Healthy Michigan Plan
Section 1115 Demonstration
Interim Evaluation Report

Demonstration Period January 1, 2019 – December 31, 2023

Project No. 11-W-00245/5

Initial draft submission date: July 1, 2022

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Table of Contents

A. Executive Summary

A.1. Summary of the Demonstration

In September 2013, the Michigan legislature enacted the expansion of its Medicaid program under the Affordable Care Act (ACA) through a Section 1115 waiver. The new program, the Healthy Michigan Plan (HMP) administered by the Michigan Department of Health and Human Services (MDHHS), included adults ages 19 to 64 with household income up to 133% of the federal poverty level (FPL) beginning in April 2014. HMP expanded access to health coverage for hundreds of thousands of Michiganders and offered the opportunity to test innovative approaches to beneficiary cost-sharing and personal responsibility.

Beneficiary cost-sharing policies have been in place since the launch of HMP in April 2014. With the exception of certain exempt groups, beneficiaries enrolled in managed care (HMP-MC) with incomes above 100% FPL are assessed a monthly fee (formerly known as a contribution) of 2% of their household income, and beneficiaries with incomes from 0 to 133% FPL are charged service-related co-payments for some services. Each HMP-MC beneficiary has a MI Health Account that tracks fees, co-payments, and health care expenditures. To promote preventive care, healthy behaviors, and responsible decision-making about health care use, beneficiaries can reduce their cost-sharing through the Healthy Behaviors Incentives Program.

The Centers for Medicare & Medicaid Services (CMS) approved the renewal of the Healthy Michigan Plan Section 1115 Demonstration Waiver in December 2018. The new 5-year waiver for 2019 through 2023 provided approval for MDHHS to implement the following new policies:

(1) Beneficiaries ages 19-62 without medical frailty were required to complete and report 80 hours per month of community engagement as a condition of eligibility, and
(2) Beneficiaries with incomes >100% of the FPL who have been enrolled in the demonstration ≥48 months were required to (a) pay a monthly premium of 5% of income, and (b) complete a Health Risk Assessment (HRA) at redetermination or complete a healthy behavior in the prior 12 months as conditions of eligibility.

The community engagement policy was implemented on January 1, 2020. However, on March 4, 2020, a U.S. District Court judge vacated the CMS approval of Michigan's community engagement requirement. The 48-month policy was slated to begin October 1, 2020, but it has been delayed due to the maintenance of effort requirements of Section 6008 of the Families First Coronavirus Response Act (FFCRA) during the Public Health Emergency (PHE) related to the COVID-19 pandemic.

A.2. Summary of the Evaluation

Given these changes and consistent with the approved evaluation design, this Healthy Michigan Plan Interim Evaluation Report focuses on the current/ongoing HMP policies which are the Healthy Behaviors Incentives Program and beneficiary cost-sharing, and the four broad goals of the overall demonstration: reduce uninsurance and uncompensated care, promote primary care/responsible use of services, support financial well-being, and support coordinated strategies that address social determinants of health (SDOH).

The following sources of data are used in this evaluation:

- Administrative data from the State of Michigan's Enterprise Data Warehouse
- Beneficiary survey (Healthy Michigan Voices)
- Interviews with beneficiaries
- Interviews with providers
- Interviews with key informants
- Credit report data from Experian
- Behavioral Risk Factor Surveillance System (BRFSS) from the National Center for Health Statistics
- American Community Survey (ACS) from the U.S. Census Bureau
- HCUP Fast Stats inpatient discharge data from the Agency for Healthcare Research and Quality
- Medicare cost reports from the Centers for Medicare and Medicaid Services (CMS)

A.3. Results and Interpretations

Healthy Behaviors Incentives Program

Some beneficiaries and primary care providers (PCPs) described the HRA as an opportunity to identify and set goals for health behavior change. This may be particularly true for beneficiaries who have been without a primary care medical home for an extended period, or for patients new to a primary care practice. However, HRA completion is uneven, which may reflect inconsistency in how it is introduced to beneficiaries. Some beneficiaries recall receiving an HRA from their Medicaid health plan. Some primary care settings (often FQHCs) monitor which patients are due for an HRA and are proactive about encouraging completion. In other primary care settings, beneficiaries are responsible for initiating the process of completing an HRA.

In addition, PCPs emphasized that behavior change requires sustained engagement and support, which is not readily achieved through annual HRA completion. Moreover, in most primary care practices, the HRA form is not integrated into the EMR, so it does not enable PCPs to track progress over time or to recall behavior change goals chosen by the beneficiary in the prior year.

The HMV survey found beneficiary reports of HRA completion were associated with higher rates of preventive service use, consistent with our previous evaluation of the first demonstration period. Our analysis of administrative data confirmed this pattern, but the effect size was small compared to the strength of association between continuity of primary care visits and preventive services. This raises the issue of whether the motivating factor is the completion of the HRA form or the conversation with PCPs about health behaviors and preventive services. In addition, we cannot differentiate whether completion of the HRA provided a catalyst for beneficiaries to schedule and obtain preventive services or whether beneficiaries who were more motivated to seek preventive services were also more likely to complete an HRA.

An important feature of the Healthy Behaviors Incentive Program is its financial incentive. Our HMV survey found that less than one-third of beneficiaries knew they could get a reduction in the amount they had to pay by completing an HRA or healthy behavior. PCPs were similarly unaware of the financial incentives. Interviews with beneficiaries confirmed that the Healthy

Behaviors Incentives Program was not the primary motivator of their engagement in healthy behaviors. While many recalled completing at least one HRA, most were unaware of financial incentives; among the few who knew about the possibility of a financial reward, it was not their reason for adopting a healthy behavior goal. Instead, most reported self-motivation or encouragement from their providers supported their adoption of healthy behaviors. Changes in the financial incentives over time (e.g., the discontinuation of program-wide gift cards in FY19[1]) and differences in the incentive based on income may contribute to beneficiaries' lack of awareness about the financial incentives. For example, beneficiaries who are under 100% FPL and do not reach the threshold of paying 2% of their income in copays would not receive a financial incentive.

Cost-Sharing

HMP cost-sharing is intended to support the HMP objectives of strengthening beneficiary engagement and personal responsibility, and encouraging individuals to make responsible decisions about their healthcare. Findings from this evaluation suggest that the HMP demonstration has been partially effective in achieving these objectives.

The MI Health Account statement is the primary method of communicating with beneficiaries about HMP cost-sharing. Our HMV survey found that nearly three-quarters of beneficiaries recalled getting a MI Health Account statement in the past year. In interviews, beneficiaries said they did not have questions about the statement, but most beneficiaries did not understand how the amount owed is calculated; most simply checked to see what they owed.

Reduce uninsurance

The HMP demonstration has been effective in achieving the objective of improving access to healthcare for uninsured or underinsured low-income Michigan residents. The changes in insurance coverage we observed in the first few years after HMP implementation were sustained through 2020. In particular, Michigan adults ages 19 through 64 experienced significant gains in Medicaid coverage and reductions in the fraction uninsured compared with those in states that did not expand Medicaid. These effects were concentrated among low-income adults.

Promote primary care/responsible use of services

The HMP demonstration has been effective in encouraging individuals to seek primary care and preventive services and make responsible decisions about their healthcare. The HMV survey found that nearly all beneficiaries reported having a known primary care provider. Despite the COVID-19 PHE which affected availability and access to primary care, three quarters of beneficiaries reported a primary care visit, and three quarters reported no barriers to primary care. Analysis of administrative claims showed that among beneficiaries with multi-year HMP enrollment, over half had at least one primary care visit each year.

Many PCPs described practice-based strategies to support HMP beneficiaries in responsible use of primary care services. Some practices have adjusted their scheduling practices to offer more

[1] MDHHS Medical Care Advisory Council June 18, 2018 Meeting Minutes

same-day appointments and after-hours appointments. Many practices have protocols in place to contact patients after an ED visit, using this opportunity to educate patients about using the primary care practice as the first-choice option in the future. Many primary care practices have care managers and community health workers conducting regular outreach to high-need beneficiaries to support their self-management of health conditions, identify problems with social determinants of health, and avoid unnecessary ED visits.

Despite this overall success, some beneficiaries still experience barriers to primary care. Both beneficiaries and PCPs reported challenges with transportation to medical appointments. Some beneficiaries also reported difficulty scheduling primary care appointments, which was exacerbated by COVID-19 constraints on the health care system. Minimizing these types of barriers is essential for reducing non-urgent ED visits.

Support financial well-being

Interim findings from this evaluation provide qualitative evidence that the HMP demonstration has been effective in supporting financial well-being. Beneficiary and key informant interviews highlighted many examples of HMP having a positive impact on beneficiaries' financial well-being, including the role of coverage in minimizing health care costs and worries and freeing up financial resources for other life needs such as food, transportation, and housing. There is also evidence of positive effects on employment as the HMV survey found that most beneficiaries are employed, and some interviewees stated that they gained access to medical treatments that allowed them to begin or continue working.

Sustain the safety net and support coordinated strategies to address social determinants of health

The HMP demonstration has been effective in reducing uncompensated care and supporting coordinated strategies to address social determinants of health.

Changes in insurance coverage at the population level were reflected in changes in the payer mix for inpatient hospitalizations, whereby increases in Medicaid as a source of payment were associated with a significant decline in the fraction of discharges coded as self-pay. Hospital uncompensated care in Michigan was reduced by half following HMP implementation, a stark contrast to the experience of states that did not expand Medicaid, which experienced no decline in uncompensated care. The changes in hospital payer mix and hospital uncompensated care in the first few years after HMP implementation were sustained through 2020.

Key informant interviews highlighted numerous examples of HMP's key role in fostering collaboration and coordination of health and human services organizations across sectors, including safety-net providers, health plans, healthcare systems, and social service organizations. This role has been particularly important for sustaining safety-net providers, enabling them to implement and maintain innovative programs focused on SDOH by addressing both health care and social needs of beneficiaries.

HMP coverage for large numbers of adults, including new populations not previously covered by Medicaid, increased access to reimbursable care, contributed to interagency partnerships and coalitions and innovations in programs and service delivery, including those that address SDOH, that could be sustained over time. This expanded coverage contributed to the financial stability of safety-net provider organizations and the ability to expand critical services to meet growing needs, including those for substance use disorders and COVID-19. HMP increased access to care and was associated with improved health and other outcomes for beneficiaries, many of whom were previously uninsured or unconnected to services addressing SDOH. During the COVID-19 pandemic, HMP maintained access to coverage and care for beneficiaries and offered coverage for new beneficiaries affected by unemployment and coverage losses. Partnerships among diverse organizations enhanced outreach and communications about initiating and maintaining enrollment and meeting HMP requirements.

Trends in the state's costs for HMP support its sustainability. Capitation rates for both administrative and medical claims costs have remained relatively stable for the HMP population since 2016, and cost trends over time compare favorably to other Medicaid benefit programs.

A.4. Recommendations

Regarding the four specified goals of the overall demonstration, we learned that HMP was highly effective in:

- Reducing uninsurance
- Promoting primary care
- Supporting financial well-being
- Sustaining the safety net and supporting strategies to address social determinants of health

Based on the success in achieving these main goals of the overall demonstration, we recommend that Medicaid expansion through the Healthy Michigan Plan continue with strong support beyond the current demonstration period.

Our evaluation findings also provide insights for any state Medicaid program considering features incorporated into HMP. Across several components of our evaluation, we learned that the current structure of HRAs and healthy behaviors incentives are not well understood by many HMP beneficiaries and are not viewed as well-functioning by primary care providers. MDHHS has implemented several changes[2] to the Healthy Behaviors Incentives Program in response to both our previous evaluation findings and feedback from HMP beneficiaries, providers, and health plans. Some changes facilitated the completion of HRA forms, including implementing streamlined secure statewide HRA submission processes for providers and deletion of the lab results portion of the HRA form. Other changes facilitated beneficiary participation in the Healthy Behaviors Incentives Program such as additional mechanisms to document healthy behaviors through claims/encounter data. To improve understanding of the program, MDHHS has updated beneficiary guidance and worked with an external partner to educate providers. While MDHHS discontinued program-wide gift cards as an incentive for HRA completion, some of the Medicaid health plans use gift cards to incentivize engagement in health behavior change activities.

[2] MSA Bulletin 19-35

Given the challenges with informing beneficiaries and with facilitating usefulness to providers, we offer the following recommendations to states considering incorporating HRAs and healthy behaviors incentives into a Medicaid expansion program:

- Expand the focus from completing the HRA form to supporting beneficiary engagement in behavior change over time.
- Give careful consideration to allowing variable processes and structures for health plans – dealing with multiple processes places a burden on providers.
- Facilitate mechanisms for providers to integrate program tools into EMRs and other practice systems.
- Plan for ongoing communication about program goals, processes, and incentives to beneficiaries and providers.

Michigan should continue to focus on these areas too, given that beneficiary and provider understanding of the program remains limited.

We also learned that beneficiary understanding of HMP cost-sharing policies is uneven and generally incomplete, even with the simplified MI Health Account statement implemented by MDHHS in 2017 as well as later changes. Thus, if incorporating cost-sharing into a Medicaid expansion program:

- Implement a simplified approach with (a) income-based fees and/or a method of charging equal quarterly amounts so that beneficiaries know more generally what costs to expect, and (b) co-payments for a small number of high-priority services (e.g., ED visits) so that beneficiaries can better understand the link between service utilization and cost-share obligations.

B. General Background Information

B.1. Overview and history of the demonstration

In September 2013, the Michigan legislature enacted the expansion of its Medicaid program under the Affordable Care Act (ACA) through a Section 1115 waiver. The new program, the Healthy Michigan Plan (HMP), administered by the Michigan Department of Health and Human Services (MDHHS), included those who had participated in the Michigan Adult Benefits Waiver (ABW) and newly eligible adults age 19 to 64 with household income up to 133% (138% including the 5% income disregard) of the federal poverty level (FPL). HMP expanded access to health coverage for hundreds of thousands of Michiganders and offered the opportunity to test innovative approaches to beneficiary cost-sharing and personal responsibility. HMP beneficiaries receive a full health care benefit package, which includes all the ACA-mandated essential health benefits. Most are enrolled in a managed care benefit (HMP-MC) through one of the state's Medicaid health plans in which they can choose or be assigned a primary care provider.

Beneficiary cost-sharing policies have been in place since the launch of HMP in April 2014. HMP-MC beneficiaries with incomes above 100% FPL, with the exception of certain exempt groups,[3] are subject to a monthly fee (formerly known as a contribution) equal to 2% of their household income, similar to an insurance premium. In addition, beneficiaries with incomes

[3] Michigan.gov: MI Health Account – Could I pay less in MIHA fees?

from 0 to 133% FPL, except for certain exempt groups,[4] are subject to service-related co-payments. Certain services are exempt from co-payments including preventive services and services for chronic condition management, behavioral health services, and pregnancy. Each HMP-MC beneficiary has a MI Health Account that tracks fees, co-payments, and health care expenditures via quarterly reports to beneficiaries.

To promote the use of preventive care, healthy behavior, and responsible decision-making about health care use, beneficiaries can reduce their cost-sharing through the Healthy Behaviors Incentives Program. The Healthy Behaviors Incentives Program is designed to encourage beneficiaries, in collaboration with their primary care provider, to implement and maintain healthy behaviors via an annual Health Risk Assessment (HRA). Additional mechanisms to document healthy behaviors through claims/encounter data were later added to include beneficiaries who completed healthy behavior activities but did not complete an HRA.

In December 2017, MDHHS submitted an application to continue the HMP demonstration for an additional five years. In September 2018, the State applied to amend certain elements of HMP to comply with new provisions in state law. The Centers for Medicare & Medicaid Services (CMS) approved the renewal of the Healthy Michigan Plan Section 1115 Demonstration Waiver (Project No. 11-W-00245/5) on December 21, 2018, for the period January 1, 2019 to December 31, 2023. The waiver provided approval for MDHHS to implement the following new policies:

1) Beneficiaries ages 19-62 without medical frailty were required to complete and report 80 hours per month of community engagement as a condition of eligibility; and
2) Beneficiaries with incomes >100% of the FPL who have been enrolled in the demonstration ≥48 months, with some exemptions, were required to (a) pay a monthly premium of 5% of income, and (b) complete an HRA at redetermination or complete a healthy behavior in the previous 12 months as conditions of eligibility (48-month policy). The premiums would represent the beneficiary's full obligation, with no additional co-payments.

The community engagement policy was implemented on January 1, 2020. However, on March 4, 2020, a U.S. District Court judge vacated the CMS approval of Michigan's community engagement requirement. The 48-month policy was slated to begin October 1, 2020, but it has been delayed due to the maintenance of effort requirements of Section 6008 of the Families First Coronavirus Response Act (FFCRA) during the public health emergency (PHE) related to the COVID-19 pandemic. Until the 48-month policy is implemented, HMP beneficiaries continue to be subject to the pre-existing cost-sharing and HRA/healthy behavior policies described above.

Given these changes and consistent with the approved evaluation design, this Healthy Michigan Plan Interim Evaluation Report focuses on the current/ongoing HMP policies which are the Healthy Behaviors Incentives Program and beneficiary cost-sharing, and the four broad goals of the overall demonstration: reduce uninsurance and uncompensated care, promote primary care/responsible use of services, support financial well-being, and support coordinated strategies that address social determinants of health.

[4] Healthy Michigan Plan Co-Payment Exemptions

B.2. Population groups impacted by the demonstration

HMP beneficiaries enrolled in managed care, unless otherwise exempt, will continue to be subject to the cost-sharing responsibilities and HRA/healthy behaviors incentives as described in the HMP Special Terms & Conditions (STC 22(d)) from CMS.

If implemented, HMP beneficiaries with incomes 100-133% FPL and cumulative HMP enrollment of ≥48 months, unless otherwise exempt, may be subject to the new policy of monthly 5% premiums and annual HRA/healthy behavior requirements to maintain their HMP eligibility and enrollment.

B.3. Goals of the demonstration

As stated by MDHHS, the overarching goals of the HMP demonstration are to increase access to quality health care, encourage the utilization of high-value services, promote beneficiary adoption of healthy behaviors, and implement evidence-based practice initiatives.

The main objectives for HMP stated by MDHHS include:[5]

- Improving access to healthcare for uninsured or underinsured low-income Michigan residents;
- Improving the quality of healthcare services delivered;
- Reducing uncompensated care;
- Strengthening beneficiary engagement and personal responsibility;
- Encouraging individuals to seek preventive care, adopt healthy behaviors, and make responsible decisions about their healthcare;
- Supporting coordinated strategies to address social determinants of health in order to promote positive health outcomes, greater independence, and improved quality of life;
- Helping uninsured or underinsured individuals manage their health care issues;
- Encouraging quality, continuity, and appropriate medical care.

B.4. Relevant contextual factors

Several contextual factors are likely to affect broad trends in insurance coverage, health care utilization, and population health.

Health insurance market
HMP was initially implemented in April 2014 in the context of broader changes to health insurance markets in Michigan and in other states under the Affordable Care Act. In particular, the health insurance exchange, associated premium tax credits, mandates for some employers to offer health insurance and individual mandate all affected consumer and employer behavior. An increase in private insurance coverage as people enrolled in the health insurance Marketplace established in 2013, along with Medicaid expansion, reduced the number of uninsured individuals in the state.[6] However, the longer-term trend toward private plans with high deductibles has meant that more privately insured patients face large out-of-pocket obligations

[5] HMP Section 1115 Demonstration Extension Application, September 2018
[6] Kaiser Family Foundation. Marketplace Enrollment 2014-2019.

when they are hospitalized, which may increase hospital uncompensated care for privately insured patients who are unable to pay hospital charges not covered by their insurance.

COVID-19 pandemic

The COVID-19 pandemic has had a dramatic effect on virtually all aspects of health and well-being for people in Michigan, including HMP beneficiaries. Direct health effects include many COVID-19 cases, with some individuals experiencing multiple infections and some experiencing "long COVID" symptoms that linger over time. Indirect health effects include changes in access to health care. Particularly in the first 12-18 months of the pandemic, limited availability of primary care services, non-emergency surgeries and procedures, and dental care left many individuals with few options for care. In addition, some individuals declined to seek services, to avoid exposure to COVID or to preserve health care resources for others.

The COVID-19 pandemic also affected individuals' employment and financial well-being. For many, COVID-related layoffs caused an unexpected loss of income as well as loss of employer-sponsored insurance. Some of those individuals became eligible for HMP for the first time.

After the federal government declared COVID-19 a public health emergency, the US Congress provided increased Medicaid funding to states through the Section 6008 of the Families First Coronavirus Response Act (FFCRA). States had to meet several conditions to receive FFCRA funds, including a maintenance of effort requirement that prohibits states from terminating most Medicaid beneficiaries' coverage until after the PHE ends. This federal policy change, along with an influx of newly eligible adults, led to a dramatic increase in HMP enrollment, from approximately 670,000 individuals in March 2020 to over 1 million individuals as of June 2022 Most of these HMP beneficiaries were enrolled in managed care plans, which meant that these health plans had to absorb the unanticipated increase in enrollees.

At the state level, Michigan Medicaid officials altered certain HMP policies during the PHE. Consistent with the maintenance of enrollment, Medicaid relaxed its standard timeframe for redetermination of eligibility; many beneficiaries did not submit proof or attestations of income eligibility for the first 12-18 months of the PHE. Medicaid officials also enacted changes to cost-sharing provisions, such that for the duration of the PHE, no HMP beneficiary would be charged a higher cost-share amount than the individual's pre-PHE cost-share amount. In addition, co-pays specific to the diagnosis and treatment of COVID-19 were waived. MDHHS did not have the pre-offset letters mailed to beneficiaries in July 2020 due to the COVID-19 pandemic and the resulting unemployment rate(s). Therefore, state tax refunds and lottery winning offsets were not collected in calendar year 2021 for the 2020 tax year.

Michigan Medicaid also used the flexibility of the PHE to enact policies to address constraints on the health care system. For example, officials expanded the list of services that could be delivered via telehealth, and allowed telephone-only (i.e., no video component) visits for most of the expanded services and eased rules for providers.

C. Evaluation Questions and Hypotheses

Our evaluation builds on key findings from the Healthy Michigan Plan Final Summative Evaluation Report[7] for the first five years of HMP (2014-2018) and related articles published in academic research journals.[8] Key findings from the Summative Evaluation Report were organized around the evaluation goals from the first HMP waiver period:

- *Evaluation Goal 1: The extent to which the increased availability of health insurance reduces the costs of uncompensated care borne by hospitals.* HMP was associated with substantially reduced costs of uncompensated care provided by Michigan hospitals. This reduction was comparable to other states that expanded Medicaid and contrasted with the increase in uncompensated care costs seen in states that did not expand Medicaid over the same period.
- *Evaluation Goal 2: The extent to which availability of affordable health insurance results in a reduction in the number of uninsured/underinsured individuals who reside in Michigan.* HMP substantially reduced the uninsured rate for low-income non-elderly adults by 7 percentage points relative to states that did not expand Medicaid.
- *Evaluation Goal 3: Whether the availability of affordable health insurance, which provides coverage for preventive and health and wellness activities, will increase healthy behaviors and improve health outcomes.* Access to care improved with enrollment in HMP coverage. Enrollees were more likely to have a regular source of care with HMP and fewer reported that it was an ER. A large majority of HMP enrollees used primary care and preventive services. Only one-quarter of HMP enrollees fully completed the HRA process, suggesting that HRAs may not be a key motivator for use of primary care and preventive services, but HRA completion was associated with higher rates of preventive service use.
- *Evaluation Goal 4: The extent to which beneficiaries feel that the Healthy Michigan Program has a positive impact on personal health outcomes and financial well-being.* Substantial proportions of HMP enrollees reported improved physical, mental, and oral health as well as financial well-being since enrolling in HMP. HMP coverage was particularly beneficial for enrollees with chronic health conditions that could be diagnosed and treated more effectively. Many enrollees also reported positive perspectives on HMP and that their ability to work had improved since enrolling in HMP.
- *Evaluation Goal 5: Examine the experiences of former HMP enrollees and individuals eligible for, but unenrolled in, HMP.* Former enrollees most commonly reported that their disenrollment was due to an income increase and/or getting other health insurance coverage. Many former HMP enrollees were uninsured and those with post-HMP coverage experienced challenges paying for coverage and care. Many of those eligible but unenrolled in HMP were unaware of HMP or thought they were ineligible.

Our evaluation for the current waiver period is organized around three HMP policies and four broad goals of the overall demonstration that reflect the MDHHS objectives outlined in Section B.3. Thus, the seven components that are the focus of this evaluation are:

(1) Healthy Behaviors Incentives program
(2) Cost-sharing

[7] Healthy Michigan Plan Evaluation Final Summative Report, March 2020
[8] IHPI Member Publications on Medicaid Expansion in Michigan

(3) 5% premium cost-sharing and HRA/healthy behavior requirements (48-month policy)
(4) Reduce uninsurance and uncompensated care
(5) Promote primary care/responsible use of services
(6) Support financial well-being
(7) Support coordinated strategies to address social determinants of health

Within each area, we have identified key evaluation questions that explore how HMP promotes the objectives of Titles XIX and XXI by improving access, continuity, and quality of care for low-income adults in Michigan. Because the MDHHS objectives for HMP are stated in qualitative terms, our hypotheses are framed to assess directional change without associated quantitative targets. The analysis plan was designed to identify both positive outcomes and potential adverse consequences. The full approved evaluation design is included as an attachment to this report; evaluation questions and hypotheses also are presented in the results section.

D. Methodology

D.1. Evaluation design summary

Our evaluation plan, approved by CMS on July 15, 2021,[9] uses multiple approaches, including analysis of state administrative data, publicly available data, and primary data collected through interviews and surveys. These data sources are described in detail below.

The evaluation design (see the CMS-Approved Evaluation Design Attachment) was reviewed and deemed exempt by the University of Michigan Medical School Institutional Review Board (IRBMED) under Exemption 5 as an evaluation of a government health program. The evaluation plan was also reviewed and determined to be exempt by the MDHHS Institutional Review Board, with approval of a HIPAA Privacy Waiver for the use of protected health information.

D.2. Data sources, target and comparison populations, evaluation period, evaluation measures, and analytic approach

The following sources of data are used in this evaluation:

- Administrative data from the state Enterprise Data Warehouse
- Beneficiary survey (Healthy Michigan Voices)
- Interviews with beneficiaries
- Interviews with providers
- Interviews with key informants
- Credit report data from Experian
- Behavioral Risk Factor Surveillance System (BRFSS) from the National Center for Health Statistics
- American Community Survey (ACS) from the U.S. Census Bureau
- HCUP Fast Stats inpatient discharge data from the Agency for Healthcare Research and Quality
- Medicare cost reports from the Centers for Medicare and Medicaid Services (CMS)

[9] HMP Evaluation Design Approval Letter

Descriptions of each of these data sources and methods are presented below.

D.2.1. State administrative data

Data source

Administrative data is available from the State of Michigan's Enterprise Data Warehouse. Data from Medicaid enrollment files include beneficiaries' HMP start and end dates, including months with managed care enrollment, as well as age, gender, race/ethnicity, and income level (documented as percent of FPL). Data from administrative claims encompass service-level data on paid claims (fee-for-service) and encounters (managed care), with accompanying billing and reimbursement information (e.g., CPT and ICD-10 diagnosis codes, billing modifiers, billing/rendering provider, paid amount) for inpatient, outpatient, pharmacy, durable medical equipment, dental, lab, and other services. Data from HRA tables reflect individual-level data on date of HRA completion, provider attestation, and eligibility for HRA-related incentives (e.g., cost-share reduction). Data from cost-share tables encompass charges for co-pays and fees, cost-share reductions, and payment history.

Data were extracted by an authorized member of the evaluation team under the authority of a Business Associates Agreement executed between MDHHS and the University of Michigan. Data processing, encryption and storage were conducted in accordance with established data security protocols at the University of Michigan approved by the MDHHS Compliance Office.

This data source was used to examine evaluation questions 1.4, 2.2, 5.3, and 5.4.

Target and comparison populations

The overall target population is HMP beneficiaries, with a focus on those enrolled in a HMP-MC for more than one year. For each hypothesis, the target population is further defined based on enrollment history, HRA completion, and/or evidence of chronic condition, with corresponding comparison groups.

For measures of health services utilization, we defined the target population based on the continuity of HMP-MC enrollment, calculated from the beneficiary's first HMP-MC month. Of the 1,635,153 beneficiaries with at least 1 month of HMP-MC enrollment between April 2014 and December 2021, we excluded 793,237 beneficiaries who did not maintain HMP-MC enrollment for ≥11 of 12 months from their initial month.

We grouped the remaining 841,916 beneficiaries based on the duration of their HMP-MC enrollment duration over time, as shown below:

HMP-MC enrollment from first HMP-MC month	N	Group
Enrolled ≥11 months in Months 1-12	392,561	*1-Year Enrollment Duration*
AND ≥11 months in Months 13-24	193,398	*2-Years Enrollment Duration*
AND ≥11 months in Months 25-36	96,450	*3-Years Enrollment Duration*
AND ≥11 months of in Months 37-48	159,507	*4-Years Enrollment Duration*

Administrative Data Table 1 presents the characteristics of the evaluation population for measures of health services utilization by HMP-MC enrollment duration (2-years, 3-years and 4-years enrollment groups), including sex, FPL at initial HMP-MC enrollment, race/ethnicity, age at initial enrollment, year of initial enrollment, diagnosis of the four chronic conditions outlined in the evaluation plan (COPD, asthma, cardiovascular disease, diabetes), and use of specialty behavioral health or substance use disorder services.

Administrative Data Table 1. Characteristics of the evaluation population for measures of health services utilization by HMP-MC enrollment duration

	HMP-MC Enrollment Duration		
	2-Years Enrollment N=193,398	*3-Years Enrollment* N=96,450	*4-Years Enrollment* N=159,507
FPL at initial HMP-MC enrollment			
0-35%	60.3%	62.2%	60.0%
36-99%	22.8%	21.9%	23.6%
≥100%	17.0%	15.9%	16.4%
Sex			
Female	51.2%	50.3%	50.3%
Male	48.8%	49.7%	49.7%
Age at initial HMP-MC enrollment			
19-20	18.4%	15.9%	10.3%
21-29	23.5%	22.2%	17.3%
30-49	35.2%	37.3%	42.7%
50-64	22.9%	24.5%	29.7%
Year of initial HMP-MC enrollment			
2014-15	32.5%	38.8%	60.3%
2016-17	23.0%	17.8%	36.6%
2018	4.5%	35.1%	3.1%
2019-20	40.1%	8.3%	0%
Race/ethnicity			
Hispanic	4.8%	4.0%	4.8%
Black, non-Hispanic	23.4%	22.0%	24.8%
White, non-Hispanic	60.9%	62.6%	59.6%
Other/Unknown	11.0%	10.7%	10.7%
COPD diagnosis	6.8%	9.2%	12.6%
Asthma diagnosis	5.8%	7.8%	10.3%
Cardiovascular diagnosis	5.9%	7.6%	9.4%
Diabetes diagnosis	8.5%	9.9%	14.0%
Any COPD, Asthma, CV or Diabetes	20.5%	25.2%	30.4%
Use of specialty mental health	12.0%	14.3%	15.1%

For evaluation of cost-sharing patterns, our target population was Medicaid beneficiaries with continuous HMP-MC enrollment for at least 18 months. The minimum time period corresponds to the HMP cost-sharing policy where an initial observation period of 6 months serves as a baseline for the beneficiary's health service utilization and spending, followed by calculation of

the beneficiary's first MI Health Account/Healthy Michigan Plan statement, and at least one year to observe patterns in charges and payments.

We identified Medicaid beneficiaries who had new HMP-MC enrollment periods starting between January 2016 and October 2018 and who remained continuously enrolled in HMP-MC for at least 18 months. We followed beneficiaries through March 2020 and counted all months of continuous HMP-MC enrollment. Gaps of up to two months were allowed, consistent with the state's standard practice for calculating cost-share obligations. Gaps could reflect no Medicaid coverage or non-HMP coverage (e.g., fee-for-service Medicaid, incarceration, and emergency services only designations).

We included beneficiaries with prior HMP-MC enrollment if they met inclusion criteria for the new enrollment period. For the 1,633 beneficiaries with two separate enrollment periods that would qualify, we included only the first qualifying enrollment period. We excluded HMP-MC beneficiaries in groups not subject to cost-sharing, including those in Children's Special Health Care Services and those with evidence of nursing home or hospice services.

Application of these criteria yielded an analytic population of 287,106 beneficiaries, described in Administrative Data Table 2.

Administrative Data Table 2. Characteristics of the evaluation population for measures of cost-sharing patterns

	Study Population (n = 287,106)
Female	47.8%
Age at first enrollment	
19-34	39.4%
35-44	22.8%
45-54	22.8%
55-62	15.1%
Race/Ethnicity	
White, non-Hispanic	62.2%
Black, non-Hispanic	24.5%
American Indian/Alaska Native	0.8%
Hispanic	3.9%
Asian/Pacific Islander	0.9%
Other	7.7%
Region	
UP/NW/NE	8.2%
W/E Central/E	27.2%
S Central/SW/SE	19.4%
Detroit Metro	45.2%

Evaluation period

For measures of health services utilization, the evaluation period is April 2014 to December 2021.

For evaluation of cost-sharing patterns, the evaluation period is January 2016 through March 2020.

Evaluation measures

For measures of health services utilization, evaluation measures derived from administrative data include the following:

HRA Completion: We identified the total number of HRA records with a provider attestation for the beneficiary's full period of HMP-MC enrollment (1-4 years).

Primary Care Continuity: We identified primary care visits based on Michigan Medicaid policy for primary care reimbursement. Classification of an outpatient visit as a primary care visit required two elements: (1) a procedure code included in the Physician Primary Care Rate Increase Initiative list;[10] and (2) a billing or rendering provider who was a Primary Care Provider of record for ≥1 Medicaid beneficiary in the Data Warehouse PCP table; who had been verified as a primary care provider for a prior MDHHS project; or who had a primary care specialty classification (e.g., family medicine, internal medicine) in both the Michigan Medicaid provider specialty table and the NPPES taxonomy table. We excluded NPIs known to be inaccurate from prior analyses.

Primary care visits identified through this method were used to create a flag indicating receipt of one or more primary care visits in each year of enrollment. We generated a summary measure of primary care continuity to reflect receipt of primary care visits across enrollment years for beneficiaries with 2, 3 or 4 years of HMP-MC enrollment:

- *Regular* primary care – had at least one primary care visit in each year of enrollment
- *Irregular* primary care – had a primary care visit in at least one year but not every year of enrollment
- *No* primary care – had no primary care visits in any year of enrollment

Preventive Visit: We identified preventive visits in each year of enrollment based on CPT visit codes (99381-99387, 99391-99397, G0402). Preventive visits could occur with any provider type, including specialists. We generated a summary measure of preventive care continuity to reflect receipt of preventive visits across enrollment years for beneficiaries with 2, 3 or 4 years of HMP-MC enrollment:

- *Regular* preventive visits – had at least one preventive visit in each year of enrollment
- *Irregular* preventive visits – had a preventive visit in at least one year but not every year of enrollment
- *No* preventive visits – had no preventive visits in any year of enrollment

[10] MDHHS Physician Primary Care Rate Increase Initiative Database. January 2016.

Dental Visit: We identified dental visits in each year of enrollment based on procedure codes (Dxxx) and generated a summary measure for beneficiaries with 2, 3 or 4 years of HMP-MC enrollment reflecting receipt of a dental visit in any year.

Cancer Screening: Assessment of cancer screening was based on existing measures for

- Breast Cancer Screening among women 40-64 years (NQF 2372)
- Cervical Cancer Screening among women 21-64 years (NQF 0032)
- Colon Cancer Screening among adults 50-64 years (NQF 0034)

We assessed receipt of each type of cancer screening for beneficiaries with 2, 3 or 4 years of HMP-MC enrollment who met eligibility criteria in any year of enrollment. We categorized receipt of screening at any time during the beneficiary's HMP-MC enrollment duration.

Emergency Department (ED) Utilization: Identification of ED visits was modified from the HEDIS® Emergency Department Utilization (EDU) measure. Consistent with those specifications, we did not count ED visits that resulted in an inpatient admission. However, to reflect a more comprehensive view of ED utilization, we included observation visits and ED visits related to mental health or substance use.

ED visits identified through this method were used to calculate two outcome measures:

ED Visit Rate – the number of ED visits per 1,000 member-months

High-Frequency ED Utilization – the proportion of beneficiaries with >5 ED visits in the year

Inpatient Utilization: We generated inpatient utilization measures for condition-specific discharges, based on measures included in the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators. For these measures, chronic condition was linked to the discharge diagnosis (i.e., not based on utilization-based identification of chronic conditions). The condition-specific discharge measures included the following:

Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate (NQF 0275) – the number of discharges for chronic obstructive pulmonary disease (including asthma and bronchitis) per 100,000 beneficiaries 40-64 years of age

Heart Failure Admission Rate (NQF 0277) – the number of discharges for congestive heart failure per 100,000 beneficiaries

Diabetes Short-Term Complications (NQF 0272) – the number of discharges for diabetes short-term complications per 100,000 beneficiaries

For measures of cost-sharing patterns, evaluation measures derived from administrative data are based on quarterly reports of beneficiaries' invoices and payments. For each quarter, we calculated:

Total amount owed – combined monthly fee and co-payment amounts for that quarter, minus any reductions

Payment – amount paid by the beneficiary for that quarter

Payment fraction – payment amount applied to each quarterly statement, divided by the total amount due. We coded any overpayments to reflect the full amount of the invoice owed.

Payment actions – categorized as full payment, partial payment, or no payment, based on payment fraction. We defined any fraction of 0.99 or above as paid in full.

HMP cost-sharing policy calls for monthly fees for HMP-MC beneficiaries with household incomes above 100% of the federal poverty line (FPL) and service-related co-payments for all HMP-MC beneficiaries. To identify subgroups of beneficiaries based on their likely type of cost-sharing, we reviewed the monthly income (% FPL) data recorded in Medicaid files for each beneficiary's period of continuous HMP-MC enrollment. We defined the cost-share income groups as:

- All HMP-MC months below 100% FPL
- Some HMP-MC months above, some months below 100% FPL
- All HMP-MC months above 100% FPL

Analytic methods

For measures of health services utilization, results presented in this Interim Evaluation Report focus on beneficiaries with multiple years of HMP-MC enrollment (2-years, 3-years and 4-years enrollment duration groups); these beneficiaries had at least two years to experience and benefit from HMP features designed to promote the use of primary care, encourage receipt of preventive services, and limit unnecessary ED utilization. Parallel analyses were performed for each enrollment duration group to describe key outcomes and patterns over varying duration of HMP-MC enrollment and to facilitate assessment of the impact of HMP features over time. We employed Chi-squared bivariate analyses to evaluate differences by primary care continuity and HRA completion and paired t-tests were performed to assess differences in ED rates across years. Two-tailed P values <0.01 were considered statistically significant. We ran multivariate analyses controlling for demographic characteristics (sex, age, income level, race/ethnicity), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), use of specialty mental health services, primary care continuity, and HRA completion. We used regression model estimates to calculate the predicted marginal probability of cancer screening, using the delta method to calculate standard errors.

For evaluation of cost-sharing patterns, we conducted a serial cross-sectional analysis, calculating by quarter each beneficiary's total amount owed, payment amount and payment fraction, and payment actions. We generated average amounts owed, payment amounts and payment fractions for our overall population and by cost-share income groups. We calculated cumulative cost-sharing burden for each beneficiary's continuous HMP-MC enrollment period, generating the average amounts owed, payment amounts and payment fractions.

We assigned beneficiaries to a payment action group (full payment, partial payment, no payment) for each quarter of their continuous HMP-MC enrollment period, and for the full period. We calculated the proportion in each payment action group for our overall population and by cost-share income groups, and for the subset of beneficiaries with at least 30 months of continuous HMP-MC enrollment.

Methodological limitations

Several limitations may affect measures of health care utilization. This report focuses on beneficiaries who maintained continuous enrollment in HMP-MC over time; results do not represent beneficiaries with gaps in enrollment. Subgroup analyses focused on four chronic conditions outlined in the evaluation plan. Beneficiaries may have had other conditions that affected their utilization patterns.

Our determination of a primary care visit was based on a combination of visit codes and provider identifiers; in some instances, primary care providers may have delivered services outside those visit codes and some providers working in a primary care setting may not have been accurately identified. In addition, the definition of primary care likely included situations were primary care providers delivered care in urgent care or other settings.

As noted in Section B.4, the COVID-19 pandemic had a significant impact on the availability and delivery of health services, on the health and health-seeking behaviors of beneficiaries, and on HMP enrollment. The extent to which these factors affected utilization measures is not fully understood.

Analyses of cost-sharing patterns also have potential limitations. Our results are limited to beneficiaries whose enrollment is sufficiently long to accrue experience with cost-sharing and may not represent the effects of cost-sharing on those with shorter durations of HMP-MC enrollment. Descriptive data are presented to characterize some of the dimensions along which shorter- and longer-term beneficiaries differ. Some of our measures of cost-share obligations may be "noisy" due to incomplete information about factors that may exempt beneficiaries from cost-share obligations, which may change over time. We analyzed cost-sharing patterns through March 2020, so results do not reflect cost-sharing during the COVID-19 PHE.

We include only beneficiaries who begin new periods of continuous HMP-MC enrollment in 2016 or later. We excluded beneficiaries who enrolled in the initial years of HMP (2014-2015) and maintained HMP-MC coverage, this analysis represents a "flow" of new enrollments rather than the "stock" of enrollments that occurred near the program's initiation. Therefore, looking at these more recent enrollments is likely to be more representative of those people entering the program going forward.

Future analyses for Summative Evaluation Report

The Summative Evaluation Report will include:

- Additional measures of preventive care (e.g., flu vaccine, COVID vaccine) to assess Hypothesis 1.4
- Identification of additional chronic conditions to assess their influence on ED utilization
- Assessment of medication management for beneficiaries with chronic conditions, as well as additional analyses of inpatient rates, and follow-up after ED visits for beneficiaries with chronic conditions to examine Hypothesis 5.4
- Additional analyses to explore the impact of preventive visit continuity
- Multivariate regression models predicting payment actions

- Analyses focused on utilization of health care services and cost-share payment patterns before, during and after the PHE

D.2.2. Beneficiary survey

Data source

The Healthy Michigan Voices (HMV) beneficiary survey was conducted from August 2021 to April 2022 to understand the experiences with and impact of HMP features and policies on HMP beneficiaries. Surveys supplement administrative data by documenting beneficiary knowledge of key policies such as the Healthy Behaviors Incentives Program and cost-share obligations; eliciting information on barriers that impede beneficiaries from effective use of health services; describing lifestyle behaviors that impact health status; and understanding the impact of HMP on beneficiary financial well-being.

This data source was used to examine evaluation questions 1.2, 1.3, 2.1, 5.1, 5.2, and 6.1.

Target and comparison populations

The HMV target population is beneficiaries enrolled in HMP-MC, through which key HMP features are administered including the primary care provider assignment, HRA, healthy behaviors incentives, and cost-sharing.

The beneficiary survey included two groups: beneficiaries who participated in prior HMV surveys and agreed to be recontacted (Longitudinal Cohort), and a refresher sample of more recently enrolled HMP beneficiaries (New Cohort). Recontacting existing cohorts allowed for a more thorough understanding of the experiences of beneficiaries over time, while adding a new cohort allowed for broader representation of the HMP population and understanding of the experiences and impact of the program for those who enrolled more recently.

The Longitudinal Cohort and the New Cohort had the same inclusion criteria at the time of their initial HMV survey selection: at least 12 months in any HMP benefit; HMP-MC enrollment in the month of selection and in the at least 9 of the prior 12 months; preferred language of English, Spanish or Arabic; and complete address and phone information. The Longitudinal Cohort included respondents who agreed to be recontacted. To ensure broad representation across income levels and geographic regions, stratified sample selection was done for each cohort's initial sample selection according to the following proportions by State of Michigan prosperity region (Beneficiary Survey Appendix Table 1).

Eligibility determination and sample selection for the 2021/2022 HMV survey was done monthly; beneficiaries could be eligible in multiple months but selected only once.

Beneficiary Survey Table 1 describes eligibility information and completion rates for the Longitudinal and New Cohorts. We mailed recruitment materials to the selected beneficiaries to introduce the survey, provide options to schedule an interview time, and to note the $25 incentive for completion. We then placed telephone calls to selected beneficiaries; we made at

least two attempts to contact by phone. Surveys were completed with trained interviewers by telephone in English, Spanish or Arabic. Additional detail about the HMV survey methodology is found in the Beneficiary Survey Appendix.

Beneficiary Survey Table 1. Eligibility information and completion rates for the Longitudinal and New Cohorts

	Initial HMP enrollment	Prior HMV survey dates (completed)	Eligible for 2021/22 HMV survey	Completed 2021/22 HMV survey	Response Rate
Longitudinal Cohort: Cohort I	April 2014 - October 2015	2016 (N=4,106) 2017 (N=3,104) 2018 (N=2,608)	991	806	84.4%
Longitudinal Cohort: Cohort II	January 2016 - December 2017	2018 (N=2,602)	1160	669	63.1%
New Cohort	August 2019 - December 2020	--	10,700	2,607	28.8%
TOTAL				4,082	36.6%

Evaluation period

The evaluation period for the HMV survey was 2020-2022. Survey questions focused on the beneficiary's current health and health status, and experiences in the past 12 months.

Evaluation measures

Key outcome measures were based on validated items and scales used in prior HMV surveys. Survey items that address specific HMP features drew on questions used in prior HMV surveys[11,12,13,14,15] and were informed by experiences, perspectives, and themes that arose in qualitative interviews with beneficiaries.

Specific health-related outcome measures used in the analysis include:

- Physical, mental, and oral health status
- Number of days in past 30 days with poor physical health; with poor mental health; where poor physical or mental health kept you from usual activities
- Engagement in healthy lifestyle behaviors (physical activity/exercise, fruit/vegetable consumption)
- Engagement in unhealthy lifestyle behaviors (smoking, binge drinking, substance use, drinking sugar-sweetened beverages)

[11] Goold, S. D., & Kullgren, J. (2018). Report on the 2016 Healthy Michigan Voices Enrollee Survey.
[12] Goold, S. D., & Kullgren, J. (2018). Report on the 2016 Healthy Michigan Voices Enrollee Survey: Supplemental Analyses.
[13] Clark, S. J. & Goold, S. D. (2018). Report on the Healthy Michigan Voices 2016-17 Survey of Individuals No Longer Enrolled in the Healthy Michigan Plan.
[14] Goold, S. D., Kullgren, J., Beathard, E., Kirch, M., & Bryant, C. (2018). 2017 Healthy Michigan Voices New Enrollee Survey Report.
[15] Goold, S. D., Kullgren, J., Beathard, E., Kirch, M., Bryant, C., Tipirneni, R., Ayanian, J. Z. (2018). 2017 Healthy Michigan Voices Follow-Up Survey Report.

- Usual source of primary care/having a primary care provider
- Difficulty getting primary care appointment and after-hours advice; other barriers to accessing primary care
- Difficulty getting prescription medication
- Patient self-efficacy (confidence in ability to take action to maintain or improve health)
- Emergency department (ED) visit in past 12 months and attempted contact with primary care provider prior to ED visit

Specific measures based on HMP policies include:

- Knowledge of financial incentive for completion of an HRA
- Completion of an HRA, engagement with primary care provider around HRA
- Experiences with Healthy Michigan Plan/MI Health Account statements

Specific measures related to employment and social determinants of health to assess the goals of the overall demonstration include:

- Employment status (full/part time)
- Health-related barriers to employment
- Other barriers to employment

We created composite variables that combine responses to multiple survey questions related to healthy and unhealthy behaviors, health-related self-efficacy, difficulty accessing prescription medications or primary care, and changes in health status over the past year. Please see the Beneficiary Survey Appendix for the definitions of composite variables, and the Survey Instrument and Interview Guide Appendix for the full HMV survey instrument.

Analytic methods

Survey weights

Weights were applied to data to adjust for the probability of selection, nonresponse bias, and other factors. Please see the Beneficiary Survey Appendix for additional details regarding construction of weights.

Overall analysis

We first generated weighted frequencies for all survey items. We employed bivariate analysis to describe the association with demographic variables drawn from the Data Warehouse (age group, rural/urban residence, income level, cumulative months of HMP-MC enrollment), as well as bivariate associations with respondents' survey report of their gender, race/ethnicity, and health literacy level. These bivariate results are included in the Beneficiary Survey Supplemental Data attachment showing weighted proportions for the overall population and for key subgroups with 95% confidence intervals. To test for statistical significance between subgroups, we present p-values from Pearson's Chi-squared tests for categorical outcomes and means and adjusted Wald tests for continuous variables.

Multivariable analyses included logistic regression for dichotomous outcomes, with adjusted odds ratios and 95% confidence intervals reported. For continuous outcomes, we used linear regression and report regression coefficients and 95% confidence intervals.

Methodological limitations

As noted in Section B.4, the COVID-19 pandemic had a significant impact on the availability and delivery of health services, on the health and health-seeking behaviors of beneficiaries, and on HMP enrollment. The HMV survey was conducted during the COVID-19 PHE, and responses reflect beneficiaries' experiences during this period. For beneficiaries in the New Cohort, some or all of their initial year of HMP enrollment occurred during the PHE. Their experiences of establishing and seeking care under HMP coverage likely differed from the Longitudinal Cohort, many of whom had established relationships with HMP providers prior to the PHE. The data collection period included months with high COVID-19 case rates; beneficiaries who had experienced COVID often mentioned it when responding to questions about health status, days of poor health, and emergency department use.

The survey asked about HRA completion in the prior 12 months, as outlined in the evaluation plan. As we learned in prior HMV surveys, recall of HRA completion is challenging. To aid in recall, interviewers used a standardized script to describe the HRA as "a form for people enrolled in the Healthy Michigan Plan that asks about health habits and has a section about choosing a health behavior to work on." Some beneficiaries may have reported HRA completion based on their recall of answering questions about health habits and/or discussing health behavior goals during primary care visits (but not for the HRA process), or because they confused the HRA with other forms. To explore the receipt of HRA-like support, in addition to completion of the HRA form, we added survey items about whether the primary care provider addressed key elements of the HRA process (e.g., asking about health behaviors, discussing health goals, asking about stressors and social determinants of health) during visits in the past year.

This cross-sectional survey was administered via phone to a sample of HMP beneficiaries. Response rates were lower for the New Cohort than the Longitudinal Cohort. This is not surprising since the Longitudinal Cohort had previously responded to an HMV survey and agreed to be recontacted. However, the response rate for the New Cohort was lower than for newly enrolled beneficiaries in previous HMV surveys (which were typically near 50%). Interviewers noted an unusually high number of cases in the New Cohort where the phone number listed in Medicaid files was for a parent or spouse rather than the selected beneficiary. This may be due to changes in administrative processes during the PHE. The use of bilingual interviewers enabled beneficiaries to complete the survey in Arabic or Spanish. Beneficiaries who spoke other languages were unable to participate. There may be differences between those who completed the survey and those who refused participation or could not be contacted.

As with any survey, some responses could be biased due to social desirability, misinterpretation of questions, or limited ability to recall certain events. In addition, measures developed to assess knowledge about specific HMP features do not differentiate respondents' degree of certainty or their ability to apply that knowledge. To minimize survey response bias or misinterpretation, we relied on validated measures with neutral wording when possible. For areas without established

measures, we trained phone interviewers to offer standardized explanations when beneficiaries asked for clarification.

Beneficiaries in Cohort I of the Longitudinal Cohort were completing their fourth HMV survey. Prior HMV surveys may have prompted them to become more aware of key HMP features. This expected educational value of the HMV surveys could influence results for this group.

Bivariate analyses should be interpreted with caution as they may identify relationships between variables that are due to selection bias or confounding. In addition, sample size may limit the ability to detect more modest statistical associations. Some results from multivariate analyses could change when presented in the Summative Evaluation Report once additional variables (e.g., chronic conditions) have been added to the models as described below.

Future analyses for Summative Evaluation Report

The Summative Evaluation Report will include the following analyses:

- Additional multivariate analyses that incorporate claims-derived utilization variables (e.g., primary care visit patterns, evidence of chronic conditions, count of ED visits). We will examine the relationship between these claims-derived variables and key outcomes.
- Descriptions of responses to open-ended questions about reasons for ED utilization and barriers to receiving health services.
- Comparison of aggregate responses for cohorts at a similar point in their HMP enrollment (13-24 months of cumulative enrollment) will be operationalized by comparing responses from the initial HMV Cohort I survey vs. the initial HMV Cohort II survey (both included in the Longitudinal Cohort) vs. the New Cohort. We will use independent sample t-tests and multivariate regression models adjusting for age, gender, race/ethnicity, income, and chronic disease status within each cohort.
- Comparisons of individual beneficiaries' responses over time (Longitudinal Cohort only). For many items, respondents from Cohort I will have a total of four data points while respondents from Cohort II will have two data points. Comparisons over time will use mixed effects logistic regression models, adjusting for age, gender, race/ethnicity, region, income level, and chronic disease status.
    - Relationship between HRA completion and change in self-reported health over time (Hypothesis 1.3).
    - Change in employment and health-related barriers to employment over time (Hypothesis 6.1).

D.2.3. Interviews with beneficiaries

Data source

Interviews with beneficiaries were used to gain a richer understanding of the multifaceted ways that those enrolled in HMP use and benefit from their coverage. In July and August 2021, we conducted in-depth qualitative telephone interviews with a purposive sample of 30 beneficiaries who had completed a prior HMV survey and agreed to be recontacted. We provided participants

with a $50 gift card in recognition of their time. We obtained consent to record interviews and generated verbatim transcriptions of those recordings.

This data source was used to examine evaluation questions 1.5, 2.3, 2.4, 5.5, and 6.3.

Study population

Our sampling frame for the beneficiary interviews included individuals who completed previous HMV surveys in English and who gave permission to be recontacted. To ensure HMP policy-oriented questions would be relevant, we focused on prior HMV survey respondents enrolled in HMP-MC as of June 2021 which yielded 2,351 beneficiaries from whom interviewees could be sampled. For these 2,351 beneficiaries, we queried the Data Warehouse to obtain updated information on:

- Current address/region of residence
- Current FPL
- Evidence of HRA completion between January 2020 and June 2021
- Evidence of charge for contributions between January 2020 and June 2021
- Evidence of charge for co-pay between January 2020 and June 2021
- Evidence of healthy behavior reduction/adjustment between January 2020 and June 2021

We identified self-reported limited literacy and race and ethnicity from prior HMV survey responses.

Using the information above, we selected a purposive sample of beneficiaries for interviews, with the following intent:

- All had evidence of cost-sharing (contributions, co-pays, or both types)
- Variation in HRA completion (completion or non-completion)
- Variation in cost-sharing action related to healthy behavior (reduction/adjustment or none)
- Variation by sex, age, race/ethnicity, region, year of initial HMP enrollment, FPL group, low literacy

In all, 63 beneficiaries were contacted to participate in an interview and 30 beneficiaries were interviewed. As shown in Beneficiary Interviews Table 1, the sample reflected diversity in geographic region, income, age, gender, race/ethnicity, length of HMP enrollment, health conditions, FPL group, and experience with HMP features.

Beneficiary Interviews Table 1. Characteristics of HMP beneficiaries interviewed (N=30)

	N	%
FPL		
0-35%	6	20.0
36-99%	15	50.0
100-133%	9	30.0
Sex		
Female	16	53.3
Male	14	46.7
Age		
19-35	10	33.3

36-49	5	16.7
50-64	15	50.0
Race/ethnicity		
White	20	66.7
Black	6	20.0
Hispanic	2	6.7
Other	2	6.7
Region		
Detroit Metro	7	23.3
W/E/Central	9	30.0
UP/NW/NE	8	26.7
S Central/SW/SE	6	20.0
Employment status		
Employed and/or student	17	56.7
Not employed	13	43.3
Health literacy		
Low health literacy	7	23.3
Not low health literacy	23	76.7
HRA since January 2020		
Yes	16	53.3
No	14	46.7
Date of first HMP enrollment		
2014-2015	16	53.3
2016-2017	14	46.7

Evaluation period

Interviews were conducted in July and August 2021 by a single trained interviewer from the evaluation team. Interviews focused on beneficiaries' experiences with HMP, with an emphasis on recent years of enrollment.

Evaluation measures

We developed a structured interview guide (see the Survey Instrument and Interview Guide Appendix) to explore:

- How HMP has affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health
- Beneficiaries' understanding and perceptions of the quarterly MI Health Account statement, including terminology, layout, and description of payment options
- Barriers and facilitators to making payments
- How HMP has impacted beneficiaries' physical, mental, and oral health over time and their use of health care services
- How HMP has affected beneficiaries' financial and material well-being, including out-of-pocket costs for medical care and ability to work

Analytic methods

We used an inductive approach to analysis, with iterative coding using standard qualitative analysis techniques and Dedoose software. We reviewed summaries and transcripts of the initial interviews to develop an initial codebook while data collection was still in progress. Codes were modified and added over time to capture emerging themes. We applied the codes to the transcripts and questions about coding were resolved by consensus in team meetings. We analyzed content within these codes to identify key themes. A summary of the themes and illustrative quotes is included in the text of this report. A longer version with additional quotes is included in the Beneficiary Interviews Appendix.

Methodological limitations

Interview results are not representative of all HMP beneficiaries. Our purposive sample of 63 beneficiaries was drawn only from prior HMV survey respondents who were enrolled in HMP-MC during June 2021 and who had evidence of cost-share obligations. Specifically, results do not reflect beneficiaries who did not have cost-share obligations. We selected our sample to achieve diversity in geographic and sociodemographic characteristics.

The results of our interviews should be interpreted with awareness of several limitations of qualitative research. Not unlike quantitative survey research, there may be selection bias in that the perspectives of beneficiaries who agreed to participate may not be representative of those who declined or did not respond to the invitation. Some interviewees may have provided what they perceived as socially acceptable responses to the interviewer.

Future analyses for Summative Evaluation Report

A second set of interviews with beneficiaries will be included in the Summative Evaluation Report.

D.2.4. Interviews with providers

Data source

We interviewed a convenience sample of primary care providers (PCPs) serving beneficiaries enrolled in HMP. We recruited providers via email using self-reported email contact information from the PCP survey we conducted during the initial waiver period, as well as professional contacts in health systems across the state. From March to May 2022, members of the HMP evaluation team conducted 21 interviews, and participating PCPs were offered a $50 gift card in appreciation of their time. Interviews lasted 20-30 minutes and were recorded with the provider's permission. We generated transcriptions of those recordings.

This data source was used to examine evaluation question 1.6.

Study population

Our target population was physicians, nurse practitioners, and physician assistants currently serving as PCPs to HMP beneficiaries. We excluded providers who do not provide primary care.

Our 21 interview participants included 8 physicians, 9 nurse practitioners, and 4 physician assistants. Many have served as a PCP for HMP beneficiaries since the inception of the program in 2014, while several began serving as a PCP in the past 2 years. They practice at family medicine and internal medicine clinics representing all 10 prosperity regions in Michigan, with a mix of rural and urban locations. Their primary care practices are affiliated with three large tertiary care health systems, eight smaller health systems, four federally qualified health centers (FQHCs), and one rural health clinic. In addition to their PCP roles, 2 providers serve as site medical directors, another is involved in health system-wide quality improvement activities, and two have some clinical time allocated to urgent care settings.

Evaluation period

Interviews were conducted from March to May 2022 and focused on PCPs' experience with HMP, with an emphasis on 2019 to the present.

Evaluation measures

We developed a structured interview guide (see the Survey Instrument and Interview Guide Appendix) to explore PCPs' knowledge of and experience with HRA processes, including variation between health plans; perceptions of HMP beneficiaries' awareness of HRA processes and incentives; use of HRAs to facilitate conversations about health risks and healthy behaviors; and available services to support HMP beneficiaries' behavior change goals. We also explored strategies to decrease unnecessary emergency department utilization among HMP beneficiaries.

Analytic methods

We used contemporaneous notes and interview transcriptions to summarize PCP views, highlighting areas of concordance and disagreement. We identified key themes and illustrative quotes.

Methodological limitations

This relatively small number of PCP interviews cannot fully represent the perspectives and experiences of all PCPs who provide care to HMP beneficiaries. However, the diversity of demographic and practice characteristics in our sample helps to mitigate this potential limitation.

Future analyses for Summative Evaluation Report

These are the only PCP interviews that will be conducted in this evaluation. No additional analyses based on this data source are planned for the Summative Evaluation Report.

D.2.5. Interviews with key informants

Data source

For evaluation questions related to the overall costs of HMP, we interviewed Medicaid officials within MDHHS. Three group interviews were conducted in March and April 2022, lasting 30-60 minutes each. The interviews were recorded and transcribed. Following the interviews, Medicaid officials provided documents containing additional information related to the evaluation questions.

For the evaluation question related to the broad social impact of HMP, we interviewed current and former leaders from governmental and non-governmental health and human services organizations who were directly involved with planning and/or implementing HMP. Interviews were conducted between December 2021 and February 2022 and lasted 30-45 minutes. Interview recordings were used to develop transcripts and summaries.

This data source was used to examine evaluation questions 7.1 and 7.2 (administrative and medical costs of HMP, respectively) and 7.4 (social impact of HMP).

Study population

For evaluation questions related to the overall costs of HMP, we interviewed eight Medicaid officials from Policy, Operations and Actuarial Services, Managed Care Plan Division, Customer Service Division, and Budget and Financing Division.

For evaluation questions related to the broad social impact of HMP, we interviewed 23 current and former leaders and key staff representing a variety of areas within MDHHS; health plans, health system and provider organizations, including safety net providers; and advocacy organizations; and coalitions.

Evaluation period

The key informant interviews focused on the costs and social impact of HMP from 2014 to the present.

Evaluation measures

For evaluation questions related to the costs of HMP, we developed a semi-structured interview guide (see the Survey Instrument and Interview Guide Appendix) to explore:

- Administrative processes and contracts specific to HMP (relative to other Medicaid benefit plans)
- Extent to which HMP-specific administrative costs can be identified
- Trends over time in HMP administrative processes, contracts or costs
- Extent to which HMP-specific administrative processes or contracts have been used for other purposes/populations

Following the interview, key informants provided documents showing the annual capitation rate summary for HMP and two traditional Medicaid populations: Temporary Assistance for Needy Families (TANF) and Aged, Blind and Disabled (ABAD). The TANF population primarily includes children and their parents who qualify based on income and asset tests. The ABAD population includes primarily disabled individuals in all age cohorts. The capitation rate summary included base medical claims costs as well as non-benefit expense load (excluding supplemental payments and taxes).

For evaluation questions related to the broad social impact of HMP, we developed a semi-structured interview guide (see the Survey Instrument and Interview Guide Appendix) to explore how HMP:

- Facilitated or supported new or expanded initiatives and innovations in HMP enrollment
- Contributed to the sustainability of innovative policies and services addressing SDOH
- Promoted positive health outcomes, greater independence, and improved quality of life
- Facilitated innovative connections and partnerships, within MDHHS and among MDHHS, health plans, safety net providers, health systems and community-based organizations

Analytic methods

For evaluation questions related to the costs of HMP, we reviewed documents showing the annual capitation rate summary for HMP and two traditional Medicaid populations (TANF and ABAD). For question 7.1, we compared actual dollar amount and percent change across years for administrative costs (non-benefit expense load). For question 7.2, we compared capitation rates based on medical claims.

For evaluation questions related to the broad social impact of HMP, we conducted thematic analysis of the interviews. We identified major themes and subthemes related to the research question and selected quotes from the interviews that illustrated these themes. A summary of the themes and illustrative quotes is included in the text of this report. A longer version with additional quotes is included in the Key Informant Interviews (Social Impact of HMP) Appendix.

Methodological limitations

For evaluation questions related to the costs of HMP, a major limitation is the inability to distinguish administrative costs for HMP from the administrative costs of the broader program. Medicaid staff are not detailed to HMP-specific tasks exclusively, and most administrative tasks are applicable to more than one benefit plan. Similarly, most administrative tasks included in the contract for the beneficiary call center vendor pertain to all Medicaid beneficiaries, not HMP exclusively. Some administrative cost data were available for vendor costs related to HRAs and MI Health Accounts. Thus, we could summarize these costs but were unable to conduct a detailed analysis of HMP administrative costs for Medicaid staff and the beneficiary call center vendor.

Medicaid staff were able to provide detail about managed care capitation payments over time, including comparison data for the TANF and ABAD populations. Our original evaluation plan called for comparison of trends in age- and sex-adjusted capitation rates for HMP vs traditional

Medicaid. However, the comparison data do not differentiate adults from children and do not include rates by sex. Thus, we limited our analysis to overall trends in capitation rates for administrative and medical costs.

Medicaid staff also provided limited information from an annual survey of health plans about their administrative costs. This effort, which started in FY2016, contains proprietary information and is managed by the state's actuarial firm. We received de-identified information about plan-reported changes in administrative costs from FY2019 to FY2020; we are unable to comment on plan-reported costs in any other years.

Finally, capitation rates for FY2020 included costs for health plans to implement work requirements in January 2020, as required by the Michigan legislature. However, work requirements were suspended by a federal district judge in March 2020. We were unable to distinguish FY2020 administrative costs for work requirements vs other HMP features.

For evaluation questions related to the broad social impact of HMP, our key informants do not represent all potential experiences and perspectives of leaders or employees of the sectors they work within. Also, while the key informants described the impact of HMP on beneficiaries, they were expressing their own perspectives, not those of HMP beneficiaries or other stakeholders. While we found that interviewees shared both successes and challenges quite openly, their direct involvement in the program could lead some key informants to share views that put HMP in a more favorable light, or political or other sensitivities could hinder what they share, given their positions and stakes in the program's future. Nonetheless, we found that interviewees were quite candid, sharing both challenges and successes of HMP.

Future analyses for Summative Evaluation Report

For evaluation questions related to the costs of HMP, we will conduct additional interviews and request capitation rate summaries focused on later years. We will use this additional information to update cost trends for the Summative Evaluation Report.

For evaluation questions related to the broad social impact of HMP, this is the only set of key informant interviews that will be conducted in this evaluation. No additional analyses based on this data source are planned for the Summative Evaluation Report.

D.2.6. Credit report data

Data source

We will use Experian credit report data from 2013–2021 to examine financial outcomes for HMP beneficiaries. Our data linkage procedure closely followed that used in a previous study led by a U-M faculty member in IHPI that examined financial outcomes for HMP beneficiaries.[16] Data from Experian was matched with HMP administrative data using name, address, and Social Security number. To preserve the confidentiality of HMP beneficiaries' identities, the matching

[16] Miller, S., Hu, L., Kaestner, R., Mazumder, B., & Wong, A. (2018). The ACA Medicaid Expansion in Michigan and Financial Health. NBER Working Paper No. 25053.

process utilized a double-blind procedure. Evaluation team members at U-M extracted the identifying information on HMP beneficiaries and appended to this dataset a randomly selected sample of Michigan residents drawn from an unrelated state health database. These additional observations served as "masking" observations. A file consisting of personal information for both HMP beneficiaries and the masking observations was provided to Experian, which then performed the final step of the data linkage and delivered the credit report data to our team with all identifying information removed. Because of the masking procedure, Experian was unable to distinguish which observations were associated with HMP beneficiaries.

This data source will be used to examine evaluation question 6.2.

Target and comparison populations

Our target population includes all HMP beneficiaries ages 26-61 enrolled for any period of time (see specific enrollment periods below). We excluded individuals ≥62 years old at their first month of enrollment in HMP who would have aged into Medicare within 3 years of enrollment. We also excluded individuals who were recorded as deceased within their first three years of HMP enrollment.

We plan to examine credit outcomes separately for four cohorts of HMP beneficiaries, including:

1) "Early cohort": Individuals who enrolled between April 2014 and December 2015.
2) "Later cohort": Individuals who enrolled in HMP in 2018-2019.
3) "2020 cohort": Individuals who enrolled in HMP between March 2020 and March 2021.
4) "Disenrollment cohort": Individuals who disenrolled from HMP after a period of continuous enrollment.

To obtain a comparison population for the HMP beneficiaries, we also obtained credit report data for a randomly chosen sample of individuals who were residents of non-expansion states in January 2014 from the Experian database. Non-expansion states were states that had not expanded Medicaid as of mid-2021 and included MO, WI, KS, WY, SD, TX, MS, TN, AL, GA, SC, NC, and FL. To choose as closely matched a comparison population as possible for the HMP beneficiary population, these individuals were also required to be between the ages of 26 and 61 and have an estimated income of <$35,000/year. The estimated income used to select the sample is a proprietary income measure from Experian that is imputed from credit report data and has been validated against tax filing data for a sample of the Experian database.

Descriptive demographics and enrollment characteristics of the early enrollment cohort and the random sample comparison group are available in the Credit Report Data Appendix.

Evaluation period

We obtained semi-annual files (January and July) of credit report data from 2013–2021 for our target and comparison populations.

Evaluation measures

The credit report data include several measures that have been used in previous studies of financial distress. We first will examine the Vantage 4.0 credit score. This is a proprietary score created by Experian that is analogous to the FICO credit score and ranges between 300-800. Lenders use this measure when evaluating whether to extend credit and at what interest rate. As such, it is a concise summary of an individual's access to credit markets. We will analyze credit score as a continuous variable as well as the probability that an individual has a credit score in the "subprime" (≤600) range.

There are also several debt-related measures in the credit data. One measure is the total amount of debt that has been sent by an original creditor to a third-party collection agency. This debt could represent unpaid bills or severely derogatory credit accounts. The credit reporting agency data provide details on the type of third-party collections. Medical bills in collections are reported separately from other sources of debt in collections and are of particular interest. Another indicator of financial distress is debt on credit accounts that is 30 days or more past due but not yet sent to a collection agency. The amount of credit that is in collections and the amount past due but not yet in collections can be summed to form the total amount of debt on which a consumer is delinquent.

Another marker of financial difficulties that we will examine is the overall balance to credit limit ratio on a consumer's credit cards. While having a credit card balance that exceeds one's total credit limit is not a measure of delinquency *per se*, it can be a sign that the consumer is having difficulty spending less than their card limit. This may be a precursor to delinquent debt. We will also analyze the occurrence of personal bankruptcy in the past 24 months as a measure of severe financial distress.

Credit Report Data Table 1 summarizes the outcomes we will examine in this analysis.

Credit Report Data Table 1. Credit outcomes of HMP beneficiaries

Continuous outcomes	Binary outcomes
Vantage 4.0 credit score	Subprime credit score (≤600)
Total delinquent debt	Any delinquent debt
Total debt in collections	Any debt in collections
Medical debt in collections	Non-medical debt in collections
Balance-to-credit limit ratio	Bankruptcy in the past 2 years

Analytic methods

The analyses described here are designed exclusively for the early cohort analysis. Similar but not identical analyses for other cohorts are also planned.

For all analyses, we will use a difference-in-differences event study analysis comparing differential changes over time between the treatment group (HMP beneficiaries) and the comparison group. This type of model is often referred to as a "two-way fixed effects" (TWFE) difference-in-differences model. We will use this specification for both continuous and binary

outcomes. Binary outcomes will be estimated using linear probability models due to the large computational requirements for the regression analyses.

Individual-level covariates will include the following time-invariant measures, all measured as of January 2014: imputed income, gender, marital status, education level, occupation code, homeowner (yes/no), and renter (yes/no). These covariates are available from Experian for both our target and comparison groups. Gender assignment is based on name evaluation software, and some records are coded as gender unknown due to ambiguous or unisex names. Occupation code is based on self-reported and known sources such as state agencies. Education level is compiled from self-reported surveys, derived based on occupation information, or imputed by Experian using predictive models. Experian's predictive model for education level includes a flag for their model's confidence in the result (unknown, likely, or extremely likely), and this confidence level is also included as a separate categorical individual-level covariate.

We will use time-invariant covariates because these covariates are only available to us in the periods January 2014 and January 2020, and their subsequent values in January 2020 may well be impacted by the presence or absence of health insurance and therefore should be excluded as inappropriate controls.

Additional details regarding our planned regression models, as well as planned sensitivity analyses and alternative approaches, are available in the Credit Report Data Appendix**.**

Methodological limitations

The key assumption of this analysis is that the comparison group of low-income individuals from non-expansion states provides an appropriate counterfactual for HMP beneficiaries. That is, in the absence of enrolling in HMP, credit outcomes among HMP beneficiaries would have paralleled those of the comparison group. This assumption can never be directly tested, and time-varying confounding variables may be correlated with both HMP enrollment and also credit outcomes, which could bias the effect estimates. We will test for potential sources of this bias by employing the sensitivity analyses described in the Credit Report Data Appendix.

In addition, the use of credit data to study financial outcomes among HMP beneficiaries has other limitations. The data reported on credit reports can change over time based on regulatory changes; during the period of our analysis, there were changes in reporting of medical debt in collections that imposed a new six-month waiting period before medical debt in collections could be reported on consumer credit reports. These changes were implemented nationally and therefore would affect our target and comparison populations similarly, so we would not expect these changes to bias the results.

Future analyses for Summative Evaluation Report

The credit report data received from Experian have some inconsistencies that we are currently resolving with Experian staff and are not yet ready to include in this report, Thus, the Summative Evaluation Report will include the results of the difference-in-differences analyses described above for all cohorts.

D.2.7. Behavioral Risk Factor Surveillance System (BRFSS)

Data source

We used national survey data from the Behavioral Risk Factor Surveillance System (BRFSS)[17] to estimate changes in health behaviors and health status at the population level. The BRFSS is a nationally representative telephone survey of U.S. adults conducted at the state level and overseen by the Centers for Disease Control & Prevention (CDC). This state-based sampling allows comparisons of changes in health behaviors and health status among low-income Michigan residents to low-income residents in Medicaid expansion states without a healthy behaviors incentive or requirement, and to low-income residents in states that did not expand Medicaid. Household income as a proportion of the federal poverty line (FPL) for each respondent was estimated from income and household variables available in the BRFSS.

This data source was used to examine evaluation question 1.1.

Target and comparison populations

To focus on individuals who were likely to be eligible for HMP, we included a target group of Michigan adults ages 18 to 64 (the BRFSS age categories do not allow us to separate individuals age 18 from individuals 19 and older) with reported income equal to or below 138 percent of the FPL. Similar to prior work,[18] we assessed this group against two comparison groups: (1) low-income adults ages 18 to 64 with incomes less than or equal to 138 percent of the FPL who reside in other states that expanded Medicaid but did not include a provision for a healthy behaviors incentive or requirement; and (2) low-income adults ages 18 to 64 with incomes less than or equal to 138 percent of the FPL who reside in states that did not expand Medicaid. Thus, states other than Michigan that expanded Medicaid with a healthy behavior provision (i.e., Indiana, Iowa) were excluded from analysis. See BRFSS Appendix Table 1 for characteristics of individuals in Michigan and comparison states.

We also excluded states that implemented separate state Medicaid expansions prior to 2014 (Massachusetts, District of Columbia, Vermont, Delaware, New York, California, Connecticut, Minnesota, New Jersey, Wisconsin) or that expanded Medicaid between 2017 and 2019 (Maine, Virginia), as inclusion of these states threatened the validity of the parallel-trends assumption underlying our difference-in-differences models. States that expanded after 2020 (Utah, Nebraska, Oklahoma, Missouri) were classified as non-expansion states given that almost all data collected were during the non-expansion period. State classifications and exclusions are summarized in BRFSS Appendix Table 2.

Evaluation period

The evaluation period is 2011-2020.

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[17] BRFSS (Behavior Risk Factor Surveillance System, CDC)

[18] Nelson, D.B., Sommers, B.D., Singer, P.M., Arntson, E.K., & Tipirneni, R. (2020). Changes in Coverage, Access, and Health Following Implementation of Healthy Behavior Incentive Medicaid Expansions vs. Traditional Medicaid Expansions. *J Gen Intern Med, 35*, 2521–2528.

Evaluation measures

Health outcome variables in the analysis included:

- General health status (Excellent, Very good, Good, Fair, Poor), dichotomized as Excellent/Very good health vs. not
- Functional limitations due to poor physical health, due to poor mental health, or due to either poor physical or mental health (number of days per month)

Health behavior variables in the analysis included variables in the following three categories:

Unhealthy lifestyle behaviors
- Smoking status (quit smoking in the past year, current smoker[a])
- Alcohol use (binge drinking, heavy alcohol use[a])

Healthy lifestyle behaviors
- Physical activity/exercise (any physical activity, minutes per week[c])
- Fruit and vegetable consumption[c] (intake per day)

Preventive health services
- Routine checkup in past year
- Cholesterol screening[c] (ever had)
- HIV screening (ever received, received in the past year)
- Cancer screening: colorectal cancer screening including colonoscopy, sigmoidoscopy, or stool test[b] (among adults ages 50-75), breast cancer screening with mammogram[b] (among women ages 50-75), and cervical cancer screening with Pap smear[b] (among women ages 21-65)
- Immunizations: Flu vaccine in the past year

[a]Did not meet parallel trends test and thus excluded from difference-in-difference analysis.
[b]Variables assessed every other year in BRFSS, with baseline pre-period year 2012 and final year of analysis 2020.
[c]Variables assessed every other year in BRFSS, with baseline pre-period year 2013 and final analysis year 2019.

Analytic methods

We used a difference-in-differences analytic approach, comparing trends in health and health behavior outcomes in Michigan to trends in the other expansion states without a similar healthy behavior waiver and to non-expansion states. The pre-period included the years 2011-2014 (prior to implementation of the first HMP waiver in 2014), and the post-period included the years 2015-2020. The regression model included fixed effects for state and quarter such that the model accounted for systematic (non-random) differences within states and quarters. The models also adjusted for the following covariates: age, gender, race/ethnicity, marital status, education, income, employment status, and whether the respondent was part of the BRFSS cell phone sample. We applied the BRFSS survey weights to all analyses. Post-regression average marginal effects were used to estimate the values of each variable before and after HMP implementation. To meet the assumptions of the difference-in-differences analysis, we assessed for parallel trends

between target and comparison groups among all outcomes in the pre-period. The parallel trends assumption was met for all measures except for the current smoker and heavy alcohol use variables; therefore, these two variables were excluded from difference-in-differences analysis.

Methodological limitations

The COVID-19 pandemic likely impacted secular trends in Michigan as well as in comparison states. The inclusion of time fixed effects in our models may partially but not completely mitigate this potential bias. Given higher enrollment into Medicaid during the PHE and economic downturn starting in 2020, sample selection may also have changed before and during the pandemic, despite using the same sample inclusion criteria. Another concern may be lower survey responses during the pandemic; however, a recent HHS report suggests minimal disruptions in BRFSS data collection during this time period.[19] The analyses may also be limited by power given the comparison of low-income adults from a single state to multiple states; this would bias results towards the null hypothesis of finding no effect of HMP on outcomes.

Future analyses for Summative Evaluation Report

In the Summative Evaluation Report, we will include two more years of data (2021 and 2022) in the analysis. As the two final years fall after the start of the COVID-19 pandemic, we plan to conduct robustness checks by examining target and comparison group characteristics before and after 2020. We will also conduct sensitivity analyses assessing trends in health and health behaviors before and after 2020 to support the parallel trends assumption of difference-in-differences analyses.

D.2.8. American Community Survey (ACS)

Data source

The data for the analysis of insurance coverage come from the American Community Survey (ACS), a nationally representative survey conducted annually by the Census Bureau.[20] The sample size in the ACS public release is approximately 3 million individuals in each year. Our analysis is limited to adults ages 19 through 64 since this is the group potentially eligible for HMP. Separate Medicaid eligibility rules apply for children ages 18 and younger and for adults ages 65 and older. Dropping observations for individuals younger than 19 or older than 64 yields approximately 1.8 million remaining observations in each year. Of these, approximately 58,000 in each year are in Michigan, while about 1.1 million observations are in other states that have expanded their Medicaid programs and about 690,000 are in states that have not expanded Medicaid. We dropped approximately 4 percent of all observations because they are missing data on family income.

Since 2008, the ACS has included a question that asks respondents to indicate sources of current health insurance for every household member.[21] Respondents may mark more than one option.

[19] Impact of the COVID-19 Pandemic on Major HHS Data Systems. ASPE Issue Paper. August 2021.
[20] Technical documentation for the ACS
[21] Additional information about the ACS health insurance measure

We use these data to create binary indicators of four different insurance outcomes: Medicaid or related public coverage, private non-group coverage, employer-sponsored coverage (including TRICARE), and uninsured. Note that with the exception of uninsured, these outcomes are not mutually exclusive; someone might have, for example, both private non-group coverage and Medicaid. However, this is relatively unusual. Note also that there are additional sources of coverage – primarily Medicare for individuals under age 65 who are disabled or have end-stage renal disease – which we do not discuss in this report.

Additional ACS variables in some of our analyses include family income relative to poverty, race/ethnicity (white non-Hispanic, black non-Hispanic, other non-Hispanic, Asian non-Hispanic, and Hispanic [any race]), education, and employment status (currently working for pay or not working). We also merge unemployment rate data from the Bureau of Labor Statistics to ACS observations at the state-year level.[22]

This data source was used to examine evaluation question 4.1.

Target and comparison populations

For the purpose of understanding the impact of Medicaid expansion in Michigan, we compared outcomes in Michigan to outcomes in the 14 states that had not expanded Medicaid under the ACA as of December 2020. See the ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of states categorized as non-expansion states in this analysis.

For the purpose of examining the impact of Michigan's waiver-based expansion, we compared outcomes in Michigan to outcomes in the 22 states that expanded Medicaid under the ACA in January 2014 without a waiver similar to Michigan in its benefit, co-payment, and healthy behavior provisions. See the ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of these traditional expansion states.

Evaluation period

The evaluation period is 2010 to 2020.

Evaluation measures

The outcomes studied are the fraction of adults ages 19 to 64 with four types of insurance coverage: no coverage, Medicaid, private non-group insurance, and employer-sponsored insurance.

Analytic methods

We described trends over time in Michigan versus the comparison populations for the period 2008 through 2020. We also fit difference-in-differences regression models for the period 2010 through 2020, which summarize the relative change over time in outcomes in Michigan

[22] Specifically, we use series LNS14000000 from the Bureau of Labor Statistics.

compared with the two separate comparison groups before and after the implementation of HMP in 2014. The specification for the difference-in-differences models is the following:

$$(1)\ Y_{ist} = \alpha_0 + \sum_{2011}^{2020} \alpha_{1t} YEAR_t + \alpha_2 \cdot (YEAR_t \geq 2014) \cdot MICHIGAN + \alpha_3 \cdot STATE + \alpha_4 X_{ist} + \alpha_5 UNEMPLOYMENT\ RATE_{st} + e_{ist}$$

The vector X_{ist} includes the individual-level controls for gender and marital status, race/ethnicity, age, employment status, and education. Both descriptive figures and difference-in-difference regression models are presented for the total adult population and the subset of adults in households with income below 138% of the federal poverty level.

Methodological limitations

The analysis relies on the assumption that in the absence of the interventions being studied, the trend in outcomes in Michigan would have been similar to the trend in outcomes observed in the comparison states. For example, to examine the impact of Medicaid expansion in Michigan, we assume that trends in Michigan would have been similar to trends in non-expansion states had Michigan not expanded its Medicaid program. Similarly, to examine the impact of Michigan's waiver-based expansion, we assume that trends in Michigan would have been similar to trends in traditional expansion states had Michigan taken that approach. These assumptions cannot be directly tested, though the similarity of trends across the three groups prior to 2014 suggest that these assumptions are valid.

Future analyses for Summative Evaluation Report

The Summative Evaluation Report will include the same type of analyses, updated with the most recent data available at that time.

D.2.9. HCUP Fast Stats inpatient discharge data

Data source

Data on inpatient payer mix are from the FastStats program of the Agency for Healthcare Research and Quality Healthcare Cost and Utilization Project (HCUP). The data were obtained from the HCUP website.[23] The payer mix data are reported on a quarterly basis.

The Fast Stats program aggregates state-level data contributed by states to HCUP. Not all states provide all types of data to HCUP in all years. In the years that we analyze in this report, there are no data from Alabama; Connecticut; Washington, DC; Idaho; and New Hampshire.

This data source was used to examine evaluation question 7.3.

[23] HCUP website

Target and comparison populations

For the purpose of understanding the impact of Medicaid expansion in Michigan, we compared outcomes in Michigan to outcomes in the 14 states that had not expanded Medicaid under the ACA as of December 2020. See ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of states categorized as non-expansion states in this analysis.

For the purpose of understanding the impact of Michigan's waiver-based expansion, we compared outcomes in Michigan to outcomes in the 22 states that expanded Medicaid under the ACA in 2014 without a waiver similar to Michigan in its benefit, co-payment, and healthy behavior provisions. See ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of these traditional expansion states.

Evaluation period

The evaluation period is from 2003 to 2020.

Evaluation measures

The evaluation measures are the percentage of adult (ages 19-64) inpatient hospital discharges by three sources of payment: Medicaid, self-pay, and private insurance.

Analytic methods

We describe trends over time in Michigan versus the comparison populations. We also fit difference-in-differences regression models, weighted by population at the state/year level, which summarize the relative change over time in outcomes in Michigan compared with the two separate comparison groups.

Methodological limitations

The HCUP data have some limitations. As noted, not all states are represented in the data. In addition, for adults ages 19-64, the data do not include individuals with Medicare coverage.

The analysis relies on the assumption that in the absence of the interventions being studied, the trend in outcomes in Michigan would have been similar to the trend in outcomes observed in the comparison states. For example, to examine the impact of Medicaid expansion in Michigan, we assume that trends in Michigan would have been similar to trends in non-expansion states had Michigan not expanded its Medicaid program. Similarly, to examine the impact of Michigan's waiver-based expansion, we assume that trends in Michigan would have been similar to trends in traditional expansion states had Michigan taken that approach. These assumptions cannot be directly tested, though the similarity of trends across the three groups prior to 2014 suggest that these assumptions are valid.

Future analyses for Summative Evaluation Report

The Summative Evaluation Report will include the same type of analyses, updated with the most recent data available at that time.

D.2.10. Medicare cost reports

Data source

All hospitals that receive payments from the Medicare program are required by CMS to submit cost report data annually. The data are maintained by CMS in the Healthcare Provider Cost Reporting Information System (HCRIS). We obtained a cleaned version of these data from the RAND Corporation (hospitaldatasets.org). Hospitals report data on a fiscal year basis. RAND creates analytic files that organize the data on either a fiscal year or calendar year basis. Our analysis is based on the calendar year version of the data.

This data source was used to examine evaluation question 7.3.

Target and comparison populations

The HCRIS data include general acute care hospitals and critical access hospitals located in the 50 states and District of Columbia.

To understand the impact of Medicaid expansion in Michigan, we compared outcomes in Michigan to outcomes in the 14 states that had not expanded Medicaid under the ACA as of December 2020. See ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of states categorized as non-expansion states in this analysis.

To understand the impact of Michigan's waiver-based expansion, we compared outcomes in Michigan to outcomes in the 22 states that expanded Medicaid under the ACA in 2014 without a waiver similar to Michigan in its benefit, co-payment, and healthy behavior provisions. See ACS, HCUP, and Medicare Cost Report Appendix Table 1 for a list of these expansion states.

Evaluation period

The evaluation period is 2011 to 2020.

Evaluation measures

The evaluation measures are hospital uncompensated care expressed in dollars ($2020) and as a percentage of total hospital expenditures.

Analytic methods

We described trends over time in Michigan versus the comparison populations. We also fit difference-in-differences regression models, which summarize the relative change over time in outcomes in Michigan compared with the two separate comparison groups.

Methodological limitations

The Medicare cost report data have some limitations relevant to our analysis. As noted, hospitals report data on a fiscal year basis. The fact that the timing of the fiscal year varies across hospitals creates two challenges for our analysis. The first is that the data reported to CMS in a given year pertain to different periods for different hospitals. The second is that most states that expanded Medicaid did so as of January 1, 2014. For hospitals whose fiscal years correspond to the calendar year, this timing allows for a clean definition of the pre- and post-expansion period. In contrast, for a hospital whose fiscal year runs from July to June, FY2014 contains six months of pre-expansion data and six months of post-expansion data. Because HMP was established in April 2014, FY2014 data from most Michigan hospitals include a mix of pre- and post-HMP data, with the exact mix varying depending on the timing of the fiscal year.

RAND creates the calendar year version of the data that we use by averaging data across adjacent fiscal years. This solves the problem of data from different hospitals pertaining to different years. However, this procedure further smooths the data around the time of HMP implementation. For a Michigan hospital whose fiscal year runs from July 1 to June 30. FY2014 data for that hospital will include 9 months of pre-HMP experience (July 2013 through March 2014) and three months of post-HMP data (April 2014 through June 2014). FY2013 will be entirely in the pre-HMP period. Due to the way the calendar year observations are formed, both the CY2013 and CY2014 data will include a mix of pre- and post-HMP experience.

Another known issue with the HCRIS data is potential errors in reporting that result in extreme values for certain variables in certain years. RAND uses an algorithm for identifying likely errors and replacing them with interpolated values.

The analysis relies on the assumption that in the absence of the interventions being studied, the trend in outcomes in Michigan would have been similar to the trend in outcomes observed in the comparison states. For example, to examine the impact of Medicaid expansion in Michigan, we assume that trends in Michigan would have been similar to trends in non-expansion states had Michigan not expanded its Medicaid program. Similarly, to examine the impact of Michigan's waiver-based expansion, we assume that trends in Michigan would have been similar to trends in traditional expansion states had Michigan taken that approach. These assumptions cannot be directly tested, though the similarity of trends across the three groups prior to 2014 suggest that these assumptions are valid.

Future analyses for Summative Evaluation Report

The Summative Evaluation Report will include the same type of analyses, updated with the most recent data at that time.

E. Methodological Limitations

Methodological limitations specific to each data source are described above.

F. Results

The results presented in this Interim Evaluation Report include data available to the evaluation team and summarized as of May 2022. The results are organized by evaluation question and corresponding hypotheses.

F.1. Healthy Behaviors Incentives Program

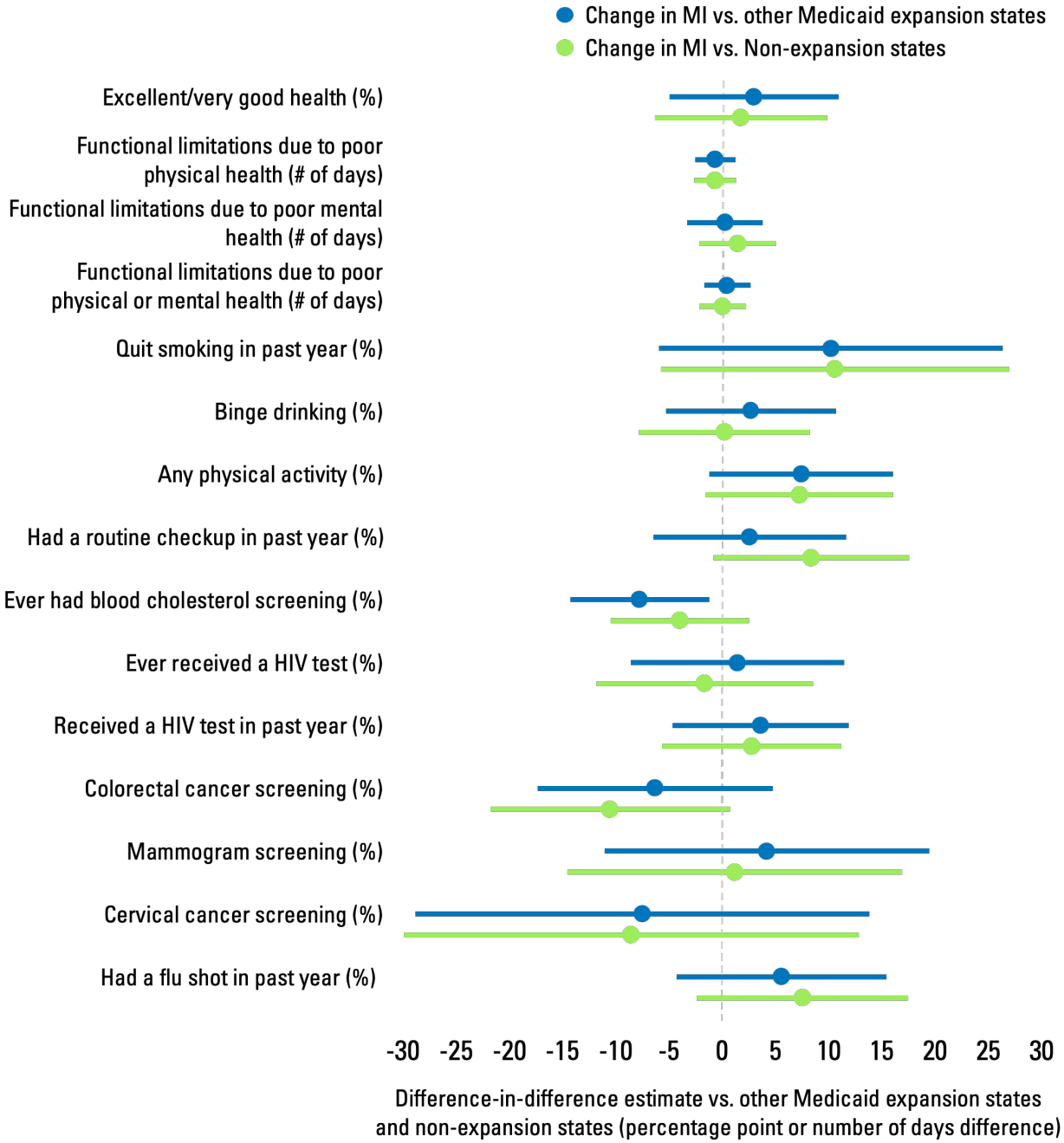
Evaluation question 1.1: How has the health and healthy behavior engagement among Michigan adults changed since introduction of HMP and its Healthy Behaviors Incentives Program?
Hypothesis 1.1: Health status will improve and healthy behaviors will increase over time among income-eligible adults in Michigan compared with similar adults in comparison states.
Data source: Behavioral Risk Factor Surveillance System (BRFSS) (as described in D.2.7)

Results

In Michigan, the following health and health behavior measures improved significantly between the years prior to HMP implementation and the last year of analysis (BRFSS Appendix Table 1.1.1): percent reporting excellent or very good health (increase of 8 percentage points), functional limitation due to poor physical health (decrease of 2 poor health days in the past 30 days), routine checkup in past year (increase of 16 percentage points), and flu shot in past year (increase of10 percentage points). However, cervical cancer screening per recommended guidelines worsened (decrease of 22 percentage points).

In difference-in-difference (DID) analyses (BRFSS Appendix Table 1.1.2, Figure 1.1.A), no statistically significant change was noted in most health or health behavior measures by the final year of analysis in Michigan, compared to other Medicaid expansion states and to non-expansion states. One notable exception was there was a statistically significant increase of 16 percentage points in having a routine checkup in Michigan compared to non-expansion states and 10 percentage points compared to other Medicaid expansion states in 2015, the year after HMP was implemented. However, this significant difference compared to the other state groups was not sustained in subsequent years of the program. A few health and health behavior measures (binge drinking, physical activity, fruit intake, cholesterol screening) showed statistically significant worsening in individual years compared to the other state groups, but most health behavior measures showed no significant difference by the final year of analysis.

Figure 1.1.A. Comparison of changes in health and health behavior outcomes in Michigan vs. other expansion states and non-expansion states



Summary of response to evaluation question 1.1

Aggregate health or health behavior measures did not improve for low-income adults in Michigan after HMP implementation compared to other Medicaid expansion and non-expansion states, except for a large increase in the rate of routine checkups in Michigan in 2015. However, this increase was not sustained in subsequent years.

Evaluation question 1.2: What is the association between beneficiary knowledge of the Healthy Behaviors Incentives Program and efforts to maintain or improve health?
Hypothesis 1.2: Engagement in efforts to maintain or improve health will be higher among beneficiaries who report knowledge of the HMP Healthy Behaviors Incentives Program.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

The HMP Healthy Behaviors Incentives Program includes financial incentives for completion of an annual HRA in the form of reduced cost-share obligations. However, among the 4,082 HMV survey respondents, only 28.8% knew they could get a reduction in the amount they had to pay if they completed an HRA.

Beneficiaries who knew they could receive a reduction in the amount they have to pay if they complete an HRA reported a greater frequency of healthy behaviors and limiting unhealthy behaviors, and greater self-efficacy in managing their own health, compared to their counterparts who were unaware of the HRA financial incentives (Table 1.2.A). This relationship was confirmed in multivariate analysis (Beneficiary Survey Appendix Table 1.2.3).

Table 1.2.A. Health behavior and self-efficacy by knowledge of financial incentive for HRA completion

	I may get a reduction in the amount I have to pay if I complete an HRA	
	Yes Mean	**No/Don't Know Mean**
Healthy behavior score (0-2)**	1.38	1.27
Limiting unhealthy behavior score (0-4)**	2.92	2.72
Self-efficacy score (0-5)*	3.57	3.38

Adjusted Wald test results, *p<.05, **p<.01, ***p<.001

Additional data related to this hypothesis are presented in Beneficiary Survey Appendix Tables 1.2.1-1.2.6.

Summary of response to evaluation question 1.2

Beneficiaries with knowledge of the financial incentives for HRA completion reported greater frequency of healthy behaviors and limiting unhealthy behaviors, and greater self-efficacy in taking actions to maintain or improve their health, compared to beneficiaries who were not aware of HRA financial incentives.

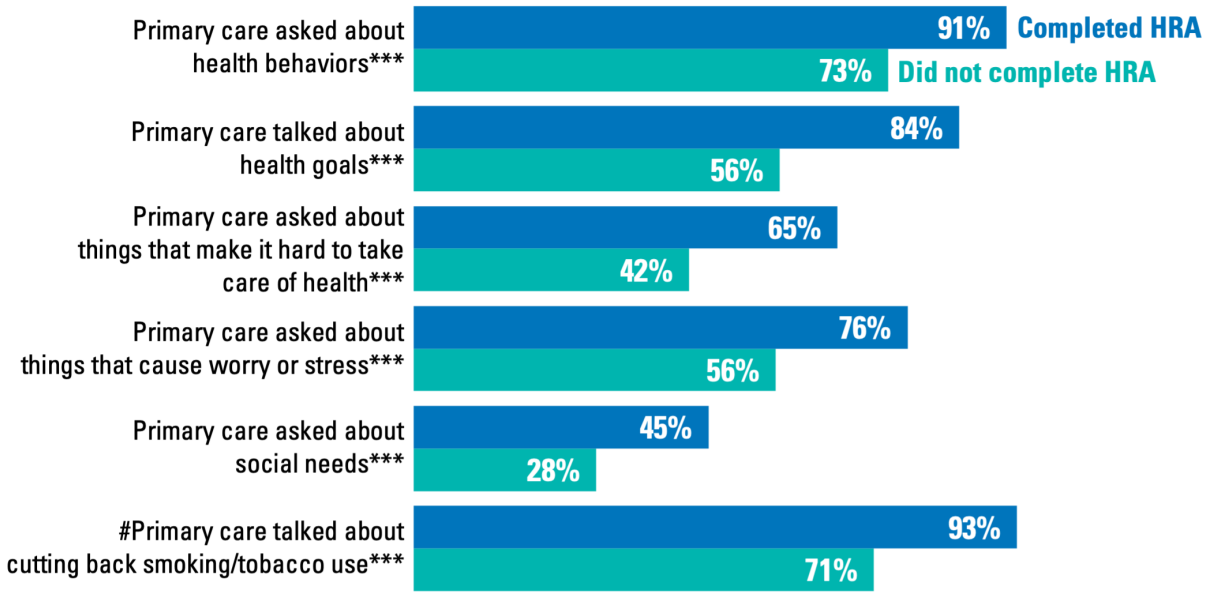
Evaluation question 1.3: Is HRA completion associated with improved health status and health behaviors?
Hypothesis 1.3: Beneficiaries who complete an HRA will report improvement in health status and health behaviors compared to beneficiaries who do not complete an HRA.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

Of the 4,082 HMV survey respondents, 9.1% did not report having a PCP and 17.6% had a PCP but had not had an appointment in the past 12 months. The remaining 73.4% reported having a PCP appointment in the past year, of which about half recalled completing an HRA with their PCP (37.6% of overall population) and the others (35.8%) did not (Beneficiary Survey Appendix Table 1.3.1).

Beneficiaries who had a primary care visit in the past year were asked to recall if the visit included several elements that would be consistent with a typical discussion about the HRA. Beneficiaries who reported completing an HRA were more likely to report that their primary care visit included questions about health behaviors, discussion of health goals, challenges with managing their own health, life stressors, and smoking cessation (if applicable), compared to beneficiaries who did not report HRA completion (Figure 1.3.A).

Figure 1.3.A. Reported topics during primary care visit in past year, by self-reported HRA status



***p<.001

#Includes respondents who reported using tobacco in past 30 days

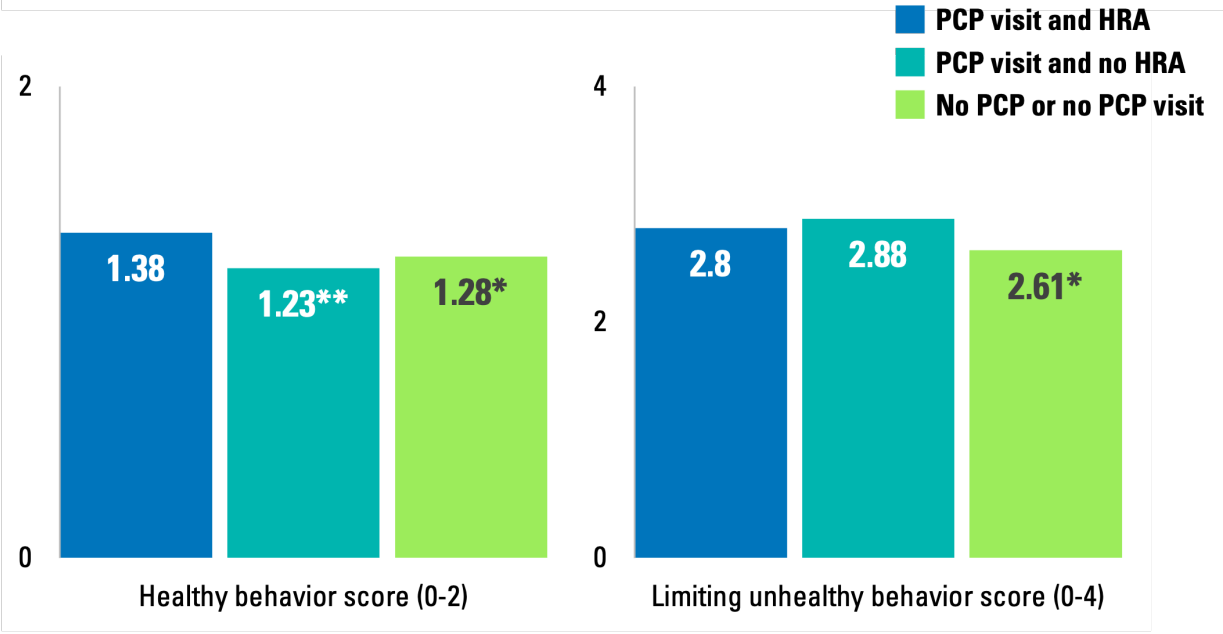
Beneficiaries who reported completing an HRA in the past year reported worse health (e.g., fair/poor health; ≥5 of past 30 days with physical health not good) compared to those who did not complete an HRA and those with no PCP/no PCP visit (Table 1.3.B). Beneficiaries who reported HRA completion had greater frequency of healthy behaviors compared to those who did not complete an HRA (Figure 1.3.C). In multivariate analysis, reported HRA completion was associated with higher healthy behavior scores but not associated with physical, mental, or oral health improvement (Beneficiary Survey Appendix Tables 1.3.6 and 1.3.7).

Table 1.3.B. Health status by primary care visit and HRA completion in past year

	PCP Visit and HRA %	PCP Visit and no HRA %	No PCP or No PCP Visit %
Health status***			
Excellent/Very good/Good	73.8	76.2	85.9
Fair/Poor	26.2	23.8	14.1
Mental health status			
Excellent/Very good/Good	80.7	79.5	83.0
Fair/Poor	19.3	20.5	17.0
Health of teeth and gums			
Excellent/Very good/Good	66.0	65.4	64.4
Fair/Poor	34.0	34.6	35.6
Number of days physical health not good***			
0 days	48.6	53.1	59.9
1-4 days	17.7	14.5	18.5
5+ days	33.7	32.4	21.6

Pearson results, *p<.05, **p<.01, ***p<.001

Figure 1.3.C. Healthy behavior scores by primary care visit and HRA completion in past year



Unadjusted linear regression results (PCP visit and HRA = reference),*p<0.05, **p<0.01

Summary of response to evaluation question 1.3

Beneficiaries who reported completing an HRA in the past year reported worse overall health, slightly better health behaviors, and showed no difference in reported health improvement compared to beneficiaries who did not report completing an HRA. Among beneficiaries who did

not report completing an HRA, many recalled engaging with their PCP in similar ways, including discussion of health behavior goals.

Evaluation question 1.4: Is HRA completion associated with higher rates of preventive service use?
Hypothesis 1.4: Beneficiaries who complete at least one HRA will demonstrate higher rates of preventive service use compared to beneficiaries who have similar primary care utilization but who have not completed an HRA.
Data source: Medicaid claims and encounter data; HRA tables (as described in D.2.1)

Results

HRA completion increased with longer duration of HMP-MC enrollment (Table 1.4.A). For each enrollment group, over half of beneficiaries had regular primary care. The proportion with no primary care decreased with longer enrollment duration. HRA completion was higher for beneficiaries with regular primary care (compared to irregular or no primary care), and higher for longer duration of HMP-MC enrollment, particularly among those with regular primary care.

Table 1.4.A. HRA completion and primary care continuity, by HMP-MC enrollment duration

	HMP-MC Enrollment Duration		
	2-Years Enrollment	*3-Years Enrollment*	*4-Years Enrollment*
HRA completion	24.32%	29.41%	42.14%
Primary care continuity			
Regular primary care	57.62%	52.06%	53.13%
Irregular primary care	22.00%	32.42%	37.23%
No primary care	20.37%	15.52%	9.64%
HRA completion for those with*			
Regular primary care	34.03%	40.97%	54.15%
Irregular primary care	17.12%	22.77%	34.21%
No primary care	4.63%	4.48%	6.57%

*Chi-squared $p \leq 0.0001$ for difference in HRA completion by primary care continuity within each enrollment duration group

Receipt of preventive services was higher with longer duration of HMP-MC enrollment (Table 1.4.B). Within each enrollment group, similar proportions of beneficiaries had one or more preventive visits and dental visits. In contrast, cancer screening rates were more varied, with breast cancer screening more frequent than cervical or colorectal cancer screening in all groups.

Table 1.4.B. Receipt of preventive services, by HMP-MC enrollment duration

	HMP-MC Enrollment Duration		
	2-Years Enrollment	*3-Years Enrollment*	*4-Years Enrollment*
Preventive visit	46.74%	56.22%	66.18%
Dental visit	43.91%	53.33%	63.16%
Breast cancer screening	57.01%	64.79%	70.37%
Cervical cancer screening	42.12%	52.24%	61.23%
Colorectal cancer screening	30.68%	39.24%	45.70%

Beneficiaries who completed at least one HRA were more likely to receive preventive services than their counterparts with no HRA completion who had the same continuity of primary care (Figures 1.4.A and 1.4.B). This pattern was consistent and significant across all preventive services and all HMP-MC enrollment duration groups.

Figure 1.4.A. Receipt of preventive and dental visits, by HRA completion and primary care continuity

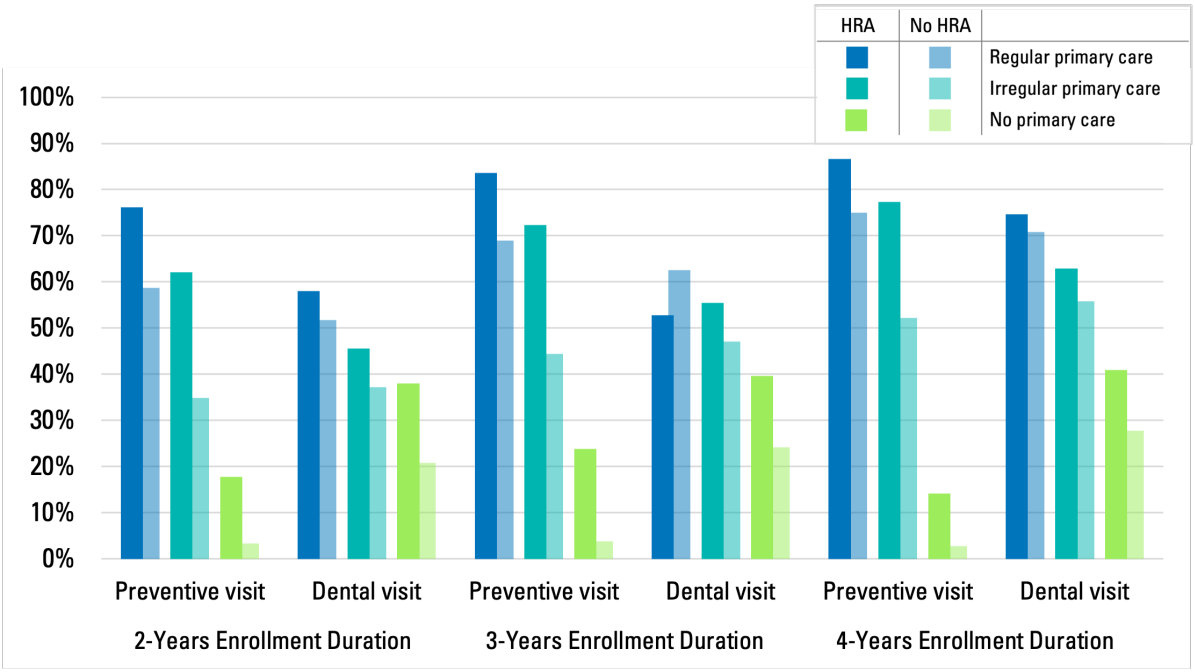
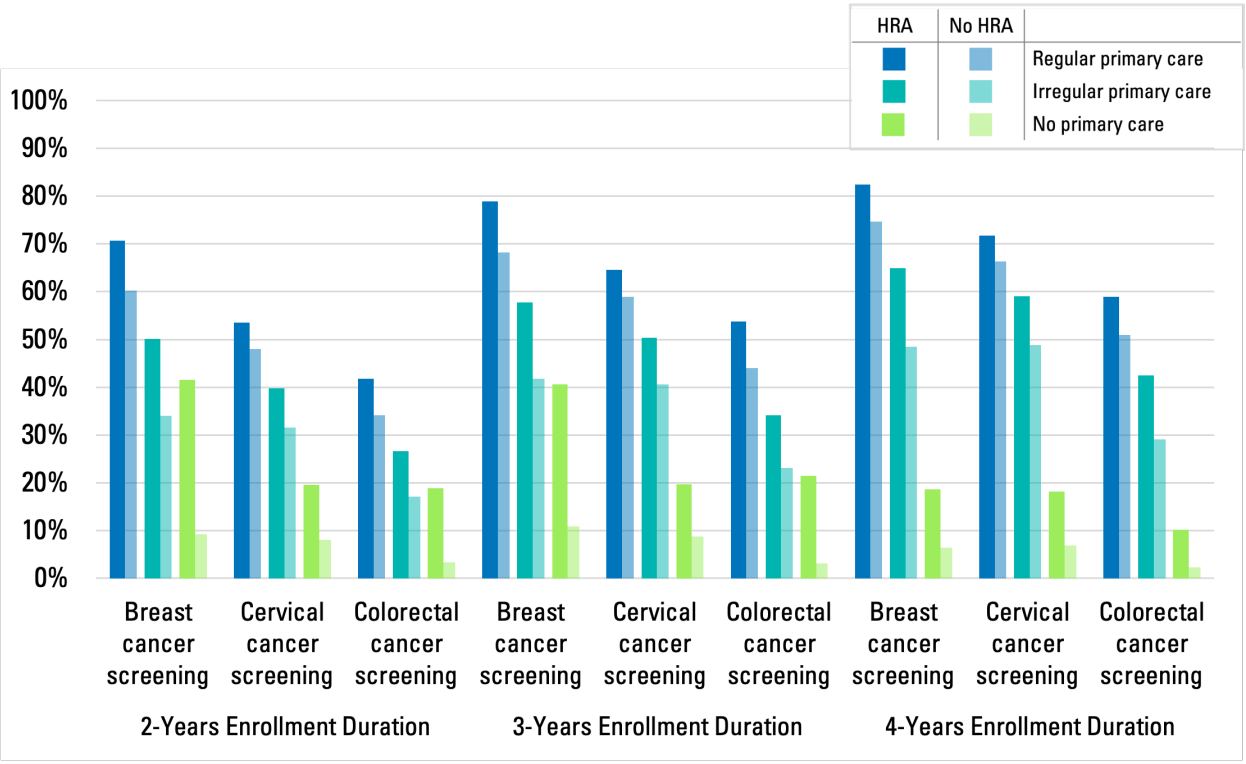


Figure 1.4.B. Receipt of cancer screening, by HRA completion and primary care continuity



Multivariate analyses demonstrated that cancer screening increased substantially as primary care continuity increased (Figure 1.4.C). In contrast, there was a much smaller increase in cancer screening with HRA completion (Figure 1.4.D).

Figure 1.4.C. Predicted probability of cancer screening by primary care continuity

Adjusted for HRA completion, year of HMP start, income, race/ethnicity, chronic condition, and use of specialty mental health

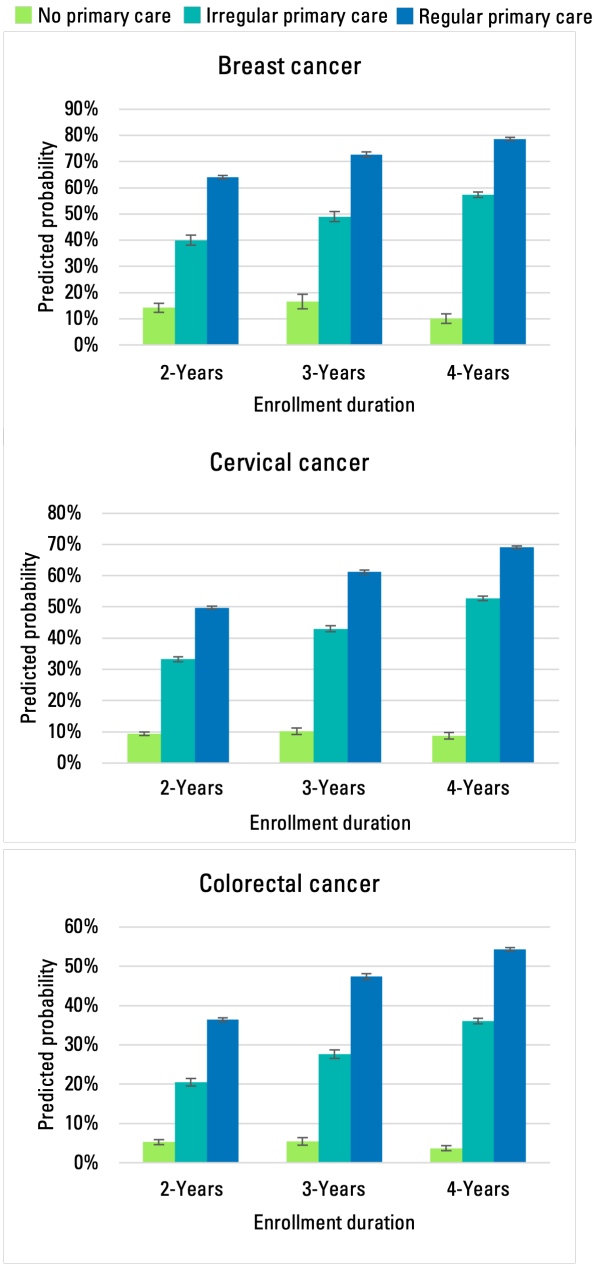
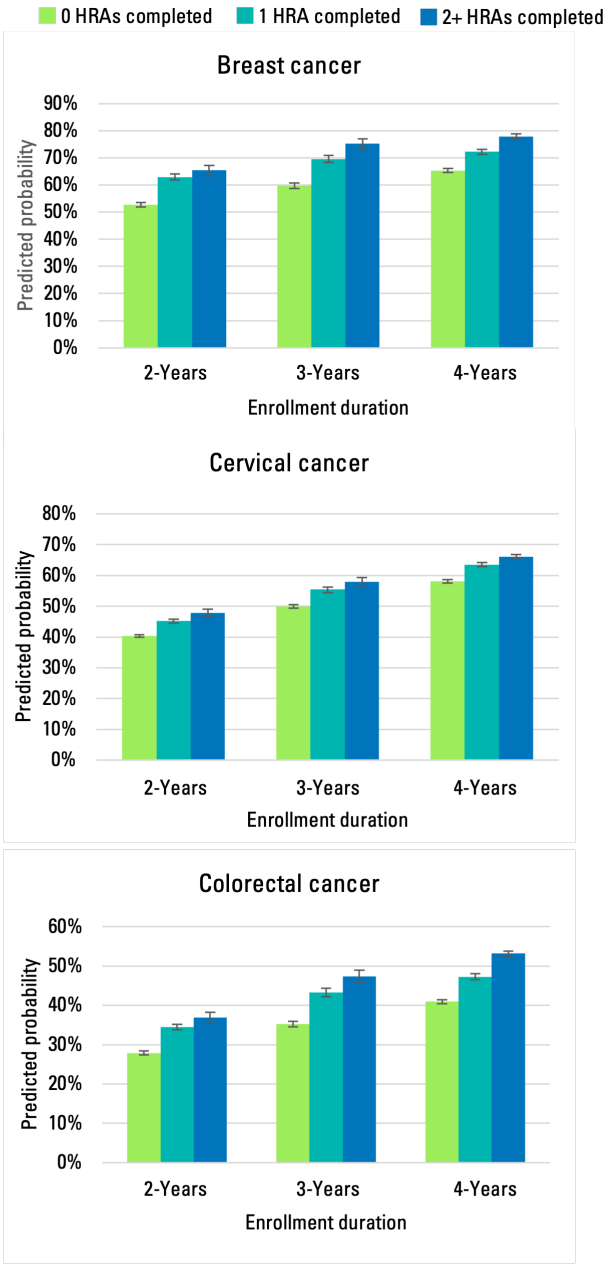


Figure 1.4.D. Predicted probability of cancer screening by HRA completion

Adjusted for primary care continuity, year of HMP start, income, race/ethnicity, chronic condition, and use of specialty mental health



Summary of response to evaluation question 1.4

HRA completion was associated with higher rates of preventive service use. Among beneficiaries with the same duration of HMP-MC enrollment and similar continuity of primary care, those who completed at least one HRA demonstrated higher receipt of preventive care. This finding was consistent for services that can be completed in the primary care setting (e.g., preventive visits, cervical cancer screening) as well as those that typically require a different

provider or location (e.g., dental visits, breast cancer screening). Primary care continuity was a stronger predictor of cancer screening than HRA completion.

Evaluation question 1.5: How has the Heathy Behaviors Incentives program, and HMP as a whole, affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health over time?
Hypothesis 1.5: Beneficiaries will describe assistance from primary care providers in setting health goals and engaging in behavior change to meet those goals.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

Interviews with 30 beneficiaries who had experience with cost-share obligations found limited knowledge of the Healthy Behaviors Incentives program, but generally positive experiences with the HRA and getting assistance to engage in behaviors to maintain or improve health.

Knowledge of the Healthy Behaviors Incentives program

Many interviewees had not heard of, or had a limited understanding of, the HMP Healthy Behaviors Incentives/Reward program.

> *I do recall something like that. I don't know a lot about it, though. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Some interviewees, including the few who reported receiving a healthy behavior reward, correctly described key aspects of the program. When asked specifically about it, only some interviewees recalled seeing on their MI Health Account statement that they could lower their health care costs by earning a healthy behavior reward.

> *It's setting goals for yourself and trying to abide by those goals…I guess seeing the doctor and talking to the doctor about some goals you have for yourself, such as you want to lose weight…And you get a really good discount for what would be the monthly bill. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*

> *I believe I had something they sent in the mail or in a newsletter. And I know seeing the doctor and stuff, I did get a healthy reward or sometimes the payments I made were 50% less if I saw the doctor yearly and had testing and stuff done. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *Well, it was just on one of my statements. They just said as long as you do that type of stuff, and for a while they used to, when I did my physical, if I turned my paperwork in, I used to get a gift card but don't mind doing it. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

Health Risk Assessment

A majority of interviewees recalled completing at least one HRA. Few interviewees said that the possibility of receiving a reduction in what they owed through the Healthy Behavior Reward program was what motivated them to complete the HRA. Primary reasons for completing the HRA included encouragement or reminders from their doctor, health plan, or HMP to do so, and a desire to complete it for the benefit of their own health.

> *I was going to do it [the HRA] anyway. It [the HBR reward] might motivate other people, but I was going to do it anyway for my own personal health. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

> *They do push you to find a healthy behavior and do some things that it's like… a reminder…. I don't have any problem with the health risk assessment, I think it's a good idea. I think that's more important than the— well, the healthy rewards part of it—but with the health risk assessment I do actually have to fill out a form and think about something and not just blow it all off.... And you sit down with the doctor and oh, what will you work now, or what's next or how you feeling? I've been so proactive with my doctor ever since I've had this. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Many interviewees who recalled completing an HRA said they worked with their health care provider to select their healthy behavior goal. Some said that those conversations helped facilitate their engagement in health behaviors. Many interviewees said they had made progress toward the healthy behavior goal that they selected.

> *Many times, when I go to the doctor, I'm not quite sure how to put into words what I might be feeling. So having the health risk assessment helps me figure out what to say, and that helps steer the conversation so the doctor can help me do better at it. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

> *Well, it was like in consultation with my physician. We talked about some of the goals we have to work on, and it was like exercise, diet, taking the right medications, just staying on track with the program, the plan. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

Engagement in health behaviors and other efforts to maintain or improve health

Most interviewees were engaged in health behaviors and other efforts to maintain or improve their physical and mental health. Some attributed this to having HMP coverage. Interviewees reported getting regular checkups and preventive care including dental care, engaging in exercise, healthier eating, quitting or cutting back on smoking, and taking their medications.

> *Well, my only goal was to get my weight down and I have, because I went from weighing 260; I weigh 210 now…So I am working on it every day. Just try to eat better, have smaller portions, just try to not snack so much in between there. But I have been actually making progress, and I haven't had my arthritis flare up in maybe*

3 or 4 months now when I used to get them on the regular. (Age 50-64, Female, 100-133% FPL, W/E/Central)

I'm in a quit smoking program…My biggest thing is smoking, was smoking, because it gives me COPD, you know. And I got shot in the neck and I got a lot of scar tissues in my neck, so the doctor always said the best thing to do is stop smoking…that's one thing I did to try to change…I'm down to maybe three a day. (Age 50-64, Female, 0-99% FPL, Detroit Metro)

Interviewees commonly reported that getting information, including learning about their health, and encouragement from their doctor, helped them make positive behavior changes.

Right now I feel much better. Especially when I was informed that my thyroid was normal now after taking the medication and taking the doctor's advice of eating, for example, fish because it has iodine so yeah, it's really helped me. I really listen. I used to be a little stubborn to be honest when it comes to the health, but now I'm more open and I understand better. (Age 19-35, Female, 0-99% FPL, Detroit Metro)

Between the information from the doctors and the insurance companies has helped me a lot, giving me different information on different types of stuff as far as different foods that I used to like to eat and they say, "ok you can have that, but you've got to cut it down as far as moderation." (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

Some interviewees described how HMP coverage facilitated their ability to get regular checkups and preventive care, including dental care.

It helps me stay focused on my health. The annual checkups are a big deal because it, you know, touch base with the doctor and she's like, she told me to watch my cholesterol and I'm expecting to hear that when I go in there. But you know, I wouldn't probably be going for my check-up if I didn't have this for my annual physicals. So, I really like it. (Age 50-64, Male, 0-99% FPL, W/E/Central)

I was able to go to the dentist for the first time in many years, and I've been able to take better care of my mouth thanks to that. And make a better effort to keep my teeth clean. Because it's easy to get lazy about that. But it's good to have a dentist and to have the information to really help me to motivate myself to make sure I do. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)

Some interviewees said that reminders about preventive care and other materials provided to them by their health plan helped them take better care of their health.

They remind me. Okay you got to go because you didn't visit the doctor for a while now. They send me letters in the mail to do the Risk Assessment, to go check up with the doctor or do some tests. That is also one of the things that caught my attention and felt like they really cared about our health to go do tests and checks once in a while…So when they encourage you to do so and it's covered; you gotta go check on

your health. I didn't have someone to encourage me to do that before to be honest. (Age 19-35, Female, 0-99% FPL, Detroit Metro)

Well, one thing I like about it is they keep you up to date on, like, it's time to go get your mammogram, you know what I'm saying? They let you know when the time comes, because you know it could slip by years and you don't know unless you get sick (Age 50-64, Female, 0-99% FPL, Detroit Metro)

Only a few interviewees mentioned barriers to taking care of their health. The barriers they reported included school, job, or family responsibilities or stressors, limited time, and environmental factors (e.g., weather, lack of sidewalks) and lack of internal motivation.

I try taking a walk, like I said, daily. But that sometimes gets messed up when your daughter's been up all night and you're super tired the next day or that type of thing. (Age 19-35, Male, 100-133% FPL, W/E/Central)

I think I've been lagging on the exercise regimen and try to keep up on that level that I was at earlier. But, you know, with the heat, there's always little things that make you want to procrastinate and what not. But there's nothing to really prevent me from doing that other than kind of my will. (Age 50-64, Male, 0-99% FPL, Detroit Metro)

Summary of response to evaluation question 1.5

These interviews suggest that the Healthy Behaviors Incentives Program is not the primary motivator of beneficiaries' engagement in healthy behaviors. Most interviewees were not aware of details of the program. While many recalled completing at least one HRA, the possibility of a reward was not their reason for adopting a healthy behavior goal. Most reported that self-motivation or encouragement from their providers supported their adoption of healthy behaviors. Many beneficiaries reported that information and guidance from their primary care providers and health plans (e.g., health education, reminders, goal setting, monitoring), along with HMP coverage itself, were important to their efforts to maintain or improve their health over time.

Evaluation question 1.6: How do primary care providers use the HRA to assist in patient engagement and health promotion?
Hypothesis 1.6: Primary care providers will describe that they have become more knowledgeable over time about how to use the HRA to engage patients enrolled in HMP.
Data source: PCP interviews (as described in D.2.4)

Results

Volume of Health Risk Assessments

All 21 PCPs reported completing HRAs with patients enrolled in HMP. Most PCPs reported completing 10 or fewer HRAs in the past two years for patients enrolled in HMP, but five PCPs reported between 50 and 200 completed HRAs.

PCPs with higher HRA volume indicated that their practice has a system to identify patients who are eligible for an HRA. In most cases, these PCPs practiced at an FQHC.

> *Because of COVID I've been making sure that when any patient comes in who has this insurance [HMP], that they have their physical and they have the HRA filled out, because I might not see them again like for a whole year. We're just proactive... We save the HRAs in a file so I can look to see when their last HRA was done... As long as it's been a year on the HRA and the physical, I ask them, do you want to do your physical today because you're due.*

> *I'm very lucky, because my front desk people flag the chart if they're due for an HRA… and before I even go into the room the patient's filled it out in the lobby and it's sitting in the box. Occasionally, they're still filling it out when I go in the room. And then some patients must have been mailed to them, or they have it somehow because many of them will actually show up with it already filled out when they come in for a visit.*

In contrast, PCPs reporting lower HRA volume indicated that HRA-related interactions typically occur at visits where a patient brings in the HRA form.

> *In 2015-16 we did a lot more of them; they've really trailed off after that… We get a lot of lists from health plans and we get people in who need screenings; we do a really good job with that overall. But for the actual HRA forms, it is patient driven… we don't reach out to do those.*

Understanding of the HRA process and financial incentives

PCPs generally had limited information about how the HRA process is communicated to beneficiaries. Several PCPs sensed there may be differences in the HRA process across the Medicaid health plans but could not articulate what those differences might be.

> *Every once in a great while we have a patient that will say: Oh, I get a $25 CVS card or something like that. Or if they get something in the mail. But it definitely is not anything consistent. I think they probably would get better participation, if it was more consistent.*

Similarly, PCPs had limited information about HMP's financial incentives for HRA completion. About half of PCPs thought that HMP beneficiaries received a gift card for completing the HRA, based on comments from patients.

> *I thought there used to be some type of incentive if they came in and got their annual exam. They could get a gift card to Target or something like that, so we went through a phase where we were having hundred people come in, because they wanted their gift card… I don't honestly know if that's still going on.*

In describing the financial incentives, no PCPs mentioned that HMP beneficiaries who owe a monthly fee could get a reduction in the amount they owe for completing the HRA. Two PCPs recalled that at one time there was a practice/provider incentive for HRA completion.

All PCPs reported that clerical staff or medical assistants submit the completed HRAs to the health plans; only one PCP noted administrative challenges with this process.

Usefulness of the HRA to establish healthy behavior goals

PCPs were lukewarm in describing the usefulness of the HRA to engage patients in thinking about their health. Some PCPs described how they use the HRA to facilitate a discussion of strategies to achieve a health goal.

> *I found it's been beneficial is when the patient says, for smoking, for instance, "yes, I'm wanting to change." That's something that we try and address anyway, but it is nice if it's in writing and I can be like, "Hey look you just said this."*

> *For me it's been a good talking point… "Oh, it says here that you get 30 to 60 minutes of exercise a day, what do you do?" ..."I work at the library, I shelve books." Okay, so that's not exercise. So then we have that conversation about what exercise is. So I don't know if [the HRA] itself help them engage in healthy behaviors but it definitely helps me to engage in more direct talking points during their exam.*

Some PCPs noted that patients who brought in the HRA often were patients who already were engaged with their health.

> *For these particular patients [who brought in the HRA] it felt less fruitful because they're already pretty healthy and they didn't have a ton of modifiable behaviors.*

Other PCPs described some frustration when the patient did not complete the initial HRA sections or had not considered any goals prior to the visit.

> *To me it's just another form that they are sitting in the room, looking at, filling out while I'm trying to have a conversation with them.*

> *The vast majority of people have never even looked at the form before they bring it in. Very rarely has a person looked at the form and given some thought to it, and then we can talk about that item. But the vast majority, no.*

Several PCPs noted that the content of the HRA is already covered, either in their standard patient care or through other practice initiatives.

> *I tend to do a lot of preventive care and motivational interviewing in my annuals and wellness visits, and so [completing an HRA] did feel similar to that.*

So we already have our own social determinants of health form that we do. And we're very consistent on that. We've been involved in medical home and in CPC plus and SIM and all those programs, so this [HRA] feels a little bit like it is a duplicate. Sometimes patients will say I've already filled out something like this.

Usefulness of the HRA to facilitate behavior change

PCPs were uniform in endorsing the need to facilitate engagement and healthy behavior change, particularly among patients with chronic physical and/or behavioral health conditions. PCPs described several reasons why the HRA has limited usefulness for this purpose.

The most common limitation is that behavior change requires consistent engagement and support over time, but the HRA is not a tool that requires patient engagement over time.

I don't think beyond that initial visit the HRA drives very much. With some private plans, if you don't do well on your initial screening, they make you come back every three to six months... If you had a box [on the HRA form] that says check here if a patient needs to come back more frequently, that would make a difference. But it seems like it's a one-time thing for [HMP].

But I noticed on the form, it said, did the patient meet their goals from last year. On the patient side, it was very much the one and done mindset, I'm just going to do what you need to do to get this form completed and get my check. But as far as the accountability afterwards was lacking… It'd be interesting to look back on how many actually have follow up on those things that we set goals for. Honestly, I don't even remember what the goals were…we just fill that form out and it disappears…we don't track it very well.

A related challenge is that HRAs are not integrated with practice initiatives and processes. For example, HRAs are not embedded within the electronic medical record (EMR), so responses are not easily accessible.

*I think it's got potential, but it's somewhat helpful because you're only doing it on an annual basis. And we really don't revert back to it and say, "Where are we with meeting those goals?" because it's not put directly into [EHR] so we don't see [the HRA information] in a tangible w*ay.

Where [it would be] helpful is if it's a digitized system and it's going into our database… Now I know who's got risks.

Even when an HRA is scanned into the record, it is usually stored in a separate section of the EMR and is not searchable. As a result, PCPs have limited ability to use the HRA as a guidepost, to check back on the patient's behavior change goal and hold that patient accountable.

We do scan the form into the chart, but I'm so busy I'm not digging for it to compare from last year to this year.

Nearly all PCPs noted the importance of follow-up visits to support behavior change, but many felt they did not have sufficient availability.

> *In a perfect world, I think we could have better access to follow up. So imagine setting this goal of smoking cessation…you set a goal, we're going to quit on this day, here's the plan... Then having a follow up in a week or a touch point.*

> *Since COVID though with a shortage of staff, we've been less able to accommodate [patients].*

PCPs felt that given their limited availability, patients with chronic physical and/or mental health conditions benefit from regular contacts with care managers, social workers, or community health workers. However, about one-third of PCPs felt they had limited access to staff who could follow up with patients and assist them with needs. Others noted that staff encountered barriers when trying to assist patients.

> *I think having a care manager or a nurse follow up on some of those things would be appropriate for a lot of the goals and we don't have that.*

> *[For certain patients] our community health workers or caseworkers will want to make calls [to help set up transportation], and the health plan will let you know it has to be patient driven. That's frustrating. I understand we want patient responsibility, but it's hard to have patient responsibility when they don't have a place to live or have any minutes on their phone.*

Several PCPs who work with high-need patients acknowledged that their standard process for scheduling follow-up visits does not always meet the needs of their population.

> *So we set up a patient for [a follow-up visit in] three months .. but in three months, they've got to work or they don't have transportation or any number of other things… And they're not going to show up to an appointment. It's not because they don't want to be there.*

Nearly all PCPs noted challenges with a subset of patients who use the emergency department (ED) for situations that are not true emergencies. This impedes the PCP's ability to identify and address the patient's health-related needs.

Many PCPs said that in the past few years their practice or health system has expanded options for primary care visits, either in their same clinic site or a centralized walk-in or urgent care clinic. Both options allow the visit to be documented within the patient's EHR which helps to facilitate follow-up care.

> *We have same-day sick appointments, and we try to get patients in. If for some reason like one of the patients can't get into their primary care doctor, we try to see if another provider has an opening for a sick visit…Then we have an after-hours clinic,*

so any patient from the [health system] can go there. It's open til 9 pm weekdays, and 9-2 on weekends and holidays.

We had a very, very high no-show rate, 25-30%...and the bulk of those no shows were happening in the morning… so we started doing a walk-in clinic or acute care clinic in our morning for half day, where one provider would just have acute slots for our patients… that filled up instantly and our no-show rates started to drop.

Telemedicine is the place where we can actually increase access to care. COVID forced providers to start using it more and more… However, equity-wise it's a big question: do we have those can't afford it? We had people parked at McDonald's to get WIFI for their office visits.

When patients go to the ER, we do reach out to them afterwards and say, hey you know you could have come here for that, and, and I think that has really helped.

Transportation is a major barrier; although Medicaid health plans offer transportation assistance, the requirement for three-day advance notice precludes patients from getting assistance for more urgent primary care appointments.

Transportation is unreliable. Patients know that their insurance provides transportation, but you have to call so many days in advance and sometimes they give this 45-minute window, which people don't like.

A small number of PCPs noted that patients sometimes get mixed messages about using the ED.

Every day we have six hours of time where patients can just walk in. Unfortunately, we have two ERs in town that aren't super busy and advertise.

Part of the problem is that [the ER visit] is 100% covered, [HMP enrollees] never get any copay… I don't have a whole lot of people who just run to the ER for everything, but I know that they're out there. And when you don't have a bill for $7,000, $10,000, $20,000 worth of services, why not use it?

Barriers related to HMP coverage

PCPs articulated several issues with HMP coverage that impede their efforts to help patients enrolled in HMP to follow through on health goals, adhere to medication and other treatment regimens, and improve their health.

Consistently, PCPs noted a lack of referral options. Services mentioned most frequently were dietitians, dentists, psychiatrists and other mental health providers. In some cases, PCPs lost referral options due to changes in the health plan's provider network.

We have two hospitals in this area, and [hospital name] doesn't accept [health plan name] anymore.

Several PCPs described challenges getting authorization for services they felt their patients needed.

> *We have real good success with working [certain Medicaid health plans] when you look at like prior authorizations, referrals… other plans have been just insanely difficult trying to get certain medications covered or testing ordered. It's definitely hard to get ahold of them.*

Overall level of knowledge about HMP

Several PCPs indicated they had limited information about HMP.

> *I truly feel like there's so much that I don't know. Part of it being is being a relatively new provider in the state. But I also think that's a huge gap in my knowledge as a provider. There's so much I don't know that I don't even have like a specific question.*

> *I'm thinking, I want to learn more about [HMP]. I kind of know what it is, I know that it's increased access for my patients... Beyond that, I don't have that level of detail. By the time a patient gets registered and gets to me, there's not a lot of distinction in terms of who their payer is, unless there's a medication or treatment we're trying to get authorized.*

Despite their knowledge gaps, PCPs were unanimous in viewing HMP as an important resource to allow their patients to maintain and improve their health.

> *We're constantly evaluating and seeing what programs and opportunities patients can tap into... from weight watchers to new medications for weight loss, opportunities for education. Although we took a little hiatus during the pandemic, we try to tap into all those resources… It gives our patients a wonderful opportunity to optimize their health.*

Summary of response to evaluation question 1.6

Findings from PCP interviews suggest that PCPs have limited knowledge about HMP's Healthy Behaviors Incentives Program, including the financial incentives for patients. The volume of HRA completion in many primary care practices is higher in practices that have a specific mechanism for tracking and recalling patients due for HRA completion, but relatively low in practices that rely on patients to bring in the HRA form. Some PCPs use the HRA to engage patients in identifying and setting goals for health behavior change. However, PCPs make limited use of the HRA as a tool to engage patients in health behavior change, primarily because they lack a structure to incorporate the HRA into a more comprehensive, readily accessible system to provide support for health behavior change over time.

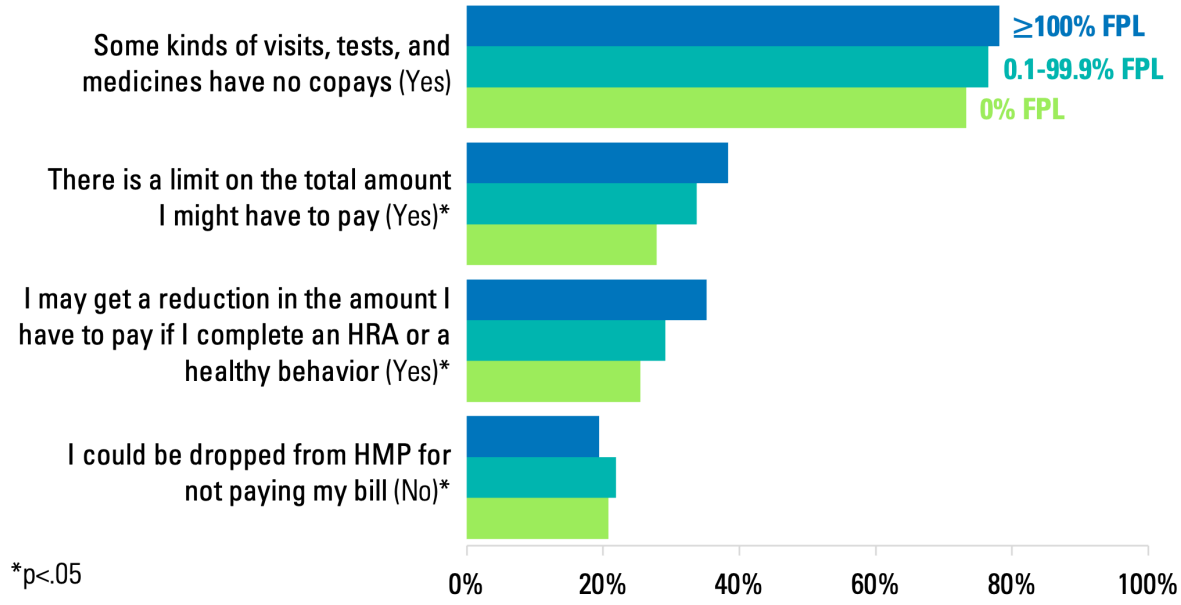
F.2. Cost-Sharing

Evaluation question 2.1: Do beneficiaries understand cost-sharing and other consumer-oriented features of HMP coverage?
Hypothesis 2.1: Beneficiaries who are aware of healthy behavior financial incentives will demonstrate a better understanding of cost-share obligations and connections between service utilization and amount owed.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

Three quarters of beneficiaries knew that some kinds of visits, tests, and medicines have no copays (Beneficiary Survey Supplemental Data Table 6.4). In contrast, less than one-third knew they could get a reduction in the amount they have to pay if they complete an HRA, that there are limits on how much they would have to pay each year, and that they would not be dropped due to non-payment (Beneficiary Survey Supplemental Data Tables 6.1, 6.2, and 6.3). Beneficiaries subject to fees (income ≥100% FPL) were more likely to know that there is a limit on how much they might have to pay and that they may get a reduction for HRA completion (Figure 2.1.A).

Figure 2.1.A. Beneficiary knowledge of HMP consumer-oriented features by FPL group



Most beneficiaries recalled receiving a MI Health Account/HMP statement in the past year. Among those who received a statement, less than one-third recalled seeing a reduction in the amount they would have to pay (Table 2.1.B). Some of those beneficiaries described the "reduction" as a $0 charge, a charge that was lower than what they paid in a prior quarter, or a charge that was less than the service-related cost shown on the statement, rather than due to the Healthy Behaviors Incentives Program.

Table 2.1.B. Beneficiary experience with cost-sharing of consumer-oriented features

	%
Received statement from Healthy Michigan Plan in past year	
Yes	71.5
No	22.9
Not sure	5.6
[#]Statement in past year showed reduction in amount to pay	
Yes	30.2
No	42.8
Don't know	27.0

Summary of response to evaluation question 2.1

Most beneficiaries recalled receiving MI Health Account statements and were aware that some services have no copays. They were less familiar with other consumer-oriented features of HMP, including incentives for healthy behavior and HRA completion. Knowledge about consumer-oriented features was higher among beneficiaries subject to fees.

Evaluation question 2.2: What factors are associated with beneficiaries' compliance with cost-share obligations?
Hypothesis 2.2: Beneficiaries with MI Health Account fees will have better payment compliance than their counterparts with service-based cost-sharing only.
Data source: Medicaid cost-share tables (as described in D.2.1)

Results

Table 2.2.A describes the cost-share characteristics of the 287,106 beneficiaries with at least 18 continuous months of enrollment in HMP-MC. Slightly more than half of beneficiaries faced cost-share obligations (i.e., had a non-zero amount owed) in at least one quarter (n = 153,382). Cost-share obligations differed substantially by income level. Among beneficiaries with all eligible months below 100% FPL, who would have only co-payments, only 30% had any cost-share obligations. In contrast, the proportion with cost-share obligations was high among beneficiaries with some or all months above 100% FPL, who may have both co-payments and monthly fees.

Table 2.2.A Characteristics of the evaluation population for measures of cost-sharing patterns

	Study Population (n = 287,106)
Eligible months of continuous HMP-MC enrollment	
18-24	39.6%
25-30	19.2%
31-35	13.7%
36-40	11.2%
41+	16.4%

Cost-share income level	
All HMP-MC months below 100% FPL	59.9%
Some HMP-MC months above, some months below 100% FPL	37.4%
All HMP-MC months above 100% FPL	2.7%
Cost-share obligation in continuous enrollment period	
At least one quarter with cost-share obligation	53.4%
Cost-share obligation by cost-share income level	
All HMP-MC months below 100% FPL	30.2%
Some HMP-MC months above, some months below 100% FPL	87.5%
All HMP-MC months above 100% FPL	96.6%

Table 2.2.B presents the average amount owed, quarterly and cumulative for beneficiaries' continuous enrollment periods, among those with cost-share obligations. The average amount owed, both by quarter and cumulative for the entire enrollment period, was lowest for beneficiaries with all months below 100% FPL, and highest for those with all months above 100% FPL.

Table 2.2.B. Average cost-share amount owed

	Among those with cost-share obligations (n=153,382)
Average amount owed, quarterly	$21.74
By cost-share income level	
All months below 100% FPL	$3.08
Some months above, some months below 100% FPL	$29.18
All months above 100% FPL	$58.26
Average amount owed, cumulative	$181.53
(95th percentile)	($630.47)
By cost-share income level	
All months below 100% FPL	$26.24
	($92.00)
Some months above, some months below 100% FPL	$241.15
	($657.00)
All months above 100% FPL	$515.38
	($1023.40)

The average amount paid for the cumulative period was $68.00, which represents 37.5% of the total cost-share obligation amount (Table 2.2.C). The proportion paid was substantially lower for beneficiaries with some month above and some months below 100% FPL.

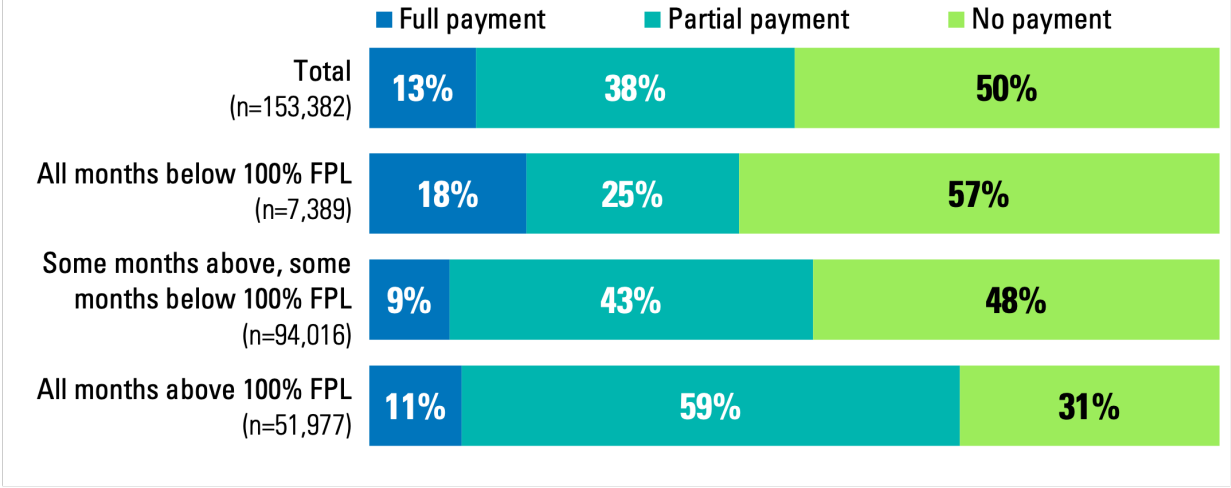
Table 2.2.C. Average cost-share amount paid

	Among those with cost-share obligations (n=153,382)
Average amount paid, cumulative	$68.00
By cost-share income level	

All months below 100% FPL	$12.21
Some months above, some months below 100% FPL	$85.67
All months above 100% FPL	$235.52
Proportion of total obligation paid, cumulative	37.5%
By cost-share income level	
All months below 100% FPL	46.5%
Some months above, some months below 100% FPL	35.5%
All months above 100% FPL	45.6%

This gross payment percentage reflects a mix of beneficiaries who made no payments, partial payments, or full payments toward their obligations (Figure 2.2.A). For the overall population with cost-share obligations, 50.0% made no payments, 37.5% made partial payments, and 12.6% made full payments. The distribution of payment status varied by income. A larger proportion of beneficiaries with all months below 100% FPL made no payments, compared to beneficiaries with some or all months above 100% FPL.

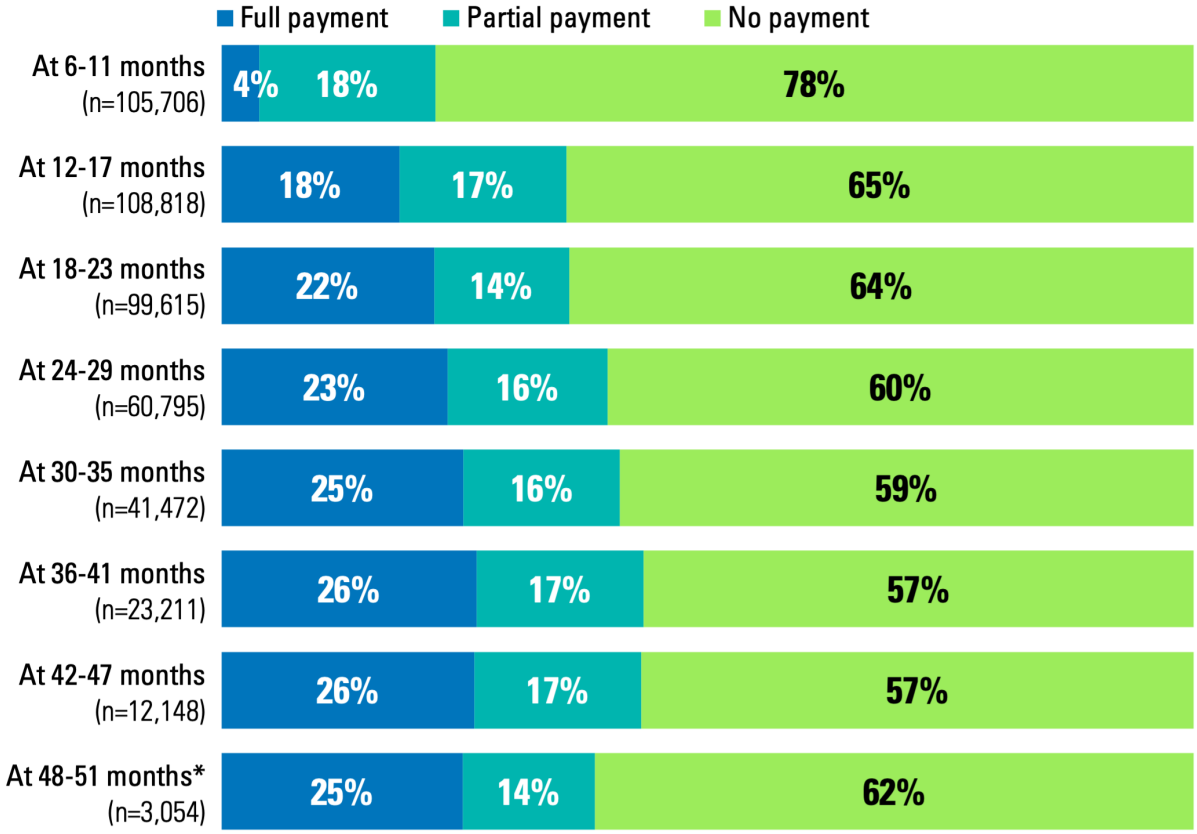
Figure 2.2.A. Payment rates among 18+ month continuously enrolled HMP beneficiaries with cost-share obligations, by FPL



In multivariate analysis, beneficiaries with all months above 100% FPL were more likely to have full payments, and less likely to have no payment, compared to beneficiaries with some or all months below 100% FPL (Administrative Data Appendix Table 2.2.2).

Beneficiaries' payment actions might change over time as they become more familiar with HMP policies or their financial situations evolve. Propensity to make partial or full payments as a function of length of enrollment is illustrated in Figure 2.2.B among beneficiaries who faced cost-share obligations in the period. In general, payment compliance improved incrementally each quarter for the first four quarters of cost-share obligations; after that, payment compliance generally remained consistent, except for a slight increase in non-payment at the start of the COVID-19 pandemic.

Figure 2.2.B. Payment rates among 18+ month continuously enrolled HMP beneficiaries with cost-share obligations, by period of enrollment

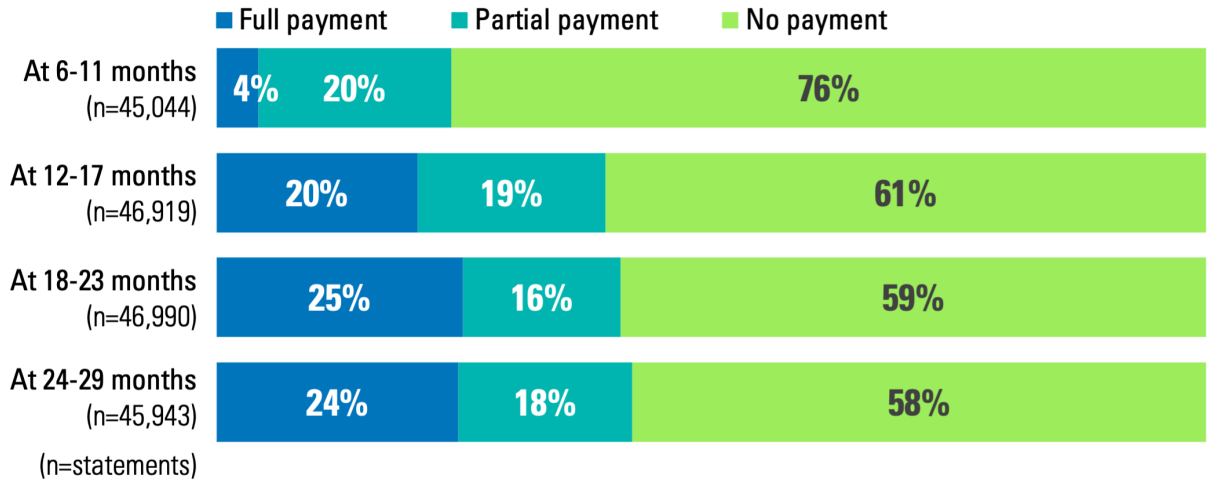


The results in Figure 2.2.B should be interpreted as a series of cross-sectional analyses that reflect the mix of beneficiaries by length of enrollment. Therefore, the observed improvement in payment compliance as program tenure increases could arise from either (or both) of two factors. First, individuals may become more compliant the longer they remain in the program. Second, persons who are more compliant may be less likely to leave the program and hence become more heavily represented in the later follow-up windows.

An alternative way to characterize payment behavior over time is to observe the choices of a fixed set of beneficiaries who remain in the program for the entire observation period. This can be interpreted as a longitudinal sample where the number and composition of beneficiaries is held constant rather than being subject to attrition from the cohort. Such an analysis would isolate changes in the propensity to make payments over time at the individual level from changes due to persons who stay in HMP longer being different than those who leave the program earlier. Figure 2.2.C presents payment actions over time for the subset of beneficiaries with at least 30 months of continuous HMP-MC enrollment.

The results confirm the overall patterns found in Figure 2.2.B. This suggests that changes in payment actions over time are driven by changes in beneficiaries' propensity to pay as they stay in the program rather than by differential attrition from the program.

Figure 2.2.C. Payment rates among 30+ month continuously enrolled HMP beneficiaries with cost-share obligations, by period of enrollment



Summary of response to evaluation question 2.2

Slightly more than half of HMP beneficiaries with at least 18 months of continuous HMP-MC enrollment faced cost-share obligations. Beneficiaries with all eligible months below 100% FPL were less likely to have cost-share obligations.

Only 37.5% of the total obligation amount was paid. Compared to those with all months below or all months above 100% FPL, the. proportion paid was lower for beneficiaries with some months above and some months below 100% FPL It is plausible that factors related to the change in income level (e.g., loss of job or other source of household income) also created challenges with payment of cost-share obligations.

Propensity to pay the full obligation amount was higher for beneficiaries with all months above 100% FPL and those who remained in the program longer. This suggests that having regular cost-share obligations (e.g., monthly fees) and increased familiarity with cost-share policies are related to compliance with cost-share obligations.

Evaluation question 2.3: Are beneficiaries able to understand the MI Health Account statement?
Hypothesis 2.3: Beneficiaries will understand where to find the amount they owe but may not understand how that amount is calculated.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

The 30 beneficiary interview participants all had evidence of cost-sharing in the Data Warehouse. The results presented here relate to the knowledge of the MI Health Account Statement, cost-sharing amounts, and consequences of nonpayment.

MI Health Account statement

Most interviewees recalled receiving a MI Health Account statement. Many expressed a general understanding of the statement and described some of the statement's key features (e.g., a list of the services they received, how much the services cost, the amount they owed). Most said they were able to easily tell how much they owed from the statement. Some interviewees reported not reading the statement closely, focusing instead on the amount they owed.

> *The doctors that I had saw, what I had done, prescription costs, and things like went up or went down and I always checked to make sure I was charged for the correct services. They were really easy to read and understand and they were always correct for me…. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *It just tells the doctor's name, and it tells how much they charge, and it says how much my program pays, and then it tells how much each copay is and stuff. But I check that out and I understand what that means, yes. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *I don't know if I review them that close but I review them enough so I can go in and pay them. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

Only a few interviewees said they learned about the cost of the services they received from reviewing their statements.

> *Yeah, it kind of says. I don't know if the charge is different…from when you go in the hospital to what the insurance pays, I know there's a big difference to what they allow, so I don't ever usually see the full price. But it says the partial, you may owe, and it shows 0. So I'm like okay...It just makes it to where there's no extra worrying on my part. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *It's excellent. I love getting that statement and seeing what things actually cost and what they pay. I tell friends, it's just incredibly efficient. You're able to see how much costs are, how much they pay, and my share is just minimal. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

Knowledge of costs

Many interviewees said they knew the amount they expected to owe from their statement. Most found the amount they owed to be reasonable. However, some interviewees described feeling

surprised and confused when they received a statement or other communications that showed an increase in the amount owed or indicated they owed something when they thought they did not.

> *My biggest surprise is some of the things that they're, they're pretty reasonable.…I was just surprised about some of the costs because I know I've paid out of pocket before, and it seems like I paid more than some of those. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *I remember, they usually send me every couple months or so a copay, and it's really, really, affordable. Like $6 or $8 the most. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *I was never told that I was going to pay a copay, and I think I owe them still. I'm still confused why I had a copay. I don't know if anything changed because of the benefits, or if it was because of my income. And this has been going on for like two years that they have been billing me. (Age 19-35, Female, 0-99% FPL, S Central/SW/SE)*

Some interviewees had a limited understanding at best of how the total amount they owe is calculated, but the majority did not know. Few interviewees understood which services do and do not have copayments associated with them.

> *I don't know how they determine that… Because one time I wasn't paying nothing; then they came up with $50 a month. (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

> *I know that they were saying something about a copay. But, no, I don't know because when it started, I didn't have to pay anything. So I'm not sure how they determine what you owe. I just know that they said that that's what I owed. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *I do think a lot of it is income contingent and that kind of thing. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *No, I don't [know how the amount was calculated], but I don't care. I understand that some medications cost money and some don't. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Knowledge of consequences of nonpayment

Many interviewees did not know what would happen if they did not pay the amount they owed. Some interviewees thought they could lose their coverage if they did not make their payments.

> *I mean I'm sure there's some kind of penalty. But I'm really not sure since I'm usually able to pay it off. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

Well I think that you could eventually lose your coverage, right? I think that's one of the things that they mention. You could lose your coverage, yeah. So I'm aware of the consequences, it's very important to keep on time and stay current and not get behind on those. (Age 50-64, Male, 0-99% FPL, Detroit Metro)

Summary of response to evaluation question 2.3

Among a group of beneficiaries with cost-share obligations, most recalled receiving a MI Health Account Statement and focused on reviewing how much they owed. Few interviewees knew how the amount they owed was calculated. Most were satisfied with the amount they owed; only a few expressed surprise or disappointment. Most interviewees did not know the consequences for non-payment.

Evaluation question 2.4: What are barriers and facilitators for beneficiaries to pay the amount owed?
Hypothesis 2.4: Beneficiaries will report financial barriers more often than logistical barriers to paying the amount owed.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to the payment process and barriers to making payments.

Payment methods and process

Most interviewees reported making MI Health Account payments. Most who made payments reported mailing in a check or money order; some reported making the payments online.

I usually make out a check and mail it to them. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)

I just did a money order…Because I think it was like $3 a slip or something like that. So just got a money order, filled out a slip, put it in there with the slip, and sent it back. (Age 50-64, Female, 100-133% FPL, W/E/Central)

I do it all online. Honestly, the state's website is kind of archaic looking, but it's pretty easy to put your information in to pay for it. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)

Most interviewees said that the process of making payments was easy. Many reported that they would pay the full amount on their statement at one time rather than paying monthly. Some said they liked having the option to make smaller monthly payments.

I just send the whole thing in. I'm not going to get three envelopes, and pay for three stamps, and pay for three money orders for $14…but then you're talking three stamps, three envelopes, whatever stamps are now a days. And I'm pay sixty cents for

a money order, I might as well just pay it either at the beginning or at the very end. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

Depending on the cost, sometimes it's only a few dollars. I'll usually pay off three months at one time unless it's a little higher than usual then I'll pay it monthly…A lot depends on, you know, how much I'm working at the time. Sometimes I work a lot more. I continued to work through COVID, but it was shorter hours. So if it was a little more than usual than I paid it every month. Otherwise, I'd do it every three months. (Age 50-64, Female, 100-133% FPL, W/E/Central)

Barriers to payment

Some interviewees described financial barriers that made it more difficult to pay the amount owed or to make payments on time.

Well, I mean, I was working at one time, part time, and I paid it and now I'm not working part time, and I'm just living off my Social Security checks. So, I mean, I do pay it, but it is a little bit harder. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)

Well at first, because I wasn't working, it took me awhile because I didn't have any extra money. (Age 50-64, Female, 100-133% FPL, W/E/Central)

I'm supposed to pay it monthly. No, I can't say I'm always accurate. But I have paid them…I have bills. I have to buy food. Food is the most highest thing now going. Now gas went up… It's not that I like make so much money. Because I don't…I work 32 hours a week. That's not much. (Age 50-64, Female, 0-99% FPL, Detroit Metro)

A few interviewees described other factors that influenced whether and when they paid including competing demands on their time, forgetting to pay, or not receiving the statement.

I work long hours and days, and when I get home, I am exhausted, and I don't think of things like that. I think about trying to get my house clean, or do a load of laundry, or put the dishes away. I have other things to do than go on there and pay a $3 bill. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)

Summary of response to evaluation question 2.4

In this group of beneficiaries with cost-share obligations, most had made MI Health Account payments and felt the process was easy. Facilitators of payment include having different payment options (e.g., check, money order, online payment) and timeframes (monthly or quarterly). Some interviewees described difficulties with making payments; they cited financial barriers more often than logistical or other barriers.

F.3. 5% Premium Cost-Sharing & HRA/Healthy Behavior Requirements (48-month policy)

We did not evaluate this component of the waiver because it has not been implemented.

F.4. Reduce uninsurance

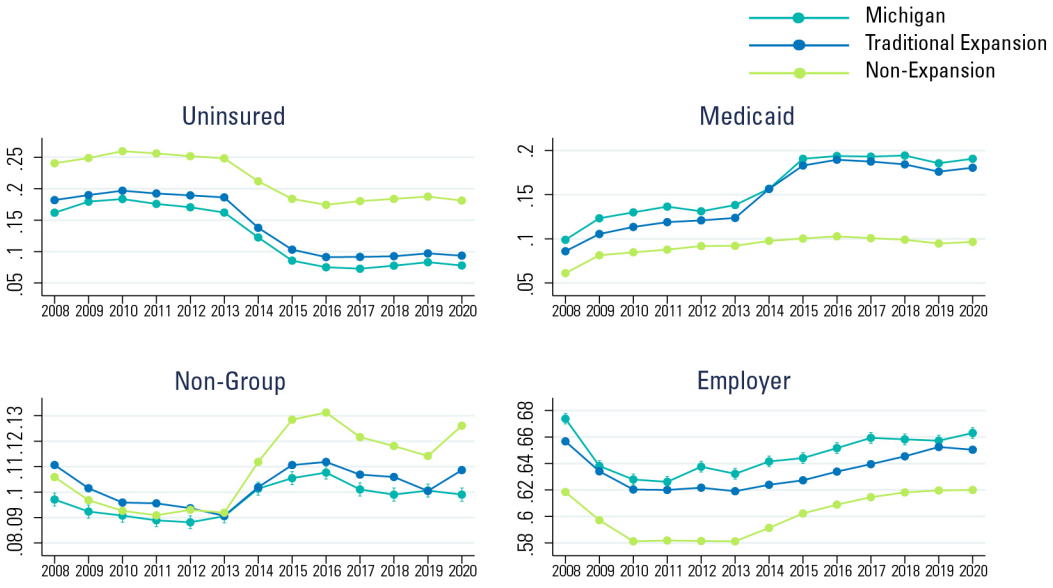
Evaluation question 4.1: How have insurance coverage rates in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?
Hypothesis 4.1a: The decline in uninsurance among non-elderly adults in Michigan compared to other states that did not expand Medicaid that was observed in 2013-2017 will be sustained through subsequent years.
Hypothesis 4.1b: The decline in uninsurance among non-elderly adults in Michigan compared to other states that expanded without a waiver that was observed in 2013-2017 will be sustained through subsequent years.
Data source: American Community Survey (ACS) (as described in D.2.8)

Results

Trends in insurance coverage among working-age adults in Michigan compared with non-expansion states and traditional expansion states

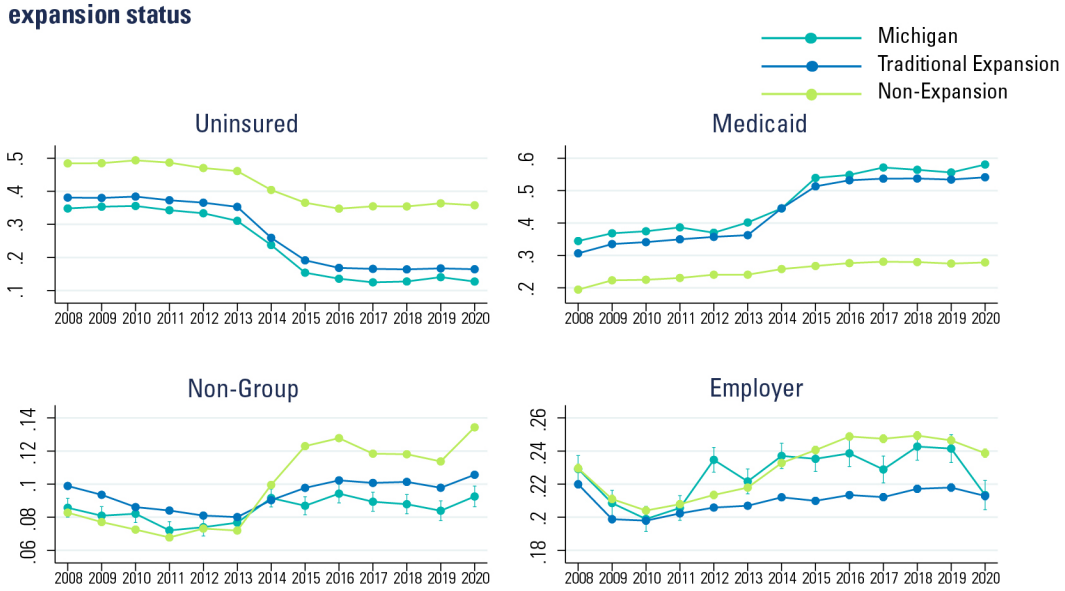
Figure 4.1.A shows trends in the four insurance outcomes (uninsured, Medicaid, private non-group, and employer coverage) for all adults ages 19 through 64 over the period 2008 through 2020 by state Medicaid expansion status. Non-expansion states had the highest rates of uninsurance in the pre-expansion period (2008 through 2013). The fraction uninsured in Michigan before 2013 was very slightly lower than in traditional expansion states. The fraction uninsured dropped noticeably in all three types of states in 2014 and continued to drop in 2015 and 2016. In 2017 through 2020, the fraction uninsured fluctuated slightly but did not decline below the 2016 level. The changes in coverage in 2014 and later were driven largely by increases in Medicaid coverage in Michigan and other expansion states, with increases in both non-group and employer coverage as well in 2014, and later in all three types of states.

Figure 4.1.A. Insurance coverage among adults ages 19-64 by state Medicaid expansion status



Trends for low-income nonelderly adults are generally similar (Figure 4.1.B), although overall rates of uninsurance are much higher throughout this period.

Figure 4.1.B. Insurance coverage among low-income adults ages 19-64 by state Medicaid expansion status



Medicaid and uninsured by Michigan prosperity region, 2013 and 2020

Michigan's decline in uninsurance and increase in Medicaid over this period, shown in Figure 4.1.A above, reflects changes in all regions of the state. Figure 4.1.C shows the fraction uninsured in each of Michigan's prosperity regions in 2013 and 2020. In 2013, rates of uninsurance among adults ages 19 through 64 ranged from 11% in the South Central region to 24% in the Northeast region. As of 2020, uninsurance rates had dropped across the board, ranging from 6% in the South Central and Southeast regions to 11% in the Northeast region. In other words, the region with the *highest* rate of uninsured adults in 2020 had the same rate in 2020 as the region with the *lowest* rate in 2013. In addition, the variability across regions in the fraction uninsured dropped between 2013 and 2020: while some regions still have lower rates than others, the absolute differences are smaller. These reductions in uninsurance reflect increases in Medicaid in all regions (Figure 4.1.D).

Figure 4.1.C. Fraction of all adults ages 19-64 uninsured in Michigan by prosperity region

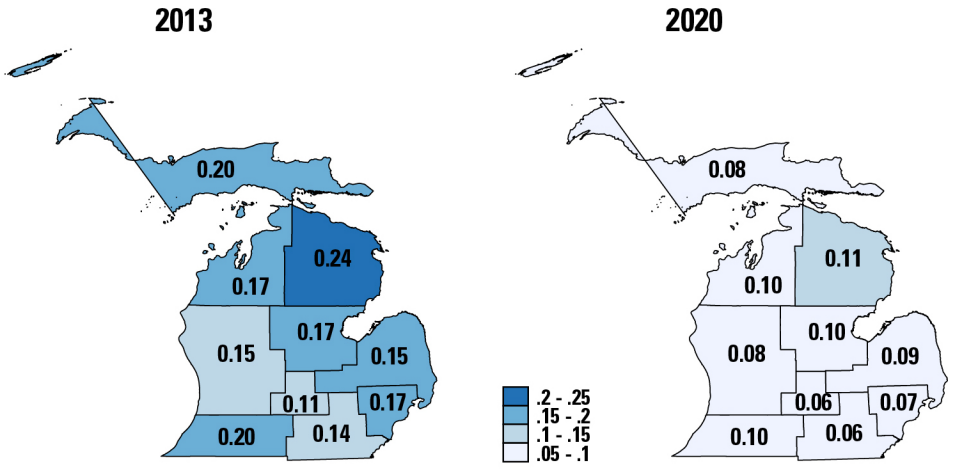
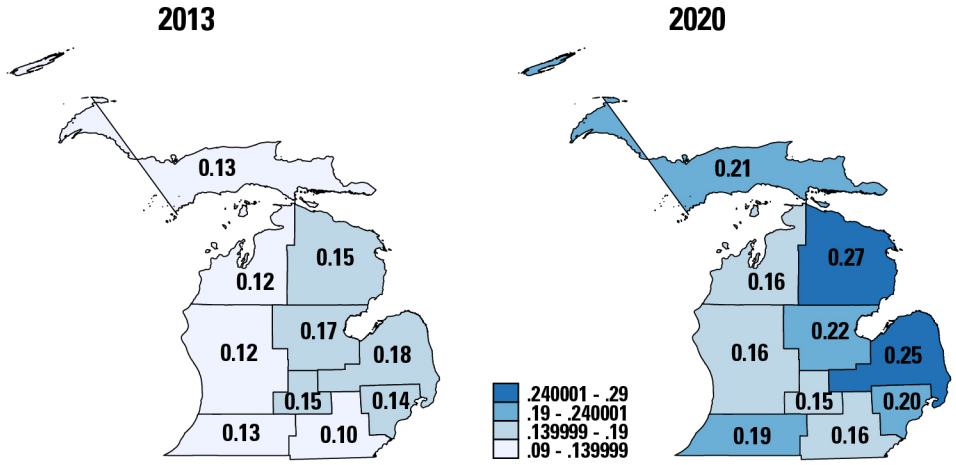


Figure 4.1.D. Fraction of all adults ages 19-64 with Medicaid in Michigan by prosperity region



Impact of HMP on health insurance coverage compared with non-expansion states

Table 4.1.A presents the coefficients from the difference-in-difference regressions for each of four insurance outcomes (uninsured, Medicaid, non-group, and employer coverage), for both the comparison with non-expansion and the comparison with traditional expansion states, for all non-elderly adults and low-income non-elderly adults.

Panel a of Table 4.1.A shows results for Michigan versus non-expansion states for all non-elderly adults. These estimates indicate that compared to non-expansion states, HMP resulted in a significant reduction in the fraction of the non-elderly adult population without coverage of 1.7 percentage points in 2014 and later. This reduction represents about one-tenth of the fraction of all Michigan adults who were uninsured in 2013. This decline was due to an increase of 4.2

percentage points in Medicaid coverage, and small but significant offsetting declines in non-group and employer coverage of 1.9 and 0.8 percentage points respectively. It is notable that these offsetting declines are relative to trends in non-expansion states; in absolute terms, all of these types of coverage actually increased over time.

The effects were even larger for low-income non-elderly adults, presented in panel b of Table 4.1.A. For this population, HMP resulted in a 6.6 percentage point drop in uninsurance, thanks to a 10.95 percentage point increase in Medicaid offset by declines of 3.7 percentage points in non-group coverage and 0.9 percentage points in employer coverage.

Table 4.1.A. Difference-in-differences estimates of the impact of Medicaid expansion in Michigan on insurance coverage from 2010 to 2020

	(1) Uninsured	(2) Medicaid	(3) Non Group	(4) Employer
a. Michigan vs. Non-Expansion, all adults ages 19-64				
(Post 2014)	-0.0169*	0.0420***	-0.0189*	-0.0077**
* Michigan	(0.0076)	(0.0020)	(0.0079)	(0.0021)
Sample n	8,128,342	8,128,342	8,128,342	8,128,342
b. Michigan vs. Non-Expansion, low-income adults ages 19-64				
(Post 2014)	-0.0655***	0.1095***	-0.0373***	-0.0090**
* Michigan	(0.0098)	(0.0042)	(0.0085)	(0.0028)
Sample n	1,596,208	1,596,208	1,596,208	1,596,208
c. Michigan vs. Traditional Expansion, all adults ages 19-64				
(Post 2014)	0.0177	-0.0148	0.0007	-0.0062
* Michigan	(0.0118)	(0.0090)	(0.0021)	(0.0033)
Sample n	11,714,098	11,714,098	11,714,098	11,714,098
d. Michigan vs. Traditional Expansion, low-income adults ages 19-64				
(Post 2014)	0.0180	-0.0253*	-0.0013	0.0063**
* Michigan	(0.0118)	(0.0117)	(0.0015)	(0.0019)
Sample n	1,974,927	1,974,927	1,974,927	1,974,927
Mean of outcome in MI, 2013:				
All adults 19-64	0.162	0.138	0.090	0.632
Low-income adults 19-64	0.311	0.402	0.077	0.415

*p<0.05; **p<0.01; ***p<0.001

Impact of HMP on health insurance coverage compared with traditional expansion states

The results showing the impact of HMP compared with traditional Medicaid expansion are presented in panels c and d of Table 4.1.A. Very few of these results are significant, indicating the decision to expand Medicaid through a waiver in Michigan did not alter patterns of insurance relative to traditional Medicaid expansion.

Summary of response to evaluation question 4.1

The analysis shows significant, sustained reductions in uninsurance as a result of increases in Medicaid coverage due to HMP, compared with states that did not expand Medicaid. The analysis shows very similar changes in coverage in Michigan compared with states that expanded Medicaid without a waiver similar to Michigan.

F.5. Promote primary care/responsible use of services

Evaluation question 5.1: Does HMP's facilitation of primary care access (e.g., through managed care PCP assignment) influence beneficiary engagement in health and maintenance or improvement in physical and mental health?
Hypothesis 5.1a: Beneficiaries who report no barriers to primary care will be more likely to report improved health status and ability to take action to improve or maintain their health.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

Among the 4,082 HMV survey respondents, 9.1% of beneficiaries reported not having a PCP (Beneficiary Survey Supplemental Data Table 3.5). Among those without a PCP, 62.3% reported difficulties getting set up with a PCP (Beneficiary Survey Supplemental Data Table 3.6). The most commonly reported difficulties were having to change providers and being unable to find a provider with desired characteristics in their area (Beneficiary Survey Supplemental Data Table 3.7).

Among beneficiaries who reported having a PCP, 23.5% reported barriers to primary care, including difficulty getting an appointment, not getting a response within 24 hours of contacting the PCP, having to find a new PCP, long waits for appointments, or barriers due specifically to the PHE. The proportion of beneficiaries who reported barriers to primary care was similar for those who had a PCP appointment in the past year (22.6%) vs. those who did not (27.1%) (Beneficiary Survey Supplemental Data Table 3.16).

Beneficiaries who had a PCP and reported barriers to primary care, compared to beneficiaries who had a PCP but reported no barriers to primary care, described themselves as being in worse overall health and worse mental health, were more likely to say their physical or mental health was not good for 5 or more days in the past month, and more likely to report their health limited their activities for 5 or more days in the past month (Table 5.1.A). These findings were confirmed in multivariable analysis (Beneficiary Survey Appendix Tables 5.1.2 and 5.1.3). Beneficiaries who had a PCP and reported barriers to primary care, compared to beneficiaries

who had a PCP but no reported barriers to primary care, were more likely to say their physical, mental, and oral health had gotten worse in the past year than those with a PCP who reported no barriers (Table 5.1.A). In multivariate analysis there was a difference in odds of reported improvement in oral health but no difference in odds of reported improvement in physical or mental health for those who did or did not report barriers to primary care (Beneficiary Survey Appendix Table 5.1.4). Multivariate analyses did not include claims-based indicators of chronic conditions.

Table 5.1.A. Health measures by reported barriers to primary care

	Reported PCP barriers %	Reported no PCP barriers %	No PCP %
Health status**			
Excellent/Very good/Good	70.4	79.8	80.6
Fair/Poor	29.6	20.2	19.4
Mental health status***			
Excellent/Very good/Good	70.4	83.9	82.2
Fair/Poor	29.6	16.1	17.8
Oral health			
Excellent/Very good/Good	59.7	67.3	64.0
Fair/Poor	40.3	32.7	36.0
Number of days physical health not good***			
0 days	36.1	58.3	54.2
1-4 days	16.6	16.4	20.0
5+ days	47.3	25.3	25.8
Number of days mental health not good***			
0 days	39.0	64.3	62.9
1-4 days	20.4	12.9	9.8
5+ days	40.6	22.7	27.3
Number of days health limited activities***			
0 days	39.6	62.9	59.5
1-4 days	14.6	14.0	15.3
5+ days	45.8	23.1	25.2
Physical health in past year***			
Gotten better	23.9	28.2	26.7
Stayed the same	45.3	56.7	52.2
Gotten worse	30.7	15.1	21.1
Mental health in past year***			
Gotten better	22.6	23.8	32.4
Stayed the same	53.8	62.2	54.7
Gotten worse	23.6	14.0	12.9
Oral health in past year**			
Gotten better	13.3	17.1	13.7

Stayed the same	62.1	65.1	57.5
Gotten worse	24.5	17.8	28.8
Any health improvement in past year (physical, mental or oral)			
Yes	37.9	45.4	45.8
No	62.1	54.6	54.2

Pearson results, *p<.05, **p<.01, ***p<.001

Beneficiaries who reported no barriers to primary care were more likely than those with barriers to report self-efficacy in their ability to take action to improve or maintain their health (Table 5.1.B). These results were confirmed in multivariate analysis (Beneficiary Survey Appendix Table 5.1.6).

Table 5.1.B. Self-efficacy measures by reported barriers to primary care

	Reported PCP barriers %	Reported no PCP barriers %	No PCP %
I always know when I need to go to the doctor***	67.8	81.9	66.0
I always keep my appointments***	67.9	85.9	84.8
I always know how to prevent problems with my health***	41.4	56.4	48.4
I am always able to follow my doctor's treatment advice between visits***	71.0	85.2	83.4
When I have health care visits, I always bring a list of questions or concerns	48.7	49.5	50.1

Pearson results, *p<.05, **p<.01, ***p<.001

Summary of response to evaluation question 5.1

Beneficiaries who had a PCP and reported no barriers to getting primary care described better health status and greater self-efficacy in managing their health compared to beneficiaries with a PCP who reported barriers to primary care, but not compared to those with no PCP.

Evaluation question 5.2: What factors influence beneficiaries' decisions about seeking care in the emergency department?
Hypothesis 5.2: Beneficiaries who report barriers to care will be more likely to report an emergency department visit without first attempting to contact their primary care provider.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

Among HMV survey respondents who reported having a PCP, 32.5% recalled going to the ED in the past year (Beneficiary Survey Supplemental Data Table 3.25). Of these, one-quarter (22.2%) said they tried contacting their PCP before going to the ED (Beneficiary Survey Supplemental Data Table 3.26). Some reasons provided for going to the ED, despite contacting primary care,

were that the primary care office told them to go to the ED and/or told them a timely primary care appointment was not available. In contrast, most beneficiaries (77.3%) who reported an ED visit in the past year did not contact their PCP first (Beneficiary Survey Supplemental Data Table 3.26). Some explanations given were that the office was closed, that they were having a true emergency (e.g., stroke), or that they had COVID.

Beneficiaries who tried to contact their PCP before going to the ED, compared to beneficiaries who did not, were more likely to report barriers to primary care, including difficulty getting an appointment and other difficulties accessing primary care (Table 5.2.A). In multivariate analyses, beneficiaries who reported barriers to primary care were less likely to have an ED visit without first attempting to contact their PCP (Beneficiary Survey Appendix Table 5.2.2).

Table 5.2.A. Healthcare barriers by PCP contact prior to an ED visit

	Did not try to contact PCP before ED visit %	**Tried to contact PCP before ED visit %**
Ease of getting a PCP appointment***		
Difficult/Very difficult	10.5	28.7
Easy/Very easy	86.8	70.3
Response from PCP within 24 hours		
Sometimes/Never	16.3	26.4
Always/Usually	78.1	70.8
Other barriers to primary care**		
Yes	14.7	28.4
No	85.3	71.6
[#]Any difficulties accessing prescription meds		
Yes	42.1	52.7
No	57.9	47.3

Pearson results, *p<.05, **p<.01, ***p<.001
[#]Among respondents who reported being on prescription medications in the last 12 months

Summary of response to evaluation question 5.2

Several factors influenced beneficiaries' decisions about seeking care in the ED without first contacting their PCP office. Some beneficiaries believed they were having a true emergency; others believed that possible cases of COVID needed to be handled at the ED rather than the PCP office.

Beneficiaries who reported barriers to primary care were more likely than those who reported no barriers to contact their PCP office before going to the ED. It is plausible that those who sought timely advice or appointments were those more likely to encounter barriers to receiving the care in the timeframe they desired.

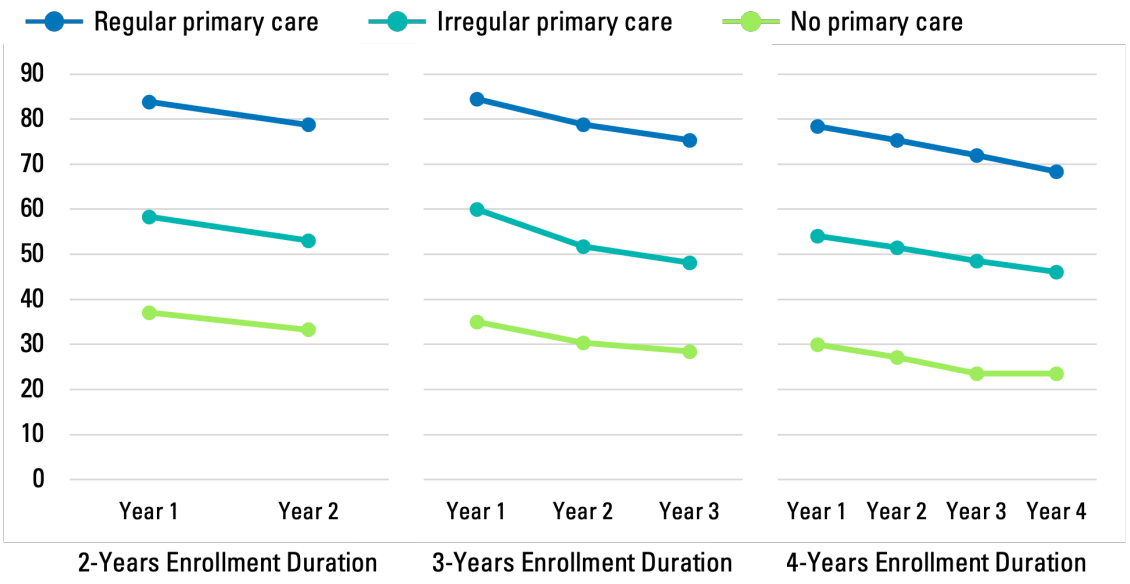
Evaluation question 5.3: Is use of the emergency department related to continuity of primary care?
Hypothesis 5.3: Beneficiaries with higher continuity of primary care will have lower rates of emergency department utilization and lower odds of being high-frequency ED utilizers.
Data source: Medicaid claims and encounter data (as described in D.2.1)

Results

The rate of ED visits per 1,000 member-months was higher for beneficiaries who had regular primary care compared to those with irregular or no primary care (Figure 5.3.A), which may be related to a greater burden of chronic and acute conditions among those who are regular users of primary care. This pattern was consistent for each enrollment duration group and in each year of their enrollment. Within each subgroup of primary care continuity, the ED visit rate was highest in Year 1 of enrollment and decreased in subsequent years.

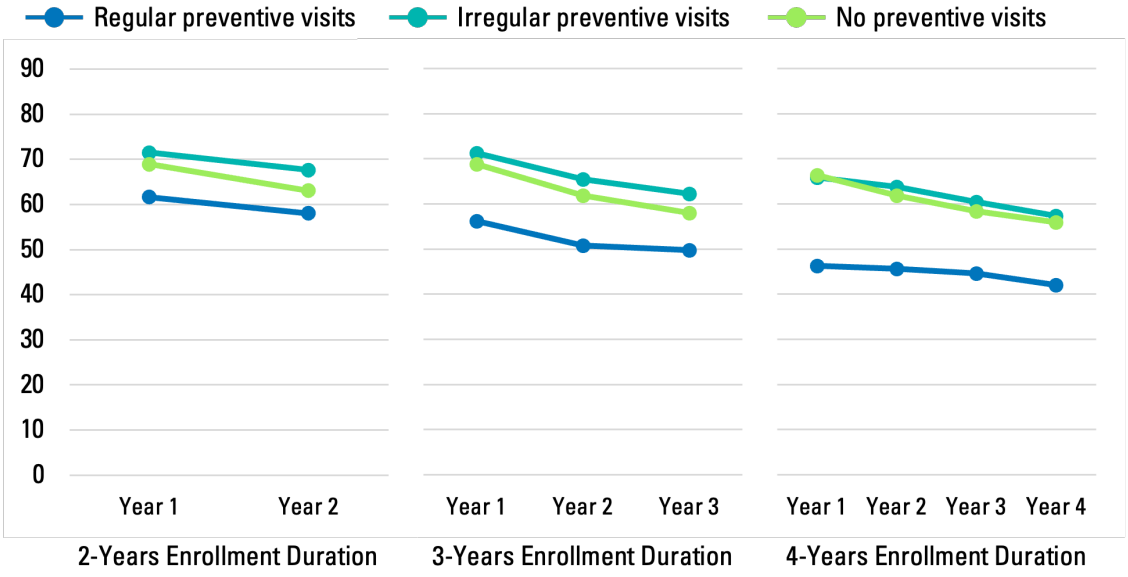
A markedly different pattern was observed for continuity of preventive visits (Figure 5.3.B). Across all enrollment duration groups, ED visit rates are lowest for beneficiaries who had regular preventive visits, compared to those with irregular or no preventive visits.

Figure 5.3.A. ED visit rate (per 1,000 member-months) by primary care continuity



Note: p≤0.001 for comparison between levels of primary care continuity in each enrollment duration group

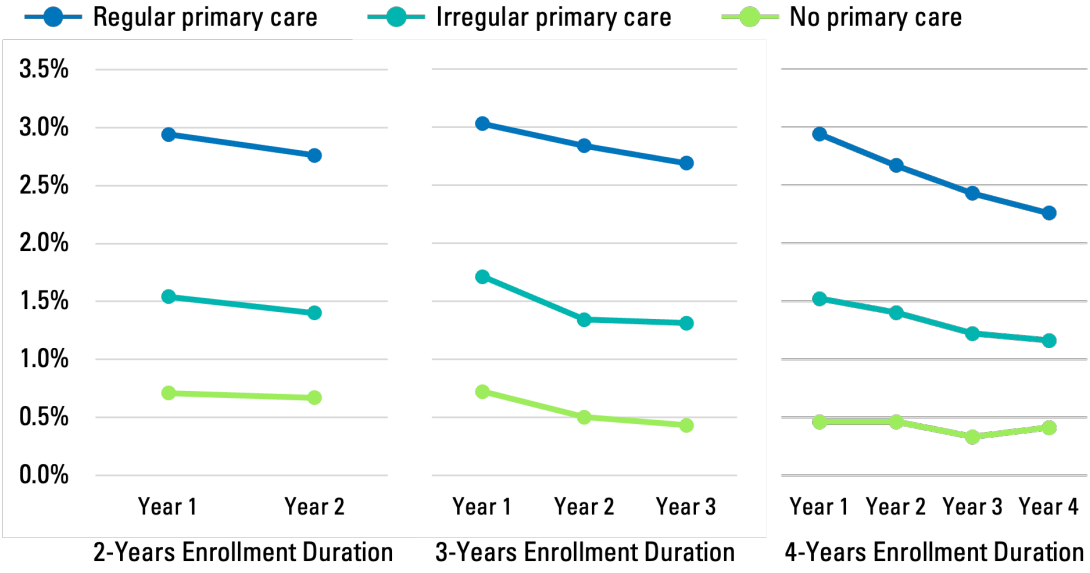
Figure 5.3.B. ED visit rate (per 1,000 member-months) by preventive visit continuity



Note: p=0.001 for comparison between levels of preventive visit continuity in each enrollment duration group

A similar pattern was seen for high-frequency ED utilization, defined as more than 5 ED visits in a 12-month period. For each enrollment duration group, the proportion of high-frequency ED utilizers was higher for those who had regular primary care compared to irregular or no primary care (Figure 5.3.C). Such ED utilization decreased from Year 1 to each subsequent year.

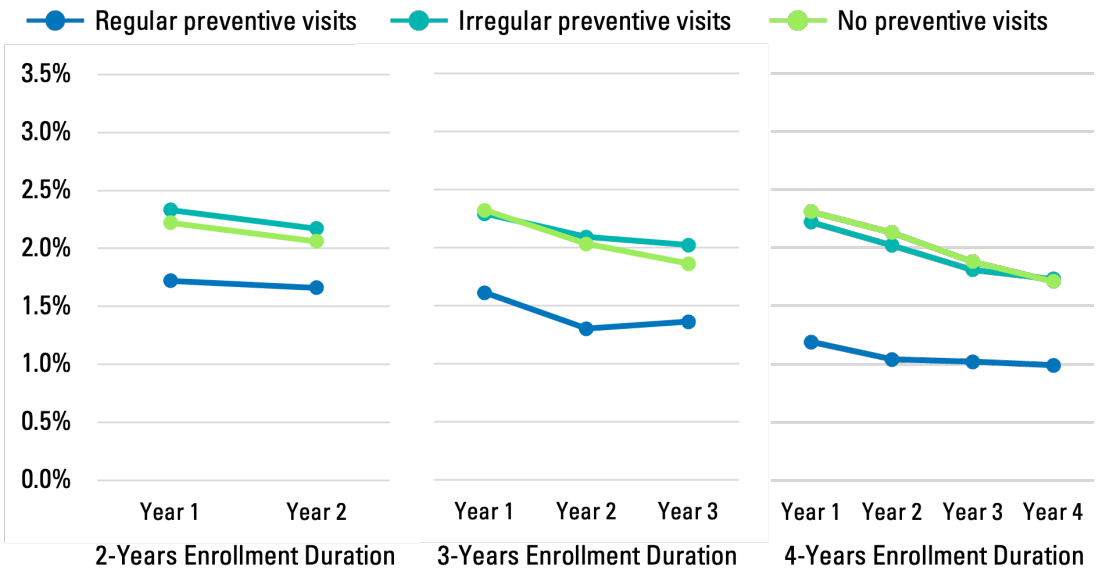
Figure 5.3.C. High-frequency ED utilizers by primary care continuity



Note: p≤0.001 for comparison between levels of primary care continuity in each enrollment duration group

In contrast, the proportion of high-frequency ED utilizers was lower for those who had regular preventive visits compared irregular or no preventive visits (Figure 5.3.D). Within each subgroup of preventive visit continuity, the ED visit rate was highest in Year 1 of enrollment and decreased in subsequent years.

Figure 5.3.D. High-frequency ED utilizers by preventive visit continuity



Note: p≤0.001 for comparison between levels of preventive visit continuity in each enrollment duration group

Multivariate analysis confirms that beneficiaries who have regular preventive visits were less likely to be high-frequency ED utilizers compared to beneficiaries with no preventive visits. Beneficiaries with chronic conditions were more likely to be high-frequency ED utilizers, as were those who used specialty behavioral health services and who were younger at their first HMP-MC enrollment (Administrative Data Appendix Table 5.3.5).

Summary of response to evaluation question 5.3

Results of this analysis indicate that when primary care continuity is measured with an inclusive definition of all visit types, beneficiaries with higher continuity of primary care have higher ED utilization, not lower. These beneficiaries have higher utilization overall – for primary care and ED visits, suggesting they have chronic and/or acute conditions that require more frequent care.

We also found that higher preventive visit continuity is associated with lower ED utilization. Other research suggests that individuals with multiple chronic conditions have higher rates of acute, problem-focused visits and lower rates of preventive visits. If healthier HMP beneficiaries without chronic conditions have higher rates of preventive visits than beneficiaries with chronic conditions, then this finding would reflect that difference in acuity. If rates of preventive visits are similar for HMP beneficiaries with and without chronic conditions, then preventive visits may contribute to reducing ED utilization.

Evaluation question 5.4: Does HMP promote more consistent use of services to manage chronic conditions over time?
Hypothesis 5.4: Beneficiaries with chronic conditions will demonstrate better rates of primary care utilization, and lower rates of ED visits and hospitalizations, over time compared to their initial year of HMP enrollment.
Data source: Medicaid claims and encounter data (as described in D.2.1)

Results

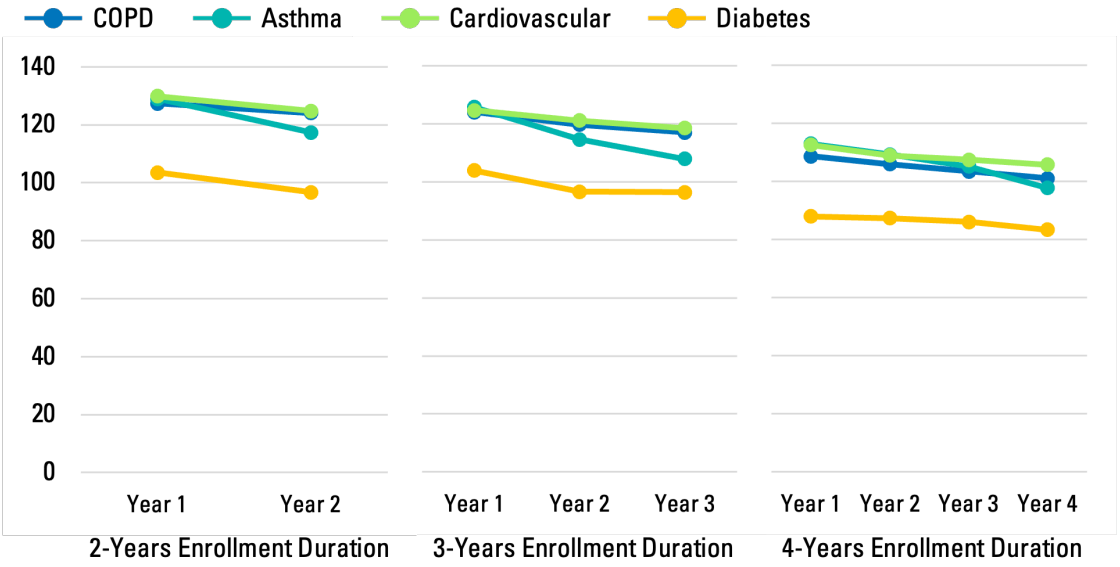
For each of the four chronic conditions studied, over three-quarters of beneficiaries had a primary care visit in each year of enrollment and less than five percent had no primary care visits (Table 5.4.A). Among beneficiaries who did not have any of the four conditions, those in the 2- or 3-years enrollment duration groups had dramatically lower primary care continuity. However, those with 4-years enrollment duration had primary care continuity that was similar to their counterparts with one of the four conditions.

Table 5.4.A. Primary care continuity by chronic condition and HMP-MC enrollment duration

	HMP-MC Enrollment Duration		
	2-Years Enrollment	*3-Years Enrollment*	*4-Years Enrollment*
COPD			
Primary care continuity			
Regular primary care	86.73%	79.44%	75.12%
Irregular primary care	10.57%	18.66%	23.87%
No primary care	2.70%	1.90%	1.01%
Asthma			
Primary care continuity			
Regular primary care	83.50%	77.45%	76.87%
Irregular primary care	12.08%	19.36%	21.77%
No primary care	4.42%	3.19%	1.36%
Cardiovascular			
Primary care continuity			
Regular primary care	86.16%	81.06%	75.93%
Irregular primary care	10.72%	16.76%	22.83%
No primary care	3.12%	2.18%	1.24%
Diabetes			
Primary care continuity			
Regular primary care	89.25%	83.92%	81.48%
Irregular primary care	8.67%	14.61%	17.90%
No primary care	2.08%	1.47%	0.62%
None of the Above			
Primary care continuity			
Regular primary care	50.52%	43.27%	75.07%
Irregular primary care	24.72%	36.86%	23.68%
No primary care	24.76%	19.87%	1.25%

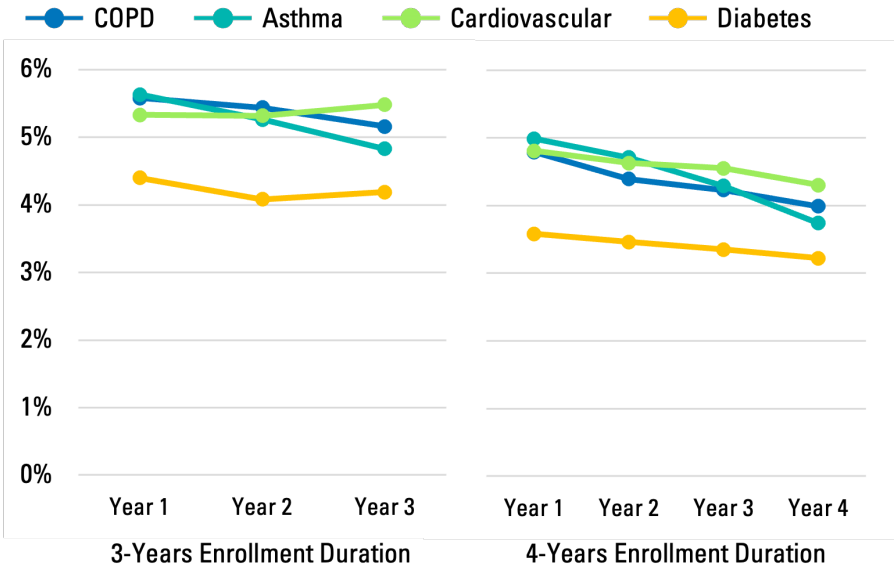
The ED visit rate for beneficiaries with chronic conditions decreased over time (Figure 5.4.B), as did the proportion of high-frequency utilizers (Figure 5.4.C). This pattern was consistent for all four chronic conditions studied, and for all HMP-MC enrollment duration groups.

Figure 5.4.B. ED visit rate (per 1,000 member-months) by chronic condition



Note: p≤0.01 for each condition-specific comparison between Year 1 and Final Year (2, 3 or 4) in each enrollment duration group

Figure 5.4.C. High-frequency ED utilizers by chronic condition



Patterns were more variable for condition-specific inpatient rates (Table 5.4.D), which include beneficiaries with newly diagnosed conditions. Inpatient admission rates were highest for

beneficiaries with COPD/Asthma and lowest for those with cardiovascular disease. All groups demonstrated both increases and decreases over the four years.

Table 5.4.D. Condition-specific inpatient rate (discharges per 100,000 members)

	Year 1	Year 2	Year 3	Year 4
OVERALL[#]				
COPD/Asthma	451.82	417.99	451.92	381.15
Heart Failure	142.06	172.47	169.56	184.94
Diabetes	210.35	188.94	185.19	203.13

[#]Includes beneficiaries with HMP-MC enrollment duration of at least 1 year

Summary of response to evaluation question 5.4

Based on analyses to date, 75 to 90% of HMP beneficiaries with designated chronic conditions have established a usual source of care that provides continuity of primary care. In turn, beneficiaries with chronic conditions had reductions in ED utilization after their initial year of HMP-MC enrollment.

Evaluation question 5.5: How has HMP impacted beneficiaries' physical, mental, and oral health and their use of health care services over time?
Hypothesis 5.5: Beneficiaries will describe HMP as allowing them to receive services that have a significant positive impact on their health and well-being.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to access to different types of health care and the impact on health, the impact of the COVID-19 pandemic on service use, and impact of having HMP on overall well-being.

Access to health care and impact on physical health

Most interviewees said having HMP coverage has allowed them to access needed health care services and medications that they otherwise would not have been able to get due to cost. Many interviewees said they were more likely to seek out needed care, for both acute and chronic conditions, because of their HMP coverage. Interviewees described how their increased access to care has led to improvements in their health.

> *Well, before, when I didn't have healthcare, I couldn't go to the doctor when I was maybe in pain…But now that I have the Healthy Michigan Plan, now I can go to my scheduled appointments, you know, every six months….I'm a pre-diabetic, and so I have to go to the doctor to check my A1c and stuff so that's all doing well. And I'm just happy about the insurance now, because without insurance, your health will decline, especially if you don't go to the doctor to keep up on your health. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

I actually had COVID and it covered all the inhalers and like special medications and stuff they put me on, stuff like that back in October. So, without it, I would have really been in big trouble. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)

I would absolutely say it's improved. I was able to get glasses a few years ago, which improved my eyesight tremendously. And varicose veins, relief in my legs and feet was tremendous, tremendous relief …. I'm part time, so I don't make a lot of money. I couldn't tell you off the top of my head what the cost of my kidney surgery was, but I'd probably never be able to pay that off in this lifetime… I don't know if I would be here today without this Healthy Michigan. (Age 50-64, Male, 100-133% FPL, UP/NW/NE)

So, it has improved me a lot since I'm able to go through this health plan…I had insurance [before] but it didn't take care of a lot of the things I take care of now like my teeth and my eyes and stuff... And this I like a lot better because I get my teeth checked every six months and I can go to the eye doctor every year and get my eyes checked. And I keep up with my physical health because I'm sixty years old. I try to keep my health healthier as I get older…And it's helping me take care of my medication more than I was able to before…I've lost weight, I feel healthier. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)

Some interviewees said they were less likely to use the ED or visit an urgent care center as result of now having a regular source of care.

I don't use the emergency room much anymore. I just only go to my regular doctor or if I have to go to a specialist, I go to them…I didn't really like to go to the emergency room because I ended up paying for a lot of that. I didn't have any other way. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)

I guess, if I didn't have coverage and there was a problem, I'd be more likely to go to urgent care. Just because it was cheaper…When I have coverage, I like to, or I prefer to have that established relationship with the primary care physician so they can monitor my health long term. So, if I have any issues then it seems a lot more in-depth and better care that I'm receiving if I can go to a primary care versus an urgent care. (Age 19-35, Female, 0-99% FPL, W/E/Central)

I am able to say, "hey this is going on" and can I get a doctor's appointment. And I am able to go there, whereas before…, I didn't have a choice but to go to the emergency. (Age 50-64, Female, 100-133% FPL, W/E/Central)

A few interviewees noted delays in accessing specialist care or difficulty finding a specialist that accepted HMP in their area.

And there were no neurologists up in this area. The nearest neurologist was Grand Rapids, which is 2.5 hours. In the winter it's a treacherous drive down 131. So, I just blew that off and she [doctor] was able to get me samples of the medicine for a

while…If I had good health insurance, I could see a neurologist locally, make a few visits, and get a prescription…Otherwise, Medicaid's been pretty good up here. I had some trouble finding a dermatologist, but now I got a dermatologist, really good, right in town...For specialists, kind of a gap up here it seems of people who take Medicaid. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

In my area, I was very disappointed with the coverage. I literally couldn't find an eye doctor to get into to get my glasses…there's not a lot of places that take that specific coverage here. And the couple that did were so overbooked and packed you couldn't even get in. And I'm literally half-blind…my old glasses were broken and I needed them right away, so I had no choice but to find an alternative and it ended up costing me $200 out of pocket. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)

Access to dental care and impact on oral health

Many interviewees said that their HMP coverage allowed them to get regular dental care and motivated them to focus on their oral hygiene at home, both of which improved their oral health.

It helps a lot, which I'm able to get my teeth cleaned periodically. If I didn't have this plan, I wouldn't go anywhere. Or I basically wouldn't cover anything to do with my teeth and problems would occur from that. Such as if I had a tooth pain in my mouth that I can immediately get checked out. Not too long ago, I had a problem with my teeth, and they were able to address it and I was able to get that treated. It was my wisdom teeth. If I didn't have that [coverage], I would have been in a lot more pain and I wouldn't have known what to do for getting that treated. (Age 19-35, Male, 0-99% FPL, S Central/SW/SE)

Now I can go to the dentist and get my teeth cleaned like I should, you know what I'm saying. I mean I've lost a few teeth but, you know, I thank God for the few teeth I do have. I at least can go to the dentist and get them cleaned. (Age 50-64, Female, 0-99% FPL, W/E/Central)

Some interviewees had not received needed dental care or had delayed getting dental care due to limited availability or difficulty finding an oral health provider in their area that accepted HMP.

There really isn't a dentist around here that takes the dental health plan that I'm on. There's one but my teeth are so bad, I did have a while back an abscess and I had to go to the ER and they wanted me to go to like an oral surgeon. But the one in [location] don't take the plan no more, so I'd have to go down state… (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

I had an abscess tooth and I tried to get into the dentist and they couldn't get me in for like a month or two later. And it was severe tooth pain and I just felt like that wasn't really doable. You shouldn't have to suffer and wait when it's an emergency-type situation like that…I ended up going to another place and paying cash. Just to

get the antibiotic and the tooth taken care of faster. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)

Access to mental health care and impact on mental health

Some interviewees described receiving mental health services covered by HMP that led to improved mental health. A few interviewees said behavior changes they made since getting their HMP coverage led to improvements in both their physical and mental health.

I would say I was a bit depressed because of my thyroid issue, but with the help from the Medicaid itself and the program and the doctors and everything, I would say yeah, it's improved my mental health as well. I used to be stressed or depressed, but with the advice to take the medication constantly and take my vitamins, it helped. It definitely helped. Right now, I feel much better. (Age 19-35, Female, 0-99% FPL, Detroit Metro)

I saw her [therapist] for about three years and she helped me through some anger issues so I'm a lot more calmer, which has helped in my health because it's lowered my blood pressure…I'm thankful for the therapist, and I'm thankful for the insurance. Because if not, I wouldn't have been able to afford it. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

A few interviewees said they had trouble finding a mental health care provider that accepted HMP coverage.

I feel like there aren't as many providers that participate with it when it comes to mental health. It's really limited in the area. (Age 19-35, Female, 0-99% FPL, W/E/Central)

I called my Medicaid card place, and they gave me a few listed, but the listed people were full, or they didn't accept the [health plan]. So, it's just the point of finding someone that accepts it. (Age 19-35, Female, 0-99% FPL, S Central/SW/SE)

Learning about and monitoring health conditions

Many interviewees received new diagnoses and/or were better able to monitor existing health conditions because HMP covered regular doctor visits and tests.

I've learned that sometimes my bloodwork numbers don't always come back good. Like triglycerides and cholesterol and stuff, so. But doing the preventative – I get it done yearly – so if something goes up, I have a chance to work on getting it back down…Instead of letting it go and then causing chronic illness or something else bad to happen later on. It helps me so I can monitor that type of stuff regularly instead of it getting into a bad situation. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)

Like blood pressure, I mean that was something that I was unaware of. And then the diabetic condition, found that out after a blood test. So, really that's been the biggest change. It's kind of I'm more aware of all the health issues I have and have to address…So, that's made it easier to confront them, and the medication and everything has helped. And kept it under control, you know the blood pressure and cholesterol. The diabetes I'm taking metformin for that…Before, I think, just not having that awareness really hurt me and really hurt my health situation overall…I think the health plan is really good in that regard. Encouraging you -- that you go to screenings and check-ups and all -- that has been really helpful. It just kind of makes you get out there and do it instead of procrastinating. (Age 50-64, Male, 0-99% FPL, Detroit Metro)

As far as learning, probably the most I've learned from is when they do like labs blood work and stuff, you know. I had the high white blood count and I've learned—and that's one of the things that on the reason why I quit smoking. (Age 50-64, Male, 0-99% FPL, W/E/Central)

Impact of the COVID-19 pandemic on service use

Many interviewees reported delays in getting care in the past year, especially dental care, due to COVID-19-related office closures, appointment backlogs, and concerns about the risk of infection. Other interviewees said their use of health care services had not changed much in the past year and that they were able to receive care in person.

I've delayed care when it comes to my dental. I'm a little apprehensive about the virus and being unmasked and everything. Generally, I've had really healthy teeth in the past so I've just kind of put that off, I don't think I've gone in the last year. But other than that, I feel comfortable with the practices they have at my family doctor. (Age 19-35, Female, 0-99% FPL, W/E/Central)

But they're [the dentist] so backed up from being closed from COVID that it's been hard to get in to get what you need done in a timely manner. They're like months and months out between appointments and stuff at the one place I can go to. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)

With COVID happening it was impossible for me to consider going to the doctors for an annual check-up. I think it was in the summer of last year that they asked me if I wanted a check-up, and I was like 'no way', just because it seemed very dangerous and there was an influx of patients at the local hospital here. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)

Some interviewees reported getting care via telehealth visits in the past year. Most were satisfied with their experience although some interviewees felt that telehealth visits were not as good as getting care in person. A few interviewees said they preferred getting care via telehealth.

I didn't notice much of a difference between video chats and in person. Obviously, temperature, and blood pressure, and those types of things are different. But it didn't make much of a difference; it felt like I was right there in the office. (Age 19-35, Male, 100-133% FPL, W/E/Central)

I had COVID, and I had the COVID rash, and it was all over my body. So, I had called him [doctor] about that, and he could look at it and it was perfect. So, it [telehealth] was better than going in and exposing people or him, or anything like that. It was very beneficial and helpful….My therapy - actually, we still do video conference. (Age 36-49, Female, 0-99% FPL, Detroit Metro)

Well like the mental health I've been doing virtual and then everything else has been in-person care…It's been video every time except once I was having problems with my phone then we were able to do it just as a call. I think it's really helpful. I kind of like it better that way because then I am kind of in my own place and it feels a little less formal. I really like the virtual for mental health. I think it's a good idea for me. (Age 19-35, Female, 0-99% FPL, W/E/Central)

Impact of having HMP on overall wellbeing

Many interviewees said that having HMP coverage reduced their stress and worry about being able to access care when needed.

I'm much less anxious and knowing that I'm not going to have to fight with multiple insurance companies and just not knowing how much I'm going to have to pay out of pocket for any potential emergencies. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)

But it's less stressful knowing I have coverage. I was stressed out for years, watching my friends go medically bankrupt and having to deal with that. Knowing that I had coverage if I had to go to the ER took a lot of stress off me. First good health insurance I've had in my life…best insurance I've had. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)

It's a great relief knowing that I have this plan because compared to not having it, it would have been way more stressful. Because I would have been more prone to weighing my options rather than being able to make the choice of going to the doctor or getting a check-up. (Age 19-35, Male, 0-99% FPL, S Central/SW/SE)

Many interviewees expressed gratitude for, and satisfaction with, their HMP coverage.

I'm thankful I have this program, otherwise I wouldn't be going to the doctors at all because I wouldn't be able to afford to go. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)

Summary of response to evaluation question 5.5

Most interviewees said having HMP coverage has allowed them to access needed physical, mental/behavioral, dental, vision and other health care services and medications though some described access barriers to specialists. Many interviewees said they were more likely to seek out needed care for both acute and chronic conditions which led to improvements in their knowledge of how to take care of their health and in their health overall. Many interviewees described how HMP coverage improved their general sense of well-being by reducing their stress and worries and many expressed gratitude for their HMP coverage and its positive impact on their lives.

F.6. Support financial well-being

Evaluation question 6.1: What impact has HMP had on beneficiaries' levels of employment and ability to work?
Hypothesis 6.1: Beneficiaries will report sustained or increased employment and decreased health-related barriers to employment over time.
Data source: Beneficiary surveys – longitudinal and new cohorts (as described in D.2.2)

Results

At the time of the HMV survey, 40.8% survey respondents were not employed, 43.7% were employed at a job, and 15.6% were self-employed only. Among those employed at a job, 55.8% were working full-time and 44.2% were working part-time. Nearly half of beneficiaries who were employed or self-employed reported some inconsistency in their work schedule, whether week-to-week (33.1%) or seasonally (13.2%) (Beneficiary Survey Appendix Table 6.1.1).

Half of employed or self-employed beneficiaries and three-quarters of non-employed beneficiaries reported factors that interfere with their ability to work, how much they can work or the type of work they can do. Health-related issues were the most common barrier for both groups. Non-employed beneficiaries were more likely to report barriers related to health, transportation, and lack of jobs (Table 6.1.A).

Table 6.1A. Employment barriers by employment status

	Employed		Not Employed	
	Percent	**95% CI**	**Percent**	**95% CI**
Any barriers to work***	50.2	[46.7, 53.7]	78.4	[74.5, 81.8]
Health-related barriers***	28.7	[25.7, 31.9]	51.1	[46.8, 55.3]
Transportation-related barriers***	16.8	[14.2, 19.9]	29.3	[25.6, 33.4]
Lack of jobs in the area***	13.3	[10.9, 16.1]	22.8	[19.3, 26.8]
Caregiving responsibilities	17.2	[14.6, 20.2]	18.2	[15.3, 21.5]
A prior conviction or legal action	5.4	[3.6, 8.0]	6.5	[4.5, 9.3]

Pearson results, ***p<.001, **p<.01, *p<.05

Summary of response to evaluation question 6.1

At the time of the survey, most beneficiaries were employed or self-employed, of those nearly half reported barriers to how much they could work or the type of work they could do. Health-related limitations were the most commonly cited barrier to employment for both working and non-working beneficiaries.

Evaluation question 6.2: How is HMP enrollment related to individual beneficiaries' financial outcomes during and after HMP enrollment?
Hypothesis 6.2: HMP enrollment will be associated with improved credit report outcomes for beneficiaries over time.
Data source: Credit report data linked to Medicaid enrollment (as described in D.2.6)

Results

Approximately 90.3% of all HMP beneficiaries enrolled at any time were successfully matched to at least one period of their Experian credit report data. Among these beneficiaries, the matching rate for the early cohort was 90.8%. We have recently received the data from Experian. Data cleaning and quality assurance are now underway in preparation for planned analyses.

Summary of response to evaluation question 6.2

This analysis is in progress, and the results not yet available.

Evaluation question 6.3: How has HMP affected beneficiaries' financial and material well-being over time?
Hypothesis 6.3: Beneficiaries will describe examples of how HMP has improved their financial and material well-being.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to the impact of HMP on financial well-being and ability to work.

Impact of HMP on financial well-being, including out-of-pocket costs for health services

Many interviewees reported that HMP has had a positive impact on their financial situation. Interviewees described reduced out-of-pocket medical expenses and/or insurance costs. Several noted how these savings had improved their ability to pay for other living expenses.

> *Yes, it's helped, you know, because if I didn't have the Healthy Michigan Plan, I don't know what the affordable health care premiums are anymore. But I have that extra money to pay for utilities and things like that…And I don't have no surprise medical bills. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

It definitely helps because I'm paying less than health insurance would be otherwise, paying a lot less than some other people. And that of course leaves more money to pay for food and rent and other things. (Age 19-35, Male, 0-99% FPL, W/E/Central)

Impact of HMP on ability to work

Many interviewees reported that HMP has had no impact on their employment situation or their ability to work. However, a few interviewees described how HMP has improved their ability to work or their performance at work by allowing them to get the care they needed to address health concerns that were previously barriers to employment.

I was not working before I went on the Healthy Michigan Plan and now I have been working….I've been working ever since certainly after I got on the Healthy Michigan Plan and started seeing doctors. So, it helped me get to work…Both of my shoulders, I had surgery on. And if I didn't have the Healthy Michigan Plan and that didn't happen, I wouldn't be working because I'm telling you they were broke bad. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)

It's just made me more healthy and more in control of my health…I mean the eye coverage and things, and contacts…Now they have like a special lens…that's what made it easier on the job…. They're more expensive I believe, but they're much better and just in that one instance, that example shows it's just really helped me in terms of employment. (Age 50-64, Male, 0-99% FPL, Detroit Metro)

Well, it's keeping me healthy, that's for sure. My legs feel much better since those varicose veins got done. I'm a chef so I'm on my feet quite a bit. So, that's a tremendous relief. (Age 50-64, Male, 100-133% FPL, UP/NW/NE)

Summary of response to evaluation question 6.3

Many interviewees described how HMP has had a positive impact on their financial situation, describing how their out-of-pocket medical expenses have been reduced and/or insurance costs had improved their ability to pay for other living expenses. A few interviewees described how having HMP coverage had improved their ability to work.

F.7. Sustain the safety net and support coordinated strategies to address social determinants of health

Evaluation question 7.1: What are the categories and estimated amounts of the State's costs to administer key HMP demonstration policies (e.g., Healthy Behaviors Incentives program, cost-sharing)?
Hypothesis 7.1: Administrative costs to implement demonstration policies will remain stable during the current Section 1115 waiver period.
Data source: Key informant interviews (as described in D.2.5)

Results

Medicaid officials confirmed that there are administrative costs to implement HMP policies but that it is difficult to quantify those costs.

> *There was a lot of interest in the early years of HMP… of being able to, with a high degree of confidence, identify the costs that are going into administering it. Over time, it's become a little bit more theoretical in some areas… because of the administrative burden of trying to keep everything separate.*

For example, Medicaid staff effort to administer HMP policies are often concurrent with other Medicaid-related duties.

> *So they [Medicaid staff] have a little different edges in terms of their expertise, but there's very few that are identified as simply structured for this one program piece [HMP].*

In most cases, administrative costs of specific HMP policies are not called out in budget documents. The exception was the HMP work requirement, for which the legislature appropriated $26 million in dedicated funding.

> *There was an awful lot of funding that was provided by the legislature in order to implement the work requirements and then it was someplace in the neighborhood of about $15 million that we pulled out in light of the Court ruling when we realized that was not a direction that the State was going to be able to go in.*

Beneficiary call center vendor

Medicaid officials described their contract with the beneficiary call center vendor which includes responding to questions and requests for assistance from beneficiaries in all Medicaid benefit plans. The contract also includes several HMP-specific components. In the initial years of HMP, the vendor contract included the option for beneficiaries to complete the first section of the HRA over the phone with the call center. That was discontinued in 2019.

> *The call center doesn't do the first portion of the HRA with callers anymore. We had some updates to systems, and physicians are able to actually enter the HRAs themselves… or health plans can send the information in their files... So this way you could have the complete Health Risk Assessment come in, either through the physician or through the health plan, and it does take away some of the costs in regards to the call center completing the upfront portion of it.*

The beneficiary call center vendor contract also includes administrative functions specific to cost-sharing; HMP is the largest, but not the only, Medicaid population subject to cost-sharing.

> *They have an Oracle Financials Accounting (OFA) system…we pay for operations and maintenance for OFA, we pay for enhancements for that, and we pay for server costs*

for that. However, that group of applications also is used for the MI Child Program and the Freedom to Work programs.

Based on information provided by Medicaid officials, approximately $107,000 was paid to a vendor to cover server storage costs for MI Health Account data during FY2018 through FY2021. These server costs ended in June 2022, when the Medicaid program began paying $14,000 per month ($42,000 in FY2021 and $168,000 in FY2022) for software licensing and cloud computing and storage charges related to MI Health Account data.

Medicaid officials also noted that vendor costs for administering the HRAs totaled approximately $1.355 million during FY2014 through FY2019. These costs ended in May 2020 when the costs of HRA administration were assumed by HMP managed care organizations.

For a limited time in FY2020 the beneficiary call center vendor contract included administrative tasks to prepare for HMP features that have not been implemented, including the 48-month policy and work requirements.

We had a change notice in anticipation of the HMP3 (48-month policy), where we also found out there is so much in regards to researching disputes for Healthy Michigan Plan due to whether they're paying the right amounts and such. [Beneficiary call center vendor] does some of the research on their end and we have a piece for premiums research also that started to be charged to us in February of 2020... It's based on volume, so we've been paying base tier. If the volume were to go up higher, the cost would increase as well.

Medicaid health plans

Much of the administration burden of key HMP features, including the Healthy Behaviors Incentive program and the cost-sharing component, falls on the Medicaid health plans.

For Healthy Michigan Plan members, the plans are required to have a process for… receiving health risk assessments and processing those… They're required to monitor folks that are in consistently fail to pay status… They're expected to conduct outreach to members that are in that renewal window when their cost sharing could go up, based on whether or not they maintain a healthy behavior.

We require the health plans to contract with [beneficiary call center vendor] directly for collecting the Healthy Michigan Plan copays and the MI Health Account fees, so that we would have them all under the same system instead of having several different vendors doing the same type of work… The Medicaid health plans pay for those letters, but also, they get the monies that are collected from the co-pays and the MI Health Account fees.

Health plan contracts included capitated payments per member-month comprised of base medical claims and composite administrative costs. Capitated payments are different for each managed care population: HMP, TANF, and ABAD beneficiaries.

Medicaid officials provided historical HMP capitation rates over time, which included base medical claims cost and non-benefit expense load (administrative costs). The per-member per-month (PMPM) capitation rate for HMP administrative costs, in both dollar amount and as a percentage of the total managed care capitation rate, is shown in Table 7.1.A. Both the dollar amount and the percentage stayed relatively flat over the first five years of HMP. In FY2020, administrative costs increased substantially due to added responsibilities to prepare for work requirements.

Table 7.1.A. HMP capitation rates for administrative costs, PMPM

FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
$ 38.83	$ 38.83	$ 39.77	$ 34.79	$ 39.30	$ 39.65	$ 47.32	$ 49.56
12.00%	12.00%	12.58%	12.00%	11.81%	11.88%	13.76%	13.07%

Medicaid officials provided data on capitation rates for FY2017 and beyond for two comparison populations: TANF and ABAD. As shown in Table 7.1.B, the dollar amount of the administrative capitation rate for HMP was consistently higher than TANF and lower than for ABAD. The percentage of the overall capitation rate for administrative costs was lower for HMP than TANF until FY2020, when the HMP administrative costs increased due to work requirements.

Table 7.1.B. Capitation rates for administrative costs, PMPM: HMP vs TANF vs ABAD

	FY2017	FY2018	FY2019	FY2020	FY2021
HMP $	$ 34.79	$ 39.30	$ 39.65	$ 47.32	$ 49.56
TANF $	$ 16.17	$ 16.57	$ 17.67	$ 17.87	$ 18.50
ABAD $	$ 59.72	$ 61.32	$ 71.79	$ 71.23	$ 72.73
HMP %	12.00%	11.81%	11.88%	13.76%	13.07%
TANF %	12.29%	12.32%	12.81%	12.81%	12.31%
ABAD %	9.51%	9.52%	10.01%	10.01%	9.51%

The three populations differed in the year-to-year change in the percentage of the overall capitation rates allocated to administrative costs (Table 7.1.C). In most years, HMP demonstrated a lower rate of increase compared to the other populations; the exception was the very large increase for FY2020, related to expanded health plan responsibilities to prepare for work requirements.

Table 7.1.C. Year-to-year change in the percentage of the overall capitation rates allocated to administrative costs: HMP vs TANF vs ABAD

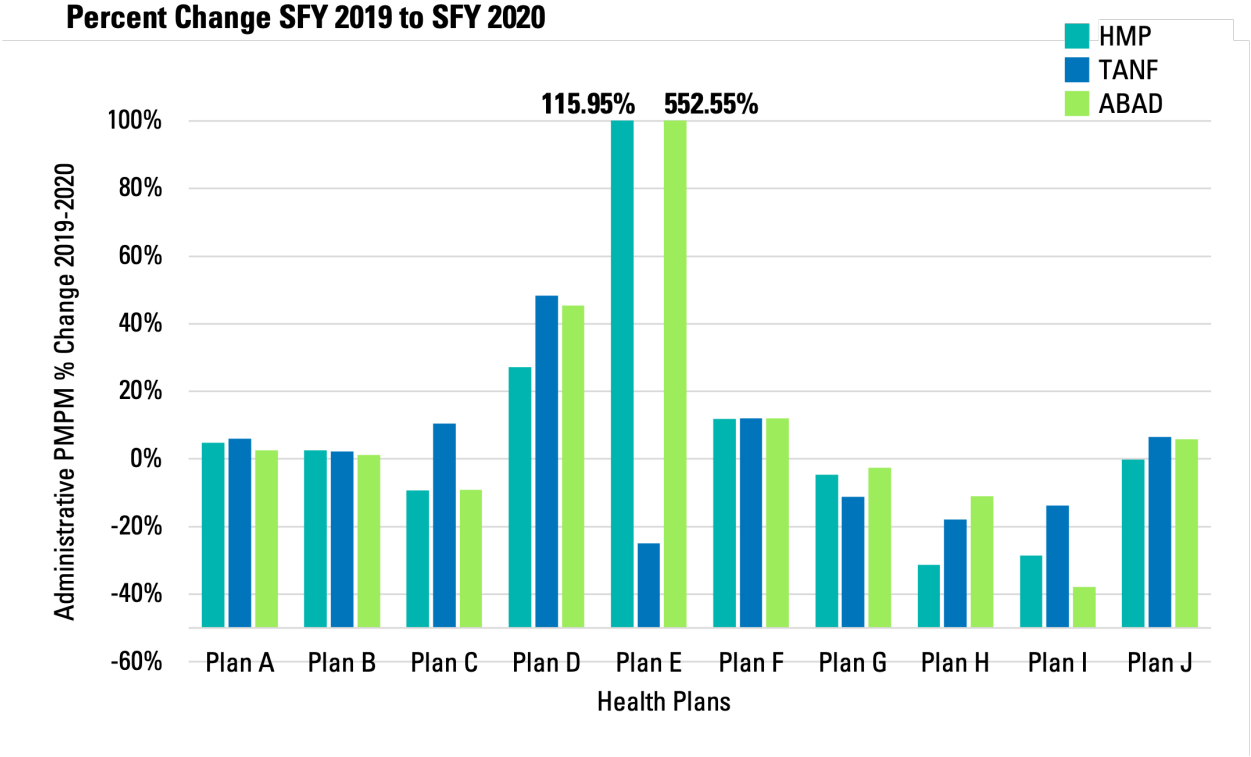
	FY2017 to FY2018	FY2018 to FY2019	FY2019 to FY2020	FY2020 to FY2021
HMP	-1.56%	0.53%	15.85%	-4.98%
TANF	0.25%	4.02%	-0.01%	-3.94%
ABAD	0.06%	5.23%	0.00%	-5.00%

To inform the rate setting for administrative costs, Medicaid officials described a new methodology that incorporates input from the health plans.

> *We get input from the health plans by surveying them before rate setting every cycle, which is every fiscal year. Understand kind of their base underlying admin costs and then look for what changes are coming up the next – the next year, and you know, make an estimate of whether we need to bump those up or potentially down…There's some proprietary information in there, so the survey is actually done by our actuary, and [the plan's survey data] goes right to the actuary.*

Figure 7.1.D presents the percent change from FY2019 to FY2020 in the administrative costs reported by plans on the annual survey conducted by the actuarial firm; data are reported as per member-month. Some plans reported a decrease in administrative costs, while one plan reported an increase of over 500% for ABAD beneficiaries. Many plans reported similar percentage changes across the three benefit plans, while others reported differences.

Figure 7.1.D Health Plan Reported Administrative Dollars (Administrative PMPM) Percent Change SFY 2019 to SFY 2020



Medicaid officials noted that plans can change the methodology of how administrative expenses are allocated across programs and populations which could lead to swings in reported values. For example, plans that are part of a national organization which allocates corporate overhead to different state units can have large changes from year to year based on things outside of the state-specific activities. When smaller plans make allocation adjustments in how they account for administrative expenses from one year to the next, it can have material impacts on reported costs.

Summary of response to evaluation question 7.1

Many tasks to administer key HMP demonstration policies are included in contracts for the Medicaid health plans and for the beneficiary call center vendor. These include administrative processes to receive HRAs and to communicate with beneficiaries about the Healthy Behaviors Incentive Program. At the outset of the second waiver period, these contracts also included administrative tasks to prepare for HMP features that have not been implemented, notably work requirements and the 48-month policies for beneficiaries with incomes >100% FPL. Medicaid staff performed HMP administrative functions concurrent with other duties.

With the exception of an increase in FY2020, consistent with preparations to implement new HMP policies (work requirements and 48-month policies), HMP administrative costs for the Medicaid health plans have been relatively consistent since the launch of HMP in 2014.

Evaluation question 7.2: How do trends over time in Medicaid expenditures per member-month for HMP beneficiaries compare to those for beneficiaries in traditional Medicaid managed care?
Hypothesis 7.2: Annual trends in age- and sex-adjusted expenditures per member-month will demonstrate a lower rate of increase over time for beneficiaries in HMP managed care than for beneficiaries in traditional Medicaid managed care.
Data source: Key informant interviews (as described in D.2.5)

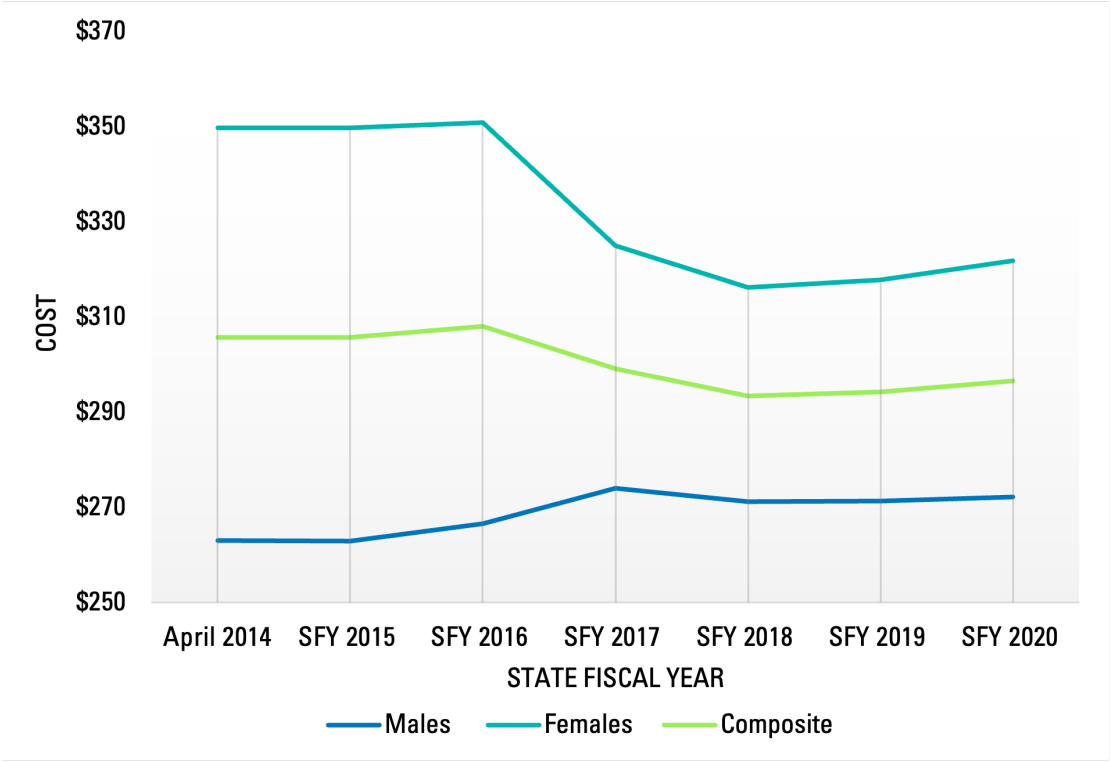
Results

Health plan contracts include capitated payments per member-month for the costs of medical care. Capitated payments are different for each managed care population: HMP, TANF, and ABAD beneficiaries.

> *It's an exercise where [actuarial firm] receives encounter data - the health plan equivalent of the claims data so it's what they are paying to providers to provide medical care for the people that they're responsible for serving. It would typically be based on two-year-old data… Then [actuarial firm] goes through their statistical actuarial exercise to determine by population group what a fair and reasonable rate is that should be adequate to provide care for the people that they're that they're responsible for… If we are paying too much, then that's going to be reflected in subsequent years encounter data, and the rate is going to dial back; if we're paying too little, the opposite will happen.*

The per member-month capitation rate for HMP medical claims costs overall and for males and females is shown in Figure 7.2.A. The overall capitation rate for medical costs remained relatively consistent over the first six years of HMP.

Figure 7.2.A Base HMP medical claims costs in health plan contracts, FY2014-FY2020



Comparing trends over time in Table 7.2.B, the per member-month capitation rate for medical claims for HMP-MC beneficiaries decreased nearly 2% from FY2017 to FY2018 increased less than 1% each year from FY2018 to FY2020, which was lower than the annual increases for TANF. Annual changes in medical expenditures were more variable for ABAD.

Table 7.2.B. Year-to-year change in base medical claims cost in Medicaid health plan contracts for HMP compared to TANF and ABAD populations

	FY2017 to FY2018	FY2018 to FY2019	FY2019 to FY2020
HMP	-1.92%	0.29%	0.81%
TANF	2.18%	1.92%	1.17%
ABAD	2.62%	10.65%	-0.79%

Summary of response to evaluation question 7.2

Average expenditures per member-month were essentially unchanged from FY2017 to FY2020 for beneficiaries enrolled in HMP-MC. In that same time period, expenditures per member-month for HMP beneficiaries generally demonstrated a lower overall rate of increase than for managed care beneficiaries in the TANF or ABAD benefit programs.

Evaluation question 7.3: How have uncompensated care costs in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?
Hypothesis 7.3a: The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that did not expand Medicaid that was observed between 2013 and 2017 will be sustained in subsequent years.
Hypothesis 7.3b: The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that expanded Medicaid without a waiver that was observed between 2013 and 2017 will be sustained in subsequent years.
Data source: HCUP Fast Stats Inpatient Stay data (as described in D.2.9); Medicare cost reports (worksheet S-10) (as described in D.2.10)

Results

Changes in inpatient payer mix (analysis of HCUP Fast Stats data)

Figure 7.3.A presents trends in the percentage of non-elderly adult inpatients with Medicaid coverage in Michigan and the two groups of comparison states. Prior to 2014, this outcome was increasing for all three groups. Between 2007 and 2014, the trends for the three groups were roughly parallel. The level for Michigan was very similar to the non-expansion states and lower than in the traditional Medicaid expansion states. In Q4 2013, 31 percent of inpatients in Michigan and 30% of patients in non-expansions states had Medicaid coverage. In traditional expansion states the percentage was 34%.

In 2014, there was a discrete increase in the percentage of patients with Medicaid coverage in Michigan and in the other expansion states, but not in the non-expansion states. By Q4 2014, the share of non-elderly adult inpatients covered by Medicaid was 43% in traditional expansion states, 39% in Michigan, and 30% in non-expansion states. In subsequent quarters, there was a slight positive trend in the Medicaid coverage share in Michigan and the traditional expansion states and a slight negative trend in non-expansion states (except for an increase in non-expansion during the start of the COVID-19 pandemic in 2020).

Figure 7.3.A. Fraction of hospital discharges with Medicaid, by state Medicaid expansion status
HCUP Data, Adults 19-64, 2003-2020

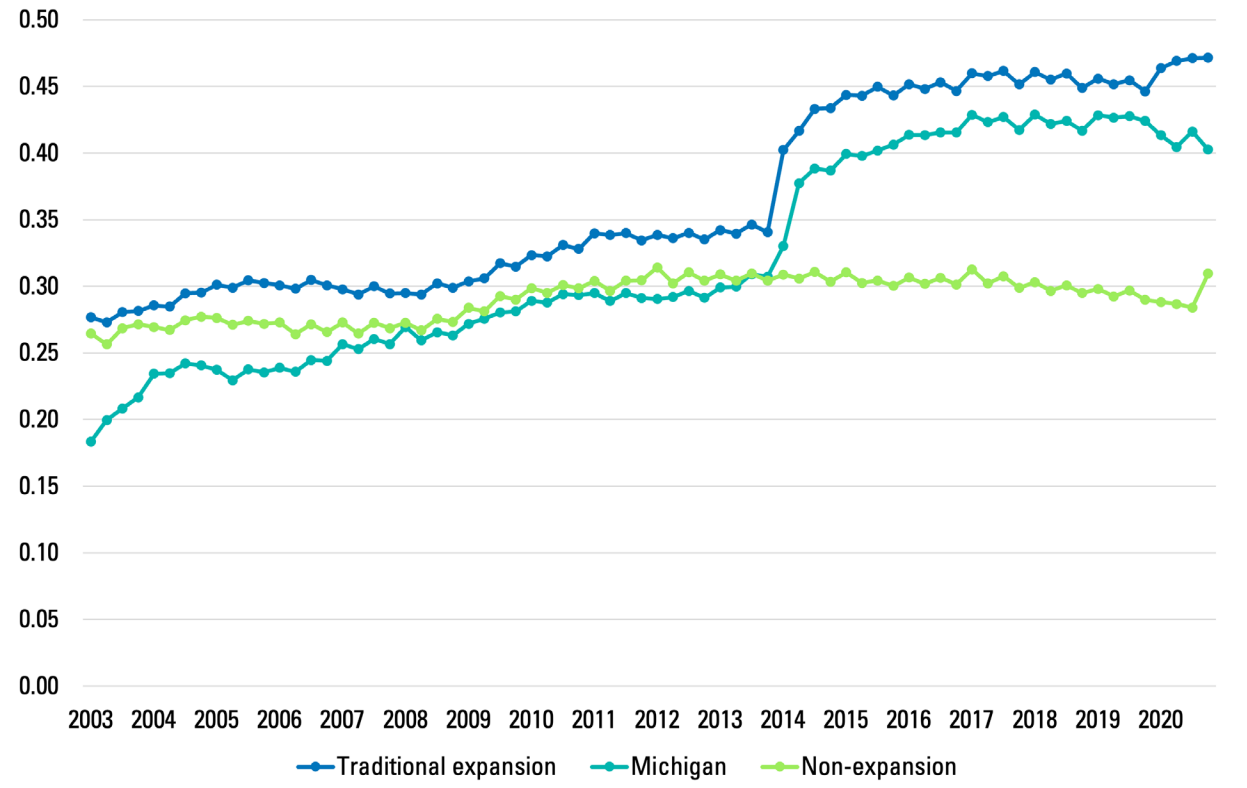


Figure 7.3.B presents trends for privately insured inpatients. For all three groups, the percentage of non-elderly adult inpatients with private insurance was trending downward in the years prior to 2014. In non-expansion states, the percentage ticked up in 2014. For the other two groups, private coverage continued to decline without an obvious break in trend.

Figure 7.3.B. Fraction of hospital discharges with private coverage, by state Medicaid expansion status
HCUP Data, Adults 19-64, 2003-2020

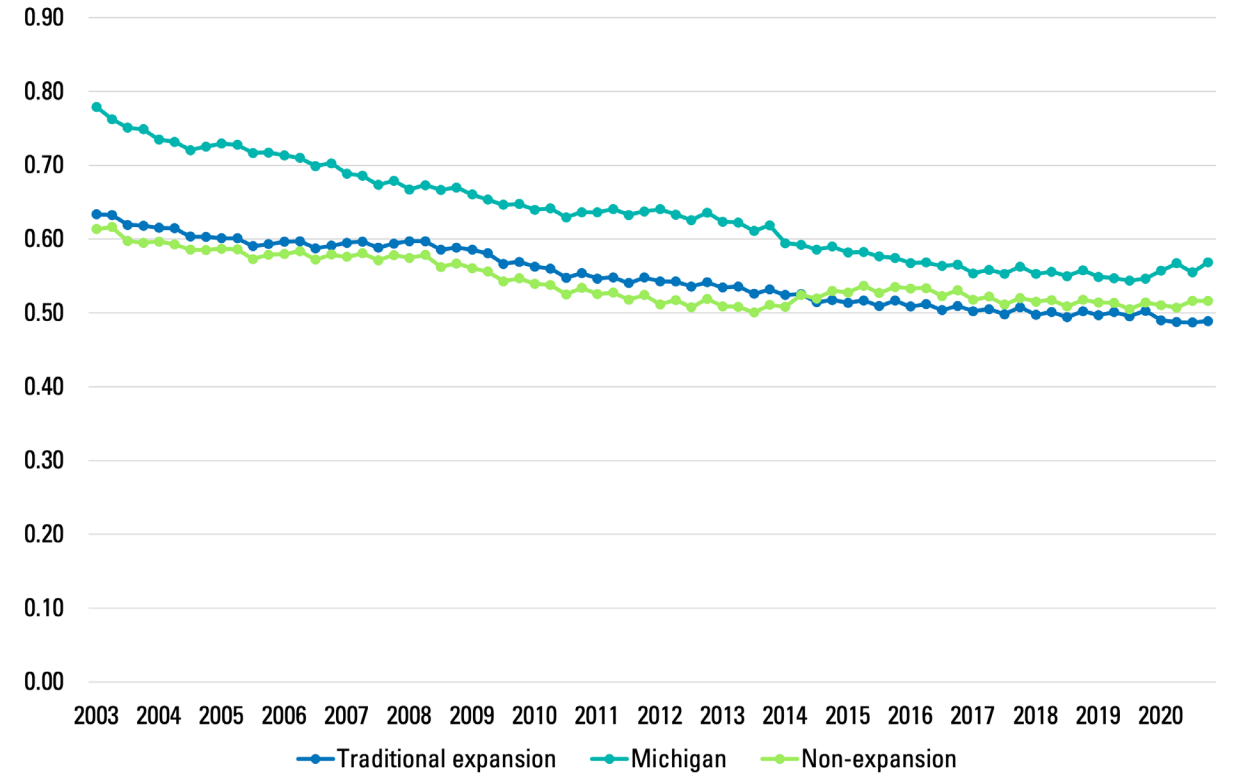


Figure 7.3.C completes the picture by presenting the percentage of non-elderly adult inpatients without insurance (labeled as self-pay in the HCUP data). Prior to 2014, the share of self-pay patients was highest in non-expansion states, lowest in Michigan, and trending upward for all three groups. Similar to the results for Medicaid, we see a discrete and rapid change in 2014 for Michigan and traditional expansion states. Between Q4 2013 and Q4 2015, the percentage of self-pay inpatients fell by 5 percentage points in Michigan and by 7.8 percentage points in traditional expansion states. Relative to the Q4 2013 rate, these changes represent relative declines of 69% and 62%, respectively. The share of self-pay patients also decreased in non-expansions states, though not as dramatically: by 1.8 percentage points, roughly a 10% relative decline.

Between Q1 2016 and Q1 2020, the percentage of non-elderly adult inpatients without insurance increased in non-expansion states by about 4 percentage points, from 16.0% to 20.1%. For Michigan and traditional expansion states, this percentage increased by about 1 percentage point. Thus, the data in Figure 7.3.C provide support for Hypotheses 7.3a and 7.3b.

Figure 7.3.C. Fraction of hospital discharges that are self-pay, by state Medicaid expansion status
HCUP Data, Adults 19-64, 2003-2020

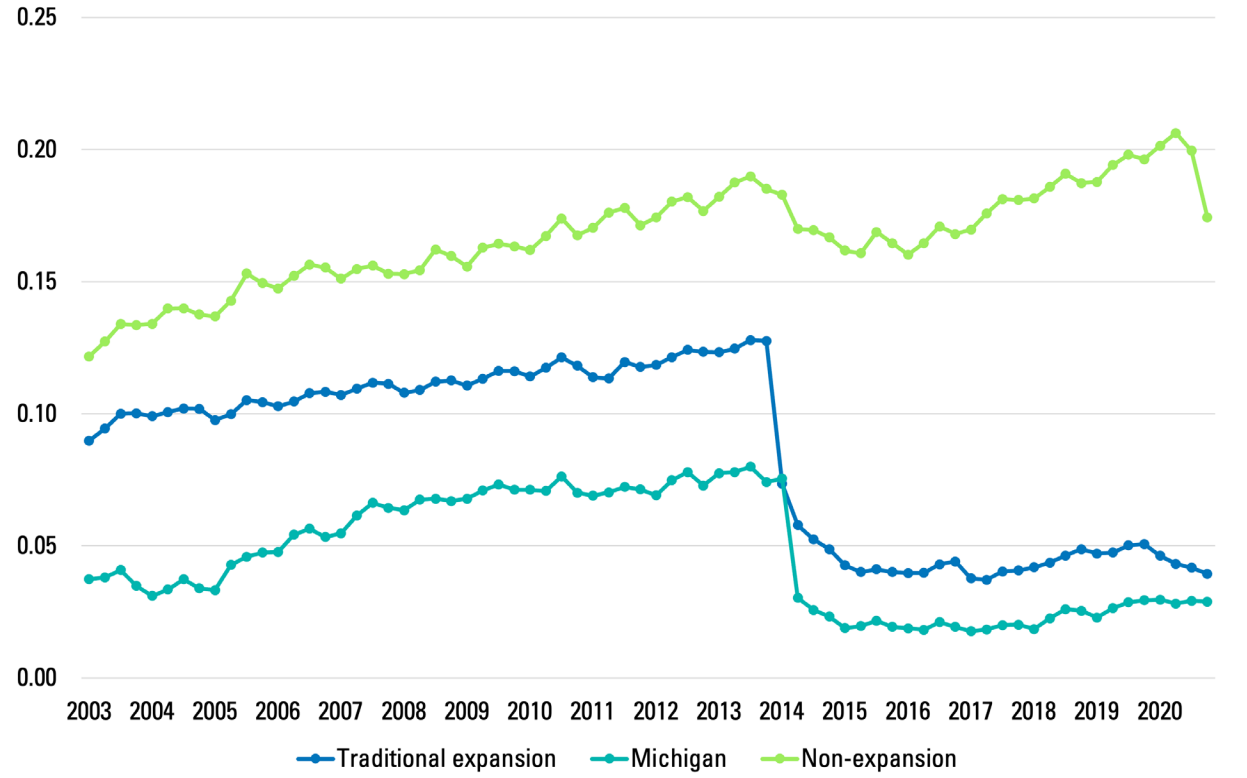


Table 7.3.A presents corresponding difference-in-differences estimates. Columns 1 through 3 present results comparing Michigan to the non-expansion states. The results show that after 2014, the proportion of non-elderly adult inpatients with Medicaid increased by 11.7 percentage points in Michigan relative to non-expansion states. The percentage of privately insured and self-pay patients fell significantly by 6.7 and 4.9 percentage points, respectively, in Michigan relative to non-expansion states.

Columns 4 through 6 of Table 7.3.A present estimates from difference-in-differences models that compare Michigan to traditional expansion states. The results in column 4 indicate that the increase in the percentage of non-elderly adult inpatients with Medicaid was essentially the same in Michigan and traditional expansion states: an increase of 11.6 percentage points. The percentage of patients with private coverage decreased by 4.0 percentage points in traditional expansion states and by 6.7 percentage points in Michigan, and this difference was not statistically significant. The percent self-pay declined by 7.6 percentage points in traditional expansion states and by 4.8 percentage points in Michigan, which differed significantly ($p<0.01$).

Table 7.3.A. Difference-in-differences estimates of payer status for hospital discharges in Michigan and other states, HCUP Fast Stats data, 2010 – 2020

	Michigan vs. Non-Expansion States			Michigan vs. Traditional Expansion States		
Outcome is share with:	(1) Medicaid	(2) Private	(3) Self-pay	(4) Medicaid	(5) Private	(6) Self-pay
Michigan	-0.0078	0.1104***	-0.1026***	-0.0394*	0.0870***	-0.0476***
	(0.0090)	(0.0112)	(0.0096)	(0.0156)	(0.0142)	(0.0068)
Post 2014	-0.0019	0.0007	0.0013	0.1157***	-0.0396***	-0.0761***
	(0.0034)	(0.0043)	(0.0037)	(0.0049)	(0.0045)	(0.0022)
Michigan x Post 2014	0.1167***	-0.0673***	-0.0494***	-0.0009	-0.0270	0.0280**
	(0.0112)	(0.0141)	(0.0121)	(0.0195)	(0.0177)	(0.0085)
Constant	0.3027***	0.5212***	0.1761***	0.3343***	0.5447***	0.1210***
	(0.0027)	(0.0034)	(0.0029)	(0.0040)	(0.0036)	(0.0017)
Mean in MI, 2013	0.304	0.619	0.077	0.304	0.619	0.077
N	583	583	583	870	870	870

Standard errors in parentheses
* p<0.05, ** p<0.01, ***p<0.001

Changes in hospital uncompensated care (analysis of HCRIS data)

Figure 7.3.D presents trends in the mean level of hospital uncompensated care measured in millions of dollars for the three groups; figure 7.3.E reports trends in the mean of uncompensated care measured as a share of total hospital expenditures. Whether measured in dollars or as a percentage of total expenditures, uncompensated care was lower in Michigan than in traditional Medicaid expansion states and non-expansion states, throughout the full analysis period. After 2014, uncompensated care fell in Michigan and the traditional expansion states. In non-expansion states, uncompensated care continued to rise.

Figure. 7.3.D. Mean uncompensated care costs - Michigan vs. Other states, 2011-2020

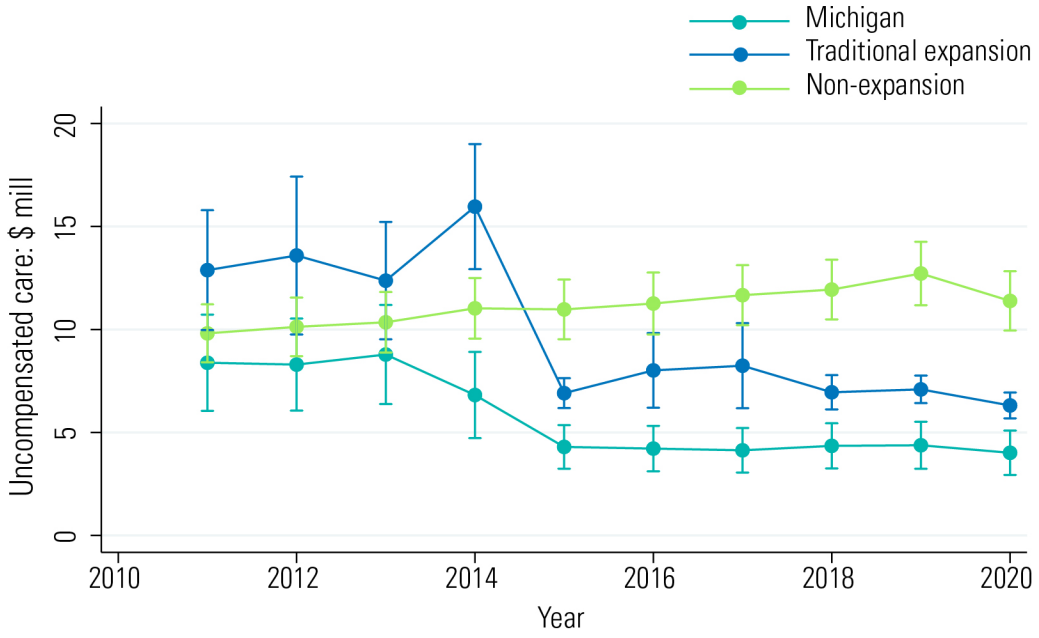


Figure. 7.3.E. Uncompensated care as % of expenses - Michigan vs. Other states, 2011-2020

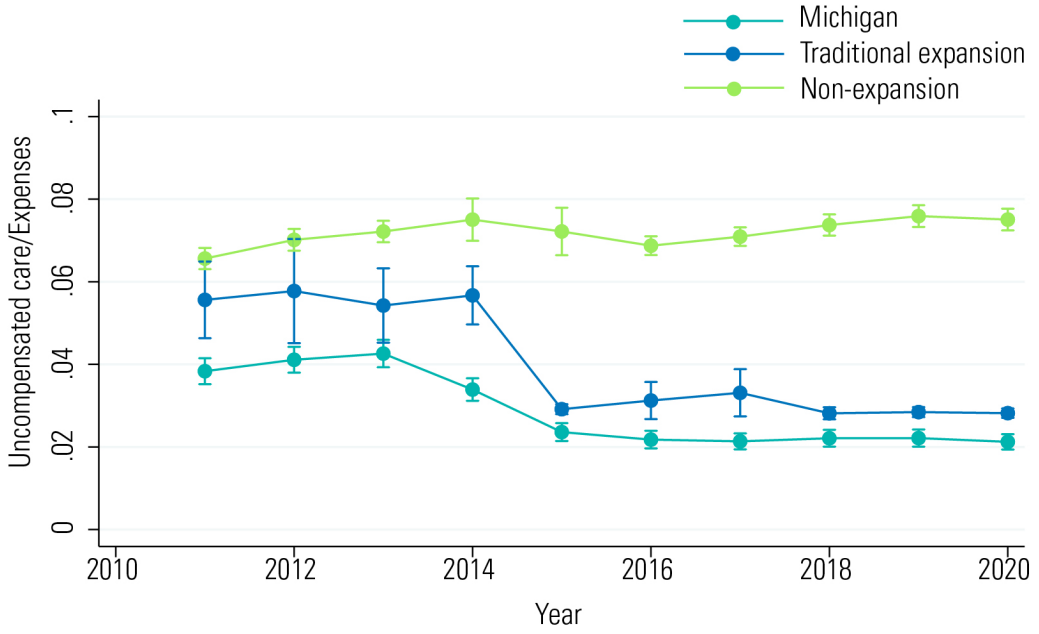


Table 7.3.B presents estimates from difference-in-differences regression models. The results in column 1 indicate a significant decline in uncompensated care in Michigan relative to non-expansion states. When the outcome is measured in dollars, the results indicate that the implementation of HMP was associated with an average decline in uncompensated care of over $5 million per year. Measured as a percentage of total hospital expenses, the implied effect is a reduction of 2.1 percentage points. Relative to Michigan's pre-2014 mean of 4 percentage points, this represents a relative decline of 50%. Columns 3 and 4 indicate no statistically significant

difference in the change in uncompensated care after 2014 between Michigan and the traditional expansion states in dollars or as a percentage of expenses, respectively.

Table 7.3.B. Hospital uncompensated care difference-in-differences estimates

	Michigan vs. Non-Expansion States		Michigan vs. Traditional Expansion States	
Outcome measured in:	$2020	% of expenses	$2020	% of expenses
	(1)	(2)	(3)	(4)
Michigan	-1.616	-0.029***	-4.457**	-0.015***
	(1.611)	(0.006)	(2.115)	(0.005)
Post 2014	1.458*	0.004*	-4.425***	-0.022***
	(0.839)	(0.002)	(1.221)	(0.004)
Michigan x Post 2014	-5.333***	-0.021***	0.550	0.005
	(0.839)	(0.002)	(1.221)	(0.004)
Constant	10.104***	0.069***	12.946***	0.056***
	(1.611)	0.006)	(2.115)	(0.005)
N	17,500	17,496	18,090	18,054

* p<0.05, ** p<0.01, ***p<0.001
Standard errors in parentheses.

Summary of response to evaluation question 7.3

Our analysis finds that uncompensated care costs in Michigan hospitals have been cut in half since the implementation of HMP. Reductions in uncompensated care were significantly larger in Michigan than in states that did not expand Medicaid. These reductions in uncompensated care accompanied significant reductions in the fraction of hospitalized patients without insurance in Michigan, both in absolute terms and compared with states that did not expand Medicaid. The reduction in the fraction of self-pay patients was smaller in Michigan than in states that expanded Medicaid without a waiver. However, the reductions in hospital uncompensated care did not differ significantly between Michigan and traditional Medicaid expansion states.

Evaluation question 7.4: How does HMP support new or broadened initiatives to address social determinants of health for low-income adults in Michigan?
Hypothesis 7.4: State officials and safety-net providers will describe specific examples of health-promoting initiatives that build on HMP's continuity, breadth of coverage, and primary care emphasis.
Data source: Key informant interviews (as described in D.2.5)

Results

Several key themes emerged from these key informant interviews on the role of HMP in supporting new or broadened initiatives:

- Innovations and collaborations around the HMP enrollment process led to more streamlined and integrated enrollment in other programs that address SDOH.

- Innovative policies were initiated or revised that supported the health and social needs of HMP beneficiaries. This included coverage expansions, expanded roles for CHWs, new reimbursement and billing practices, telehealth, and the HRA.
- HMP's coverage expansions led to more integrated and sustainable safety net provider and health plan programs and services, including those that address SDOH.
- HMP increased access to care that promoted positive health outcomes, greater independence, and improved quality of life.
- Partnerships among diverse organizations enhanced outreach and communications to beneficiaries and providers about initiating and maintaining enrollment, meeting HMP requirements, and planning for reinitiating redeterminations.

Innovations and collaborations around HMP enrollment

Innovations in the HMP enrollment process includes changes to MI Bridges which allowed people to enroll in multiple programs they qualified for, many of which address SDOH.

> *In the new application system for HMP.…we not only improved the application process from the amount of time it takes to complete, the complexity of the application, just the sheer and length of questions… For online application, I think for the first time ever in Michigan, presented community resources alongside state benefits programs. So part of what MI Bridges does is brings in the statewide 211 database and so when you look for resources in MI Bridges, you see things like Medicaid or HMP or cash assistance or food assistance but you also see a local food pantry, a community action agency offering weatherization support and so there was a broader context of social supports provided in that application context; and that type of resource was also available as a person was maintaining benefits online…you were getting access to community resources in a more integrated way than ever had been. (Safety net organization)*

Innovations included providing community-based organizations access to MI Bridges for their clients and greater use of enrollment counselors, navigators, and community health workers (CHWs) to support and maintain enrollment.

> *It was also the first time community partner organizations had any level of access in the [MI Bridges] system so one of the things we introduced was for a MI Bridges community partner, which includes big and small community organizations all across the state, you actually have a login and you could have like a navigator ID to associate yourself to a person and that person could give you permission to see some things about their benefits so like you could keep track of when that person might need to renew and so if you have an ongoing relationship with that individual, they grant you access to see somethings about their benefits and then you can help them remember "hey, time to renew your coverage" or "oh you missed that letter; let's go get that letter out of the online account from DHHS," or some of those features that also had never existed. (Safety net organization)*

We do [enrollment] consistently across several agencies, through scripts and protocols… we want them to be able to be enrolled not only to receive the services that we can provide for them, but also from all the other providers and that [program name] as part of the Community Health Innovation Region, which is a huge partnership of local agencies that created a steering committee that oversees that work. (County health)

These streamlined enrollment practices built upon actions to assess needs and integrate services at the clinic/health department/health center level.

When somebody comes to the health department, whether they're calling for their appointment, or they show up at a clinic, we assess not only the needs they're there for, but what else do they need…it's just built into our protocols, and we've really tried hard to work together as health departments to accomplish that across Northern Michigan so that there's equity across the board. And certainly, I think that that [HMP] insurance eligibility is the first door into the gate for those integrated services. (County health)

Innovative policies to support health and social needs

These policies included expanded coverage and innovations around the dental benefit, immunizations, hospital reimbursement, and new collaborative care codes.

We tried to encourage the dental community to respond to the opportunity for input on what should be included in HMP….What was successful in this process was having the dental coverage under HMP be a dental health plan, part of the whole managed care plan contracted through dental organizations, and not a FFS carve out. (MDHHS)

HMP covers adult immunizations, but not all primary care practices stock the full array of adult vaccines. So, the Immunization Program worked with Medicaid to allow HMP enrollees to get vaccines at pharmacies and local health departments without requiring a separate contract with each health plan. Note that previously this would have been viewed as "out of network" and thus not covered, unless the specific pharmacy had a contract that brought it into the plan's provider network, which didn't happen very often….Due to the pandemic, Medicaid has allowed race/ethnicity data to be transferred into the state's immunization registry. This allowed the state to look at COVID vaccination patterns by race/ethnicity. (MDHHS)

Special financing policy and payment programs for HMP…I would say those programs have been extremely crucial to hospitals being able to take on the new patients because payment rates are higher than what base Medicaid rates would pay. (Health plan/provider organization)

[HMP] really helped us in working with the state, HHS, and with locals, to test out new coding ideas, like collaborative codes. So, Medicaid has made some policy

changes…There's a collaborative medicine code...it's actually now a billable code, it's like combining several other different treatment team entities into one code. (MDHHS)

Medicaid health plan contract requirements to hire or contract for CHWs helped support HMP beneficiaries in using their new coverage and navigating the health care system; and helped health systems, plans and providers address SDOH.

[The health plans] use community health workers for social determinants of health…that's how they're addressing, or at least trying to dig into, what social determinants of health their members are facing and getting them the resources that they need. (Health plan/provider organization)

When we were thinking about our model to kind of push forward this design and support systematic screening of social needs and the kind of system of care, including the connections to resources associated with those needs, it became apparent to us that we needed to expand the medical model to include CHWs as a core component because there wasn't currently a payment methodology within Medicaid to support that. (MDHHS)

Policies that facilitated telehealth coverage for services increased access and addressed barriers to enrollment and care during the pandemic.

We advocated that MDHHS work to help us with the ability to provide more remote enrollment systems…. [MDHHS] came out with a guiding document about how you do that safely, making sure you keep information secure, and sort of who hits what buttons….Having some of the flexibility to do that was really very important to get that new population at the beginning of the pandemic. There was a bunch of people that were, again, newly eligible to Healthy Michigan because they had lost jobs, got their hours cut…It also exposed [some] people to something like telehealth for the first time…and they hadn't interacted with a care providing organization in that way before… there have not been a lot of bright spots in Covid but, boy, what a good unintended component, to expose people. (Safety net organization)

HRAs provided health care providers and health plans with opportunities to engage HMP beneficiaries in their own care and provided a tool to identify and address both health and social needs.

The HRA…that's the start of making sure that individuals are accessing the care that they need. And then, depending on the results of the HRA, and different outreaches that the [health plans] complete, then they may be enrolled in care management or some type of a case management program and trying to connect with them that way to make sure that they're accessing the care that they need…Whether it's a mammogram or its their colorectal screening or their annual flu shot, the [health] plans are always sending out those types of reminders. In addition, they're working with their CHWs to make sure that CHWs…have the list of the things that they need

[to] access services that they should be accessing…making sure that they're getting in for their annual visits with their physicians and talking about their healthy behaviors. (Health plan/provider organization)

I think there was some greater understanding that occurred across the provider community around how the behaviors that they might identify in an HRA were impacted by the social needs that an individual had…. It also aided the clinical staff that were supporting HMP beneficiaries to have the conversations with someone that were more person centric. Say, 'is this the goal you wanted to work on? Is this the primary healthy behavior that we need to address right now?.... because of that required HRA, because of a system we created around screening...it's really just more of a patient centered or person-centered environment. (MDHHS)

The HRA purpose and process took time to be effectively communicated, with challenges that affected understanding and uptake by providers and by beneficiaries. Increased information and support led to improvements over time.

The healthy behaviors were tied towards decreasing the amount that people had to pay on contributions and then it was supposed to also be tied to whether or not people could keep their health care…The real goal of the MI Health account or the healthy behaviors…was all about is getting people in for their preventive care medicine…the issue is, is how well did they understand the message?….If they just did one thing, they could qualify for it, but I don't think the uptake was as high as we wanted… We did reach out to navigators and CHWs and our safety net providers and let them know what it is that we were trying to really improve on preventive care and having the health plans message people. (MDHHS)

The front end became very focused on the process of completing a health risk assessment; and so health centers developed almost registry-like functionalities in their populations health systems to track which people have completed a health risk assessment and which people have not…and making sure it gets back to where it needed to be I think maybe distracted from intent, which was having a person actually come get engaged in some type of healthy behavior better. I do think that it's a little better now, people have found a better a balance between getting the form done and having a realistic and engaging conversation about a health behavior. (Safety net organization)

As we were getting the Healthy Michigan Plan implemented and shortly after implementation, it was tough to get providers to understand what [the HRA] was and why it's important. And I think that we've seen a couple of different iterations of the HRA form itself. It used to be a little bit longer, it's been shortened up some...So that's been, you know, sometimes that's the barrier, and then just getting providers on board that they need to sign off on that. But actually, in the last few years, we haven't heard a lot about pain points, and it seems to be going better than it was at the beginning. (Health plan/provider organization)

We actually talked for a long time and eventually succeeded with the Healthy Michigan Plans to allow us to assist people to complete [HRAs]…Once we were able to directly assist people with that, our rates went way up. (County health)

Integrated and sustainable safety net provider and health plan programs and services

For the new adult population not previously covered by Medicaid, HMP coverage increased access to reimbursable care and contributed to interagency partnerships and coalitions and innovations in programs and service delivery that could be sustained over time.

In public health, we receive categorical funding for some of the things we do. It's never enough to cover the services that we provide....having most people eligible for a payer has been a huge gamechanger in the flexibility and the ability to provide a wide variety of services and employ the staff that we need to be able to do that...billing for individual services has been a really important process for us.… It's our biggest source of revenue, and a really important measure for public health sustainability, to do all of the things that we do. Our health department actually owns a system of eight public health dental clinics, and the Healthy Michigan Plan has been a huge game changer for adults who need dental care. I remember the days when we had to hold a huge, huge, huge unmet needs fund to serve adults because there was no other source to reimburse them for their dental care. The ability of us to bill for dental services has allowed us to provide services to more people. (County health)

The Medicaid expansion and Healthy Michigan Plan was really a game changer for community health centers in Michigan…because community health centers are, of course, a core fabric of the safety net and predominantly served the underserved, uninsured or underinsured populations in our communities. So, from a business perspective…the uninsured rate across health centers dropped at about half when the combination of the ACA marketplace and the Healthy Michigan Plan really came into play because it was able to really get individuals from the uninsured or underinsured state enfranchised into the health insurance environment. (Safety net organization)

I think we were successful in leveraging our Medicaid health plans and embedding some requirements in their contract to continue to address and expand, even, the work that we saw and the patients on our Medical Home Model and the State Innovation Model by then expanding to other providers in the network, requiring social needs screening, creating these value-based payment models that embed the social needs screening as a part of them to providers that weren't initially engaged in our pilot program. (MDHHS)

Before these people had [HMP] coverage, it was much harder for the nonprofits to sustain the change. So, it's really changed everything. Sustainability of innovative change in terms of bolstering new and creative ideas. Nonprofits are much more likely to propose something if they know there's at least this Healthy Michigan funding stream. (MDHHS)

HMP contributed to the financial stability of safety net provider organizations and the ability to expand critical services to meet the growing need, including those for substance use disorder.

> *We [FQHCs] have seen that number of [health plan] contracts grow so that heath centers are even more part of the provider network for those [health plans] than maybe we were when first started. (Safety net organization)*

> *It allows us to expand access to [substance use disorder and mental health] treatment services …since 2014 this has just been a huge lifeline that was needed to be able to help this state. Certainly, in the world of substance use as this crisis has continued to explode in terms of the number of lives lost during this time. So, being able to have a sustainable funding source to be able to provide treatment, to be able to provide the continuity that is needed for the lives of people who receive services but also for those treatment providers that know they can get reimbursed. (MDHHS)*

Interviewees described several specific examples of sustainable programs facilitated by HMP.

> *Prescription for Health...it's a collaboration between the food banks, Medicaid health plans, the people who need the service, and it's kind of like a prescription for actually getting food…All about taking the Medicaid Health Plan where the Healthy Michigan people are and getting them fast tracked to food access...the Medicaid health plans… have active care managers following through. (MDHHS)*

> *The Healthy Michigan Plan has been incredibly helpful to creating volume within our programming within the Behavioral Health and Developmental Disabilities Administration generally, as well as in the specific programs…meaning the Opioid Health Home, the SMI/SED Health Home, as well as the Certified Community Behavioral Health Clinic demonstration….[HMP] added so many new potential recipients to a lot of integrative care coordination…(MDHHS)*

> *[Going from] 12% of your jail [eligible for traditional Medicaid]…to almost 90% of them getting access because of Healthy Michigan to care...sustainable continuity of care…The [jail] population is overly represented for people who are mentally ill by four times…just a huge impact on access to mental health care as well as healthcare services and addiction services…….the day they get released…this automated field is going to turn on and off Medicaid... it's going to suspend and then reengage Medicaid like same day. (MDHHS)*

Promoted positive health outcomes

For many beneficiaries who were not traditionally served by Medicaid and/or were uninsured, HMP served as an entry point to health and social services.

> *The big thing is being able to get people into the healthcare system and then get them connected with a provider who can assess for these issues…That's what Healthy*

Michigan did, is it allowed us to connect these people who were maybe close to being disabled but didn't meet any of the Medicaid eligibility criteria, so this allowed us to cast a wider net…our safety net providers, health departments, FQHCs, and even our physicians and other providers that once you can get them into the system, they get eyes on them, and they can start evaluating them and looking for diseases. And then once they establish that relationship, then some of the social determinants of health will bubble up and will be identified…One thing that was really interesting about Health Homes is that it took several touches with a provider before that relationship was established. Once it was established, then people began opening up to certain providers. I think that goes a long way with helping people with whatever their issues are…just by being in the healthcare system it really helped with social determinants of health. (MDHHS)

But what it [HMP] did change was we got people a place to belong, which is the first step in giving people the true access to the healthcare system, at least we gave people a door to say that this is your assigned door to walk through. You might not be comfortable there but it's a place to start, and for so many people there really wasn't a door, and I really took great comfort in that we could provide something, as opposed to for many people who are uninsured, nothing. (Health plan/provider organization)

This whole slew of individuals…mostly adults who were not eligible for health coverage before became eligible [for HMP]… the HMP application process was more of an entry point...that enrollment assistor …found themselves providing access and linking people to many other resources based on what they were learning and the relationship and trust they were developing through the process of helping somebody get HMP: so like apply, understand eligibility, pick a plan - through that process, they learned things about people they didn't know very well because they were often folks that weren't interacting with the health system in a very proactive or preventative way because they didn't have coverage. (Safety net organization)

HMP's support for positive health behaviors and focus on primary care and the access it provided to preventive care and other health care services, including dental care, vaccinations, specialist care, mental health and substance use disorder care, and surgery, led to improved health, well-being, and other outcomes.

Being the health care provider, the main thing we're trying to do is empower individuals on how to change and make an impact on their health outcomes…If you don't have insurance and you're only going to the doctor when you're truly, truly sick, you're not going to be able to understand the preventive things that can be done and the behavioral changes that need to done to improve your overall health…just by virtue of them having coverage and coming in more regularly, having more preventive treatment, going to their physicals, diabetes management, hypertension, how do we make sure they're on the right meds, that we have the right actions in place. The door being open just by having the coverage I think has been the most

important thing to be able to make an impact on those healthy behaviors. (Safety net organization)

Prior to HMP, most low-income adults did not have any insurance coverage or a way to pay for adult vaccines. HMP provides that. (MDHHS)

One of the most important aspects…about the Healthy Michigan Plan and their suite of benefits that come along with it, is the inclusion of a much better dental benefit for the adult population that has historically had no access to dental services….that's just been a life-changer…from a whole person perspective and the social determinants that are associated with having poor oral health and poor oral hygiene, 'how do you get a job when your teeth are messed up?'...the only time it is a priority is when folks are in pain. But being able to have that ongoing coverage, they're now able to get into the preventive care… [it] helps them get ready for if they were, say, in need of dentures. They now have benefits that are going to get them to the point and they may have to pay out-of-pocket for costs for some of the materials. For uninsured folks, they pay out-of-pocket, but with Medicaid, as long we can follow along with the right guidelines, we can get people teeth and they can get gainful employment. And, and, not just gainful employment, but nutrition. They can actually eat, they can, you know, feel better and more confident about themselves. And, I do think, that – that makes it a very, very big difference for our patients' lives. (Safety net organization)

Healthy Michigan. It is the single biggest thing we've done to address this epidemic that's killing thousands of people every year. Expanding access to substance use disorder health coverage, it has made a huge impact on the number of people that we can get into treatment and there are many people [who] are alive today because they were able to get coverage through Healthy Michigan Plan. (MDHHS)

During the pandemic, HMP maintained access to coverage and care for beneficiaries and offered coverage for new beneficiaries affected by job and coverage losses.

[During the pandemic], HMP has offered care management… because we're looking at social determinants of health, we may be able to help some of these members related to food or clothing or housing or help with utility bills…We've also been able to really work on outreach for COVID education, so educating members on what COVID benefits are available. Testing sites, vaccine availability…that the COVID vaccine is safe and the benefits to getting the vaccination. And then when members of health plans have COVID positive tests, many of them are assigned to a case manager that reaches out and ensures that all of their needs are being met…In addition, plans are sharing information about 211 services and how 211s can help individuals. Non-emergent medical transportation so, during the pandemic, providing that transportation to vaccination clinics or treatment for COVID or for whatever other services that they need...providing outreach and trying to connect with [Health Plan] members that may be socially isolated and making sure that they have services that they need. (Health plan/provider organization)

The pandemic led to new health and social challenges, limits on health service capacity and access that led to delayed or missed care, and some setbacks in the delivery of innovations in care to HMP beneficiaries. Some safety net providers continued to experience backlogs in services and staffing shortages.

> *We look at people who have multiple complex chronic disease like diabetes… they're diabetic, they're hypertensive, they might have some heart disease. And so, what we did was create this multidisciplinary team…over time, can we actually drop that A1c...we were just starting that initiative before COVID struck. We were starting to see some success and we're waiting to be able to go full swing and open it back up again. (Safety net organization)*

> *[Due to the pandemic] the biggest problem is that dental offices were closed for 3 months; then slowly started to gear up. The lack of availability of PPE really played a big role last year in limiting dental care. Can people get in to care? The workforce has changed, scheduling has changed, clinics are not seeing as many patients. Demand for oral health care has come back, but there are still delays in being able to get care…. It's hard right now because COVID created a lot of workforce issues (e.g., [dental] hygienists have left the workforce). (MDHHS)*

> *From the pandemic, from a staffing perspective it's extremely hard right now to find good, qualified individuals to recruit and there's been a lot of turnover because of burn out in the healthcare system. (Safety net organization)*

Partnerships among diverse organizations

Organizations worked collaboratively to understand, plan for, and implement communications to maximize the ability of HMP beneficiaries to meet program requirements and maintain enrollment. Many organizations have worked together to plan for the continuation of the redetermination process at the end of the public health emergency.

> *We were doing everything from working with MDHHS to coordinate promotional materials to sharing outreach strategies, to actually doing hands on training for people who would ultimately assist individuals in enrolling so they could get used to the new program, the new eligibility components, and those types of things. We started with a focus on health centers, but it really became more of a coalitional effort and so free clinics, rural health clinics, community-based organizations came together and joined in on that effort really all across the state and so on the front end a lot of health coverage outreach, promotion of Healthy Michigan enrollment assistance coordination. (Safety net organization)*

> *HMP provides a mechanism to get information to a large group of low-income adults. e.g., information about COVID vaccination–[The] Immunization Program can share info with Medicaid Health Plans, and they can send messages to their members…. The Immunization Program has been invited to present to Medicaid Health*

Plans...[about] strategies to promote immunization, including sending reminders to people who are eligible or overdue for a vaccine dose. (MDHHS)

We work really closely with the health plans to make sure that we're reaching out... that sometimes means we're outreaching about different services than what the person might be calling for or presenting for. Or maybe it means that we're taking a list of clients who have received a certain service and calling them and making sure that they're still enrolled in their insurance and that they're still getting that care, whether they're getting it from us or somebody else, and if they're not, is there something we can do to help them get reconnected in whatever way. (County health)

We've paused the redetermination process and I anticipate our HMP population is going to be most at risk at the end of the public health emergency because of this. So there's certainly significant focus from a department standpoint…to really assess that population that's right now covered by HMP benefits to make sure that the appropriate supports are in place; that we're engaging with various stakeholders that are in direct connection with HMP beneficiaries, whether that be the Medicaid health plans,…various associations like the Primary Care Association, or physicians associations, Health and Hospital Association, community entities…to make sure that we're amplifying messages to our beneficiaries to ensure maintenance of coverage at the end of the public health emergency and if not maintenance of coverage, a smooth transition to the federal marketplace should they qualify for that. (MDHHS)

All of the [health] plans are working with their members on a regular basis to conduct outreach and working with providers, not just the HMP members…to remind both providers and individuals that a redetermination day is near…there's monthly outreach calls that the plans are conducting. They're also sending postcard reminders reminding them that redeterminations coming up, that they need to complete an annual HRA, that they need to work on their healthy behaviors. (Health plan/provider organization)

Summary of response to evaluation question 7.4

Innovations in the HMP enrollment process led to more streamlined and integrated enrollment in other programs, in addition to HMP, that address SDOH. Policy innovations have included coverage expansions; support for community health workers who work with beneficiaries to identify and address SDOH, achieve and use their HMP coverage, and navigate the health care system; new reimbursement and billing practices; coverage of telehealth services; and use of the HRA as a tool to improve primary care engagement and support healthy behaviors. HMP coverage for large numbers of adults, including new populations not previously covered by Medicaid, increased access to reimbursable care, contributed to interagency partnerships and coalitions and innovations in programs and service delivery, including those that address SDOH, that could be sustained over time. This expanded coverage contributed to the financial stability of safety net provider organizations and the ability to expand critical services to meet growing needs, including those for substance use disorder. Partnerships among diverse organizations

enhanced outreach and communications about initiating and maintaining enrollment, meeting HMP requirements, and planning for reinitiating redeterminations.

G. Conclusions

This evaluation has been organized around three HMP policies and four broad goals of the overall demonstration that reflect the MDHHS objectives. Below are conclusions for each of these evaluation areas.

Healthy Behaviors Incentives Program

The Healthy Behaviors Incentives Program is intended to support the HMP objectives of strengthening beneficiary engagement and personal responsibility, and encouraging individuals to seek preventive care, adopt healthy behaviors, and make responsible decisions about their healthcare. Findings from this evaluation suggest that this HMP component has been partially effective in achieving these objectives.

Some beneficiaries and PCPs described the HRA as an opportunity to identify and set goals for health behavior change. This may be particularly true for beneficiaries who have been without a primary care medical home for an extended period, or for patients new to a primary care practice. However, HRA completion is uneven, which may reflect the inconsistency in how it is introduced to beneficiaries. Some but not all beneficiaries recall receiving an HRA from their Medicaid health plan. Some primary care settings (often FQHCs) monitor which patients are due for an HRA and are proactive about encouraging completion. In other primary care settings, beneficiaries are responsible for initiating the process of completing an HRA.

PCPs emphasized that behavior change requires sustained engagement and support, which is not readily achieved through annual HRA completion. The HRA form does not prompt PCPs to identify which patients should receive this type of sustained engagement, which may occur by working with a care manager, social worker, or community health worker in the practice, engaging with a health promotion program (e.g., diet, exercise or smoking cessation programs), and regular follow-up visits with the PCP.

Moreover, in most primary care practices, the HRA form is not integrated into the practice EMR, so it does not enable PCPs to track progress over time or to even to recall the behavior change goals chosen by the beneficiary in the prior year. Without EMR integration, the clinical usefulness of the HRA is limited.

Our HMV survey found beneficiary reports of HRA completion were associated with higher rates of preventive service use, consistent with our previous evaluation of the first demonstration period. Our analysis of administrative data confirmed this pattern, but the effect size was small compared to the strength of association between preventive services and continuity of primary care visits and preventive services. This raises the issue of whether the motivating factor is the completion of the HRA form or the conversation with PCPs about health behaviors and preventive services. In addition, we cannot differentiate whether completion of the HRA provided a catalyst for beneficiaries to schedule and obtain preventive services or whether

beneficiaries who were motivated to seek preventive services were more likely to complete an HRA.

An important feature of the Healthy Behaviors Incentive Program is its financial incentive. Our HMV survey found that less than one-third of beneficiaries knew they could get a reduction in the amount they had to pay by completing an HRA or healthy behavior. PCPs were similarly unaware of the financial incentives. Interviews with beneficiaries confirmed that the Healthy Behaviors Incentives Program was not the primary motivator of their engagement in healthy behaviors. While many recalled completing at least one HRA, most were unaware of financial incentives; among the few who knew about the possibility of a financial reward, it was not their reason for adopting a healthy behavior goal. Instead, most reported self-motivation or encouragement from their providers supported their adoption of healthy behaviors. Changes in the financial incentives over time (e.g., the discontinuation of program-wide gift cards in FY19[24]) and differences in the incentive based on income may contribute to beneficiaries' lack of awareness about the financial incentives. For example, beneficiaries who are under 100% FPL and do not reach the threshold of paying 2% of their income in copays would not receive a financial incentive.

The state may consider modifying the Healthy Behaviors Incentive Program to more fully achieve the goals of the HMP demonstration. A potential modification to the HRA form would allow PCPs to designate the beneficiary's level of needed behavior change and frequency of follow-up to identify the highest need beneficiaries and offer suggestions for the types of follow-up services that the beneficiary could connect to so the provider and patient can discuss next steps and connect to other resources, with additional incentives for short-term and long-term progress.

Another area of modification would target integration of the HRA into the practice EMR. One strategy involves funding for technical support to build an HRA template into the EMR. Another option would be to allow existing practice screening systems (e.g., templates for clinical and SDOH screening) to substitute for the corresponding sections of the HRA, and to implement billing codes for discussion and monitoring of behavior change. This change would promote HMP's objectives of emphasizing primary care and HRAs and give primary care practices a more effective tool to support beneficiary engagement in healthy behaviors.

Finally, any modifications to the Healthy Behaviors Incentive Program should be introduced with a coordinated communication plan that targets beneficiaries, primary care providers, and supporting staff (case managers, community health workers, social workers) at primary care practices, to ensure that the key players understand and can act on the incentive structure.

Cost-Sharing

HMP cost-sharing is intended to support the HMP objectives of strengthening beneficiary engagement and personal responsibility, and encouraging individuals to make responsible decisions about their healthcare. Findings from this evaluation suggest that the HMP demonstration has been partially effective in achieving these objectives.

[24] MDHHS Medical Care Advisory Council June 18, 2018 Meeting Minutes

The MI Health Account statement is the primary method of communicating with beneficiaries about HMP cost-sharing. Our HMV survey found that nearly three-quarters of beneficiaries recalled getting a MI Health Account statement in the past year. However, beneficiary interviews confirmed that few beneficiaries understood how the amount owed is calculated; most simply checked to see what they owed.

Our analysis of cost-share data sheds light on some aspects of beneficiary confusion. Among beneficiaries with at least 18 continuous months of HMP-MC enrollment, nearly half had no cost-share obligations; this was mainly concentrated in the group with all eligible months below 100% FPL. For this group, cost-sharing consists of co-payments tied to receipt of services, and related cost-share obligations appear on the MI Health Account in the next quarter. Thus, beneficiaries in this group typically do not have regular obligations, which may make it more difficult to gain a better understanding over time of the rationale for cost-sharing.

We also found that beneficiaries with incomes above 100% FPL have higher rates of full payment for cost-share obligations than beneficiaries below 100% FPL. It is plausible that the consistency of the monthly fees allows beneficiaries to plan for and achieve a consistent payment pattern.

The state may consider modifying HMP cost-sharing policies to more fully achieve the goals of the HMP demonstration. One possible objective is to increase payment compliance. This may call for strategies to establish a more consistent payment amount for all income groups, since beneficiaries seem to understand and have greater payment compliance for the monthly fees.

A second objective is to improve beneficiary understanding of how cost-sharing is linked to utilization of services. A possible strategy to achieve this objective is to simplify the policy by reducing the number of services that have a co-payment, making it easier for beneficiaries to understand the policy. The simplified approach could focus on high-priority services such as non-urgent ED visits, which would support HMP's goal of promoting responsible decisions about healthcare. It would be essential to work closely with primary care providers to implement this approach, since avoiding unnecessary ED visits often requires availability of services in the primary care setting. Emphasizing ED use, or any other service, as the target for cost-sharing should be accompanied by efforts to ensure that needed alternate care is available in the outpatient setting.

Reduce uninsurance

A broad goal of the HMP demonstration is to improve access to healthcare for uninsured or underinsured low-income Michigan residents. Findings from this evaluation suggest that the HMP demonstration has been effective in achieving this objective.

The changes in insurance coverage we observed in the first few years after HMP implementation were sustained through 2020. In particular, Michigan adults ages 19 through 64 experienced significant gains in Medicaid coverage and reductions in the fraction uninsured compared with

those in states that did not expand Medicaid. These effects were concentrated among low-income adults.

Promote primary care/responsible use of services

An objective of the HMP demonstration is encouraging individuals to seek primary care and preventive services and make responsible decisions about their healthcare. Findings from this evaluation suggest that the HMP demonstration has been effective in achieving this objective.

Our HMV survey found that nearly all beneficiaries reported having a known primary care provider. Despite a public health emergency which affected availability and access to primary care, three quarters reported a primary care visit, and three quarters reported no barriers to primary care. Analysis of administrative claims showed that among beneficiaries with multi-year HMP enrollment, over half had at least one primary care visit each year.

Many PCPs described practice-based strategies to support HMP beneficiaries in responsible use of primary care services. Some practices have adjusted their scheduling practices to offer more same-day appointments and after-hours appointments. Many practices have protocols in place to contact patients after an ED visit, using this opportunity to educate patients about using the primary care practice as the first-choice option in the future. Many primary care practices have care managers and community health workers conducting regular outreach to high-need beneficiaries to support their self-management of health conditions, identify problems with social determinants of health, and avoid unnecessary ED visits.

Despite this overall success, some beneficiaries still experience barriers to primary care. Both beneficiaries and PCPs reported challenges with transportation to medical appointments. Some beneficiaries also reported difficulty scheduling primary care appointments, which was exacerbated by COVID-19 constraints on health care. Minimizing these types of barriers is essential for reducing non-urgent ED visits.

Support financial well-being

A goal of the HMP demonstration is to support the financial well-being of beneficiaries. Findings from this evaluation provide qualitative evidence that the HMP demonstration has been effective in achieving this objective. Beneficiary and key informant interviews highlighted many examples of HMP having a positive impact on beneficiaries' financial well-being, including the role of coverage in minimizing health care costs and worries and freeing up financial resources for other life needs such as food, transportation, and housing. There is also evidence of positive effects on employment as some patients gained access to medical treatments that allowed them to begin or continue working.

Additional information from credit report analyses related to this objective will be presented in the Summative Evaluation Report.

Sustain the safety net and support coordinated strategies to address social determinants of health

An objective of the HMP demonstration is reducing uncompensated care to sustain the safety net and supporting coordinated strategies to address social determinants of health. Findings from this evaluation indicate that the HMP demonstration has been effective in achieving this objective.

Changes in insurance coverage at the population level were reflected in changes in the payer mix for inpatient hospitalizations, whereby increases in Medicaid as a source of payment were associated with a significant decline in the fraction of discharges coded as self-pay. Hospital uncompensated care in Michigan was reduced by half following HMP implementation, a stark contrast to the experience of states that did not expand Medicaid, which experienced no decline in uncompensated care. The changes in hospital payer mix and hospital uncompensated care in the early years after HMP implementation were sustained through 2020.

Key informant interviews highlighted numerous examples of HMP's key role in fostering collaboration and coordination of health and human services organizations across sectors, including safety net providers, health plans, healthcare systems, and social service organizations. This role has been particularly important for sustaining safety net providers, enabling them to implement and maintain innovative programs focused on SDOH by addressing both health care and social needs of beneficiaries.

HMP coverage for large numbers of adults, including new populations not previously covered by Medicaid, increased access to reimbursable care, contributed to interagency partnerships and coalitions and innovations in programs and service delivery, including those that address SDOH, that could be sustained over time. This expanded coverage contributed to the financial stability of safety-net provider organizations and the ability to expand critical services to meet growing needs, including those for substance use disorders and COVID-19. HMP increased access to care and was associated with improved health and other outcomes for beneficiaries, many of whom were previously uninsured or unconnected to services addressing SDOH. During the COVID-19 pandemic, HMP maintained access to coverage and care for beneficiaries and offered coverage for new beneficiaries affected by unemployment and coverage losses. Partnerships among diverse organizations enhanced outreach and communications about initiating and maintaining enrollment and meeting HMP requirements.

Trends in the state's costs for HMP itself support its sustainability. Capitation rates for both administrative and medical claims costs have remained relatively stable for the HMP population since 2016, and cost trends over time compare favorably to trends for other Medicaid benefit programs.

H. Interpretations, and Policy Implications and Interactions with Other State Initiatives

Beyond the mostly positive findings tied to specific evaluation questions, HMP is effective because it undergirds many other initiatives to promote health and health care for adults in Michigan. These initiatives include other federal demonstration projects, such as the Section 1115 behavioral health demonstration focused on diagnosis and treatment of substance use

disorders. The majority of beneficiaries receiving SUD treatment are enrolled in HMP. Other demonstrations include Health Homes; since the 2014 implementation of HMP, Michigan has piloted and expanded Health Homes for beneficiaries with co-occurring chronic medical and behavioral health conditions, opioid use disorder, and serious mental illness/serious emotional disturbances. HMP beneficiaries comprise a substantial number of Health Homes participants.

Because of its large enrollment, HMP facilitates the inclusion of low-income adults in the Medicaid Health Equity Project. This is a coordinated effort with the Medicaid health plans to address racial disparities through evidence-based interventions.

Many public health initiatives rely on HMP to cover recommended services for a substantial proportion of low-income adults. These initiatives include public health programs to treat hepatitis C and to promote adult immunizations such as influenza, shingles, and COVID-19 vaccines.

Recent initiatives to facilitate healthcare coverage for individuals being released from prison rely on HMP. These programs allow prisoners to apply for HMP in advance of their release date, so that they are covered and able to begin services as soon as they are released, including mental health and SUD treatment services and medications.

We view these initiatives as cross-sustaining with HMP. While HMP provides the basic coverage for beneficiaries, these other state initiatives improve the quality of care and the health outcomes for participating beneficiaries.

We identified three key policy implications related to HMP. First, because HMP covers such a large number of low-income adults (currently covers over 10% of the total Michigan population), the costs of other initiatives to extend or expand coverage are more reasonable. For example, Michigan recently enacted a policy to extend Medicaid coverage for pregnant women from 60 days to 12 months postpartum (HASA 22-08). From the perspective of state funding requirements, enacting this policy is feasible because the majority of women already are covered through HMP and thus would not be at risk for losing coverage at 60 days. Similarly, the state recently expanded the Children's Special Health Care Services program to cover adults with sickle cell disease. Because many adults with sickle cell disease are already covered under HMP, this amount of state funds required to cover the remaining adults is more feasible.

Second, because so many adults are now covered under HMP, Medicaid policies designed to expand access to services will reach many more people. For example, recent action to broaden Medicaid beneficiaries' access to oral contraceptives (HASA 22-12) applies to a dramatically larger number of adults than if it were enacted without the HMP population.

HMP has offered a reliable source of insurance coverage and access to care during a global pandemic during which there were significant risks to the health and financial well-being of Michigan residents. HMP appears to be meeting its goals despite the challenges of this period. When the PHE ends, some beneficiaries will lose this coverage. To understand the role of HMP in bridging insurance gaps related to the pandemic, it will be important to collect information on

health insurance coverage, health care utilization/unmet needs, and financial well-being after Medicaid enrollment ends.

I. Lessons Learned and Recommendations

Regarding the four specified goals of the overall demonstration, we learned that HMP was highly effective in:

- Reducing uninsurance
- Promoting primary care
- Supporting financial well-being
- Sustaining the safety net and supporting strategies to address social determinants of health

Based on the success in achieving these main goals of the overall demonstration, we recommend that Medicaid expansion through the Healthy Michigan Plan continue with strong support beyond the current demonstration period.

Our evaluation findings also provide insights for any state Medicaid program considering features incorporated into HMP. Across several components of our evaluation, we learned that the current structure of HRAs and healthy behaviors incentives are not well understood by many HMP beneficiaries and are not viewed as well-functioning by primary care providers. MDHHS has implemented several changes[25] to the Healthy Behaviors Incentives Program in response to both our previous evaluation findings and feedback from HMP beneficiaries, providers, and health plans. Some changes facilitated the completion of HRA forms, including implementing streamlined secure statewide HRA submission processes for providers and deletion of the lab results portion of the HRA form. Other changes facilitated beneficiary participation in the Healthy Behaviors Incentives program such as additional mechanisms to document healthy behaviors through claims/encounter data. To improve understanding of the program, MDHHS has updated beneficiary guidance and worked with an external partner to educate providers. While MDHHS discontinued program-wide gift cards as an incentive for HRA completion, some of the Medicaid health plans use gift cards to incentivize engagement in health behavior change activities.

Given the challenges with informing beneficiaries and with facilitating usefulness to providers, we offer the following recommendations to states considering incorporating HRAs and healthy behaviors incentives into a Medicaid expansion program:

- Expand the focus from completing the HRA form to supporting beneficiary engagement in behavior change over time.
- Give careful consideration to allowing variable processes and structures for health plans – dealing with multiple processes places a burden on providers.
- Facilitate mechanisms for providers to integrate program tools into EMRs and other practice systems.
- Plan for ongoing communication about program goals, processes, and incentives to beneficiaries and providers.

Michigan should continue to focus on these areas too, given that beneficiary and provider understanding of the program remains limited.

[25] MSA Bulletin 19-35

We also learned that beneficiary understanding of HMP cost-sharing policies is uneven and generally incomplete, even with the simplified MI Health Account statement implemented by MDHHS in 2017 as well as later changes. Thus, if incorporating cost-sharing into a Medicaid expansion program:

- Implement a simplified approach with (a) income-based fees and/or a method of charging equal quarterly amounts so that beneficiaries know more generally what costs to expect, and (b) co-payments for a small number of high-priority services (e.g., ED visits) so that beneficiaries can better understand the link between service utilization and cost-share obligations.

J. Attachment(s)

- CMS-Approved Evaluation Design
- Administrative Data Appendix
- Beneficiary Survey Appendix
- Beneficiary Survey Supplemental Data Appendix
- Beneficiary Interviews Appendix
- Key Informant Interviews (Social Impact of HMP) Appendix
- Credit Report Data Appendix
- BRFSS Appendix
- ACS, HCUP, and Medicare Cost Report Appendix
- Survey Instrument and Interview Guide Appendix

Healthy Michigan Plan
Section 1115 Demonstration
Interim Evaluation Report
Attachments

1. CMS-Approved Evaluation Design
2. Administrative Data Appendix
3. Beneficiary Survey Appendix
4. Beneficiary Survey Supplemental Data Appendix
5. Beneficiary Interviews Appendix
6. Key Informant Interviews (Social Impact of HMP) Appendix
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10. Survey Instrument and Interview Guide Appendix

Healthy Michigan Plan
Final Evaluation Design – June 2021

June 24, 2021

University of Michigan
Institute for Healthcare Policy & Innovation

Healthy Michigan Plan Evaluation Design Narrative

A. General Background Information about the Demonstration and Evaluation

The Centers for Medicare & Medicaid Services (CMS) approved the renewal of the Healthy Michigan Plan (HMP) Section 1115 Demonstration Waiver (Project No. 11-W-00245/5) on December 21, 2018, for the period January 1, 2019-December 31, 2023. The waiver provided approval for the State to require the following:

(1) Beneficiaries age 19-62 to complete and report 80 hours per month of community engagement as a condition of eligibility, and
(2) Beneficiaries with incomes >100% of the Federal Poverty Level (FPL) who have been enrolled in the demonstration ≥48 months to (a) pay a monthly premium of 5% of income, and (b) complete a Health Risk Assessment (HRA) at redetermination or complete a healthy behavior in the previous 12 months as conditions of eligibility.

The community engagement policy was implemented on January 1, 2020. On March 4, 2020, the U.S. District Court vacated CMS approval of Michigan's community engagement waiver. The 48-month policy, consisting of the monthly premium and HRA/healthy behavior requirements, was slated to begin October 1, 2020, but was delayed due to the maintenance of effort requirements of Section 6008 of the Families First Coronavirus Response Act during the public health emergency (FFCRA) related to the COVID-19 pandemic.

This updated evaluation design reflects these modifications to the State's implementation plan. As a result, this evaluation design focuses on current HMP policies (cost-sharing and Healthy Behaviors Incentives program) and requirements expected to be implemented later in this waiver period (48-month policy). Activities to evaluate the impact of the community engagement requirement have been removed in response to the U.S. District Court decision as noted above. Activities to evaluate the impact of the 48-month policy are included, with a delayed timeline to reflect the uncertain date of implementation; these activities will be limited to descriptive trend analyses of administrative data to characterize enrollment patterns in individuals affected by the policy if the new 48-month policy is implemented after January 2023 because there otherwise would be insufficient time to complete the evaluation activities related to surveys of HMP beneficiaries affected by this policy for the summative report to be submitted to MDHHS in July 2024.

A.1. Overview and history of the demonstration

On April 1, 2014, Michigan expanded its Medicaid program under the Affordable Care Act (ACA) to include adults with incomes up to 133% FPL. To accompany this expansion, the Michigan Adult Benefits Waiver (ABW) was amended and transformed to establish HMP, through which the State intended to test innovative approaches to beneficiary cost-sharing and personal responsibility. HMP is administered through the Michigan Department of Health and Human Services (MDHHS). HMP beneficiaries receive a full health care benefit package, which includes all of the ACA-mandated essential health benefits. Most are enrolled in a managed care benefit (HMP-MC) and choose or are assigned a primary care provider through one of the State's Medicaid Health Plans.

Since 2014, to encourage beneficiary engagement and personal responsibility, HMP-MC beneficiaries with incomes above 100% FPL have been required to pay a monthly fee (formerly known as contributions) equal to 2% of their household income, similar to an insurance premium. In addition, all beneficiaries with incomes from 0 to 133% FPL have been required to pay service-related co-payments. Each HMP-MC beneficiary has a MI Health Account that tracks fees, co-pays, and health care expenditures. This cost-sharing policy was modified effective January 1, 2020, when medically frail beneficiaries became exempt from both fees and service-related co-payments.

To promote seeking preventive care, adopting healthy behaviors, and making responsible decisions about health care use, beneficiaries have opportunities to reduce their cost-sharing by participating in the Healthy Behaviors Incentives program, designed to encourage beneficiaries to maintain and implement healthy behaviors in collaboration with their primary care provider via a standardized Health Risk Assessment (HRA). Additional mechanisms to document healthy behaviors through claims/encounter data were later added to include beneficiaries who completed healthy behavior activities but did not submit an HRA.

In December 2017, MDHHS submitted an application to extend the HMP demonstration for an additional five years. In September 2018, the State applied to amend certain elements of HMP to comply with new provisions in state law, and these policy changes were approved by CMS in December 2018. Under the 48-month policy, beneficiaries with household incomes between 100% and 133% FPL and cumulative HMP enrollment of ≥48 months would be required to meet two conditions to maintain HMP eligibility. The first condition requires monthly premiums of 5% of their income in order for beneficiaries to become more familiar with how commercial coverage operates; the premiums would represent the beneficiary's full obligation, with no additional co-payments. Because the 5% premium is designed as a requirement to maintain eligibility, the evaluation team expects it will lead to higher rates of premium payment among those who are subject to this requirement. The second condition is completion of an HRA or documented engagement in a specified healthy behavior (e.g., cancer screening, influenza vaccination) within the twelve-month period prior to the annual eligibility re-determination deadline. Beneficiaries exempt from the new 48-month requirements include pregnant women, beneficiaries identified or self-attested as medically frail, beneficiaries not enrolled in a Medicaid Health Plan, and beneficiaries enrolled in the Flint Michigan Section 1115 demonstration. American Indian/Alaska Natives and children under 21 years of age are exempt from paying premiums but they will still be required to meet the HRA/healthy behavior requirement.

Implementation of the 48-month policy has been delayed, as noted above. Until implementation, HMP beneficiaries continue to be subject to the cost-sharing and HRA/healthy behavior policies described above.

A.2. Population groups impacted by the demonstration

HMP beneficiaries enrolled in managed care, unless otherwise exempt, will continue to be subject to the cost-sharing responsibilities and HRA/healthy behavior incentives as described in the HMP Special Terms & Conditions (STC 22(d)) from CMS.

HMP beneficiaries with incomes 100-133% FPL and cumulative HMP enrollment of ≥48 months, unless otherwise exempt, will be subject to the new policy of monthly 5% premiums and annual HRA/healthy behavior requirements, as approved by CMS.

A.3. Goals of the demonstration

As stated by MDHHS, the overarching goals of the HMP demonstration are to increase access to quality health care, encourage the utilization of high-value services, promote beneficiary adoption of healthy behaviors, and implement evidence-based practice initiatives.

The main objectives for HMP stated by MDHHS include:

- Improving access to healthcare for uninsured or underinsured low-income Michigan residents;
- Improving the quality of healthcare services delivered;
- Reducing uncompensated care;
- Strengthening beneficiary engagement and personal responsibility;
- Encouraging individuals to seek preventive care, adopt healthy behaviors, and make responsible decisions about their healthcare;
- Supporting coordinated strategies to address social determinants of health in order to promote positive health outcomes, greater independence, and improved quality of life;
- Helping uninsured or underinsured individuals manage their health care issues;
- Encouraging quality, continuity, and appropriate medical care

A.4. Other relevant contextual factors

HMP was initially implemented in April 2014 in the context of broader changes to health insurance markets in Michigan and in other states under the Affordable Care Act. In particular, the health insurance exchange, associated premium tax credits, and individual mandate all affected consumer and employer behavior. An increase in private insurance coverage as people enrolled in the health insurance Marketplace established in 2013 also reduced the number of uninsured individuals in the state.[1] However, the longer-term trend toward private plans with high deductibles has meant that more privately insured patients face large out-of-pocket obligations when they are hospitalized, which may increase hospital uncompensated care for patients who are unable to pay hospital charges not covered by their private insurance.

The HMP community engagement requirement was implemented January 1, 2020, following months of beneficiary and stakeholder education. The implementation process gave MDHHS valuable experience in broad communication of policy changes, development of efficient methods of identifying policy exemptions, and modifying information systems to track policy compliance. From the perspective of beneficiaries, the rapid changes, from policy implementation to suspension, may have introduced confusion. A prior version of the evaluation plan included a randomized controlled trial to understand the impact of the community engagement requirement, and beneficiary surveys had begun as part of this effort.[2] These

[1] Kaiser Family Foundation. Marketplace Enrollment 2014-2019.
[2] Evaluation of the Healthy Michigan Plan Section 1115 Community Engagement Requirement Waiver

activities were discontinued after the March 2020 ruling that vacated CMS approval for the community engagement provision.

The first individuals diagnosed with COVID-19 in Michigan were identified in March 2020. Since that time, the COVID-19 pandemic has had a dramatic effect on health care utilization and costs and financial well-being for people in Michigan and across the country, including HMP beneficiaries. In particular, HMP enrollment, which had been quite stable in recent years, has grown substantially from approximately 670,000 individuals in March 2020 to over 874,000 individuals as of February 1, 2021. This substantial increase in enrollment can be attributed both to people becoming newly eligible for the program and also to the state's implementation of the maintenance of effort provisions of Section 6008 of the FFCRA.

B. Logic Model, Evaluation Questions, and Hypotheses

B.1. Logic model

Please see the evaluation logic models at the end of this document (pages 45-46).

B.2. Evaluation questions and hypotheses

The evaluation questions and hypotheses are organized around three HMP policies and four broad goals of the overall demonstration that reflect the MDHHS objectives outlined in Section A.3 above. The seven components of the evaluation are: (1) Healthy Behaviors Incentives program, (2) cost-sharing, (3) 5% premium cost-sharing and HRA/healthy behavior requirements (48-month policy), (4) reduce uninsurance and uncompensated care, (5) promote primary care/responsible use of services, (6) support financial well-being, and (7) support coordinated strategies to address social determinants of health. Within each area, we have identified key evaluation questions that explore how HMP promotes the objectives of Titles XIX and XXI by improving access, continuity, and quality of care for low-income adults in Michigan. Because the MDHHS objectives for HMP are stated in qualitative terms, we have framed our hypotheses below to assess directional change without associated quantitative targets. The analysis plan is designed to identify both positive outcomes and potential adverse consequences.

1. Healthy Behaviors Incentives Program

Evaluation question 1.1: How has the health and healthy behavior engagement among Michigan adults changed since introduction of HMP and its Healthy Behaviors Incentives Program?
Hypothesis 1.1: Health status will improve and healthy behaviors will increase over time among income-eligible adults in Michigan compared with similar adults in comparison states.

Evaluation question 1.2: What is the association between beneficiary knowledge of the Healthy Behaviors Incentives program and efforts to maintain or improve health?
Hypothesis 1.2: Engagement in efforts to maintain or improve health will be higher among beneficiaries who report knowledge of the HMP Healthy Behaviors Incentives Program.

Evaluation question 1.3: Is HRA completion associated with improved health status and health behaviors?
Hypothesis 1.3: Beneficiaries who complete an HRA will report improvement in health status and health behaviors compared to beneficiaries who do not complete an HRA.

Evaluation question 1.4: Is HRA completion associated with higher rates of preventive service use?
Hypothesis 1.4: Beneficiaries who complete at least one HRA will demonstrate higher rates of preventive service use compared to beneficiaries who have similar primary care utilization but who have not completed an HRA.

Evaluation question 1.5: How has the Heathy Behaviors Incentives program, and HMP as a whole, affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health over time?
Hypothesis 1.5: Beneficiaries will describe assistance from primary care providers in setting health goals and engaging in behavior change to meet those goals.

Evaluation question 1.6: How do primary care providers use the HRA to assist in patient engagement and health promotion?
Hypothesis 1.6: Primary care providers will describe that they have become more knowledgeable over time about how to use the HRA to engage patients enrolled in HMP.

2. Cost-Sharing

Evaluation question 2.1: Do beneficiaries understand cost-sharing and other consumer-oriented features of HMP coverage?
Hypothesis 2.1: Beneficiaries who are aware of healthy behavior financial incentives will demonstrate a better understanding of cost-sharing obligations and connections between service utilization and amount owed.

Evaluation question 2.2: What factors are associated with beneficiaries' compliance with cost-sharing obligations?
Hypothesis 2.2: Beneficiaries with MI Health Account fees will have better payment compliance than their counterparts with service-based cost-sharing only.

Evaluation question 2.3: Are beneficiaries able to understand the MI Health Account statement?
Hypothesis 2.3: Beneficiaries will understand where to find the amount they owe, but may not understand how that amount is calculated.

Evaluation question 2.4: What are barriers and facilitators for beneficiaries to pay the amount owed?
Hypothesis 2.4: Beneficiaries will report financial barriers more often than logistical barriers to paying the amount owed.

3. 5% Premium Cost-Sharing & HRA/Healthy Behavior Requirements (48-month policy)

Evaluation question 3.1: Do beneficiaries subject to the new 48-month policy understand the requirements and consequences for noncompliance?
Hypothesis 3.1: Beneficiary literacy level will be associated with understanding of specific provisions of the new 48-month policy.

Evaluation question 3.2: Is the penalty of disenrollment for failure to complete the HRA/healthy behavior requirement stronger than the incentive of cost-sharing reduction for HRA/healthy behavior completion?
Hypothesis 3.2: Among beneficiaries subject to the new 48-month policy, HRA/healthy behavior completion will increase for beneficiaries with income >100% FPL who are subject to disenrollment, with no change for beneficiaries with income <100% FPL who are not subject to disenrollment.

Evaluation question 3.3: Among beneficiaries with income above 100% FPL, how does payment compliance change with the new cost-sharing requirements (from 2% fee and service-related co-payments to a flat 5% premium)?
Hypothesis 3.3: Payment compliance will be higher among those subject to the 5% monthly premium requirement than under the previous cost-sharing requirements.

Evaluation question 3.4: To what extent is the 5% monthly premium requirement associated with disenrollment?
Hypothesis 3.4a: The rate of disenrollment will be higher after implementation of the 5% monthly premium requirement compared to before implementation.
Hypothesis 3.4b: Disenrollment will disproportionately occur among beneficiaries with low utilization in the 24 months prior to implementation of the 5% monthly premium requirement.

4. Overall demonstration: Reduce uninsurance

Evaluation question 4.1: How have insurance coverage rates in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?
Hypothesis 4.1a: The decline in uninsurance among non-elderly adults in Michigan compared to other states that did not expand Medicaid that was observed in 2013-2017 will be sustained through subsequent years.
Hypothesis 4.1b: The decline in uninsurance among non-elderly adults in Michigan compared to other states that expanded without a waiver that was observed in 2013-2017 will be sustained through subsequent years.

5. Overall demonstration: Promote primary care/responsible use of services

Evaluation question 5.1: Does HMP's facilitation of primary care access (e.g., through managed care PCP assignment) influence beneficiary engagement in health and maintenance or improvement in physical and mental health?
Hypothesis 5.1a: Beneficiaries who report no barriers to primary care will be more likely to report improved health status and ability to take action to improve or maintain their health.

Hypothesis 5.1b: Beneficiaries who make regular primary care visits will be more likely to report improved health status and ability to take action to improve or maintain their health.

Evaluation question 5.2: What factors influence beneficiaries' decisions about seeking care in the emergency department?
Hypothesis 5.2: Beneficiaries who report barriers to care will be more likely to report an emergency department visit without first attempting to contact their primary care provider.

Evaluation question 5.3: Is use of the emergency department related to continuity of primary care?
Hypothesis 5.3: Beneficiaries with higher continuity of primary care will have lower rates of emergency department utilization and lower odds of being high-frequency ED utilizers.

Evaluation question 5.4: Does HMP promote more consistent use of services to manage chronic conditions over time?
Hypothesis 5.4: Beneficiaries with chronic conditions will demonstrate better rates of medication management and primary care utilization, and lower rates of ED visits and hospitalizations, over time compared to their initial year of HMP enrollment.

Evaluation question 5.5: How has HMP impacted beneficiaries' physical, mental, and oral health and their use of health care services over time?
Hypothesis 5.5: Beneficiaries will describe HMP as allowing them to receive services that have a significant positive impact on their health and well-being.

6. Overall demonstration: Support financial well-being

Evaluation question 6.1: What impact has HMP had on beneficiaries' levels of employment and ability to work?
Hypothesis 6.1: Beneficiaries will report sustained or increased employment and decreased health-related barriers to employment over time.

Evaluation question 6.2: How is HMP enrollment related to individual beneficiaries' financial outcomes during and after HMP enrollment?
Hypothesis 6.2: HMP enrollment will be associated with improved credit report outcomes for beneficiaries over time.

Evaluation question 6.3: How has HMP affected beneficiaries' financial and material well-being over time?
Hypothesis 6.3: Beneficiaries will describe examples of how HMP has improved their financial and material well-being.

7. Overall demonstration: Sustain the safety net and support coordinated strategies to address social determinants of health

Evaluation question 7.1: What are the categories and estimated amounts of the State's costs to administer key HMP demonstration policies (e.g., Healthy Behaviors Incentives program, cost-sharing)?
Hypothesis 7.1: Administrative costs to implement demonstration policies will remain stable during the current Section 1115 waiver period.

Evaluation question 7.2: How do trends over time in Medicaid expenditures per member-month for HMP enrollees compare to those for beneficiaries in traditional Medicaid managed care?
Hypothesis 7.2: Annual trends in age- and sex-adjusted expenditures per member-month will demonstrate a lower rate of increase over time for enrollees in HMP managed care than for enrollees in traditional Medicaid managed care.

Evaluation question 7.3: How have uncompensated care costs in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?
Hypothesis 7.3a: The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that did not expand Medicaid that was observed between 2013 and 2017 will be sustained in subsequent years.
Hypothesis 7.3b: The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that expanded Medicaid without a waiver that was observed between 2013 and 2017 will be sustained in subsequent years.

Evaluation question 7.4: How does HMP support new or broadened initiatives to address social determinants of health for low-income adults in Michigan?
Hypothesis 7.4: State officials and safety-net providers will describe specific examples of health-promoting initiatives that build on HMP's continuity, breadth of coverage, and primary care emphasis.

C. Methodology

C.1. Evaluation design summary

This new evaluation builds on key findings from the summative report prepared by the HMP evaluation team at the University of Michigan Institute for Healthcare Policy and Innovation for the initial five years of HMP (2014-2018) that was submitted to CMS by MDHHS in May 2019 and finalized in March 2020.

This evaluation design responds to the evaluation requirements outlined in the new HMP Special Terms and Conditions (STCs) (Section XII. Evaluation of the Demonstration) and related guidance provided by CMS in Attachment A: Developing the Evaluation Design.[3] The HMP evaluation team has also followed subsequent guidance released by CMS in March 2019 in its report, *Evaluation Design Guidance for Section 1115 Eligibility and Coverage Demonstrations*,

[3] Healthy Michigan Plan Section 1115 Demonstration Standard Terms and Conditions (2018)

and guidance released in August 2020 in its report, *Implications of COVID-19 for Section 1115 Demonstration Evaluations: Considerations for States and Evaluators*.[4]

The evaluation will use multiple approaches, including analysis of state administrative data, publicly available data, and primary data collected through interviews and surveys. These data sources are described in detail in this evaluation narrative.

Institutional Review Board (IRB) Review and Considerations

Federal regulations governing human subjects protection specify categories of human subjects research that are exempt from the standard regulatory process, per the 2018 Common Rule (45CFR46 subpart A). Exemption category 5 includes:

1. Research and demonstration projects that are conducted or supported by a Federal department or agency, or otherwise subject to the approval of department or agency heads (or the approval of the heads of bureaus or other subordinate agencies that have been delegated authority to conduct the research and demonstration projects), and that are designed to study, evaluate, improve, or otherwise examine public benefit or service programs, including procedures for obtaining benefits or services under those programs, possible changes in or alternatives to those programs or procedures, or possible changes in methods or levels of payment for benefits or services under those programs. Such projects include, but are not limited to, internal studies by Federal employees, and studies under contracts or consulting arrangements, cooperative agreements, or grants. Exempt projects also include waivers of otherwise mandatory requirements using authorities such as sections 1115 and 1115A of the Social Security Act, as amended.
    i. Each Federal department or agency conducting or supporting the research and demonstration projects must establish, on a publicly accessible Federal Web site or in such other manner as the department or agency head may determine, a list of the research and demonstration projects that the Federal department or agency conducts or supports under this provision. The research or demonstration project must be published on this list prior to commencing the research involving human subjects.

The evaluation plan has been reviewed and deemed exempt by the University of Michigan Medical School IRB under Exemption 5. The evaluation plan has also been reviewed and determined to be exempt by the MDHHS IRB, with approval of a HIPAA Privacy Waiver to use protected health information.

C.2. Target and comparison populations

The evaluation plan does not include a broad experimental design that covers all data sources. Rather, the specific target and comparison populations are described for each data source and corresponding hypotheses in the accompanying table.

C.3. Evaluation period

[4] CMS 1115 Demonstration State Monitoring & Evaluation Resources

The evaluation period will include the current waiver demonstration period (January 1, 2019, to December 31, 2023). As specified in the descriptions of analytic methods, the period prior to January 1, 2019, will be used as a baseline comparison period when data from this period are available. The specific time periods to be utilized for each data source are described below.

C.4. Data sources, evaluation measures, and analytic approach

The following sources of data will be used in the evaluation:

- State administrative data
- Beneficiary survey (Healthy Michigan Voices)
- Interviews with beneficiaries
- Interviews with providers
- Interviews with key informants
- Credit data
- Behavioral Risk Factor Surveillance System (BRFSS)
- American Community Survey (ACS)
- HCUP Fast Stats inpatient discharge data
- Medicare cost reports

Descriptions of these data sources and how they will be included in the evaluation are presented below. Analyses related to the 48-month policy are included in italics given that they are contingent on implementation by January 2023. If the 48-month policy is implemented between January 2023 and June 2023, descriptive trend analyses of administrative data will be conducted, when feasible.

C.4.1. State administrative data

Data source

Administrative data will be used in a variety of ways to document changes over time in program enrollment, engagement and utilization, and compliance with cost-sharing requirements. Administrative data allow for multivariate modeling that adjusts for both beneficiary characteristics (e.g., age, sex, region) and programmatic characteristics (managed care vs fee-for-service coverage, cost-sharing requirements) to understand patterns in different subgroups of beneficiaries; this information may be used by policymakers to understand the differential engagement in and benefit from HMP features across subgroups. Administrative data also will be used to describe trends over time in expenditures, with the ability to generate expenditure trends by service type, adjusted estimates by beneficiary characteristics, and comparisons to expenditure trends for other Medicaid benefit plans (e.g., traditional Medicaid).

The state of Michigan offers a rich data environment for evaluation. The backbone of the data environment is the state's Enterprise Data Warehouse. The Data Warehouse maintains individual-level, identifiable data for numerous programs within MDHHS, including:

- Medicaid enrollment files include eligibility dates for different benefit plans, enrollment start and end dates, contact information (address, phone, email), key demographic characteristics (gender, race/ethnicity), and third-party liability coverage.
- Medicaid administrative claims include service-level data on paid claims (fee-for-service)

and encounters (Managed Care), with accompanying billing and reimbursement information (e.g., CPT and ICD-10 diagnosis codes, billing modifiers, billing/rendering provider, paid amount) for inpatient, outpatient, pharmacy, durable medical equipment, dental, lab, and other services.
- Specialty behavioral health administrative claims include individual-level data on services provided through Michigan's behavioral health system.
- Michigan Care Improvement Registry houses individual-level immunization history including vaccine product, date of administration, and provider.
- HRA tables include individual-level data on administration of HRAs (e.g., dates of completion, whether HRA completion was facilitated by a provider, answers to individual HRA questions, and eligibility for HRA-related incentives (e.g., cost-share reduction)).
- Cost-share tables include individual-level data on charges for HMP fees, premiums and co-pays, cost-sharing reductions, and payment history.
- Other tables house data related to specific Medicaid initiatives, such as indicators of medical frailty and other exemptions from program requirements, eligibility for supplementary or pilot programs, and compliance actions.

Each beneficiary has a unique Medicaid ID number that enables linkages across data files within the Data Warehouse. The Data Warehouse houses data from other components of state government, such as the Department of Corrections, Department of Treasury, and Department of Licensing and Regulatory Affairs. The State has implemented a Master Person Indicator that allows linkages across departments once authorization has been obtained.

The HMP evaluation team has a longstanding history of working with MDHHS staff on projects utilizing the state Data Warehouse. A Business Associates Agreement executed between MDHHS and the University of Michigan authorizes direct access to the Data Warehouse via an existing secure portal. The HMP evaluation team has established data storage protocols that comply with MDHHS regulations, including the use of encrypted files, secure networks, and multiple layers of password protection. The evaluation team has extensive experience processing the administrative claims data into analytic data files.

This data source will be used to examine evaluation questions 1.4, 2.2, 3.2, 3.3, 3.4, 5.3, 5.4, and 7.2.

Measures

Data from the state Data Warehouse will be extracted and processed to derive an array of variables.

Enrollment-related variables will include:
- Cumulative months of HMP enrollment (overall, in HMP-Managed Care)
- Enrollment disruptions (number of disruptions, length of enrollment gaps)
- Disenrollment/noncompliance actions
- Timing of initial HMP enrollment (2014-2018 vs. 2019-2023)
- Change from HMP to another Medicaid benefit plan

Demographic variables will include:

- Age at initial HMP enrollment
- Race ethnicity as categorized in data warehouse
- Geographic region, based on prosperity region
- Income level (% FPL) as documented in the data warehouse
- Medicaid Health Plan for months enrolled in HMP-Managed Care
- Medical frailty indicators

HRA-related variables will include:

- Number and timing of initial and subsequent HRA completions
- Target behavior selected, and self-reported health status on initial and subsequent HRAs
- HRA-related incentives

Cost-sharing variables will include:

- Quarterly/annual amount owed (fees, premiums, co-pays)
- Amount and frequency of payments
- Evidence of cost-share reductions
- Non-compliance determinations

Utilization-related variables will be derived from claims data using established measures from the Healthcare Effectiveness Data and Information Set (HEDIS) and from the CMS Core Set of Adult Quality Measures for Medicaid. We will apply modifications as appropriate (e.g., to incorporate state-specific billing codes and/or data sources, to adjust age ranges to be consistent with HMP eligibility). We will calculate utilization-related measures that reflect HMP policies regarding use of primary care/preventive services, avoiding overuse of the emergency department, and effective management of chronic conditions. Specific outcome measures include:

Primary Care and Preventive Services

- Flu Vaccinations for Adults (NQF 0039; measure steward NCQA): percentage of beneficiaries who received an influenza vaccine between July 1 and June 30 (annual measure, modified to use immunization documentation from the MCIR and Medicaid claims rather than self-report)
- Colon Cancer Screening (NQF 0034, measure steward NCQA): percentage of beneficiaries aged 50-64 who received colon cancer screening by high-sensitivity fecal occult blood test, sigmoidoscopy with FOBT, or colonoscopy.
- Breast Cancer Screening (NQF 2372; measure steward NCQA): percentage of women 40-64 who had a mammogram to screen for breast cancer at least once in a two-year period
- Cervical Cancer Screening (NQF 0032; measure steward NCQA): percentage of women 21-64 years of age who received a Pap test to screen for cervical cancer at least once in a three-year period
- Adults' Access to Preventive/Ambulatory Health Services (HEDIS AAP; measure steward HEDIS): percentage of beneficiaries who made an ambulatory or preventive care visit
- Annual Dental Visit (HEDIS ADV; measure steward HEDIS): percentage of beneficiaries who made at least one dental visit, modified to include a sub-measure for preventive dental services

Emergency Department Utilization

- Overall ED utilization (HEDIS EDU; measure steward HEDIS): rate of ED visits per 1,000 member months
- High Frequency ED utilization: proportion of beneficiaries who make >5 ED visits within a 12-month period

Management of Chronic Conditions

- Pharmacotherapy Management of COPD Exacerbation (HEDIS PCE; measure steward HEDIS): percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or ED visit and who were dispensed appropriate medications.
- Medication Management for People with Asthma (HEDIS MMA; measure steward HEDIS): percentage of members identified as having persistent asthma who were dispensed appropriate medications that they remained on during the treatment period.
- Statin Therapy for Patients with Cardiovascular Disease (HEDIS SPC; measure steward HEDIS): percentage of members who were identified as having clinical atherosclerotic cardiovascular disease and who (a) were dispensed at least one high- or moderate-intensity statin medication and (b) remained on a statin medication for at least 80% of the treatment period.
- Statin Therapy for Patients with Diabetes (HEDIS SPD; measure steward HEDIS): percentage of members with diabetes who do not have clinical atherosclerotic cardiovascular disease who (a) were dispensed at least one high- or moderate-intensity statin medication and (b) remained on a statin medication for at least 80% of the treatment period.
- Follow-Up After Emergency Department Visit for People with Multiple High-Risk Chronic Conditions (HEDIS FMC; measure steward HEDIS): percentage of ED visits for members who have multiple high-risk chronic conditions that had a follow-up service within 7 days of the ED visit.
- Diabetes, Short-term Complications Admission Rate (NQF 0272; measure steward AHRQ): number of discharges for diabetes short-term complications per 100,000 beneficiaries.
- Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate (NQF 0275; measure steward AHRQ): number of discharges for COPD or asthma per 100,000 beneficiaries.
- Heart Failure Admission Rate (NQF 0277; measure steward AHRQ): number of discharges for CHF per 100,000 beneficiaries.

Analytic approach

For hypotheses based on utilization of health services and completion of HRAs, we first will identify the populations of interest based on the relevant evaluation timeframe (e.g., pre vs. post-implementation of the 5% premium), and beneficiary enrollment duration (e.g., cumulative enrollment of ≥48 months). We will also identify each beneficiary's enrollment dates in 12-month increments from initial enrollment, to facilitate longitudinal measures. We will apply measure specifications regarding age, diagnostic and utilization-based inclusion and exclusion criteria.

We will use paired t-tests to compare outcome measures across subgroups. We will employ multivariate negative binomial regression models controlling for demographic characteristics to

generate stratified results (e.g., beneficiaries with and without chronic conditions, those who did vs. did not complete an HRA). For beneficiaries with extended HMP enrollment, we will examine utilization over time (e.g., primary care continuity) and identify characteristics associated with suboptimal patterns (e.g., multiyear pattern of high-frequency ED use).

We will conduct three sets of sensitivity analyses: (1) examining the impact of enrollment disruptions by generating parallel measure results that maintain vs. relax HEDIS/NQA enrollment requirements; (2) examining the impact of managed care plan performance by generating parallel measure results for beneficiaries who do vs. do not remain in the same Medicaid Health Plan throughout their enrollment; and (3) examining the impact of data incompleteness by generating parallel measure results for beneficiaries who have evidence of other insurance in the Third-Party Liability fields.

For hypotheses related to compliance with cost-sharing obligations, we will use logistic regressions (any payment vs. no payment, full payment vs. partial payment) and ordered logistic regression (no payment, partial payment, full payment) analyses to examine differences in payment behavior for beneficiaries subject to fees vs. co-pays only. Analyses will adjust for age, gender, health conditions, race/ethnicity, urban/rural, income, length of HMP enrollment, and total cost-share liability.

Across all areas, we will conduct supplemental analyses, appropriate to each hypothesis, that address the impact of the COVID-19 public health emergency. For example, for measures that reflect a specific timeframe in the beneficiary's enrollment history, we will compare results for those whose measurement period occurred before, during or after the public health emergency. In addition, we will consider the impact of the public health emergency in the interpretation of results; for example, for measures tracking utilization rates over time, we will expect a larger decrease for services that require in-person care (e.g., flu vaccine, cancer screening) compared to services that can be delivered via telehealth (e.g., primary care visit, medication management) during the public health emergency.

The results of these analyses will be included in the interim report, with updated analyses included in the summative report.

Analyses related to the 48-month policy will incorporate three key characteristics: HRA/healthy behavior completion, payment compliance and maintenance of enrollment. Because the 48-month policy includes disenrollment for beneficiaries who do not meet the requirements, we expect that compliance will be higher among those who are subject to the requirements than it was for this group before the 48-month policy took effect. We will test these hypotheses and identify other factors associated with compliance, by estimating bivariate logistic regression models predicting HRA/healthy behavior completion, payment compliance and maintenance of enrollment as a function of beneficiary characteristics, income (above or below 100% FPL), and enrollment period (≥48 vs. <48 months of cumulative HMP enrollment). We will conduct stratified analyses to compare beneficiaries with higher vs. lower utilization in the 24 months prior to implementation of the new requirements, including number of primary care visits, dental visits, ED visits, inpatient stays, and medication fills.

The results of analyses focused on the 48-month policy will be included in the summative report if this policy takes effect by January 2023. If the 48-month policy is implemented between January 2023 and June 2023, descriptive trend analyses of these administrative data will be conducted, when feasible.

C.4.2. Beneficiary survey

Data source

The Healthy Michigan Voices (HMV) beneficiary survey will be conducted from July 2021 to April 2022 to understand the experience and impact of HMP structures and policies. *HMV surveys focused on the 48-month policy will be conducted 6-12 months after implementation of that policy.* Surveys supplement administrative data by documenting beneficiary knowledge of key policies such as of the Healthy Behaviors Incentives program and cost-sharing obligations; eliciting barriers that impede beneficiaries from responsible use of health services; describing lifestyle behaviors that impact health status; and understanding the extended impact of HMP on beneficiary financial well-being.

The HMV target population will be beneficiaries with at least 12 months of enrollment in HMP's managed care benefit, through which key HMP features are administered including the primary care provider assignment, HRA, healthy behavior incentives, and cost-sharing.

The beneficiary survey will include two groups: beneficiaries who participated in prior HMV surveys (Longitudinal Cohort), and a refresher sample of more recently enrolled HMP beneficiaries (New Cohort). Recontacting existing cohorts allows for a more thorough understanding of the experiences of beneficiaries over time, while adding new respondents allows for broader representation of the HMP population and understanding the experiences and impact of the program for those who enrolled more recently.

This data source will be used to examine evaluation questions 1.2, 1.3, 2.1, 3.1, 5.1, 5.2, and 6.1.

Survey cohorts & sample size

The Longitudinal Cohort will be drawn from two prior HMV target populations:

- Cohort I included beneficiaries with initial HMP enrollment between April 2014 and October 2015. Cohort I completed their initial HMV surveys in 2016 (N=4,106), when beneficiaries had cumulative HMP enrollment of 13-28 months. Follow-up surveys were done in 2017 (N=3,104) and 2018 (N=2,608).
- Cohort II included beneficiaries with initial HMP enrollment between January 2016 and December 2017. Cohort II completed HMV surveys in 2018 (N=2,602) when beneficiaries had cumulative HMP enrollment of 13-24 months.

Inclusion criteria for initial selection into Cohorts I and II were enrollment in HMP-Managed Care in the month selected and at least 9 of the prior 12 months in managed care; preferred language of English, Arabic or Spanish; and having complete contact information (phone, address) in the MDHHS Data Warehouse. To ensure broad representation across income levels and geographic regions, stratified sample selection was done according to the following proportions:

Federal Poverty Level	Prosperity Region				
	UP/NW/NE	W/EC/E	SC/SW/SE	DET	Total
0-35%	7.0%	12.0%	8.0%	12.8%	39.9%
36-99%	6.0%	10.5%	7.0%	11.2%	34.8%
≥100%	4.9%	7.5%	5.0%	8.0%	25.5%
Total	17.9%	30.0%	20.0%	32.0%	100.0%

Eligibility for the Longitudinal Cohort will be based on enrollment in HMP-Managed Care in the month selected, regardless of any gaps in HMP coverage; and agreement to recontact on the prior HMV survey. As of October 2020, roughly 2,800 beneficiaries from HMV Cohorts I and II meet these criteria. We will target 2,000 completed surveys with the Longitudinal Cohort.

The New Cohort will be newly drawn from beneficiaries with initial HMP enrollment between August 2019 and December 2020; with the expected timing for data collection, beneficiaries will have cumulative HMP enrollment of 13-24 months. The New Cohort will be drawn using parallel inclusion criteria: enrollment in HMP-Managed Care in the month selected and at least 9 of the prior 12 months in managed care; preferred language of English, Arabic or Spanish; and having complete contact information (phone, address) in the MDHHS Data Warehouse. Stratified sample selection of the New Cohort will be done by income level and region using the same proportions as shown above. We will target 2,000 completed surveys with the New Cohort.

For two-tailed hypothesis testing with Type I error of 5% ($p<0.05$), this sample size is designed to provide 80% statistical power to detect a 5 percentage-point difference (i.e. 50% vs. 55% or 45%) between those with excellent/very good/good vs. fair/poor health. This sample size also allows for reliable outcome estimates by FPL, region, length of enrollment, and gender.

Sampling for evaluation of the 48-month policy: We anticipate that the Longitudinal Cohort will yield about 400 beneficiaries who would be subject to the 5% premium and HRA/healthy behavior requirements, as verified by information from the state Data. If the Longitudinal Cohort yields fewer than 400, we will sample additional beneficiaries who have not participated in prior HMV surveys, in order to achieve a target number of at least 400 surveys with beneficiaries subject to the 48-month policy.

Measures

Key outcome measures will be based on validated items and scales used in prior HMV surveys. Health-related items will be drawn from national surveys, including the National Health and Nutrition Exam Survey (NHANES),[5] Health Tracking Household Survey (HTHS),[6] National Health Interview Survey (NHIS),[7] Behavioral Risk Factor Surveillance System (BRFSS[8] and

[5] NHANES (National Health and Nutrition Exam Survey, CDC)
[6] HTHS (Health Tracking Household Survey)
[7] NHIS (National Health Interview Survey, CDC)
[8] BRFSS (Behavioral Risk Factor Surveillance System, CDC)

MiBRFSS[9]), Short Form Health Survey (SF-12),[10] Food Attitudes and Behaviors Survey,[11] Consumer Assessment of Healthcare Providers and Systems (CAHPS),[12] Employee Benefit Research Institute Consumer Engagement in Healthcare Survey (CEHCS),[13] Commonwealth Fund Health Care Quality Survey,[14] and Patient Activation Measure.[15]

Specific health-related outcome measures to be used in the analysis include:

- Physical, mental, oral health status (Excellent, Very good, Good, Fair, Poor)
- Number of days in past 30 days with poor physical health; with poor mental health; where poor physical or mental health kept you from usual activities
- Engagement in healthy lifestyle behaviors (physical activity/exercise, fruit/vegetable consumption, other attempts at healthy eating)
- Engagement in unhealthy lifestyle behaviors (smoking, binge drinking, substance use)
- Engagement in efforts to address unhealthy behaviors (smoking cessation, substance use treatment, diet change)
- Participation in health-supporting programs (peer support, wellness or disease management programs)
- Usual source of primary care
- Availability of primary care advice after hours
- Barriers to accessing primary care, other services
- Patient activation (confidence in ability to take action to maintain or improve health)
- Reason for ED visit in past 12 months
- Attempted contact with primary care provider prior to ED visit

Survey items that address specific HMP features will draw on questions that were developed and used for prior HMV surveys by the evaluation team.[16,17,18,19,20] If new policies are implemented or modified, items exploring those features (e.g., understanding of new requirements) will undergo pre-testing to assess clarity of wording and appropriateness of response choices. Additional items may be drawn from emerging topics identified during qualitative interviews with beneficiaries. Specific measures based on HMP policies will include:

- Knowledge of HRA/healthy behaviors and cost-share reduction incentive
- Completion of an HRA, engagement with primary care provider around HRA
- Knowledge of cost-sharing obligations and link between service utilization and amount owed
- Recall of MI Health Account statement

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[9] MiBRFSS (Michigan Behavioral Risk Factor Surveillance System, MDHHS)
[10] SF-12 (Short Form Health Survey, RAND)
[11] FAB (Food Attitudes and Behaviors Survey, NCI)
[12] CAHPS (Consumer Assessment of Healthcare Providers and Systems)
[13] Consumer Engagement in Health Care Survey (EBRI: CEHCS)
[14] Commonwealth Fund Health Care Quality Survey
[15] PAM (Patient Activation Measure)
[16] Goold, S. D., & Kullgren, J. (2018). Report on the 2016 Healthy Michigan Voices Enrollee Survey.
[17] Goold, S. D., & Kullgren, J. (2018). Report on the 2016 Healthy Michigan Voices Enrollee Survey: Supplemental Analyses.
[18] Clark, S. J. & Goold, S. D. (2018). Report on the Healthy Michigan Voices 2016-17 Survey of Individuals No Longer Enrolled in the Healthy Michigan Plan.
[19] Goold, S. D., Kullgren, J., Beathard, E., Kirch, M., & Bryant, C. (2018). 2017 Healthy Michigan Voices New Enrollee Survey Report.
[20] Goold, S. D., Kullgren, J., Beathard, E., Kirch, M., Bryant, C., Tipirneni, R., Ayanian, J. Z. (2018). 2017 Healthy Michigan Voices Follow-Up Survey Report.

- *Knowledge of new 48-month requirements and consequences for noncompliance*

Measures of employment and social determinants of health, used in previous HMV surveys, will be largely drawn from national surveys, such as the American Community Survey (ACS),[21] the Current Population Survey (CPS),[22] and the Health Reform Monitoring Survey (HRMS).[23] Items addressing the impact of the pandemic on employment and social determinants of health will be drawn from the NIH PhenX toolkit.[24] Specific measures related to employment and social determinants of health to assess the goals of the overall demonstration will include:

- Employment status (full/part time, number of hours worked)
- Health-related barriers to employment
- Other barriers to employment (inconsistent work hours, transportation, caregiving responsibilities, discrimination, homelessness in past 12 months)

Survey administration

HMV survey administration will build on strategies used successfully in previous HMV surveys. The evaluation team will utilize a Computer-Assisted Telephone Interviewing (CATI) system to administer surveys. Survey questions will be programmed into the CATI system, allowing for branching of survey items based on characteristics known prior to the survey and responses given during the survey. The CATI system will integrate individual characteristics (e.g. gender, name of Medicaid Health Plan) to allow for tailored question wording, as well as tailored branching based on identified characteristics (e.g., subject to 48-month policy). Interviewers will be trained on the survey instrument, including prompts and definitions, pronunciation of terms, and appropriate response to questions about coverage or services. Interviewers will engage in practice interviews and supervisor review of initial interviews until their proficiency is confirmed. Supervisors will conduct ongoing quality assessment checks to ensure fidelity to the interview protocol.

Sampled individuals will be mailed an introductory packet containing a letter explaining the project and a simple-language brochure with key information. The letter and brochure will provide phone, text and email options for individuals to indicate a preferred time/day for the interview or refusal to participate.

For sampled individuals who do not refuse to participate, interviewers will place phone calls between the hours of 9:00 AM and 8:30 PM. Non-respondents will receive two additional mailings with a brief letter and brochure encouraging participation. At the outset of the survey, interviewers will explain the purpose of the project, emphasize the confidentiality of responses, and obtain agreement to participate. Interviewers will note that completion of the survey is voluntary that questions can be skipped for any reason. Interviewers will also note that only aggregate data will be reported. Interviewers will ask if the interview can be recorded; in the prior HMP evaluation, over 95% of respondents agreed to be recorded. At the end of the survey, interviewers will ask if the respondent agrees to be re-contacted for future surveys and interviews and, if yes, the preferred phone, email, and text information to use. Individuals who complete the

[21] ACS (American Community Survey)
[22] CPS (Current Population Survey)
[23] HRMS (Health Reform Monitoring Survey)
[24] NIH PhenX Toolkit

survey will be mailed a gift card in an amount commensurate with the expected time for participation (e.g., $25 for an interview of 20-30 minutes); incentives will be administered through the University of Michigan research incentive system, to allow for tracking and replacement of lost cards.

Initial data files will be generated from the CATI system. Trained research assistants will review recordings to verify the accuracy of coding and to categorize responses to open-ended questions. Variables describing respondents' demographic and health services utilization characteristics will be generated from Medicaid administrative data for use in analysis of survey data.

Analytic approach

Survey weights

Sample design and survey nonresponse will be handled through weights as well as adjustments to the weights. From the sample design, we will have base weights that account for over- or under-sampling based on the income and region stratification. Because the New Cohort will be drawn from the HMP enrollee list ("frame"), we will use a wide range of characteristics available in the frame to examine nonresponse patterns. A response propensity score model will be developed with multiple predictors. Using the estimated response propensity scores, we will develop weighting classes that include both respondents and nonrespondents and compensate for the potential nonresponse bias by adjusting the base weights of respondents. A similar procedure will be used for the Longitudinal Cohort sample with a wider range of characteristics available from the survey data. Once nonresponse adjustment is completed, we will combine the two samples and post-stratify to the known current beneficiary characteristics ascertained from the Data Warehouse (e.g., the population count of minority beneficiaries).

Note that weight adjustment addresses potential biases using the observed data from both the frame and the survey.

Overall analysis

The design of the survey cohorts allows for three types of analyses.

Cross-sectional analyses of data collected in this evaluation period will include descriptive analysis with subgroup analyses by key beneficiary characteristics (age, gender, race/ethnicity, urban/rural, income, chronic condition, and cumulative HMP enrollment). As appropriate to the hypothesis, cross-sectional analyses may include bivariate comparisons based on survey response patterns (e.g., comparing beneficiaries who do vs. do not report HRA completion).

Comparison of an individual beneficiary's responses over time will be done only for the Longitudinal Cohort. For many items, respondents from Cohort I will have a total of four data points while respondents from Cohort II will have two data points. Comparisons over time will use mixed effects logistic regression models, adjusting for age, gender, race/ethnicity, region, income level, and chronic disease status.

Comparison of aggregate responses for cohorts at a similar point in their HMP enrollment (13-24 months of cumulative enrollment) will be operationalized by comparing responses from the initial HMV Cohort I survey vs. the initial HMV Cohort II survey (both included in the

Longitudinal Cohort) vs. the New Cohort. We will use independent sample t-tests and multivariate regression models adjusting for age, gender, race/ethnicity, income, and chronic disease status within each cohort.

High-level findings from these analyses will be included in the interim report and findings from more detailed analyses (e.g. multivariate, longitudinal) will be included in the summative report.

Analyses related to the 48-month policy will include descriptive analysis with subgroup analyses by key beneficiary characteristics (age, gender, race/ethnicity, urban/rural, income).

The results of analyses focused on the 48-month policy will be included in the summative report if this policy takes effect by January 2023, which would allow a sufficient period for survey data collection from enrollees affected by this policy through the end of the current waiver period in December 2023 and for data analysis between January and April 2024 to be included in the final summative report that will be finalized in May and June and submitted to MDHHS in July 2024.

C.4.3. Interviews with beneficiaries

Data source
Interviews with beneficiaries will be used to gain a richer understanding of the multifaceted ways that beneficiaries interact with and benefit from HMP coverage. We will conduct in-depth longitudinal qualitative interviews by telephone, with a purposive sample of approximately 30 beneficiaries who have completed a prior HMV survey and agreed to be recontacted. Sampling will reflect diversity of geographic region, income, age, gender, race/ethnicity, length of HMP enrollment, and health conditions. This design will allow us to conduct both cross-sectional and longitudinal mixed-methods analyses, using qualitative and survey data. The first round of interviews will be conducted from June to September 2021 and the second round of interviews will be conducted from November 2022 to March 2023.

We will send participants a $25 gift card in recognition of their time (approximately 30-45 minutes per interview). We will request permission to record the interview and will generate verbatim transcriptions of those recordings.

This data source will be used to examine evaluation questions 1.5, 2.3, 2.4, 5.5, and 6.3.

Measures
We will develop a structured interview guide to explore:

- How HMP has affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health
- Beneficiaries' understanding and perceptions of the MIHA statement, including terminology, layout, and description of payment options
- Barriers and facilitators to making payments
- How HMP has impacted beneficiaries' physical, mental, and oral health over time and their use of health care services
- How HMP has affected beneficiaries' financial and material well-being, including out-of-pocket costs for medical care and ability to work

Analytic approach
We will use an inductive approach to analysis, coding iteratively using standard qualitative analysis techniques and Dedoose software (https://www.dedoose.com). For the first stage of the process, immediately post-interview interviewers will complete a summary of major themes that arose during the interview that are relevant to the project aims. These summaries will be used to develop an initial codebook while data collection is still in progress. We will modify or add new codes to capture emerging themes. Then two team members will independently code the interviews, with differences in coding resolved by consensus in team meetings.

A cross-sectional analysis of initial interview data will be conducted for the whole group of beneficiaries, and in subgroups with shared experiences, e.g., those with cost-sharing obligations; those with chronic conditions. Case profiles will allow us to capture individual narratives in a reduced form that allows both within interviewee and between interviewee comparisons at the group level. Change over time at the individual level will be explored for specific research questions by analyzing responses to questions that remind interviewees of earlier responses and ask them to describe changes during the interval between interviews. Change over time at the group level will be assessed by comparing the overall key themes that emerged during the initial interviews to those that emerge from the follow-up interviews.

High level results from the initial interview data will be included in the interim report. This results of the longitudinal analysis of interview data will be included in the summative report.

C.4.4. Interviews with providers

Data source
Interviews with providers will offer a complementary perspective on how HMP, particularly the HRA process, facilitates beneficiary engagement with healthy behaviors. We will conduct 20-25 in-depth qualitative telephone interviews with a purposive sample of primary care providers from September-November 2021 who are the PCP of record for at least 5 HMP beneficiaries, based on information in the Data Warehouse from January to June 2021. The selected sample will reflect diversity of geographic region, setting (private practice, FQHC, health system-affiliated), and assigned number of HMP beneficiaries.

We will recruit providers via mailed invitation, with telephone and email follow-up. We will conduct 30-minute individual interviews via phone or Zoom, scheduled at the provider's convenience. We will offer a $50 reimbursement for participation, an amount shown in prior projects to be sufficient to achieve recruitment goals. We will request permission to record the interview and will generate transcriptions of those recordings.

This data source will be used to examine evaluation question 1.6.

Measures
We will develop a structured interview guide to explore providers' knowledge of HRA processes, including variation between health plans; perceptions of HMP beneficiaries' awareness of HRA processes and incentives; use of HRAs to facilitate conversations about

health risks and healthy behaviors; and knowledge of and referral to support services (e.g., peer support groups, gym memberships, online tools).

Analytic approach
We will conduct a thematic analysis of the provider interviews. We will review transcriptions to identify key themes and illustrative quotations.

High-level findings from this analysis will be included in the interim report and findings from more detailed analyses will be included in the summative report.

C.4.5. Interviews with key informants

Data source
Interviews with key informants will provide insight and information about how Medicaid officials calculate and monitor the state cost impacts of HMP. These interviews will explore the costs of implementation and ongoing operations for specific demonstration policies, with a particular focus on components related to HRA/healthy behavior incentives and cost-sharing/premiums. This will include the costs of contracts to implement, monitor and evaluate demonstration policies, as well as and staff time estimates to implement, administer, and communicate with beneficiaries. These interviews will also explore the short- and long-term effects of eligibility and coverage policies on Medicaid health service expenditures.

Interviews with key informants will also allow us to gain a broader understanding of how HMP has contributed to the development, facilitation, and maintenance of innovative approaches to system development and service delivery, including efforts to address social determinants of health. These innovations targeted to HMP and other Medicaid beneficiaries, and to the systems that serve them, are aimed at reducing barriers to care and improving connection, continuity, and coordination of care for beneficiaries. An example is the partnership between MDHHS and the Michigan Department of Corrections to initiate application for HMP prior to release of returning citizens from prison, facilitating transition to covered status upon release, and connection to primary care and behavioral health services. Other examples include the Michigan Opioids Task Force; Michigan's State Innovation Model and Health Homes initiatives; and use of community health workers by Medicaid health plans to facilitate outreach to beneficiaries, and coordination and connections to resources to address the social determinants of health. We expect to identify additional innovations during the interviews.

From December 2021 to March 2022, we will conduct 20-25 key informant interviews with two groups. The first group will focus on individuals familiar with Medicaid program administration, rate setting, budgeting, and operations, including the directors and/or key staff of Medicaid Policy, Operations and Actuarial Services, Managed Care Plan Division, and Customer Service Division. The second group will focus on administrators and service providers involved in developing and/or implementing state and local initiatives and services for HMP beneficiaries and HMP-eligible individuals, such as representatives from Medicaid health plans, Behavioral Health, and Public Health Administration; officials from other state departments, such as Michigan Department of Corrections; officials from provider organizations, such as the Michigan Primary Care Association (representing federally qualified health centers), the

Michigan Opioid Task Force and the Michigan State Medical Society; and representatives from relevant advocacy groups, such as the Michigan League for Public Policy.

Key informant interviews will be conducted, by telephone and are expected to take approximately 30-45 minutes. Interviews will be digitally recorded and transcribed.

This data source will be used to examine evaluation questions 7.1 and 7.4.

Measures
We will develop structured interview guides for each research question. For key informants who are familiar with Medicaid program administration, staffing and budgeting, we will discuss the state's calculation of the incremental costs associated with administering the distinctive policies of the Section 1115 waiver, including the Healthy Behaviors Incentives program, 5% premium cost-sharing requirement and HRA/healthy behavior requirement, and other cost-sharing provisions. For key informants involved in innovative approaches to system development and service delivery, including efforts to address social determinants of health, we will explore whether and how HMP facilitated or supported new or expanded initiatives, including; identifying eligible participants, how the initiatives facilitated connection, continuity and quality of care and addressing social determinants of health; barriers and facilitators to initiation, implementation over time focusing on the linkage to HMP; financing; and developing a model for sustainability for these initiatives.

Analytic approach
For key informant interviews pertaining to administrative costs, we will identify major themes related to monitoring and controlling costs. We will review documents shared by interview participants to identify changes in HMP costs over the period of HMP (2014-2023).

For key informant interviews related to programs to address social determinants of health, we will conduct a thematic analysis of the key informant interviews. Immediately following the interview, interviewers will complete a summary of major themes that arose. Subsequently, the interviewer will review the recording to confirm themes and identify illustrative quotations. These summaries will be used by evaluation team members to identify themes that emerged between interviews and quotes that exemplify these themes. This approach is designed to provide rapid but rigorous information to foster understanding of the contributions of HMP policy to systems and service system changes.

An overview of findings from this analysis will be included in the interim report and findings from more detailed analyses will be included in the summative report.

C.4.6. Credit data

Data source
Analysis of linked credit report data from commercial credit agencies presents a unique opportunity to examine the impact of several different aspects of the HMP program on financial outcomes for beneficiaries.

To estimate the effect of HMP on household financial outcomes, we will link HMP administrative data to data on consumer credit histories provided by a credit reporting agency (TransUnion, Experian, or Equifax). Our data linkage procedure will closely follow that used in a previous study led by a U-M faculty member in IHPI that examined financial outcomes for HMP beneficiaries.[25] Data from the credit reporting agency will be matched with the HMP administrative data using name, address, and Social Security number. To preserve the confidentiality of HMP beneficiaries' identities, the matching process will utilize a double-blind procedure. Evaluation team members at U-M will extract the identifying information on HMP beneficiaries and append to this dataset a randomly selected sample of approximately one million Michigan residents drawn from an unrelated state health database. These additional observations will serve as "masking" observations. A file consisting of personal information for both HMP beneficiaries and the masking observations will then be provided to the credit reporting agency, which will perform the final step of the data linkage, and then deliver the data to our team with all identifying information removed. Because of the masking procedure, the credit reporting agency will be unable to distinguish which observations are associated with HMP beneficiaries. In the prior study, approximately 98% of HMP beneficiaries were successfully matched to the credit reporting data. We will obtain semi-annual snapshots of credit report data for HMP beneficiaries and comparison groups in low-income zip codes of states that have not expanded Medicaid, beginning in 2013 through 2022 (the most recent data we anticipate being available for analysis).

This data source will be used to examine evaluation question 6.2.

Measures

The credit reporting agency data include several measures that have been used in previous studies of financial distress. Our analysis will be informed by this previous research. One measure is the total amount of debt that has been sent by an original creditor to a third-party collection agency. This debt could represent unpaid bills or severely derogatory credit accounts, such as a credit card bill that is over 180 days late. The credit reporting agency data provide details on the type of third-party collections. Medical bills are reported separately from other sources of debt and are of particular interest. Another indicator of financial distress is credit accounts that are 30 days or more past due but not yet sent to a collection agency. The amount of credit that is in collections and the amount past due but not yet in collections can be summed to form the total amount of debt on which a consumer is delinquent. Another marker of financial difficulties that we will examine is the number of months a consumer is overdrawn on his or her credit card out of the last 12 months. While being overdrawn is not a measure of delinquency *per se*, it is a sign that the consumer is having difficulty spending less than their card limit. This may be a precursor to delinquent debt. We will also analyze financial judgments from court proceedings, including evictions from housing and personal bankruptcies, as measures of severe financial distress.

Finally, we will examine credit score or similar summary of creditworthiness. Lenders use this measure when evaluating whether to extend credit and at what price. As such, it is a concise summary of an individual's access to credit markets. We will analyze the credit score as a

[25] Miller, S., Hu, L., Kaestner, R., Mazumder, B., & Wong, A. (2018). The ACA Medicaid Expansion in Michigan and Financial Health. NBER Working Paper No. 25053.

continuous variable. We will also examine the probability that an individual has a credit score in the "subprime" (≤600) range, as well as in the "deep subprime" (<500) range.

Analytic approach
We will construct several different cohorts of HMP beneficiaries with an appropriate comparison group for each cohort and examine credit report outcomes for all cohorts.

Early beneficiary cohort: Individuals who enrolled in HMP in 2014-2015 and have at least one year of total enrollment in HMP. *Comparison group:* Randomly selected individuals from low-income zip codes in states that have not expanded Medicaid.

Later beneficiary cohort: Individuals who enrolled in HMP in 2018-2019 and have at least one year of total enrollment in HMP. *Comparison groups:* (a) Randomly selected individuals from low-income zip codes in states that have not expanded Medicaid; (b) early beneficiary cohort.

2020 beneficiary cohort: Individuals who enrolled in HMP between March 2020 and March 2021 and have at least one year of total enrollment in HMP. *Comparison groups:* Randomly selected individuals from low-income zip codes in states that have not expanded Medicaid.

Disenrollment cohort: Individuals who disenrolled from HMP after at least one year of enrollment. *Comparison group:* Individuals matched on age, zip code, and initial enrollment period who remain enrolled in HMP.

For all analyses, we will use an event study framework to test for a break in trend from 2013 through 2022 within the cohort. We will also use standard difference-in-differences techniques using the comparison groups specified above, including using an evaluation of pre-trends in each cohort and its comparison group(s). If there is not good matching of the pre-trends between treatment and comparison groups, we will consider propensity score weighting or synthetic control methods combined with difference-in-differences analysis.

The results of the early beneficiary cohort and later beneficiary cohort analyses will be included in the interim report. The results of the 2020 beneficiary cohort and the disenrollment cohort will be included in the summative report.

C.4.7. Behavioral Risk Factor Surveillance System (BRFSS)

Data source
We will use national survey data from the Behavioral Risk Factor Surveillance System (BRFSS)[26] to estimate changes in health behaviors and health status at the population level. The BRFSS is a nationally representative telephone survey of U.S. adults conducted at the state level and overseen by the Centers for Disease Control & Prevention. Its state-based sampling will allow us to compare changes in health behaviors and health status among low-income Michigan residents to low-income residents in Medicaid expansion states without a healthy behavior incentive or requirement, and to low-income residents in states that did not expand Medicaid.

[26] BRFSS (Behavior Risk Factor Surveillance System, CDC)

Household income as a proportion of FPL for each respondent will be estimated from income and household variables available in the BRFSS.

This data source will be used to examine evaluation question 1.1.

Measures

Health outcome variables to be used in the analysis include [variable names]:

- General health status (Excellent, Very good, Good, Fair, Poor) [GENHLTH]
- Poor physical health days per month [PHYSHLTH]
- Poor mental health days per month [MENTHLTH]
- Poor physical or mental health keeping from doing usual activities [POORHLTH]

Health behavior variables to be used in the analysis [variable names] can be grouped into three categories:

Unhealthy lifestyle behaviors

- Smoking status, frequency, and cessation attempts [SMOKE100, SMOKDAY2, STOPSMK2]
- Alcohol use (unhealthy alcohol levels, binge drinking) [ALCDAY5, AVEDRNK3, DRNK3GE5, MAXDRNKS]

Healthy lifestyle behaviors

- Physical activity/exercise [EXERANY2, EXEROFT1, EXERHMM1]
- Fruit and vegetable consumption [FRUIT2, FVGREEN1, VEGETAB2]

Preventive health services

- Cholesterol screening [CHOLCH2]
- HIV screening [HIVTST7]
- Cancer screening: (e.g., colonoscopy, mammogram, Pap smear) [HADSIGM3, HADSGCO1, LASTSIG3, BLDSTOO, LSTBLDS3, HADMAM, HOWLONG, HADPAP2, LASTPAP2]
- Immunizations: Flu vaccine [FLUSHOT7]

Analytic approach

To focus on individuals who are likely to be eligible for HMP, the target group will include low-income Michigan adults between the ages of 19 and 64 with incomes less than or equal to 138 percent of the FPL. Similar to our prior work,[27] we will assess this group against two comparison groups: 1) low-income adults between the ages of 19 and 64 with incomes less than or equal to 138 percent of the FPL who reside in demographically or geographically similar states that expanded Medicaid as of the penultimate year of analysis (2019 for the interim report, 2021 for the summative report) but did not include a provision for a healthy behavior incentive or requirement; 2) low-income adults between the ages of 19 and 64 with incomes less than or equal to 138 percent of the FPL who reside in demographically or geographically similar states that did not expand Medicaid as of the penultimate year of analysis. Thus, states other than Michigan that expanded Medicaid with a healthy behavior provision (e.g., Indiana, Iowa) will be excluded from analysis.

[27] Nelson, D.B., Sommers, B.D., Singer, P.M., Arntson, E.K., & Tipirneni, R. (2020). Changes in Coverage, Access, and Health Following Implementation of Healthy Behavior Incentive Medicaid Expansions vs. Traditional Medicaid Expansions. *J Gen Intern Med, 35*, 2521–2528.

We will use a difference-in-differences analytic approach, comparing trends in health and health behavior outcomes in Michigan to trends in expansion states without a similar waiver and to non-expansion states. The pre-period will include the years 2011-2014 (prior to implementation of the first HMP waiver in 2014), and the post-period will include the years 2015-2022. The regression model will include fixed effects for state and quarter and also control for covariates, such as age, gender, race/ethnicity, marital status, education, income, employment status, and whether the respondent was part of the BRFSS cell phone sample. We will apply the BRFSS survey weights to all analyses. To meet the assumptions of the difference-in-differences analytic approach, we will assess for parallel trends between target and comparison groups among all outcomes in the pre-period. If the parallel trends assumption is not met for any outcome, we will minimize confounding by using propensity score matching based on inverse probability of treatment weights. These weights will be formed by estimating a logistic model of Medicaid enrollment for a sample of Michigan residents in the years before the implementation of the HMP healthy behavior program features and then applying the estimated parameter models to observations from Michigan and the comparison states.

A confounder of secular trends in Michigan and comparison states will be the coronavirus disease 2019 (COVID-19) pandemic experienced by all states in 2020 and 2021. The inclusion of time fixed effects in our models may partially but not completely mitigate this potential bias. Given higher enrollment during the economic downturn in 2020, sample selection may also be changed before and after the pandemic, despite using the same sample inclusion criteria. We will assess this by examining target and comparison group characteristics before and after 2020. We will also conduct sensitivity analyses assessing trends in health and health behaviors before and after 2020 to ensure the parallel trends assumption of difference-in-differences analysis is met, incorporating quarters in calendar years 2020 and 2021 as a confounding covariate in analyses, and consider dropping calendar year 2020 and some or all of 2021 from analyses.

The results of this analysis using BRFSS data from 2015 to 2020 will be included in the interim report and the results of this analysis using BRFSS data from 2015 to 2022 will be included in the summative report.

C.4.8. American Community Survey (ACS)

Data source

The American Community Survey (ACS) is a nationally representative survey conducted annually by the Census Bureau. The sample size in the ACS public release is approximately 3 million individuals in each year. Our analysis will be limited to adults ages 19 through 64 since this is the group potentially eligible for HMP.

Focusing on observations for individuals from ages 19 to 64 yields approximately 1.8 million observations in each year. Of these individuals, approximately 58,000 in each year are in Michigan, while about 1.1 million observations are in other states that have expanded their Medicaid programs and about 690,000 are in states that have not expanded Medicaid. Based on

prior work with these data in the prior waiver evaluation,[28] we anticipate having to drop approximately 4 percent of all observations because they are missing data on family income.

This data source will be used to examine evaluation question 4.1.

Measures

Since 2008, the ACS has included a question about health insurance that asks respondents to indicate sources of current health insurance for every household member. Respondents may mark more than one option. We use these data (variable names HINS1 through HINS6) to create binary indicators of four different measures reflecting insurance outcomes: (1) Medicaid or related public coverage, (2) private non-group coverage, (3) employer-sponsored coverage (including TRICARE), and (4) uninsured. With the exception of uninsured, these outcomes are not mutually exclusive; someone might have, for example, both private non-group coverage and Medicaid; however, this is relatively unusual. Our primary outcomes of interest are Medicaid, private coverage, and uninsurance; trends in employer-sponsored coverage will also be reported. These data will be used to assess insurance coverage among non-elderly low-income adults ages 19 through 64 in Michigan relative to other states.[29]

Analytic approach

To evaluate the effect of HMP on insurance coverage we will use data from the ACS to compare trends in Michigan with trends in demographically or geographically similar non-expansion states and in demographically or geographically similar expansion states without a similar waiver. Comparing trends in Michigan with trends in non-expansion states extends the analysis we did in the original waiver evaluation. Comparing trends in Michigan with trends in other expansion states without similar waiver provisions will shed light on the impact of Michigan's waiver policies. Our analysis of insurance coverage will separately test for effects on the percentage of people with private health insurance, Medicaid, and uninsured.

We will apply standard difference-in-differences techniques. In the analysis of individual-level data from the ACS we will control for a standard set of individual demographic variables and variables that capture economic conditions measured at the state and sub-state level. These control variables include age, race/ethnicity (white non-Hispanic, black non-Hispanic, other non-Hispanic, Asian non-Hispanic, and Hispanic [any race]), education, gender, and marital status. To account for differences in labor market conditions, we will merge unemployment rate data from the Bureau of Labor Statistics to ACS observations at the state-year level.

We plan also to run analyses that minimize the influence of observed confounders on estimates of program effect by limiting the analysis sample to low-income adults with incomes less than or equal to 150% FPL.

The results of this analysis using ACS data from 2008 to 2020 will be included in the interim report and the results of this analysis using ACS data from 2008 to 2022 will be included in the summative report.

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[28] Levy, H. & Buchmueller, T. (2019). Report on Reduction in the Number of Uninsured.

[29] ACS data are released annually in late September for the previous year. So, for example, 2023 ACS microdata would not be released until September 2024.

C.4.9. HCUP Fast Stats inpatient discharge data

Data source
The Healthcare Cost & Utilization Project (HCUP) sponsored by the federal Agency for Healthcare Research and Quality (AHRQ) provides the Fast Stats database (https://www.hcup-us.ahrq.gov/faststats/landing.jsp) as a timely source of state-level inpatient discharge data. These data include demographic variables, diagnoses, and payer for patients discharged from non-federal acute-care hospitals.

This data source will be used to examine evaluation question 7.3.

Measures
Outcomes of interest in the HCUP data include the fraction of hospital discharges for adults ages 19 through 64 for whom the primary payer is Medicaid or uninsured/self-pay. Additional outcomes include the fraction with private coverage or Medicare as primary payer.

Analytic approach
To evaluate the effect of HMP on hospital payer mix for non-elderly adults, we will use data from the Medicare cost reports to compare trends in Michigan with trends in demographically or geographically similar non-expansion states and in demographically or geographically similar expansion states without a similar waiver. Comparing trends in Michigan with trends in non-expansion states extends the analysis we did in the original waiver evaluation. Comparing trends in Michigan with trends in other expansion states without similar waiver provisions will shed light on the impact of Michigan's waiver policies. Payer mix for inpatient hospital stays, which is an important determinant of hospital uncompensated care

The results of this analysis using HCUP data from 2010 to 2021 will be included in the interim report and the results of this analysis using HCUP data from 2010 to 2023 will be included in the summative report.

C.4.10. Medicare cost reports

Data source
We will compare trends in uncompensated care provided by acute care hospitals in Michigan to trends for hospitals in other states using data from the Medicare Hospital cost reports. These data are available for all Medicare-certified hospitals in the U.S. Hospitals report data on a fiscal year basis. Information on uncompensated care comes from Schedule S-10 of the cost reports. The analysis in the prior waiver evaluation used cost report data corresponding to fiscal years 2011 to 2015. For the new waiver evaluation, we will extend the analysis period through 2024.

This data source will be used to examine evaluation question 7.3.

Measures

As in the prior waiver evaluation and consistent with the research literature,[30] we will focus on uncompensated care, which equals the sum of charity care and bad debt. Both types of uncompensated care can arise from patients who are uninsured or from those who have private insurance but are unable to afford the cost-sharing required by their insurance plan. The amounts of charity care and bad debt that hospitals report to CMS represent the *charges* corresponding to the care provided. The *cost* of this care can be calculated by applying the hospital's cost-to-charge ratio, which is another measure that hospitals provide in their cost reports. We will analyze the cost of uncompensated care measured in dollars and as a percentage of total operating expenses.

Before analyzing these data, it will be necessary to complete several data cleaning steps. In some cases, hospitals submit multiple cost reports, often for periods that are shorter than 12 months. In these cases, we will combine multiple reports to create a single fiscal year observation for the hospital. We will also check the data for infeasible entries in key fields. Where such outliers are found, we will check for consistency within the set of submissions for a particular hospital. A hospital that consistently reports extremely high values in certain fields is less of a concern than a hospital that reports extreme values in one year, but not others.

Analytic approach

To evaluate the effect of HMP on uncompensated care, we will use data from the Medicare cost reports to compare trends in Michigan with trends in demographically or geographically similar non-expansion states and in demographically or geographically similar expansion states without a similar waiver. Comparing trends in Michigan with trends in non-expansion states extends the analysis we did in the original waiver evaluation. Comparing trends in Michigan with trends in other expansion states without similar waiver provisions will shed light on the impact of Michigan's waiver policies. In regression analyses, we will include hospital and area-level control variables obtained from other sources, including the American Hospital Association annual survey, the Health Resources and Service Administration, and the Bureau of Labor Statistics. These covariates will include hospital ownership status, teaching status, bed count, participation in the 340B prescription drug program, and the county unemployment rate where the hospital is located.

The results of this analysis using Medicare cost report data from 2010 to 2021 will be included in the interim report and the results of this analysis using Medicare cost report data from 2010 to 2023 will be included in the summative report.

D. Methodological Limitations

The statewide implementation of the HMP waiver precludes the conduct of a randomized controlled trial. Where possible, we will rely on quasi-experimental designs (e.g., comparing statewide HMP trends to trends from other states; analyzing trends over time) using difference-in-differences or other appropriate methods to conduct more rigorous analyses of the main outcomes of interest. However, we will not be able to draw definitive causal inferences about specific features of HMP.

[30] See, for example, Rhodes, J. H., Buchmueller, T. C., Levy, H. G., & Nikpay, S. S. (2019). Heterogeneous Effects of the ACA Medicaid Expansion on Hospital Financial Outcomes. *Contemporary Economic Policy*.

Several HMP features are complementary, notably the enrollment of beneficiaries into managed care with a specific primary care provider and the encouragement to complete an annual health risk assessment with the primary care provider. It may not be possible to separate the effects of these complementary features. However, state Medicaid officials have expressed interest in understanding the additive benefit of an HRA requirement; as such, the evaluation includes several analyses that attempt to understand the contribution of HRA completion in both changes in health status and engagement in healthy behaviors.

The COVID-19 pandemic has had profound effects the availability and delivery of health care services for Medicaid beneficiaries in Michigan and throughout the country. These effects will impact the evaluation by disrupting trends in patterns of enrollment, utilization of services, employment, and financial stability. We will incorporate sensitivity and supplemental analyses throughout the evaluation, based on the timing of the federal COVID-19 public health emergency, to interpret the impact on evaluation results.

During Michigan's COVID-19 public health emergency, HMP enrollment increased by 30% over a one-year period. It is difficult to estimate the proportion of the enrollment increase due to people becoming newly eligible vs. the proportion due to the lack of disenrollment related to the maintenance of effort provisions of Section 6008 of the FFCRA. This will affect the calculation of claims-based outcomes (e.g., HEDIS, NQF measures) that rely on the number of beneficiaries or member-months for a denominator. We will address this limitation by recalculating outcomes after maintenance of effort provisions expire and enrollment corrections are implemented.

Evaluation activities that utilize administrative data rely on complete and accurate information in the state Data Warehouse. For longitudinal measures, we anticipate some challenges due to modifications in the data structure, particularly for the cost-sharing and HRA tables. We will address these challenges by working with state partners to understand changes in definitions and data management procedures, and employing sensitivity analyses to assess how differential categorization may impact results.

Nonresponse bias can affect evaluation results based on beneficiary surveys. We will address this limitation by employing strategies used in the prior evaluation period, including colorful and engaging recruitment brochures, varying the timing of contact attempts, using email addresses of beneficiaries when listed in the Data Warehouse, and allowing unscheduled call-in surveys as well as scheduled appointments. In addition, we will incorporate nonresponse into our weighting of results. Beneficiary surveys include some measures of self-reported health care utilization (e.g., ED visits in prior year, completion of an HRA), which may suffer from recall bias. When possible, we will validate self-report with claims and encounter data from the Data Warehouse.

Finally, data sources that reflect multi-state or national datasets will use income variables to represent the HMP population. Invariably, this data will include some individuals who are eligible but not enrolled in HMP, which may dampen potential observable effects.

F. Attachments

Independent evaluator

The CMS approval of the Section 1115 waiver for the Healthy Michigan Plan requires that the evaluation be designed and conducted by researchers who will meet the scientific rigor and research standards of leading academic institutions and academic journal peer review. The University of Michigan Institute for Healthcare Policy and Innovation (IHPI is an interdisciplinary university-wide institute at a premier public research university. The mission of the Institute is to improve the quality, safety, equity, and affordability of health care. The Institute includes more than 650 health services researchers from 15 schools and colleges across the university. IHPI faculty members and staff are national leaders in health services research, health economics, and population health with substantial experience conducting rigorous evaluations of access to care, quality of care, costs of care, and health outcomes.

The Institute for Healthcare Policy and Innovation faculty members participating on the HMP evaluation team represent the University of Michigan Medical School, School of Public Health, Institute for Social Research, Ross School of Business, Ford School of Public Policy, and School of Social Work. They conducted the independent evaluation of the Healthy Michigan Plan during the first five years of the Section 1115 demonstration waiver that authorized this program from April 2014 through December 2018.

A summary of the HMP evaluation reports and articles published in peer-reviewed journals by the evaluation team is available on the Institute for Healthcare Policy and Innovation website.

Brief biographies of evaluation team

John Z. Ayanian, MD, MPP, is the Alice Hamilton Distinguished University Professor of Medicine and Healthcare Policy and Director of the Institute for Healthcare Policy and Innovation at the University of Michigan. He has led the team of faculty and staff conducting the CMS-authorized evaluation of the Healthy Michigan Plan in collaboration with MDHHS since 2014. He is a primary care physician and health services researcher whose research focuses on access to care, quality of care, and health care disparities, including the effects of insurance coverage on health services and outcomes. He is the lead author of three articles on the Healthy Michigan Plan published in the *New England Journal of Medicine*. Dr. Ayanian is an elected member of the National Academy of Medicine, a Master of the American College of Physicians, and the founding Editor of *JAMA Health Forum*.

Nora V. Becker, MD, PhD, is an Assistant Professor in the Department of Internal Medicine, Division of General Medicine, and at the Institute for Healthcare Policy and Innovation at the University of Michigan. Dr. Becker's research focuses on the impact of changes in health policy and health insurance coverage on health care utilization and health outcomes among women and economically disadvantaged populations. As a member of the HMP evaluation team, she brings expertise in health economics and working with insurance claims and financial data.

Thomas C. Buchmueller, PhD, is the Waldo O. Hildebrand Professor of Risk Management and Insurance at the University of Michigan's Stephen M. Ross School of Business. From 2012 to 2019 he served as the Chair of the School's Business Economics and Public Policy area. Buchmueller is an expert on the economics of health insurance and related public policies. His

areas of expertise on the HMP evaluation team include the impact of the expansion on health insurance coverage and on hospital uncompensated care. Other research on the Affordable Care Act includes studies on the law's effects on insurance coverage, hospital utilization and finances and labor market outcomes. In 2011-12 he served as Senior Health Economist to the President's Council of Economic Advisers.

Sarah J. Clark, MPH, is a Research Scientist in the Department of Pediatrics, based in the Susan B. Meister Child Health Evaluation and Research (CHEAR) Center at the University of Michigan. She also serves as Co-Director of the C.S. Mott Children's Hospital National Poll on Children's Health. Since joining the University of Michigan faculty in 1998, Ms. Clark has worked closely with Michigan Medicaid and other MDHHS units on projects evaluating programs and policies related to managed care, children with special health needs, substance use disorder, and provision of dental care, and others. She led the utilization analyses in the initial HMP evaluation, and oversaw data collection for the HMV beneficiary surveys.

Susan Dorr Goold, MD, MHSA, MA, is a Professor of Internal Medicine and Health Management and Policy. She engages patients and communities, particularly minority and underserved communities, in research on health policy. She served as the lead on the beneficiary and provider surveys in the initial HMP evaluation. The Healthy Michigan Voices surveys and interviews have become a national model for Medicaid expansion evaluations in numerous other states. She has served on a CMS panel advising state leaders about 1115 waiver evaluations, consulted for Mathematica as they developed guidance for 1115 wavier evaluations and serves on the advisory board for the Medicaid Demonstration Evaluation Learning Collaborative. Dr. Goold is a Fellow of the American College of Physicians and the Hastings Center.

Richard Hirth, PhD, is the S.J. Axelrod Collegiate Professor of Health Management and Policy at the University of Michigan School of Public Health. Dr. Hirth is an economist whose research focuses on healthcare spending, insurance design and payment systems. He led the cost-sharing analyses for the initial HMP evaluation. In that role, he led the analyses and report writing about the effects of HMP cost-sharing and premium contributions on spending, value of care, and program enrollment.

Edith C. Kieffer, MPH, PhD, is Professor Emerita at the University of Michigan School of Social Work. She conducts community-based participatory intervention research addressing disparities in health and health care. She has contributed to survey design, analyses, and development of reports, presentations and publications as part of the HMP evaluation team. She led the qualitative interviews and analyses conducted as part of the initial HMP evaluation which have provided an in-depth understanding of the perceptions and experiences of HMP beneficiaries, health care providers, and individuals who are eligible for HMP but unenrolled, in their own words. In 2015, she led cognitive interviews to assess HMP beneficiaries' understanding of their MI Health Account statements and recommend modifications.

Sunghee Lee, MS, PhD, is an Associate Research Scientist in the Survey Research Center at the University of Michigan's Institute for Social Research. She provides guidance on power analysis and sample design for the HMP evaluation and leads post-survey statistical weighting efforts.

Helen Levy, PhD, is a Research Professor at the University of Michigan's Institute for Social Research, Gerald R. Ford School of Public Policy, and School of Public Health. Her research interests include evaluating the impact of Medicaid expansion at both the state and national levels, the causes and consequences of lacking health insurance, and material hardship among older Americans. Her expertise on the HMP evaluation team includes the impact of the expansion on health insurance coverage and on hospital uncompensated care. She has also conducted research on the impact of Medicaid expansion nationally on economic outcomes including consumption and labor supply, and she co-authored a study of the fiscal impact of Michigan's Medicaid expansion on the state. Levy is also an Associate Director of the Health and Retirement Study, an NIH-funded longitudinal study of health and economic dynamics at older ages. She is a Research Associate at the National Bureau of Economic Research and served as a Senior Economist to the President's Council of Economic Advisers in 2010-11.

Minal Patel, MPH, PhD, is an Associate Professor in the Department of Health Behavior & Health Education at the University of Michigan School of Public Health. Emphases of her work include access to care, health care navigation, health-related financial burden, and team-based care. Dr. Patel has led studies focused on improving health insurance literacy in economically disadvantaged communities that are primarily covered under Medicaid/HMP, screening and addressing social determinants of health in clinical settings, and health care provider training in implementing guideline-based care. She contributed to the initial HMP evaluation by providing expertise to the survey team related to individuals with chronic conditions.

Zachary Rowe is Executive Director of Friends of Parkside, a non-profit, community-based organization that concerns itself with the health, education and safety of the residents that live in the Village at Parkside on the eastside of Detroit. He has more than 23 years of experience with community-based participatory research and was a founding member of the Detroit Urban Research Center (URC) Board. He serves on the Health Housing Heatwave Partnership Steering Committee, Healthy Environment Partnership Steering Committee, Community Action Against Asthma Steering Committee, the University of Michigan Clinician Scholars Program Advisory Committee and consults for the Michigan Institute for Clinical and Health Research. He has co-directed several projects with Dr. Goold, including the NIA-funded DECIDERS project.

Renuka Tipirneni, MD, MSc, is an Assistant Professor in the Department of Internal Medicine, Divisions of General Medicine and Hospital Medicine, and at the Institute for Healthcare Policy and Innovation investigating the impact of health reform policies and programs on low socioeconomic status, aging and other vulnerable populations, and on delivery of care in the health care safety net. As a member of the team conducting the initial HMP evaluation, she focused on assessing health and employment-related outcomes among enrollees. Dr. Tipirneni will continue to assist with evaluating these key measures in the next waiver evaluation.

Community Advisory Board. The HMP evaluation team has benefitted from the guidance and insights of a Community Advisory Board composed of leaders from minority and underserved communities across Michigan since 2014. These community leaders consult with the evaluation team to ensure Healthy Michigan Voices surveys and other evaluation activities are reflective of diverse perspectives. The Community Advisory Board has engaged with the University of

Michigan in Michigan-focused health policy projects since 2011 to give voice to these communities in decisions about health policy and health research.

Evaluation budget

The HMP evaluation team has prepared and submitted an evaluation budget which includes the total estimated cost, as well as a breakdown of estimated staff, administrative, and other costs for all aspects of the evaluation.

Evaluation data collection, analysis, and reporting milestones

The interim report will be submitted to MDHHS in July 2022 and will contain initial analyses of Data Warehouse (DW) enrollment and claims data, HMV survey data, beneficiary interview data, provider interview data, key informant interview data, credit report data, BRFSS data, ACS data, HCUP data, and Medicare cost report data, as well as findings from interviews with beneficiaries. The summative report will be submitted to MDHHS in July 2024 and will contain final analyses of administrative data, HMV survey data, beneficiary interview data, provider interview data, key informant interview data, credit report data, BRFSS data, ACS data, HCUP data, and Medicare cost report data, as well as the findings from provider interviews, beneficiary follow-up interviews, key informant interviews, and the HMV beneficiary survey.

The below timeline may be modified based on the duration of the federal declaration of the public health emergency, due to delays in data availability, as a result of any limitations on data collection due to pandemic workforce restrictions, or due to other reasons related to the COVID-19 pandemic. As noted above in Sections C.4.1 and C.4.2, evaluation activities focused on the 48-month policy will be limited to descriptive, trend analyses of administrative data if implementation of the new requirements occurs between January and June 2023.

Evaluation Activities/Reporting Milestones	Date
Initial linkages & analysis of DW data, credit report data, BRFSS data, ACS data, HCUP data, and Medicare cost report data	January 2021 – May 2022
Conduct beneficiary interviews	July 2021 – September 2021
Field HMV beneficiary survey	July 2021 – April 2022
Conduct provider interviews	September 2021 – November 2021
Conduct key informant interviews	December 2021 – March 2022
Conduct initial analyses of survey and interview data	October 2021-May 2022
Interim report submitted to MDHHS	**July 2022**
Ongoing analysis of HMV survey data, beneficiary interview data, provider interview data, key informant interview data, DW data, credit report data, BRFSS data, ACS data, HCUP data, and Medicare cost report data	August 2022 – May 2024
Conduct follow-up beneficiary interviews	November 2022 – March 2023
Summative report submitted to MDHHS	**July 2024**

Healthy Michigan Plan Evaluation Tables of Hypotheses & Research Questions

1. Healthy Behaviors Incentives Program

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 1.1: Health status will improve and healthy behaviors will increase over time among income-eligible adults in Michigan compared with similar adults in comparison states.			
Research question 1.1: How has the health and healthy behavior engagement among Michigan adults changed since introduction of HMP and its Healthy Behaviors Incentives Program?			
Similar adults in expansion states without a healthy behavior waiver provision Similar adults in states that did not expand Medicaid under the ACA	Proportion reporting fair/poor health status Proportion reporting >5 days in past 30 days with poor physical health, mental health, and physical or mental health keeping from usual activities Proportion reporting engagement in unhealthy lifestyle behaviors Proportion reporting engagement in healthy lifestyle behaviors Proportion reporting receipt of preventive services	BRFSS	Difference-in-difference regression model of health and health behavior outcomes in Michigan vs. comparison states not implementing similar waivers
Hypothesis 1.2: Engagement in efforts to maintain or improve health will be higher among beneficiaries who report knowledge of the HMP Healthy Behaviors Incentives Program.			
Research question 1.2: What is the association between beneficiary knowledge of the Healthy Behaviors Incentives program and efforts to maintain or improve health?			
Beneficiaries who report higher vs. lower knowledge of Healthy Behaviors Incentives program	Proportion reporting engagement in healthy lifestyle behaviors Proportion reporting that they are able to take actions to maintain or improve their health Proportion reporting participation in health-supporting measures	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional survey outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, duration of HMP enrollment
Hypothesis 1.3: Beneficiaries who complete an HRA will report improvement in health status and health behaviors compared to beneficiaries who do not complete an HRA.			
Research question 1.3: Is HRA completion associated with improved health status and health behaviors?			
Beneficiaries who do vs. do not report completion of an HRA	Proportion reporting fair or poor physical, mental and oral health status Proportion reporting >5 days in past 30 days with poor physical health, mental health, and physical or mental health keeping from usual activities	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional survey outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, duration of HMP enrollment

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
	Proportion reporting improvement in physical and mental health over past 12 months Proportion reporting engagement in unhealthy lifestyle behaviors Proportion reporting engagement in healthy lifestyle behaviors		Mixed effects logistic regression models of Longitudinal Cohort responses over time, adjusting for age, gender, race/ethnicity, income, and chronic condition
Hypothesis 1.4: Beneficiaries who complete at least one HRA will demonstrate higher rates of preventive service use compared to beneficiaries who have similar primary care utilization but who have not completed an HRA.			
Research question 1.4: Is HRA completion associated with higher rates of preventive service use?			
Beneficiaries who do vs. do not have evidence of a completed HRA	Proportion with evidence of annual primary care and dental visits (HEDIS AAP, ADV) Proportion with evidence of flu vaccine, cancer screening (NCQF 0039, 0034, 2372, 0032)	Medicaid claims and encounter data; HRA tables	Bivariate comparison of outcomes; multivariate models adjusting for primary care continuity patterns; multivariate negative binomial regression controlling for demographic characteristics to generate stratified results for those with chronic conditions (asthma, heart failure, COPD, diabetes)
Hypothesis 1.5: Beneficiaries will describe assistance from primary care providers in setting health goals and engaging in behavior change to meet those goals.			
Research question 1.5: How has the Heathy Behaviors Incentives program, and HMP as a whole, affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health over time?			
n.a.	Reported impact on engagement in health behaviors Reported impact on other efforts to maintain or improve health	Interviews with beneficiaries	Descriptive cross-sectional and longitudinal qualitative analysis
Hypothesis 1.6: Primary care providers will describe that they have become more knowledgeable over time about how to use the HRA to engage patients enrolled in HMP.			
Research question 1.6: How do primary care providers use the HRA to assist in patient engagement and health promotion?			
n.a.	Reported usefulness of HRA as tool to engage patients Reported understanding of the HRA process and financial incentives	PCP interviews	Descriptive cross-sectional qualitative analysis; assessment of variation by plan participation, volume of HMP-enrolled patients

2. Cost-Sharing

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 2.1: Beneficiaries who are aware of healthy behavior financial incentives will demonstrate a better understanding of cost-sharing obligations and connections between service utilization and amount owed.			
Research question 2.1: Do beneficiaries understand cost-sharing and other consumer-oriented features of HMP coverage?			
Beneficiaries who do vs. do not report awareness of healthy behavior financial incentives	Proportion reporting awareness of financial incentives related to Healthy Behaviors Incentives program Proportion reporting correct information about payment obligations, link between service utilization and cost-sharing Proportion who recall receiving a MI Health Account (MIHA) statement	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional survey outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, literacy, duration of HMP enrollment
Hypothesis 2.2: Beneficiaries with MI Health Account fees will have better payment compliance than their counterparts with service-based cost-sharing only.			
Research question 2.2: What factors are associated with beneficiaries' compliance with cost-sharing obligations?			
Beneficiaries who are vs. are not subject to fees	Beneficiary-level payments (any payment, full payment) of amount owed	Medicaid cost-share tables	Descriptive quantitative analysis of the average amounts and distribution of cost-sharing obligations and estimating multivariate models adjusting for beneficiary characteristics including time enrolled, and subgroup analyses (such as age, gender, race/ethnicity, urban/rural, income, and length of HMP enrollment)
Hypothesis 2.3: Beneficiaries will understand where to find the amount they owe, but may not understand how that amount is calculated.			
Research question 2.3: Are beneficiaries able to understand the MI Health Account statement?			
n.a.	Understanding of MIHA terminology and layout	Interviews with beneficiaries	Descriptive cross-sectional qualitative analysis
Hypothesis 2.4: Beneficiaries will report financial barriers more often than logistical barriers to paying the amount owed.			
Research question 2.4: What are barriers and facilitators for beneficiaries to pay the amount owed?			
n.a.	Barriers and facilitators to making payments	Interviews with beneficiaries	Descriptive cross-sectional qualitative analysis

3. 5% Premium Cost-Sharing & HRA/Healthy Behavior Requirements (48-month policy)*

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 3.1: Beneficiary literacy level will be associated with understanding of specific provisions of the new 48-month policy.			
Research question 3.1: Do beneficiaries subject to the new 48-month policy understand the requirements and consequences for noncompliance?			
n.a.	Proportion reporting knowledge of HRA/healthy behavior requirement Proportion reporting knowledge of 5% monthly premium requirement Proportion reporting knowledge of consequences for noncompliance	Beneficiary surveys – longitudinal cohort (subject to 48-month policy)	Bivariate comparison of cross-sectional survey outcomes by literacy level; multivariate models adjusting for age, gender, race/ethnicity, chronic condition
Hypothesis 3.2: Among beneficiaries subject to the new 48-month policy, HRA/healthy behavior completion will increase for beneficiaries with income >100% FPL who are subject to disenrollment, with no change for beneficiaries with income <100% FPL who are not subject to disenrollment.			
Research question 3.2: Is the penalty of disenrollment for failure to complete the HRA/healthy behavior requirement stronger than the incentive of cost-sharing reduction for HRA/healthy behavior completion?			
Beneficiaries before vs. after implementation of the 48-month policy	Probability of completing an annual HRA or healthy behavior	Medicaid HRA tables	Regression model of HRA completion stratified by income group (</>100%), adjusted for demographic characteristics (gender, age, race/ethnicity, urban/rural)
Hypothesis 3.3: Payment compliance will be higher among those subject to the 5% monthly premium requirement than under the previous cost-sharing requirements.			
Research question 3.3: Among beneficiaries with income above 100% FPL, how does payment compliance change with the new cost-sharing requirements (from 2% fee and service-related co-payments to a flat 5% premium)?			
Beneficiaries before vs. after implementation of the 48-month policy	Rates of any payment, full payment of cost-share obligations	Medicaid cost-share tables	Regression model of payment adjusted for demographic characteristics (such as age, gender, race/ethnicity, urban/rural)
Hypothesis 3.4a: The rate of disenrollment will be higher after implementation of the 5% monthly premium requirement compared to before implementation. **Hypothesis 3.4b:** Disenrollment will disproportionately occur among beneficiaries with low utilization in the 24 months prior to implementation of the 5% monthly premium requirement.			
Research question 3.4: To what extent is the 5% monthly premium requirement associated with disenrollment?			
Beneficiaries with high vs. low utilization prior to implementation of the 48-month policy	Rate of HMP disenrollment Utilization in prior 24 months (number of primary care visits, dental visits, ED visits, hospitalizations, medication fills)	Medicaid enrollment files Medicaid claims and encounter data	Comparison of disenrollment rates for pre- vs. post-implementation period using paired t-tests. Multivariate negative binomial regression controlling for demographic characteristics to generate stratified results for those with high vs. low utilization.

*Contingent on implementation, if implemented between January 2023 and July 2023, all analyses will be descriptive, trend analyses.

4. Overall Demonstration: Reduce uninsurance

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 4.1a: The decline in uninsurance among non-elderly adults in Michigan compared to other states that did not expand Medicaid that was observed in 2013-2017 will be sustained through subsequent years. **Hypothesis 4.1b:** The decline in uninsurance among non-elderly adults in Michigan compared to other states that expanded without a waiver that was observed in 2013-2017 will be sustained through subsequent years.			
Research question 4.1: How have insurance coverage rates in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?			
Similar adults in states that did not expand Medicaid under the ACA Similar adults in expansion states without a similar waiver	Proportion of adults who are: • Uninsured • Insured through Medicaid • Insured through employer-sponsored coverage • Insured through private non-group coverage	ACS (variables HINS1 through HINS6)	Difference-in-differences regression model of coverage among all non-elderly adults, among low-income adults (e.g. income <200% of FPL), and among adults with characteristics correlated with program eligibility (e.g., low levels of education) Regression adjusted for observable demographic characteristics (age, gender, race/ethnicity)

5. Overall Demonstration: Promote primary care/responsible use of services

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 5.1a: Beneficiaries who report no barriers to primary care will be more likely to report improved health status and ability to take action to improve or maintain their health. **Hypothesis 5.1b:** Beneficiaries who make regular primary care visits will be more likely to report improved health status and ability to take action to improve or maintain their health.			
Research question 5.1: Does HMP's facilitation of primary care access (e.g., through managed care PCP assignment) influence beneficiary engagement in health and maintenance or improvement in physical and mental health?			
Beneficiaries who do vs. do not report difficulty accessing primary care Beneficiaries who do vs. do not report regular primary care visits (avg 1 per year)	Proportion reporting it is easy to get advice or an appointment from their primary care provider Proportion reporting fair or poor physical, mental and oral health status Proportion reporting >5 days in past 30 days with poor physical health, mental health, and physical or mental health preventing usual activities Proportion reporting improvement in physical and mental health over past 12 months Proportion reporting that they are able to take actions to maintain or improve their health	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional survey outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, literacy, duration of HMP enrollment Independent sample t-test comparison of aggregate responses for New Cohort vs. Longitudinal Cohort at a similar point in their HMP enrollment, with multivariate models adjusting for age, gender, race/ethnicity, income, and chronic condition Mixed effects logistic regression models of Longitudinal Cohort responses over time, adjusting for age, gender, race/ethnicity, income, and chronic condition
Hypothesis 5.2: Beneficiaries who report barriers to care will be more likely to report an emergency department visit without first attempting to contact their primary care provider.			
Research question 5.2: What factors influence beneficiaries' decisions about seeking care in the emergency department?			
Beneficiaries who do vs. do not report difficulty obtaining needed services	Proportion reporting it is easy to get advice or an appointment from their primary care provider Proportion reporting medical urgency vs. PCP recommendation vs. other reason for ED visit in the past 12 months Proportion reporting they attempted to contact their primary care provider before going to the ED, among those reporting ED visit	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional survey outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, duration of HMP enrollment Independent sample t-test comparison of aggregate responses for New Cohort vs. Longitudinal Cohort at a similar point in their HMP enrollment, with multivariate models adjusting for age, gender,

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
			race/ethnicity, income, and chronic condition Mixed effects logistic regression models of Longitudinal Cohort responses over time, adjusting for age, gender, race/ethnicity, income, and chronic condition
Hypothesis 5.3: Beneficiaries with higher continuity of primary care will have lower rates of emergency department utilization and lower odds of being high-frequency ED utilizers.			
Research question 5.3: Is use of the emergency department related to continuity of primary care?			
Beneficiaries with higher vs. lower primary care continuity	Rate of ED visits (HEDIS EDU) Proportion of high-frequency ED utilizers Primary care continuity (average number of primary care visits per year)	Medicaid claims and encounter data	Comparison of ED outcomes using paired t-tests; multivariate negative binomial regression controlling for demographic characteristics to generate stratified results for those with chronic conditions (asthma, heart failure, COPD, diabetes)
Hypothesis 5.4: Beneficiaries with chronic conditions will demonstrate better rates of medication management and primary care utilization, and lower rates of ED visits and hospitalizations, over time compared to their initial year of HMP enrollment.			
Research question 5.4: Does HMP promote more consistent use of services to manage chronic conditions over time?			
n.a	Rate of appropriate medication management (HEDIS PCE, MMA, SPC, SPD) Emergency department visit rate (HEDIS EDU); Follow-up after ED visit for beneficiaries with multiple chronic conditions (HEDIS FMC) Disease-specific hospitalization rates (NQF 0272, 0275, 0277)	Medicaid claims and encounter data	Comparison of outcomes in initial vs. subsequent years using paired t-tests; multivariate negative binomial regression controlling for demographic characteristics to generate stratified results by continuity of primary care
Hypothesis 5.5: Beneficiaries will describe HMP as allowing them to receive services that have a significant positive impact on their health and well-being.			
Research question 5.5: How has HMP impacted beneficiaries' physical, mental, and oral health and their use of health care services over time?			
n.a.	Reported impact of HMP on health status (physical, mental, oral) Reported impact of HMP on use of health care services	Interviews with beneficiaries	Descriptive cross-sectional and longitudinal qualitative analysis

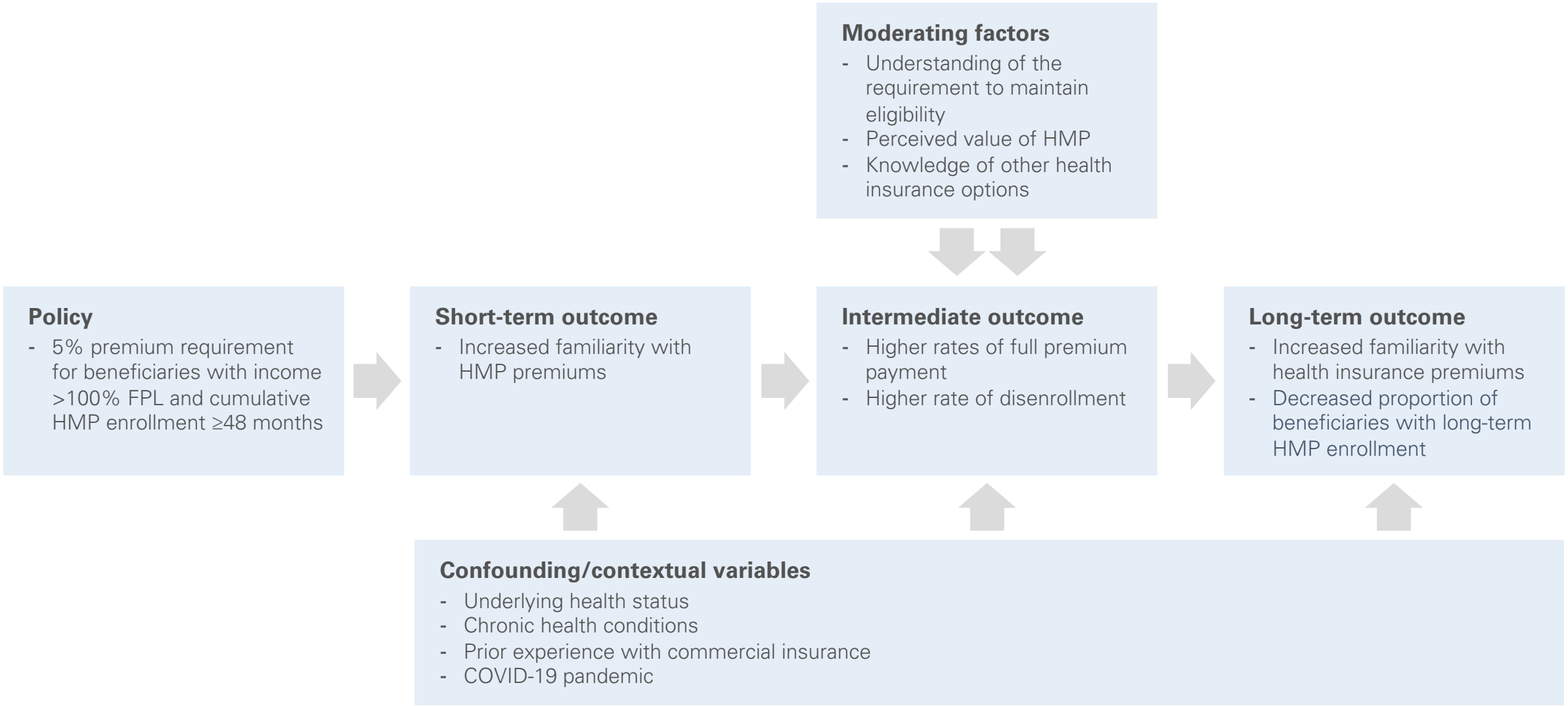
6. Overall Demonstration: Support financial well-being

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 6.1: Beneficiaries will report sustained or increased employment and decreased health-related barriers to employment over time.			
Research question 6.1: What impact has HMP had on beneficiaries' levels of employment and ability to work?			
n.a.	Proportion reporting full/part time employment Proportion reporting work hours >20 hours/week Proportion reporting health-related barriers to work Proportion reporting other barriers to work (inconsistent work schedule, transportation, caregiving responsibilities, homelessness, discrimination)	Beneficiary surveys – longitudinal and new cohorts	Bivariate comparison of cross-sectional outcomes; multivariate models adjusting for age, gender, race/ethnicity, income, chronic condition, duration of HMP enrollment Independent sample t-test comparison of aggregate responses for New Cohort vs. Longitudinal Cohort at a similar point in their HMP enrollment; multivariate models adjusting for age, gender, race/ethnicity, income, and chronic condition Mixed effects logistic regression models of Longitudinal Cohort responses over time, adjusting for age, gender, race/ethnicity, income, and chronic condition
Hypothesis 6.2: HMP enrollment will be associated with improved credit report outcomes for beneficiaries over time.			
Research question 6.2: How is HMP enrollment related to individual beneficiaries' financial outcomes during and after HMP enrollment?			
Individuals from low-income zip codes in states that have not expanded Medicaid HMP beneficiaries who enrolled in different time periods	Total debt past due Bills in collections (all, medical) Number of months with overdrawn credit cards Financial judgments (e.g., evictions, bankruptcies, and wage garnishments) Credit scores	Credit report data linked to Medicaid enrollment	Event study regression models to test for break in trend over time Difference-in-difference regression models
Hypothesis 6.3: Beneficiaries will describe examples of how HMP has improved their financial and material well-being.			
Research question 6.3: How has HMP affected beneficiaries' financial and material well-being over time?			
n.a.	Reported impact on how HMP has facilitated ability to work Reported impact on financial well-being, including out-of-pocket costs for health services	Interviews with beneficiaries	Descriptive cross-sectional and longitudinal qualitative analysis

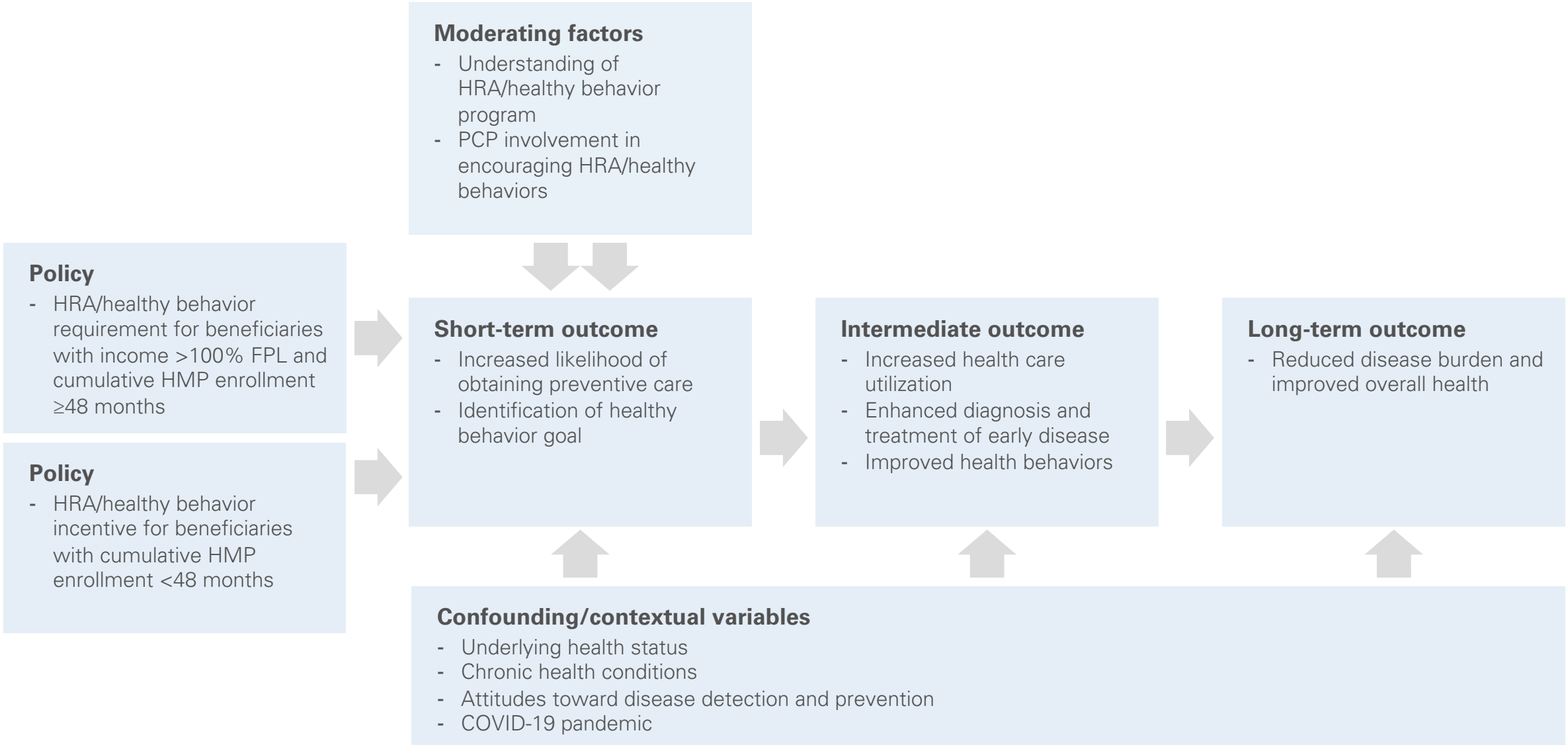
7. Overall Demonstration: Sustain the safety net and support coordinated strategies to address social determinants of health

Comparison strategy	Outcome measure(s)	Data sources	Analytic approach
Hypothesis 7.1: Administrative costs to implement demonstration policies will remain stable during the current Section 1115 waiver period.			
Research question 7.1: What are the categories and estimated amounts of the State's costs to administer key HMP demonstration policies (e.g., Healthy Behaviors Incentives program, cost-sharing)?			
n.a.	Reported HMP administrative costs and staff effort over time	Key informant interviews	Descriptive cross-sectional qualitative analysis
Hypothesis 7.2: Annual trends in age- and sex-adjusted expenditures per member-month will demonstrate a lower rate of increase over time for enrollees in HMP managed care than for enrollees in traditional Medicaid managed care.			
Research question 7.2: How do trends over time in Medicaid expenditures per member-month for HMP enrollees compare to those for beneficiaries in traditional Medicaid managed care?			
HMP-MC vs traditional MA-MC	Total expenditures per member-month	Medicaid claims and encounter data	Year-to-rate change in member-month expenditures, adjusted for enrollee age and sex
Hypothesis 7.3a: The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that did not expand Medicaid that was observed between 2013 and 2017 will be sustained in subsequent years. **Hypothesis 7.3b:** The decline in hospital uncompensated care and the fraction of hospital discharges among non-elderly adults in Michigan for whom the primary payer was uninsured/self-pay compared with states that expanded Medicaid without a waiver that was observed between 2013 and 2017 will be sustained in subsequent years.			
Research question 7.3: How have uncompensated care costs in the state changed since the implementation of HMP, compared with states that did not expand Medicaid and with states that expanded Medicaid without a waiver?			
States that did not expand Medicaid under the ACA Expansion states without a similar waiver	Proportion of hospital discharges for which primary payer was uninsured/self-pay	HCUP Fast Stats Inpatient Stay data	Comparison of trends in Michigan with other states by payer/age group (Medicaid, 19-64; Medicare, 65+; uninsured, 19-64; private, 19-64)
States that did not expand Medicaid under the ACA Expansion states without a similar waiver	Uncompensated care costs	Medicare cost reports (worksheet S-10)	Difference-in-differences regression models of uncompensated care costs comparing changes for Michigan to changes in expansion states that do not have a similar demonstration Regression adjusted for state-level variables
Hypothesis 7.4: State officials and safety-net providers will describe specific examples of health-promoting initiatives that build on HMP's continuity, breadth of coverage, and primary care emphasis.			
Research question 7.4: How does HMP support new or broadened initiatives to address social determinants of health for low-income adults in Michigan?			
n.a.	Reported role of HMP in sustaining new or broadened initiatives	Key informant interviews	Descriptive cross-sectional qualitative analysis

Logic model for program goals as stated in HMP Section 1115 demonstration waiver
5% premium requirement (48-month policy)



Logic model for program goals as stated in HMP Section 1115 demonstration waiver HRA/healthy behavior requirement (48-month policy) and Healthy Behaviors Incentives program



Administrative Data Appendix

The Administrative Data Appendix includes additional tables related to the methods and results using administrative data.

Administrative Data Appendix

Analytic Methods

Administrative Data Appendix Table 1. Characteristics of the evaluation population for measures of health services utilization by HMP-MC enrollment duration

	HMP-MC Enrollment Duration			
	1-Year Enrollment N=392,561	*2-Years Enrollment* N=193,398	*3-Years Enrollment* N=96,450	*4-Years Enrollment* N=159,507
Sex				
Female	51.81%	51.23%	50.33%	50.33%
Male	48.19%	48.77%	49.67%	49.67%
FPL at initial HMP-MC enrollment				
0-35%	59.65%	60.25%	62.17%	60.01%
36-99%	23.47%	22.75%	21.89%	23.64%
≥100%	16.88%	17.00%	15.94%	16.35%
Race/Ethnicity				
Hispanic	5.17%	4.78%	4.00%	4.83%
Black, non-Hispanic	25.13%	23.36%	22.70%	24.79%
White, non-Hispanic	59.13%	60.91%	62.55%	59.64%
Other/Unknown	10.56%	10.95%	10.74%	10.74%
Age at initial HMP-MC enrollment				
19-20	17.57%	18.35%	15.91%	10.27%
21-29	27.45%	23.54%	22.22%	17.32%
30-49	37.34%	35.24%	37.34%	42.70%
50-64	17.64%	22.87%	24.53%	29.71%
Year of initial HMP-MC enrollment				
2014-15	37.48%	32.50%	38.78%	60.25%
2016-17	23.74%	22.99%	17.81%	36.64%
2018	7.77%	4.46%	35.08%	3.11%
2019-20	31.00%	40.05%	8.33%	0%
COPD diagnosis	3.79%	6.83%	9.20%	12.57%
Asthma diagnosis	3.56%	5.80%	7.83%	10.30%
Cardiovascular diagnosis	3.26%	5.94%	7.55%	9.43%
Diabetes diagnosis	5.59%	8.47%	9.85%	13.99%
Any COPD, Asthma, CV or Diabetes	13.37%	20.54%	25.16%	30.44%
Use of specialty mental health	8.88%	11.97%	14.32%	15.11%

Administrative Data Appendix

Additional Results

Evaluation question 1.4: Is HRA completion associated with higher rates of preventive service use?

Administrative Data Appendix Table 1.4.1. Characteristics associated with HRA completion

	IRR	95% CI	
HMP-MC enrollment duration			
Two-years enrollment	Ref.	-	-
Three-years enrollment	1.209	1.190	1.228
Four-years enrollment	1.728	1.706	1.750
Year of initial HMP-MC enrollment			
2014-15	Ref.	-	-
2016-17	0.721	0.712	0.730
2018	0.590	0.578	0.603
2019-20	0.504	0.494	0.513
Age at initial HMP-MC enrollment			
19-20	0.739	0.726	0.752
21-29	0.799	0.787	0.811
30-49	Ref.	-	-
50-64	1.234	1.219	1.248
FPL at initial HMP-MC enrollment			
0-35%	Ref.	-	-
36-99%	1.109	1.095	1.122
100+%	1.227	1.210	1.244
Sex			
Female	1.245	1.232	1.258
Male	Ref.	-	-
Race/Ethnicity			
Hispanic	0.909	0.884	0.935
Black, non-Hispanic	0.903	0.891	0.914
White, non-Hispanic	Ref.	-	-
Other/Unknown	1.041	1.023	1.058
Any COPD, Asthma, CV or Diabetes			
No	Ref.	-	-
Yes	1.320	1.305	1.335
Use of specialty mental health			
No	Ref.	-	-
Yes	0.933	0.919	0.947

Negative binomial regression controlling for demographic characteristics (sex, age, income level, race/ethnicity, enrollment duration), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), and use of specialty mental health services

Administrative Data Appendix

Administrative Data Appendix Table 1.4.2. Receipt of preventive services by HRA completion and primary care continuity

	2-Years Enrollment		*3-Years Enrollment*		*4-Years Enrollment*	
	HRA	No HRA	HRA	No HRA	HRA	No HRA
Preventive visit						
Regular primary care	76.18%	58.69%	83.62%	68.99%	86.64%	75.05%
Irregular primary care	62.04%	34.83%	72.35%	44.37%	77.31%	52.22%
No primary care	17.71%	3.29%	23.85%	3.85%	14.14%	2.78%
Dental visit						
Regular primary care	57.96%	51.72%	52.79%	62.54%	74.64%	70.79%
Irregular primary care	45.51%	37.19%	55.41%	47.08%	62.89%	55.85%
No primary care	38.05%	20.76%	39.64%	24.20%	40.95%	27.73%
Breast cancer screening						
Regular primary care	70.64%	60.25%	78.94%	68.19%	82.44%	74.70%
Irregular primary care	50.07%	34.04%	57.77%	41.78%	64.88%	48.52%
No primary care	41.52%	9.19%	40.58%	10.83%	18.66%	6.40%
Cervical cancer screening						
Regular primary care	53.53%	48.00%	64.54%	58.90%	71.74%	66.36%
Irregular primary care	39.82%	31.57%	50.38%	40.61%	59.01%	48.82%
No primary care	19.61%	8.10%	19.64%	8.78%	18.10%	6.92%
Colorectal cancer screening						
Regular primary care	41.72%	34.11%	53.76%	44.02%	58.90%	50.89%
Irregular primary care	26.65%	17.07%	34.12%	23.10%	42.53%	29.11%
No primary care	18.91%	3.34%	21.39%	3.12%	10.14%	2.27%

*Chi-squared $p \leq 0.0001$ for difference by HRA completion and primary care continuity

Administrative Data Appendix Table 1.4.3. Logistic regression – Breast cancer screening

	2-Years Enrollment			*3-Years Enrollment*			*4-Years Enrollment*		
	OR	95% CI		OR	95% CI		OR	95% CI	
Count of HRA									
0	Ref.	-	-	Ref.	-	-	Ref.	-	-
1	1.595	1.496	1.701	1.622	1.485	1.772	1.447	1.359	1.540
2+	1.809	1.638	1.997	2.236	1.975	2.533	2.058	1.915	2.213
Primary care continuity									
Regular primary care	11.271	9.764	13.011	14.497	11.710	17.948	36.154	29.324	44.574
Irregular primary	4.114	3.515	4.815	5.057	4.061	6.298	12.856	10.424	15.856
No primary care	Ref.	-	-	Ref.	-	-	Ref.	-	-
Year of initial HMP-MC enrollment									
2014-15	Ref.	-	-	Ref.	-	-	Ref.	-	-
2016-17	1.040	0.966	1.119	0.921	0.827	1.025	0.884	0.832	0.939
2018	1.013	0.893	1.150	0.828	0.754	0.910	0.995	0.833	1.188
2019-20	0.809	0.755	0.866	0.808	0.686	0.951	-	-	-
FPL at initial HMP-MC enrollment									
0-35%	Ref.	-	-	Ref.	-	-	Ref.	-	-
36-99%	1.087	1.011	1.169	1.198	1.084	1.324	1.142	1.071	1.217
100+%	1.181	1.096	1.274	1.222	1.098	1.361	1.312	1.218	1.413
Race/Ethnicity									
Hispanic	1.052	0.895	1.236	1.133	0.897	1.432	1.204	1.004	1.444
Black, non-Hispanic	1.008	0.937	1.084	1.017	0.920	1.124	0.909	0.847	0.975
White, non-Hispanic	Ref.	-	-	Ref.	-	-	Ref.	-	-
Other/Unknown	0.890	0.814	0.973	1.084	0.952	1.233	1.074	0.976	1.181
Any COPD, Asthma, CV or Diabetes									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	0.963	0.909	1.021	0.999	0.923	1.082	0.991	0.937	1.048
Use of specialty mental health									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	0.789	0.717	0.868	0.659	0.584	0.743	0.670	0.616	0.730

Logistic regression controlling for demographic characteristics (year of initial HMP enrollment, income level, race/ethnicity), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), use of specialty mental health services, primary care continuity, and HRA completion

Administrative Data Appendix Table 1.4.4. Logistic regression – Cervical cancer screening

	2-Years Enrollment			*3-Years Enrollment*			*4-Years Enrollment*		
	OR	95% CI		OR	95% CI		OR	95% CI	
Count of HRA									
0	Ref.	-	-	Ref.	-	-	Ref.	-	-
1	1.237	1.193	1.282	1.273	1.212	1.338	1.285	1.239	1.334
2+	1.393	1.316	1.475	1.429	1.335	1.531	1.452	1.391	1.514
Primary care continuity									
Regular primary care	9.867	9.152	10.638	14.440	12.811	16.277	24.523	21.695	27.720
Irregular primary	4.899	4.521	5.310	6.798	6.019	7.677	12.057	10.666	13.629
No primary care	Ref.	-	-	Ref.	-	-	Ref.	-	-
Year of initial HMP-MC enrollment									
2014-15	Ref.	-	-	Ref.	-	-	Ref.	-	-
2016-17	0.822	0.790	0.855	0.852	0.804	0.903	0.843	0.814	0.872
2018	0.716	0.668	0.768	0.720	0.685	0.757	0.839	0.762	0.923
2019-20	0.638	0.615	0.662	0.729	0.669	0.795	-	-	-
FPL at initial HMP-MC enrollment									
0-35%	Ref.	-	-	Ref.	-	-	Ref.	-	-
36-99%	1.143	1.103	1.185	1.284	1.221	1.351	1.280	1.233	1.329
100+%	1.075	1.033	1.118	1.228	1.161	1.298	1.367	1.311	1.425
Race/Ethnicity									
Hispanic	1.110	1.032	1.195	1.101	0.985	1.229	1.200	1.093	1.317
Black, non-Hispanic	1.144	1.101	1.188	1.143	1.084	1.206	1.180	1.133	1.230
White, non-Hispanic	Ref.	-	-	Ref.	-	-	Ref.	-	-
Other/Unknown	0.933	0.887	0.982	0.972	0.905	1.043	1.029	0.973	1.088
Any COPD, Asthma, CV or Diabetes									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	0.694	0.670	0.719	0.695	0.664	0.728	0.768	0.743	0.795
Use of specialty mental health									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	0.964	0.919	1.012	1.004	0.944	1.067	1.076	1.027	1.126

Logistic regression controlling for demographic characteristics (year of initial HMP enrollment, income level, race/ethnicity), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), use of specialty mental health services, primary care continuity, and HRA completion

Administrative Data Appendix

Administrative Data Appendix Table 1.4.5. Logistic regression – Colorectal cancer screening

	2-Years Enrollment			*3-Years Enrollment*			*4-Years Enrollment*		
	OR	95% CI		OR	95% CI		OR	95% CI	
Count of HRA									
0	Ref.	-	-	Ref.	-	-	Ref.	-	-
1	1.386	1.325	1.451	1.440	1.358	1.527	1.321	1.269	1.375
2+	1.556	1.454	1.664	1.730	1.603	1.867	1.716	1.643	1.792
Primary care continuity									
Regular primary care	10.411	9.147	11.850	16.131	13.306	19.555	31.985	26.633	38.412
Irregular primary	4.660	4.056	5.355	6.778	5.570	8.246	14.966	12.458	17.980
No primary care	Ref.	-	-	Ref.	-	-	Ref.	-	-
Year of initial HMP-MC enrollment									
2014-15	Ref.	-	-	Ref.	-	-	Ref.	-	-
2016-17	0.937	0.889	0.987	0.973	0.906	1.045	0.883	0.850	0.917
2018	0.966	0.883	1.056	0.804	0.755	0.857	0.801	0.715	0.897
2019-20	0.799	0.760	0.841	0.818	0.729	0.917	-	-	-
FPL at initial HMP-MC enrollment									
0-35%	Ref.	-	-	Ref.	-	-	Ref.	-	-
36-99%	1.019	0.965	1.075	1.046	0.977	1.120	1.092	1.048	1.138
100+%	1.019	0.964	1.078	1.053	0.979	1.133	1.122	1.070	1.177
Race/Ethnicity									
Hispanic	0.965	0.856	1.087	1.048	0.896	1.226	1.070	0.955	1.198
Black, non-Hispanic	0.981	0.930	1.034	0.937	0.876	1.002	0.898	0.858	0.939
White, non-Hispanic	Ref.	-	-	Ref.	-	-	Ref.	-	-
Other/Unknown	0.966	0.904	1.031	0.993	0.913	1.081	0.985	0.928	1.045
Any COPD, Asthma, CV or Diabetes									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	1.060	1.017	1.105	1.028	0.976	1.084	1.030	0.995	1.067
Use of specialty mental health									
No	Ref.	-	-	Ref.	-	-	Ref.	-	-
Yes	0.967	0.905	1.033	0.875	0.809	0.947	0.815	0.773	0.860

Logistic regression controlling for demographic characteristics (year of initial HMP enrollment, income level, race/ethnicity), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), use of specialty mental health services, primary care continuity, and HRA completion

Administrative Data Appendix

Evaluation question 2.2: What factors are associated with beneficiaries' compliance with cost-sharing obligations?

Administrative Data Appendix Table 2.2.1 Average cost-share amount owed and paid among all eligible beneficiaries

	Among all eligible beneficiaries (n = 287,106)	Among those with cost-sharing obligations (n=153,382)
Average amount owed, quarterly	**$12.00**	**$21.74**
By cost-share income level		
All months below 100% FPL	$0.97	$3.08
Some months above, some months below 100% FPL	$25.98	$29.18
All months above 100% FPL	$56.90	$58.26
Average amount owed, cumulative	**$100.19**	**$181.53**
(95th percentile)	($503.76)	($630.47)
By cost-share income level		
All months below 100% FPL	$8.28	$26.24
	($47.65)	($92.00)
Some months above, some months below 100% FPL	$214.64	$241.15
	($637.96)	($657.00)
All months above 100% FPL	$503.32	$515.38
	($1,018.89)	($1023.40)
Average amount paid, cumulative	**$37.60**	**$68.00**
By cost-share income level		
All months below 100% FPL	$3.95	$12.21
Some months above, some months below 100% FPL	$76.31	$85.67
All months above 100% FPL	$230.03	$235.52

Note: Eligible beneficiaries include those who had a new 18+ month HMP-MC enrollment period starting between January 2016 and October 2018.

Administrative Data Appendix

Administrative Data Appendix Table 2.2.2. Multivariate ordered logistic regression of predictors of payment (cross-sectional)

	Marginal effects (%)			p-value
	No payment	Partial payment	Full payment	
Age				
22-34	55.8%	34.5%	9.7%	Ref.
35-44	54.8%	35.1%	10.1%	0.001
45-54	46.8%	39.6%	13.6%	<0.001
55-63	35.8%	44.0%	20.2%	<0.001
Sex				
Female	48.9%	38.0%	13.1%	Ref.
Male	52.7%	36.0%	11.4%	<0.001
Race/Ethnicity				
White, non-Hispanic	44.6%	41.1%	14.3%	Ref.
Black, non-Hispanic	73.6%	21.9%	4.5%	<0.001
American Indian/Alaska Native	56.7%	34.1%	9.2%	<0.001
Hispanic	54.5%	35.4%	10.0%	<0.001
Asian	32.6%	45.7%	21.8%	<0.001
Other	43.1%	41.8%	15.0%	0.002
FPL				
All months below 100% FPL	53.4%	35.6%	11.0%	Ref.
Some months above, some months below 100% FPL	49.6%	37.7%	12.7%	<0.001
All months above 100% FPL	39.5%	42.3%	18.2%	<0.001
Region				
UP/NW/NE	48.6%	38.2%	13.2%	Ref.
W/E Central/E	51.7%	36.5%	11.8%	<0.001
S Central/SW/SE	52.4%	36.1%	11.5%	<0.001
Detroit Metro	48.9%	38.0%	13.1%	0.433

Note: Among HMP beneficiaries with continuous 18+ month enrollment period starting between 2016 and 2018 who had non-zero cost-share obligations

Administrative Data Appendix

Evaluation question 5.3: Is use of the emergency department related to continuity of primary care?

Administrative Data Appendix Table 5.3.1. ED visit rate (per 1,000 member-months) by primary care continuity and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
2-Years Enrollment Duration				
Regular primary care	83.81	78.69		
Irregular primary care	58.31	53.01		
No primary care	37.01	33.26		
3-Years Enrollment Duration				
Regular primary care	84.41	78.80	75.35	
Irregular primary care	60.02	51.75	48.16	
No primary care	34.95	30.34	28.41	
4-Years Enrollment Duration				
Regular primary care	78.41	75.31	72.00	68.32
Irregular primary care	54.01	51.51	48.53	46.13
No primary care	29.94	27.15	23.54	23.51

*Paired t-test = $p \leq 0.0001$ for difference by primary care continuity within each measurement year

Administrative Data Appendix Table 5.3.2. ED visit rate (per 1,000 member-months) by preventive visit continuity and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
2-Years Enrollment Duration				
Regular preventive visits	61.67	58.05		
Irregular preventive visits	71.51	67.66		
No preventive visits	68.91	63.09		
3-Years Enrollment Duration				
Regular preventive visits	56.22	50.83	49.80	
Irregular preventive visits	71.30	65.44	62.24	
No preventive visits	68.83	61.83	58.04	
4-Years Enrollment Duration				
Regular preventive visits	46.34	45.60	44.62	42.02
Irregular preventive visits	65.93	63.81	60.42	57.32
No preventive visits	66.45	61.86	58.46	55.99

*Paired t-test = $p \leq 0.0001$ for difference by preventive visit continuity within each measurement year

Administrative Data Appendix Table 5.3.3. High-frequency ED utilizers by primary care continuity and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
2-Years Enrollment Duration				
Regular primary care	2.94%	2.76%		
Irregular primary care	1.54%	1.40%		
No primary care	0.71%	0.67%		
3-Years Enrollment Duration				
Regular primary care	3.03%	2.84%	2.69%	
Irregular primary care	1.71%	1.34%	1.31%	
No primary care	0.72%	0.50%	0.43%	
4-Years Enrollment Duration				
Regular primary care	2.94%	2.67%	2.43%	2.26%
Irregular primary care	1.52%	1.40%	1.22%	1.16%
No primary care	0.46%	0.46%	0.33%	0.41%

*Chi-squared p≤0.0001 for difference by primary care continuity within each measurement year

Administrative Data Appendix Table 5.3.4. High-frequency ED utilizers by preventive visit continuity and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
2-Years Enrollment Duration				
Regular preventive visits	1.72%	1.66%		
Irregular preventive visits	2.33%	2.17%		
No preventive visits	2.22%	2.06%		
3-Years Enrollment Duration				
Regular preventive visits	1.61%	1.30%	1.36%	
Irregular preventive visits	2.29%	2.09%	2.02%	
No preventive visits	2.32%	2.03%	1.86%	
4-Years Enrollment Duration				
Regular preventive visits	1.19%	1.04%	1.02%	0.99%
Irregular preventive visits	2.22%	2.02%	1.81%	1.73%
No preventive visits	2.31%	2.13%	1.88%	1.71%

*Chi-squared p≤0.0001 for difference by preventive visit continuity within each measurement year

Administrative Data Appendix Table 5.3.5. Logistic regression - High frequency ED

	2-Years Enrollment			*3- or 4-Years Enrollment*		
	OR	95% CI		OR	95% CI	
Preventive visit continuity						
Regular preventive visits	0.698	0.629	0.775	0.795	0.746	0.848
Irregular preventive visits	0.891	0.829	0.959	0.934	0.875	0.997
No preventive visits	Ref.	-	-	Ref.	-	-
Year of initial HMP-MC enrollment						
2014-15	Ref.	-	-	Ref.	-	-
2016-17	0.745	0.686	0.809	0.796	0.748	0.846
2018	0.700	0.595	0.824	0.489	0.444	0.540
2019-20	0.473	0.435	0.514	0.402	0.321	0.503
Age at initial HMP-MC enrollment						
19-20	1.430	1.297	1.578	1.479	1.355	1.615
21-29	1.363	1.254	1.481	1.480	1.382	1.584
30-49	Ref.	-	-	Ref.	-	-
50-64	0.479	0.435	0.528	0.480	0.446	0.516
FPL at initial HMP-MC enrollment						
0-35%	Ref.	-	-	Ref.	-	-
36-99%	0.773	0.708	0.844	0.7xx	0.685	0.791
100+%	0.626	0.560	0.699	0.621	0.567	0.681
Sex						
Female	1.575	1.471	1.686	1.415	1.340	1.495
Male	Ref.	-	-	Ref.	-	-
Race/Ethnicity						
Hispanic	1.101	0.938	1.292	1.016	0.875	1.180
Black, non-Hispanic	1.380	1.284	1.484	1.381	1.303	1.463
White, non-Hispanic	Ref.	-	-	Ref.	-	-
Other/Unknown	0.753	0.658	0.861	0.730	0.650	0.820
Any COPD, Asthma, CV or Diabetes						
No	Ref.	-	-	Ref.	-	-
Yes	3.615	3.365	3.883	3.684	3.482	3.898
Use of specialty mental health						
No	Ref.	-	-	Ref.	-	-
Yes	4.689	4.382	5.017	4.619	4.380	4.871

Logistic regression controlling for demographic characteristics (year of initial HMP enrollment, age, income level, race/ethnicity), chronic conditions (COPD, asthma, cardiovascular disease, diabetes), use of specialty mental health services, and preventive visit continuity

Evaluation question 5.4: Does HMP promote more consistent use of services to manage chronic conditions over time?

Administrative Data Appendix Table 5.4.1. Preventive visit continuity by chronic conditions

	HMP-MC Enrollment Duration		
	2-Years Enrollment	*3-Years Enrollment*	*4-Years Enrollment*
COPD			
Preventive visit continuity			
Regular preventive visits	18.30%	10.29%	7.13%
Irregular preventive visits	37.15%	54.20%	64.30%
No preventive visits	44.55%	35.51%	28.57%
Asthma			
Preventive visit continuity			
Regular preventive visits	21.18%	12.64%	9.39%
Irregular preventive visits	38.53%	55.52%	66.84%
No preventive visits	40.29%	31.84%	23.77%
Cardiovascular			
Preventive visit continuity			
Regular preventive visits	17.62%	10.15%	7.41%
Irregular preventive visits	35.24%	52.09%	62.16%
No preventive visits	47.14%	37.76%	30.43%
Diabetes			
Preventive visit continuity			
Regular preventive visits	19.35%	10.98%	8.13%
Irregular preventive visits	37.03%	53.29%	63.41%
No preventive visits	43.63%	35.73%	28.46%
None			
Preventive visit continuity			
Regular preventive visits	13.86%	8.53%	7.05%
Irregular preventive visits	30.37%	44.73%	56.16%
No preventive visits	55.77%	46.74%	36.79%

Administrative Data Appendix

Administrative Data Appendix Table 5.4.2. ED visit rate (per 1,000 member-months) by chronic condition and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
2-Years Enrollment Duration				
COPD	127.41	124.08**		
Asthma	128.97	117.38***		
Cardiovascular	129.88	124.75***		
Diabetes	103.49	96.68***		
3-Years Enrollment Duration				
COPD	124.06	119.68**	116.98**	
Asthma	125.72	114.59**	107.90**	
Cardiovascular	124.65	121.09	118.52**	
Diabetes	103.88	96.58**	96.43**	
4-Years Enrollment Duration				
COPD	108.71	106.06*	103.48**	101.16**
Asthma	113.03	109.30**	105.25**	97.78**
Cardiovascular	112.62	109.05**	107.48**	105.78**
Diabetes	88.01	87.39	86.08*	83.45**

T-test comparison with Year 1 rate: *p≤0.01, **p≤0.001, ***p≤0.0001

Administrative Data Appendix Table 5.4.3. High-frequency ED utilizers by chronic condition and HMP-MC enrollment duration

	Year 1	Year 2	Year 3	Year 4
3-Years Enrollment Duration				
COPD	5.58%	5.44%	5.16%	
Asthma	5.63%	5.26%	4.83%	
Cardiovascular	5.33%	5.32%	5.48%	
Diabetes	4.40%	4.08%	4.19%	
4-Years Enrollment Duration				
COPD	4.79%	4.39%	4.23%	3.99%
Asthma	4.99%	4.71%	4.29%	3.74%
Cardiovascular	4.81%	4.63%	4.55%	4.30%
Diabetes	3.58%	3.46%	3.35%	3.22%

Beneficiary Survey Appendix

The Beneficiary Survey Appendix includes additional text and tables related to the methods and results using beneficiary survey data.

Beneficiary Survey Appendix

Methodology

Target and comparison populations

The 2021/2022 HMV beneficiary survey included two groups: beneficiaries who participated in prior HMV surveys and agreed to be recontacted (Longitudinal Cohort), and a refresher sample of more recently enrolled HMP beneficiaries (New Cohort). Recontacting existing cohorts allowed for a more thorough understanding of the experiences of beneficiaries over time, while adding a new cohort allowed for broader representation of the HMP population and understanding of the experiences and impact of the program for those who enrolled more recently.

Specifically,

- Longitudinal Cohort 1 sample represents the population of those who initially enrolled in HMP between April 2014 and October 2015 with a minimum of 12 months cumulative enrollment and 9 months of HMP-Managed Care enrollment and were still enrolled in September 2021. They completed their initial HMV survey in 2016 (N=4,106) and follow-up surveys in 2017 (N=3,104) and 2018 (N=2,608). Cohort I beneficiaries were enrolled in HMP-MC at the time of initial survey sampling; they were eligible for follow-up surveys in 2017 and 2018 if they continued to reside in Michigan, regardless of HMP enrollment status.
- Longitudinal Cohort 2 sample represents the population of those who initially enrolled in HMP between January 2016 and December 2017 with a minimum of 12 months cumulative enrollment and 9 months of HMP-Managed Care enrollment and were still enrolled in September 2021. They completed their initial HMV survey in 2018 (N=2,602).
- New Cohort sample represents the population of those who initially enrolled in HMP between August 2019 and December 2020 a minimum of 12 months cumulative enrollment and 9 months of HMP-Managed Care enrollment and were still enrolled in September 2021.

The Longitudinal Cohort and the New Cohort had the same inclusion criteria at the time of their initial HMV survey selection: at least 12 months in any HMP benefit; HMP-MC enrollment in the month of selection and in the at least 9 of the prior 12 months; preferred language of English, Spanish or Arabic; and complete address and phone information. To ensure broad representation across income levels and geographic regions, stratified sample selection was done for each cohort's initial sample selection according to the following proportions by State of Michigan prosperity region and income level:

Beneficiary Survey Appendix Table 1. Sampling strata by income and prosperity region used in 2016-2018

Federal Poverty Level	Prosperity Region				
	UP/NW/NE	W/EC/E	SC/SW/SE	DET	Total
0-35%	7.0%	12.0%	8.0%	12.8%	39.9%
36-99%	6.0%	10.5%	7.0%	11.2%	34.8%
≥100%	4.9%	7.5%	5.0%	8.0%	25.5%
Total	17.9%	30.0%	20.0%	32.0%	100.0%

Beneficiary Survey Appendix

Beneficiaries in the Longitudinal Cohort were eligible for the 2021/2022 HMV survey if they were enrolled in HMP-MC enrollment in the month selected, regardless of any gaps in HMP coverage; had complete address and phone number in the data warehouse; and agreed to be recontacted on the prior HMV survey. Beneficiary Survey Appendix Table 2 outlines the eligibility determination for Cohorts 1 and 2.

Beneficiary Survey Appendix Table 2. 2021/2022 HMV eligibility of HMV Longitudinal Cohort

2021/2022 HMV Eligibility	Cohort 1		Cohort 2	
	n	(%)	n	(%)
Total	2,608	100.0%	2,602	100.0%
Eligible for HMV 2021/2022	991	38.0%	1,160	44.6%
Ineligible for HMV 2021/2022 *	1,617	62.0%	1,442	55.4%
No recontact consent	17	0.7%	85	3.3%
Not enrolled in HMP-MC	1,508	57.8%	1,319	50.7%
Deceased	74	2.8%	59	2.3%
Age≥65 years old	330	12.7%	196	7.5%
No usable address	21	0.8%	29	1.1%
No usable phone number	213	8.2%	171	6.6%

*Ineligibility criteria are not mutually exclusive. In other words, some cases may meet multiple criteria. Hence, the proportions of ineligibility criteria do not sum up to the total ineligible proportion.

Sampling for the New Cohort (n=10,700) was drawn from the HMP beneficiary data using disproportionate stratification by federal poverty levels and prosperity regions that were used for previous HMV sampling (shown above). With that stratification, the effective sampling rate differed by strata, as shown below

Beneficiary Survey Appendix Table 3. 2021/2022 HMV New Cohort sampling rate by sampling strata

Sampling Strata (Region x FPL)	Eligible	Sampled	Sampling Rate
UP/NW/NE, FPL≤35%	3,223	743	23.1%
UP/NW/NE, 35%<FPL<100%	2,309	648	28.1%
UP/NW/NE, FPL≥100%	1,955	526	26.9%
W/EC/E, FPL≤35%	12,475	1,277	10.2%
W/EC/E, 35%<FPL<100%	7,737	1,132	14.6%
W/EC/E, FPL≥100%	6,206	804	13.0%
SC/SW/SE, FPL≤35%	9,785	854	8.7%
SC/SW/SE, 35%<FPL<100%	5,708	751	13.2%
SC/SW/SE, FPL≥100%	4,275	537	12.6%
DET, FPL≤35%	22,463	1,364	6.1%
DET, 35%<FPL<100%	11,855	1,204	10.2%

DET, FPL≥100%	8,300	860	10.4%
Total	96,291	10,700	11.1%

Eligibility determination and sample selection for the 2021/2022 HMV survey was done monthly; beneficiaries could be eligible in multiple months but selected only once. At the beginning of each month, we conducted eligibility checks for beneficiaries who had not yet completed the survey, and noted newly determined ineligibility (e.g., deceased, no longer enrolled in HMP-MC).

Beneficiary Survey Appendix Table 4 describes eligibility information and completion rates for the Longitudinal and New Cohorts. We mailed recruitment materials to the selected beneficiaries to introduce the survey, provide options to schedule an interview time, and to note the $25 gift card incentive for completion. We then placed telephone calls to selected beneficiaries; we made at least two attempts to contact them by phone. Surveys were completed with trained interviewers by telephone in English, Spanish or Arabic.

Using criteria for the American Association for Public Opinion Research (AAPOR) Response Rate 3 (RR3), the overall response rate of the 2021/2022 HMV survey was 36.6%. The response rates of the 2021/2022 HMV survey ranged from 28.8% for the New Cohort to 63.1% for Longitudinal Cohort II (enrolled in HMP during 2016-2017) and 84.4% for Longitudinal Cohort I (enrolled in HMP during 2014-2015).

Beneficiary Survey Appendix Table 4. Eligibility information and completion rates for the Longitudinal and New Cohorts

	Initial HMP enrollment	Prior HMV survey dates (completed)	Eligible for 2021/22 HMV survey	Completed 2021/22 HMV survey	Response Rate
Longitudinal Cohort: Cohort I	April 2014 - October 2015	2016 (N=4,106) 2017 (N=3,104) 2018 (N=2,608)	991	806	84.4%
Longitudinal Cohort: Cohort II	January 2016 - December 2017	2018 (N=2,602)	1160	669	63.1%
New Cohort	August 2019 - December 2020	--	10,700	2,607	28.8%
TOTAL				4,082	36.6%

Evaluation measures

Key outcome measures were based on validated items and scales used in prior HMV surveys. Health-related items were drawn from national surveys, including the National Health and Nutrition Exam Survey (NHANES),[1] Health Tracking Household Survey (HTHS),[2] National

[1] NHANES (National Health and Nutrition Exam Survey, CDC)
[2] HTHS (Health Tracking Household Survey)

Health Interview Survey (NHIS),[3] Behavioral Risk Factor Surveillance System (BRFSS[4] and MiBRFSS[5]), Short Form Health Survey (SF-12),[6] Food Attitudes and Behaviors Survey,[7] Consumer Assessment of Healthcare Providers and Systems (CAHPS),[8] Employee Benefit Research Institute Consumer Engagement in Healthcare Survey (CEHCS),[9] Commonwealth Fund Health Care Quality Survey,[10] and Patient Activation Measure.[11]

Survey items that address specific HMP features drew on questions that were used in prior HMV surveys[12,13,14,15,16] and informed by experiences, perspectives, and themes that arose in the qualitative interviews with beneficiaries. Items assessing access to, use of and experiences with telehealth, patient portals, and general use of internet to access health care and information, were drawn from published literature and added to account for the increase in such services during the pandemic.[17,18]

Measures of employment and social determinants of health, used in previous HMV surveys, were drawn from national surveys, such as the American Community Survey (ACS),[19] the Current Population Survey (CPS),[20] and the Health Reform Monitoring Survey (HRMS).[21] Items addressing the impact of the pandemic on employment and social determinants of health were drawn from the NIH PhenX toolkit.[22]

Composite variables

We developed several composite variables that combine responses to multiple survey questions. These composite variables include the following items:

- Healthy behavior score ranges from 0 (neither healthy behavior) to 2 (both healthy behaviors) from the following questions:

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[3] NHIS (National Health Interview Survey, CDC)
[4] BRFSS (Behavioral Risk Factor Surveillance System, CDC)
[5] MiBRFSS (Michigan Behavioral Risk Factor Surveillance System, MDHHS)
[6] SF-12 (Short Form Health Survey, RAND)
[7] FAB (Food Attitudes and Behaviors Survey, NCI)
[8] CAHPS (Consumer Assessment of Healthcare Providers and Systems)
[9] Consumer Engagement in Health Care Survey (EBRI: CEHCS)
[10] Commonwealth Fund Health Care Quality Survey
[11] PAM (Patient Activation Measure)
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[18] Agha, Z., Schapira, R. M., Laud, P. W., McNutt, G., & Roter, D. L. (2009). Patient satisfaction with physician-patient communication during telemedicine. *Telemedicine journal and e-health, 15*(9), 830-839.
[19] ACS (American Community Survey)
[20] CPS (Current Population Survey)
[21] HRMS (Health Reform Monitoring Survey)
[22] NIH PhenX Toolkit

  - In the past 7 days how many days did you eat 3 or more servings of fruits and vegetables? (1 point for response of *3-7 days*)
  - In the past 7 days, how many days did you exercise for at least 20 minutes? (1 point for response of *3-7 days*)
- Limiting unhealthy behavior score ranges from 0 (all four unhealthy behaviors) to 4 (no unhealthy behaviors) from the following questions:
  - In the past 7 days, how many days did you have sugary drinks? (1 point for response of *0-2 days*)
  - In the past 7 days, how many days did you have [5 for men/4 for women] alcoholic drinks? (1 point for response of *0 days*)
  - In the past 30 days have you smoked or used tobacco in any form? (1 point for response of *no*)
  - How often do you use drugs or medications which affect your mood or help you relax, other than exactly as prescribed for you? (1 point for response of *never* or *rarely*)
- Self-efficacy score ranges from 0 to 5, based on response of *always* to the following statements:
  - I know when I need to go to the doctor
  - I keep my appointments
  - I know how to prevent problems with my health
  - I am able to follow my doctor's treatment advice in between visits
  - When I have health care visits, I bring a list of questions or concerns I want to talk about.
- Has a primary care provider is defined as a response of *yes* to either of the following questions:
  - Is this your primary care provider for your Healthy Michigan Plan coverage?
  - Do you have a primary care provider through your health plan?
- Any health improvement in past year is defined as a response of *gotten better* to one or more of the following questions:
  - In the last year, would you say your physical health has gotten better, stayed the same, or gotten worse?
  - In the last year, would you say your mental health has gotten better, stayed the same, or gotten worse?
  - In the last year, has the health of your teeth and gums gotten better, stayed the same, or gotten worse?
- Primary care barriers, among those who reported having a primary care provider, is defined by one or more of the following responses:
  - Have you had any difficulties getting care the primary care provider's office [open-ended]? (*yes* if respondent reported difficulties)
  - In the last 12 months, how easy or difficult was it to get an appointment with your primary care provider? (*yes* if response of difficult or very difficult)
  - In the last 12 months, when you contacted your primary care provider's office for advice or information, how often did you get a response within 24 hours? (*yes* if response of sometimes or never)

- Any difficulties accessing prescription medications, among those who reported any prescription medications in the past 12 months, is defined as response of *yes* to one or more of the following questions:
    - In the last 12 months, were you ever charged more than expected for your prescription?
    - In the last 12 months, have you delayed or avoided picking up your prescription because of the cost?
    - In the last 12 months, have you taken less than instructed or skipped doses to make medications last longer?
    - In the last 12 months, have you missed doses because you didn't get a refill on time?
    - In the last 12 months, have you stopped taking your medicine or took a different dose without talking to a doctor?
- Any reported barriers to work is defined as a response of *yes* to any of the following interfering with their ability to work, how much they can work, or the type of work they can do:
    - Health
    - Transportation
    - Prior conviction or legal action
    - Caregiving responsibilities
    - Lack of jobs in the area

Analytic methods

Survey weights

There were 2,608 and 2,602 cases from Cohorts 1 and 2, respectively. From there, 1,617 and 1,442 were deemed ineligible for various reasons as noted in Beneficiary Survey Appendix Table 5. This left *n*=991 and *n*=1,160 enrollees from Cohorts 1 and 2 to be used as a sample for the 2021/2022 HMV Survey Longitudinal Cohort. The New Cohort was chosen from the enrollees in the data warehouse based on inclusion criteria. In keeping with previous HMV survey sampling, the New Cohort sampling used disproportionate stratification based on 12 classes that cross Michigan geography (Upper Peninsula/Northwest/Northeast; West/East central/East; South central/Southwest/Southeast; Detroit) and FPL (0-35%, 36-99%, ≥100%) for *n*=10,700.
The results of calls on all sampled enrollees are summarized by sample source in Beneficiary Survey Appendix Table 5. In total, there were 12,851 enrollees (991 Cohort 1; 1,160 Cohort 2;10,700 New Cohort) included in the sample. As shown in Beneficiary Survey Appendix Table 5, a total of *n*=4,082 enrollees (*n*=806 Cohort 1; *n*=669 Cohort 2; *n*=2,607 New Cohort) completed the survey.

Beneficiary Survey Appendix Table 5. 2021/2022 HMV survey call results by sample source

	Sample Source					
	Cohort 1		Cohort 2		New Cohort	
	n	(%)	n	(%)	n	(%)
Sampled for 2021/2022 HMV	991	100.0	1,160	100.0	10,700	100.0
Response	806	81.3	669	57.7	2,607	24.4
Nonresponse	43	4.3	161	13.9	2,396	22.4
Partial complete	1	0.1	2	0.2	17	0.2

Refusal	6	0.6	44	3.8	500	4.7
Noncontact	6	0.6	23	2.0	553	5.2
Other nonresponse	30	3.0	92	7.9	1,326	12.4
Ineligible	32	3.2	78	6.7	912	8.5
Non-working number	24	2.4	62	5.3	999	9.3
Unknown eligibility	86	8.7	190	16.4	3,786	35.4

*Ineligibility criteria are not mutually exclusive. In other words, some cases may meet multiple criteria. Hence, the proportions of ineligibility criteria do not sum up to the total ineligible proportion.

The steps to create weights for the 2021/2022 HMV survey are described below. Weights were developed separately by sample source, because the sample eligibility requirements differed and the call outcomes, including nonresponse and eligibility ascertainment, differed by sample source. However, the weighting process itself was the same across sources. Below, we describe the general process and, when sources were treated differently, we note the differences.

1. Base Weight

The source of the base weight differed by sample source. For Cohorts 1 and 2, it was the final weight computed in the most recent data collection with respective cohorts: for Cohort 1, the HMV Follow-up 2 in 2018; and for Cohort 2, the HMV 2 survey in 2018. For the New Cohort, we computed the selection weight based on the stratification described above.
For a given sample enrollee i ($i = 1, \dots, 12851$), the base weight is as follows:

$$w_{1,i} = \begin{cases} fu\_w_{6,2018,i} & \text{for } i \in (c = 1) \\ w_{6,2018,i} & \text{for } i \in (c = 2) \\ N_h/n_h & \text{for } i \in (c = 3) \end{cases}$$

where $fu\_w_{6,2018,i}$ is the final weight from the HMV Follow-up 2 in 2018 for Cohort 1; $w_{6,2018,i}$ is the final weight from the HMV 2 survey in 2018 for Cohort 2; c indicates the sample source (1: Cohort 1; 2: Cohort 2; 3: New Cohort); and N_h and n_h are the population size and the sample size of New Cohort for sampling stratum h that combines geography and FPL, where $h = 1, \dots, 12$.

2. Nonworking Number Adjustment

We used the following adjustment factor, $f_{2,chi}$, for nonworking numbers as considered out of our target population.

$$f_{2,chi} = \begin{cases} 0, & \text{if } i \text{ is not a working number} \\ \dfrac{\sum_{i \in ch} w_{1,i}}{\sum_{i \in ch}\left(I\_WR_i \times w_{1,i}\right)}, & \text{if } i \text{ is a working number} \end{cases}$$

where I_WR_i is a 1/0 indicator for working number status (1: working number, 0: nonworking number). The resulting weight is:

$$w_{2,i} = f_{2,chi} \times w_{1,i}$$

3. Unknown Eligibility Adjustment

An adjustment factor is applied to the weight from the previous stage to account for those that were working numbers but never contacted as follows.

$$f_{3,chi} = \begin{cases} 0, & \text{if eligibility is unknown for } i \\ \dfrac{\sum_{i \in ch} w_{2,i}}{\sum_{i \in ch}\left(I\_UE_i \times w_{2,i}\right)}, & \text{if eligibility is known for } i \end{cases}$$

where I_UE_i is a 1/0 indicator for unknown eligibility status (1: known eligibility; 0: unknown eligibility. The resulting weight is:

$$w_{3,i} = f_{3,chi} \times w_{2,i}$$

4. Known Eligibility Adjustment

For those who were contacted but were not eligible for various reasons were removed through the following:

$$f_{4,chi} = \begin{cases} 0, & \text{if } i \text{ is ineligible} \\ \dfrac{\sum_{i \in ch} w_{3,i}}{\sum_{i \in ch}\left(I\_EL_i \times w_{3,i}\right)}, & \text{if } i \text{ is eligible} \end{cases}$$

where I_EL_i is a 1/0 indicator for eligibility status (1: eligible; 0: ineligible). The resulting weight is:

$$w_{4,i} = f_{4,chi} \times w_{3,i}$$

5. Nonresponse Adjustment

As noted previously, the response rates varied by sample source. Specifically, there were 849 cases ascertained to be eligible from Cohort 1. Among them, 806 enrollees responded. From Cohort 2, 669 out of 830 eligible enrollees responded. From New Cohort, 2,607 out of 5,003 eligible enrollees responded.

5.1. Nonresponse analysis

For both respondents and nonrespondents from all sample sources, we have the MDHHS warehouse data from the time of sampling into HMV. Additionally, for Cohorts 1 and 2, we have the survey data from the last time these cohorts were interviewed. We used these data sets to compare respondents and nonrespondents separately by cohorts on the following characteristics:

<u>From warehouse data used for sampling to initial HMV entry</u>

- FPL (0-35%, 36-99%, ≥100%)
- Region (Upper Peninsula/Northwest/Northeast; West/East central/East; South central/Southwest/Southeast; Detroit)
- Sampling stratum (FPL x Region)
- Age (19-34; 35-49; 50-64 years old)
- Sex (Male; Female)
- Race/ethnicity (Non-Hispanic White; Other)

<u>From the most recent survey</u>

- Marital status (Married; Other)
- Employment status (Employed; Other)
- Self-reported health (Fair/Poor; Excellent/Very good/Good)
- Usual source of care (Have usual source of care; Other)

Beneficiary Survey Appendix

Beneficiary Survey Appendix Table 6 compares nonrespondents and respondents among eligible cases by sample source through the Rao-Scott χ^2 test. Overall, nonrespondents and respondents were similar for Cohort 1 on most characteristics. For Cohort 2, statistical differences were observed on sampling strata, age, sex and usual source of care. For example, among those who reported having a usual source of case in the last survey and were eligible for the 2021/2022 HMV survey, 81.6% responded, whereas those who reported no usual source of care responded to the 2021/2022 HMV survey at 69.1%, lower by 12.5 percentage points (p=0.01). For the New Cohort, Detroit residents were less likely to respond than those in other regions; and younger, male, and racial/ethnic minority enrollees were less likely to respond than their counterparts.

Beneficiary Survey Appendix Table 6. Comparison of characteristics of nonrespondents and respondents of the 2021/2022 HMV survey by sample source

	Cohort 1		Cohort 2		New Cohort	
	Non-Resp (n=43)	Resp (n=806)	Non-Resp (n=161)	Resp (n=669)	Non-Resp (n=2,396)	Resp (n=2,607)
FPL at HMV entry						
0-35%	5.3	94.7	20.6	79.4	48.6	51.4
36-99%	5.0	95.0	18.8	81.2	48.4	51.6
100%+	4.7	95.3	18.7	81.3	46.2	53.8
	χ^2=0.1 (*df*=2); *p*=0.95		χ^2=0.4 (*df*=2); *p*=0.83		χ^2=0.1 (*df*=2); *p*=0.95	
Region at HMV entry						
UP/NW/NE	5.0	95.0	14.1	85.9	42.2	57.8
W/EC/E	6.0	94.0	19.2	80.8	44.6	55.4
SC/SW/SE	4.9	95.1	17.6	82.4	44.9	55.1
DET	4.1	95.9	23.6	76.4	55.1	44.9
	χ^2=1.0 (*df*=3); *p*=0.81		χ^2=6.1 (*df*=3); *p*=0.11		χ^2=56.9 (*df*=3); *p*<0.01	
Sampling Stratum						
1. UP/NW/NE, 0-35	5.6	94.4	12.3	87.7	39.2	61.8
2. UP/NW/NE, 36-99	6.2	93.8	14.3	85.7	43.0	57.0
3. UP/NW/NE, 100+	2.4	97.6	16.0	84.0	45.2	54.8
4. W/EC/E, 0-35	7.0	93.0	24.0	76.0	45.8	54.2
5. W/EC/E, 36-99	4.9	95.1	12.9	87.1	47.5	52.5
6. W/EC/E, 100+	6.2	93.8	23.4	76.6	38.8	61.2
7. SC/SW/SE, 0-35	2.9	97.1	27.3	72.7	45.6	54.4
8. SC/SW/SE, 36-99	4.3	95.7	19.0	81.0	43.5	56.5
9. SC/SW/SE, 100+	8.9	91.1	4.3	95.7	46.1	53.9
10. DET, 0-35	4.8	95.2	19.0	81.0	57.3	42.7
11. DET, 36-99	5.1	94.9	26.2	73.8	54.6	45.4
12. DET, 100+	1.7	98.3	26.1	73.9	52.9	47.1
	χ^2=5.3 (*df*=11); *p*=0.92		χ^2=21.5 (*df*=11); *p*=0.03		χ^2=69.0 (*df*=11); *p*<0.01	
Age at HMV entry						
19-35 yrs	4.8	95.2	28.1	71.9	53.7	46.3
36-49 yrs	7.1	92.9	19.1	80.9	47.9	52.1
50-64 yrs	3.7	96.3	9.6	90.4	35.1	64.9
	χ^2=3.6 (*df*=2); *p*=0.16		χ^2=30.4 (*df*=2); *p*<0.01		χ^2=117.2 (*df*=2); *p*<0.01	
Sex at HMV entry						
Female	4.4	95.6	16.1	83.9	41.8	58.2
Male	6.2	93.8	24.5	75.5	54.7	45.3
	χ^2=1.8 (*df*=1); *p*=0.24		χ^2=8.9 (*df*=1); *p*<0.01		χ^2=83.4 (*df*=1); *p*<0.01	
Race at HMV entry						
Non-Hispanic White	5.7	94.3	18.0	82.0	46.3	53.7
Other	3.7	96.3	22.6	77.4	50.7	49.3
	χ^2=1.6 (*df*=1); *p*=0.21		χ^2=2.3 (*df*=1); *p*=0.13		χ^2=9.2 (*df*=1); *p*<0.01	

Married in the last survey						
Not married	4.2	95.8	19.7	90.3	na	na
Married	7.7	92.3	18.4	91.6	na	na
	χ^2=4.0 (*df*=1); *p*=0.04		χ^2=0.2 (*df*=1); *p*=0.68			
Employed in the last survey						
Not employed	3.1	96.9	16.7	83.3	na	na
Employed	6.3	93.7	20.9	79.1	na	na
	χ^2=4.3 (*df*=1); *p*=0.04		χ^2=2.1 (*df*=1); *p*=0.14			
Self-rated health in the last survey						
Fair, Poor	6.1	93.9	15.9	84.1	na	na
Excellent, very good, good	4.8	95.2	20.3	79.7	na	na
	χ^2=0.6 (*df*=1); *p*=0.46		χ^2=1.7 (*df*=1); *p*=0.19			
Had usual source of care in the last survey						
Yes	4.8	95.2	18.4	81.6	na	na
Other than yes	6.2	93.8	30.9	69.1	na	na
	χ^2=0.5 (*df*=2); *p*=0.47		χ^2=6.4 (*df*=1); *p*=0.01			

5.2. Nonresponse adjustment

Nonresponse was not a random phenomenon as it differed across characteristics examined in Beneficiary Survey Appendix Table 6. Further, this differed by sample source. We adjusted for this through a logistic regression approach that controlled for characteristics in Beneficiary Survey Appendix Table 6 associated with differential nonresponse patterns. Specifically, for Cohort 1, we modelled the binary response status with sex, age, marital status, employment status and usual source of care; for Cohort 2, sampling strata, age, sex, race, employment status, self-rated health and usual source of care; and for New Cohort, sampling strata, age, sex and race. The adjustment factor, $f_{5,ci}$, was the inverse of response propensity estimated from the logistic regression for each sample source, c. The resulting weight is:

$$w_{5,i} = f_{5,ci} \times w_{4,i}$$

6. Post-stratification

The target population for each sample source was defined earlier. Under this definition, the population size was *N*=153,353, *N*=76,658 and *N*=96,291 for Cohort 1, Cohort 2 and New Cohort, respectively. Because age, sex, race/ethnicity and sampling stratum for these populations were known from the warehouse data, any potential discrepancies in these characteristics between the target population and the nonresponse adjusted sample were controlled in the post-stratification separately by sample source. The resulting weight is $w_{6,i}$. When using this post-stratified weight, the sample should match the target population perfectly with respect to age, sex, race/ethnicity and sampling stratum.

Beneficiary Survey Appendix

Additional Tables

Evaluation question 1.2: What is the association between beneficiary knowledge of the Healthy Behaviors Incentives program and efforts to maintain or improve health?

Beneficiary Survey Appendix Table 1.2.1. Health behaviors and self-efficacy by reported knowledge of incentive for HRA completion

	I may get a reduction in the amount I have to pay if I complete an HRA			
	Yes		No/Don't know	
	Col %	95% CI	Col %	95% CI
Healthy behaviors				
Frequent fruits/veggies (3 or more days)**	78.3	[73.8, 82.3]	70.8	[67.7, 73.8]
Frequent exercise (3 or more days)	59.5	[54.4, 64.4]	55.8	[52.6, 59.1]
Unhealthy behaviors				
Frequent sugary drinks (3 or more days)*	46.8	[41.8, 51.9]	53.2	[49.9, 56.4]
Binge drinking in past 7 days	20.2	[16.3, 24.8]	23.2	[20.4, 26.2]
Smoked or used tobacco in past 30 days	29.7	[25.3, 34.6]	34.6	[31.6, 37.7]
Frequent drug use (Sometimes/Almost every day)*	11.3	[8.5, 14.8]	16.4	[13.9, 19.2]
Self-efficacy				
I always know when I need to go to the doctor	80.0	[75.7, 83.7]	76.5	[73.6, 79.1]
I always keep my appointments**	86.8	[83.3, 89.8]	80.1	[77.5, 82.4]
I always know how to prevent problems with my health	53.9	[48.9, 58.9]	52.0	[48.8, 55.2]
I am always able to follow my doctor's treatment advice between visits	84.1	[79.7, 87.8]	81.3	[78.4, 83.8]
When I have health care visits, I always bring a list of questions or concerns	52.1	[47.1, 57.1]	48.3	[45.1, 51.6]

Pearson results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.2.2. Health behavior and self-efficacy by knowledge of financial incentive for HRA completion

	I may get a reduction in the amount I have to pay if I complete an HRA			
	Yes		No/Don't know	
	Mean	95% CI	Mean	95% CI
Healthy behavior score (0-2)**	1.38	[1.31, 1.45]	1.27	[1.22, 1.31]
Limiting unhealthy behavior score (0-4)**	2.92	[2.82, 3.02]	2.72	[2.65, 2.79]
Self-efficacy score (0-5)*	3.57	[3.44, 3.70]	3.38	[3.30, 3.47]

Adjusted Wald test results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.2.3. Knowledge of HRA incentive, healthy behavior and self-efficacy: Multivariate analysis

	Healthy behavior score		Self-efficacy score	
	Coefficient	**95% CI**	**Coefficient**	**95% CI**
HRA incentive knowledge	0.100*	[0.015, 0.185]	0.169*	[0.018, 0.321]
Age				
19-34	0.000		0.000	
35-50	-0.010	[-0.106, 0.086]	0.172	[-0.005, 0.350]
51-65	0.090*	[0.001, 0.179]	0.456***	[0.301, 0.611]
FPL				
0%	-0.087	[-0.178, 0.004]	-0.159*	[-0.315, -0.004]
0.1 to 99.99%	0.000		0.000	
100% or more	0.031	[-0.064, 0.126]	-0.042	[-0.206, 0.121]
Months enrolled in HMP-MC				
Less than 24 months	0.000		0.000	
24-47 months	0.051	[-0.040, 0.141]	-0.036	[-0.189, 0.117]
48+ months	0.008	[-0.060, 0.076]	-0.016	[-0.138, 0.105]
Urbanicity				
Urban	0.000		0.000	
Suburban	0.042	[-0.087, 0.172]	0.108	[-0.092, 0.308]
Rural	0.072	[-0.040, 0.183]	0.134	[-0.013, 0.281]
Gender				
Female	0.000		0.000	
Male	-0.046	[-0.126, 0.033]	-0.018	[-0.157, 0.121]
Non-binary, transgender, or other	--	--	--	--
Race/Ethnicity				
White, non-Hispanic	0.000		0.000	
Black, non-Hispanic	-0.026	[-0.128, 0.077]	0.258**	[0.072, 0.443]
Hispanic	0.014	[-0.166, 0.194]	-0.077	[-0.316, 0.162]
Arab, Chaldean, or Middle Eastern	0.037	[-0.132, 0.206]	0.505**	[0.176, 0.835]
Other, multi-racial, or not reported	0.056	[-0.093, 0.205]	0.051	[-0.254, 0.356]
Help reading health materials				
Never	0.000		0.000	
Sometimes	-0.047	[-0.144, 0.051]	-0.485***	[-0.666, -0.304]
Often	-0.159	[-0.323, 0.006]	-0.080	[-0.432, 0.271]
Intercept	1.296***	[1.202, 1.391]	3.297***	[3.117, 3.476]

Multivariate linear regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.2.4. Health behaviors and self-efficacy by knowledge of waived copayments

	Some kinds of visits, tests, and medicines have no copays			
	Yes		No/Don't know	
	Col %	95% CI	Col %	95% CI
Healthy behaviors				
Frequent fruits/veggies (3 or more days)	73.0	[69.9, 75.8]	73.2	[68.2, 77.6]
Frequent exercise (3 or more days)	58.3	[55.2, 61.4]	52.2	[46.6, 57.7]
Unhealthy behaviors				
Frequent sugary drinks (3 or more days)	50.4	[47.2, 53.5]	54.1	[48.5, 59.6]
Binge drinking in past 7 days	21.7	[19.1, 24.5]	24.3	[19.6, 29.8]
Smoked or used tobacco in past 30 days	32.6	[29.8, 35.6]	34.7	[29.5, 40.3]
Frequent drug use (Sometimes/Almost every day)	15.0	[12.7, 17.6]	14.9	[11.4, 19.4]
Self-efficacy				
I always know when I need to go to the doctor***	78.2	[75.5, 80.7]	75.1	[70.4, 79.2]
I always keep my appointments	82.4	[80.0, 84.6]	80.7	[76.5, 84.3]
I always know how to prevent problems with my health	52.2	[49.1, 55.3]	53.5	[48.0, 59.0]
I am always able to follow my doctor's treatment advice between visits	82.4	[79.6, 84.8]	80.9	[76.2, 84.9]
When I have health care visits, I always bring a list of questions or concerns	50.5	[47.4, 53.6]	45.8	[40.2, 51.4]

Pearson results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.2.5. Health behavior and self-efficacy scores by knowledge of waived copayments

	Some kinds of visits, tests, and medicines have no copays			
	Yes		No/Don't know	
	Mean	95% CI	Mean	95% CI
Healthy behavior score (0-2)	1.31	[1.27, 1.36]	1.25	[1.18, 1.33]
Limiting unhealthy behavior score (0-4)	2.80	[2.73, 2.86]	2.72	[2.59, 2.85]
Self-efficacy score (0-5)	3.46	[3.37, 3.54]	3.37	[3.21, 3.52]

Adjusted Wald test results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.2.6. Healthy behavior and self-efficacy scores by knowledge of waived copayments: Multivariate analysis

	Healthy behavior score		Self-efficacy score	
	Coefficient	**95% CI**	**Coefficient**	**95% CI**
Copay knowledge	0.029	[-0.058, 0.116]	0.085	[-0.084, 0.254]
Age				
19-34	0.000		0.000	
35-50	-0.011	[-0.107, 0.086]	0.172	[-0.006, 0.350]
51-65	0.092*	[0.003, 0.181]	0.458***	[0.305, 0.612]
FPL				
0%	-0.091	[-0.182, 0.001]	-0.165*	[-0.321, -0.009]
0.1 to 99.99%	0.000		0.000	
100% or more	0.037	[-0.058, 0.132]	-0.033	[-0.196, 0.130]
Months enrolled in HMP-MC				
Less than 24 months	0.000		0.000	
24-47 months	0.045	[-0.047, 0.137]	-0.047	[-0.201, 0.108]
48+ months	0.012	[-0.056, 0.079]	-0.011	[-0.132, 0.110]
Urbanicity				
Urban	0.000		0.000	
Suburban	0.049	[-0.083, 0.181]	0.120	[-0.085, 0.324]
Rural	0.074	[-0.038, 0.186]	0.138	[-0.007, 0.283]
Gender				
Female	0.000		0.000	
Male	-0.041	[-0.120, 0.038]	-0.007	[-0.146, 0.132]
Non-binary, transgender, or other	--	--	--	--
Race/Ethnicity				
White, non-Hispanic	0.000		0.000	
Black, non-Hispanic	-0.028	[-0.132, 0.075]	0.256**	[0.069, 0.444]
Hispanic	0.013	[-0.168, 0.194]	-0.077	[-0.314, 0.160]
Arab, Chaldean, or Middle Eastern	0.041	[-0.125, 0.206]	0.519**	[0.192, 0.846]
Other, multi-racial, or not reported	0.049	[-0.103, 0.200]	0.037	[-0.271, 0.345]
Help reading health materials				
Never	0.000		0.000	
Sometimes	-0.048	[-0.145, 0.050]	-0.484***	[-0.665, -0.303]
Often	-0.172*	[-0.334, -0.010]	-0.099	[-0.456, 0.258]
Intercept	1.300***	[1.188, 1.413]	3.275***	[3.039, 3.511]

Multivariate linear regression results, *p<.05, **p<.01, ***p<.001

Evaluation question 1.3: Is HRA completion associated with improved health status and health behaviors?

Beneficiary Survey Appendix Table 1.3.1. Patient report of primary care experiences in the past year

	N	%
No PCP	407	9.1
PCP, No Appt in past 12 m	641	17.6
PCP, Yes Appt in past 12 m, Completed an HRA	1,546	37.6
PCP, Yes Appt in past 12 m, No HRA	1,488	35.8
	4,082	100.0%

Beneficiary Survey Appendix Table 1.3.2. Reported topics during primary care visit in past year, by self-reported HRA status

	Completed HRA		Did not complete HRA	
	Col %	95% CI	Col %	95% CI
Primary care asked about health behaviors***				
Yes	91.4	[88.2, 93.8]	73.1	[68.9, 76.8]
No	7.8	[5.5, 11.0]	25.0	[21.4, 29.0]
Don't know	0.8	[0.4, 1.5]	1.9	[1.0, 3.6]
Primary care talked about health goals***				
Yes	84.1	[80.5, 87.1]	56.4	[51.9, 60.9]
No	14.9	[11.9, 18.4]	41.8	[37.4, 46.4]
Don't know	1.0	[0.6, 1.8]	1.7	[1.0, 2.9]
Primary care asked about things that make it hard to take care of health***				
Yes	65.3	[61.2, 69.3]	42.3	[37.8, 47.0]
No	32.3	[28.4, 36.5]	51.8	[47.2, 56.3]
Don't know	2.4	[1.7, 3.3]	5.9	[4.0, 8.5]
Primary care asked about things that cause worry or stress***				
Yes	76.1	[72.1, 79.6]	55.6	[51.0, 60.1]
No	22.8	[19.3, 26.7]	43.4	[38.9, 48.0]
Don't know	1.1	[0.6, 2.3]	1.0	[0.6, 1.7]
Primary care asked about social needs***				
Yes	45.4	[41.2, 49.8]	27.8	[23.8, 32.2]
No	49.9	[45.6, 54.1]	67.7	[63.2, 71.9]
Don't know	4.7	[3.1, 7.0]	4.4	[2.9, 6.9]
[#]Primary care talked about cutting back on smoking or tobacco use***				
Yes	93.0	[86.4, 96.5]	70.8	[62.3, 78.1]
No	6.9	[3.4, 13.6]	28.7	[21.4, 37.3]
Don't know	0.1	[0.0, 0.4]	0.5	[0.1, 2.1]

Pearson results, *p<.05, **p<.01, ***p<.001

[#]Includes respondents who reported using tobacco in past 30 days

Beneficiary Survey Appendix Table 1.3.3. HRA self-report vs. Data Warehouse completion

	Reported HRA completion in past year			
	Completed HRA		Did not complete HRA[#]	
	Col %	95% CI	Col %	95% CI
HRA completion since HMP enrollment (DW)***				
Yes	52.9	[48.7, 57.1]	31.9	[28.7, 35.3]
No	47.1	[42.9, 51.3]	68.1	[64.7, 71.3]

Pearson results, *p<.05, **p<.01, ***p<.001

[#]Includes respondents without PCP visit in past year and non-respondents.

Beneficiary Survey Appendix Table 1.3.4. Health status by primary care visit and HRA completion in past year

	PCP visit and HRA		PCP visit and no HRA		No PCP or no PCP visit	
	Col %	**95% CI**	**Col %**	**95% CI**	**Col %**	**95% CI**
Health status***						
Excellent/Very good/Good	73.8	[70.0, 77.3]	76.2	[72.3, 79.7]	85.9	[82.1, 88.9]
Fair/Poor	26.2	[22.7, 30.0]	23.8	[20.3, 27.7]	14.1	[11.1, 17.9]
Mental health status						
Excellent/Very good/Good	80.7	[77.0, 83.8]	79.5	[75.7, 82.8]	83.0	[79.1, 86.3]
Fair/Poor	19.3	[16.2, 23.0]	20.5	[17.2, 24.3]	17.0	[13.7, 20.9]
Health of teeth and gums						
Excellent/Very good/Good	66.0	[61.8, 70.0]	65.4	[60.8, 69.6]	64.4	[58.7, 69.7]
Fair/Poor	34.0	[30.0, 38.2]	34.6	[30.4, 39.2]	35.6	[30.3, 41.3]
Physical health in past year						
Gotten better	28.1	[24.4, 32.1]	25.1	[21.2, 29.4]	28.6	[23.9, 33.8]
Stayed the same	51.2	[46.9, 55.4]	54.4	[49.8, 58.9]	57.0	[51.5, 62.4]
Gotten worse	20.7	[17.7, 24.0]	20.5	[17.2, 24.4]	14.4	[10.7, 19.1]
Mental health in past year						
Gotten better	22.7	[19.4, 26.4]	22.8	[19.2, 26.9]	28.7	[23.9, 34.1]
Stayed the same	60.8	[56.6, 64.9]	59.1	[54.6, 63.5]	58.9	[53.4, 64.3]
Gotten worse	16.5	[13.6, 19.8]	18.1	[14.8, 21.9]	12.3	[9.3, 16.3]
Health of teeth and gums in past year						
Gotten better	16.2	[13.3, 19.6]	16.6	[13.4, 20.5]	14.8	[11.4, 18.9]
Stayed the same	63.1	[58.9, 67.1]	63.9	[59.4, 68.2]	64.7	[59.2, 69.8]
Gotten worse	20.7	[17.5, 24.4]	19.4	[16.1, 23.2]	20.6	[16.3, 25.6]
Number of days physical health not good***						
0 days	48.6	[44.3, 52.9]	53.1	[48.6, 57.6]	59.9	[54.5, 65.1]
1-4 days	17.7	[14.8, 21.1]	14.5	[12.0, 17.4]	18.5	[14.7, 23.1]
5+ days	33.7	[29.8, 37.8]	32.4	[28.5, 36.6]	21.6	[17.6, 26.1]
Number of days mental health not good						
0 days	59.7	[55.6, 63.8]	55.0	[50.5, 59.5]	62.6	[57.4, 67.6]
1-4 days	14.6	[11.9, 17.9]	15.2	[12.3, 18.7]	12.4	[9.7, 15.7]
5+ days	25.6	[22.3, 29.3]	29.8	[25.9, 33.9]	25.0	[20.7, 29.9]
Number of days poor physical or mental health limited usual activities						
0 days	55.6	[51.4, 59.8]	55.7	[51.2, 60.1]	62.9	[57.5, 68.1]
1-4 days	13.4	[10.8, 16.4]	14.7	[11.7, 18.3]	15.0	[11.3, 19.6]
5+ days	31.0	[27.2, 35.0]	29.6	[25.8, 33.7]	22.1	[18.1, 26.6]

Pearson results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.3.5. Healthy behavior scores by primary care visit and HRA completion in past year

	PCP visit and HRA		PCP visit and no HRA		No PCP or no PCP visit	
	Mean	**95% CI**	**Mean**	**95% CI**	**Mean**	**95% CI**
Healthy behavior score (0-2)	1.38	[1.32, 1.44]	1.23**	[1.16, 1.30]	1.28*	[1.20, 1.36]
Limiting unhealthy behavior score (0-4)	2.80	[2.70, 2.89]	2.88	[2.79, 2.97]	2.61*	[2.49, 2.73]

Unadjusted linear regression results (PCP visit and HRA = reference), *p<.05, **p<.01

Beneficiary Survey Appendix

Beneficiary Survey Appendix Table 1.3.6. Multivariate models predicting self-reported improvement in health in past year

	Physical health improvement		Mental health improvement		Oral health improvement		Any health improvement	
	aOR	95% CI	aOR	95% CI	aOR	95% CI	aOR	95% CI
PCP/HRA status								
PCP visit and HRA	1.00		1.00		1.00		1.00	
PCP visit and no HRA	0.84	[0.63, 1.13]	0.95	[0.69, 1.29]	0.98	[0.68, 1.41]	0.91	[0.69, 1.19]
No PCP or no PCP visit	0.92	[0.66, 1.28]	1.13	[0.81, 1.58]	0.72	[0.48, 1.07]	0.86	[0.64, 1.16]
Age								
19-34	1.00		1.00		1.00		1.00	
35-50	0.57***	[0.42, 0.77]	0.58***	[0.42, 0.79]	0.58**	[0.39, 0.84]	0.48***	[0.37, 0.64]
51-65	0.67*	[0.49, 0.92]	0.50***	[0.36, 0.71]	0.38***	[0.26, 0.54]	0.43***	[0.32, 0.56]
FPL								
0%	1.05	[0.78, 1.41]	1.07	[0.79, 1.43]	1.22	[0.87, 1.72]	1.13	[0.87, 1.47]
0.1 to 99.99%	1.00		1.00		1.00		1.00	
100% or more	0.96	[0.70, 1.32]	0.64**	[0.47, 0.87]	1.09	[0.75, 1.58]	0.96	[0.73, 1.26]
Months enrolled in HMP-MC								
Less than 24 months	1.00		1.00		1.00		1.00	
24-47 months	0.84	[0.64, 1.11]	0.66**	[0.50, 0.87]	0.71*	[0.52, 0.98]	0.74*	[0.57, 0.95]
48+ months	0.85	[0.68, 1.07]	0.70**	[0.55, 0.89]	0.74*	[0.56, 0.97]	0.73**	[0.60, 0.90]
Rurality								
Urban	1.00		1.00		1.00		1.00	
Suburban	1.21	[0.74, 2.00]	1.02	[0.61, 1.69]	0.99	[0.62, 1.58]	1.20	[0.79, 1.82]
Rural	1.09	[0.79, 1.50]	0.81	[0.58, 1.13]	1.04	[0.67, 1.61]	1.04	[0.77, 1.40]
Gender								
Female	1.00		1.00		1.00		1.00	
Male	1.00	[0.78, 1.28]	0.95	[0.73, 1.23]	1.12	[0.84, 1.50]	1.06	[0.85, 1.33]
Non-binary, transgender, or other	--	--	--	--	--	--	--	--
Race/Ethnicity								
White, non-Hispanic	1.00		1.00		1.00		1.00	
Black, non-Hispanic	1.18	[0.84, 1.65]	1.27	[0.90, 1.80]	1.42	[0.93, 2.15]	1.23	[0.91, 1.67]
Hispanic	0.77	[0.48, 1.25]	1.15	[0.71, 1.87]	1.05	[0.58, 1.90]	0.83	[0.54, 1.27]
Arab, Chaldean, or Middle Eastern	0.98	[0.59, 1.63]	0.81	[0.49, 1.34]	1.26	[0.75, 2.11]	0.78	[0.49, 1.25]
Other, multi-racial, or not reported	0.87	[0.55, 1.35]	0.90	[0.53, 1.50]	1.51	[0.86, 2.68]	0.84	[0.54, 1.29]
Help reading health materials								
Never	1.00		1.00		1.00		1.00	
Sometimes	0.90	[0.65, 1.24]	0.87	[0.63, 1.21]	0.95	[0.67, 1.35]	0.86	[0.65, 1.15]
Often	1.15	[0.66, 2.00]	2.18**	[1.32, 3.60]	1.30	[0.66, 2.56]	1.21	[0.77, 1.92]
Intercept	0.57**	[0.40, 0.82]	0.60*	[0.41, 0.89]	0.27***	[0.17, 0.43]	1.51*	[1.08, 2.11]

Multivariate logistic regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 1.3.7. Reported HRA completion, healthy behavior and limiting unhealthy behavior scores: Multivariate analyses

	Healthy behavior score		Limiting unhealthy behavior score	
	Coefficient	**95% CI**	**Coefficient**	**95% CI**
PCP/HRA status				
PCP visit and HRA	0.000		0.000	
PCP visit and no HRA	-0.152**	[-0.244, -0.061]	0.090	[-0.037, 0.216]
No PCP or no PCP visit	-0.071	[-0.168, 0.027]	-0.081	[-0.239, 0.076]
Age				
19-34	0.000		0.000	
35-50	-0.010	[-0.106, 0.087]	-0.028	[-0.165, 0.109]
51-65	0.079	[-0.010, 0.169]	0.166*	[0.021, 0.310]
FPL				
0%	-0.094*	[-0.184, -0.005]	-0.167*	[-0.301, -0.032]
0.1 to 99.99%	0.000		0.000	
100% or more	0.030	[-0.065, 0.124]	0.061	[-0.068, 0.190]
Months enrolled in HMP-MC				
Less than 24 months	0.000		0.000	
24-47 months	0.052	[-0.039, 0.144]	-0.077	[-0.197, 0.042]
48+ months	0.006	[-0.062, 0.073]	0.018	[-0.085, 0.121]
Rurality				
Urban	0.000		0.000	
Suburban	0.041	[-0.092, 0.173]	-0.049	[-0.234, 0.137]
Rural	0.070	[-0.043, 0.183]	-0.006	[-0.140, 0.129]
Gender				
Female	0.000		0.000	
Male	-0.039	[-0.118, 0.039]	-0.215***	[-0.332, -0.098]
Non-binary, transgender, or other	--	--	--	--
Race/Ethnicity				
White, non-Hispanic	0.000		0.000	
Black, non-Hispanic	-0.044	[-0.145, 0.057]	-0.180*	[-0.340, -0.020]
Hispanic	0.016	[-0.170, 0.202]	-0.016	[-0.264, 0.232]
Arab, Chaldean, or Middle Eastern	0.045	[-0.121, 0.211]	0.489***	[0.292, 0.686]
Other, multi-racial, or not reported	0.040	[-0.108, 0.188]	0.127	[-0.086, 0.339]
Help reading health materials				
Never	0.000		0.000	
Sometimes	-0.047	[-0.142, 0.049]	-0.159	[-0.320, 0.001]
Often	-0.165*	[-0.322, -0.008]	-0.273*	[-0.507, -0.039]
Intercept	1.408***	[1.299, 1.517]	2.950***	[2.778, 3.122]

Multivariate linear regression results, *p<.05, **p<.01, ***p<.001

Evaluation question 5.1: Does HMP's facilitation of primary care access (e.g., through managed care PCP assignment) influence beneficiary engagement in health and maintenance or improvement in physical and mental health?

Beneficiary Survey Appendix Table 5.1.1. Health measures by reported barriers to primary care

	Reported PCP barriers		Reported no PCP barriers		No PCP	
	Col %	95% CI	Col %	95% CI	Col %	95% CI
Health status**						
Excellent/Very good/Good	70.4	[64.8, 75.5]	79.8	[77.3, 82.1]	80.6	[73.3, 86.3]
Fair/Poor	29.6	[24.5, 35.2]	20.2	[17.9, 22.7]	19.4	[13.7, 26.7]
Mental health status***						
Excellent/Very good/Good	70.4	[64.9, 75.5]	83.9	[81.5, 86.0]	82.2	[75.7, 87.3]
Fair/Poor	29.6	[24.5, 35.1]	16.1	[14.0, 18.5]	17.8	[12.7, 24.3]
Health of teeth and gums						
Excellent/Very good/Good	59.7	[53.7, 65.3]	67.3	[64.1, 70.4]	64.0	[55.1, 72.1]
Fair/Poor	40.3	[34.7, 46.3]	32.7	[29.6, 35.9]	36.0	[27.9, 44.9]
Number of days physical health not good***						
0 days	36.1	[30.8, 41.7]	58.3	[55.2, 61.5]	54.2	[45.5, 62.7]
1-4 days	16.6	[13.0, 21.1]	16.4	[14.2, 18.8]	20.0	[14.3, 27.2]
5+ days	47.3	[41.5, 53.1]	25.3	[22.7, 28.0]	25.8	[18.9, 34.3]
Number of days mental health not good***						
0 days	39.0	[33.7, 44.6]	64.3	[61.3, 67.2]	62.9	[54.6, 70.5]
1-4 days	20.4	[15.9, 25.7]	12.9	[11.1, 15.1]	9.8	[6.4, 14.7]
5+ days	40.6	[35.0, 46.5]	22.7	[20.3, 25.3]	27.3	[20.6, 35.2]
Number of days health limited activities***						
0 days	39.6	[34.2, 45.2]	62.9	[59.7, 65.9]	59.5	[51.0, 67.5]
1-4 days	14.6	[10.8, 19.6]	14.0	[11.9, 16.5]	15.3	[10.2, 22.4]
5+ days	45.8	[40.1, 51.6]	23.1	[20.6, 25.7]	25.2	[19.1, 32.5]
Physical health in past year***						
Gotten better	23.9	[19.1, 29.5]	28.2	[25.3, 31.3]	26.7	[20.0, 34.7]
Stayed the same	45.3	[39.8, 51.0]	56.7	[53.5, 59.9]	52.2	[43.5, 60.8]
Gotten worse	30.7	[25.4, 36.6]	15.1	[13.1, 17.3]	21.1	[14.2, 30.0]
Mental health in past year***						
Gotten better	22.6	[18.0, 28.0]	23.8	[21.2, 26.7]	32.4	[24.6, 41.3]
Stayed the same	53.8	[48.0, 59.5]	62.2	[59.0, 65.3]	54.7	[45.9, 63.3]
Gotten worse	23.6	[18.9, 29.1]	14.0	[11.9, 16.3]	12.9	[8.3, 19.4]
Health of teeth and gums in past year**						
Gotten better	13.3	[9.9, 17.7]	17.1	[14.7, 19.7]	13.7	[9.2, 20.0]
Stayed the same	62.1	[56.4, 67.6]	65.1	[61.9, 68.2]	57.5	[48.5, 66.0]
Gotten worse	24.5	[19.8, 29.9]	17.8	[15.5, 20.4]	28.8	[21.0, 38.1]
Any health improvement in past year (physical, mental or oral)						
Yes	37.9	[32.5, 43.6]	45.4	[42.1, 48.7]	45.8	[37.3, 54.5]
No	62.1	[56.4, 67.5]	54.6	[51.3, 57.9]	54.2	[45.5, 62.7]

Pearson results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix

Beneficiary Survey Appendix Table 5.1.2. Multivariate models predicting fair or poor health status

	Fair/poor health status		Fair/poor mental health status		Fair/poor oral health status	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
Primary care barriers						
Reported PCP barriers	1.76***	[1.29, 2.40]	2.04***	[1.50, 2.79]	1.48**	[1.11, 1.97]
Reported no PCP barriers	1.00		1.00		1.00	
No PCP	0.97	[0.63, 1.51]	0.90	[0.57, 1.44]	1.08	[0.72, 1.64]
Age						
19-34	1.00		1.00		1.00	
35-50	2.23***	[1.61, 3.08]	0.84	[0.61, 1.16]	1.87***	[1.39, 2.50]
51-65	2.13***	[1.54, 2.93]	0.43***	[0.30, 0.60]	1.55**	[1.15, 2.08]
FPL						
0%	1.26	[0.94, 1.71]	1.60**	[1.17, 2.19]	1.33*	[1.01, 1.75]
0.1 to 99.99%	1.00		1.00		1.00	
100% or more	0.95	[0.68, 1.32]	0.78	[0.54, 1.11]	1.00	[0.75, 1.34]
Months enrolled in HMP-MC						
Less than 24 months	1.00		1.00		1.00	
24-47 months	0.95	[0.71, 1.27]	1.20	[0.88, 1.63]	0.92	[0.70, 1.21]
48+ months	1.08	[0.86, 1.37]	1.05	[0.81, 1.36]	1.19	[0.96, 1.48]
Rurality						
Urban	1.00		1.00		1.00	
Suburban	1.42	[0.92, 2.19]	1.10	[0.69, 1.74]	1.70**	[1.14, 2.55]
Rural	1.05	[0.73, 1.49]	1.22	[0.84, 1.79]	0.95	[0.69, 1.31]
Gender						
Female	1.00		1.00		1.00	
Male	0.72*	[0.56, 0.94]	0.65**	[0.48, 0.86]	1.12	[0.88, 1.43]
Non-binary, transgender, or other	--	--	--	--	--	--
Race/Ethnicity						
White, non-Hispanic	1.00		1.00		1.00	
Black, non-Hispanic	1.10	[0.77, 1.56]	0.69	[0.47, 1.01]	1.26	[0.92, 1.73]
Hispanic	0.86	[0.49, 1.54]	0.90	[0.53, 1.53]	1.03	[0.62, 1.71]
Arab, Chaldean, or Middle Eastern	0.67	[0.38, 1.19]	0.43*	[0.21, 0.85]	0.61	[0.35, 1.08]
Other, multi-racial, or not reported	0.61*	[0.39, 0.96]	0.77	[0.47, 1.24]	1.04	[0.65, 1.66]
Help reading health materials						
Never	1.00		1.00		1.00	
Sometimes	1.57**	[1.15, 2.14]	1.42*	[1.02, 1.99]	1.25	[0.92, 1.69]
Often	3.62***	[2.19, 5.98]	3.39***	[1.97, 5.85]	2.63***	[1.64, 4.22]
Intercept	0.14***	[0.09, 0.20]	0.24***	[0.17, 0.34]	0.23***	[0.16, 0.32]

Multivariate logistic regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix Table 5.1.3. Multivariate models predicting 5 or more days of bad health

	5+ days physical health not good		5+ days mental health not good		5+ days health limited activities	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
Primary care barriers						
Reported PCP barriers	2.66***	[2.02, 3.52]	2.13***	[1.60, 2.82]	2.79***	[2.11, 3.68]
Reported no PCP barriers	1.00		1.00		1.00	
No PCP	1.04	[0.67, 1.62]	1.18	[0.76, 1.81]	1.06	[0.73, 1.55]
Age						
19-34	1.00		1.00		1.00	
35-50	1.44*	[1.09, 1.92]	0.77	[0.58, 1.02]	1.21	[0.91, 1.60]
51-65	1.49**	[1.11, 1.99]	0.44***	[0.33, 0.58]	0.94	[0.70, 1.26]
FPL						
0%	1.23	[0.94, 1.60]	1.35*	[1.03, 1.77]	1.26	[0.96, 1.65]
0.1 to 99.99%	1.00		1.00		1.00	
100% or more	0.80	[0.60, 1.06]	0.94	[0.68, 1.29]	0.83	[0.61, 1.12]
Months enrolled in HMP-MC						
Less than 24 months	1.00		1.00		1.00	
24-47 months	1.01	[0.78, 1.31]	0.98	[0.75, 1.27]	0.90	[0.69, 1.16]
48+ months	0.80*	[0.64, 1.00]	0.82	[0.66, 1.03]	0.80*	[0.64, 1.00]
Rurality						
Urban	1.00		1.00		1.00	
Suburban	1.33	[0.89, 1.99]	1.10	[0.72, 1.67]	1.31	[0.87, 1.98]
Rural	1.28	[0.96, 1.70]	1.38*	[1.02, 1.87]	1.22	[0.89, 1.66]
Gender						
Female	1.00		1.00		1.00	
Male	0.65***	[0.52, 0.83]	0.54***	[0.42, 0.70]	0.60***	[0.47, 0.76]
Non-binary, transgender, or other	--	--	--	--	--	--
Race/Ethnicity						
White, non-Hispanic	1.00		1.00		1.00	
Black, non-Hispanic	0.80	[0.58, 1.12]	0.55***	[0.39, 0.76]	0.78	[0.56, 1.09]
Hispanic	1.28	[0.81, 2.01]	0.94	[0.60, 1.46]	0.80	[0.51, 1.25]
Arab, Chaldean, or Middle Eastern	0.63	[0.38, 1.03]	0.52*	[0.30, 0.88]	0.57*	[0.35, 0.95]
Other, multi-racial, or not reported	0.93	[0.57, 1.51]	1.10	[0.68, 1.77]	0.94	[0.59, 1.48]
Help reading health materials						
Never	1.00		1.00		1.00	
Sometimes	1.10	[0.82, 1.47]	1.42*	[1.06, 1.92]	1.60**	[1.21, 2.13]
Often	2.02**	[1.22, 3.34]	1.79*	[1.03, 3.12]	3.01***	[1.78, 5.09]
Intercept	0.35***	[0.25, 0.49]	0.54***	[0.38, 0.76]	0.37***	[0.27, 0.51]

Multivariate logistic regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix

Beneficiary Survey Appendix Table 5.1.4. Multivariate models predicting self-reported improvement in health in past year

	Physical health improvement		Mental health improvement		Oral health improvement		Any health improvement	
	aOR	95% CI	aOR	95% CI	aOR	95% CI	aOR	95% CI
Primary care barriers								
Reported PCP barriers	0.78	[0.56, 1.07]	0.87	[0.62, 1.22]	0.66*	[0.45, 0.98]	0.68**	[0.52, 0.91]
Reported no PCP barriers	1.00		1.00		1.00		1.00	
No PCP	0.83	[0.55, 1.27]	1.21	[0.79, 1.84]	0.60*	[0.36, 0.99]	0.83	[0.57, 1.21]
Age								
19-34	1.00		1.00		1.00		1.00	
35-50	0.56***	[0.42, 0.75]	0.57***	[0.42, 0.77]	0.59**	[0.40, 0.85]	0.48***	[0.36, 0.63]
51-65	0.67**	[0.49, 0.91]	0.50***	[0.36, 0.69]	0.37***	[0.26, 0.54]	0.42***	[0.32, 0.56]
FPL								
0%	1.06	[0.79, 1.43]	1.08	[0.80, 1.44]	1.24	[0.88, 1.74]	1.15	[0.89, 1.50]
0.1 to 99.99%	1.00		1.00		1.00		1.00	
100% or more	0.97	[0.71, 1.33]	0.65**	[0.48, 0.88]	1.10	[0.76, 1.60]	0.98	[0.75, 1.28]
Months enrolled in HMP-MC								
Less than 24 months	1.00		1.00		1.00		1.00	
24-47 months	0.83	[0.63, 1.09]	0.65**	[0.49, 0.87]	0.70*	[0.51, 0.97]	0.73*	[0.56, 0.94]
48+ months	0.85	[0.68, 1.07]	0.71**	[0.56, 0.90]	0.73*	[0.56, 0.95]	0.73**	[0.60, 0.90]
Rurality								
Urban	1.00		1.00		1.00		1.00	
Suburban	1.21	[0.74, 1.99]	1.01	[0.60, 1.69]	0.97	[0.60, 1.55]	1.18	[0.78, 1.78]
Rural	1.10	[0.80, 1.50]	0.81	[0.58, 1.13]	1.06	[0.68, 1.64]	1.05	[0.78, 1.41]
Gender								
Female	1.00		1.00		1.00		1.00	
Male	0.99	[0.77, 1.27]	0.95	[0.73, 1.23]	1.08	[0.80, 1.45]	1.03	[0.82, 1.29]
Non-binary, transgender, or other	--	--	--	--	--	--	--	--
Race/Ethnicity								
White, non-Hispanic	1.00		1.00		1.00		1.00	
Black, non-Hispanic	1.20	[0.86, 1.69]	1.28	[0.90, 1.82]	1.42	[0.95, 2.13]	1.24	[0.91, 1.69]
Hispanic	0.80	[0.50, 1.28]	1.17	[0.73, 1.90]	1.11	[0.61, 2.00]	0.87	[0.57, 1.32]
Arab, Chaldean, or Middle Eastern	0.97	[0.59, 1.61]	0.81	[0.49, 1.33]	1.27	[0.76, 2.12]	0.78	[0.49, 1.25]
Other, multi-racial, or not reported	0.90	[0.57, 1.40]	0.91	[0.54, 1.52]	1.56	[0.89, 2.74]	0.87	[0.56, 1.33]
Help reading health materials								
Never	1.00		1.00		1.00		1.00	
Sometimes	0.91	[0.66, 1.25]	0.88	[0.63, 1.23]	0.97	[0.68, 1.38]	0.88	[0.66, 1.16]
Often	1.17	[0.67, 2.04]	2.15**	[1.31, 3.55]	1.38	[0.69, 2.74]	1.24	[0.78, 1.98]
Intercept	0.56***	[0.41, 0.77]	0.61**	[0.44, 0.86]	0.28***	[0.19, 0.42]	1.54**	[1.14, 2.08]

Multivariate logistic regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix

Beneficiary Survey Appendix Table 5.1.5. Self-efficacy measures by reported barriers to primary care

	Reported PCP barriers		Reported no PCP barriers		No PCP	
	Col %	95% CI	Col %	95% CI	Col %	95% CI
I know when I need to go to the doctor***						
Always	67.8	[62.0, 73.1]	81.9	[79.3, 84.2]	66.0	[57.7, 73.4]
Sometimes	31.5	[26.2, 37.3]	17.8	[15.5, 20.4]	31.1	[24.1, 39.1]
Never	0.8	[0.3, 2.3]	0.3	[0.2, 0.5]	2.9	[1.0, 8.5]
I keep my appointments***						
Always	67.9	[62.2, 73.1]	85.9	[83.6, 87.9]	84.8	[79.6, 88.9]
Sometimes	31.4	[26.3, 37.1]	14.0	[12.0, 16.3]	13.8	[10.0, 18.9]
Never	0.7	[0.2, 2.2]	0.1	[0.1, 0.3]	1.3	[0.5, 3.7]
I know how to prevent problems with my health***						
Always	41.4	[35.8, 47.2]	56.4	[53.2, 59.6]	48.4	[39.8, 57.1]
Sometimes	55.2	[49.4, 60.9]	42.2	[39.0, 45.4]	48.5	[39.7, 57.3]
Never	3.4	[1.7, 6.7]	1.4	[0.9, 2.2]	3.1	[1.5, 6.4]
I am able to follow my doctor's treatment advice between visits***						
Always	71.0	[65.3, 76.1]	85.2	[82.5, 87.6]	83.4	[76.0, 88.9]
Sometimes	27.9	[22.9, 33.6]	14.5	[12.1, 17.2]	14.6	[9.6, 21.5]
Never	1.1	[0.4, 3.3]	0.3	[0.1, 0.9]	2.0	[0.4, 9.1]
When I have health care visits, I bring a list of questions or concerns						
Always	48.7	[43.0, 54.5]	49.5	[46.2, 52.8]	50.1	[41.4, 58.8]
Sometimes	34.4	[29.2, 40.0]	33.6	[30.6, 36.8]	27.7	[21.5, 34.9]
Never	16.9	[13.1, 21.5]	16.9	[14.5, 19.6]	22.2	[15.5, 30.7]

Pearson results, *p<.05, **p<.01, ***p<.001

Table 5.1.6. Multivariate models predicting self-efficacy score

	Self-efficacy score	
	Coef.	**95% CI**
Primary care barriers		
Reported PCP barriers	-0.568***	[-0.742, -0.394]
No reported PCP barriers	0.000	
No PCP	-0.150	[-0.360, 0.060]
Age		
19-34	0.000	
35-50	0.146	[-0.026, 0.319]
51-65	0.428***	[0.273, 0.584]
FPL		
0%	-0.139	[-0.291, 0.013]
0.1 to 99.99%	0.000	
100% or more	-0.010	[-0.168, 0.148]
Months enrolled in HMP-MC		
Less than 24 months	0.000	
24-47 months	-0.057	[-0.210, 0.097]
48+ months	-0.011	[-0.128, 0.106]
Rurality		
Urban	0.000	
Suburban	0.083	[-0.119, 0.284]
Rural	0.141	[-0.003, 0.285]
Gender		
Female	0.000	
Male	-0.045	[-0.179, 0.090]
Non-binary, transgender, or other	--	--
Race/Ethnicity		
White, non-Hispanic	0.000	
Black, non-Hispanic	0.251**	[0.070, 0.432]
Hispanic	-0.004	[-0.227, 0.219]
Arab, Chaldean, or Middle Eastern	0.513**	[0.189, 0.837]
Other, multi-racial, or not reported	0.086	[-0.234, 0.407]
Help reading health materials		
Never	0.000	
Sometimes	-0.455***	[-0.629, -0.281]
Often	-0.070	[-0.414, 0.273]
Intercept	3.483***	[3.301, 3.664]

Multivariate linear regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix

Evaluation question 5.2: What factors influence beneficiaries' decisions about seeking care in the emergency department?

Beneficiary Survey Appendix Table 5.2.1. Barriers to care by PCP contact prior to an ED visit

	Did not try to contact PCP before ED visit		Tried to contact PCP before ED visit	
	Col %	**95% CI**	**Col %**	**95% CI**
Ease of getting a PCP appointment***				
Difficult/Very difficult	10.5	[7.5, 14.6]	28.7	[19.5, 40.1]
Easy/Very easy	86.8	[82.6, 90.1]	70.3	[59.0, 79.5]
N/A – did not try to get appointment in past year	2.7	[1.7, 4.3]	1.0	[0.3, 2.9]
Response from PCP within 24 hours				
Sometimes/Never	16.3	[12.4, 21.1]	26.4	[17.7, 37.5]
Always/Usually	78.1	[72.7, 82.6]	70.8	[59.7, 79.9]
N/A – did not try to contact PCP office in past year	5.6	[3.3, 9.4]	2.8	[0.7, 10.7]
Other barriers to primary care**				
Yes	14.7	[11.2, 19.0]	28.4	[19.2, 39.8]
No	85.3	[81.0, 88.8]	71.6	[60.2, 80.8]
[#]Any difficulties accessing prescription meds				
Yes	42.1	[35.8, 48.6]	52.7	[42.1, 63.2]
No	57.9	[51.4, 64.2]	47.3	[36.8, 57.9]

Pearson results, *p<.05, **p<.01, ***p<.001

[#]Among respondents who reported being on prescription medications in the last 12 months

Beneficiary Survey Appendix Table 5.2.2. Multivariate model predicting ED visit without attempted PCP contact

	Did not try to contact PCP before ED visit	
	aOR	**95% CI**
Primary care barriers		
Reported PCP barriers	0.48**	[0.29, 0.78]
Reported no PCP barriers	1.00	
Any difficulties accessing prescription meds	.78	[0.46, 1.30]
Age		
19-34	1.00	
35-50	0.86	[0.50, 1.47]
51-65	0.59	[0.33, 1.06]
FPL		
0%	1.32	[0.78, 2.23]
0.1 to 99.99%	1.00	
100% or more	1.26	[0.73, 2.17]
Months enrolled in HMP-MC		
Less than 24 months	1.00	
24-47 months	1.63	[0.98, 2.73]
48+ months	1.09	[0.72, 1.66]
Rurality		
Urban	1.00	
Suburban	0.84	[0.40, 1.73]
Rural	0.54	[0.26, 1.09]
Gender		
Female	1.00	
Male	1.01	[0.65, 1.57]
Non-binary, transgender, or other	--	--
Race/Ethnicity		
White, non-Hispanic	1.00	
Black, non-Hispanic	0.94	[0.50, 1.75]
Hispanic	1.33	[0.46, 3.83]
Arab, Chaldean, or Middle Eastern	0.58	[0.24, 1.44]
Other, multi-racial, or not reported	0.72	[0.32, 1.58]
Help reading health materials		
Never	1.00	
Sometimes	0.97	[0.56, 1.67]
Often	1.04	[0.35, 3.10]
Intercept	4.83***	[2.40, 9.71]

Multivariate logistic regression results, *p<.05, **p<.01, ***p<.001

Beneficiary Survey Appendix

Evaluation question 6.1: What impact has HMP had on beneficiaries' levels of employment and ability to work?

Beneficiary Survey Appendix Table 6.1.1. Employment status and work schedule consistency

	Percent	95% CI
Employment status		
Employed at a job	43.7	[41.0, 46.3]
Self-employed	15.6	[13.7, 17.7]
Not employed	40.8	[38.1, 43.4]
[#]Are you working full-time or part-time?		
Full-time	55.8	[51.8, 59.7]
Part-time	44.2	[40.3, 48.2]
[##]Work schedule consistency		
It changes week to week[###]	33.1	[29.8, 36.5]
It changes by season	13.2	[11.0, 15.6]
It's pretty consistent	53.7	[50.2, 57.3]

Employment status hierarchy: employed at a job> self-employed > not employed
Work schedule consistency hierarchy: it changes week to week > it changes by season> it's pretty consistent
[#]Among those employed at a job
[##]Among those employed at a job or self-employed
[###]2.6% reported both week-to-week and seasonal changes

Beneficiary Survey Appendix Table 6.1.2. Self-reported employment barriers

	Percent	95% CI
Any reported barriers to work	61.7	[59.0, 64.3]
Specific barriers to work		
Health-related barriers	37.8	[35.3, 40.4]
Transportation-related barriers	21.9	[19.7, 24.4]
A prior conviction or legal action	5.8	[4.4, 7.7]
Caregiving responsibilities	17.6	[15.7, 19.8]
Lack of jobs in the area	17.2	[15.1, 19.4]

2022 Healthy Michigan Voices Survey
Beneficiary Survey Supplemental Data Appendix

The Beneficiary Survey Supplemental Data Appendix outlines results from all survey items.

Beneficiary Survey Supplemental Data Appendix

Table of Contents

Beneficiary Survey Supplemental Data Appendix

Beneficiary Survey Supplemental Data Appendix

0 Demographic Characteristics

Beneficiary Survey Supplemental Data Appendix

0.1 Main demographics table, unweighted

Universe: All respondents (N=4082)

		Percent
HMV cohort		
Longitudinal cohort	(n=1475)	36.1
New cohort	(n=2607)	63.9
Months enrolled in HMP-MC		
Less than 24 months	(n=1691)	41.4
24-47 months	(n=1019)	25.0
48+ months	(n=1372)	33.6
FPL		
0%	(n=1312)	32.1
0.1 to 99.99%	(n=1641)	40.2
100% or more	(n=1129)	27.7
Age		
19-34	(n=1663)	40.7
35-50	(n=1148)	28.1
51-65	(n=1271)	31.1
Rurality		
Urban	(n=2898)	71.0
Suburban	(n=369)	9.0
Rural	(n=815)	20.0
Gender		
Female	(n=2427)	59.7
Male	(n=1615)	39.7
Non-binary, transgender, or other	(n=23)	0.6
Race/Ethnicity		
White, non-Hispanic	(n=2484)	60.9
Black, non-Hispanic	(n=758)	18.6
Hispanic	(n=263)	6.4
Arab, Chaldean, or Middle Eastern	(n=235)	5.8
Other, multi-racial, or not reported	(n=342)	8.4
Highest level of education		
Less than high school	(n=353)	8.7
High school graduate or GED	(n=1512)	37.1
Some college	(n=1060)	26.0
Associate's degree	(n=489)	12.0
Bachelor's degree	(n=516)	12.7
Graduate degree	(n=141)	3.5
Marital status		
Married/Partnered	(n=1018)	25.0
Not married/Not partnered	(n=3061)	75.0
Help reading health materials		
Never	(n=3116)	76.4
Sometimes	(n=773)	19.0
Often	(n=188)	4.6

Beneficiary Survey Supplemental Data Appendix

0.2 Main demographics table

Universe: All respondents (N=4082)

		Percent	95% CI
HMV cohort			
Longitudinal cohort	(n=1475)	70.5	[69.5, 71.5]
New cohort	(n=2607)	29.5	[28.5, 30.5]
Months enrolled in HMP-MC			
Less than 24 months	(n=1691)	16.8	[15.9, 17.6]
24-47 months	(n=1019)	21.4	[19.4, 23.5]
48+ months	(n=1372)	61.8	[59.8, 63.8]
FPL			
0%	(n=1312)	44.7	[42.7, 46.7]
0.1 to 99.99%	(n=1641)	34.1	[32.3, 36.0]
100% or more	(n=1129)	21.2	[20.0, 22.5]
Age			
19-34	(n=1663)	45.6	[42.9, 48.4]
35-50	(n=1148)	30.7	[28.3, 33.2]
51-65	(n=1271)	23.7	[21.7, 25.8]
Rurality			
Urban	(n=2898)	82.4	[80.8, 83.9]
Suburban	(n=369)	7.9	[6.7, 9.3]
Rural	(n=815)	9.7	[8.8, 10.7]
Gender			
Female	(n=2427)	49.4	[46.8, 52.1]
Male	(n=1615)	50.0	[47.4, 52.7]
Non-binary, transgender, or other	(n=23)	0.5	[0.3, 1.0]
Race/Ethnicity			
White, non-Hispanic	(n=2484)	52.7	[50.0, 55.3]
Black, non-Hispanic	(n=758)	25.8	[23.4, 28.4]
Hispanic	(n=263)	5.7	[4.6, 6.9]
Arab, Chaldean, or Middle Eastern	(n=235)	6.8	[5.6, 8.2]
Other, multi-racial, or not reported	(n=342)	9.0	[7.5, 10.8]
Highest level of education			
Less than high school	(n=353)	9.8	[8.3, 11.5]
High school graduate or GED	(n=1512)	36.8	[34.2, 39.4]
Some college	(n=1060)	27.0	[24.6, 29.5]
Associate's degree	(n=489)	11.9	[10.2, 13.8]
Bachelor's degree	(n=516)	11.3	[9.7, 13.0]
Graduate degree	(n=141)	3.2	[2.4, 4.3]
Marital status			
Married/Partnered	(n=1018)	21.1	[19.2, 23.2]
Not married/Not partnered	(n=3061)	78.9	[76.8, 80.8]
Help reading health materials			
Never	(n=3116)	77.7	[75.5, 79.8]
Sometimes	(n=773)	17.9	[16.0, 20.0]
Often	(n=188)	4.4	[3.5, 5.4]

Beneficiary Survey Supplemental Data Appendix

0.3 Demographics by HMV cohort

Universe: All respondents (N=4082)

	HMV cohort			
	Longitudinal cohort		New cohort	
	Percent	95% CI	Percent	95% CI
Months enrolled in HMP-MC				
Less than 24 months	0.2	[0.0, 1.6]	56.3	[54.0, 58.5]
24-47 months	12.1	[9.6, 15.1]	43.7	[41.5, 46.0]
48+ months	87.7	[84.6, 90.2]	0.0	
FPL				
0%	44.9	[42.2, 47.7]	44.2	[42.9, 45.5]
0.1 to 99.99%	34.0	[31.5, 36.7]	34.3	[33.1, 35.5]
100% or more	21.1	[19.4, 22.9]	21.5	[21.0, 22.1]
Age				
19-34	44.3	[40.6, 48.2]	48.8	[46.5, 51.0]
35-50	33.9	[30.6, 37.5]	23.0	[21.1, 24.9]
51-65	21.7	[19.1, 24.6]	28.3	[26.3, 30.3]
Rurality				
Urban	82.2	[80.0, 84.2]	82.9	[81.7, 84.0]
Suburban	7.7	[6.1, 9.6]	8.5	[7.5, 9.6]
Rural	10.2	[8.9, 11.6]	8.6	[8.2, 9.1]
Gender				
Female	49.5	[45.8, 53.1]	49.4	[47.2, 51.7]
Male	50.1	[46.4, 53.7]	49.9	[47.6, 52.1]
Non-binary, transgender, or other	0.5	[0.2, 1.2]	0.7	[0.4, 1.2]
Race/Ethnicity				
White, non-Hispanic	53.0	[49.4, 56.6]	51.8	[49.7, 53.9]
Black, non-Hispanic	26.8	[23.5, 30.3]	23.5	[21.6, 25.5]
Hispanic	5.0	[3.7, 6.8]	7.2	[6.2, 8.4]
Arab, Chaldean, or Middle Eastern	6.3	[4.8, 8.3]	8.0	[6.7, 9.5]
Other, multi-racial, or not reported	8.9	[6.9, 11.4]	9.4	[8.2, 10.9]
Highest level of education				
Less than high school	10.1	[8.1, 12.5]	9.1	[7.8, 10.6]
High school graduate or GED	36.9	[33.4, 40.6]	36.5	[34.3, 38.7]
Some college	26.9	[23.7, 30.4]	27.3	[25.3, 29.3]
Associate's degree	12.4	[10.2, 15.2]	10.7	[9.4, 12.1]
Bachelor's degree	10.6	[8.6, 13.1]	12.8	[11.4, 14.3]
Graduate degree	3.0	[2.0, 4.6]	3.7	[3.0, 4.6]
Marital status				
Married/Partnered	20.9	[18.3, 23.7]	21.7	[20.0, 23.5]
Not married/Not partnered	79.1	[76.3, 81.7]	78.3	[76.5, 80.0]
Help reading health materials				
Never	79.4	[76.3, 82.2]	73.7	[71.7, 75.7]
Sometimes	16.5	[14.0, 19.4]	21.2	[19.4, 23.1]
Often	4.0	[2.9, 5.6]	5.1	[4.2, 6.1]

1 Health Status

Beneficiary Survey Supplemental Data Appendix

1.1 In general, would you say your health is excellent, very good, good, fair or poor?

Universe: All respondents (N= 4082)

	Health status									
	Excellent		Very good		Good		Fair		Poor	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4078)	**11.4**	**[9.6, 13.5]**	**30.2**	**[27.8, 32.8]**	**36.2**	**[33.6, 38.9]**	**17.7**	**[15.9, 19.8]**	**4.4**	**[3.5, 5.5]**
HMV cohort										
Longitudinal cohort (n=1475)	10.9	[8.6, 13.9]	29.8	[26.5, 33.3]	36.9	[33.4, 40.6]	18.1	[15.6, 20.9]	4.3	[3.1, 5.9]
New cohort (n=2603)	12.6	[11.1, 14.2]	31.4	[29.3, 33.5]	34.6	[32.5, 36.8]	16.9	[15.2, 18.7]	4.6	[3.7, 5.6]
Months enrolled in HMP-MC										
Less than 24 months (n=1689)	12.6	[10.9, 14.6]	31.7	[29.2, 34.4]	34.2	[31.4, 37.1]	16.4	[14.4, 18.6]	5.1	[4.0, 6.5]
24-47 months (n=1017)	11.5	[8.2, 15.7]	28.9	[24.2, 34.0]	40.2	[34.9, 45.8]	16.5	[13.2, 20.5]	2.9	[2.0, 4.3]
48+ months (n=1372)	11.1	[8.6, 14.2]	30.3	[26.9, 34.0]	35.4	[31.8, 39.2]	18.5	[15.9, 21.5]	4.7	[3.4, 6.5]
FPL										
0% (n=1310)	12.1	[9.0, 15.9]	26.3	[22.5, 30.5]	37.3	[33.0, 41.9]	19.1	[16.2, 22.5]	5.2	[3.7, 7.2]
0.1 to 99.99% (n=1640)	11.9	[9.3, 15.2]	31.9	[28.0, 36.1]	35.4	[31.4, 39.6]	17.0	[14.0, 20.4]	3.7	[2.4, 5.7]
100% or more (n=1128)	9.3	[7.1, 12.0]	35.8	[31.1, 40.8]	35.2	[30.7, 40.0]	16.0	[12.8, 19.9]	3.7	[2.4, 5.7]
Age***										
19-34 (n=1663)	16.0	[13.0, 19.5]	36.5	[32.5, 40.8]	32.6	[28.6, 37.0]	12.7	[10.1, 15.7]	2.2	[1.1, 4.1]
35-50 (n=1145)	6.5	[4.6, 9.0]	24.8	[20.8, 29.4]	39.8	[35.2, 44.5]	23.4	[19.6, 27.6]	5.5	[3.9, 7.9]
51-65 (n=1270)	9.0	[5.7, 14.0]	25.1	[21.4, 29.1]	38.6	[34.3, 43.1]	20.2	[17.2, 23.6]	7.1	[5.3, 9.5]
Rurality										
Urban (n=2895)	12.2	[10.2, 14.6]	30.6	[27.9, 33.6]	35.9	[33.0, 39.0]	16.9	[14.9, 19.2]	4.3	[3.3, 5.6]
Suburban (n=369)	10.2	[5.4, 18.4]	28.3	[20.7, 37.2]	32.6	[25.5, 40.6]	23.8	[17.4, 31.7]	5.1	[2.6, 9.8]
Rural (n=814)	5.6	[3.7, 8.3]	28.5	[23.7, 33.8]	41.8	[35.3, 48.7]	19.5	[14.8, 25.3]	4.6	[3.0, 6.9]
Gender										
Female (n=2426)	10.4	[8.3, 13.0]	28.9	[25.9, 32.2]	36.4	[33.2, 39.7]	19.6	[16.9, 22.6]	4.7	[3.3, 6.5]
Male (n=1612)	12.5	[9.7, 16.0]	31.8	[28.0, 35.8]	35.8	[31.9, 40.0]	15.9	[13.3, 18.8]	4.0	[2.9, 5.4]
Race/Ethnicity***										
White, non-Hispanic (n=2482)	9.1	[6.9, 11.8]	30.4	[27.2, 33.8]	37.0	[33.6, 40.4]	18.4	[16.0, 21.1]	5.1	[3.8, 6.9]
Black, non-Hispanic (n=758)	17.2	[12.8, 22.7]	27.2	[22.3, 32.7]	32.4	[27.0, 38.3]	20.9	[16.6, 26.0]	2.3	[1.4, 3.7]
Hispanic (n=262)	9.0	[5.6, 14.1]	33.7	[24.9, 43.8]	36.1	[27.0, 46.4]	18.2	[10.9, 28.7]	3.0	[1.3, 6.6]
Arab, Chaldean, or Middle Eastern (n=235)	14.6	[9.9, 21.2]	36.8	[27.5, 47.2]	32.1	[23.5, 42.0]	8.9	[5.1, 15.2]	7.5	[3.2, 16.7]
Other, multi-racial, or not reported (n=341)	7.5	[4.3, 13.0]	30.9	[23.0, 40.2]	46.1	[36.8, 55.7]	11.1	[7.4, 16.2]	4.4	[2.4, 7.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.2 In general, would you say your health is excellent, very good, good, fair or poor? [collapsed]

Universe: All respondents (N= 4082)

	Health status			
	Excellent/Very good/Good		Fair/Poor	
	Row %	95% CI	Row %	95% CI
Total (n=4078)	**77.9**	**[75.7, 79.9]**	**22.1**	**[20.1, 24.3]**
HMV cohort				
Longitudinal cohort (n=1475)	77.6	[74.6, 80.4]	22.4	[19.6, 25.4]
New cohort (n=2603)	78.5	[76.6, 80.4]	21.5	[19.6, 23.4]
Months enrolled in HMP-MC				
Less than 24 months (n=1689)	78.5	[76.1, 80.7]	21.5	[19.3, 23.9]
24-47 months (n=1017)	80.6	[76.5, 84.1]	19.4	[15.9, 23.5]
48+ months (n=1372)	76.8	[73.6, 79.7]	23.2	[20.3, 26.4]
FPL				
0% (n=1310)	75.7	[72.0, 79.0]	24.3	[21.0, 28.0]
0.1 to 99.99% (n=1640)	79.3	[75.6, 82.5]	20.7	[17.5, 24.4]
100% or more (n=1128)	80.3	[76.3, 83.8]	19.7	[16.2, 23.7]
Age***				
19-34 (n=1663)	85.2	[81.9, 88.0]	14.8	[12.0, 18.1]
35-50 (n=1145)	71.1	[66.6, 75.1]	28.9	[24.9, 33.4]
51-65 (n=1270)	72.7	[68.9, 76.2]	27.3	[23.8, 31.1]
Rurality				
Urban (n=2895)	78.8	[76.3, 81.1]	21.2	[18.9, 23.7]
Suburban (n=369)	71.1	[62.9, 78.1]	28.9	[21.9, 37.1]
Rural (n=814)	75.9	[70.0, 80.9]	24.1	[19.1, 30.0]
Gender*				
Female (n=2426)	75.7	[72.6, 78.7]	24.3	[21.3, 27.4]
Male (n=1612)	80.1	[77.1, 82.9]	19.9	[17.1, 22.9]
Race/Ethnicity				
White, non-Hispanic (n=2482)	76.5	[73.5, 79.2]	23.5	[20.8, 26.5]
Black, non-Hispanic (n=758)	76.8	[71.7, 81.2]	23.2	[18.8, 28.3]
Hispanic (n=262)	78.9	[68.5, 86.5]	21.1	[13.5, 31.5]
Arab, Chaldean, or Middle Eastern (n=235)	83.5	[74.5, 89.8]	16.5	[10.2, 25.5]
Other, multi-racial, or not reported (n=341)	84.6	[78.8, 89.0]	15.4	[11.0, 21.2]
PCP/HRA status***				
PCP visit and HRA (n=1544)	73.8	[70.0, 77.3]	26.2	[22.7, 30.0]
PCP visit and no HRA (n=1487)	76.2	[72.3, 79.7]	23.8	[20.3, 27.7]
No PCP or no PCP visit (n=1047)	85.9	[82.1, 88.9]	14.1	[11.1, 17.9]
Primary care barriers**				
Reported PCP barriers (n=851)	70.4	[64.8, 75.5]	29.6	[24.5, 35.2]
Reported no PCP barriers (n=2821)	79.8	[77.3, 82.1]	20.2	[17.9, 22.7]
No PCP (n=406)	80.6	[73.3, 86.3]	19.4	[13.7, 26.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

1.3 In general, would you say your mental health is excellent, very good, good, fair or poor?

Universe: All respondents (N= 4082)

	Mental health status									
	Excellent		Very good		Good		Fair		Poor	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4076)	**22.7**	**[20.4, 25.2]**	**27.7**	**[25.3, 30.2]**	**30.5**	**[28.1, 33.0]**	**15.5**	**[13.7, 17.4]**	**3.7**	**[2.8, 4.8]**
HMV cohort										
Longitudinal cohort (n=1474)	23.6	[20.4, 27.1]	27.6	[24.4, 31.1]	30.0	[26.7, 33.4]	15.3	[12.9, 18.0]	3.6	[2.5, 5.1]
New cohort (n=2602)	20.7	[18.9, 22.6]	27.8	[25.8, 29.9]	31.7	[29.6, 33.8]	15.8	[14.3, 17.5]	4.0	[3.2, 5.0]
Months enrolled in HMP-MC										
Less than 24 months (n=1688)	21.0	[18.9, 23.4]	28.4	[25.9, 31.0]	32.1	[29.3, 35.0]	14.6	[12.8, 16.5]	3.9	[2.9, 5.1]
24-47 months (n=1016)	19.3	[15.3, 24.1]	28.3	[23.3, 34.0]	31.6	[27.0, 36.6]	17.0	[13.4, 21.3]	3.8	[2.2, 6.3]
48+ months (n=1372)	24.4	[21.0, 28.0]	27.2	[24.0, 30.8]	29.6	[26.2, 33.3]	15.2	[12.7, 18.0]	3.6	[2.5, 5.2]
FPL										
0% (n=1309)	22.3	[18.4, 26.8]	25.5	[21.8, 29.5]	29.3	[25.5, 33.5]	18.1	[15.0, 21.8]	4.8	[3.4, 6.7]
0.1 to 99.99% (n=1639)	24.1	[20.5, 28.0]	28.4	[24.6, 32.6]	30.6	[26.8, 34.8]	14.3	[11.8, 17.1]	2.6	[1.5, 4.5]
100% or more (n=1128)	21.5	[18.1, 25.4]	31.2	[26.7, 36.1]	32.5	[28.1, 37.3]	11.7	[9.1, 14.9]	3.1	[1.6, 5.7]
Age**										
19-34 (n=1663)	20.3	[16.8, 24.3]	26.5	[22.8, 30.6]	31.1	[27.2, 35.3]	18.3	[15.3, 21.7]	3.8	[2.5, 5.7]
35-50 (n=1147)	24.4	[20.3, 29.0]	27.0	[22.9, 31.5]	28.3	[24.4, 32.6]	15.6	[12.5, 19.4]	4.7	[3.1, 7.0]
51-65 (n=1266)	25.2	[21.1, 29.9]	30.7	[26.7, 35.1]	32.1	[28.0, 36.5]	9.8	[7.8, 12.3]	2.1	[1.3, 3.4]
Rurality*										
Urban (n=2893)	23.9	[21.2, 26.8]	27.8	[25.1, 30.6]	29.8	[27.1, 32.6]	14.5	[12.5, 16.7]	4.1	[3.1, 5.4]
Suburban (n=369)	18.3	[11.8, 27.3]	28.9	[21.9, 37.1]	31.8	[24.5, 40.2]	19.1	[13.4, 26.6]	1.8	[0.6, 5.2]
Rural (n=814)	16.5	[12.9, 21.0]	25.8	[21.3, 31.0]	35.3	[28.8, 42.3]	20.5	[15.5, 26.6]	1.9	[1.0, 3.7]
Gender***										
Female (n=2426)	17.0	[14.7, 19.6]	28.9	[25.8, 32.2]	32.7	[29.6, 36.1]	17.4	[14.9, 20.2]	4.0	[2.8, 5.6]
Male (n=1611)	28.7	[24.8, 32.9]	26.8	[23.3, 30.7]	28.0	[24.6, 31.8]	13.0	[10.6, 16.0]	3.4	[2.3, 5.0]
Race/Ethnicity***										
White, non-Hispanic (n=2482)	17.4	[14.7, 20.4]	29.5	[26.3, 32.8]	32.0	[28.9, 35.3]	17.8	[15.2, 20.6]	3.4	[2.4, 4.8]
Black, non-Hispanic (n=757)	32.6	[27.0, 38.7]	23.2	[18.7, 28.6]	28.1	[23.1, 33.7]	12.8	[9.5, 17.0]	3.3	[1.9, 5.7]
Hispanic (n=261)	23.9	[16.4, 33.4]	19.4	[12.9, 28.1]	32.7	[23.7, 43.3]	19.6	[12.5, 29.6]	4.4	[2.3, 8.1]
Arab, Chaldean, or Middle Eastern (n=235)	31.9	[23.2, 42.0]	33.1	[24.1, 43.5]	22.7	[16.2, 30.7]	4.8	[2.6, 8.7]	7.6	[3.1, 17.1]
Other, multi-racial, or not reported (n=341)	18.3	[12.2, 26.6]	30.9	[22.8, 40.3]	32.7	[24.3, 42.5]	14.9	[9.8, 22.1]	3.2	[1.4, 6.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.4 In general, would you say your mental health is excellent, very good, good, fair or poor? [collapsed]

Universe: All respondents (N= 4082)

	Mental health status			
	Excellent/Very good/Good		Fair/Poor	
	Row %	95% CI	Row %	95% CI
Total (n=4076)	**80.9**	**[78.7, 82.8]**	**19.1**	**[17.2, 21.3]**
HMV cohort				
Longitudinal cohort (n=1474)	81.2	[78.2, 83.8]	18.8	[16.2, 21.8]
New cohort (n=2602)	80.1	[78.3, 81.9]	19.9	[18.1, 21.7]
Months enrolled in HMP-MC				
Less than 24 months (n=1688)	81.5	[79.4, 83.5]	18.5	[16.5, 20.6]
24-47 months (n=1016)	79.3	[74.7, 83.2]	20.7	[16.8, 25.3]
48+ months (n=1372)	81.2	[78.2, 83.9]	18.8	[16.1, 21.8]
FPL**				
0% (n=1309)	77.1	[73.3, 80.5]	22.9	[19.5, 26.7]
0.1 to 99.99% (n=1639)	83.1	[79.9, 85.8]	16.9	[14.2, 20.1]
100% or more (n=1128)	85.2	[81.6, 88.3]	14.8	[11.7, 18.4]
Age***				
19-34 (n=1663)	77.9	[74.3, 81.2]	22.1	[18.8, 25.7]
35-50 (n=1147)	79.7	[75.7, 83.2]	20.3	[16.8, 24.3]
51-65 (n=1266)	88.0	[85.3, 90.3]	12.0	[9.7, 14.7]
Rurality				
Urban (n=2893)	81.4	[79.0, 83.6]	18.6	[16.4, 21.0]
Suburban (n=369)	79.1	[71.5, 85.1]	20.9	[14.9, 28.5]
Rural (n=814)	77.6	[71.5, 82.7]	22.4	[17.3, 28.5]
Gender*				
Female (n=2426)	78.7	[75.7, 81.4]	21.3	[18.6, 24.3]
Male (n=1611)	83.5	[80.4, 86.3]	16.5	[13.7, 19.6]
Race/Ethnicity				
White, non-Hispanic (n=2482)	78.8	[75.8, 81.6]	21.2	[18.4, 24.2]
Black, non-Hispanic (n=757)	83.9	[79.4, 87.5]	16.1	[12.5, 20.6]
Hispanic (n=261)	76.0	[66.2, 83.6]	24.0	[16.4, 33.8]
Arab, Chaldean, or Middle Eastern (n=235)	87.7	[79.0, 93.1]	12.3	[6.9, 21.0]
Other, multi-racial, or not reported (n=341)	81.9	[74.4, 87.6]	18.1	[12.4, 25.6]
PCP/HRA status				
PCP visit and HRA (n=1542)	80.7	[77.0, 83.8]	19.3	[16.2, 23.0]
PCP visit and no HRA (n=1488)	79.5	[75.7, 82.8]	20.5	[17.2, 24.3]
No PCP or no PCP visit (n=1046)	83.0	[79.1, 86.3]	17.0	[13.7, 20.9]
Primary care barriers***				
Reported PCP barriers (n=849)	70.4	[64.9, 75.5]	29.6	[24.5, 35.1]
Reported no PCP barriers (n=2822)	83.9	[81.5, 86.0]	16.1	[14.0, 18.5]
No PCP (n=405)	82.2	[75.7, 87.3]	17.8	[12.7, 24.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

1.5 In general, would you say the health of your teeth and gums is excellent, very good, good, fair or poor?

Universe: All respondents (N= 4082)

	Health of teeth and gums									
	Excellent		Very good		Good		Fair		Poor	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4059)	**9.8**	**[8.2, 11.6]**	**20.3**	**[18.4, 22.4]**	**35.3**	**[32.7, 37.9]**	**22.5**	**[20.2, 25.0]**	**12.1**	**[10.5, 14.0]**
HMV cohort***										
Longitudinal cohort (n=1469)	9.9	[7.8, 12.4]	18.3	[15.7, 21.1]	35.3	[31.8, 39.0]	23.8	[20.7, 27.3]	12.7	[10.5, 15.3]
New cohort (n=2590)	9.5	[8.4, 10.8]	25.3	[23.3, 27.3]	35.1	[33.0, 37.3]	19.4	[17.7, 21.3]	10.7	[9.4, 12.1]
Months enrolled in HMP-MC*										
Less than 24 months (n=1679)	10.2	[8.7, 11.8]	24.4	[22.1, 26.9]	33.1	[30.4, 35.8]	20.4	[17.9, 23.2]	11.9	[10.3, 13.8]
24-47 months (n=1013)	7.8	[5.3, 11.2]	21.4	[17.8, 25.6]	41.0	[35.6, 46.6]	20.2	[16.0, 25.0]	9.7	[6.9, 13.4]
48+ months (n=1367)	10.4	[8.1, 13.1]	18.8	[16.1, 21.9]	33.9	[30.3, 37.7]	23.9	[20.6, 27.6]	13.0	[10.6, 15.8]
FPL*										
0% (n=1297)	7.5	[5.4, 10.4]	19.5	[16.3, 23.1]	33.8	[29.7, 38.2]	26.0	[22.0, 30.6]	13.1	[10.5, 16.3]
0.1 to 99.99% (n=1635)	10.9	[8.4, 14.0]	20.4	[17.5, 23.8]	37.5	[33.3, 42.0]	19.3	[16.2, 22.8]	11.8	[9.2, 15.0]
100% or more (n=1127)	12.7	[9.4, 17.0]	21.9	[18.4, 25.8]	34.7	[30.2, 39.4]	20.4	[16.6, 24.7]	10.4	[7.7, 13.8]
Age***										
19-34 (n=1659)	13.0	[10.2, 16.4]	23.1	[19.9, 26.7]	36.3	[32.1, 40.7]	19.8	[16.5, 23.6]	7.7	[5.7, 10.4]
35-50 (n=1143)	7.8	[5.7, 10.7]	19.3	[15.9, 23.2]	29.9	[25.9, 34.2]	26.5	[22.2, 31.4]	16.5	[13.1, 20.6]
51-65 (n=1257)	6.1	[4.5, 8.1]	16.2	[13.5, 19.4]	40.3	[35.9, 44.9]	22.6	[18.4, 27.3]	14.9	[12.1, 18.2]
Rurality**										
Urban (n=2883)	10.5	[8.7, 12.6]	20.8	[18.5, 23.2]	34.9	[32.0, 37.9]	22.8	[20.2, 25.7]	11.0	[9.3, 13.0]
Suburban (n=364)	6.9	[3.9, 11.9]	14.5	[10.5, 19.6]	32.7	[25.3, 41.1]	26.3	[18.9, 35.4]	19.6	[12.9, 28.6]
Rural (n=812)	5.9	[4.1, 8.3]	21.4	[17.3, 26.1]	40.3	[33.9, 47.1]	17.3	[13.2, 22.4]	15.1	[10.4, 21.5]
Gender										
Female (n=2416)	10.5	[8.6, 12.8]	22.0	[19.4, 24.9]	34.7	[31.5, 38.1]	21.8	[19.0, 24.9]	10.9	[8.8, 13.5]
Male (n=1605)	9.2	[6.9, 12.2]	18.7	[15.9, 22.0]	35.3	[31.4, 39.4]	23.4	[19.7, 27.4]	13.4	[11.0, 16.3]
Race/Ethnicity										
White, non-Hispanic (n=2470)	8.4	[6.6, 10.6]	20.8	[18.3, 23.5]	36.5	[33.1, 40.1]	20.0	[17.3, 23.0]	14.3	[12.0, 17.0]
Black, non-Hispanic (n=755)	11.6	[8.1, 16.3]	16.9	[13.0, 21.8]	33.0	[27.7, 38.8]	28.0	[22.8, 34.0]	10.4	[7.4, 14.4]
Hispanic (n=260)	13.8	[7.7, 23.3]	22.6	[16.3, 30.6]	29.4	[21.9, 38.2]	24.5	[15.7, 36.0]	9.8	[4.4, 20.3]
Arab, Chaldean, or Middle Eastern (n=233)	12.6	[7.3, 21.1]	27.0	[19.5, 36.0]	38.2	[29.0, 48.4]	17.0	[10.0, 27.4]	5.2	[2.1, 12.3]
Other, multi-racial, or not reported (n=341)	8.0	[4.4, 13.9]	20.9	[14.7, 28.9]	36.0	[27.5, 45.6]	24.6	[16.7, 34.5]	10.5	[6.6, 16.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.6 In general, would you say the health of your teeth and gums is excellent, very good, good, fair or poor? [collapsed]

Universe: All respondents (N= 4082)

	Health of teeth and gums			
	Excellent/Very good/Good		Fair/Poor	
	Row %	95% CI	Row %	95% CI
Total (n=4059)	**65.4**	**[62.7, 68.0]**	**34.6**	**[32.0, 37.3]**
HMV cohort**				
Longitudinal cohort (n=1469)	63.5	[59.7, 67.0]	36.5	[33.0, 40.3]
New cohort (n=2590)	69.9	[67.8, 71.9]	30.1	[28.1, 32.2]
Months enrolled in HMP-MC*				
Less than 24 months (n=1679)	67.7	[64.8, 70.5]	32.3	[29.5, 35.2]
24-47 months (n=1013)	70.2	[64.9, 75.0]	29.8	[25.0, 35.1]
48+ months (n=1367)	63.1	[59.2, 66.8]	36.9	[33.2, 40.8]
FPL**				
0% (n=1297)	60.8	[56.2, 65.3]	39.2	[34.7, 43.8]
0.1 to 99.99% (n=1635)	68.9	[64.8, 72.7]	31.1	[27.3, 35.2]
100% or more (n=1127)	69.3	[64.5, 73.7]	30.7	[26.3, 35.5]
Age***				
19-34 (n=1659)	72.5	[68.3, 76.2]	27.5	[23.8, 31.7]
35-50 (n=1143)	57.0	[52.0, 61.8]	43.0	[38.2, 48.0]
51-65 (n=1257)	62.6	[57.8, 67.1]	37.4	[32.9, 42.2]
Rurality*				
Urban (n=2883)	66.2	[63.1, 69.1]	33.8	[30.9, 36.9]
Suburban (n=364)	54.1	[45.1, 62.8]	45.9	[37.2, 54.9]
Rural (n=812)	67.6	[61.0, 73.5]	32.4	[26.5, 39.0]
Gender				
Female (n=2416)	67.3	[63.9, 70.6]	32.7	[29.4, 36.1]
Male (n=1605)	63.2	[59.0, 67.3]	36.8	[32.7, 41.0]
Race/Ethnicity				
White, non-Hispanic (n=2470)	65.7	[62.2, 69.0]	34.3	[31.0, 37.8]
Black, non-Hispanic (n=755)	61.5	[55.5, 67.2]	38.5	[32.8, 44.5]
Hispanic (n=260)	65.8	[54.2, 75.7]	34.2	[24.3, 45.8]
Arab, Chaldean, or Middle Eastern (n=233)	77.8	[67.2, 85.7]	22.2	[14.3, 32.8]
Other, multi-racial, or not reported (n=341)	64.9	[55.2, 73.5]	35.1	[26.5, 44.8]
PCP/HRA status				
PCP visit and HRA (n=1540)	66.0	[61.8, 70.0]	34.0	[30.0, 38.2]
PCP visit and no HRA (n=1476)	65.4	[60.8, 69.6]	34.6	[30.4, 39.2]
No PCP or no PCP visit (n=1043)	64.4	[58.7, 69.7]	35.6	[30.3, 41.3]
Primary care barriers				
Reported PCP barriers (n=850)	59.7	[53.7, 65.3]	40.3	[34.7, 46.3]
Reported no PCP barriers (n=2804)	67.3	[64.1, 70.4]	32.7	[29.6, 35.9]
No PCP (n=405)	64.0	[55.1, 72.1]	36.0	[27.9, 44.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.7 In the last year, would you say your physical health has gotten better, stayed the same, or gotten worse?

Universe: All respondents (N= 4082)

	Physical health in last year					
	Gotten better		Stayed the same		Gotten worse	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4069)	**27.2**	**[24.8, 29.7]**	**53.9**	**[51.2, 56.6]**	**19.0**	**[17.0, 21.1]**
HMV cohort						
Longitudinal cohort (n=1472)	25.9	[22.7, 29.4]	55.2	[51.4, 58.8]	18.9	[16.3, 21.9]
New cohort (n=2597)	30.2	[28.1, 32.3]	50.8	[48.6, 53.1]	19.0	[17.3, 20.8]
Months enrolled in HMP-MC						
Less than 24 months (n=1686)	30.1	[27.6, 32.8]	50.4	[47.5, 53.3]	19.5	[17.0, 22.2]
24-47 months (n=1014)	26.9	[22.4, 32.0]	54.9	[49.5, 60.2]	18.2	[14.8, 22.1]
48+ months (n=1369)	26.4	[23.1, 30.1]	54.5	[50.6, 58.3]	19.1	[16.2, 22.3]
FPL						
0% (n=1308)	27.7	[23.9, 31.8]	52.6	[48.1, 57.0]	19.7	[16.6, 23.2]
0.1 to 99.99% (n=1637)	27.2	[23.2, 31.5]	53.8	[49.3, 58.1]	19.1	[15.8, 22.8]
100% or more (n=1124)	26.1	[21.9, 30.7]	56.8	[51.8, 61.6]	17.2	[13.7, 21.3]
Age***						
19-34 (n=1660)	32.0	[28.1, 36.3]	56.3	[51.9, 60.6]	11.7	[9.1, 14.8]
35-50 (n=1144)	21.7	[18.1, 25.7]	51.5	[46.7, 56.2]	26.9	[22.7, 31.5]
51-65 (n=1265)	24.9	[20.9, 29.4]	52.4	[47.7, 56.9]	22.7	[19.5, 26.4]
Rurality						
Urban (n=2890)	27.2	[24.5, 30.0]	54.8	[51.7, 57.8]	18.1	[15.9, 20.5]
Suburban (n=369)	29.1	[20.9, 39.0]	49.5	[40.9, 58.0]	21.4	[15.2, 29.3]
Rural (n=810)	25.4	[20.7, 30.9]	50.1	[43.6, 56.6]	24.5	[19.0, 30.9]
Gender						
Female (n=2423)	26.9	[23.7, 30.4]	53.7	[50.1, 57.1]	19.5	[16.9, 22.3]
Male (n=1606)	27.4	[24.0, 31.1]	54.2	[50.0, 58.3]	18.4	[15.5, 21.8]
Race/Ethnicity						
White, non-Hispanic (n=2476)	26.7	[23.5, 30.1]	52.4	[48.9, 55.9]	20.9	[18.4, 23.7]
Black, non-Hispanic (n=758)	30.1	[25.0, 35.7]	55.6	[49.6, 61.4]	14.3	[10.8, 18.8]
Hispanic (n=260)	22.7	[15.8, 31.5]	57.4	[47.1, 67.1]	19.9	[12.3, 30.6]
Arab, Chaldean, or Middle Eastern (n=234)	27.6	[19.7, 37.3]	56.9	[46.7, 66.5]	15.5	[9.3, 24.8]
Other, multi-racial, or not reported (n=341)	24.1	[17.4, 32.3]	53.3	[43.8, 62.5]	22.6	[14.9, 32.7]
PCP/HRA status						
PCP visit and HRA (n=1542)	28.1	[24.4, 32.1]	51.2	[46.9, 55.4]	20.7	[17.7, 24.0]
PCP visit and no HRA (n=1483)	25.1	[21.2, 29.4]	54.4	[49.8, 58.9]	20.5	[17.2, 24.4]
No PCP or no PCP visit (n=1044)	28.6	[23.9, 33.8]	57.0	[51.5, 62.4]	14.4	[10.7, 19.1]
Primary care barriers***						
Reported PCP barriers (n=848)	23.9	[19.1, 29.5]	45.3	[39.8, 51.0]	30.7	[25.4, 36.6]
Reported no PCP barriers (n=2817)	28.2	[25.3, 31.3]	56.7	[53.5, 59.9]	15.1	[13.1, 17.3]
No PCP (n=404)	26.7	[20.0, 34.7]	52.2	[43.5, 60.8]	21.1	[14.2, 30.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.8 In the last year, would you say your mental health has gotten better, stayed the same, or gotten worse?

Universe: All respondents (N= 4082)

	Mental health in last year					
	Gotten better		Stayed the same		Gotten worse	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4068)	**24.4**	**[22.1, 26.8]**	**59.7**	**[57.0, 62.3]**	**15.9**	**[14.1, 18.0]**
HMV cohort**						
Longitudinal cohort (n=1472)	22.4	[19.4, 25.8]	61.4	[57.7, 65.0]	16.1	[13.6, 19.0]
New cohort (n=2596)	29.0	[27.0, 31.1]	55.6	[53.3, 57.8]	15.4	[13.9, 17.1]
Months enrolled in HMP-MC*						
Less than 24 months (n=1684)	30.4	[27.9, 33.1]	53.2	[50.3, 56.1]	16.3	[14.0, 19.0]
24-47 months (n=1015)	23.0	[19.1, 27.6]	58.2	[52.7, 63.5]	18.8	[14.7, 23.7]
48+ months (n=1369)	23.2	[19.9, 26.7]	62.0	[58.1, 65.7]	14.8	[12.4, 17.7]
FPL*						
0% (n=1307)	26.7	[23.0, 30.8]	58.1	[53.7, 62.4]	15.2	[12.5, 18.4]
0.1 to 99.99% (n=1636)	25.4	[21.6, 29.6]	58.0	[53.5, 62.3]	16.6	[13.4, 20.3]
100% or more (n=1125)	17.7	[14.7, 21.1]	65.9	[61.2, 70.3]	16.4	[12.9, 20.7]
Age***						
19-34 (n=1662)	30.2	[26.4, 34.3]	51.3	[46.9, 55.6]	18.5	[15.3, 22.2]
35-50 (n=1141)	20.4	[16.9, 24.4]	64.2	[59.5, 68.6]	15.4	[12.4, 19.0]
51-65 (n=1265)	18.1	[14.5, 22.4]	70.3	[65.8, 74.4]	11.6	[9.4, 14.3]
Rurality						
Urban (n=2887)	25.2	[22.6, 28.0]	59.2	[56.1, 62.2]	15.6	[13.5, 17.9]
Suburban (n=367)	23.5	[16.4, 32.4]	60.3	[51.4, 68.6]	16.2	[10.9, 23.5]
Rural (n=814)	17.6	[14.0, 21.8]	63.5	[57.1, 69.4]	19.0	[13.9, 25.4]
Gender*						
Female (n=2419)	23.8	[20.8, 27.0]	57.4	[53.8, 60.8]	18.9	[16.2, 21.9]
Male (n=1609)	24.8	[21.4, 28.5]	62.1	[58.0, 66.0]	13.1	[10.6, 15.9]
Race/Ethnicity*						
White, non-Hispanic (n=2478)	22.4	[19.6, 25.6]	60.1	[56.6, 63.5]	17.5	[15.0, 20.3]
Black, non-Hispanic (n=755)	29.0	[23.9, 34.6]	60.2	[54.3, 65.8]	10.8	[7.8, 14.8]
Hispanic (n=263)	27.6	[19.7, 37.4]	52.7	[42.5, 62.7]	19.6	[11.9, 30.6]
Arab, Chaldean, or Middle Eastern (n=234)	22.6	[15.7, 31.3]	65.6	[55.9, 74.2]	11.8	[6.7, 20.1]
Other, multi-racial, or not reported (n=338)	21.6	[14.8, 30.3]	55.9	[46.4, 65.1]	22.5	[15.3, 31.8]
PCP/HRA status						
PCP visit and HRA (n=1542)	22.7	[19.4, 26.4]	60.8	[56.6, 64.9]	16.5	[13.6, 19.8]
PCP visit and no HRA (n=1480)	22.8	[19.2, 26.9]	59.1	[54.6, 63.5]	18.1	[14.8, 21.9]
No PCP or no PCP visit (n=1046)	28.7	[23.9, 34.1]	58.9	[53.4, 64.3]	12.3	[9.3, 16.3]
Primary care barriers***						
Reported PCP barriers (n=849)	22.6	[18.0, 28.0]	53.8	[48.0, 59.5]	23.6	[18.9, 29.1]
Reported no PCP barriers (n=2813)	23.8	[21.2, 26.7]	62.2	[59.0, 65.3]	14.0	[11.9, 16.3]
No PCP (n=406)	32.4	[24.6, 41.3]	54.7	[45.9, 63.3]	12.9	[8.3, 19.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.9 In the last year, has the health of your teeth and gums gotten better, stayed the same, or gotten worse?

Universe: All respondents (N= 4082)

	Health of teeth and gums in last year					
	Gotten better		Stayed the same		Gotten worse	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4061)	**16.0**	**[14.1, 18.1]**	**63.8**	**[61.1, 66.4]**	**20.2**	**[18.1, 22.5]**
HMV cohort						
Longitudinal cohort (n=1466)	15.0	[12.4, 17.9]	64.3	[60.6, 67.8]	20.8	[17.9, 24.0]
New cohort (n=2595)	18.4	[16.7, 20.3]	62.7	[60.5, 64.9]	18.9	[17.2, 20.7]
Months enrolled in HMP-MC						
Less than 24 months (n=1683)	19.3	[17.1, 21.7]	61.5	[58.7, 64.2]	19.2	[17.1, 21.5]
24-47 months (n=1015)	15.6	[12.3, 19.6]	65.4	[60.0, 70.4]	19.0	[14.8, 24.1]
48+ months (n=1363)	15.2	[12.5, 18.3]	63.9	[60.0, 67.5]	20.9	[18.0, 24.2]
FPL						
0% (n=1302)	17.3	[14.1, 21.0]	62.6	[58.1, 66.9]	20.1	[16.7, 23.9]
0.1 to 99.99% (n=1637)	14.5	[11.8, 17.7]	63.0	[58.7, 67.1]	22.5	[19.0, 26.5]
100% or more (n=1122)	15.6	[12.3, 19.7]	67.5	[62.8, 71.9]	16.9	[13.8, 20.5]
Age***						
19-34 (n=1659)	20.8	[17.6, 24.5]	63.4	[59.1, 67.4]	15.8	[13.0, 19.2]
35-50 (n=1143)	13.7	[10.6, 17.5]	62.3	[57.5, 67.0]	23.9	[19.9, 28.5]
51-65 (n=1259)	9.5	[7.4, 12.1]	66.6	[62.0, 70.8]	24.0	[20.0, 28.4]
Rurality						
Urban (n=2882)	16.6	[14.4, 19.0]	63.6	[60.5, 66.6]	19.8	[17.4, 22.4]
Suburban (n=367)	13.3	[9.2, 18.9]	61.2	[52.6, 69.1]	25.5	[18.6, 34.0]
Rural (n=812)	13.1	[9.4, 17.9]	67.6	[61.7, 73.1]	19.3	[15.2, 24.2]
Gender						
Female (n=2418)	14.8	[12.5, 17.4]	64.7	[61.3, 68.0]	20.5	[17.8, 23.5]
Male (n=1604)	16.9	[14.0, 20.4]	62.8	[58.6, 66.8]	20.3	[17.1, 23.8]
Race/Ethnicity						
White, non-Hispanic (n=2470)	13.5	[11.2, 16.2]	66.2	[62.8, 69.5]	20.2	[17.7, 23.1]
Black, non-Hispanic (n=757)	18.9	[14.6, 24.0]	59.0	[53.0, 64.8]	22.1	[17.4, 27.6]
Hispanic (n=262)	15.9	[10.1, 24.2]	69.4	[59.9, 77.6]	14.7	[9.3, 22.4]
Arab, Chaldean, or Middle Eastern (n=234)	18.9	[13.4, 26.1]	61.4	[51.2, 70.6]	19.7	[12.0, 30.6]
Other, multi-racial, or not reported (n=338)	19.8	[13.1, 28.7]	61.6	[51.6, 70.6]	18.7	[11.8, 28.3]
PCP/HRA status						
PCP visit and HRA (n=1540)	16.2	[13.3, 19.6]	63.1	[58.9, 67.1]	20.7	[17.5, 24.4]
PCP visit and no HRA (n=1477)	16.6	[13.4, 20.5]	63.9	[59.4, 68.2]	19.4	[16.1, 23.2]
No PCP or no PCP visit (n=1044)	14.8	[11.4, 18.9]	64.7	[59.2, 69.8]	20.6	[16.3, 25.6]
Primary care barriers**						
Reported PCP barriers (n=845)	13.3	[9.9, 17.7]	62.1	[56.4, 67.6]	24.5	[19.8, 29.9]
Reported no PCP barriers (n=2812)	17.1	[14.7, 19.7]	65.1	[61.9, 68.2]	17.8	[15.5, 20.4]
No PCP (n=404)	13.7	[9.2, 20.0]	57.5	[48.5, 66.0]	28.8	[21.0, 38.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

1.10 Any health improvement in last year [composite variable]

Universe: All respondents (N= 4082)

	Any health improvement in last year			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**43.8**	**[41.1, 46.5]**	**56.2**	**[53.5, 58.9]**
HMV cohort***				
Longitudinal cohort (n=1475)	41.5	[37.8, 45.3]	58.5	[54.7, 62.2]
New cohort (n=2607)	49.4	[47.1, 51.6]	50.6	[48.4, 52.9]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	49.8	[46.9, 52.6]	50.2	[47.4, 53.1]
24-47 months (n=1019)	44.0	[38.7, 49.4]	56.0	[50.6, 61.3]
48+ months (n=1372)	42.2	[38.3, 46.1]	57.8	[53.9, 61.7]
FPL				
0% (n=1312)	45.5	[41.1, 50.0]	54.5	[50.0, 58.9]
0.1 to 99.99% (n=1641)	43.0	[38.7, 47.4]	57.0	[52.6, 61.3]
100% or more (n=1129)	41.7	[36.9, 46.6]	58.3	[53.4, 63.1]
Age***				
19-34 (n=1663)	53.4	[49.0, 57.8]	46.6	[42.2, 51.0]
35-50 (n=1148)	36.8	[32.3, 41.4]	63.2	[58.6, 67.7]
51-65 (n=1271)	34.5	[30.3, 39.1]	65.5	[60.9, 69.7]
Rurality				
Urban (n=2898)	44.2	[41.2, 47.3]	55.8	[52.7, 58.8]
Suburban (n=369)	45.5	[36.9, 54.3]	54.5	[45.7, 63.1]
Rural (n=815)	39.1	[33.3, 45.3]	60.9	[54.7, 66.7]
Gender				
Female (n=2427)	42.7	[39.2, 46.2]	57.3	[53.8, 60.8]
Male (n=1615)	45.0	[40.9, 49.2]	55.0	[50.8, 59.1]
Race/Ethnicity				
White, non-Hispanic (n=2484)	42.7	[39.2, 46.2]	57.3	[53.8, 60.8]
Black, non-Hispanic (n=758)	49.0	[43.0, 54.9]	51.0	[45.1, 57.0]
Hispanic (n=263)	41.4	[32.2, 51.4]	58.6	[48.6, 67.8]
Arab, Chaldean, or Middle Eastern (n=235)	40.6	[31.5, 50.4]	59.4	[49.6, 68.5]
Other, multi-racial, or not reported (n=342)	39.8	[31.1, 49.1]	60.2	[50.9, 68.9]
PCP/HRA status				
PCP visit and HRA (n=1546)	43.8	[39.7, 48.1]	56.2	[51.9, 60.3]
PCP visit and no HRA (n=1488)	42.8	[38.4, 47.4]	57.2	[52.6, 61.6]
No PCP or no PCP visit (n=1048)	45.1	[39.8, 50.7]	54.9	[49.3, 60.2]
Primary care barriers				
Reported PCP barriers (n=852)	37.9	[32.5, 43.6]	62.1	[56.4, 67.5]
Reported no PCP barriers (n=2823)	45.4	[42.1, 48.7]	54.6	[51.3, 57.9]
No PCP (n=407)	45.8	[37.3, 54.5]	54.2	[45.5, 62.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Any health improvement in past year is defined as a response of gotten better to one or more of the following questions:
In the last year, would you say your physical health has gotten better, stayed the same, or gotten worse?
In the last year, would you say your mental health has gotten better, stayed the same, or gotten worse?
In the last year, has the health of your teeth and gums gotten better, stayed the same, or gotten worse?

1.11 For how many days during the last 30 days was your physical health not good?

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=4049)	**4.85**	**[4.42, 5.27]**
HMV cohort		
Longitudinal cohort (n=1467)	4.70	[4.12, 5.28]
New cohort (n=2582)	5.21	[4.83, 5.58]
Months enrolled in HMP-MC		
Less than 24 months (n=1676)	5.22	[4.74, 5.69]
24-47 months (n=1009)	5.05	[4.26, 5.84]
48+ months (n=1364)	4.68	[4.06, 5.30]
FPL		
0% (n=1300)	5.10	[4.38, 5.83]
0.1 to 99.99% (n=1630)	4.76	[4.11, 5.41]
100% or more (n=1119)	4.46	[3.69, 5.23]
Age		
19-34 (n=1654)	3.60	[3.03, 4.17]
35-50 (n=1139)	5.84	[5.02, 6.66]
51-65 (n=1256)	5.98	[5.07, 6.89]
Rurality		
Urban (n=2873)	4.55	[4.07, 5.02]
Suburban (n=368)	6.64	[4.98, 8.29]
Rural (n=808)	5.94	[4.78, 7.09]
Gender		
Female (n=2412)	5.39	[4.80, 5.99]
Male (n=1598)	4.28	[3.67, 4.89]
Race/Ethnicity		
White, non-Hispanic (n=2461)	5.38	[4.78, 5.99]
Black, non-Hispanic (n=756)	3.87	[3.17, 4.57]
Hispanic (n=262)	5.87	[4.10, 7.63]
Arab, Chaldean, or Middle Eastern (n=232)	3.53	[1.98, 5.09]
Other, multi-racial, or not reported (n=338)	4.89	[3.11, 6.67]

Total n may be less than universe N due to item non-response

1.12 For how many days during the last 30 days was your physical health not good? [collapsed]

Universe: All respondents (N= 4082)

	Number of days physical health not good					
	0 days		1-4 days		5+ days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4049)	**53.2**	**[50.5, 55.9]**	**16.8**	**[15.0, 18.8]**	**30.0**	**[27.6, 32.4]**
HMV cohort**						
Longitudinal cohort (n=1467)	55.4	[51.7, 59.1]	15.6	[13.2, 18.4]	29.0	[25.8, 32.4]
New cohort (n=2582)	48.0	[45.7, 50.2]	19.6	[17.9, 21.5]	32.4	[30.3, 34.5]
Months enrolled in HMP-MC*						
Less than 24 months (n=1676)	48.5	[45.6, 51.4]	18.6	[16.6, 20.9]	32.9	[30.1, 35.7]
24-47 months (n=1009)	48.8	[43.3, 54.3]	19.2	[15.4, 23.9]	32.0	[27.3, 37.0]
48+ months (n=1364)	56.1	[52.2, 59.8]	15.4	[13.0, 18.2]	28.5	[25.2, 32.1]
FPL						
0% (n=1300)	53.2	[48.8, 57.6]	14.5	[11.8, 17.7]	32.3	[28.3, 36.5]
0.1 to 99.99% (n=1630)	52.9	[48.6, 57.2]	17.8	[14.9, 21.1]	29.3	[25.6, 33.3]
100% or more (n=1119)	53.8	[48.9, 58.7]	20.0	[16.3, 24.3]	26.2	[22.3, 30.5]
Age*						
19-34 (n=1654)	56.2	[51.9, 60.5]	18.0	[15.1, 21.3]	25.8	[22.3, 29.6]
35-50 (n=1139)	50.8	[46.0, 55.6]	16.2	[13.0, 20.1]	33.0	[28.7, 37.5]
51-65 (n=1256)	50.6	[46.0, 55.2]	15.2	[12.7, 18.0]	34.2	[30.0, 38.7]
Rurality						
Urban (n=2873)	54.6	[51.6, 57.7]	16.6	[14.5, 18.8]	28.8	[26.1, 31.6]
Suburban (n=368)	45.8	[37.3, 54.5]	18.8	[12.1, 28.1]	35.4	[28.0, 43.6]
Rural (n=808)	47.5	[41.0, 53.9]	17.1	[13.3, 21.7]	35.5	[29.5, 41.9]
Gender**						
Female (n=2412)	49.2	[45.8, 52.7]	16.6	[14.5, 18.9]	34.2	[31.0, 37.6]
Male (n=1598)	57.1	[53.0, 61.1]	17.1	[14.2, 20.4]	25.8	[22.5, 29.4]
Race/Ethnicity						
White, non-Hispanic (n=2461)	50.4	[46.9, 53.9]	17.6	[15.3, 20.2]	32.1	[29.0, 35.3]
Black, non-Hispanic (n=756)	58.2	[52.3, 63.9]	16.0	[12.1, 21.0]	25.7	[21.0, 31.0]
Hispanic (n=262)	47.0	[37.1, 57.1]	13.7	[9.2, 20.0]	39.3	[29.5, 50.0]
Arab, Chaldean, or Middle Eastern (n=232)	61.5	[51.6, 70.6]	16.2	[10.7, 23.7]	22.3	[14.9, 31.8]
Other, multi-racial, or not reported (n=338)	53.2	[43.6, 62.5]	16.7	[11.1, 24.3]	30.2	[21.9, 39.9]
PCP/HRA status***						
PCP visit and HRA (n=1535)	48.6	[44.3, 52.9]	17.7	[14.8, 21.1]	33.7	[29.8, 37.8]
PCP visit and no HRA (n=1473)	53.1	[48.6, 57.6]	14.5	[12.0, 17.4]	32.4	[28.5, 36.6]
No PCP or no PCP visit (n=1041)	59.9	[54.5, 65.1]	18.5	[14.7, 23.1]	21.6	[17.6, 26.1]
Primary care barriers***						
Reported PCP barriers (n=842)	36.1	[30.8, 41.7]	16.6	[13.0, 21.1]	47.3	[41.5, 53.1]
Reported no PCP barriers (n=2803)	58.3	[55.2, 61.5]	16.4	[14.2, 18.8]	25.3	[22.7, 28.0]
No PCP (n=404)	54.2	[45.5, 62.7]	20.0	[14.3, 27.2]	25.8	[18.9, 34.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

1.13 For how many days during the last 30 days was your mental health not good?

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=4059)	**4.38**	**[3.95, 4.81]**
HMV cohort		
Longitudinal cohort (n=1467)	4.21	[3.62, 4.80]
New cohort (n=2592)	4.78	[4.42, 5.15]
Months enrolled in HMP-MC		
Less than 24 months (n=1681)	4.62	[4.15, 5.08]
24-47 months (n=1013)	4.75	[3.95, 5.56]
48+ months (n=1365)	4.19	[3.56, 4.81]
FPL		
0% (n=1306)	4.98	[4.20, 5.77]
0.1 to 99.99% (n=1635)	3.92	[3.34, 4.50]
100% or more (n=1118)	3.84	[3.18, 4.50]
Age		
19-34 (n=1658)	4.57	[3.93, 5.22]
35-50 (n=1141)	4.87	[4.03, 5.72]
51-65 (n=1260)	3.37	[2.63, 4.10]
Rurality		
Urban (n=2883)	4.21	[3.74, 4.69]
Suburban (n=366)	4.73	[3.40, 6.06]
Rural (n=810)	5.51	[4.10, 6.92]
Gender		
Female (n=2416)	5.14	[4.53, 5.75]
Male (n=1604)	3.60	[3.00, 4.19]
Race/Ethnicity		
White, non-Hispanic (n=2468)	4.82	[4.24, 5.40]
Black, non-Hispanic (n=757)	3.08	[2.43, 3.72]
Hispanic (n=261)	5.45	[3.19, 7.72]
Arab, Chaldean, or Middle Eastern (n=235)	4.15	[2.20, 6.11]
Other, multi-racial, or not reported (n=338)	5.04	[3.33, 6.75]

Total n may be less than universe N due to item non-response

1.14 For how many days during the last 30 days was your mental health not good? [collapsed]

Universe: All respondents (N= 4082)

	Number of days mental health not good					
	0 days		1-4 days		5+ days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4059)	**58.8**	**[56.2, 61.4]**	**14.2**	**[12.5, 16.1]**	**26.9**	**[24.7, 29.3]**
HMV cohort**						
Longitudinal cohort (n=1467)	60.8	[57.2, 64.4]	13.5	[11.2, 16.2]	25.7	[22.6, 28.9]
New cohort (n=2592)	54.0	[51.8, 56.2]	16.0	[14.4, 17.7]	30.0	[28.0, 32.1]
Months enrolled in HMP-MC						
Less than 24 months (n=1681)	55.3	[52.4, 58.1]	15.2	[13.4, 17.3]	29.5	[26.8, 32.3]
24-47 months (n=1013)	56.3	[50.9, 61.5]	14.1	[11.1, 17.8]	29.6	[25.1, 34.5]
48+ months (n=1365)	60.7	[56.9, 64.3]	14.0	[11.6, 16.8]	25.3	[22.2, 28.7]
FPL						
0% (n=1306)	56.8	[52.4, 61.1]	14.6	[11.8, 18.1]	28.6	[24.9, 32.5]
0.1 to 99.99% (n=1635)	60.5	[56.4, 64.4]	14.1	[11.7, 17.0]	25.4	[22.0, 29.1]
100% or more (n=1118)	60.5	[55.6, 65.2]	13.6	[10.7, 17.1]	26.0	[21.8, 30.6]
Age***						
19-34 (n=1658)	52.6	[48.2, 56.9]	16.0	[13.2, 19.2]	31.5	[27.7, 35.4]
35-50 (n=1141)	59.8	[55.1, 64.3]	13.4	[10.7, 16.6]	26.8	[22.9, 31.1]
51-65 (n=1260)	69.7	[65.4, 73.6]	12.0	[9.2, 15.4]	18.4	[15.4, 21.8]
Rurality						
Urban (n=2883)	59.8	[56.8, 62.7]	14.3	[12.3, 16.5]	25.9	[23.4, 28.6]
Suburban (n=366)	53.9	[45.3, 62.3]	17.0	[11.7, 23.9]	29.1	[22.2, 37.2]
Rural (n=810)	54.6	[48.0, 60.9]	11.6	[8.6, 15.4]	33.9	[27.8, 40.5]
Gender***						
Female (n=2416)	52.7	[49.2, 56.1]	15.4	[13.2, 17.9]	32.0	[28.8, 35.3]
Male (n=1604)	65.1	[61.1, 68.9]	13.4	[10.8, 16.4]	21.6	[18.5, 24.9]
Race/Ethnicity***						
White, non-Hispanic (n=2468)	54.5	[51.0, 58.0]	15.6	[13.3, 18.2]	29.9	[26.8, 33.1]
Black, non-Hispanic (n=757)	68.5	[63.1, 73.5]	12.5	[9.1, 16.8]	19.0	[15.3, 23.4]
Hispanic (n=261)	56.1	[45.9, 65.8]	10.1	[6.5, 15.2]	33.8	[24.6, 44.5]
Arab, Chaldean, or Middle Eastern (n=235)	67.6	[57.7, 76.1]	11.5	[6.0, 21.0]	20.9	[14.3, 29.4]
Other, multi-racial, or not reported (n=338)	51.2	[41.8, 60.6]	16.0	[10.6, 23.5]	32.7	[24.3, 42.5]
PCP/HRA status						
PCP visit and HRA (n=1541)	59.7	[55.6, 63.8]	14.6	[11.9, 17.9]	25.6	[22.3, 29.3]
PCP visit and no HRA (n=1477)	55.0	[50.5, 59.5]	15.2	[12.3, 18.7]	29.8	[25.9, 33.9]
No PCP or no PCP visit (n=1041)	62.6	[57.4, 67.6]	12.4	[9.7, 15.7]	25.0	[20.7, 29.9]
Primary care barriers***						
Reported PCP barriers (n=843)	39.0	[33.7, 44.6]	20.4	[15.9, 25.7]	40.6	[35.0, 46.5]
Reported no PCP barriers (n=2811)	64.3	[61.3, 67.2]	12.9	[11.1, 15.1]	22.7	[20.3, 25.3]
No PCP (n=405)	62.9	[54.6, 70.5]	9.8	[6.4, 14.7]	27.3	[20.6, 35.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

1.15 During the last 30 days, for how many days did poor physical or mental health keep you from doing your usual activities?

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=4042)	**4.87**	**[4.41, 5.33]**
HMV cohort		
Longitudinal cohort (n=1465)	4.80	[4.17, 5.42]
New cohort (n=2577)	5.04	[4.66, 5.42]
Months enrolled in HMP-MC		
Less than 24 months (n=1672)	4.92	[4.45, 5.39]
24-47 months (n=1008)	4.92	[4.07, 5.77]
48+ months (n=1362)	4.84	[4.18, 5.50]
FPL		
0% (n=1296)	5.38	[4.61, 6.15]
0.1 to 99.99% (n=1626)	4.63	[3.90, 5.36]
100% or more (n=1120)	4.18	[3.41, 4.95]
Age		
19-34 (n=1655)	4.13	[3.46, 4.80]
35-50 (n=1138)	5.72	[4.85, 6.59]
51-65 (n=1249)	5.20	[4.34, 6.06]
Rurality		
Urban (n=2873)	4.71	[4.19, 5.22]
Suburban (n=365)	5.84	[4.32, 7.37]
Rural (n=804)	5.45	[4.31, 6.60]
Gender		
Female (n=2408)	5.62	[4.97, 6.27]
Male (n=1595)	4.12	[3.49, 4.75]
Race/Ethnicity		
White, non-Hispanic (n=2460)	5.41	[4.80, 6.02]
Black, non-Hispanic (n=753)	4.01	[3.12, 4.91]
Hispanic (n=260)	4.74	[3.03, 6.44]
Arab, Chaldean, or Middle Eastern (n=233)	3.93	[2.25, 5.61]
Other, multi-racial, or not reported (n=336)	4.99	[3.19, 6.80]

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

1.16 During the last 30 days, for how many days did poor physical or mental health keep you from doing your usual activities? [collapsed]

Universe: All respondents (N= 4082)

	Number of days poor physical or mental health limited usual activities					
	0 days		1-4 days		5+ days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4042)	**57.6**	**[54.9, 60.2]**	**14.3**	**[12.5, 16.3]**	**28.1**	**[25.8, 30.5]**
HMV cohort						
Longitudinal cohort (n=1465)	59.1	[55.4, 62.7]	13.9	[11.5, 16.8]	27.0	[23.9, 30.3]
New cohort (n=2577)	54.1	[51.8, 56.3]	15.1	[13.6, 16.8]	30.8	[28.7, 32.9]
Months enrolled in HMP-MC						
Less than 24 months (n=1672)	54.2	[51.3, 57.1]	14.3	[12.5, 16.3]	31.5	[28.8, 34.4]
24-47 months (n=1008)	55.0	[49.6, 60.3]	16.3	[12.8, 20.4]	28.7	[24.3, 33.7]
48+ months (n=1362)	59.4	[55.6, 63.2]	13.6	[11.1, 16.6]	27.0	[23.8, 30.4]
FPL						
0% (n=1296)	54.3	[49.8, 58.7]	15.3	[12.3, 18.8]	30.4	[26.7, 34.4]
0.1 to 99.99% (n=1626)	58.5	[54.2, 62.7]	14.3	[11.5, 17.6]	27.2	[23.5, 31.3]
100% or more (n=1120)	63.1	[58.3, 67.7]	12.3	[9.4, 15.9]	24.6	[20.7, 28.9]
Age						
19-34 (n=1655)	57.9	[53.6, 62.0]	15.5	[12.7, 18.7]	26.7	[23.1, 30.6]
35-50 (n=1138)	55.9	[51.1, 60.6]	13.0	[10.0, 16.8]	31.1	[27.0, 35.6]
51-65 (n=1249)	59.4	[54.8, 63.8]	13.7	[10.6, 17.5]	27.0	[23.2, 31.1]
Rurality						
Urban (n=2873)	58.5	[55.5, 61.5]	14.5	[12.5, 16.8]	27.0	[24.5, 29.7]
Suburban (n=365)	52.0	[43.3, 60.7]	14.5	[8.2, 24.5]	33.5	[26.0, 41.8]
Rural (n=804)	54.5	[48.0, 60.9]	12.4	[9.5, 16.0]	33.1	[27.2, 39.6]
Gender***						
Female (n=2408)	52.4	[48.9, 55.8]	15.0	[12.8, 17.6]	32.6	[29.4, 36.0]
Male (n=1595)	62.7	[58.7, 66.6]	13.5	[10.8, 16.8]	23.7	[20.7, 27.1]
Race/Ethnicity						
White, non-Hispanic (n=2460)	54.4	[50.9, 57.9]	15.3	[12.9, 18.0]	30.3	[27.3, 33.5]
Black, non-Hispanic (n=753)	64.6	[58.8, 70.0]	10.9	[7.7, 15.3]	24.5	[19.9, 29.7]
Hispanic (n=260)	54.7	[44.4, 64.6]	16.1	[9.9, 25.0]	29.2	[20.3, 40.0]
Arab, Chaldean, or Middle Eastern (n=233)	63.8	[53.5, 72.9]	14.1	[8.2, 23.2]	22.1	[14.7, 31.8]
Other, multi-racial, or not reported (n=336)	53.5	[44.0, 62.7]	17.1	[10.8, 26.0]	29.4	[21.7, 38.5]
PCP/HRA status						
PCP visit and HRA (n=1533)	55.6	[51.4, 59.8]	13.4	[10.8, 16.4]	31.0	[27.2, 35.0]
PCP visit and no HRA (n=1472)	55.7	[51.2, 60.1]	14.7	[11.7, 18.3]	29.6	[25.8, 33.7]
No PCP or no PCP visit (n=1037)	62.9	[57.5, 68.1]	15.0	[11.3, 19.6]	22.1	[18.1, 26.6]
Primary care barriers***						
Reported PCP barriers (n=842)	39.6	[34.2, 45.2]	14.6	[10.8, 19.6]	45.8	[40.1, 51.6]
Reported no PCP barriers (n=2796)	62.9	[59.7, 65.9]	14.0	[11.9, 16.5]	23.1	[20.6, 25.7]
No PCP (n=404)	59.5	[51.0, 67.5]	15.3	[10.2, 22.4]	25.2	[19.1, 32.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2 Health Behaviors

Beneficiary Survey Supplemental Data Appendix

2.1 In the last 7 days, how many days did you eat 3 or more servings of fruit or vegetables?

Universe: All respondents (N= 4082)

	3 or more fruits or vegetables servings in last 7 days							
	Every day (7 days)		Most days (3-6 days)		1-2 days		0 days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4067)	**33.6**	**[31.1, 36.2]**	**39.4**	**[36.8, 42.1]**	**15.5**	**[13.5, 17.7]**	**11.5**	**[9.9, 13.4]**
HMV cohort								
Longitudinal cohort (n=1471)	34.1	[30.6, 37.7]	38.5	[35.0, 42.2]	15.7	[13.0, 18.8]	11.7	[9.5, 14.3]
New cohort (n=2596)	32.5	[30.4, 34.6]	41.4	[39.2, 43.7]	14.9	[13.4, 16.7]	11.1	[9.8, 12.6]
Months enrolled in HMP-MC								
Less than 24 months (n=1688)	32.9	[30.3, 35.6]	39.4	[36.5, 42.3]	15.6	[13.6, 17.8]	12.1	[10.4, 14.1]
24-47 months (n=1010)	37.0	[31.7, 42.6]	38.5	[33.6, 43.6]	14.1	[10.4, 18.9]	10.4	[7.2, 14.9]
48+ months (n=1369)	32.6	[29.2, 36.3]	39.7	[35.9, 43.6]	15.9	[13.1, 19.1]	11.7	[9.5, 14.4]
FPL								
0% (n=1306)	34.2	[30.0, 38.7]	37.0	[32.7, 41.4]	17.9	[14.5, 21.9]	10.9	[8.6, 13.7]
0.1 to 99.99% (n=1634)	33.2	[29.3, 37.3]	40.9	[36.7, 45.3]	14.5	[11.5, 18.2]	11.3	[8.7, 14.6]
100% or more (n=1127)	33.0	[28.8, 37.4]	42.0	[37.3, 47.0]	11.9	[9.4, 15.0]	13.1	[9.5, 17.7]
Age*								
19-34 (n=1656)	28.8	[25.0, 32.9]	42.7	[38.4, 47.1]	16.0	[13.0, 19.7]	12.5	[9.8, 15.7]
35-50 (n=1144)	35.9	[31.5, 40.6]	37.1	[32.6, 41.8]	16.1	[12.7, 20.3]	10.9	[8.2, 14.2]
51-65 (n=1267)	39.9	[35.4, 44.5]	36.0	[31.8, 40.4]	13.6	[10.5, 17.4]	10.6	[8.1, 13.6]
Rurality								
Urban (n=2883)	33.7	[30.8, 36.7]	39.5	[36.5, 42.6]	15.5	[13.3, 18.0]	11.3	[9.4, 13.4]
Suburban (n=369)	30.9	[23.9, 39.0]	40.4	[31.9, 49.6]	11.9	[8.1, 17.0]	16.8	[11.6, 23.8]
Rural (n=815)	35.2	[29.6, 41.2]	37.6	[31.7, 43.8]	18.0	[12.1, 26.0]	9.2	[6.7, 12.6]
Gender***								
Female (n=2422)	38.6	[35.3, 42.0]	39.7	[36.4, 43.2]	11.1	[9.0, 13.4]	10.6	[8.4, 13.2]
Male (n=1605)	28.9	[25.1, 32.9]	39.2	[35.2, 43.4]	19.4	[16.2, 23.0]	12.5	[10.2, 15.3]
Race/Ethnicity								
White, non-Hispanic (n=2473)	30.1	[27.2, 33.2]	40.7	[37.2, 44.2]	16.1	[13.5, 19.2]	13.1	[10.7, 15.8]
Black, non-Hispanic (n=757)	36.7	[31.0, 42.8]	39.1	[33.5, 45.0]	13.5	[9.9, 18.1]	10.7	[7.7, 14.8]
Hispanic (n=263)	34.7	[25.5, 45.3]	36.4	[27.5, 46.3]	21.7	[14.2, 31.5]	7.3	[4.1, 12.6]
Arab, Chaldean, or Middle Eastern (n=235)	46.0	[36.3, 56.0]	34.9	[26.2, 44.7]	10.7	[5.5, 20.0]	8.4	[4.7, 14.6]
Other, multi-racial, or not reported (n=339)	35.0	[26.7, 44.4]	38.0	[29.4, 47.5]	17.2	[10.5, 26.9]	9.8	[5.7, 16.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.2 In the last 7 days, how many days did you eat 3 or more servings of fruit or vegetables? [collapsed]

Universe: All respondents (N= 4082)

	3 or more fruits or vegetables servings in last 7 days			
	3 or more days		2 or less days	
	Row %	95% CI	Row %	95% CI
Total (n=4067)	**73.0**	**[70.4, 75.4]**	**27.0**	**[24.6, 29.6]**
HMV cohort				
Longitudinal cohort (n=1471)	72.6	[69.1, 75.9]	27.4	[24.1, 30.9]
New cohort (n=2596)	73.9	[71.9, 75.9]	26.1	[24.1, 28.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1688)	72.3	[69.7, 74.8]	27.7	[25.2, 30.3]
24-47 months (n=1010)	75.5	[70.0, 80.3]	24.5	[19.7, 30.0]
48+ months (n=1369)	72.4	[68.7, 75.7]	27.6	[24.3, 31.3]
FPL				
0% (n=1306)	71.2	[66.9, 75.1]	28.8	[24.9, 33.1]
0.1 to 99.99% (n=1634)	74.2	[69.9, 78.0]	25.8	[22.0, 30.1]
100% or more (n=1127)	75.0	[70.2, 79.3]	25.0	[20.7, 29.8]
Age				
19-34 (n=1656)	71.5	[67.3, 75.4]	28.5	[24.6, 32.7]
35-50 (n=1144)	73.0	[68.4, 77.2]	27.0	[22.8, 31.6]
51-65 (n=1267)	75.9	[71.6, 79.7]	24.1	[20.3, 28.4]
Rurality				
Urban (n=2883)	73.2	[70.3, 75.9]	26.8	[24.1, 29.7]
Suburban (n=369)	71.3	[63.7, 77.9]	28.7	[22.1, 36.3]
Rural (n=815)	72.8	[65.4, 79.1]	27.2	[20.9, 34.6]
Gender***				
Female (n=2422)	78.4	[75.2, 81.2]	21.6	[18.8, 24.8]
Male (n=1605)	68.1	[64.1, 71.8]	31.9	[28.2, 35.9]
Race/Ethnicity				
White, non-Hispanic (n=2473)	70.8	[67.3, 74.1]	29.2	[25.9, 32.7]
Black, non-Hispanic (n=757)	75.8	[70.4, 80.5]	24.2	[19.5, 29.6]
Hispanic (n=263)	71.1	[61.2, 79.3]	28.9	[20.7, 38.8]
Arab, Chaldean, or Middle Eastern (n=235)	80.9	[71.5, 87.7]	19.1	[12.3, 28.5]
Other, multi-racial, or not reported (n=339)	73.0	[63.3, 81.0]	27.0	[19.0, 36.7]
I may get a payment reduction if I complete an HRA**				
Yes (n=1167)	78.3	[73.8, 82.3]	21.7	[17.7, 26.2]
No/Don't know (n=2877)	70.8	[67.7, 73.8]	29.2	[26.2, 32.3]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3063)	73.0	[69.9, 75.8]	27.0	[24.2, 30.1]
No/Don't know (n=985)	73.2	[68.2, 77.6]	26.8	[22.4, 31.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.3 In the last 7 days, how many days did you exercise for at least 20 minutes?

Universe: All respondents (N= 4082)

	Exercise for 20 minutes in last 7 days							
	Every day (7 days)		Most days (3-6 days)		1-2 days		0 days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4076)	**24.2**	**[22.1, 26.4]**	**32.7**	**[30.2, 35.4]**	**18.4**	**[16.2, 20.8]**	**24.7**	**[22.5, 27.1]**
HMV cohort								
Longitudinal cohort (n=1474)	23.9	[21.1, 27.0]	32.8	[29.3, 36.4]	19.2	[16.3, 22.6]	24.1	[21.0, 27.4]
New cohort (n=2602)	24.8	[22.9, 26.8]	32.6	[30.5, 34.8]	16.4	[14.7, 18.2]	26.2	[24.3, 28.2]
Months enrolled in HMP-MC								
Less than 24 months (n=1690)	24.2	[21.9, 26.6]	31.6	[29.0, 34.2]	16.4	[14.0, 19.2]	27.8	[25.4, 30.4]
24-47 months (n=1015)	22.5	[18.7, 26.8]	35.1	[30.0, 40.5]	17.3	[13.5, 21.9]	25.1	[20.4, 30.5]
48+ months (n=1371)	24.7	[21.7, 28.0]	32.2	[28.7, 36.0]	19.3	[16.2, 22.9]	23.7	[20.6, 27.1]
FPL**								
0% (n=1309)	22.3	[19.0, 26.1]	29.3	[25.3, 33.6]	22.5	[18.6, 26.9]	25.9	[22.2, 29.9]
0.1 to 99.99% (n=1639)	24.6	[21.4, 28.0]	35.3	[31.2, 39.8]	15.6	[12.4, 19.4]	24.5	[21.0, 28.5]
100% or more (n=1128)	27.3	[23.3, 31.9]	35.8	[31.2, 40.7]	14.3	[11.5, 17.8]	22.5	[18.5, 27.0]
Age**								
19-34 (n=1662)	20.5	[17.6, 23.8]	36.2	[32.1, 40.6]	20.3	[16.8, 24.4]	22.9	[19.3, 27.0]
35-50 (n=1148)	24.3	[20.4, 28.6]	29.0	[25.0, 33.5]	18.8	[15.0, 23.2]	27.9	[24.0, 32.3]
51-65 (n=1266)	31.0	[27.1, 35.2]	30.8	[26.3, 35.7]	14.2	[11.2, 18.0]	24.0	[20.8, 27.5]
Rurality								
Urban (n=2893)	23.2	[20.9, 25.7]	32.2	[29.4, 35.2]	19.4	[16.9, 22.2]	25.2	[22.6, 27.9]
Suburban (n=368)	28.9	[21.3, 37.8]	33.7	[25.8, 42.8]	13.0	[8.4, 19.6]	24.4	[18.5, 31.4]
Rural (n=815)	28.3	[23.4, 33.7]	36.2	[30.1, 42.9]	14.4	[10.3, 19.7]	21.1	[16.2, 27.1]
Gender								
Female (n=2423)	23.0	[20.5, 25.7]	32.4	[29.1, 35.8]	17.3	[14.7, 20.3]	27.3	[24.2, 30.6]
Male (n=1613)	25.8	[22.4, 29.4]	32.6	[28.8, 36.7]	19.6	[16.2, 23.6]	22.0	[18.8, 25.5]
Race/Ethnicity**								
White, non-Hispanic (n=2480)	25.8	[23.0, 28.7]	34.8	[31.5, 38.4]	16.0	[13.3, 19.0]	23.4	[20.7, 26.4]
Black, non-Hispanic (n=756)	18.6	[14.8, 23.1]	30.3	[25.0, 36.2]	21.3	[16.6, 26.8]	29.8	[24.6, 35.6]
Hispanic (n=263)	29.6	[21.0, 39.9]	29.3	[21.1, 39.0]	14.7	[9.3, 22.6]	26.5	[18.3, 36.7]
Arab, Chaldean, or Middle Eastern (n=235)	22.2	[15.5, 30.9]	29.1	[21.0, 38.6]	20.9	[13.1, 31.8]	27.8	[19.8, 37.4]
Other, multi-racial, or not reported (n=342)	28.8	[21.2, 37.8]	32.4	[24.8, 41.1]	24.8	[16.3, 35.7]	14.1	[9.5, 20.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.4 In the last 7 days, how many days did you exercise for at least 20 minutes? [collapsed]

Universe: All respondents (N= 4082)

	Exercise for 20 minutes in last 7 days			
	3 or more days		2 or less days	
	Row %	95% CI	Row %	95% CI
Total (n=4076)	**56.9**	**[54.2, 59.6]**	**43.1**	**[40.4, 45.8]**
HMV cohort				
Longitudinal cohort (n=1474)	56.7	[52.9, 60.4]	43.3	[39.6, 47.1]
New cohort (n=2602)	57.4	[55.2, 59.6]	42.6	[40.4, 44.8]
Months enrolled in HMP-MC				
Less than 24 months (n=1690)	55.8	[52.8, 58.7]	44.2	[41.3, 47.2]
24-47 months (n=1015)	57.6	[52.0, 63.0]	42.4	[37.0, 48.0]
48+ months (n=1371)	57.0	[53.0, 60.8]	43.0	[39.2, 47.0]
FPL**				
0% (n=1309)	51.6	[47.1, 56.2]	48.4	[43.8, 52.9]
0.1 to 99.99% (n=1639)	59.9	[55.5, 64.1]	40.1	[35.9, 44.5]
100% or more (n=1128)	63.2	[58.3, 67.7]	36.8	[32.3, 41.7]
Age				
19-34 (n=1662)	56.8	[52.3, 61.1]	43.2	[38.9, 47.7]
35-50 (n=1148)	53.3	[48.5, 58.1]	46.7	[41.9, 51.5]
51-65 (n=1266)	61.8	[57.4, 66.0]	38.2	[34.0, 42.6]
Rurality*				
Urban (n=2893)	55.5	[52.3, 58.5]	44.5	[41.5, 47.7]
Suburban (n=368)	62.6	[54.4, 70.1]	37.4	[29.9, 45.6]
Rural (n=815)	64.5	[58.1, 70.4]	35.5	[29.6, 41.9]
Gender				
Female (n=2423)	55.4	[51.9, 58.9]	44.6	[41.1, 48.1]
Male (n=1613)	58.4	[54.1, 62.5]	41.6	[37.5, 45.9]
Race/Ethnicity**				
White, non-Hispanic (n=2480)	60.6	[57.1, 64.0]	39.4	[36.0, 42.9]
Black, non-Hispanic (n=756)	48.9	[42.9, 54.9]	51.1	[45.1, 57.1]
Hispanic (n=263)	58.8	[48.6, 68.4]	41.2	[31.6, 51.4]
Arab, Chaldean, or Middle Eastern (n=235)	51.3	[41.3, 61.2]	48.7	[38.8, 58.7]
Other, multi-racial, or not reported (n=342)	61.2	[51.2, 70.3]	38.8	[29.7, 48.8]
I may get a payment reduction if I complete an HRA				
Yes (n=1166)	59.5	[54.4, 64.4]	40.5	[35.6, 45.6]
No/Don't know (n=2890)	55.8	[52.6, 59.1]	44.2	[40.9, 47.4]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3068)	58.3	[55.2, 61.4]	41.7	[38.6, 44.8]
No/Don't know (n=989)	52.2	[46.6, 57.7]	47.8	[42.3, 53.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.5 Healthy behavior score (0-2) [composite variable]

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=4061)	**1.30**	**[1.26, 1.34]**
HMV cohort		
Longitudinal cohort (n=1470)	1.29	[1.24, 1.35]
New cohort (n=2591)	1.31	[1.28, 1.35]
Months enrolled in HMP-MC		
Less than 24 months (n=1687)	1.28	[1.24, 1.32]
24-47 months (n=1006)	1.33	[1.24, 1.41]
48+ months (n=1368)	1.29	[1.24, 1.35]
FPL		
0% (n=1303)	1.23	[1.16, 1.29]
0.1 to 99.99% (n=1632)	1.34	[1.28, 1.40]
100% or more (n=1126)	1.38	[1.31, 1.45]
Age		
19-34 (n=1655)	1.28	[1.22, 1.34]
35-50 (n=1144)	1.26	[1.19, 1.34]
51-65 (n=1262)	1.38	[1.31, 1.44]
Rurality		
Urban (n=2878)	1.29	[1.24, 1.33]
Suburban (n=368)	1.34	[1.22, 1.46]
Rural (n=815)	1.37	[1.28, 1.47]
Gender		
Female (n=2418)	1.34	[1.29, 1.39]
Male (n=1603)	1.26	[1.20, 1.32]
Race/Ethnicity		
White, non-Hispanic (n=2469)	1.31	[1.26, 1.37]
Black, non-Hispanic (n=755)	1.25	[1.17, 1.33]
Hispanic (n=263)	1.30	[1.14, 1.46]
Arab, Chaldean, or Middle Eastern (n=235)	1.32	[1.17, 1.47]
Other, multi-racial, or not reported (n=339)	1.34	[1.19, 1.48]
I may get a payment reduction if I complete an HRA		
Yes (n=1166)	1.38	[1.31, 1.45]
No/Don't know (n=2875)	1.27	[1.22, 1.31]
Some kinds of visits, tests, and medicines have no copays		
Yes (n=3059)	1.31	[1.27, 1.36]
No/Don't know (n=984)	1.25	[1.18, 1.33]
PCP/HRA status		
PCP visit and HRA (n=1542)	1.38	[1.32, 1.44]
PCP visit and no HRA (n=1479)	1.23	[1.16, 1.30]
No PCP or no PCP visit (n=1040)	1.28	[1.20, 1.36]

Total n may be less than universe N due to item non-response

Healthy behavior score ranges from 0 (neither healthy behavior) to 2 (both healthy behaviors) from the following questions:
In the past 7 days how many days did you eat 3 or more servings of fruits and vegetables? (1 point for response of *3-7 days*)
In the past 7 days, how many days did you exercise for at least 20 minutes? (1 point for response of *3-7 days*)

Beneficiary Survey Supplemental Data Appendix

2.6 In the last 7 days, how many days did you have sugary drinks, which include soda or pop that contains sugar, sweetened fruit drinks, sports drinks, or energy drinks?

Universe: All respondents (N= 4082)

	Sugary drinks in last 7 days							
	Every day (7 days)		Most days (3-6 days)		1-2 days		0 days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4080)	**28.0**	**[25.6, 30.6]**	**23.3**	**[21.1, 25.7]**	**24.5**	**[22.2, 26.9]**	**24.1**	**[22.0, 26.4]**
HMV cohort								
Longitudinal cohort (n=1475)	28.1	[24.9, 31.7]	22.5	[19.5, 25.8]	25.1	[22.0, 28.6]	24.2	[21.3, 27.4]
New cohort (n=2605)	27.8	[25.8, 29.9]	25.3	[23.4, 27.4]	22.9	[21.1, 24.8]	23.9	[22.1, 25.9]
Months enrolled in HMP-MC								
Less than 24 months (n=1690)	29.4	[26.6, 32.3]	24.0	[21.7, 26.5]	22.3	[20.1, 24.6]	24.3	[22.1, 26.7]
24-47 months (n=1018)	27.5	[22.9, 32.6]	27.5	[22.6, 32.9]	22.4	[18.5, 26.9]	22.6	[18.3, 27.6]
48+ months (n=1372)	27.9	[24.5, 31.6]	21.7	[18.7, 25.1]	25.8	[22.5, 29.4]	24.6	[21.6, 27.9]
FPL								
0% (n=1312)	30.2	[26.1, 34.7]	24.2	[20.6, 28.3]	24.2	[20.4, 28.5]	21.3	[18.2, 24.8]
0.1 to 99.99% (n=1639)	25.4	[22.0, 29.3]	23.5	[20.0, 27.4]	23.2	[19.8, 27.0]	27.9	[24.0, 32.1]
100% or more (n=1129)	27.6	[23.5, 32.1]	21.1	[17.3, 25.5]	27.1	[23.1, 31.6]	24.1	[20.1, 28.6]
Age***								
19-34 (n=1663)	28.3	[24.5, 32.5]	28.9	[25.2, 33.0]	27.0	[23.3, 31.1]	15.8	[12.9, 19.1]
35-50 (n=1146)	30.1	[25.7, 34.8]	20.8	[17.2, 24.9]	22.8	[19.0, 27.1]	26.3	[22.5, 30.6]
51-65 (n=1271)	24.9	[21.3, 29.0]	15.8	[12.7, 19.6]	21.7	[18.2, 25.8]	37.5	[33.1, 42.1]
Rurality**								
Urban (n=2897)	26.7	[24.0, 29.6]	24.9	[22.3, 27.7]	24.7	[22.1, 27.5]	23.7	[21.3, 26.3]
Suburban (n=368)	39.3	[31.1, 48.1]	17.2	[12.7, 22.8]	21.3	[15.1, 29.1]	22.2	[15.3, 31.2]
Rural (n=815)	30.0	[24.1, 36.7]	15.0	[11.2, 19.8]	25.5	[19.7, 32.3]	29.4	[24.6, 34.7]
Gender***								
Female (n=2425)	24.5	[21.8, 27.4]	22.1	[19.3, 25.1]	25.0	[22.1, 28.1]	28.4	[25.3, 31.8]
Male (n=1615)	31.8	[27.9, 36.0]	24.9	[21.4, 28.7]	23.2	[19.8, 27.0]	20.1	[17.3, 23.2]
Race/Ethnicity***								
White, non-Hispanic (n=2483)	32.3	[29.0, 35.8]	19.1	[16.6, 22.0]	21.5	[18.7, 24.6]	27.0	[24.1, 30.1]
Black, non-Hispanic (n=757)	25.1	[20.4, 30.4]	30.5	[25.2, 36.3]	27.8	[22.5, 33.8]	16.6	[12.7, 21.4]
Hispanic (n=263)	29.2	[20.1, 40.2]	27.7	[19.7, 37.6]	25.4	[18.2, 34.2]	17.7	[11.6, 26.0]
Arab, Chaldean, or Middle Eastern (n=235)	8.5	[5.5, 13.1]	30.0	[21.0, 40.8]	28.7	[20.7, 38.2]	32.8	[24.1, 42.8]
Other, multi-racial, or not reported (n=342)	25.7	[17.7, 35.7]	19.4	[13.2, 27.6]	28.4	[21.2, 36.8]	26.5	[19.0, 35.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.7 In the last 7 days, how many days did you have sugary drinks, which include soda or pop that contains sugar, sweetened fruit drinks, sports drinks, or energy drinks? [collapsed]

Universe: All respondents (N= 4082)

	Sugary drinks in last 7 days			
	3 or more days		2 or less days	
	Row %	95% CI	Row %	95% CI
Total (n=4080)	**51.4**	**[48.7, 54.1]**	**48.6**	**[45.9, 51.3]**
HMV cohort				
Longitudinal cohort (n=1475)	50.6	[46.9, 54.4]	49.4	[45.6, 53.1]
New cohort (n=2605)	53.2	[50.9, 55.4]	46.8	[44.6, 49.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1690)	53.4	[50.6, 56.2]	46.6	[43.8, 49.4]
24-47 months (n=1018)	54.9	[49.5, 60.2]	45.1	[39.8, 50.5]
48+ months (n=1372)	49.6	[45.7, 53.5]	50.4	[46.5, 54.3]
FPL				
0% (n=1312)	54.5	[50.0, 58.9]	45.5	[41.1, 50.0]
0.1 to 99.99% (n=1639)	48.9	[44.6, 53.3]	51.1	[46.7, 55.4]
100% or more (n=1129)	48.7	[43.9, 53.6]	51.3	[46.4, 56.1]
Age***				
19-34 (n=1663)	57.2	[52.8, 61.5]	42.8	[38.5, 47.2]
35-50 (n=1146)	50.9	[46.1, 55.6]	49.1	[44.4, 53.9]
51-65 (n=1271)	40.8	[36.4, 45.3]	59.2	[54.7, 63.6]
Rurality				
Urban (n=2897)	51.6	[48.5, 54.7]	48.4	[45.3, 51.5]
Suburban (n=368)	56.5	[47.6, 64.9]	43.5	[35.1, 52.4]
Rural (n=815)	45.1	[38.7, 51.6]	54.9	[48.4, 61.3]
Gender***				
Female (n=2425)	46.6	[43.2, 50.0]	53.4	[50.0, 56.8]
Male (n=1615)	56.7	[52.6, 60.7]	43.3	[39.3, 47.4]
Race/Ethnicity*				
White, non-Hispanic (n=2483)	51.5	[47.9, 55.0]	48.5	[45.0, 52.1]
Black, non-Hispanic (n=757)	55.6	[49.5, 61.5]	44.4	[38.5, 50.5]
Hispanic (n=263)	56.9	[47.0, 66.3]	43.1	[33.7, 53.0]
Arab, Chaldean, or Middle Eastern (n=235)	38.5	[29.1, 48.8]	61.5	[51.2, 70.9]
Other, multi-racial, or not reported (n=342)	45.1	[35.9, 54.7]	54.9	[45.3, 64.1]
I may get a payment reduction if I complete an HRA*				
Yes (n=1167)	46.8	[41.8, 51.9]	53.2	[48.1, 58.2]
No/Don't know (n=2890)	53.2	[49.9, 56.4]	46.8	[43.6, 50.1]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3071)	50.4	[47.2, 53.5]	49.6	[46.5, 52.8]
No/Don't know (n=989)	54.1	[48.5, 59.6]	45.9	[40.4, 51.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.8 In the last 7 days, how many days did you have [5+ for men/4+ for women] alcoholic drinks?

Universe: All respondents (N= 4082)

	Binge drinking in last 7 days							
	Every day (7 days)		Most days (3-6 days)		1-2 days		0 days	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4076)	**1.0**	**[0.7, 1.4]**	**5.2**	**[4.1, 6.7]**	**16.2**	**[14.1, 18.4]**	**77.6**	**[75.1, 79.9]**
HMV cohort*								
Longitudinal cohort (n=1472)	0.6	[0.3, 1.3]	5.4	[3.9, 7.5]	16.9	[14.1, 20.1]	77.1	[73.6, 80.2]
New cohort (n=2604)	1.8	[1.3, 2.6]	4.8	[3.9, 5.9]	14.4	[12.9, 16.1]	78.9	[77.0, 80.7]
Months enrolled in HMP-MC								
Less than 24 months (n=1690)	2.1	[1.4, 3.1]	4.4	[3.5, 5.6]	14.2	[12.3, 16.3]	79.3	[77.0, 81.5]
24-47 months (n=1017)	1.5	[0.6, 3.4]	6.0	[3.6, 9.7]	17.6	[13.1, 23.1]	74.9	[69.2, 79.9]
48+ months (n=1369)	0.5	[0.2, 1.0]	5.2	[3.7, 7.4]	16.2	[13.4, 19.4]	78.1	[74.6, 81.2]
FPL								
0% (n=1308)	1.0	[0.6, 1.6]	5.6	[3.7, 8.5]	17.9	[14.3, 22.0]	75.5	[71.1, 79.5]
0.1 to 99.99% (n=1639)	1.1	[0.5, 2.3]	4.2	[3.0, 5.8]	16.1	[13.0, 19.7]	78.7	[74.9, 82.1]
100% or more (n=1129)	0.9	[0.5, 1.5]	6.1	[3.7, 9.8]	12.8	[10.0, 16.2]	80.2	[75.9, 83.9]
Age								
19-34 (n=1662)	0.4	[0.2, 0.8]	5.0	[3.3, 7.7]	16.5	[13.3, 20.2]	78.0	[73.9, 81.7]
35-50 (n=1144)	1.3	[0.6, 2.8]	6.3	[4.2, 9.4]	15.9	[12.7, 19.7]	76.5	[72.1, 80.4]
51-65 (n=1270)	1.6	[1.0, 2.5]	4.2	[3.1, 5.9]	15.9	[12.0, 20.7]	78.3	[73.6, 82.3]
Rurality*								
Urban (n=2893)	0.7	[0.5, 1.1]	5.3	[4.0, 7.1]	17.3	[14.9, 20.0]	76.7	[73.8, 79.3]
Suburban (n=368)	2.2	[0.6, 8.3]	4.7	[1.9, 11.0]	10.0	[6.6, 14.9]	83.1	[76.0, 88.4]
Rural (n=815)	2.3	[1.1, 4.6]	4.9	[2.9, 8.2]	11.6	[8.3, 15.9]	81.3	[76.2, 85.5]
Gender**								
Female (n=2423)	0.9	[0.4, 1.7]	3.7	[2.8, 4.9]	14.6	[12.2, 17.3]	80.9	[78.0, 83.4]
Male (n=1613)	1.0	[0.7, 1.6]	6.8	[4.8, 9.6]	18.1	[14.8, 21.9]	74.0	[69.9, 77.8]
Race/Ethnicity***								
White, non-Hispanic (n=2482)	1.2	[0.7, 2.0]	4.9	[3.5, 6.8]	12.0	[10.0, 14.5]	81.9	[79.0, 84.4]
Black, non-Hispanic (n=757)	1.0	[0.5, 1.7]	7.5	[4.7, 11.6]	26.9	[21.5, 32.9]	64.7	[58.5, 70.4]
Hispanic (n=263)	0.0		4.7	[2.4, 9.0]	18.5	[11.6, 28.1]	76.8	[67.2, 84.2]
Arab, Chaldean, or Middle Eastern (n=235)	0.0		1.0	[0.2, 5.5]	8.3	[3.6, 17.9]	90.7	[81.2, 95.6]
Other, multi-racial, or not reported (n=339)	1.1	[0.3, 4.4]	4.4	[1.8, 10.5]	14.1	[8.3, 22.8]	80.4	[71.3, 87.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.9 In the last 7 days, how many days did you have [5+ for men/4+ for women] alcoholic drinks? [collapsed]

Universe: All respondents (N= 4082)

	Binge drinking in last 7 days			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4076)	**22.4**	**[20.1, 24.9]**	**77.6**	**[75.1, 79.9]**
HMV cohort				
Longitudinal cohort (n=1472)	22.9	[19.8, 26.4]	77.1	[73.6, 80.2]
New cohort (n=2604)	21.1	[19.3, 23.0]	78.9	[77.0, 80.7]
Months enrolled in HMP-MC				
Less than 24 months (n=1690)	20.7	[18.5, 23.0]	79.3	[77.0, 81.5]
24-47 months (n=1017)	25.1	[20.1, 30.8]	74.9	[69.2, 79.9]
48+ months (n=1369)	21.9	[18.8, 25.4]	78.1	[74.6, 81.2]
FPL				
0% (n=1308)	24.5	[20.5, 28.9]	75.5	[71.1, 79.5]
0.1 to 99.99% (n=1639)	21.3	[17.9, 25.1]	78.7	[74.9, 82.1]
100% or more (n=1129)	19.8	[16.1, 24.1]	80.2	[75.9, 83.9]
Age				
19-34 (n=1662)	22.0	[18.3, 26.1]	78.0	[73.9, 81.7]
35-50 (n=1144)	23.5	[19.6, 27.9]	76.5	[72.1, 80.4]
51-65 (n=1270)	21.7	[17.7, 26.4]	78.3	[73.6, 82.3]
Rurality				
Urban (n=2893)	23.3	[20.7, 26.2]	76.7	[73.8, 79.3]
Suburban (n=368)	16.9	[11.6, 24.0]	83.1	[76.0, 88.4]
Rural (n=815)	18.7	[14.5, 23.8]	81.3	[76.2, 85.5]
Gender**				
Female (n=2423)	19.1	[16.6, 22.0]	80.9	[78.0, 83.4]
Male (n=1613)	26.0	[22.2, 30.1]	74.0	[69.9, 77.8]
Race/Ethnicity***				
White, non-Hispanic (n=2482)	18.1	[15.6, 21.0]	81.9	[79.0, 84.4]
Black, non-Hispanic (n=757)	35.3	[29.6, 41.5]	64.7	[58.5, 70.4]
Hispanic (n=263)	23.2	[15.8, 32.8]	76.8	[67.2, 84.2]
Arab, Chaldean, or Middle Eastern (n=235)	9.3	[4.4, 18.8]	90.7	[81.2, 95.6]
Other, multi-racial, or not reported (n=339)	19.6	[12.9, 28.7]	80.4	[71.3, 87.1]
I may get a payment reduction if I complete an HRA				
Yes (n=1165)	20.2	[16.3, 24.8]	79.8	[75.2, 83.7]
No/Don't know (n=2889)	23.2	[20.4, 26.2]	76.8	[73.8, 79.6]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3072)	21.7	[19.1, 24.5]	78.3	[75.5, 80.9]
No/Don't know (n=984)	24.3	[19.6, 29.8]	75.7	[70.2, 80.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.10 In the last 30 days have you smoked or used tobacco in any form?

Universe: All respondents (N= 4082)

	Smoked or used tobacco in last 30 days			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4079)	**33.2**	**[30.7, 35.8]**	**66.8**	**[64.2, 69.3]**
HMV cohort*				
Longitudinal cohort (n=1473)	34.6	[31.1, 38.2]	65.4	[61.8, 68.9]
New cohort (n=2606)	29.9	[27.9, 32.0]	70.1	[68.0, 72.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1690)	31.7	[28.9, 34.6]	68.3	[65.4, 71.1]
24-47 months (n=1019)	30.3	[25.7, 35.3]	69.7	[64.7, 74.3]
48+ months (n=1370)	34.6	[31.0, 38.4]	65.4	[61.6, 69.0]
FPL***				
0% (n=1312)	39.8	[35.5, 44.4]	60.2	[55.6, 64.5]
0.1 to 99.99% (n=1638)	28.1	[24.4, 32.0]	71.9	[68.0, 75.6]
100% or more (n=1129)	27.4	[23.1, 32.1]	72.6	[67.9, 76.9]
Age***				
19-34 (n=1660)	27.0	[23.2, 31.1]	73.0	[68.9, 76.8]
35-50 (n=1148)	41.1	[36.4, 45.9]	58.9	[54.1, 63.6]
51-65 (n=1271)	34.9	[30.6, 39.5]	65.1	[60.5, 69.4]
Rurality				
Urban (n=2895)	32.3	[29.4, 35.2]	67.7	[64.8, 70.6]
Suburban (n=369)	37.2	[29.2, 46.1]	62.8	[53.9, 70.8]
Rural (n=815)	37.9	[31.8, 44.4]	62.1	[55.6, 68.2]
Gender***				
Female (n=2426)	29.1	[26.0, 32.3]	70.9	[67.7, 74.0]
Male (n=1613)	37.8	[33.8, 42.0]	62.2	[58.0, 66.2]
Race/Ethnicity				
White, non-Hispanic (n=2484)	34.5	[31.3, 37.9]	65.5	[62.1, 68.7]
Black, non-Hispanic (n=757)	32.7	[27.3, 38.6]	67.3	[61.4, 72.7]
Hispanic (n=263)	34.7	[25.0, 45.9]	65.3	[54.1, 75.0]
Arab, Chaldean, or Middle Eastern (n=234)	21.5	[13.8, 31.9]	78.5	[68.1, 86.2]
Other, multi-racial, or not reported (n=341)	34.4	[26.0, 44.1]	65.6	[55.9, 74.0]
I may get a payment reduction if I complete an HRA				
Yes (n=1167)	29.7	[25.3, 34.6]	70.3	[65.4, 74.7]
No/Don't know (n=2889)	34.6	[31.6, 37.7]	65.4	[62.3, 68.4]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3070)	32.6	[29.8, 35.6]	67.4	[64.4, 70.2]
No/Don't know (n=989)	34.7	[29.5, 40.3]	65.3	[59.7, 70.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

2.11 How often do you use drugs or medications which affect your mood or help you relax, other than exactly as prescribed for you?

Universe: All respondents (N= 4082)

	Use medications or drugs that affect mood							
	Almost every day		Sometimes		Rarely		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4006)	**7.5**	**[6.1, 9.2]**	**7.4**	**[6.0, 9.1]**	**7.5**	**[6.2, 9.1]**	**77.5**	**[75.1, 79.8]**
HMV cohort								
Longitudinal cohort (n=1461)	7.2	[5.4, 9.7]	7.3	[5.5, 9.7]	7.3	[5.6, 9.6]	78.1	[74.7, 81.2]
New cohort (n=2545)	8.2	[7.0, 9.6]	7.7	[6.5, 9.1]	8.0	[6.9, 9.3]	76.1	[74.1, 78.0]
Months enrolled in HMP-MC								
Less than 24 months (n=1654)	8.3	[6.8, 10.0]	7.7	[6.3, 9.3]	9.1	[7.0, 11.7]	74.9	[72.1, 77.6]
24-47 months (n=994)	8.8	[6.1, 12.6]	8.8	[5.6, 13.4]	9.3	[6.0, 14.0]	73.2	[67.3, 78.3]
48+ months (n=1358)	6.9	[5.0, 9.5]	6.9	[5.1, 9.2]	6.5	[5.0, 8.5]	79.7	[76.3, 82.7]
FPL								
0% (n=1283)	8.2	[6.0, 11.0]	9.1	[6.7, 12.3]	6.5	[4.6, 9.1]	76.2	[72.1, 79.9]
0.1 to 99.99% (n=1611)	8.1	[5.6, 11.5]	7.0	[5.0, 9.7]	8.2	[6.1, 10.9]	76.7	[72.5, 80.5]
100% or more (n=1112)	5.3	[3.4, 8.2]	4.6	[3.0, 7.0]	8.7	[6.1, 12.1]	81.5	[77.2, 85.1]
Age**								
19-34 (n=1646)	9.8	[7.3, 13.0]	7.8	[5.7, 10.5]	9.2	[7.0, 12.1]	73.2	[69.0, 77.0]
35-50 (n=1126)	6.9	[4.7, 9.9]	7.0	[4.8, 10.0]	5.6	[4.0, 7.7]	80.6	[76.5, 84.1]
51-65 (n=1234)	3.9	[2.5, 5.8]	7.3	[4.8, 11.0]	6.8	[4.7, 9.7]	82.0	[77.8, 85.6]
Rurality*								
Urban (n=2842)	7.5	[5.9, 9.4]	7.9	[6.2, 9.9]	7.9	[6.4, 9.7]	76.8	[74.0, 79.4]
Suburban (n=360)	10.0	[5.3, 17.8]	7.0	[4.2, 11.7]	2.0	[1.1, 3.5]	81.0	[73.3, 86.9]
Rural (n=804)	6.1	[3.9, 9.6]	4.1	[2.7, 6.2]	9.3	[5.9, 14.4]	80.5	[75.0, 85.0]
Gender								
Female (n=2383)	6.5	[4.9, 8.7]	6.3	[4.6, 8.6]	7.5	[5.8, 9.6]	79.6	[76.4, 82.5]
Male (n=1585)	8.6	[6.4, 11.5]	8.5	[6.4, 11.2]	7.4	[5.5, 9.9]	75.5	[71.7, 79.0]
Race/Ethnicity***								
White, non-Hispanic (n=2443)	8.9	[6.8, 11.5]	5.5	[4.2, 7.1]	7.5	[6.0, 9.5]	78.1	[75.0, 80.9]
Black, non-Hispanic (n=747)	7.4	[4.8, 11.3]	13.0	[9.1, 18.2]	8.4	[5.4, 12.8]	71.2	[65.1, 76.6]
Hispanic (n=262)	6.6	[2.7, 14.9]	4.7	[2.2, 9.9]	7.1	[3.0, 15.8]	81.7	[72.0, 88.6]
Arab, Chaldean, or Middle Eastern (n=228)	0.6	[0.2, 1.7]	4.6	[1.9, 10.8]	4.0	[2.2, 7.2]	90.8	[84.9, 94.6]
Other, multi-racial, or not reported (n=326)	5.6	[2.6, 11.5]	6.6	[3.2, 13.0]	8.1	[4.5, 14.2]	79.7	[71.4, 86.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.12 How often do you use drugs or medications which affect your mood or help you relax, other than exactly as prescribed for you? [collapsed]

Universe: All respondents (N= 4082)

	Use medications or drugs that affect mood			
	Sometimes/Almost every day		Never/Rarely	
	Row %	95% CI	Row %	95% CI
Total (n=4006)	**15.0**	**[13.0, 17.1]**	**85.0**	**[82.9, 87.0]**
HMV cohort				
Longitudinal cohort (n=1461)	14.6	[11.9, 17.6]	85.4	[82.4, 88.1]
New cohort (n=2545)	15.9	[14.2, 17.7]	84.1	[82.3, 85.8]
Months enrolled in HMP-MC				
Less than 24 months (n=1654)	16.0	[14.0, 18.2]	84.0	[81.8, 86.0]
24-47 months (n=994)	17.6	[13.4, 22.8]	82.4	[77.2, 86.6]
48+ months (n=1358)	13.8	[11.1, 16.9]	86.2	[83.1, 88.9]
FPL*				
0% (n=1283)	17.3	[14.1, 21.1]	82.7	[78.9, 85.9]
0.1 to 99.99% (n=1611)	15.1	[11.9, 19.0]	84.9	[81.0, 88.1]
100% or more (n=1112)	9.9	[7.3, 13.3]	90.1	[86.7, 92.7]
Age*				
19-34 (n=1646)	17.6	[14.4, 21.3]	82.4	[78.7, 85.6]
35-50 (n=1126)	13.8	[10.7, 17.7]	86.2	[82.3, 89.3]
51-65 (n=1234)	11.2	[8.2, 15.0]	88.8	[85.0, 91.8]
Rurality				
Urban (n=2842)	15.3	[13.1, 17.9]	84.7	[82.1, 86.9]
Suburban (n=360)	17.0	[11.3, 24.8]	83.0	[75.2, 88.7]
Rural (n=804)	10.3	[7.4, 14.0]	89.7	[86.0, 92.6]
Gender*				
Female (n=2383)	12.9	[10.5, 15.7]	87.1	[84.3, 89.5]
Male (n=1585)	17.1	[14.0, 20.6]	82.9	[79.4, 86.0]
Race/Ethnicity**				
White, non-Hispanic (n=2443)	14.4	[11.9, 17.2]	85.6	[82.8, 88.1]
Black, non-Hispanic (n=747)	20.4	[15.7, 26.1]	79.6	[73.9, 84.3]
Hispanic (n=262)	11.3	[6.2, 19.6]	88.7	[80.4, 93.8]
Arab, Chaldean, or Middle Eastern (n=228)	5.2	[2.3, 11.1]	94.8	[88.9, 97.7]
Other, multi-racial, or not reported (n=326)	12.2	[7.3, 19.6]	87.8	[80.4, 92.7]
I may get a payment reduction if I complete an HRA*				
Yes (n=1154)	11.3	[8.5, 14.8]	88.7	[85.2, 91.5]
No/Don't know (n=2831)	16.4	[13.9, 19.2]	83.6	[80.8, 86.1]
Some kinds of visits, tests, and medicines have no copays				
Yes (n=3019)	15.0	[12.7, 17.6]	85.0	[82.4, 87.3]
No/Don't know (n=972)	14.9	[11.4, 19.4]	85.1	[80.6, 88.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

2.13 Limiting unhealthy behavior score (0-4) [composite variable]

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=3997)	**2.78**	**[2.72, 2.83]**
HMV cohort		
Longitudinal cohort (n=1457)	2.77	[2.69, 2.85]
New cohort (n=2540)	2.79	[2.75, 2.84]
Months enrolled in HMP-MC		
Less than 24 months (n=1652)	2.78	[2.72, 2.84]
24-47 months (n=991)	2.71	[2.60, 2.83]
48+ months (n=1354)	2.80	[2.71, 2.88]
FPL		
0% (n=1279)	2.63	[2.53, 2.73]
0.1 to 99.99% (n=1606)	2.87	[2.78, 2.96]
100% or more (n=1112)	2.94	[2.85, 3.03]
Age		
19-34 (n=1642)	2.76	[2.66, 2.86]
35-50 (n=1122)	2.70	[2.61, 2.80]
51-65 (n=1233)	2.90	[2.79, 3.01]
Rurality		
Urban (n=2835)	2.77	[2.70, 2.84]
Suburban (n=358)	2.73	[2.56, 2.90]
Rural (n=804)	2.88	[2.75, 3.01]
Gender		
Female (n=2378)	2.91	[2.84, 2.99]
Male (n=1581)	2.63	[2.54, 2.71]
Race/Ethnicity		
White, non-Hispanic (n=2440)	2.81	[2.74, 2.88]
Black, non-Hispanic (n=744)	2.56	[2.42, 2.70]
Hispanic (n=262)	2.74	[2.50, 2.97]
Arab, Chaldean, or Middle Eastern (n=227)	3.29	[3.12, 3.46]
Other, multi-racial, or not reported (n=324)	2.86	[2.66, 3.06]
I may get a payment reduction if I complete an HRA		
Yes (n=1153)	2.92	[2.82, 3.02]
No/Don't know (n=2824)	2.72	[2.65, 2.79]
Some kinds of visits, tests, and medicines have no copays		
Yes (n=3016)	2.80	[2.73, 2.86]
No/Don't know (n=966)	2.72	[2.59, 2.85]
PCP/HRA status		
PCP visit and HRA (n=1514)	2.80	[2.70, 2.89]
PCP visit and no HRA (n=1463)	2.88	[2.79, 2.97]
No PCP or no PCP visit (n=1020)	2.61	[2.49, 2.73]

Total n may be less than universe N due to item non-response

Limiting unhealthy behavior score ranges from 0 (all four unhealthy behaviors) to 4 (no unhealthy behaviors) from the following questions:

In the past 7 days, how many days did you have sugary drinks? (1 point for response of *0-2 days*)

In the past 7 days, how many days did you have [5 for men/4 for women] alcoholic drinks? (1 point for response of *0 days*)

In the past 30 days have you smoked or used tobacco in any form? (1 point for response of *no*)

How often do you use drugs or medications which affect your mood or help you relax, other than exactly as prescribed for you? (1 point for response of *never* or *rarely*)

3 Enrollee Healthcare Experiences

Beneficiary Survey Supplemental Data Appendix

3.1 Is there a place that you usually go for a checkup, when you feel sick, or when you want advice about your health?

Universe: All respondents (N= 4082)

	Regular source of care			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4080)	**90.0**	**[88.2, 91.5]**	**10.0**	**[8.5, 11.8]**
HMV cohort**				
Longitudinal cohort (n=1473)	91.3	[88.8, 93.3]	8.7	[6.7, 11.2]
New cohort (n=2607)	86.7	[85.0, 88.2]	13.3	[11.8, 15.0]
Months enrolled in HMP-MC**				
Less than 24 months (n=1691)	85.4	[82.7, 87.8]	14.6	[12.2, 17.3]
24-47 months (n=1019)	87.6	[83.4, 90.8]	12.4	[9.2, 16.6]
48+ months (n=1370)	92.0	[89.5, 94.0]	8.0	[6.0, 10.5]
FPL***				
0% (n=1312)	86.9	[83.5, 89.7]	13.1	[10.3, 16.5]
0.1 to 99.99% (n=1639)	91.3	[88.5, 93.4]	8.7	[6.6, 11.5]
100% or more (n=1129)	94.3	[92.1, 96.0]	5.7	[4.0, 7.9]
Age**				
19-34 (n=1663)	87.1	[84.0, 89.7]	12.9	[10.3, 16.0]
35-50 (n=1147)	91.2	[87.7, 93.8]	8.8	[6.2, 12.3]
51-65 (n=1270)	93.8	[91.6, 95.5]	6.2	[4.5, 8.4]
Rurality				
Urban (n=2897)	89.8	[87.8, 91.6]	10.2	[8.4, 12.2]
Suburban (n=369)	88.0	[81.2, 92.5]	12.0	[7.5, 18.8]
Rural (n=814)	92.7	[88.1, 95.6]	7.3	[4.4, 11.9]
Gender***				
Female (n=2426)	93.7	[91.9, 95.1]	6.3	[4.9, 8.1]
Male (n=1614)	86.3	[83.1, 88.9]	13.7	[11.1, 16.9]
Race/Ethnicity				
White, non-Hispanic (n=2483)	91.5	[89.5, 93.1]	8.5	[6.9, 10.5]
Black, non-Hispanic (n=758)	89.0	[84.5, 92.4]	11.0	[7.6, 15.5]
Hispanic (n=263)	84.6	[75.9, 90.5]	15.4	[9.5, 24.1]
Arab, Chaldean, or Middle Eastern (n=235)	91.8	[84.4, 95.8]	8.2	[4.2, 15.6]
Other, multi-racial, or not reported (n=341)	85.7	[76.3, 91.8]	14.3	[8.2, 23.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.2 What kind of place is it?

Universe: Respondents who reported having a RSOC (N= 3671)

	What kind of place is it?			
	Primary care		Not primary care	
	Row %	**95% CI**	**Row %**	**95% CI**
Total (n=3671)	**92.7**	**[91.4, 93.9]**	**7.3**	**[6.1, 8.6]**
HMV cohort***				
Longitudinal cohort (n=1381)	94.6	[92.8, 96.0]	5.4	[4.0, 7.2]
New cohort (n=2290)	87.9	[86.2, 89.4]	12.1	[10.6, 13.8]
Months enrolled in HMP-MC***				
Less than 24 months (n=1476)	87.9	[85.8, 89.8]	12.1	[10.2, 14.2]
24-47 months (n=907)	90.0	[86.5, 92.6]	10.0	[7.4, 13.5]
48+ months (n=1288)	94.8	[93.0, 96.2]	5.2	[3.8, 7.0]
FPL				
0% (n=1141)	92.3	[89.9, 94.1]	7.7	[5.9, 10.1]
0.1 to 99.99% (n=1482)	93.1	[90.9, 94.8]	6.9	[5.2, 9.1]
100% or more (n=1048)	93.1	[90.1, 95.2]	6.9	[4.8, 9.9]
Age**				
19-34 (n=1434)	90.8	[88.7, 92.5]	9.2	[7.5, 11.3]
35-50 (n=1044)	92.5	[89.3, 94.8]	7.5	[5.2, 10.7]
51-65 (n=1193)	96.5	[94.9, 97.6]	3.5	[2.4, 5.1]
Rurality				
Urban (n=2609)	92.3	[90.7, 93.6]	7.7	[6.4, 9.3]
Suburban (n=322)	95.1	[91.9, 97.0]	4.9	[3.0, 8.1]
Rural (n=740)	94.4	[91.7, 96.2]	5.6	[3.8, 8.3]
Gender*				
Female (n=2248)	94.2	[92.7, 95.4]	5.8	[4.6, 7.3]
Male (n=1387)	91.3	[88.9, 93.2]	8.7	[6.8, 11.1]
Race/Ethnicity*				
White, non-Hispanic (n=2265)	94.0	[92.2, 95.4]	6.0	[4.6, 7.8]
Black, non-Hispanic (n=679)	90.1	[86.7, 92.7]	9.9	[7.3, 13.3]
Hispanic (n=219)	87.6	[78.9, 93.0]	12.4	[7.0, 21.1]
Arab, Chaldean, or Middle Eastern (n=214)	94.8	[90.3, 97.3]	5.2	[2.7, 9.7]
Other, multi-racial, or not reported (n=294)	93.9	[90.5, 96.2]	6.1	[3.8, 9.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.3 Is this your primary care provider for your Healthy Michigan Plan coverage?

Universe: Respondents who reported their RSOC is a PCP (N= 3340)

	Primary care provider for HMP coverage					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3340)	**95.8**	**[94.5, 96.8]**	**3.3**	**[2.4, 4.6]**	**0.9**	**[0.6, 1.4]**
HMV cohort*						
Longitudinal cohort (n=1305)	96.4	[94.6, 97.6]	3.0	[1.9, 4.8]	0.6	[0.3, 1.3]
New cohort (n=2035)	94.2	[92.8, 95.3]	4.2	[3.2, 5.4]	1.6	[1.0, 2.5]
Months enrolled in HMP-MC*						
Less than 24 months (n=1315)	93.7	[91.9, 95.1]	4.2	[3.1, 5.8]	2.0	[1.3, 3.1]
24-47 months (n=806)	95.0	[92.1, 96.9]	3.5	[2.0, 5.9]	1.5	[0.6, 3.8]
48+ months (n=1219)	96.5	[94.6, 97.8]	3.1	[1.9, 5.0]	0.4	[0.2, 1.1]
FPL						
0% (n=1028)	94.9	[92.3, 96.7]	3.8	[2.2, 6.4]	1.3	[0.7, 2.5]
0.1 to 99.99% (n=1353)	96.6	[94.6, 97.9]	3.1	[1.9, 5.2]	0.2	[0.1, 0.4]
100% or more (n=959)	96.2	[94.3, 97.5]	2.8	[1.7, 4.5]	1.0	[0.5, 2.1]
Age						
19-34 (n=1229)	95.1	[93.0, 96.6]	3.9	[2.6, 6.0]	1.0	[0.5, 1.9]
35-50 (n=967)	95.9	[93.5, 97.4]	3.3	[1.9, 5.5]	0.8	[0.3, 2.3]
51-65 (n=1144)	96.9	[93.5, 98.6]	2.4	[0.9, 6.1]	0.7	[0.3, 1.5]
Rurality						
Urban (n=2358)	96.0	[94.5, 97.1]	3.3	[2.3, 4.7]	0.8	[0.4, 1.3]
Suburban (n=299)	95.9	[90.0, 98.4]	3.5	[1.2, 9.8]	0.6	[0.2, 1.8]
Rural (n=683)	94.2	[89.2, 97.0]	3.8	[1.7, 8.5]	2.0	[0.7, 5.7]
Gender						
Female (n=2087)	96.5	[94.9, 97.6]	3.0	[1.9, 4.6]	0.6	[0.3, 1.0]
Male (n=1223)	95.1	[92.8, 96.7]	3.7	[2.3, 6.0]	1.2	[0.6, 2.3]
Race/Ethnicity						
White, non-Hispanic (n=2094)	96.4	[94.9, 97.5]	2.9	[1.9, 4.4]	0.7	[0.4, 1.3]
Black, non-Hispanic (n=593)	96.8	[94.8, 98.1]	2.3	[1.4, 3.8]	0.9	[0.3, 2.7]
Hispanic (n=191)	92.5	[87.3, 95.7]	5.6	[2.8, 10.6]	1.9	[0.8, 4.6]
Arab, Chaldean, or Middle Eastern (n=199)	93.8	[81.9, 98.1]	5.9	[1.7, 18.2]	0.3	[0.1, 1.3]
Other, multi-racial, or not reported (n=263)	92.6	[82.2, 97.1]	5.6	[1.7, 17.2]	1.8	[0.6, 5.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.4 Do you have a primary care provider through your health plan?

Universe: Respondents who did not report having a RSOC, did not report that their RSOC is a PCP, or did not report that their RSOC is their PCP through HMP (N= 899)

	Have primary care provider through health plan					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=898)	**54.7**	**[48.9, 60.4]**	**37.9**	**[32.3, 43.8]**	**7.4**	**[5.4, 10.1]**
HMV cohort						
Longitudinal cohort (n=213)	53.7	[44.3, 62.9]	39.7	[30.8, 49.3]	6.6	[3.8, 11.3]
New cohort (n=685)	56.1	[51.7, 60.4]	35.3	[31.2, 39.7]	8.6	[6.6, 11.0]
Months enrolled in HMP-MC						
Less than 24 months (n=454)	54.9	[49.0, 60.7]	35.2	[29.9, 40.8]	9.9	[7.4, 13.1]
24-47 months (n=252)	57.5	[47.0, 67.4]	36.7	[27.0, 47.5]	5.8	[3.3, 10.3]
48+ months (n=192)	53.0	[43.1, 62.8]	39.9	[30.5, 50.2]	7.0	[3.9, 12.5]
FPL						
0% (n=344)	55.7	[46.9, 64.1]	37.3	[29.1, 46.3]	7.0	[4.2, 11.5]
0.1 to 99.99% (n=342)	48.1	[38.5, 57.8]	43.8	[34.2, 53.9]	8.1	[4.9, 13.2]
100% or more (n=212)	63.8	[52.6, 73.6]	28.7	[19.7, 39.7]	7.6	[4.7, 12.0]
Age						
19-34 (n=521)	55.7	[48.1, 63.1]	35.4	[28.4, 43.2]	8.8	[6.1, 12.7]
35-50 (n=222)	48.1	[37.0, 59.3]	46.2	[35.2, 57.7]	5.7	[2.6, 12.0]
51-65 (n=155)	64.0	[51.8, 74.6]	30.5	[20.8, 42.4]	5.5	[2.7, 11.0]
Rurality*						
Urban (n=649)	54.9	[48.3, 61.3]	38.7	[32.4, 45.5]	6.4	[4.4, 9.1]
Suburban (n=84)	46.2	[29.4, 63.9]	47.2	[30.3, 64.8]	6.6	[2.9, 14.4]
Rural (n=165)	60.6	[45.1, 74.3]	21.0	[13.8, 30.7]	18.4	[8.3, 35.7]
Gender						
Female (n=430)	60.7	[52.7, 68.1]	33.0	[26.1, 40.8]	6.3	[3.9, 10.2]
Male (n=456)	51.8	[43.8, 59.6]	41.1	[33.3, 49.3]	7.2	[4.7, 10.8]
Race/Ethnicity						
White, non-Hispanic (n=478)	57.1	[49.3, 64.7]	35.1	[28.1, 42.8]	7.8	[4.8, 12.3]
Black, non-Hispanic (n=192)	48.9	[37.7, 60.2]	46.9	[35.5, 58.6]	4.3	[2.0, 8.8]
Hispanic (n=91)	56.4	[40.1, 71.5]	25.0	[14.7, 39.3]	18.6	[9.8, 32.3]
Arab, Chaldean, or Middle Eastern (n=44)	-	-	-	-	-	-
Other, multi-racial, or not reported (n=93)	50.9	[31.2, 70.4]	41.1	[22.8, 62.3]	8.0	[2.8, 20.6]

Pearson, *p<.05, **p<.01, ***p<.001
Total n may be less than universe N due to item non-response
Subpopulations with n less than 50 were omitted

Beneficiary Survey Supplemental Data Appendix

3.5 Has a primary care provider [composite variable]

Universe: All respondents (N= 4082)

	Has a PCP			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**90.9**	**[89.2, 92.3]**	**9.1**	**[7.7, 10.8]**
HMV cohort**				
Longitudinal cohort (n=1475)	92.3	[89.9, 94.1]	7.7	[5.9, 10.1]
New cohort (n=2607)	87.6	[86.0, 89.0]	12.4	[11.0, 14.0]
Months enrolled in HMP-MC**				
Less than 24 months (n=1691)	86.7	[84.6, 88.5]	13.3	[11.5, 15.4]
24-47 months (n=1019)	89.3	[85.6, 92.2]	10.7	[7.8, 14.4]
48+ months (n=1372)	92.6	[90.1, 94.5]	7.4	[5.5, 9.9]
FPL*				
0% (n=1312)	89.4	[86.4, 91.8]	10.6	[8.2, 13.6]
0.1 to 99.99% (n=1641)	90.7	[87.8, 92.9]	9.3	[7.1, 12.2]
100% or more (n=1129)	94.4	[92.2, 96.0]	5.6	[4.0, 7.8]
Age**				
19-34 (n=1663)	89.0	[86.4, 91.2]	11.0	[8.8, 13.6]
35-50 (n=1148)	90.1	[86.4, 92.9]	9.9	[7.1, 13.6]
51-65 (n=1271)	95.6	[93.8, 96.9]	4.4	[3.1, 6.2]
Rurality				
Urban (n=2898)	90.8	[88.9, 92.4]	9.2	[7.6, 11.1]
Suburban (n=369)	89.3	[83.4, 93.3]	10.7	[6.7, 16.6]
Rural (n=815)	93.0	[89.6, 95.4]	7.0	[4.6, 10.4]
Gender***				
Female (n=2427)	94.2	[92.7, 95.4]	5.8	[4.6, 7.3]
Male (n=1615)	87.9	[84.9, 90.3]	12.1	[9.7, 15.1]
Race/Ethnicity*				
White, non-Hispanic (n=2484)	92.7	[90.9, 94.1]	7.3	[5.9, 9.1]
Black, non-Hispanic (n=758)	88.6	[84.2, 91.9]	11.4	[8.1, 15.8]
Hispanic (n=263)	86.3	[79.9, 90.9]	13.7	[9.1, 20.1]
Arab, Chaldean, or Middle Eastern (n=235)	94.2	[86.8, 97.5]	5.8	[2.5, 13.2]
Other, multi-racial, or not reported (n=342)	87.5	[78.8, 92.9]	12.5	[7.1, 21.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Has a primary care provider is defined as a response of yes to either of the following questions:
Is this your primary care provider for your Healthy Michigan Plan coverage?
Do you have a primary care provider through your health plan?

3.6 Have you had difficulty getting set up with a primary care provider?

Universe: Respondents who did not report having a PCP (N= 407)

	Difficulties getting set up with PCP	
	Yes	**No**
	Row %	**Row %**
Total (n=407)	**62.3**	**37.7**
HMV cohort		
Longitudinal cohort (n=95)	67.9	32.1
New cohort (n=312)	54.0	46.0
Months enrolled in HMP-MC		
Less than 24 months (n=210)	57.6	42.4
24-47 months (n=112)	61.8	38.2
48+ months (n=85)	64.9	35.1
FPL		
0% (n=164)	66.5	33.5
0.1 to 99.99% (n=157)	59.5	40.5
100% or more (n=86)	53.2	46.8
Age		
19-34 (n=242)	57.8	42.2
35-50 (n=105)	68.4	31.6
51-65 (n=60)	66.3	33.7
Rurality		
Urban (n=282)	63.6	36.4
Suburban (n=46)	-	-
Rural (n=79)	40.7	59.3
Gender		
Female (n=174)	62.8	37.2
Male (n=225)	61.0	39.0
Race/Ethnicity		
White, non-Hispanic (n=210)	56.0	44.0
Black, non-Hispanic (n=91)	69.9	30.1
Hispanic (n=44)	-	-
Arab, Chaldean, or Middle Eastern (n=14)	-	-
Other, multi-racial, or not reported (n=48)	-	-

Missing test statistics due to stratum with single sampling unit
Total n may be less than universe N due to item non-response
Subpopulations with n less than 50 were omitted

3.7 Reported difficulties getting set up with a primary care provider

Universe: Respondents who did not report having a PCP (N= 407)

	Longitudinal cohort Percent	New cohort Percent	Total Percent
Had to change PCP (e.g., doc retired, office closed, aged out, got dropped, moved)	34.2	17.6	27.6
Could not find PCP in my area or with desired features	17.6	15.8	16.9
Haven't tried/Haven't needed one/Too busy to look into	8.9	12.6	10.4
Tried to, but assistance and/or info was not helpful or offered by provider office or health plan	11.6	6.6	9.6
Didn't know that I had insurance/Not sure how to get PCP	2.3	6.3	3.9
Don't want to switch providers/See someone else	3.0	0.4	2.0
Miscellaneous issues	0.0	3.8	1.5
Recently changed plan	0.0	3.1	1.2

Missing test statistics due to stratum with single sampling unit

3.8 How long have you been going to this primary care provider's office?

Universe: Respondents who reported having a PCP (N= 3675)

	How long have you been going to this primary care office?					
	Less than a year		1-2 years		More than 2 years	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3654)	**14.3**	**[12.3, 16.6]**	**21.5**	**[19.2, 24.0]**	**64.2**	**[61.3, 66.9]**
HMV cohort***						
Longitudinal cohort (n=1377)	13.0	[10.4, 16.2]	17.5	[14.4, 21.0]	69.5	[65.6, 73.2]
New cohort (n=2277)	17.7	[16.0, 19.6]	31.6	[29.4, 33.9]	50.6	[48.2, 53.1]
Months enrolled in HMP-MC***						
Less than 24 months (n=1466)	20.8	[18.4, 23.3]	32.0	[29.2, 34.9]	47.2	[44.1, 50.4]
24-47 months (n=904)	17.5	[13.0, 23.2]	26.4	[21.7, 31.8]	56.0	[50.1, 61.8]
48+ months (n=1284)	11.6	[9.1, 14.8]	17.2	[14.1, 20.9]	71.2	[67.1, 74.9]
FPL*						
0% (n=1144)	15.4	[12.2, 19.4]	25.5	[21.4, 30.0]	59.1	[54.2, 63.8]
0.1 to 99.99% (n=1470)	12.8	[9.9, 16.4]	19.3	[15.7, 23.4]	68.0	[63.4, 72.2]
100% or more (n=1040)	14.5	[11.0, 18.9]	17.0	[14.0, 20.5]	68.5	[63.7, 72.9]
Age***						
19-34 (n=1406)	17.5	[14.1, 21.5]	25.2	[21.2, 29.6]	57.3	[52.5, 62.0]
35-50 (n=1040)	12.4	[9.5, 15.9]	19.9	[16.1, 24.5]	67.7	[62.8, 72.2]
51-65 (n=1208)	11.1	[7.9, 15.2]	16.9	[13.7, 20.6]	72.1	[67.4, 76.3]
Rurality						
Urban (n=2596)	14.8	[12.6, 17.4]	22.6	[19.9, 25.6]	62.6	[59.3, 65.7]
Suburban (n=324)	13.7	[8.8, 20.8]	18.6	[12.5, 26.7]	67.7	[58.8, 75.6]
Rural (n=734)	10.9	[6.1, 18.7]	14.5	[11.2, 18.6]	74.6	[67.7, 80.4]
Gender						
Female (n=2242)	14.1	[11.6, 17.1]	19.2	[16.5, 22.2]	66.7	[63.1, 70.0]
Male (n=1380)	14.0	[11.2, 17.4]	23.9	[20.1, 28.1]	62.1	[57.6, 66.4]
Race/Ethnicity*						
White, non-Hispanic (n=2266)	13.5	[10.8, 16.7]	17.8	[15.4, 20.5]	68.7	[65.1, 72.1]
Black, non-Hispanic (n=662)	14.7	[10.9, 19.6]	27.9	[22.1, 34.6]	57.4	[50.8, 63.7]
Hispanic (n=216)	21.0	[13.0, 32.2]	22.7	[14.6, 33.3]	56.3	[44.9, 67.1]
Arab, Chaldean, or Middle Eastern (n=220)	12.9	[7.0, 22.6]	18.8	[13.7, 25.4]	68.3	[58.8, 76.4]
Other, multi-racial, or not reported (n=290)	15.5	[10.2, 22.9]	27.3	[18.6, 38.2]	57.2	[47.0, 66.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

3.9 Have you had an appointment with your primary care provider in the last 12 months?

Universe: Respondents who reported having a PCP (N= 3675)

	Had appointment with PCP in last 12 months			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=3658)	**81.2**	**[78.7, 83.4]**	**18.8**	**[16.6, 21.3]**
HMV cohort				
Longitudinal cohort (n=1373)	81.9	[78.4, 84.9]	18.1	[15.1, 21.6]
New cohort (n=2285)	79.5	[77.4, 81.4]	20.5	[18.6, 22.6]
Months enrolled in HMP-MC				
Less than 24 months (n=1475)	81.7	[79.2, 83.9]	18.3	[16.1, 20.8]
24-47 months (n=903)	79.8	[74.9, 84.0]	20.2	[16.0, 25.1]
48+ months (n=1280)	81.5	[77.8, 84.7]	18.5	[15.3, 22.2]
FPL				
0% (n=1144)	78.6	[73.9, 82.5]	21.4	[17.5, 26.1]
0.1 to 99.99% (n=1477)	82.9	[79.0, 86.2]	17.1	[13.8, 21.0]
100% or more (n=1037)	83.8	[80.2, 86.8]	16.2	[13.2, 19.8]
Age***				
19-34 (n=1413)	75.5	[71.3, 79.2]	24.5	[20.8, 28.7]
35-50 (n=1038)	86.4	[82.2, 89.8]	13.6	[10.2, 17.8]
51-65 (n=1207)	84.9	[79.7, 89.0]	15.1	[11.0, 20.3]
Rurality				
Urban (n=2606)	80.3	[77.5, 82.9]	19.7	[17.1, 22.5]
Suburban (n=320)	81.2	[69.4, 89.1]	18.8	[10.9, 30.6]
Rural (n=732)	88.2	[84.6, 91.1]	11.8	[8.9, 15.4]
Gender***				
Female (n=2244)	85.2	[82.6, 87.5]	14.8	[12.5, 17.4]
Male (n=1382)	76.6	[72.2, 80.4]	23.4	[19.6, 27.8]
Race/Ethnicity				
White, non-Hispanic (n=2259)	83.8	[80.7, 86.5]	16.2	[13.5, 19.3]
Black, non-Hispanic (n=666)	77.2	[70.9, 82.5]	22.8	[17.5, 29.1]
Hispanic (n=218)	76.5	[66.1, 84.5]	23.5	[15.5, 33.9]
Arab, Chaldean, or Middle Eastern (n=221)	84.3	[76.0, 90.1]	15.7	[9.9, 24.0]
Other, multi-racial, or not reported (n=294)	77.2	[67.4, 84.7]	22.8	[15.3, 32.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.10 Have you had any difficulties getting care at the primary care provider's office?

Universe: Respondents who reported having a PCP (N= 3675)

	Difficulties getting PCP care			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=3675)	**13.8**	**[11.9, 16.0]**	**86.2**	**[84.0, 88.1]**
HMV cohort				
Longitudinal cohort (n=1380)	13.9	[11.3, 17.0]	86.1	[83.0, 88.7]
New cohort (n=2295)	13.7	[12.1, 15.4]	86.3	[84.6, 87.9]
Months enrolled in HMP-MC				
Less than 24 months (n=1481)	14.3	[11.8, 17.3]	85.7	[82.7, 88.2]
24-47 months (n=907)	13.5	[10.1, 17.9]	86.5	[82.1, 89.9]
48+ months (n=1287)	13.8	[11.2, 17.0]	86.2	[83.0, 88.8]
FPL				
0% (n=1148)	15.7	[12.3, 19.7]	84.3	[80.3, 87.7]
0.1 to 99.99% (n=1484)	11.2	[8.7, 14.3]	88.8	[85.7, 91.3]
100% or more (n=1043)	14.4	[10.9, 18.6]	85.6	[81.4, 89.1]
Age*				
19-34 (n=1421)	16.4	[13.1, 20.3]	83.6	[79.7, 86.9]
35-50 (n=1043)	12.8	[9.9, 16.5]	87.2	[83.5, 90.1]
51-65 (n=1211)	10.5	[7.6, 14.2]	89.5	[85.8, 92.4]
Rurality				
Urban (n=2616)	14.2	[12.0, 16.7]	85.8	[83.3, 88.0]
Suburban (n=323)	7.6	[4.5, 12.7]	92.4	[87.3, 95.5]
Rural (n=736)	16.0	[10.7, 23.2]	84.0	[76.8, 89.3]
Gender				
Female (n=2253)	15.5	[12.8, 18.7]	84.5	[81.3, 87.2]
Male (n=1390)	12.0	[9.4, 15.2]	88.0	[84.8, 90.6]
Race/Ethnicity*				
White, non-Hispanic (n=2274)	12.2	[10.0, 14.9]	87.8	[85.1, 90.0]
Black, non-Hispanic (n=667)	12.2	[8.9, 16.5]	87.8	[83.5, 91.1]
Hispanic (n=219)	28.8	[18.3, 42.1]	71.2	[57.9, 81.7]
Arab, Chaldean, or Middle Eastern (n=221)	15.8	[8.4, 28.0]	84.2	[72.0, 91.6]
Other, multi-racial, or not reported (n=294)	17.8	[10.8, 28.0]	82.2	[72.0, 89.2]
Among those with an ED Visit**				
Did not try to contact PCP (n=887)	14.7	[11.2, 19.0]	85.3	[81.0, 88.8]
Tried to contact PCP (n=280)	28.4	[19.2, 39.8]	71.6	[60.2, 80.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.11 Reported difficulties getting care at primary care provider's office

Universe: Respondents who reported having a PCP (N= 3675)

	Longitudinal cohort		New cohort		Total	
	Percent	**95% CI**	**Percent**	**95% CI**	**Percent**	**95% CI**
Hard to get appointment	8.0	[6.0, 10.6]	5.6	[4.6, 6.8]	7.3	[5.8, 9.2]
Can't or difficult to get care	3.6	[2.4, 5.3]	3.3	[2.6, 4.3]	3.5	[2.6, 4.7]
Difficulties finding PCP	3.2	[2.0, 4.9]	1.8	[1.2, 2.5]	2.8	[1.9, 4.0]
Don't like my PCP/office staff	2.9	[1.7, 4.9]	2.2	[1.6, 3.0]	2.7	[1.8, 4.1]
Had to change/Delay in getting PCP	2.1	[1.2, 3.5]	2.0	[1.5, 2.8]	2.1	[1.4, 3.1]
COVID-specific difficulties	1.9	[1.0, 3.3]	1.1	[0.7, 1.7]	1.7	[1.0, 2.7]
Not sure who PCP is	1.4	[0.7, 3.1]	1.2	[0.8, 1.9]	1.4	[0.8, 2.5]
Transportation/Office too far away	1.3	[0.7, 2.4]	1.2	[0.7, 1.9]	1.3	[0.8, 2.0]
Healthy/Don't need to go/Didn't try to get care	0.6	[0.2, 1.8]	1.0	[0.6, 1.6]	0.7	[0.4, 1.4]
Difficulties with insurance	0.3	[0.1, 1.5]	0.5	[0.3, 1.0]	0.4	[0.1, 1.0]
Miscellaneous issues	0.1	[0.0, 0.6]	0.6	[0.3, 1.2]	0.3	[0.1, 0.5]
Doesn't want to switch providers/go elsewhere	0.1	[0.0, 0.4]	0.5	[0.2, 1.1]	0.2	[0.1, 0.4]
See a specialist instead	0.0	[0.0, 0.2]	0.2	[0.1, 0.4]	0.1	[0.0, 0.2]

Multiple responses allowed

3.12 In the last 12 months, how easy or difficult was it to get an appointment with your primary care provider?

Universe: Respondents who reported having a PCP (N= 3675)

	How easy or difficult was it to get an appointment with PCP?									
	Very easy		Easy		Difficult		Very difficult		Not applicable	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3655)	**44.5**	**[41.7, 47.4]**	**39.8**	**[37.0, 42.6]**	**8.2**	**[6.8, 9.9]**	**1.7**	**[1.1, 2.5]**	**5.8**	**[4.6, 7.3]**
HMV cohort										
Longitudinal cohort (n=1373)	45.4	[41.5, 49.3]	39.5	[35.8, 43.3]	8.1	[6.2, 10.5]	1.7	[0.9, 2.9]	5.3	[3.8, 7.4]
New cohort (n=2282)	42.4	[40.0, 44.8]	40.4	[38.1, 42.8]	8.4	[7.2, 9.9]	1.8	[1.3, 2.6]	6.9	[5.7, 8.3]
Months enrolled in HMP-MC										
Less than 24 months (n=1472)	42.7	[39.6, 45.7]	41.3	[38.2, 44.5]	8.3	[6.8, 10.1]	1.6	[0.9, 2.5]	6.2	[4.9, 7.8]
24-47 months (n=903)	41.0	[35.3, 46.9]	39.0	[33.7, 44.6]	9.8	[6.7, 14.2]	1.8	[1.0, 3.1]	8.4	[5.3, 13.1]
48+ months (n=1280)	46.2	[42.2, 50.3]	39.6	[35.8, 43.6]	7.7	[5.8, 10.1]	1.7	[0.9, 3.1]	4.8	[3.4, 6.7]
FPL										
0% (n=1146)	44.5	[39.7, 49.3]	38.5	[33.9, 43.4]	9.3	[6.9, 12.5]	1.6	[0.8, 3.4]	6.0	[4.1, 8.8]
0.1 to 99.99% (n=1473)	45.4	[40.8, 50.1]	41.9	[37.6, 46.4]	5.4	[3.9, 7.5]	1.7	[0.9, 3.3]	5.6	[3.6, 8.4]
100% or more (n=1036)	43.3	[38.3, 48.6]	38.9	[34.3, 43.8]	10.3	[7.3, 14.5]	1.9	[1.1, 3.2]	5.6	[4.0, 7.6]
Age*										
19-34 (n=1410)	40.9	[36.3, 45.8]	39.2	[34.8, 43.9]	9.8	[7.2, 13.1]	2.4	[1.3, 4.3]	7.7	[5.7, 10.3]
35-50 (n=1038)	46.6	[41.7, 51.6]	40.5	[35.6, 45.5]	7.6	[5.5, 10.5]	1.5	[0.9, 2.5]	3.7	[2.3, 5.9]
51-65 (n=1207)	48.4	[43.7, 53.2]	39.9	[35.5, 44.4]	6.1	[4.5, 8.2]	0.7	[0.4, 1.3]	4.9	[2.7, 8.6]
Rurality										
Urban (n=2600)	44.4	[41.1, 47.7]	38.9	[35.8, 42.1]	8.7	[7.0, 10.6]	1.8	[1.1, 2.8]	6.3	[4.9, 8.1]
Suburban (n=321)	48.1	[39.0, 57.4]	45.1	[36.0, 54.7]	3.3	[1.3, 8.6]	1.0	[0.3, 3.6]	2.4	[1.1, 5.1]
Rural (n=734)	43.1	[36.7, 49.7]	42.8	[36.0, 49.8]	8.4	[4.6, 15.0]	1.7	[0.8, 3.6]	4.0	[2.5, 6.3]
Gender										
Female (n=2242)	43.2	[39.7, 46.9]	41.2	[37.7, 44.8]	9.1	[7.1, 11.6]	2.1	[1.4, 3.3]	4.3	[3.1, 5.9]
Male (n=1381)	46.3	[41.8, 50.9]	37.7	[33.5, 42.0]	7.3	[5.3, 10.0]	1.3	[0.6, 2.9]	7.4	[5.3, 10.1]
Race/Ethnicity**										
White, non-Hispanic (n=2260)	46.6	[42.9, 50.3]	40.5	[36.9, 44.2]	6.8	[5.3, 8.7]	1.2	[0.7, 2.1]	4.9	[3.6, 6.5]
Black, non-Hispanic (n=666)	42.7	[36.5, 49.1]	40.4	[34.4, 46.6]	7.8	[5.2, 11.5]	1.8	[0.8, 3.9]	7.4	[4.4, 12.1]
Hispanic (n=218)	36.7	[26.6, 48.0]	35.8	[26.4, 46.5]	14.2	[6.6, 27.9]	7.7	[2.9, 19.1]	5.7	[2.7, 11.3]
Arab, Chaldean, or Middle Eastern (n=220)	42.9	[33.0, 53.3]	45.4	[35.5, 55.8]	7.4	[2.9, 17.3]	1.4	[0.4, 5.3]	3.0	[1.5, 5.6]
Other, multi-racial, or not reported (n=291)	43.4	[33.8, 53.6]	31.4	[23.8, 40.1]	15.1	[8.7, 24.8]	1.1	[0.4, 3.3]	9.0	[4.7, 16.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.13 In the last 12 months, how easy or difficult was it to get an appointment with your primary care provider? [collapsed]

Universe: Respondents who reported having a PCP (N= 3675)

	How easy or difficult was it to get an appointment with PCP?					
	Easy/Very easy		Difficult/Very difficult		Not applicable	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3655)	**84.3**	**[82.1, 86.3]**	**9.9**	**[8.3, 11.8]**	**5.8**	**[4.6, 7.3]**
HMV cohort						
Longitudinal cohort (n=1373)	84.9	[81.9, 87.5]	9.8	[7.7, 12.3]	5.3	[3.8, 7.4]
New cohort (n=2282)	82.8	[80.9, 84.6]	10.3	[8.9, 11.9]	6.9	[5.7, 8.3]
Months enrolled in HMP-MC						
Less than 24 months (n=1472)	84.0	[81.6, 86.1]	9.8	[8.2, 11.8]	6.2	[4.9, 7.8]
24-47 months (n=903)	80.0	[74.5, 84.6]	11.6	[8.3, 16.0]	8.4	[5.3, 13.1]
48+ months (n=1280)	85.8	[82.8, 88.4]	9.4	[7.3, 12.0]	4.8	[3.4, 6.7]
FPL						
0% (n=1146)	83.0	[79.1, 86.3]	11.0	[8.3, 14.3]	6.0	[4.1, 8.8]
0.1 to 99.99% (n=1473)	87.3	[84.0, 90.1]	7.1	[5.3, 9.5]	5.6	[3.6, 8.4]
100% or more (n=1036)	82.3	[78.0, 85.9]	12.2	[9.0, 16.3]	5.6	[4.0, 7.6]
Age**						
19-34 (n=1410)	80.2	[76.2, 83.7]	12.1	[9.3, 15.7]	7.7	[5.7, 10.3]
35-50 (n=1038)	87.1	[83.7, 89.9]	9.2	[6.9, 12.1]	3.7	[2.3, 5.9]
51-65 (n=1207)	88.3	[84.7, 91.2]	6.8	[5.2, 9.0]	4.9	[2.7, 8.6]
Rurality*						
Urban (n=2600)	83.3	[80.7, 85.6]	10.4	[8.6, 12.5]	6.3	[4.9, 8.1]
Suburban (n=321)	93.3	[88.2, 96.3]	4.3	[1.9, 9.4]	2.4	[1.1, 5.1]
Rural (n=734)	85.9	[79.7, 90.4]	10.1	[6.0, 16.5]	4.0	[2.5, 6.3]
Gender*						
Female (n=2242)	84.4	[81.6, 86.9]	11.2	[9.1, 13.8]	4.3	[3.1, 5.9]
Male (n=1381)	84.0	[80.4, 87.0]	8.6	[6.4, 11.5]	7.4	[5.3, 10.1]
Race/Ethnicity**						
White, non-Hispanic (n=2260)	87.1	[84.7, 89.2]	8.0	[6.4, 10.0]	4.9	[3.6, 6.5]
Black, non-Hispanic (n=666)	83.1	[77.7, 87.3]	9.6	[6.7, 13.6]	7.4	[4.4, 12.1]
Hispanic (n=218)	72.5	[59.5, 82.5]	21.9	[12.4, 35.6]	5.7	[2.7, 11.3]
Arab, Chaldean, or Middle Eastern (n=220)	88.3	[79.4, 93.7]	8.8	[3.9, 18.4]	3.0	[1.5, 5.6]
Other, multi-racial, or not reported (n=291)	74.8	[64.7, 82.8]	16.2	[9.7, 25.9]	9.0	[4.7, 16.5]
Among those with an ED Visit***						
Did not try to contact PCP (n=881)	86.8	[82.6, 90.1]	10.5	[7.5, 14.6]	2.7	[1.7, 4.3]
Tried to contact PCP (n=280)	70.3	[59.0, 79.5]	28.7	[19.5, 40.1]	1.0	[0.3, 2.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

3.14 In the last 12 months, when you contacted your primary care provider's office for advice or information, how often did you get a response within 24 hours?

Universe: Respondents who reported having a PCP (N= 3675)

	Response from PCP office within 24 hours									
	Always		Usually		Sometimes		Never		NA--did not contact PCP	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3658)	**57.6**	**[54.8, 60.4]**	**22.1**	**[19.9, 24.5]**	**8.4**	**[7.0, 10.0]**	**3.4**	**[2.4, 4.8]**	**8.5**	**[7.0, 10.3]**
HMV cohort										
Longitudinal cohort (n=1374)	58.4	[54.5, 62.1]	21.4	[18.5, 24.7]	8.6	[6.8, 10.8]	3.7	[2.4, 5.6]	7.8	[5.9, 10.3]
New cohort (n=2284)	55.6	[53.2, 58.0]	23.7	[21.7, 25.8]	7.8	[6.6, 9.1]	2.7	[2.0, 3.5]	10.3	[8.8, 11.9]
Months enrolled in HMP-MC										
Less than 24 months (n=1472)	55.1	[52.0, 58.2]	23.6	[21.1, 26.2]	9.4	[7.1, 12.3]	3.1	[2.2, 4.3]	8.8	[7.2, 10.7]
24-47 months (n=905)	55.3	[49.4, 60.9]	21.5	[17.5, 26.0]	7.4	[5.0, 10.9]	4.2	[2.2, 8.0]	11.7	[8.2, 16.3]
48+ months (n=1281)	59.0	[55.0, 62.9]	21.9	[18.8, 25.4]	8.5	[6.7, 10.7]	3.2	[2.0, 5.2]	7.4	[5.5, 9.9]
FPL										
0% (n=1141)	56.5	[51.7, 61.2]	21.0	[17.5, 25.0]	7.8	[5.6, 10.7]	4.7	[2.9, 7.6]	10.0	[7.4, 13.3]
0.1 to 99.99% (n=1475)	57.8	[53.3, 62.2]	24.1	[20.5, 28.2]	8.3	[6.3, 10.7]	3.0	[1.8, 5.0]	6.8	[4.8, 9.7]
100% or more (n=1042)	59.4	[54.5, 64.2]	21.0	[17.1, 25.4]	9.8	[7.3, 13.1]	1.5	[0.9, 2.5]	8.3	[6.3, 11.0]
Age**										
19-34 (n=1416)	52.4	[47.7, 57.1]	23.1	[19.5, 27.1]	9.3	[7.1, 12.0]	3.9	[2.3, 6.6]	11.2	[8.6, 14.6]
35-50 (n=1037)	61.8	[57.0, 66.5]	20.2	[16.5, 24.5]	9.1	[6.7, 12.3]	4.1	[2.4, 6.8]	4.8	[3.5, 6.6]
51-65 (n=1205)	61.6	[56.9, 66.2]	22.5	[18.9, 26.7]	5.9	[4.2, 8.2]	1.7	[1.1, 2.7]	8.2	[5.6, 11.9]
Rurality*										
Urban (n=2604)	57.6	[54.4, 60.8]	21.2	[18.7, 23.8]	8.2	[6.7, 9.8]	3.7	[2.6, 5.3]	9.3	[7.6, 11.5]
Suburban (n=321)	55.6	[46.0, 64.8]	31.7	[23.0, 42.0]	6.9	[3.7, 12.5]	3.1	[1.0, 9.5]	2.6	[1.4, 4.9]
Rural (n=733)	58.7	[51.8, 65.2]	21.9	[17.3, 27.3]	11.5	[6.7, 19.0]	1.4	[0.6, 3.3]	6.5	[4.4, 9.5]
Gender*										
Female (n=2242)	58.7	[55.2, 62.2]	22.4	[19.7, 25.4]	9.4	[7.4, 11.8]	3.3	[2.1, 5.2]	6.2	[4.7, 8.0]
Male (n=1384)	56.2	[51.7, 60.5]	22.0	[18.5, 26.0]	7.1	[5.4, 9.3]	3.6	[2.2, 5.8]	11.1	[8.5, 14.3]
Race/Ethnicity										
White, non-Hispanic (n=2260)	57.3	[53.6, 60.9]	24.9	[21.9, 28.2]	7.2	[5.7, 9.1]	2.7	[1.6, 4.5]	7.9	[6.1, 10.2]
Black, non-Hispanic (n=667)	60.1	[53.8, 66.0]	17.7	[13.6, 22.8]	8.3	[5.8, 11.7]	4.8	[2.8, 8.1]	9.1	[5.9, 13.8]
Hispanic (n=219)	57.3	[45.9, 67.9]	11.7	[8.0, 16.9]	14.7	[7.1, 27.9]	5.6	[1.9, 15.2]	10.7	[6.1, 18.2]
Arab, Chaldean, or Middle Eastern (n=219)	59.6	[49.5, 68.9]	21.6	[14.5, 31.0]	11.9	[6.6, 20.4]	1.3	[0.4, 3.9]	5.6	[3.3, 9.3]
Other, multi-racial, or not reported (n=293)	50.7	[40.9, 60.5]	24.1	[16.4, 33.9]	9.0	[5.1, 15.5]	4.4	[1.3, 13.8]	11.7	[6.8, 19.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.15 In the last 12 months, when you contacted your primary care provider's office for advice or information, how often did you get a response within 24 hours? [collapsed]

Universe: Respondents who reported having a PCP (N= 3675)

	Response from PCP office within 24 hours					
	Always/Usually		Sometimes/Never		Not applicable	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3658)	**79.7**	**[77.3, 81.9]**	**11.8**	**[10.1, 13.7]**	**8.5**	**[7.0, 10.3]**
HMV cohort						
Longitudinal cohort (n=1374)	79.8	[76.5, 82.7]	12.3	[10.1, 15.0]	7.8	[5.9, 10.3]
New cohort (n=2284)	79.3	[77.2, 81.2]	10.5	[9.1, 12.0]	10.3	[8.8, 11.9]
Months enrolled in HMP-MC						
Less than 24 months (n=1472)	78.7	[75.6, 81.5]	12.5	[10.1, 15.4]	8.8	[7.2, 10.7]
24-47 months (n=905)	76.7	[71.2, 81.5]	11.6	[8.3, 16.1]	11.7	[8.2, 16.3]
48+ months (n=1281)	80.9	[77.6, 83.8]	11.7	[9.4, 14.4]	7.4	[5.5, 9.9]
FPL						
0% (n=1141)	77.5	[73.2, 81.4]	12.5	[9.6, 16.1]	10.0	[7.4, 13.3]
0.1 to 99.99% (n=1475)	81.9	[78.3, 85.1]	11.2	[8.9, 14.1]	6.8	[4.8, 9.7]
100% or more (n=1042)	80.4	[76.5, 83.8]	11.3	[8.7, 14.6]	8.3	[6.3, 11.0]
Age***						
19-34 (n=1416)	75.5	[71.3, 79.3]	13.2	[10.4, 16.6]	11.2	[8.6, 14.6]
35-50 (n=1037)	82.0	[78.1, 85.4]	13.2	[10.1, 16.9]	4.8	[3.5, 6.6]
51-65 (n=1205)	84.2	[80.2, 87.4]	7.6	[5.7, 10.0]	8.2	[5.6, 11.9]
Rurality*						
Urban (n=2604)	78.8	[76.1, 81.3]	11.8	[10.0, 14.0]	9.3	[7.6, 11.5]
Suburban (n=321)	87.4	[80.6, 92.0]	10.0	[5.8, 16.9]	2.6	[1.4, 4.9]
Rural (n=733)	80.6	[73.6, 86.1]	12.9	[7.9, 20.3]	6.5	[4.4, 9.5]
Gender**						
Female (n=2242)	81.1	[78.0, 83.8]	12.7	[10.4, 15.5]	6.2	[4.7, 8.0]
Male (n=1384)	78.2	[74.3, 81.6]	10.7	[8.4, 13.6]	11.1	[8.5, 14.3]
Race/Ethnicity						
White, non-Hispanic (n=2260)	82.2	[79.2, 84.9]	9.9	[8.0, 12.3]	7.9	[6.1, 10.2]
Black, non-Hispanic (n=667)	77.8	[72.3, 82.5]	13.1	[9.7, 17.4]	9.1	[5.9, 13.8]
Hispanic (n=219)	69.0	[56.8, 79.0]	20.3	[11.4, 33.4]	10.7	[6.1, 18.2]
Arab, Chaldean, or Middle Eastern (n=219)	81.2	[72.8, 87.5]	13.2	[7.7, 21.6]	5.6	[3.3, 9.3]
Other, multi-racial, or not reported (n=293)	74.9	[65.3, 82.5]	13.4	[7.8, 22.0]	11.7	[6.8, 19.5]
Among those with an ED Visit						
Did not try to contact PCP (n=879)	78.1	[72.7, 82.6]	16.3	[12.4, 21.1]	5.6	[3.3, 9.4]
Tried to contact PCP (n=280)	70.8	[59.7, 79.9]	26.4	[17.6, 37.5]	2.8	[0.7, 10.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.16 Primary care barriers [composite variable]

Universe: Respondents who reported having a PCP (N= 3675)

	Primary care barriers			
	Reported PCP barriers		Reported no PCP barriers	
	Row %	95% CI	Row %	95% CI
Total (n=3675)	**23.5**	**[21.2, 25.9]**	**76.5**	**[74.1, 78.8]**
HMV cohort				
Longitudinal cohort (n=1380)	23.2	[20.2, 26.6]	76.8	[73.4, 79.8]
New cohort (n=2295)	24.1	[22.1, 26.2]	75.9	[73.8, 77.9]
Months enrolled in HMP-MC				
Less than 24 months (n=1481)	24.7	[21.9, 27.8]	75.3	[72.2, 78.1]
24-47 months (n=907)	23.3	[19.0, 28.3]	76.7	[71.7, 81.0]
48+ months (n=1287)	23.2	[20.0, 26.7]	76.8	[73.3, 80.0]
FPL				
0% (n=1148)	24.6	[20.8, 29.0]	75.4	[71.0, 79.2]
0.1 to 99.99% (n=1484)	20.5	[17.3, 24.2]	79.5	[75.8, 82.7]
100% or more (n=1043)	25.6	[21.4, 30.4]	74.4	[69.6, 78.6]
Age				
19-34 (n=1421)	26.3	[22.4, 30.6]	73.7	[69.4, 77.6]
35-50 (n=1043)	22.1	[18.4, 26.2]	77.9	[73.8, 81.6]
51-65 (n=1211)	20.1	[16.5, 24.2]	79.9	[75.8, 83.5]
Rurality				
Urban (n=2616)	24.3	[21.7, 27.1]	75.7	[72.9, 78.3]
Suburban (n=323)	15.4	[10.4, 22.2]	84.6	[77.8, 89.6]
Rural (n=736)	22.7	[17.0, 29.6]	77.3	[70.4, 83.0]
Gender*				
Female (n=2253)	25.8	[22.7, 29.2]	74.2	[70.8, 77.3]
Male (n=1390)	21.0	[17.7, 24.6]	79.0	[75.4, 82.3]
Race/Ethnicity**				
White, non-Hispanic (n=2274)	20.9	[18.2, 23.9]	79.1	[76.1, 81.8]
Black, non-Hispanic (n=667)	22.0	[17.7, 27.1]	78.0	[72.9, 82.3]
Hispanic (n=219)	38.1	[27.3, 50.3]	61.9	[49.7, 72.7]
Arab, Chaldean, or Middle Eastern (n=221)	26.0	[17.2, 37.3]	74.0	[62.7, 82.8]
Other, multi-racial, or not reported (n=294)	32.2	[23.3, 42.6]	67.8	[57.4, 76.7]
PCP Status				
PCP, No appt in last 12 months (n=641)	27.1	[21.7, 33.2]	72.9	[66.8, 78.3]
PCP, Yes appt in last 12 months (n=3034)	22.6	[20.1, 25.3]	77.4	[74.7, 79.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Primary care barriers, among those who reported having a primary care provider, is defined by one or more of the following responses:

Have you had any difficulties getting care the primary care provider's office [open-ended]? (yes if respondent reported difficulties)

In the last 12 months, how easy or difficult was it to get an appointment with your primary care provider? (yes if response of difficult or very difficult)

In the last 12 months, when you contacted your primary care provider's office for advice or information, how often did you get a response within 24 hours? (yes if response of sometimes or never)

3.17 In the last 12 months did you discuss the Health Risk Assessment with your doctor or someone at your primary care provider's office?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Reported HRA completion					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3045)	**51.2**	**[48.1, 54.3]**	**37.3**	**[34.4, 40.4]**	**11.5**	**[9.6, 13.6]**
HMV cohort						
Longitudinal cohort (n=1171)	52.4	[48.2, 56.6]	36.4	[32.4, 40.6]	11.2	[8.7, 14.2]
New cohort (n=1874)	48.0	[45.4, 50.7]	39.7	[37.1, 42.4]	12.2	[10.6, 14.1]
Months enrolled in HMP-MC**						
Less than 24 months (n=1228)	48.3	[44.9, 51.8]	39.0	[35.6, 42.5]	12.7	[10.7, 15.0]
24-47 months (n=724)	41.5	[35.4, 47.9]	44.4	[38.0, 51.1]	14.1	[9.9, 19.6]
48+ months (n=1093)	55.1	[50.7, 59.4]	34.6	[30.6, 38.9]	10.3	[7.9, 13.4]
FPL						
0% (n=946)	52.1	[46.9, 57.4]	35.8	[31.0, 41.0]	12.0	[8.9, 16.0]
0.1 to 99.99% (n=1232)	48.5	[43.5, 53.5]	39.8	[35.0, 44.8]	11.7	[9.0, 15.2]
100% or more (n=867)	53.7	[47.8, 59.4]	36.4	[30.8, 42.3]	10.0	[7.0, 14.1]
Age**						
19-34 (n=1069)	46.8	[41.3, 52.3]	39.6	[34.3, 45.1]	13.7	[10.3, 17.9]
35-50 (n=896)	49.3	[44.0, 54.5]	40.1	[35.1, 45.4]	10.6	[7.8, 14.3]
51-65 (n=1080)	60.8	[56.1, 65.3]	30.2	[26.0, 34.9]	9.0	[6.7, 11.8]
Rurality						
Urban (n=2138)	50.4	[46.8, 54.0]	37.8	[34.4, 41.4]	11.8	[9.6, 14.4]
Suburban (n=279)	55.5	[46.5, 64.1]	33.9	[25.7, 43.1]	10.6	[6.4, 17.3]
Rural (n=628)	54.4	[47.0, 61.7]	36.0	[29.3, 43.3]	9.6	[6.8, 13.2]
Gender						
Female (n=1904)	52.1	[48.1, 56.0]	37.5	[33.7, 41.4]	10.5	[8.3, 13.2]
Male (n=1111)	50.1	[45.1, 55.0]	37.4	[32.7, 42.3]	12.6	[9.5, 16.3]
Race/Ethnicity***						
White, non-Hispanic (n=1932)	50.2	[46.2, 54.2]	35.3	[31.5, 39.3]	14.5	[11.6, 17.9]
Black, non-Hispanic (n=544)	58.6	[51.7, 65.1]	35.4	[29.2, 42.2]	6.0	[3.7, 9.7]
Hispanic (n=165)	41.6	[29.5, 54.8]	49.7	[36.9, 62.5]	8.7	[4.4, 16.7]
Arab, Chaldean, or Middle Eastern (n=182)	36.8	[26.6, 48.4]	56.1	[44.8, 66.8]	7.1	[4.0, 12.2]
Other, multi-racial, or not reported (n=222)	55.5	[44.2, 66.3]	31.9	[21.8, 44.1]	12.5	[7.4, 20.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.18 In the last 12 months did you discuss the Health Risk Assessment with your doctor or someone at your primary care provider's office? [collapsed]

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Reported HRA completion			
	Yes		No/Don't know	
	Row %	95% CI	Row %	95% CI
Total (n=3045)	**51.2**	**[48.1, 54.3]**	**48.8**	**[45.7, 51.9]**
HMV cohort				
Longitudinal cohort (n=1171)	52.4	[48.2, 56.6]	47.6	[43.4, 51.8]
New cohort (n=1874)	48.0	[45.4, 50.7]	52.0	[49.3, 54.6]
Months enrolled in HMP-MC***				
Less than 24 months (n=1228)	48.3	[44.9, 51.8]	51.7	[48.2, 55.1]
24-47 months (n=724)	41.5	[35.4, 47.9]	58.5	[52.1, 64.6]
48+ months (n=1093)	55.1	[50.7, 59.4]	44.9	[40.6, 49.3]
FPL				
0% (n=946)	52.1	[46.9, 57.4]	47.9	[42.6, 53.1]
0.1 to 99.99% (n=1232)	48.5	[43.5, 53.5]	51.5	[46.5, 56.5]
100% or more (n=867)	53.7	[47.8, 59.4]	46.3	[40.6, 52.2]
Age***				
19-34 (n=1069)	46.8	[41.3, 52.3]	53.2	[47.7, 58.7]
35-50 (n=896)	49.3	[44.0, 54.5]	50.7	[45.5, 56.0]
51-65 (n=1080)	60.8	[56.1, 65.3]	39.2	[34.7, 43.9]
Rurality				
Urban (n=2138)	50.4	[46.8, 54.0]	49.6	[46.0, 53.2]
Suburban (n=279)	55.5	[46.5, 64.1]	44.5	[35.9, 53.5]
Rural (n=628)	54.4	[47.0, 61.7]	45.6	[38.3, 53.0]
Gender				
Female (n=1904)	52.1	[48.1, 56.0]	47.9	[44.0, 51.9]
Male (n=1111)	50.1	[45.1, 55.0]	49.9	[45.0, 54.9]
Race/Ethnicity**				
White, non-Hispanic (n=1932)	50.2	[46.2, 54.2]	49.8	[45.8, 53.8]
Black, non-Hispanic (n=544)	58.6	[51.7, 65.1]	41.4	[34.9, 48.3]
Hispanic (n=165)	41.6	[29.5, 54.8]	58.4	[45.2, 70.5]
Arab, Chaldean, or Middle Eastern (n=182)	36.8	[26.6, 48.4]	63.2	[51.6, 73.4]
Other, multi-racial, or not reported (n=222)	55.5	[44.2, 66.3]	44.5	[33.7, 55.8]
HRA Completion (DW)***				
Yes (n=1134)	61.3	[56.6, 65.8]	38.7	[34.2, 43.4]
No (n=1911)	43.2	[39.3, 47.3]	56.8	[52.7, 60.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.19 In the last 12 months, did your doctor or someone at your primary care provider's office ask about your eating, exercise, and other health habits?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Primary care asks about health habits					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3049)	**82.4**	**[79.9, 84.7]**	**16.2**	**[14.0, 18.7]**	**1.3**	**[0.8, 2.2]**
HMV cohort						
Longitudinal cohort (n=1172)	81.9	[78.4, 85.0]	16.8	[13.9, 20.3]	1.2	[0.6, 2.5]
New cohort (n=1877)	83.8	[81.8, 85.6]	14.6	[12.8, 16.5]	1.6	[1.1, 2.4]
Months enrolled in HMP-MC						
Less than 24 months (n=1229)	84.4	[82.0, 86.6]	13.9	[11.8, 16.2]	1.7	[1.1, 2.6]
24-47 months (n=726)	80.3	[74.0, 85.4]	18.1	[13.1, 24.3]	1.6	[0.6, 4.0]
48+ months (n=1094)	82.6	[79.1, 85.7]	16.2	[13.3, 19.6]	1.2	[0.6, 2.5]
FPL						
0% (n=947)	84.5	[80.5, 87.7]	14.5	[11.4, 18.4]	1.0	[0.5, 2.0]
0.1 to 99.99% (n=1233)	79.5	[74.8, 83.5]	18.5	[14.7, 23.0]	2.0	[0.9, 4.5]
100% or more (n=869)	83.2	[77.9, 87.4]	15.9	[11.7, 21.2]	0.9	[0.6, 1.6]
Age						
19-34 (n=1065)	84.2	[79.4, 88.0]	14.4	[10.7, 19.0]	1.5	[0.6, 3.7]
35-50 (n=898)	78.5	[74.0, 82.4]	20.3	[16.5, 24.8]	1.2	[0.6, 2.3]
51-65 (n=1086)	84.6	[80.9, 87.8]	14.0	[11.0, 17.8]	1.4	[0.8, 2.4]
Rurality						
Urban (n=2140)	81.7	[78.7, 84.4]	16.9	[14.3, 19.8]	1.4	[0.8, 2.4]
Suburban (n=280)	86.9	[79.8, 91.8]	12.6	[7.8, 19.7]	0.5	[0.1, 3.6]
Rural (n=629)	84.7	[79.8, 88.6]	13.9	[10.2, 18.7]	1.4	[0.6, 3.1]
Gender*						
Female (n=1908)	79.4	[75.8, 82.6]	19.3	[16.2, 22.9]	1.2	[0.6, 2.6]
Male (n=1111)	85.9	[82.2, 89.0]	12.8	[9.8, 16.4]	1.3	[0.7, 2.5]
Race/Ethnicity						
White, non-Hispanic (n=1936)	81.8	[78.2, 84.9]	16.4	[13.4, 19.8]	1.8	[1.0, 3.4]
Black, non-Hispanic (n=543)	86.1	[80.8, 90.1]	13.6	[9.6, 18.8]	0.3	[0.1, 1.0]
Hispanic (n=165)	73.1	[59.8, 83.2]	26.3	[16.3, 39.6]	0.6	[0.1, 4.2]
Arab, Chaldean, or Middle Eastern (n=181)	79.6	[70.7, 86.4]	19.1	[12.6, 28.0]	1.2	[0.3, 4.9]
Other, multi-racial, or not reported (n=224)	84.5	[75.1, 90.8]	14.0	[7.9, 23.6]	1.4	[0.5, 4.0]
Reported HRA completion***						
Yes (n=1549)	91.4	[88.2, 93.8]	7.8	[5.5, 11.0]	0.8	[0.4, 1.5]
No/Don't know (n=1488)	73.1	[68.9, 76.8]	25.0	[21.4, 29.0]	1.9	[1.0, 3.6]
Primary care barriers***						
Reported PCP barriers (n=665)	74.4	[68.6, 79.4]	24.4	[19.5, 30.2]	1.2	[0.5, 2.6]
Reported no PCP barriers (n=2384)	84.8	[81.9, 87.3]	13.8	[11.4, 16.6]	1.4	[0.8, 2.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.20 In the last 12 months, did your doctor or someone at your primary care provider's office talk with you about specific goals for your health?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Primary care talks about health goals					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3041)	**70.7**	**[67.7, 73.4]**	**28.0**	**[25.2, 30.9]**	**1.4**	**[0.9, 2.0]**
HMV cohort						
Longitudinal cohort (n=1168)	71.7	[67.7, 75.4]	27.0	[23.4, 31.0]	1.2	[0.7, 2.1]
New cohort (n=1873)	67.9	[65.4, 70.3]	30.4	[28.0, 32.9]	1.7	[1.1, 2.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1226)	66.6	[63.0, 70.0]	31.9	[28.6, 35.5]	1.5	[0.9, 2.4]
24-47 months (n=725)	66.6	[60.2, 72.5]	32.2	[26.4, 38.7]	1.1	[0.6, 2.2]
48+ months (n=1090)	73.0	[68.9, 76.8]	25.6	[21.8, 29.7]	1.4	[0.8, 2.4]
FPL						
0% (n=946)	72.2	[67.1, 76.7]	26.7	[22.2, 31.7]	1.2	[0.6, 2.2]
0.1 to 99.99% (n=1229)	69.6	[64.9, 73.9]	29.2	[24.9, 33.8]	1.2	[0.6, 2.4]
100% or more (n=866)	69.5	[63.7, 74.8]	28.5	[23.3, 34.3]	1.9	[1.0, 3.8]
Age						
19-34 (n=1064)	67.3	[61.9, 72.3]	31.3	[26.3, 36.8]	1.4	[0.7, 2.6]
35-50 (n=896)	72.1	[67.2, 76.5]	27.2	[22.8, 32.0]	0.7	[0.3, 1.9]
51-65 (n=1081)	74.2	[70.0, 78.1]	23.6	[19.9, 27.8]	2.2	[1.3, 3.7]
Rurality						
Urban (n=2136)	70.8	[67.4, 73.9]	28.0	[24.8, 31.4]	1.3	[0.8, 2.0]
Suburban (n=278)	70.4	[61.3, 78.1]	26.8	[19.5, 35.7]	2.8	[0.9, 8.8]
Rural (n=627)	70.1	[62.6, 76.6]	28.9	[22.4, 36.3]	1.1	[0.5, 2.1]
Gender						
Female (n=1901)	70.1	[66.3, 73.6]	29.0	[25.5, 32.8]	0.9	[0.5, 1.6]
Male (n=1110)	71.1	[66.4, 75.5]	27.0	[22.7, 31.7]	1.9	[1.1, 3.1]
Race/Ethnicity***						
White, non-Hispanic (n=1930)	68.3	[64.2, 72.1]	29.8	[26.0, 33.9]	1.9	[1.2, 3.1]
Black, non-Hispanic (n=543)	81.7	[76.9, 85.7]	18.0	[14.1, 22.8]	0.3	[0.1, 1.0]
Hispanic (n=165)	56.3	[42.6, 69.1]	42.5	[29.7, 56.3]	1.3	[0.2, 7.1]
Arab, Chaldean, or Middle Eastern (n=181)	65.4	[54.7, 74.7]	34.4	[25.2, 45.1]	0.2	[0.0, 1.1]
Other, multi-racial, or not reported (n=222)	68.0	[56.9, 77.4]	30.3	[21.0, 41.4]	1.7	[0.7, 4.1]
Reported HRA completion***						
Yes (n=1546)	84.1	[80.5, 87.1]	14.9	[11.9, 18.4]	1.0	[0.6, 1.8]
No/Don't know (n=1483)	56.4	[51.9, 60.9]	41.8	[37.4, 46.4]	1.7	[1.0, 2.9]
Primary care barriers***						
Reported PCP barriers (n=663)	56.9	[50.3, 63.2]	40.4	[34.1, 47.1]	2.7	[1.4, 5.0]
Reported no PCP barriers (n=2378)	74.7	[71.5, 77.6]	24.3	[21.4, 27.5]	1.0	[0.6, 1.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.21 In the last 12 months, did your doctor or someone at your primary care provider's office ask you if there are things that make it hard for you to take care of your health?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Primary care asks if things make it hard to take care of your health					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3039)	**54.1**	**[51.0, 57.2]**	**41.8**	**[38.8, 44.9]**	**4.1**	**[3.0, 5.4]**
HMV cohort						
Longitudinal cohort (n=1169)	55.1	[50.9, 59.2]	41.3	[37.2, 45.4]	3.6	[2.4, 5.6]
New cohort (n=1870)	51.6	[49.0, 54.3]	43.2	[40.6, 45.9]	5.2	[4.1, 6.5]
Months enrolled in HMP-MC						
Less than 24 months (n=1222)	52.9	[49.5, 56.3]	41.5	[38.2, 44.9]	5.5	[4.2, 7.1]
24-47 months (n=726)	52.0	[45.5, 58.5]	45.1	[38.7, 51.6]	2.9	[1.9, 4.4]
48+ months (n=1091)	55.1	[50.8, 59.4]	40.8	[36.6, 45.1]	4.1	[2.6, 6.3]
FPL						
0% (n=945)	57.1	[51.8, 62.2]	38.7	[33.8, 43.9]	4.2	[2.4, 7.2]
0.1 to 99.99% (n=1227)	52.2	[47.3, 57.1]	44.9	[40.0, 49.9]	2.9	[2.0, 4.2]
100% or more (n=867)	51.6	[45.9, 57.3]	42.8	[37.2, 48.6]	5.6	[3.6, 8.5]
Age						
19-34 (n=1063)	56.7	[51.2, 62.1]	38.8	[33.6, 44.3]	4.5	[2.5, 7.7]
35-50 (n=896)	53.7	[48.5, 58.8]	42.6	[37.6, 47.8]	3.7	[2.5, 5.4]
51-65 (n=1080)	50.6	[45.9, 55.2]	45.6	[41.0, 50.3]	3.9	[2.8, 5.3]
Rurality						
Urban (n=2131)	53.7	[50.2, 57.3]	42.3	[38.8, 45.9]	3.9	[2.8, 5.5]
Suburban (n=280)	59.5	[50.7, 67.8]	37.8	[29.7, 46.6]	2.7	[1.0, 6.7]
Rural (n=628)	53.3	[45.8, 60.6]	40.6	[33.6, 48.0]	6.2	[3.8, 9.9]
Gender						
Female (n=1900)	53.7	[49.7, 57.6]	42.9	[39.0, 46.9]	3.4	[2.5, 4.7]
Male (n=1109)	54.6	[49.7, 59.4]	40.7	[36.0, 45.6]	4.7	[3.0, 7.4]
Race/Ethnicity*						
White, non-Hispanic (n=1934)	52.7	[48.7, 56.6]	41.5	[37.7, 45.5]	5.8	[4.1, 8.1]
Black, non-Hispanic (n=541)	58.0	[51.0, 64.6]	40.7	[34.1, 47.6]	1.3	[0.8, 2.2]
Hispanic (n=164)	42.5	[30.6, 55.3]	52.4	[39.4, 65.0]	5.2	[1.6, 15.7]
Arab, Chaldean, or Middle Eastern (n=179)	58.0	[47.3, 68.0]	41.2	[31.3, 51.8]	0.8	[0.2, 3.1]
Other, multi-racial, or not reported (n=221)	56.7	[45.7, 67.1]	40.7	[30.6, 51.7]	2.6	[1.0, 6.5]
Reported HRA completion***						
Yes (n=1544)	65.3	[61.1, 69.3]	32.3	[28.4, 36.5]	2.4	[1.7, 3.3]
No/Don't know (n=1484)	42.3	[37.8, 47.0]	51.8	[47.2, 56.3]	5.9	[4.0, 8.5]
Primary care barriers**						
Reported PCP barriers (n=662)	44.7	[38.3, 51.3]	49.5	[43.0, 56.0]	5.8	[3.5, 9.5]
Reported no PCP barriers (n=2377)	56.9	[53.4, 60.3]	39.6	[36.2, 43.1]	3.5	[2.5, 5.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.22 In the last 12 months, did your doctor or someone at your primary care provider's office ask you about things in your life that worry you or cause you stress?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Primary care asks about things that cause worry or stress					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3037)	**66.2**	**[63.1, 69.1]**	**32.8**	**[29.9, 35.8]**	**1.1**	**[0.7, 1.7]**
HMV cohort						
Longitudinal cohort (n=1166)	65.6	[61.5, 69.5]	33.5	[29.6, 37.6]	0.9	[0.5, 1.8]
New cohort (n=1871)	67.6	[65.1, 70.1]	30.9	[28.5, 33.5]	1.5	[1.0, 2.1]
Months enrolled in HMP-MC						
Less than 24 months (n=1224)	67.0	[63.8, 70.1]	31.2	[28.2, 34.4]	1.8	[1.1, 2.7]
24-47 months (n=725)	66.7	[60.0, 72.7]	32.8	[26.8, 39.4]	0.6	[0.3, 1.3]
48+ months (n=1088)	65.8	[61.5, 69.8]	33.2	[29.2, 37.4]	1.0	[0.5, 2.1]
FPL						
0% (n=943)	66.6	[61.3, 71.5]	32.7	[27.9, 38.0]	0.7	[0.3, 1.4]
0.1 to 99.99% (n=1229)	66.7	[61.9, 71.1]	31.5	[27.1, 36.3]	1.8	[1.0, 3.5]
100% or more (n=865)	64.6	[58.9, 69.9]	34.8	[29.5, 40.5]	0.6	[0.3, 1.1]
Age						
19-34 (n=1062)	68.1	[62.5, 73.2]	31.3	[26.2, 36.9]	0.6	[0.3, 1.1]
35-50 (n=893)	65.1	[60.0, 69.9]	33.6	[28.9, 38.7]	1.3	[0.6, 2.7]
51-65 (n=1082)	64.4	[59.8, 68.8]	34.1	[29.8, 38.6]	1.5	[0.6, 3.5]
Rurality						
Urban (n=2129)	65.1	[61.5, 68.5]	33.9	[30.5, 37.4]	1.0	[0.6, 1.8]
Suburban (n=280)	71.0	[62.4, 78.2]	28.7	[21.5, 37.2]	0.3	[0.1, 1.3]
Rural (n=628)	71.0	[64.8, 76.4]	27.1	[21.8, 33.1]	1.9	[0.9, 4.0]
Gender						
Female (n=1899)	68.0	[64.1, 71.6]	31.1	[27.5, 34.9]	1.0	[0.6, 1.7]
Male (n=1108)	63.9	[59.0, 68.6]	34.9	[30.3, 39.8]	1.2	[0.6, 2.4]
Race/Ethnicity						
White, non-Hispanic (n=1929)	67.5	[63.5, 71.2]	31.1	[27.5, 35.1]	1.4	[0.8, 2.4]
Black, non-Hispanic (n=542)	68.8	[61.9, 74.9]	30.4	[24.3, 37.3]	0.8	[0.3, 2.1]
Hispanic (n=164)	56.1	[43.3, 68.1]	43.3	[31.3, 56.1]	0.6	[0.1, 4.5]
Arab, Chaldean, or Middle Eastern (n=180)	58.5	[47.9, 68.5]	40.9	[31.1, 51.6]	0.5	[0.1, 2.1]
Other, multi-racial, or not reported (n=222)	62.3	[50.7, 72.5]	37.3	[27.0, 48.8]	0.5	[0.1, 2.1]
Reported HRA completion***						
Yes (n=1543)	76.1	[72.1, 79.6]	22.8	[19.3, 26.7]	1.1	[0.6, 2.3]
No/Don't know (n=1483)	55.6	[51.0, 60.1]	43.4	[38.9, 48.0]	1.0	[0.6, 1.7]
Primary care barriers**						
Reported PCP barriers (n=661)	58.0	[51.4, 64.3]	40.5	[34.2, 47.0]	1.5	[0.8, 3.2]
Reported no PCP barriers (n=2376)	68.5	[65.1, 71.7]	30.6	[27.4, 34.0]	0.9	[0.5, 1.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.23 In the last 12 months, did your doctor or someone at your primary care provider's office ask questions or have you fill out a form about social needs like having enough food, housing, or employment?

Universe: Respondents who reported having or being unsure if they had a PCP visit in last 12 months (N=3051)

	Primary care asks questions/has form about social needs					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3029)	**37.0**	**[34.0, 40.1]**	**58.4**	**[55.3, 61.5]**	**4.6**	**[3.4, 6.1]**
HMV cohort						
Longitudinal cohort (n=1163)	36.2	[32.2, 40.3]	59.2	[54.9, 63.2]	4.7	[3.1, 6.9]
New cohort (n=1866)	39.2	[36.7, 41.8]	56.6	[54.0, 59.2]	4.2	[3.3, 5.4]
Months enrolled in HMP-MC						
Less than 24 months (n=1220)	39.4	[36.2, 42.7]	55.8	[52.4, 59.2]	4.8	[3.6, 6.3]
24-47 months (n=724)	41.1	[34.6, 47.9]	54.8	[48.1, 61.3]	4.2	[2.2, 7.7]
48+ months (n=1085)	35.0	[31.0, 39.3]	60.3	[56.0, 64.5]	4.6	[3.0, 7.0]
FPL						
0% (n=941)	35.4	[30.4, 40.7]	58.6	[53.3, 63.8]	6.0	[3.9, 8.9]
0.1 to 99.99% (n=1224)	35.0	[30.5, 39.8]	61.4	[56.5, 66.1]	3.6	[1.9, 6.6]
100% or more (n=864)	43.0	[37.4, 48.8]	53.6	[47.8, 59.2]	3.5	[2.0, 5.9]
Age						
19-34 (n=1062)	39.4	[34.1, 44.9]	55.6	[50.0, 61.0]	5.0	[3.1, 8.0]
35-50 (n=891)	36.7	[31.7, 42.0]	60.1	[54.9, 65.2]	3.2	[1.9, 5.3]
51-65 (n=1076)	33.6	[29.3, 38.1]	60.9	[56.1, 65.5]	5.5	[3.3, 9.3]
Rurality						
Urban (n=2125)	36.5	[33.1, 40.0]	58.6	[55.0, 62.1]	4.9	[3.5, 6.8]
Suburban (n=279)	38.2	[30.2, 46.8]	59.4	[50.7, 67.5]	2.5	[1.2, 4.9]
Rural (n=625)	40.1	[32.6, 48.0]	56.4	[48.7, 63.9]	3.5	[1.6, 7.4]
Gender						
Female (n=1898)	37.0	[33.4, 40.9]	58.8	[54.9, 62.6]	4.1	[2.6, 6.4]
Male (n=1101)	36.8	[32.1, 41.8]	58.1	[53.1, 62.9]	5.1	[3.4, 7.7]
Race/Ethnicity						
White, non-Hispanic (n=1921)	38.2	[34.5, 42.1]	56.2	[52.3, 60.1]	5.5	[3.9, 7.9]
Black, non-Hispanic (n=541)	37.2	[30.6, 44.5]	60.1	[52.9, 66.8]	2.7	[1.2, 5.9]
Hispanic (n=165)	36.1	[24.2, 49.9]	61.6	[48.0, 73.6]	2.3	[1.1, 4.9]
Arab, Chaldean, or Middle Eastern (n=181)	24.5	[15.5, 36.6]	68.7	[56.1, 79.1]	6.8	[2.1, 19.8]
Other, multi-racial, or not reported (n=221)	39.9	[29.6, 51.2]	57.2	[46.0, 67.6]	2.9	[1.5, 5.6]
Reported HRA completion***						
Yes (n=1541)	45.4	[41.2, 49.8]	49.9	[45.6, 54.1]	4.7	[3.1, 7.0]
No/Don't know (n=1478)	27.8	[23.8, 32.2]	67.7	[63.2, 71.9]	4.4	[2.9, 6.9]
Primary care barriers**						
Reported PCP barriers (n=658)	28.2	[22.9, 34.0]	65.4	[59.0, 71.3]	6.5	[3.5, 11.5]
Reported no PCP barriers (n=2371)	39.5	[36.1, 43.1]	56.4	[52.9, 59.9]	4.0	[2.9, 5.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.24 In the last 12 months, did someone from your primary care provider's office talk with you about quitting or cutting back on smoking or other tobacco use?

Universe: Respondents who reported having or being unsure if they had a PCP visit in past 12 months who reported smoking or using tobacco in the past 30 days (N= 924)

	Primary care talks about quitting smoking or tobacco					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=921)	**82.7**	**[77.5, 86.9]**	**17.1**	**[12.9, 22.2]**	**0.3**	**[0.1, 1.0]**
HMV cohort						
Longitudinal cohort (n=375)	83.0	[75.9, 88.3]	16.7	[11.5, 23.8]	0.3	[0.1, 1.4]
New cohort (n=546)	81.8	[77.8, 85.2]	18.0	[14.6, 22.0]	0.2	[0.1, 0.9]
Months enrolled in HMP-MC						
Less than 24 months (n=369)	81.4	[76.3, 85.6]	18.3	[14.1, 23.4]	0.4	[0.1, 1.4]
24-47 months (n=207)	81.6	[68.1, 90.3]	18.4	[9.7, 31.9]	0.0	
48+ months (n=345)	83.3	[76.0, 88.7]	16.4	[11.0, 23.6]	0.3	[0.1, 1.6]
FPL*						
0% (n=355)	87.1	[80.0, 92.0]	12.7	[7.8, 19.9]	0.2	[0.0, 0.7]
0.1 to 99.99% (n=355)	72.7	[61.3, 81.7]	26.7	[17.7, 38.1]	0.6	[0.1, 3.5]
100% or more (n=211)	86.6	[78.8, 91.8]	13.4	[8.2, 21.2]	0.0	
Age**						
19-34 (n=252)	73.6	[61.8, 82.8]	26.3	[17.1, 38.1]	0.1	[0.0, 0.7]
35-50 (n=331)	84.6	[76.6, 90.2]	14.8	[9.3, 22.9]	0.6	[0.1, 2.4]
51-65 (n=338)	90.9	[86.3, 94.0]	9.1	[6.0, 13.7]	0.0	
Rurality						
Urban (n=599)	81.9	[75.4, 86.9]	18.0	[13.0, 24.5]	0.1	[0.0, 0.5]
Suburban (n=104)	82.3	[68.0, 91.0]	17.5	[8.7, 31.8]	0.3	[0.0, 1.9]
Rural (n=218)	88.1	[80.4, 93.1]	10.5	[6.0, 17.7]	1.3	[0.2, 8.9]
Gender						
Female (n=536)	85.5	[80.8, 89.3]	14.2	[10.5, 19.0]	0.2	[0.1, 0.8]
Male (n=380)	79.9	[70.7, 86.8]	19.7	[12.9, 29.0]	0.3	[0.0, 2.3]
Race/Ethnicity**						
White, non-Hispanic (n=623)	85.6	[79.2, 90.2]	14.3	[9.6, 20.7]	0.1	[0.0, 0.6]
Black, non-Hispanic (n=152)	89.7	[83.9, 93.6]	10.3	[6.4, 16.1]	0.0	
Hispanic (n=42)	-	-	-	-	-	
Arab, Chaldean, or Middle Eastern (n=32)	-	-	-	-	-	
Other, multi-racial, or not reported (n=72)	73.9	[47.6, 89.8]	23.9	[8.5, 51.3]	2.2	[0.4, 11.3]
Reported HRA completion***						
Yes (n=502)	93.0	[86.4, 96.5]	7.0	[3.4, 13.6]	0.0	[0.0, 0.3]
No/Don't know (n=416)	71.4	[62.7, 78.7]	28.1	[20.8, 36.8]	0.5	[0.1, 2.1]
Primary care barriers						
Reported PCP barriers (n=204)	75.5	[65.4, 83.4]	24.2	[16.3, 34.3]	0.3	[0.1, 1.6]
Reported no PCP barriers (n=717)	84.8	[78.4, 89.6]	14.9	[10.2, 21.3]	0.3	[0.0, 1.4]

Pearson, *p<.05, **p<.01, ***p<.001
Total n may be less than universe N due to item non-response
Subpopulations with n less than 50 were omitted

3.25 In the last 12 months, did you go to a hospital emergency room?

Universe: Respondents who reported having a PCP (N= 3675)

	Emergency room in last 12 months			
	Yes		No	
	Row %	**95% CI**	**Row %**	**95% CI**
Total (n=3670)	**32.5**	**[29.9, 35.3]**	**67.5**	**[64.7, 70.1]**
HMV cohort				
Longitudinal cohort (n=1376)	32.5	[28.9, 36.3]	67.5	[63.7, 71.1]
New cohort (n=2294)	32.6	[30.4, 34.9]	67.4	[65.1, 69.6]
Months enrolled in HMP-MC				
Less than 24 months (n=1480)	33.1	[30.3, 35.9]	66.9	[64.1, 69.7]
24-47 months (n=907)	37.8	[32.2, 43.7]	62.2	[56.3, 67.8]
48+ months (n=1283)	30.6	[27.0, 34.5]	69.4	[65.5, 73.0]
FPL				
0% (n=1148)	35.2	[30.7, 40.1]	64.8	[59.9, 69.3]
0.1 to 99.99% (n=1481)	29.1	[25.2, 33.3]	70.9	[66.7, 74.8]
100% or more (n=1041)	32.5	[28.0, 37.4]	67.5	[62.6, 72.0]
Age**				
19-34 (n=1418)	32.9	[28.7, 37.4]	67.1	[62.6, 71.3]
35-50 (n=1042)	37.3	[32.4, 42.5]	62.7	[57.5, 67.6]
51-65 (n=1210)	26.0	[22.1, 30.2]	74.0	[69.8, 77.9]
Rurality				
Urban (n=2612)	32.3	[29.3, 35.4]	67.7	[64.6, 70.7]
Suburban (n=323)	35.7	[26.9, 45.6]	64.3	[54.4, 73.1]
Rural (n=735)	31.9	[25.8, 38.7]	68.1	[61.3, 74.2]
Gender				
Female (n=2249)	33.8	[30.4, 37.3]	66.2	[62.7, 69.6]
Male (n=1389)	31.7	[27.6, 36.1]	68.3	[63.9, 72.4]
Race/Ethnicity*				
White, non-Hispanic (n=2269)	29.4	[26.1, 32.8]	70.6	[67.2, 73.9]
Black, non-Hispanic (n=667)	38.3	[32.2, 44.8]	61.7	[55.2, 67.8]
Hispanic (n=219)	37.8	[27.4, 49.5]	62.2	[50.5, 72.6]
Arab, Chaldean, or Middle Eastern (n=221)	26.5	[18.8, 35.9]	73.5	[64.1, 81.2]
Other, multi-racial, or not reported (n=294)	37.1	[27.8, 47.4]	62.9	[52.6, 72.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.26 Thinking about the most recent time you went to the emergency room, did you try to contact your primary care provider's office first?

Universe: Respondents who reported an ED visit in last 12 months (N= 1167)

	Try to contact PCP office					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=1166)	**22.2**	**[18.4, 26.6]**	**77.3**	**[72.9, 81.1]**	**0.5**	**[0.2, 1.3]**
HMV cohort						
Longitudinal cohort (n=406)	22.4	[17.4, 28.5]	77.1	[71.0, 82.2]	0.5	[0.2, 1.7]
New cohort (n=760)	21.6	[18.5, 25.1]	77.8	[74.3, 81.0]	0.6	[0.2, 1.4]
Months enrolled in HMP-MC						
Less than 24 months (n=499)	24.9	[20.7, 29.6]	74.5	[69.8, 78.7]	0.7	[0.2, 1.7]
24-47 months (n=301)	16.7	[10.9, 24.7]	82.6	[74.6, 88.5]	0.7	[0.2, 3.0]
48+ months (n=366)	23.7	[18.2, 30.4]	75.8	[69.2, 81.5]	0.4	[0.1, 1.9]
FPL						
0% (n=397)	20.0	[14.4, 27.0]	79.3	[72.2, 84.9]	0.7	[0.2, 2.6]
0.1 to 99.99% (n=459)	25.5	[19.0, 33.3]	74.0	[66.2, 80.5]	0.5	[0.2, 1.4]
100% or more (n=310)	22.4	[15.9, 30.6]	77.5	[69.3, 84.0]	0.1	[0.0, 0.7]
Age						
19-34 (n=494)	19.9	[14.6, 26.4]	79.8	[73.3, 85.1]	0.3	[0.1, 0.8]
35-50 (n=343)	21.9	[15.7, 29.6]	77.4	[69.7, 83.6]	0.7	[0.2, 3.2]
51-65 (n=329)	28.0	[20.0, 37.7]	71.3	[61.7, 79.4]	0.7	[0.1, 3.7]
Rurality						
Urban (n=825)	21.0	[16.9, 25.9]	78.4	[73.5, 82.5]	0.6	[0.2, 1.6]
Suburban (n=116)	21.7	[12.1, 35.8]	78.3	[64.2, 87.9]	0.0	
Rural (n=225)	32.5	[20.5, 47.3]	67.3	[52.5, 79.3]	0.2	[0.0, 1.4]
Gender						
Female (n=714)	23.6	[18.8, 29.2]	75.6	[69.9, 80.4]	0.8	[0.3, 2.4]
Male (n=444)	20.8	[15.1, 27.9]	79.1	[72.0, 84.8]	0.1	[0.0, 0.5]
Race/Ethnicity						
White, non-Hispanic (n=696)	22.3	[17.8, 27.5]	77.2	[72.0, 81.7]	0.5	[0.1, 1.4]
Black, non-Hispanic (n=229)	19.9	[12.8, 29.6]	79.2	[69.5, 86.4]	0.8	[0.2, 3.8]
Hispanic (n=81)	20.4	[7.1, 46.4]	79.6	[53.6, 92.9]	0.0	
Arab, Chaldean, or Middle Eastern (n=58)	29.4	[14.7, 50.2]	69.7	[49.1, 84.5]	0.9	[0.1, 6.1]
Other, multi-racial, or not reported (n=102)	25.3	[13.2, 43.0]	74.7	[57.0, 86.8]	0.0	

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.27 In the last 12 months, have you seen any specialists for a medical condition?

Universe: All respondents (N= 4082)

	Saw specialist in last 12 months			
	Yes		No	
	Row %	**95% CI**	**Row %**	**95% CI**
Total (n=4082)	**40.4**	**[37.9, 43.0]**	**59.6**	**[57.0, 62.1]**
HMV cohort*				
Longitudinal cohort (n=1475)	38.8	[35.4, 42.3]	61.2	[57.7, 64.6]
New cohort (n=2607)	44.2	[42.0, 46.4]	55.8	[53.6, 58.0]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	45.1	[42.3, 47.9]	54.9	[52.1, 57.7]
24-47 months (n=1019)	37.5	[32.7, 42.6]	62.5	[57.4, 67.3]
48+ months (n=1372)	40.1	[36.5, 43.8]	59.9	[56.2, 63.5]
FPL				
0% (n=1312)	37.7	[33.8, 41.8]	62.3	[58.2, 66.2]
0.1 to 99.99% (n=1641)	42.4	[38.2, 46.8]	57.6	[53.2, 61.8]
100% or more (n=1129)	42.7	[38.0, 47.6]	57.3	[52.4, 62.0]
Age***				
19-34 (n=1663)	30.2	[26.5, 34.0]	69.8	[66.0, 73.5]
35-50 (n=1148)	47.4	[42.7, 52.2]	52.6	[47.8, 57.3]
51-65 (n=1271)	51.0	[46.4, 55.6]	49.0	[44.4, 53.6]
Rurality				
Urban (n=2898)	40.3	[37.4, 43.2]	59.7	[56.8, 62.6]
Suburban (n=369)	40.5	[32.8, 48.8]	59.5	[51.2, 67.2]
Rural (n=815)	41.4	[35.6, 47.5]	58.6	[52.5, 64.4]
Gender***				
Female (n=2427)	47.6	[44.1, 51.0]	52.4	[49.0, 55.9]
Male (n=1615)	33.5	[30.0, 37.3]	66.5	[62.7, 70.0]
Race/Ethnicity**				
White, non-Hispanic (n=2484)	43.7	[40.4, 47.1]	56.3	[52.9, 59.6]
Black, non-Hispanic (n=758)	32.3	[27.2, 37.9]	67.7	[62.1, 72.8]
Hispanic (n=263)	31.5	[23.6, 40.5]	68.5	[59.5, 76.4]
Arab, Chaldean, or Middle Eastern (n=235)	45.7	[36.1, 55.7]	54.3	[44.3, 63.9]
Other, multi-racial, or not reported (n=342)	45.7	[36.6, 55.0]	54.3	[45.0, 63.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.28 In the last 12 months, have you seen a counselor, therapist, psychiatrist, or other mental health specialist?

Universe: All respondents (N= 4082)

	Saw counselor, therapist, or mental health specialist in last 12 months			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**21.7**	**[19.4, 24.1]**	**78.3**	**[75.9, 80.6]**
HMV cohort				
Longitudinal cohort (n=1475)	22.1	[19.0, 25.4]	77.9	[74.6, 81.0]
New cohort (n=2607)	20.8	[19.1, 22.6]	79.2	[77.4, 80.9]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	21.9	[19.3, 24.6]	78.1	[75.4, 80.7]
24-47 months (n=1019)	20.9	[16.7, 25.8]	79.1	[74.2, 83.3]
48+ months (n=1372)	21.9	[18.7, 25.4]	78.1	[74.6, 81.3]
FPL**				
0% (n=1312)	25.8	[21.9, 30.2]	74.2	[69.8, 78.1]
0.1 to 99.99% (n=1641)	20.1	[16.8, 23.8]	79.9	[76.2, 83.2]
100% or more (n=1129)	15.5	[12.3, 19.4]	84.5	[80.6, 87.7]
Age***				
19-34 (n=1663)	27.0	[23.3, 31.2]	73.0	[68.8, 76.7]
35-50 (n=1148)	21.0	[17.3, 25.4]	79.0	[74.6, 82.7]
51-65 (n=1271)	12.1	[9.5, 15.3]	87.9	[84.7, 90.5]
Rurality				
Urban (n=2898)	22.0	[19.5, 24.8]	78.0	[75.2, 80.5]
Suburban (n=369)	19.9	[14.2, 27.2]	80.1	[72.8, 85.8]
Rural (n=815)	20.1	[14.9, 26.5]	79.9	[73.5, 85.1]
Gender				
Female (n=2427)	23.7	[20.6, 26.9]	76.3	[73.1, 79.4]
Male (n=1615)	19.4	[16.2, 23.1]	80.6	[76.9, 83.8]
Race/Ethnicity**				
White, non-Hispanic (n=2484)	25.8	[22.7, 29.2]	74.2	[70.8, 77.3]
Black, non-Hispanic (n=758)	14.0	[10.4, 18.4]	86.0	[81.6, 89.6]
Hispanic (n=263)	23.7	[15.4, 34.7]	76.3	[65.3, 84.6]
Arab, Chaldean, or Middle Eastern (n=235)	14.3	[7.8, 24.7]	85.7	[75.3, 92.2]
Other, multi-racial, or not reported (n=342)	23.9	[15.9, 34.4]	76.1	[65.6, 84.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.29 In the last 12 months, have you seen a dentist or dental hygienist?

Universe: All respondents (N= 4082)

	Saw dentist or dental hygienist in last 12 months					
	Yes		No		Supposed to	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4075)	**51.7**	**[48.9, 54.4]**	**47.9**	**[45.2, 50.7]**	**0.4**	**[0.2, 0.9]**
HMV cohort						
Longitudinal cohort (n=1474)	51.8	[48.1, 55.6]	47.7	[44.0, 51.4]	0.4	[0.2, 1.2]
New cohort (n=2601)	51.2	[49.0, 53.5]	48.5	[46.3, 50.8]	0.3	[0.1, 0.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1686)	51.6	[48.7, 54.5]	48.3	[45.4, 51.2]	0.2	[0.1, 0.4]
24-47 months (n=1018)	55.0	[49.5, 60.3]	44.8	[39.5, 50.2]	0.3	[0.1, 0.8]
48+ months (n=1371)	50.5	[46.7, 54.4]	49.0	[45.1, 52.8]	0.5	[0.2, 1.4]
FPL*						
0% (n=1310)	47.7	[43.2, 52.2]	51.9	[47.4, 56.4]	0.4	[0.1, 1.9]
0.1 to 99.99% (n=1639)	53.8	[49.4, 58.1]	45.7	[41.3, 50.0]	0.6	[0.3, 1.3]
100% or more (n=1126)	56.7	[51.8, 61.4]	43.2	[38.5, 48.1]	0.1	[0.0, 0.4]
Age*						
19-34 (n=1658)	54.2	[49.8, 58.6]	45.7	[41.3, 50.1]	0.1	[0.0, 0.3]
35-50 (n=1146)	50.0	[45.2, 54.8]	49.0	[44.2, 53.9]	0.9	[0.3, 2.7]
51-65 (n=1271)	48.8	[44.2, 53.4]	50.9	[46.3, 55.5]	0.3	[0.1, 1.1]
Rurality						
Urban (n=2893)	52.4	[49.3, 55.4]	47.3	[44.2, 50.3]	0.4	[0.1, 1.0]
Suburban (n=369)	45.8	[37.3, 54.4]	53.6	[44.9, 62.0]	0.6	[0.1, 4.4]
Rural (n=813)	50.4	[43.9, 56.9]	49.2	[42.7, 55.7]	0.4	[0.1, 1.2]
Gender***						
Female (n=2422)	58.4	[54.9, 61.7]	41.4	[38.0, 44.8]	0.2	[0.1, 0.5]
Male (n=1614)	45.6	[41.5, 49.8]	53.8	[49.6, 57.9]	0.6	[0.2, 1.7]
Race/Ethnicity*						
White, non-Hispanic (n=2479)	48.5	[45.0, 52.0]	50.8	[47.3, 54.4]	0.7	[0.3, 1.6]
Black, non-Hispanic (n=757)	52.9	[46.9, 58.7]	47.0	[41.1, 52.9]	0.2	[0.0, 0.8]
Hispanic (n=262)	54.0	[44.0, 63.7]	45.7	[36.0, 55.7]	0.3	[0.1, 1.1]
Arab, Chaldean, or Middle Eastern (n=235)	67.0	[57.2, 75.4]	33.0	[24.6, 42.8]	0.0	
Other, multi-racial, or not reported (n=342)	53.5	[44.0, 62.7]	46.5	[37.2, 56.0]	0.0	[0.0, 0.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.30 In the last 12 months, have you been on any prescription medications?

Universe: All respondents (N= 4082)

	Been on prescription meds in last 12 months					
	Yes		No		Supposed to	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4082)	**70.2**	**[67.5, 72.7]**	**29.7**	**[27.2, 32.4]**	**0.0**	**[0.0, 0.3]**
HMV cohort						
Longitudinal cohort (n=1475)	71.1	[67.4, 74.5]	28.9	[25.4, 32.6]	0.1	[0.0, 0.4]
New cohort (n=2607)	68.1	[66.0, 70.3]	31.8	[29.7, 34.0]	0.0	[0.0, 0.1]
Months enrolled in HMP-MC						
Less than 24 months (n=1691)	70.1	[67.4, 72.7]	29.8	[27.3, 32.5]	0.0	[0.0, 0.2]
24-47 months (n=1019)	66.0	[60.7, 71.0]	34.0	[29.0, 39.3]	0.0	
48+ months (n=1372)	71.7	[67.8, 75.2]	28.3	[24.7, 32.1]	0.1	[0.0, 0.5]
FPL						
0% (n=1312)	68.5	[63.9, 72.7]	31.4	[27.2, 36.0]	0.1	[0.0, 0.6]
0.1 to 99.99% (n=1641)	72.2	[68.1, 75.9]	27.8	[24.1, 31.9]	0.0	[0.0, 0.1]
100% or more (n=1129)	70.7	[65.8, 75.2]	29.3	[24.8, 34.2]	0.0	[0.0, 0.1]
Age***						
19-34 (n=1663)	61.0	[56.6, 65.2]	39.0	[34.8, 43.4]	0.0	[0.0, 0.1]
35-50 (n=1148)	75.8	[71.2, 79.9]	24.2	[20.1, 28.8]	0.0	
51-65 (n=1271)	80.7	[76.2, 84.5]	19.1	[15.4, 23.6]	0.2	[0.0, 1.1]
Rurality**						
Urban (n=2898)	68.3	[65.3, 71.2]	31.7	[28.8, 34.7]	0.1	[0.0, 0.3]
Suburban (n=369)	78.4	[69.2, 85.4]	21.6	[14.6, 30.8]	0.0	
Rural (n=815)	79.8	[72.9, 85.2]	20.2	[14.7, 27.1]	0.0	[0.0, 0.2]
Gender***						
Female (n=2427)	75.7	[72.6, 78.7]	24.3	[21.3, 27.4]	0.0	[0.0, 0.1]
Male (n=1615)	65.1	[60.9, 69.1]	34.8	[30.8, 39.0]	0.1	[0.0, 0.5]
Race/Ethnicity**						
White, non-Hispanic (n=2484)	75.7	[72.3, 78.9]	24.2	[21.0, 27.7]	0.1	[0.0, 0.5]
Black, non-Hispanic (n=758)	62.6	[56.7, 68.2]	37.4	[31.8, 43.3]	0.0	
Hispanic (n=263)	66.0	[56.2, 74.6]	34.0	[25.4, 43.7]	0.1	[0.0, 0.5]
Arab, Chaldean, or Middle Eastern (n=235)	65.9	[55.5, 74.9]	34.1	[25.1, 44.5]	0.0	
Other, multi-racial, or not reported (n=342)	65.5	[55.6, 74.2]	34.5	[25.8, 44.4]	0.0	

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.31 Who prescribed the medication?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Percent	95% CI
Primary care provider	79.1	[76.4, 81.6]
Specialist	32.0	[29.2, 34.9]
Mental health provider	9.8	[7.8, 12.3]
Don't know	0.1	[0.0, 0.4]

Multiple responses allowed

3.32 In the last 12 months, were you ever charged more than you expected for your prescription?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Charged more than expected for prescription in last 12 months			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2976)	**6.3**	**[4.9, 8.0]**	**93.7**	**[92.0, 95.1]**
HMV cohort*				
Longitudinal cohort (n=1132)	5.5	[3.7, 7.9]	94.5	[92.1, 96.3]
New cohort (n=1844)	8.4	[7.1, 10.0]	91.6	[90.0, 92.9]
Months enrolled in HMP-MC*				
Less than 24 months (n=1223)	10.1	[8.3, 12.2]	89.9	[87.8, 91.7]
24-47 months (n=690)	7.4	[4.5, 11.8]	92.6	[88.2, 95.5]
48+ months (n=1063)	5.0	[3.3, 7.4]	95.0	[92.6, 96.7]
FPL				
0% (n=951)	6.2	[4.1, 9.3]	93.8	[90.7, 95.9]
0.1 to 99.99% (n=1207)	6.0	[3.9, 9.1]	94.0	[90.9, 96.1]
100% or more (n=818)	7.0	[4.9, 9.8]	93.0	[90.2, 95.1]
Age				
19-34 (n=1027)	7.2	[5.0, 10.5]	92.8	[89.5, 95.0]
35-50 (n=879)	5.4	[3.7, 7.7]	94.6	[92.3, 96.3]
51-65 (n=1070)	6.1	[3.7, 9.9]	93.9	[90.1, 96.3]
Rurality				
Urban (n=2030)	6.7	[5.1, 8.8]	93.3	[91.2, 94.9]
Suburban (n=297)	4.4	[2.1, 9.0]	95.6	[91.0, 97.9]
Rural (n=649)	4.9	[3.1, 7.8]	95.1	[92.2, 96.9]
Gender				
Female (n=1861)	7.3	[5.4, 9.9]	92.7	[90.1, 94.6]
Male (n=1085)	5.1	[3.4, 7.5]	94.9	[92.5, 96.6]
Race/Ethnicity				
White, non-Hispanic (n=1932)	5.5	[4.2, 7.1]	94.5	[92.9, 95.8]
Black, non-Hispanic (n=487)	7.5	[4.2, 13.0]	92.5	[87.0, 95.8]
Hispanic (n=163)	2.9	[1.4, 5.9]	97.1	[94.1, 98.6]
Arab, Chaldean, or Middle Eastern (n=158)	14.2	[6.7, 27.6]	85.8	[72.4, 93.3]
Other, multi-racial, or not reported (n=236)	4.9	[1.8, 12.3]	95.1	[87.7, 98.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.33 In the last 12 months, have you delayed or avoided picking up your prescription because of the cost?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Delayed or avoided picking up prescription because of cost			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2954)	**6.5**	**[4.9, 8.5]**	**93.5**	**[91.5, 95.1]**
HMV cohort				
Longitudinal cohort (n=1125)	6.2	[4.2, 9.1]	93.8	[90.9, 95.8]
New cohort (n=1829)	7.2	[5.9, 8.7]	92.8	[91.3, 94.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1212)	7.6	[6.0, 9.5]	92.4	[90.5, 94.0]
24-47 months (n=686)	9.8	[5.7, 16.2]	90.2	[83.8, 94.3]
48+ months (n=1056)	5.2	[3.3, 7.9]	94.8	[92.1, 96.7]
FPL				
0% (n=942)	7.2	[4.6, 11.1]	92.8	[88.9, 95.4]
0.1 to 99.99% (n=1201)	6.3	[4.0, 9.7]	93.7	[90.3, 96.0]
100% or more (n=811)	5.3	[3.4, 8.2]	94.7	[91.8, 96.6]
Age				
19-34 (n=1015)	7.4	[5.0, 10.9]	92.6	[89.1, 95.0]
35-50 (n=875)	5.0	[3.3, 7.6]	95.0	[92.4, 96.7]
51-65 (n=1064)	6.9	[3.8, 12.4]	93.1	[87.6, 96.2]
Rurality*				
Urban (n=2015)	7.3	[5.4, 9.7]	92.7	[90.3, 94.6]
Suburban (n=296)	4.0	[1.9, 8.4]	96.0	[91.6, 98.1]
Rural (n=643)	2.6	[1.0, 6.3]	97.4	[93.7, 99.0]
Gender				
Female (n=1852)	7.2	[5.2, 9.9]	92.8	[90.1, 94.8]
Male (n=1075)	5.7	[3.5, 9.1]	94.3	[90.9, 96.5]
Race/Ethnicity***				
White, non-Hispanic (n=1923)	4.3	[3.0, 6.0]	95.7	[94.0, 97.0]
Black, non-Hispanic (n=485)	10.8	[6.4, 17.7]	89.2	[82.3, 93.6]
Hispanic (n=160)	3.3	[1.6, 6.6]	96.7	[93.4, 98.4]
Arab, Chaldean, or Middle Eastern (n=154)	16.7	[8.1, 31.2]	83.3	[68.8, 91.9]
Other, multi-racial, or not reported (n=232)	3.8	[2.0, 6.9]	96.2	[93.1, 98.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

3.34 In the last 12 months, have you taken less than instructed or skipped doses to make your medicine last longer?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Taken less than instructed or skipped doses to make medicine last			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2949)	**9.5**	**[7.8, 11.7]**	**90.5**	**[88.3, 92.2]**
HMV cohort				
Longitudinal cohort (n=1126)	9.4	[7.1, 12.4]	90.6	[87.6, 92.9]
New cohort (n=1823)	9.9	[8.4, 11.7]	90.1	[88.3, 91.6]
Months enrolled in HMP-MC				
Less than 24 months (n=1206)	10.0	[8.2, 12.2]	90.0	[87.8, 91.8]
24-47 months (n=686)	10.0	[6.6, 14.9]	90.0	[85.1, 93.4]
48+ months (n=1057)	9.3	[6.9, 12.4]	90.7	[87.6, 93.1]
FPL				
0% (n=939)	11.5	[8.4, 15.4]	88.5	[84.6, 91.6]
0.1 to 99.99% (n=1197)	8.8	[6.1, 12.5]	91.2	[87.5, 93.9]
100% or more (n=813)	7.0	[5.0, 9.6]	93.0	[90.4, 95.0]
Age				
19-34 (n=1014)	10.0	[6.9, 14.1]	90.0	[85.9, 93.1]
35-50 (n=873)	10.2	[7.3, 14.0]	89.8	[86.0, 92.7]
51-65 (n=1062)	8.2	[5.8, 11.4]	91.8	[88.6, 94.2]
Rurality*				
Urban (n=2009)	10.5	[8.3, 13.1]	89.5	[86.9, 91.7]
Suburban (n=295)	7.8	[4.3, 13.8]	92.2	[86.2, 95.7]
Rural (n=645)	4.2	[3.0, 6.0]	95.8	[94.0, 97.0]
Gender				
Female (n=1849)	9.9	[7.4, 13.0]	90.1	[87.0, 92.6]
Male (n=1072)	9.1	[6.6, 12.2]	90.9	[87.8, 93.4]
Race/Ethnicity*				
White, non-Hispanic (n=1923)	9.1	[6.9, 11.9]	90.9	[88.1, 93.1]
Black, non-Hispanic (n=482)	5.9	[3.7, 9.2]	94.1	[90.8, 96.3]
Hispanic (n=158)	19.3	[10.4, 32.8]	80.7	[67.2, 89.6]
Arab, Chaldean, or Middle Eastern (n=154)	16.1	[7.6, 30.7]	83.9	[69.3, 92.4]
Other, multi-racial, or not reported (n=232)	11.9	[6.1, 21.6]	88.1	[78.4, 93.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.35 In the last 12 months, have you missed doses because you didn't get a refill on time?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Missed dose because didn't get refill on time			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2948)	**23.3**	**[20.7, 26.0]**	**76.7**	**[74.0, 79.3]**
HMV cohort				
Longitudinal cohort (n=1128)	23.6	[20.2, 27.4]	76.4	[72.6, 79.8]
New cohort (n=1820)	22.3	[20.2, 24.6]	77.7	[75.4, 79.8]
Months enrolled in HMP-MC				
Less than 24 months (n=1208)	23.2	[20.0, 26.7]	76.8	[73.3, 80.0]
24-47 months (n=681)	21.8	[17.3, 27.1]	78.2	[72.9, 82.7]
48+ months (n=1059)	23.7	[20.2, 27.7]	76.3	[72.3, 79.8]
FPL				
0% (n=939)	23.9	[19.7, 28.6]	76.1	[71.4, 80.3]
0.1 to 99.99% (n=1198)	21.3	[17.6, 25.7]	78.7	[74.3, 82.4]
100% or more (n=811)	25.2	[20.3, 30.7]	74.8	[69.3, 79.7]
Age				
19-34 (n=1010)	25.2	[20.7, 30.3]	74.8	[69.7, 79.3]
35-50 (n=872)	23.3	[19.1, 28.1]	76.7	[71.9, 80.9]
51-65 (n=1066)	20.4	[16.9, 24.5]	79.6	[75.5, 83.1]
Rurality				
Urban (n=2010)	23.5	[20.5, 26.6]	76.5	[73.4, 79.5]
Suburban (n=293)	20.2	[13.8, 28.7]	79.8	[71.3, 86.2]
Rural (n=645)	24.2	[18.0, 31.7]	75.8	[68.3, 82.0]
Gender				
Female (n=1850)	24.7	[21.3, 28.5]	75.3	[71.5, 78.7]
Male (n=1070)	21.3	[17.8, 25.4]	78.7	[74.6, 82.2]
Race/Ethnicity				
White, non-Hispanic (n=1922)	22.3	[19.1, 25.8]	77.7	[74.2, 80.9]
Black, non-Hispanic (n=481)	23.7	[18.2, 30.3]	76.3	[69.7, 81.8]
Hispanic (n=159)	27.2	[16.3, 41.6]	72.8	[58.4, 83.7]
Arab, Chaldean, or Middle Eastern (n=155)	17.2	[10.0, 28.0]	82.8	[72.0, 90.0]
Other, multi-racial, or not reported (n=231)	30.7	[21.7, 41.6]	69.3	[58.4, 78.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.36 In the last 12 months, have you stopped taking your medicine or took a different dose without talking to your provider?

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Stopped taking medication or took different dose without talking to doctor			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2953)	**11.5**	**[9.6, 13.8]**	**88.5**	**[86.2, 90.4]**
HMV cohort				
Longitudinal cohort (n=1125)	11.0	[8.5, 14.3]	89.0	[85.7, 91.5]
New cohort (n=1828)	12.8	[11.1, 14.8]	87.2	[85.2, 88.9]
Months enrolled in HMP-MC				
Less than 24 months (n=1212)	12.3	[10.3, 14.7]	87.7	[85.3, 89.7]
24-47 months (n=685)	13.0	[9.2, 18.1]	87.0	[81.9, 90.8]
48+ months (n=1056)	10.9	[8.2, 14.2]	89.1	[85.8, 91.8]
FPL*				
0% (n=943)	14.3	[10.8, 18.7]	85.7	[81.3, 89.2]
0.1 to 99.99% (n=1198)	9.5	[7.0, 12.8]	90.5	[87.2, 93.0]
100% or more (n=812)	9.4	[6.7, 12.9]	90.6	[87.1, 93.3]
Age				
19-34 (n=1016)	12.5	[9.3, 16.6]	87.5	[83.4, 90.7]
35-50 (n=874)	13.6	[10.0, 18.2]	86.4	[81.8, 90.0]
51-65 (n=1063)	7.7	[5.6, 10.6]	92.3	[89.4, 94.4]
Rurality**				
Urban (n=2015)	12.8	[10.5, 15.6]	87.2	[84.4, 89.5]
Suburban (n=295)	6.6	[3.2, 13.3]	93.4	[86.7, 96.8]
Rural (n=643)	6.1	[4.1, 9.2]	93.9	[90.8, 95.9]
Gender				
Female (n=1851)	12.7	[10.0, 16.0]	87.3	[84.0, 90.0]
Male (n=1075)	10.2	[7.6, 13.6]	89.8	[86.4, 92.4]
Race/Ethnicity				
White, non-Hispanic (n=1924)	11.4	[8.9, 14.5]	88.6	[85.5, 91.1]
Black, non-Hispanic (n=483)	9.3	[6.6, 13.0]	90.7	[87.0, 93.4]
Hispanic (n=159)	21.1	[11.2, 36.3]	78.9	[63.7, 88.8]
Arab, Chaldean, or Middle Eastern (n=156)	11.0	[5.7, 20.2]	89.0	[79.8, 94.3]
Other, multi-racial, or not reported (n=231)	13.0	[5.8, 26.6]	87.0	[73.4, 94.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.37 Any difficulties accessing prescription medications [composite variable]

Universe: Respondents who reported being on prescription meds in last 12 months (N= 2976)

	Any difficulties accessing prescription meds			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2976)	**35.8**	**[32.8, 38.9]**	**64.2**	**[61.1, 67.2]**
HMV cohort				
Longitudinal cohort (n=1132)	35.6	[31.5, 39.8]	64.4	[60.2, 68.5]
New cohort (n=1844)	36.5	[33.9, 39.1]	63.5	[60.9, 66.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1223)	37.6	[34.2, 41.2]	62.4	[58.8, 65.8]
24-47 months (n=690)	37.3	[31.1, 44.0]	62.7	[56.0, 68.9]
48+ months (n=1063)	34.9	[30.7, 39.2]	65.1	[60.8, 69.3]
FPL				
0% (n=951)	38.0	[33.0, 43.3]	62.0	[56.7, 67.0]
0.1 to 99.99% (n=1207)	32.5	[28.0, 37.4]	67.5	[62.6, 72.0]
100% or more (n=818)	36.7	[31.4, 42.4]	63.3	[57.6, 68.6]
Age				
19-34 (n=1027)	37.0	[31.9, 42.5]	63.0	[57.5, 68.1]
35-50 (n=879)	36.0	[31.0, 41.3]	64.0	[58.7, 69.0]
51-65 (n=1070)	33.8	[29.1, 39.0]	66.2	[61.0, 70.9]
Rurality				
Urban (n=2030)	36.8	[33.3, 40.4]	63.2	[59.6, 66.7]
Suburban (n=297)	29.9	[22.2, 38.8]	70.1	[61.2, 77.8]
Rural (n=649)	33.3	[26.7, 40.6]	66.7	[59.4, 73.3]
Gender				
Female (n=1861)	36.1	[32.2, 40.0]	63.9	[60.0, 67.8]
Male (n=1085)	35.5	[30.8, 40.4]	64.5	[59.6, 69.2]
Race/Ethnicity				
White, non-Hispanic (n=1932)	33.1	[29.6, 36.9]	66.9	[63.1, 70.4]
Black, non-Hispanic (n=487)	35.3	[28.5, 42.7]	64.7	[57.3, 71.5]
Hispanic (n=163)	47.5	[34.7, 60.6]	52.5	[39.4, 65.3]
Arab, Chaldean, or Middle Eastern (n=158)	36.3	[25.2, 49.2]	63.7	[50.8, 74.8]
Other, multi-racial, or not reported (n=236)	47.6	[36.8, 58.7]	52.4	[41.3, 63.2]
Among those with an ED Visit				
Did not try to contact PCP (n=736)	42.1	[35.8, 48.6]	57.9	[51.4, 64.2]
Tried to contact PCP (n=244)	52.7	[42.1, 63.2]	47.3	[36.8, 57.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Any difficulties accessing prescription medications, among those who reported any prescription medications in the past 12 months, is defined as response of yes to one or more of the following questions:

In the last 12 months, were you ever charged more than expected for your prescription?

In the last 12 months, have you delayed or avoided picking up your prescription because of the cost?

In the last 12 months, have you taken less than instructed or skipped doses to make medications last longer?

In the last 12 months, have you missed doses because you didn't get a refill on time?

In the last 12 months, have you stopped taking your medicine or took a different dose without talking to a doctor?

3.38 In the last 12 months, has a health care provider treated you unfairly because of your race or ethnic background?

Universe: All respondents (N= 4082)

	Treated unfairly because of race or ethnic background					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4017)	**1.0**	**[0.5, 2.0]**	**98.4**	**[97.4, 99.0]**	**0.6**	**[0.3, 1.2]**
HMV cohort						
Longitudinal cohort (n=1449)	1.0	[0.4, 2.6]	98.5	[96.9, 99.3]	0.5	[0.2, 1.4]
New cohort (n=2568)	1.0	[0.7, 1.6]	97.9	[97.2, 98.5]	1.0	[0.6, 1.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1669)	1.3	[0.8, 2.2]	97.6	[96.6, 98.3]	1.1	[0.7, 1.8]
24-47 months (n=1001)	0.4	[0.2, 0.9]	98.9	[97.9, 99.4]	0.7	[0.3, 1.7]
48+ months (n=1347)	1.1	[0.4, 2.9]	98.4	[96.6, 99.3]	0.5	[0.1, 1.6]
FPL**						
0% (n=1280)	0.4	[0.2, 0.7]	99.1	[98.6, 99.4]	0.5	[0.3, 0.9]
0.1 to 99.99% (n=1624)	2.1	[0.8, 5.3]	97.0	[93.8, 98.5]	0.9	[0.3, 2.8]
100% or more (n=1113)	0.5	[0.2, 1.3]	99.0	[98.0, 99.5]	0.5	[0.2, 1.3]
Age*						
19-34 (n=1635)	1.7	[0.7, 4.0]	97.8	[95.7, 98.9]	0.5	[0.2, 0.9]
35-50 (n=1132)	0.2	[0.1, 0.6]	99.2	[98.4, 99.6]	0.5	[0.2, 1.4]
51-65 (n=1250)	0.7	[0.3, 1.4]	98.2	[96.0, 99.2]	1.1	[0.3, 3.8]
Rurality***						
Urban (n=2852)	1.2	[0.6, 2.4]	98.1	[96.9, 98.8]	0.7	[0.4, 1.4]
Suburban (n=364)	0.1	[0.0, 0.6]	99.5	[98.2, 99.9]	0.4	[0.1, 1.8]
Rural (n=801)	0.1	[0.0, 0.5]	99.8	[99.3, 99.9]	0.1	[0.0, 0.5]
Gender						
Female (n=2411)	0.5	[0.3, 1.0]	99.0	[98.5, 99.3]	0.5	[0.3, 0.8]
Male (n=1566)	1.5	[0.6, 3.7]	97.8	[95.6, 98.9]	0.8	[0.3, 2.0]
Race/Ethnicity**						
White, non-Hispanic (n=2450)	0.6	[0.1, 3.4]	99.1	[96.9, 99.7]	0.2	[0.1, 0.7]
Black, non-Hispanic (n=745)	1.1	[0.6, 1.9]	98.2	[97.1, 98.9]	0.7	[0.3, 1.6]
Hispanic (n=258)	1.1	[0.4, 3.1]	98.1	[95.8, 99.1]	0.8	[0.3, 2.6]
Arab, Chaldean, or Middle Eastern (n=233)	4.1	[1.3, 12.6]	95.5	[87.4, 98.4]	0.4	[0.1, 1.3]
Other, multi-racial, or not reported (n=331)	0.4	[0.1, 1.5]	96.9	[90.2, 99.1]	2.7	[0.7, 9.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.39 In the last 12 months, has a health care provider treated you unfairly because of your appearance?

Universe: All respondents (N= 4082)

	Treated unfairly because of appearance					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4012)	**1.5**	**[1.0, 2.2]**	**97.7**	**[96.8, 98.3]**	**0.9**	**[0.5, 1.5]**
HMV cohort						
Longitudinal cohort (n=1448)	1.4	[0.8, 2.4]	97.7	[96.4, 98.5]	0.9	[0.5, 1.9]
New cohort (n=2564)	1.8	[1.3, 2.4]	97.5	[96.8, 98.1]	0.7	[0.4, 1.2]
Months enrolled in HMP-MC						
Less than 24 months (n=1665)	1.6	[1.1, 2.4]	97.5	[96.6, 98.2]	0.9	[0.5, 1.5]
24-47 months (n=1001)	1.7	[0.8, 3.5]	97.0	[94.2, 98.4]	1.3	[0.4, 4.3]
48+ months (n=1346)	1.4	[0.8, 2.5]	97.9	[96.7, 98.7]	0.7	[0.3, 1.4]
FPL						
0% (n=1280)	1.0	[0.5, 2.0]	97.6	[96.1, 98.6]	1.3	[0.6, 2.8]
0.1 to 99.99% (n=1621)	1.7	[0.9, 3.1]	97.8	[96.3, 98.7]	0.6	[0.3, 1.3]
100% or more (n=1111)	2.2	[1.0, 4.4]	97.5	[95.3, 98.7]	0.3	[0.1, 1.1]
Age						
19-34 (n=1632)	1.7	[1.1, 2.8]	97.4	[96.0, 98.3]	0.9	[0.3, 2.2]
35-50 (n=1131)	1.9	[0.9, 3.9]	97.0	[94.8, 98.2]	1.2	[0.5, 2.6]
51-65 (n=1249)	0.5	[0.3, 0.9]	99.1	[98.5, 99.4]	0.4	[0.2, 0.9]
Rurality						
Urban (n=2847)	1.4	[1.0, 2.1]	97.8	[96.9, 98.5]	0.7	[0.4, 1.5]
Suburban (n=364)	2.5	[0.5, 11.3]	95.2	[87.9, 98.2]	2.2	[0.7, 6.8]
Rural (n=801)	1.0	[0.5, 1.7]	98.4	[96.7, 99.2]	0.7	[0.2, 2.8]
Gender						
Female (n=2408)	1.9	[1.2, 3.0]	97.5	[96.4, 98.3]	0.6	[0.3, 1.2]
Male (n=1564)	0.9	[0.4, 2.0]	97.9	[96.5, 98.8]	1.1	[0.5, 2.4]
Race/Ethnicity***						
White, non-Hispanic (n=2449)	0.9	[0.5, 1.6]	98.3	[97.5, 98.9]	0.8	[0.4, 1.4]
Black, non-Hispanic (n=743)	1.3	[0.5, 3.5]	98.1	[95.9, 99.2]	0.6	[0.2, 2.0]
Hispanic (n=258)	4.2	[1.3, 12.5]	91.1	[80.5, 96.2]	4.7	[1.3, 15.8]
Arab, Chaldean, or Middle Eastern (n=233)	3.3	[1.3, 8.1]	96.5	[91.8, 98.6]	0.1	[0.0, 1.0]
Other, multi-racial, or not reported (n=329)	2.4	[1.1, 5.1]	97.4	[94.7, 98.7]	0.2	[0.0, 1.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.40 In the last 12 months, has a health care provider treated you unfairly because of your age?

Universe: All respondents (N= 4082)

	Treated unfairly because of age					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4011)	**1.2**	**[0.8, 1.8]**	**97.6**	**[96.4, 98.4]**	**1.2**	**[0.6, 2.4]**
HMV cohort						
Longitudinal cohort (n=1448)	1.1	[0.6, 2.0]	97.5	[95.7, 98.5]	1.5	[0.7, 3.2]
New cohort (n=2563)	1.5	[1.1, 2.1]	97.9	[97.2, 98.4]	0.6	[0.4, 1.0]
Months enrolled in HMP-MC						
Less than 24 months (n=1664)	2.1	[1.4, 3.0]	97.5	[96.5, 98.2]	0.5	[0.2, 0.9]
24-47 months (n=1001)	1.0	[0.3, 3.0]	96.6	[93.0, 98.4]	2.4	[0.9, 6.1]
48+ months (n=1346)	1.0	[0.5, 2.0]	98.0	[96.2, 98.9]	1.0	[0.4, 2.9]
FPL						
0% (n=1279)	1.4	[0.7, 2.6]	97.6	[95.9, 98.6]	1.0	[0.4, 2.5]
0.1 to 99.99% (n=1621)	0.8	[0.5, 1.3]	97.4	[94.4, 98.8]	1.8	[0.6, 5.4]
100% or more (n=1111)	1.5	[0.6, 3.7]	97.7	[95.5, 98.8]	0.8	[0.3, 2.1]
Age						
19-34 (n=1632)	1.6	[1.0, 2.8]	96.5	[94.0, 97.9]	1.9	[0.8, 4.5]
35-50 (n=1132)	1.0	[0.4, 2.8]	98.3	[96.4, 99.2]	0.6	[0.2, 2.3]
51-65 (n=1247)	0.6	[0.3, 1.2]	98.7	[97.6, 99.3]	0.7	[0.2, 1.9]
Rurality						
Urban (n=2845)	1.2	[0.8, 1.9]	97.4	[96.0, 98.4]	1.3	[0.6, 2.8]
Suburban (n=364)	1.6	[0.3, 8.3]	97.1	[91.5, 99.1]	1.3	[0.3, 5.0]
Rural (n=802)	0.6	[0.3, 1.1]	99.1	[98.6, 99.5]	0.3	[0.1, 0.6]
Gender						
Female (n=2407)	1.6	[0.9, 2.8]	97.6	[96.0, 98.5]	0.8	[0.3, 2.3]
Male (n=1564)	0.8	[0.4, 1.5]	97.6	[95.5, 98.8]	1.6	[0.7, 3.9]
Race/Ethnicity						
White, non-Hispanic (n=2447)	1.0	[0.5, 1.9]	97.8	[95.8, 98.9]	1.2	[0.4, 3.5]
Black, non-Hispanic (n=743)	0.8	[0.3, 2.1]	98.4	[96.6, 99.2]	0.8	[0.3, 2.5]
Hispanic (n=258)	3.8	[1.1, 12.3]	91.8	[80.9, 96.8]	4.4	[1.1, 16.0]
Arab, Chaldean, or Middle Eastern (n=233)	2.1	[0.6, 6.5]	97.5	[93.3, 99.1]	0.4	[0.1, 1.9]
Other, multi-racial, or not reported (n=330)	1.1	[0.5, 2.5]	97.7	[94.7, 99.0]	1.2	[0.3, 4.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.41 In the last 12 months, has a health care provider treated you unfairly because of your gender?

Universe: All respondents (N= 4082)

	Treated unfairly because of gender					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4007)	**0.5**	**[0.3, 0.8]**	**99.1**	**[98.7, 99.4]**	**0.4**	**[0.2, 0.7]**
HMV cohort						
Longitudinal cohort (n=1445)	0.4	[0.2, 0.9]	99.2	[98.6, 99.6]	0.3	[0.1, 0.9]
New cohort (n=2562)	0.7	[0.4, 1.2]	98.8	[98.2, 99.2]	0.4	[0.2, 0.8]
Months enrolled in HMP-MC						
Less than 24 months (n=1663)	0.7	[0.4, 1.3]	98.9	[98.2, 99.3]	0.4	[0.2, 0.9]
24-47 months (n=1001)	0.5	[0.2, 1.1]	99.2	[98.6, 99.6]	0.3	[0.1, 0.8]
48+ months (n=1343)	0.5	[0.2, 1.0]	99.1	[98.4, 99.5]	0.4	[0.2, 1.0]
FPL						
0% (n=1278)	0.5	[0.3, 1.0]	98.9	[98.2, 99.3]	0.6	[0.3, 1.3]
0.1 to 99.99% (n=1618)	0.3	[0.1, 0.8]	99.6	[99.1, 99.8]	0.1	[0.0, 0.3]
100% or more (n=1111)	0.9	[0.3, 2.3]	98.7	[97.2, 99.4]	0.4	[0.1, 1.6]
Age						
19-34 (n=1632)	0.9	[0.5, 1.6]	98.7	[97.9, 99.2]	0.4	[0.2, 1.0]
35-50 (n=1131)	0.3	[0.1, 0.8]	99.3	[98.3, 99.7]	0.5	[0.2, 1.4]
51-65 (n=1244)	0.2	[0.1, 0.5]	99.6	[99.2, 99.8]	0.2	[0.1, 0.6]
Rurality*						
Urban (n=2841)	0.6	[0.4, 1.0]	99.1	[98.7, 99.4]	0.3	[0.1, 0.6]
Suburban (n=364)	0.2	[0.0, 1.3]	98.4	[94.6, 99.5]	1.4	[0.4, 5.4]
Rural (n=802)	0.3	[0.1, 1.1]	99.2	[98.5, 99.6]	0.4	[0.2, 1.0]
Gender*						
Female (n=2406)	0.8	[0.4, 1.4]	98.8	[98.1, 99.2]	0.4	[0.2, 0.8]
Male (n=1561)	0.2	[0.1, 0.4]	99.6	[99.1, 99.8]	0.2	[0.1, 0.9]
Race/Ethnicity*						
White, non-Hispanic (n=2445)	0.4	[0.2, 0.7]	99.3	[98.7, 99.6]	0.4	[0.1, 0.9]
Black, non-Hispanic (n=743)	0.3	[0.1, 0.9]	99.6	[99.0, 99.9]	0.1	[0.0, 0.4]
Hispanic (n=258)	1.8	[0.7, 4.7]	97.1	[93.1, 98.8]	1.1	[0.2, 5.8]
Arab, Chaldean, or Middle Eastern (n=231)	1.3	[0.2, 7.3]	98.3	[93.3, 99.6]	0.4	[0.1, 1.5]
Other, multi-racial, or not reported (n=330)	0.5	[0.2, 1.7]	98.5	[96.0, 99.5]	1.0	[0.2, 3.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.42 In the last 12 months, has a health care provider treated you unfairly because of your gender identity or sexual orientation?

Universe: All respondents (N= 4082)

	Treated unfairly because of gender identity or sexual orientation					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3992)	**0.4**	**[0.2, 0.8]**	**99.3**	**[98.8, 99.6]**	**0.3**	**[0.1, 0.8]**
HMV cohort						
Longitudinal cohort (n=1439)	0.3	[0.1, 1.0]	99.4	[98.5, 99.7]	0.3	[0.1, 1.2]
New cohort (n=2553)	0.5	[0.2, 1.0]	99.3	[98.7, 99.6]	0.3	[0.1, 0.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1657)	0.4	[0.2, 1.0]	99.3	[98.7, 99.6]	0.3	[0.1, 0.7]
24-47 months (n=998)	0.3	[0.1, 1.2]	99.5	[98.7, 99.8]	0.1	[0.0, 0.7]
48+ months (n=1337)	0.3	[0.1, 1.1]	99.3	[98.3, 99.7]	0.4	[0.1, 1.4]
FPL						
0% (n=1273)	0.5	[0.2, 1.5]	99.0	[97.6, 99.6]	0.5	[0.2, 1.9]
0.1 to 99.99% (n=1614)	0.3	[0.1, 0.8]	99.6	[99.1, 99.8]	0.1	[0.1, 0.3]
100% or more (n=1105)	0.2	[0.1, 0.6]	99.7	[99.3, 99.9]	0.1	[0.0, 0.2]
Age						
19-34 (n=1630)	0.5	[0.2, 0.9]	99.1	[98.1, 99.6]	0.4	[0.1, 1.9]
35-50 (n=1127)	0.5	[0.1, 2.3]	99.3	[97.8, 99.8]	0.3	[0.1, 0.9]
51-65 (n=1235)	0.0		99.8	[99.3, 100.0]	0.2	[0.0, 0.7]
Rurality						
Urban (n=2832)	0.4	[0.2, 0.9]	99.3	[98.6, 99.7]	0.3	[0.1, 1.0]
Suburban (n=362)	0.2	[0.0, 1.3]	99.5	[98.1, 99.9]	0.3	[0.0, 1.9]
Rural (n=798)	0.1	[0.0, 0.6]	99.4	[97.7, 99.9]	0.4	[0.1, 2.6]
Gender						
Female (n=2402)	0.2	[0.1, 0.6]	99.6	[99.1, 99.8]	0.2	[0.1, 0.5]
Male (n=1551)	0.3	[0.1, 1.5]	99.3	[97.9, 99.8]	0.4	[0.1, 1.8]
Race/Ethnicity						
White, non-Hispanic (n=2436)	0.5	[0.2, 1.3]	99.4	[98.6, 99.7]	0.1	[0.1, 0.4]
Black, non-Hispanic (n=741)	0.1	[0.0, 1.0]	99.3	[96.5, 99.9]	0.6	[0.1, 3.9]
Hispanic (n=258)	1.0	[0.3, 3.1]	98.8	[96.7, 99.6]	0.2	[0.0, 1.2]
Arab, Chaldean, or Middle Eastern (n=229)	0.0		99.6	[98.5, 99.9]	0.4	[0.1, 1.5]
Other, multi-racial, or not reported (n=328)	0.0		99.5	[97.3, 99.9]	0.5	[0.1, 2.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

3.43 In the last 12 months, has a health care provider treated you unfairly because of your Medicaid coverage?

Universe: All respondents (N= 4082)

	Treated unfairly because of Medicaid coverage					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4006)	**5.4**	**[4.3, 6.6]**	**92.7**	**[91.3, 93.9]**	**1.9**	**[1.3, 2.8]**
HMV cohort						
Longitudinal cohort (n=1446)	5.1	[3.8, 6.9]	93.1	[91.1, 94.7]	1.8	[1.1, 3.1]
New cohort (n=2560)	6.0	[5.0, 7.2]	91.7	[90.3, 92.9]	2.3	[1.7, 3.2]
Months enrolled in HMP-MC						
Less than 24 months (n=1661)	6.4	[5.1, 7.9]	91.4	[89.6, 92.9]	2.2	[1.5, 3.3]
24-47 months (n=1001)	6.6	[4.3, 10.0]	90.8	[86.9, 93.6]	2.6	[1.3, 5.3]
48+ months (n=1344)	4.7	[3.4, 6.4]	93.7	[91.7, 95.2]	1.6	[0.9, 2.9]
FPL						
0% (n=1278)	5.6	[4.0, 7.9]	92.6	[90.1, 94.5]	1.8	[1.0, 3.1]
0.1 to 99.99% (n=1618)	5.4	[3.9, 7.3]	92.4	[89.8, 94.3]	2.3	[1.1, 4.4]
100% or more (n=1110)	4.8	[3.1, 7.5]	93.4	[90.7, 95.4]	1.7	[1.0, 2.9]
Age						
19-34 (n=1632)	5.2	[3.6, 7.5]	92.5	[89.9, 94.5]	2.3	[1.3, 3.9]
35-50 (n=1130)	5.8	[4.2, 8.1]	93.3	[90.9, 95.0]	0.9	[0.5, 1.6]
51-65 (n=1244)	5.0	[3.7, 6.8]	92.3	[89.8, 94.2]	2.7	[1.5, 4.9]
Rurality						
Urban (n=2841)	5.4	[4.3, 6.8]	92.4	[90.8, 93.8]	2.2	[1.5, 3.2]
Suburban (n=364)	6.9	[3.3, 13.7]	92.7	[86.0, 96.4]	0.3	[0.1, 0.9]
Rural (n=801)	3.7	[2.4, 5.5]	94.9	[92.9, 96.4]	1.4	[0.8, 2.5]
Gender						
Female (n=2406)	6.0	[4.7, 7.8]	92.7	[90.8, 94.3]	1.3	[0.7, 2.4]
Male (n=1561)	4.7	[3.3, 6.6]	92.7	[90.4, 94.4]	2.6	[1.6, 4.1]
Race/Ethnicity						
White, non-Hispanic (n=2443)	5.0	[3.7, 6.5]	93.1	[91.2, 94.6]	1.9	[1.1, 3.2]
Black, non-Hispanic (n=742)	4.8	[3.1, 7.4]	94.0	[91.3, 95.9]	1.2	[0.6, 2.5]
Hispanic (n=258)	11.1	[5.0, 23.1]	84.9	[73.5, 91.9]	4.0	[1.5, 10.1]
Arab, Chaldean, or Middle Eastern (n=232)	4.5	[1.9, 10.6]	93.7	[87.7, 96.9]	1.8	[0.6, 5.1]
Other, multi-racial, or not reported (n=331)	6.2	[3.5, 10.8]	90.8	[84.5, 94.7]	3.0	[0.9, 9.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4 Enrollee Telehealth Experiences

Beneficiary Survey Supplemental Data Appendix

4.1 Do you have internet access at home?

Universe: All respondents (N= 4082)

	Internet access at home			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4079)	**90.5**	**[88.8, 91.9]**	**9.5**	**[8.1, 11.2]**
HMV cohort**				
Longitudinal cohort (n=1475)	89.5	[87.1, 91.4]	10.5	[8.6, 12.9]
New cohort (n=2604)	93.0	[91.8, 94.0]	7.0	[6.0, 8.2]
Months enrolled in HMP-MC**				
Less than 24 months (n=1689)	93.2	[91.7, 94.4]	6.8	[5.6, 8.3]
24-47 months (n=1018)	93.4	[90.5, 95.5]	6.6	[4.5, 9.5]
48+ months (n=1372)	88.8	[86.2, 90.9]	11.2	[9.1, 13.8]
FPL*				
0% (n=1311)	88.5	[85.4, 91.0]	11.5	[9.0, 14.6]
0.1 to 99.99% (n=1641)	92.2	[89.6, 94.1]	7.8	[5.9, 10.4]
100% or more (n=1127)	92.1	[89.5, 94.1]	7.9	[5.9, 10.5]
Age***				
19-34 (n=1663)	95.8	[93.2, 97.4]	4.2	[2.6, 6.8]
35-50 (n=1148)	90.2	[86.6, 92.9]	9.8	[7.1, 13.4]
51-65 (n=1268)	80.7	[77.3, 83.8]	19.3	[16.2, 22.7]
Rurality**				
Urban (n=2897)	91.7	[89.9, 93.1]	8.3	[6.9, 10.1]
Suburban (n=369)	84.4	[75.0, 90.7]	15.6	[9.3, 25.0]
Rural (n=813)	85.6	[79.6, 90.1]	14.4	[9.9, 20.4]
Gender				
Female (n=2426)	91.5	[89.4, 93.2]	8.5	[6.8, 10.6]
Male (n=1613)	89.4	[86.6, 91.6]	10.6	[8.4, 13.4]
Race/Ethnicity				
White, non-Hispanic (n=2481)	90.6	[88.5, 92.3]	9.4	[7.7, 11.5]
Black, non-Hispanic (n=758)	90.3	[86.0, 93.3]	9.7	[6.7, 14.0]
Hispanic (n=263)	87.8	[77.2, 93.9]	12.2	[6.1, 22.8]
Arab, Chaldean, or Middle Eastern (n=235)	94.4	[86.9, 97.7]	5.6	[2.3, 13.1]
Other, multi-racial, or not reported (n=342)	89.5	[83.9, 93.3]	10.5	[6.7, 16.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.2 How would you rate your internet connection at home?

Universe: Respondents who reported having internet access at home (N= 3699)

	Internet connection at home					
	Good		Fair		Poor	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3677)	**73.4**	**[70.9, 75.8]**	**20.1**	**[18.0, 22.4]**	**6.5**	**[5.1, 8.1]**
HMV cohort						
Longitudinal cohort (n=1273)	72.8	[69.2, 76.1]	20.3	[17.4, 23.5]	6.9	[5.1, 9.3]
New cohort (n=2404)	74.9	[72.8, 76.8]	19.7	[17.9, 21.6]	5.5	[4.5, 6.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1563)	75.3	[72.7, 77.7]	18.9	[16.7, 21.2]	5.8	[4.6, 7.3]
24-47 months (n=937)	71.6	[66.1, 76.6]	21.5	[17.3, 26.5]	6.9	[4.2, 11.1]
48+ months (n=1177)	73.6	[69.9, 76.9]	20.0	[17.0, 23.3]	6.5	[4.7, 8.9]
FPL						
0% (n=1148)	73.3	[69.1, 77.2]	20.2	[16.8, 24.0]	6.5	[4.5, 9.3]
0.1 to 99.99% (n=1507)	73.6	[69.3, 77.5]	19.2	[15.9, 23.0]	7.2	[4.9, 10.4]
100% or more (n=1022)	73.3	[68.6, 77.5]	21.4	[17.5, 26.0]	5.3	[3.5, 7.8]
Age						
19-34 (n=1605)	76.1	[72.2, 79.6]	18.8	[15.7, 22.4]	5.1	[3.5, 7.5]
35-50 (n=1047)	71.8	[67.3, 75.9]	20.7	[17.2, 24.7]	7.5	[5.2, 10.6]
51-65 (n=1025)	69.6	[64.3, 74.5]	22.4	[18.4, 27.0]	8.0	[5.0, 12.7]
Rurality***						
Urban (n=2643)	75.2	[72.3, 77.8]	19.5	[17.1, 22.1]	5.3	[4.0, 7.1]
Suburban (n=318)	61.2	[51.7, 70.0]	23.1	[16.6, 31.2]	15.7	[8.9, 26.3]
Rural (n=716)	67.4	[61.1, 73.1]	23.4	[18.5, 29.1]	9.2	[6.1, 13.6]
Gender						
Female (n=2217)	72.2	[68.8, 75.3]	21.2	[18.5, 24.2]	6.6	[4.8, 9.1]
Male (n=1422)	74.5	[70.6, 78.1]	19.3	[16.1, 22.9]	6.2	[4.5, 8.6]
Race/Ethnicity**						
White, non-Hispanic (n=2230)	75.8	[72.7, 78.6]	16.7	[14.6, 19.1]	7.5	[5.6, 10.1]
Black, non-Hispanic (n=687)	70.1	[63.8, 75.6]	26.2	[20.9, 32.4]	3.7	[1.9, 6.9]
Hispanic (n=239)	68.8	[58.9, 77.3]	27.7	[19.5, 37.6]	3.5	[1.7, 6.9]
Arab, Chaldean, or Middle Eastern (n=224)	69.0	[58.7, 77.7]	22.2	[14.9, 31.8]	8.8	[4.2, 17.3]
Other, multi-racial, or not reported (n=297)	75.7	[66.5, 83.0]	16.2	[10.6, 24.1]	8.1	[3.9, 16.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Survey Supplemental Data Appendix

4.3 Reliable internet access [composite variable]

Universe: All respondents (N= 4082)

	Reliable internet access			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4057)	**84.6**	**[82.6, 86.5]**	**15.4**	**[13.5, 17.4]**
HMV cohort**				
Longitudinal cohort (n=1466)	83.3	[80.4, 85.8]	16.7	[14.2, 19.6]
New cohort (n=2591)	87.9	[86.4, 89.2]	12.1	[10.8, 13.6]
Months enrolled in HMP-MC*				
Less than 24 months (n=1681)	87.7	[85.8, 89.4]	12.3	[10.6, 14.2]
24-47 months (n=1012)	87.0	[82.6, 90.4]	13.0	[9.6, 17.4]
48+ months (n=1364)	83.0	[79.9, 85.6]	17.0	[14.4, 20.1]
FPL				
0% (n=1303)	82.7	[79.1, 85.9]	17.3	[14.1, 20.9]
0.1 to 99.99% (n=1635)	85.5	[82.0, 88.4]	14.5	[11.6, 18.0]
100% or more (n=1119)	87.2	[83.9, 89.8]	12.8	[10.2, 16.1]
Age***				
19-34 (n=1659)	90.8	[87.8, 93.2]	9.2	[6.8, 12.2]
35-50 (n=1142)	83.4	[79.3, 86.9]	16.6	[13.1, 20.7]
51-65 (n=1256)	74.1	[69.8, 78.0]	25.9	[22.0, 30.2]
Rurality***				
Urban (n=2880)	86.7	[84.5, 88.7]	13.3	[11.3, 15.5]
Suburban (n=367)	71.1	[61.1, 79.5]	28.9	[20.5, 38.9]
Rural (n=810)	77.7	[71.4, 82.9]	22.3	[17.1, 28.6]
Gender				
Female (n=2414)	85.4	[82.6, 87.8]	14.6	[12.2, 17.4]
Male (n=1603)	83.8	[80.5, 86.5]	16.2	[13.5, 19.5]
Race/Ethnicity				
White, non-Hispanic (n=2467)	83.7	[80.9, 86.2]	16.3	[13.8, 19.1]
Black, non-Hispanic (n=755)	86.9	[82.2, 90.4]	13.1	[9.6, 17.8]
Hispanic (n=262)	84.7	[74.6, 91.2]	15.3	[8.8, 25.4]
Arab, Chaldean, or Middle Eastern (n=234)	86.1	[77.0, 92.0]	13.9	[8.0, 23.0]
Other, multi-racial, or not reported (n=339)	82.2	[74.6, 87.9]	17.8	[12.1, 25.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Reliable internet access is defined as yes if the respondent reported having internet access and good or fair internet quality.

4.4 How comfortable are you using the internet to take care of health-related needs: very comfortable, somewhat comfortable, or not comfortable?

Universe: All respondents (N= 4082)

	Comfort using the internet for health care needs					
	Very comfortable		Somewhat comfortable		Not comfortable	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4024)	**52.5**	**[49.8, 55.2]**	**31.7**	**[29.2, 34.3]**	**15.8**	**[14.0, 17.8]**
HMV cohort***						
Longitudinal cohort (n=1455)	50.4	[46.6, 54.2]	32.1	[28.7, 35.7]	17.5	[15.0, 20.3]
New cohort (n=2569)	57.6	[55.3, 59.8]	30.7	[28.6, 32.9]	11.8	[10.4, 13.3]
Months enrolled in HMP-MC						
Less than 24 months (n=1666)	58.6	[55.6, 61.5]	29.7	[26.9, 32.7]	11.7	[10.0, 13.7]
24-47 months (n=1005)	53.2	[47.7, 58.7]	31.6	[27.0, 36.7]	15.1	[11.1, 20.4]
48+ months (n=1353)	50.6	[46.7, 54.5]	32.2	[28.7, 36.0]	17.2	[14.7, 19.9]
FPL						
0% (n=1289)	50.2	[45.6, 54.7]	32.7	[28.5, 37.1]	17.2	[14.2, 20.6]
0.1 to 99.99% (n=1626)	54.0	[49.7, 58.3]	31.7	[27.7, 36.0]	14.2	[11.7, 17.3]
100% or more (n=1109)	55.0	[50.1, 59.8]	29.5	[25.6, 33.7]	15.6	[12.1, 19.9]
Age***						
19-34 (n=1651)	62.8	[58.5, 67.0]	31.3	[27.3, 35.5]	5.9	[4.1, 8.4]
35-50 (n=1135)	50.3	[45.5, 55.2]	31.1	[26.8, 35.8]	18.5	[14.9, 22.8]
51-65 (n=1238)	35.2	[30.8, 39.9]	33.2	[28.9, 37.8]	31.6	[27.5, 36.0]
Rurality***						
Urban (n=2856)	54.7	[51.6, 57.8]	31.2	[28.4, 34.2]	14.1	[12.2, 16.3]
Suburban (n=366)	44.5	[36.1, 53.3]	30.1	[23.7, 37.5]	25.3	[17.7, 34.9]
Rural (n=802)	40.6	[34.5, 46.9]	37.0	[30.5, 44.0]	22.4	[17.7, 28.0]
Gender*						
Female (n=2401)	56.0	[52.6, 59.4]	29.7	[26.7, 32.9]	14.2	[12.1, 16.6]
Male (n=1585)	49.4	[45.2, 53.6]	33.3	[29.5, 37.4]	17.3	[14.4, 20.6]
Race/Ethnicity						
White, non-Hispanic (n=2453)	50.6	[47.0, 54.1]	31.5	[28.3, 35.0]	17.9	[15.4, 20.6]
Black, non-Hispanic (n=745)	54.0	[48.0, 60.0]	33.8	[28.3, 39.8]	12.1	[8.7, 16.6]
Hispanic (n=262)	55.3	[45.2, 64.9]	29.2	[21.2, 38.7]	15.5	[9.5, 24.3]
Arab, Chaldean, or Middle Eastern (n=231)	59.9	[49.8, 69.2]	28.8	[20.7, 38.7]	11.3	[6.9, 17.9]
Other, multi-racial, or not reported (n=333)	51.9	[42.5, 61.2]	30.0	[22.4, 38.7]	18.1	[12.2, 26.0]
Help reading health materials***						
Never (n=3073)	57.3	[54.1, 60.4]	29.6	[26.8, 32.6]	13.1	[11.2, 15.3]
Sometimes (n=763)	35.6	[29.9, 41.8]	40.9	[35.0, 47.1]	23.4	[18.7, 29.0]
Often (n=184)	36.4	[25.5, 49.0]	30.3	[21.6, 40.8]	33.3	[24.3, 43.6]
Reliable internet access***						
Yes (n=3418)	56.6	[53.6, 59.5]	32.2	[29.5, 35.0]	11.2	[9.6, 13.2]
No (n=581)	31.1	[24.7, 38.3]	28.9	[22.9, 35.8]	40.0	[33.5, 46.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.5 A patient portal is a website that lets you set up a personal, password-protected connection to a health care practice. Have you set up a patient portal with any of your health care providers?

Universe: All respondents (N= 4082)

	Has patient portal			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**51.1**	**[48.4, 53.8]**	**48.9**	**[46.2, 51.6]**
HMV cohort*				
Longitudinal cohort (n=1475)	49.7	[46.0, 53.4]	50.3	[46.6, 54.0]
New cohort (n=2607)	54.6	[52.3, 56.8]	45.4	[43.2, 47.7]
Months enrolled in HMP-MC*				
Less than 24 months (n=1691)	54.8	[51.9, 57.7]	45.2	[42.3, 48.1]
24-47 months (n=1019)	55.1	[49.6, 60.4]	44.9	[39.6, 50.4]
48+ months (n=1372)	48.8	[44.9, 52.6]	51.2	[47.4, 55.1]
FPL***				
0% (n=1312)	45.2	[40.8, 49.7]	54.8	[50.3, 59.2]
0.1 to 99.99% (n=1641)	55.4	[51.0, 59.6]	44.6	[40.4, 49.0]
100% or more (n=1129)	56.8	[52.0, 61.5]	43.2	[38.5, 48.0]
Age				
19-34 (n=1663)	53.1	[48.7, 57.5]	46.9	[42.5, 51.3]
35-50 (n=1148)	51.3	[46.5, 56.1]	48.7	[43.9, 53.5]
51-65 (n=1271)	47.1	[42.6, 51.7]	52.9	[48.3, 57.4]
Rurality				
Urban (n=2898)	51.6	[48.5, 54.7]	48.4	[45.3, 51.5]
Suburban (n=369)	51.1	[42.5, 59.6]	48.9	[40.4, 57.5]
Rural (n=815)	47.2	[40.9, 53.7]	52.8	[46.3, 59.1]
Gender***				
Female (n=2427)	61.8	[58.4, 65.0]	38.2	[35.0, 41.6]
Male (n=1615)	40.8	[36.8, 44.9]	59.2	[55.1, 63.2]
Race/Ethnicity***				
White, non-Hispanic (n=2484)	57.8	[54.3, 61.3]	42.2	[38.7, 45.7]
Black, non-Hispanic (n=758)	39.2	[33.6, 45.1]	60.8	[54.9, 66.4]
Hispanic (n=263)	46.5	[36.5, 56.7]	53.5	[43.3, 63.5]
Arab, Chaldean, or Middle Eastern (n=235)	53.2	[43.2, 62.8]	46.8	[37.2, 56.8]
Other, multi-racial, or not reported (n=342)	47.6	[38.5, 56.8]	52.4	[43.2, 61.5]
Help reading health materials***				
Never (n=3116)	54.9	[51.8, 58.0]	45.1	[42.0, 48.2]
Sometimes (n=773)	39.5	[33.7, 45.5]	60.5	[54.5, 66.3]
Often (n=188)	32.7	[23.4, 43.5]	67.3	[56.5, 76.6]
Reliable internet access***				
Yes (n=3456)	55.5	[52.5, 58.4]	44.5	[41.6, 47.5]
No (n=601)	27.7	[22.2, 33.9]	72.3	[66.1, 77.8]
Comfort using the internet for health care needs***				
Very comfortable (n=2167)	64.1	[60.2, 67.7]	35.9	[32.3, 39.8]
Somewhat comfortable (n=1232)	45.1	[40.4, 49.8]	54.9	[50.2, 59.6]
Not comfortable (n=625)	23.6	[18.6, 29.5]	76.4	[70.5, 81.4]
Has a PCP***				
Yes (n=3675)	53.7	[50.8, 56.5]	46.3	[43.5, 49.2]
No (n=407)	26.0	[19.8, 33.2]	74.0	[66.8, 80.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.6 Multivariate models predicting having a patient portal

Universe: All respondents (N= 4082)

	Model 1		Model 2	
	aOR	95% CI	aOR	95% CI
HMV cohort				
Longitudinal cohort	1.33	[0.77, 2.32]	1.30	[0.75, 2.25]
New cohort	1.00		1.00	
Months enrolled in HMP-MC				
Less than 24 months	1.00		1.00	
24-47 months	0.93	[0.73, 1.19]	0.91	[0.71, 1.17]
48+ months	0.63	[0.34, 1.15]	0.59	[0.32, 1.09]
FPL				
0%	0.89	[0.68, 1.17]	0.89	[0.67, 1.17]
0.1 to 99.99%	1.00		1.00	
100% or more	1.07	[0.81, 1.42]	1.03	[0.78, 1.36]
Age				
19-34	1.00		1.00	
35-50	1.25	[0.93, 1.70]	1.26	[0.93, 1.71]
51-65	1.25	[0.92, 1.71]	1.18	[0.86, 1.61]
Rurality				
Urban	1.00		1.00	
Suburban	0.95	[0.66, 1.37]	0.97	[0.67, 1.40]
Rural	0.73	[0.52, 1.03]	0.73	[0.52, 1.03]
Gender				
Female	1.00		1.00	
Male	0.45***	[0.36, 0.57]	0.47***	[0.37, 0.59]
Race/Ethnicity				
White, non-Hispanic	1.00		1.00	
Black, non-Hispanic	0.37***	[0.27, 0.51]	0.37***	[0.27, 0.52]
Hispanic	0.54*	[0.31, 0.92]	0.56*	[0.33, 0.97]
Arab, Chaldean, or Middle Eastern	0.69	[0.41, 1.17]	0.66	[0.39, 1.13]
Other, multi-racial, or not reported	0.66	[0.42, 1.03]	0.69	[0.44, 1.06]
Help reading health materials				
Never	1.00		1.00	
Sometimes	0.68*	[0.51, 0.93]	0.67*	[0.49, 0.91]
Often	0.63	[0.36, 1.10]	0.68	[0.38, 1.19]
Reliable internet access				
Yes	1.00		1.00	
No	0.41***	[0.29, 0.58]	0.41***	[0.29, 0.58]
Comfort using the internet for health care needs				
Very comfortable	1.00		1.00	
Somewhat comfortable	0.49***	[0.37, 0.64]	0.49***	[0.37, 0.64]
Not comfortable	0.19***	[0.13, 0.29]	0.19***	[0.13, 0.28]
Has a PCP				
Yes			1.00	
No			0.32***	[0.21, 0.49]
Intercept	4.81***	[3.46, 6.69]	5.57***	[3.92, 7.91]

Multivariate logistic regression results, ***p<.001, **p<.01, *p<.05

4.7 Reported having a patient portal with health care providers

Universe: All respondents (N= 4082)

	Percent	95% CI
Patient portal with primary care office	41.5	[38.9, 44.2]
Patient portal with specialist or mental health provider	20.0	[18.0, 22.1]
Other patient portal	5.6	[4.7, 6.7]

Multiple responses allowed

4.8 In the last 12 months, have you had a telehealth visit with any of your providers?

Universe: All respondents (N= 4082)

	Telehealth visit in last 12 months					
	Yes		No		Supposed to	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4074)	**33.9**	**[31.4, 36.4]**	**65.7**	**[63.1, 68.2]**	**0.5**	**[0.2, 1.2]**
HMV cohort						
Longitudinal cohort (n=1470)	33.7	[30.3, 37.2]	65.8	[62.2, 69.2]	0.5	[0.2, 1.7]
New cohort (n=2604)	34.3	[32.3, 36.5]	65.3	[63.1, 67.4]	0.4	[0.2, 0.8]
Months enrolled in HMP-MC						
Less than 24 months (n=1689)	35.0	[32.3, 37.9]	64.5	[61.6, 67.2]	0.5	[0.2, 1.2]
24-47 months (n=1018)	31.4	[26.8, 36.5]	67.8	[62.7, 72.5]	0.8	[0.2, 3.7]
48+ months (n=1367)	34.4	[30.8, 38.1]	65.2	[61.5, 68.8]	0.4	[0.1, 1.6]
FPL						
0% (n=1308)	33.2	[29.1, 37.5]	66.3	[61.9, 70.4]	0.5	[0.1, 2.1]
0.1 to 99.99% (n=1640)	33.3	[29.4, 37.5]	66.5	[62.3, 70.4]	0.2	[0.1, 0.9]
100% or more (n=1126)	36.2	[31.7, 41.0]	63.1	[58.3, 67.7]	0.7	[0.1, 3.9]
Age						
19-34 (n=1660)	32.6	[28.7, 36.8]	67.1	[62.9, 71.0]	0.3	[0.1, 0.7]
35-50 (n=1147)	36.7	[32.3, 41.4]	62.3	[57.5, 66.8]	1.1	[0.3, 3.7]
51-65 (n=1267)	32.6	[28.5, 37.0]	67.3	[63.0, 71.4]	0.1	[0.0, 0.4]
Rurality						
Urban (n=2892)	33.7	[30.9, 36.7]	65.7	[62.7, 68.6]	0.6	[0.2, 1.4]
Suburban (n=369)	33.3	[26.1, 41.4]	66.7	[58.6, 73.9]	0.0	
Rural (n=813)	35.5	[29.8, 41.8]	64.4	[58.2, 70.1]	0.1	[0.0, 0.5]
Gender***						
Female (n=2424)	39.3	[35.9, 42.7]	60.5	[57.1, 63.9]	0.2	[0.1, 0.6]
Male (n=1610)	28.4	[24.9, 32.2]	70.8	[67.0, 74.4]	0.8	[0.2, 2.3]
Race/Ethnicity**						
White, non-Hispanic (n=2479)	38.5	[35.2, 42.0]	61.0	[57.5, 64.4]	0.4	[0.1, 1.8]
Black, non-Hispanic (n=758)	25.8	[21.1, 31.1]	74.0	[68.6, 78.7]	0.2	[0.0, 1.4]
Hispanic (n=263)	30.3	[22.3, 39.7]	69.4	[60.0, 77.4]	0.3	[0.0, 2.3]
Arab, Chaldean, or Middle Eastern (n=233)	28.8	[20.7, 38.4]	70.9	[61.2, 79.0]	0.3	[0.0, 2.4]
Other, multi-racial, or not reported (n=341)	35.8	[27.0, 45.7]	62.6	[52.7, 71.5]	1.7	[0.3, 8.8]
Help reading health materials						
Never (n=3112)	34.2	[31.4, 37.2]	65.4	[62.4, 68.3]	0.4	[0.1, 1.0]
Sometimes (n=771)	34.0	[28.6, 39.8]	64.9	[59.0, 70.4]	1.1	[0.2, 5.6]
Often (n=186)	27.1	[18.4, 38.0]	72.9	[62.0, 81.6]	0.0	
Reliable internet access**						
Yes (n=3450)	35.4	[32.7, 38.3]	64.0	[61.2, 66.8]	0.5	[0.2, 1.4]
No (n=599)	25.5	[20.3, 31.4]	74.3	[68.3, 79.5]	0.3	[0.1, 0.8]
Comfort using the internet for health care needs**						
Very comfortable (n=2165)	38.3	[34.7, 42.1]	61.5	[57.7, 65.1]	0.2	[0.0, 0.6]
Somewhat comfortable (n=1230)	31.3	[27.2, 35.8]	67.9	[63.4, 72.2]	0.7	[0.2, 3.1]
Not comfortable (n=622)	25.1	[19.8, 31.1]	73.9	[67.7, 79.3]	1.0	[0.2, 5.0]
Has patient portal***						
Yes (n=2254)	47.1	[43.4, 50.7]	52.9	[49.2, 56.5]	0.1	[0.0, 0.3]
No (n=1820)	20.0	[17.1, 23.3]	79.1	[75.7, 82.0]	0.9	[0.3, 2.4]
Primary care barriers***						
Reported PCP barriers (n=851)	43.6	[38.0, 49.4]	55.2	[49.4, 60.8]	1.2	[0.3, 4.5]
Reported no PCP barriers (n=2818)	33.1	[30.1, 36.2]	66.6	[63.5, 69.6]	0.3	[0.1, 1.1]
No PCP (n=405)	17.0	[12.0, 23.6]	83.0	[76.4, 88.0]	0.0	

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.9 Multivariate models predicting telehealth visit

Universe: All respondents (N= 4082)

	Model 1		Model 2		Model 3	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
HMV cohort						
Longitudinal cohort	0.86	[0.49, 1.51]	0.80	[0.44, 1.45]	0.85	[0.49, 1.48]
New cohort	1.00		1.00		1.00	
Months enrolled in HMP-MC						
Less than 24 months	1.00		1.00		1.00	
24-47 months	0.93	[0.73, 1.17]	0.94	[0.72, 1.22]	0.92	[0.73, 1.16]
48+ months	1.18	[0.64, 2.18]	1.32	[0.68, 2.56]	1.14	[0.62, 2.08]
FPL						
0%	1.15	[0.87, 1.50]	1.19	[0.90, 1.58]	1.12	[0.85, 1.47]
0.1 to 99.99%	1.00		1.00		1.00	
100% or more	1.12	[0.85, 1.49]	1.12	[0.84, 1.50]	1.08	[0.81, 1.42]
Age						
19-34	1.00		1.00		1.00	
35-50	1.31	[0.98, 1.74]	1.26	[0.94, 1.69]	1.34*	[1.01, 1.79]
51-65	1.17	[0.85, 1.59]	1.11	[0.82, 1.52]	1.15	[0.83, 1.58]
Rurality						
Urban	1.00		1.00		1.00	
Suburban	0.88	[0.60, 1.28]	0.88	[0.59, 1.30]	0.92	[0.63, 1.35]
Rural	0.90	[0.67, 1.21]	0.97	[0.69, 1.35]	0.90	[0.67, 1.22]
Gender						
Female	1.00		1.00		1.00	
Male	0.61***	[0.48, 0.77]	0.72**	[0.57, 0.92]	0.65***	[0.51, 0.83]
Race/Ethnicity						
White, non-Hispanic	1.00		1.00		1.00	
Black, non-Hispanic	0.53***	[0.39, 0.74]	0.66*	[0.47, 0.91]	0.54***	[0.39, 0.74]
Hispanic	0.66	[0.41, 1.04]	0.76	[0.45, 1.28]	0.64	[0.39, 1.03]
Arab, Chaldean, or Middle Eastern	0.61*	[0.38, 0.98]	0.65	[0.40, 1.08]	0.58*	[0.36, 0.95]
Other, multi-racial, or not reported	0.86	[0.54, 1.39]	0.95	[0.59, 1.54]	0.86	[0.53, 1.39]
Help reading health materials						
Never	1.00		1.00		1.00	
Sometimes	1.18	[0.89, 1.57]	1.30	[0.96, 1.77]	1.14	[0.85, 1.51]
Often	0.95	[0.54, 1.66]	1.05	[0.60, 1.86]	0.98	[0.54, 1.78]
Reliable internet access						
Yes	1.00		1.00		1.00	
No	0.68*	[0.48, 0.95]	0.82	[0.57, 1.17]	0.66*	[0.46, 0.93]
Comfort using the internet for health care needs						
Very comfortable	1.00		1.00		1.00	
Somewhat comfortable	0.74*	[0.56, 0.96]	0.87	[0.66, 1.14]	0.73*	[0.56, 0.96]
Not comfortable	0.53**	[0.35, 0.79]	0.78	[0.52, 1.18]	0.53**	[0.36, 0.79]
Has patient portal						
Yes			3.11***	[2.37, 4.09]		
No			1.00			
Primary care barriers						
Reported PCP barriers					1.58**	[1.20, 2.09]
Reported no PCP barriers					1.00	
No PCP					0.46***	[0.29, 0.71]
Intercept	0.85	[0.63, 1.15]	0.32***	[0.22, 0.47]	0.84	[0.61, 1.14]

Multivariate logistic regression results, ***p<.001, **p<.01, *p<.05

4.10 Were the telehealth visits by video or by phone?

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Percent	95% CI
By video	65.9	[61.3, 70.1]
By phone	54.3	[49.8, 58.7]
Supposed to be by video but ended up by phone only	1.2	[0.5, 2.5]

Multiple responses allowed

4.11 Were the telehealth visits by video or by phone? [collapsed]

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Telehealth visit type			
	Phone only		Video	
	Row %	95% CI	Row %	95% CI
Total (n=1432)	**33.7**	**[29.5, 38.2]**	**66.3**	**[61.8, 70.5]**
HMV cohort*				
Longitudinal cohort (n=502)	36.2	[30.4, 42.4]	63.8	[57.6, 69.6]
New cohort (n=930)	27.8	[24.5, 31.4]	72.2	[68.6, 75.5]
Months enrolled in HMP-MC				
Less than 24 months (n=604)	26.8	[22.6, 31.4]	73.2	[68.6, 77.4]
24-47 months (n=355)	31.6	[23.7, 40.8]	68.4	[59.2, 76.3]
48+ months (n=473)	36.3	[30.3, 42.7]	63.7	[57.3, 69.7]
FPL				
0% (n=463)	36.9	[29.7, 44.6]	63.1	[55.4, 70.3]
0.1 to 99.99% (n=557)	29.2	[23.1, 36.1]	70.8	[63.9, 76.9]
100% or more (n=412)	34.3	[26.7, 42.8]	65.7	[57.2, 73.3]
Age*				
19-34 (n=564)	28.8	[22.4, 36.1]	71.2	[63.9, 77.6]
35-50 (n=445)	32.6	[25.6, 40.4]	67.4	[59.6, 74.4]
51-65 (n=423)	44.8	[37.2, 52.7]	55.2	[47.3, 62.8]
Rurality				
Urban (n=1020)	35.1	[30.2, 40.3]	64.9	[59.7, 69.8]
Suburban (n=124)	30.7	[19.7, 44.5]	69.3	[55.5, 80.3]
Rural (n=288)	25.0	[17.6, 34.2]	75.0	[65.8, 82.4]
Gender**				
Female (n=934)	27.8	[23.3, 32.8]	72.2	[67.2, 76.7]
Male (n=475)	42.1	[34.7, 49.8]	57.9	[50.2, 65.3]
Race/Ethnicity*				
White, non-Hispanic (n=956)	29.4	[24.7, 34.5]	70.6	[65.5, 75.3]
Black, non-Hispanic (n=226)	42.1	[31.9, 53.1]	57.9	[46.9, 68.1]
Hispanic (n=82)	30.1	[16.9, 47.7]	69.9	[52.3, 83.1]
Arab, Chaldean, or Middle Eastern (n=61)	28.8	[16.0, 46.2]	71.2	[53.8, 84.0]
Other, multi-racial, or not reported (n=107)	48.4	[31.7, 65.5]	51.6	[34.5, 68.3]
Help reading health materials				
Never (n=1106)	35.0	[30.1, 40.3]	65.0	[59.7, 69.9]
Sometimes (n=265)	30.3	[22.6, 39.3]	69.7	[60.7, 77.4]
Often (n=60)	19.7	[10.7, 33.5]	80.3	[66.5, 89.3]
Reliable internet access*				
Yes (n=1257)	31.9	[27.4, 36.7]	68.1	[63.3, 72.6]
No (n=168)	46.6	[34.9, 58.7]	53.4	[41.3, 65.1]
Comfort using the internet for health care needs**				
Very comfortable (n=845)	27.8	[22.7, 33.5]	72.2	[66.5, 77.3]
Somewhat comfortable (n=419)	37.1	[29.6, 45.3]	62.9	[54.7, 70.4]
Not comfortable (n=159)	52.2	[39.5, 64.6]	47.8	[35.4, 60.5]
Has patient portal***				
Yes (n=1052)	27.0	[22.5, 32.0]	73.0	[68.0, 77.5]
No (n=380)	50.2	[41.8, 58.6]	49.8	[41.4, 58.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.12 Multivariate models predicting phone only telehealth visit

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Model 1		Model 2	
	aOR	95% CI	aOR	95% CI
HMV cohort				
Longitudinal cohort	1.52	[0.63, 3.66]	1.57	[0.65, 3.77]
New cohort	1.00		1.00	
Months enrolled in HMP-MC				
Less than 24 months	1.00		1.00	
24-47 months	1.16	[0.79, 1.70]	1.15	[0.78, 1.70]
48+ months	1.05	[0.41, 2.70]	0.98	[0.38, 2.52]
FPL				
0%	1.13	[0.72, 1.77]	1.11	[0.70, 1.74]
0.1 to 99.99%	1.00		1.00	
100% or more	1.24	[0.77, 2.01]	1.26	[0.77, 2.05]
Age				
19-34	1.00		1.00	
35-50	1.19	[0.73, 1.93]	1.23	[0.77, 1.98]
51-65	1.82*	[1.14, 2.90]	1.89**	[1.18, 3.03]
Rurality				
Urban	1.00		1.00	
Suburban	0.81	[0.43, 1.55]	0.76	[0.39, 1.48]
Rural	0.66	[0.40, 1.09]	0.62	[0.36, 1.06]
Gender				
Female	1.00		1.00	
Male	1.89**	[1.28, 2.79]	1.80**	[1.21, 2.69]
Race/Ethnicity				
White, non-Hispanic	1.00		1.00	
Black, non-Hispanic	1.97**	[1.19, 3.27]	1.82*	[1.10, 3.00]
Hispanic	1.21	[0.51, 2.89]	1.03	[0.43, 2.46]
Arab, Chaldean, or Middle Eastern	1.08	[0.46, 2.57]	1.10	[0.47, 2.58]
Other, multi-racial, or not reported	2.12	[0.98, 4.58]	1.99	[0.93, 4.25]
Help reading health materials				
Never	1.00		1.00	
Sometimes	0.69	[0.42, 1.13]	0.59*	[0.35, 0.99]
Often	0.26**	[0.11, 0.64]	0.23**	[0.09, 0.57]
Reliable internet access				
Yes	1.00		1.00	
No	1.74*	[1.01, 3.00]	1.63	[0.96, 2.78]
Comfort using the internet for health care needs				
Very comfortable	1.00		1.00	
Somewhat comfortable	1.48	[0.95, 2.30]	1.34	[0.85, 2.10]
Not comfortable	2.31**	[1.27, 4.21]	1.87	[0.97, 3.61]
Has patient portal				
Yes			0.43***	[0.27, 0.67]
No			1.00	
Intercept	0.13***	[0.08, 0.23]	0.29***	[0.15, 0.56]

Multivariate logistic regression results, ***p<.001, **p<.01, *p<.05

4.13 Did technical problems make the visit difficult?

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Technical problems made telehealth visit difficult			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=1433)	**11.5**	**[8.9, 14.6]**	**88.5**	**[85.4, 91.1]**
HMV cohort				
Longitudinal cohort (n=502)	11.5	[8.2, 16.0]	88.5	[84.0, 91.8]
New cohort (n=931)	11.3	[9.0, 14.1]	88.7	[85.9, 91.0]
Months enrolled in HMP-MC				
Less than 24 months (n=604)	9.3	[7.0, 12.1]	90.7	[87.9, 93.0]
24-47 months (n=356)	16.9	[10.5, 26.1]	83.1	[73.9, 89.5]
48+ months (n=473)	10.3	[7.2, 14.6]	89.7	[85.4, 92.8]
FPL				
0% (n=464)	12.6	[8.6, 18.2]	87.4	[81.8, 91.4]
0.1 to 99.99% (n=557)	11.8	[7.6, 17.9]	88.2	[82.1, 92.4]
100% or more (n=412)	8.7	[5.5, 13.3]	91.3	[86.7, 94.5]
Age				
19-34 (n=565)	11.1	[7.1, 16.8]	88.9	[83.2, 92.9]
35-50 (n=445)	12.5	[8.3, 18.3]	87.5	[81.7, 91.7]
51-65 (n=423)	10.8	[7.6, 15.1]	89.2	[84.9, 92.4]
Rurality				
Urban (n=1021)	11.2	[8.3, 14.9]	88.8	[85.1, 91.7]
Suburban (n=124)	13.6	[6.9, 25.0]	86.4	[75.0, 93.1]
Rural (n=288)	11.8	[7.5, 18.1]	88.2	[81.9, 92.5]
Gender				
Female (n=934)	13.2	[9.7, 17.8]	86.8	[82.2, 90.3]
Male (n=476)	8.8	[5.7, 13.4]	91.2	[86.6, 94.3]
Race/Ethnicity				
White, non-Hispanic (n=956)	9.9	[7.6, 12.8]	90.1	[87.2, 92.4]
Black, non-Hispanic (n=226)	10.5	[4.7, 21.7]	89.5	[78.3, 95.3]
Hispanic (n=82)	15.7	[5.9, 35.6]	84.3	[64.4, 94.1]
Arab, Chaldean, or Middle Eastern (n=62)	15.1	[6.5, 31.3]	84.9	[68.7, 93.5]
Other, multi-racial, or not reported (n=107)	18.9	[8.5, 36.9]	81.1	[63.1, 91.5]
Help reading health materials				
Never (n=1107)	10.9	[8.0, 14.5]	89.1	[85.5, 92.0]
Sometimes (n=265)	11.3	[6.9, 17.9]	88.7	[82.1, 93.1]
Often (n=60)	26.3	[11.0, 50.9]	73.7	[49.1, 89.0]
Reliable internet access				
Yes (n=1258)	10.7	[8.1, 14.1]	89.3	[85.9, 91.9]
No (n=168)	17.4	[10.4, 27.5]	82.6	[72.5, 89.6]
Comfort using the internet for health care needs				
Very comfortable (n=846)	10.0	[6.9, 14.4]	90.0	[85.6, 93.1]
Somewhat comfortable (n=419)	13.8	[9.2, 20.2]	86.2	[79.8, 90.8]
Not comfortable (n=159)	13.3	[7.5, 22.5]	86.7	[77.5, 92.5]
Telehealth visit type*				
Phone only (n=423)	6.8	[4.0, 11.5]	93.2	[88.5, 96.0]
Video (n=1009)	13.8	[10.4, 18.1]	86.2	[81.9, 89.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.14 Did your provider adequately address your health concerns during the telehealth visit?

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Concerns were addressed during telehealth visit			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=1433)	**92.1**	**[89.4, 94.1]**	**7.9**	**[5.9, 10.6]**
HMV cohort				
Longitudinal cohort (n=502)	92.3	[88.5, 95.0]	7.7	[5.0, 11.5]
New cohort (n=931)	91.5	[89.2, 93.4]	8.5	[6.6, 10.8]
Months enrolled in HMP-MC				
Less than 24 months (n=604)	92.3	[89.6, 94.3]	7.7	[5.7, 10.4]
24-47 months (n=356)	93.0	[89.0, 95.6]	7.0	[4.4, 11.0]
48+ months (n=473)	91.8	[87.5, 94.7]	8.2	[5.3, 12.5]
FPL				
0% (n=464)	91.4	[86.2, 94.8]	8.6	[5.2, 13.8]
0.1 to 99.99% (n=557)	91.5	[86.8, 94.7]	8.5	[5.3, 13.2]
100% or more (n=412)	94.2	[91.1, 96.3]	5.8	[3.7, 8.9]
Age				
19-34 (n=565)	91.5	[86.4, 94.8]	8.5	[5.2, 13.6]
35-50 (n=445)	90.3	[85.2, 93.7]	9.7	[6.3, 14.8]
51-65 (n=423)	95.9	[93.6, 97.4]	4.1	[2.6, 6.4]
Rurality				
Urban (n=1021)	92.4	[89.2, 94.7]	7.6	[5.3, 10.8]
Suburban (n=124)	90.8	[81.5, 95.7]	9.2	[4.3, 18.5]
Rural (n=288)	90.5	[83.7, 94.7]	9.5	[5.3, 16.3]
Gender				
Female (n=934)	93.3	[90.4, 95.3]	6.7	[4.7, 9.6]
Male (n=476)	90.5	[85.1, 94.1]	9.5	[5.9, 14.9]
Race/Ethnicity				
White, non-Hispanic (n=956)	91.4	[87.6, 94.2]	8.6	[5.8, 12.4]
Black, non-Hispanic (n=226)	91.9	[85.0, 95.8]	8.1	[4.2, 15.0]
Hispanic (n=82)	97.2	[91.2, 99.1]	2.8	[0.9, 8.8]
Arab, Chaldean, or Middle Eastern (n=62)	91.6	[75.2, 97.5]	8.4	[2.5, 24.8]
Other, multi-racial, or not reported (n=107)	94.1	[89.2, 96.9]	5.9	[3.1, 10.8]
Help reading health materials**				
Never (n=1107)	93.8	[90.9, 95.8]	6.2	[4.2, 9.1]
Sometimes (n=265)	88.4	[80.2, 93.5]	11.6	[6.5, 19.8]
Often (n=60)	74.3	[51.8, 88.6]	25.7	[11.4, 48.2]
Reliable internet access				
Yes (n=1258)	92.8	[90.1, 94.8]	7.2	[5.2, 9.9]
No (n=168)	86.6	[75.3, 93.2]	13.4	[6.8, 24.7]
Comfort using the internet for health care needs**				
Very comfortable (n=846)	94.5	[91.4, 96.6]	5.5	[3.4, 8.6]
Somewhat comfortable (n=419)	90.6	[85.2, 94.2]	9.4	[5.8, 14.8]
Not comfortable (n=159)	82.9	[70.2, 90.8]	17.1	[9.2, 29.8]
Telehealth visit type				
Phone only (n=423)	91.6	[85.9, 95.1]	8.4	[4.9, 14.1]
Video (n=1009)	92.3	[89.2, 94.6]	7.7	[5.4, 10.8]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

4.15 Multivariate models predicting provider adequately addressed health concerns during telehealth visit

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Model 1		Model 2	
	aOR	95% CI	aOR	95% CI
HMV cohort				
Longitudinal cohort	5.04	[0.70, 36.02]	5.46	[0.70, 42.70]
New cohort	1.00		1.00	
Months enrolled in HMP-MC				
Less than 24 months	1.00		1.00	
24-47 months	0.80	[0.44, 1.45]	0.81	[0.45, 1.47]
48+ months	0.20	[0.03, 1.44]	0.19	[0.02, 1.46]
FPL				
0%	1.18	[0.60, 2.33]	1.19	[0.61, 2.33]
0.1 to 99.99%	1.00		1.00	
100% or more	1.70	[0.82, 3.51]	1.73	[0.84, 3.57]
Age				
19-34	1.00		1.00	
35-50	1.06	[0.53, 2.10]	1.05	[0.53, 2.07]
51-65	4.35***	[1.99, 9.52]	4.58***	[2.01, 10.41]
Rurality				
Urban	1.00		1.00	
Suburban	0.85	[0.33, 2.22]	0.84	[0.33, 2.17]
Rural	0.82	[0.35, 1.89]	0.81	[0.35, 1.90]
Gender				
Female	1.00		1.00	
Male	0.67	[0.36, 1.26]	0.69	[0.38, 1.27]
Race/Ethnicity				
White, non-Hispanic	1.00		1.00	
Black, non-Hispanic	0.80	[0.33, 1.95]	0.83	[0.35, 1.97]
Hispanic	5.23*	[1.43, 19.10]	5.32*	[1.46, 19.40]
Arab, Chaldean, or Middle Eastern	1.27	[0.33, 4.79]	1.27	[0.34, 4.66]
Other, multi-racial, or not reported	1.84	[0.72, 4.71]	1.99	[0.74, 5.34]
Help reading health materials				
Never	1.00		1.00	
Sometimes	0.58	[0.28, 1.22]	0.57	[0.28, 1.17]
Often	0.32	[0.09, 1.08]	0.30*	[0.09, 1.00]
Reliable internet access				
Yes	1.00		1.00	
No	0.68	[0.28, 1.65]	0.70	[0.29, 1.70]
Comfort using the internet for health care needs				
Very comfortable	1.00		1.00	
Somewhat comfortable	0.53	[0.27, 1.04]	0.53	[0.27, 1.05]
Not comfortable	0.21**	[0.08, 0.60]	0.22**	[0.08, 0.60]
Telehealth visit type				
Phone only			0.76	[0.39, 1.48]
Video			1.00	
Intercept	17.09***	[8.39, 34.80]	17.64***	[8.54, 36.44]

Multivariate logistic regression results, ***p<.001, **p<.01, *p<.05

4.16 Did using telehealth help you get care that you couldn't or wouldn't get otherwise?

Universe: Respondents who reported a telehealth visit in last 12 months (N= 1433)

	Telehealth helped me get care I couldn't get otherwise			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=1433)	**63.3**	**[58.9, 67.5]**	**36.7**	**[32.5, 41.1]**
HMV cohort				
Longitudinal cohort (n=502)	63.6	[57.4, 69.4]	36.4	[30.6, 42.6]
New cohort (n=931)	62.7	[59.0, 66.2]	37.3	[33.8, 41.0]
Months enrolled in HMP-MC				
Less than 24 months (n=604)	64.0	[59.2, 68.5]	36.0	[31.5, 40.8]
24-47 months (n=356)	55.3	[46.3, 64.0]	44.7	[36.0, 53.7]
48+ months (n=473)	65.7	[59.4, 71.5]	34.3	[28.5, 40.6]
FPL				
0% (n=464)	61.0	[53.4, 68.1]	39.0	[31.9, 46.6]
0.1 to 99.99% (n=557)	62.7	[55.3, 69.5]	37.3	[30.5, 44.7]
100% or more (n=412)	68.8	[61.5, 75.2]	31.2	[24.8, 38.5]
Age				
19-34 (n=565)	62.9	[55.4, 69.8]	37.1	[30.2, 44.6]
35-50 (n=445)	65.8	[58.5, 72.4]	34.2	[27.6, 41.5]
51-65 (n=423)	60.5	[52.9, 67.7]	39.5	[32.3, 47.1]
Rurality				
Urban (n=1021)	63.1	[58.0, 68.0]	36.9	[32.0, 42.0]
Suburban (n=124)	58.1	[44.4, 70.7]	41.9	[29.3, 55.6]
Rural (n=288)	68.7	[59.8, 76.4]	31.3	[23.6, 40.2]
Gender				
Female (n=934)	63.8	[58.2, 69.0]	36.2	[31.0, 41.8]
Male (n=476)	62.2	[54.7, 69.1]	37.8	[30.9, 45.3]
Race/Ethnicity				
White, non-Hispanic (n=956)	64.7	[59.1, 69.9]	35.3	[30.1, 40.9]
Black, non-Hispanic (n=226)	63.0	[52.4, 72.5]	37.0	[27.5, 47.6]
Hispanic (n=82)	69.1	[53.8, 81.1]	30.9	[18.9, 46.2]
Arab, Chaldean, or Middle Eastern (n=62)	54.4	[36.3, 71.4]	45.6	[28.6, 63.7]
Other, multi-racial, or not reported (n=107)	57.5	[41.1, 72.4]	42.5	[27.6, 58.9]
Help reading health materials				
Never (n=1107)	64.6	[59.5, 69.4]	35.4	[30.6, 40.5]
Sometimes (n=265)	60.7	[50.9, 69.7]	39.3	[30.3, 49.1]
Often (n=60)	49.1	[29.0, 69.5]	50.9	[30.5, 71.0]
Reliable internet access**				
Yes (n=1258)	65.4	[60.7, 69.8]	34.6	[30.2, 39.3]
No (n=168)	47.8	[36.2, 59.7]	52.2	[40.3, 63.8]
Comfort using the internet for health care needs				
Very comfortable (n=846)	66.7	[60.9, 71.9]	33.3	[28.1, 39.1]
Somewhat comfortable (n=419)	56.3	[48.0, 64.3]	43.7	[35.7, 52.0]
Not comfortable (n=159)	61.7	[49.2, 72.8]	38.3	[27.2, 50.8]
Telehealth visit type				
Phone only (n=423)	59.4	[51.4, 67.0]	40.6	[33.0, 48.6]
Video (n=1009)	65.3	[59.9, 70.3]	34.7	[29.7, 40.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5 Taking Care of Health

5.1 I know when I need to go to the doctor

Universe: All respondents (N= 4082)

	I know when I need to go to the doctor					
	Always		Sometimes		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4071)	**77.5**	**[75.1, 79.6]**	**21.9**	**[19.8, 24.2]**	**0.6**	**[0.4, 1.1]**
HMV cohort*						
Longitudinal cohort (n=1473)	78.9	[75.7, 81.8]	20.6	[17.7, 23.8]	0.5	[0.2, 1.3]
New cohort (n=2598)	74.0	[71.9, 75.9]	25.0	[23.1, 27.0]	1.0	[0.6, 1.6]
Months enrolled in HMP-MC						
Less than 24 months (n=1684)	74.5	[71.7, 77.2]	24.6	[22.0, 27.5]	0.9	[0.5, 1.5]
24-47 months (n=1017)	75.6	[70.9, 79.7]	23.7	[19.6, 28.4]	0.7	[0.3, 1.6]
48+ months (n=1370)	78.9	[75.5, 81.9]	20.6	[17.6, 23.9]	0.5	[0.2, 1.5]
FPL*						
0% (n=1307)	74.6	[70.5, 78.4]	24.4	[20.7, 28.5]	0.9	[0.4, 2.1]
0.1 to 99.99% (n=1637)	81.9	[78.5, 84.8]	17.8	[14.9, 21.1]	0.3	[0.1, 0.8]
100% or more (n=1127)	76.3	[72.0, 80.1]	23.2	[19.4, 27.5]	0.5	[0.2, 1.0]
Age**						
19-34 (n=1661)	73.1	[69.2, 76.7]	26.4	[22.8, 30.3]	0.5	[0.3, 0.9]
35-50 (n=1144)	79.2	[75.0, 82.8]	20.0	[16.5, 24.2]	0.8	[0.2, 2.6]
51-65 (n=1266)	83.5	[79.8, 86.7]	15.7	[12.7, 19.4]	0.7	[0.2, 2.1]
Rurality						
Urban (n=2891)	76.7	[74.0, 79.2]	22.6	[20.1, 25.3]	0.7	[0.4, 1.3]
Suburban (n=368)	83.1	[77.6, 87.4]	16.6	[12.3, 22.0]	0.3	[0.1, 1.3]
Rural (n=812)	79.3	[73.9, 83.8]	20.4	[15.9, 25.8]	0.3	[0.1, 0.9]
Gender						
Female (n=2426)	79.9	[76.9, 82.5]	19.5	[16.9, 22.4]	0.6	[0.2, 1.6]
Male (n=1607)	75.2	[71.5, 78.5]	24.2	[20.9, 27.9]	0.6	[0.3, 1.3]
Race/Ethnicity						
White, non-Hispanic (n=2480)	76.6	[73.4, 79.4]	22.8	[19.9, 25.9]	0.7	[0.3, 1.7]
Black, non-Hispanic (n=755)	81.9	[77.1, 85.9]	17.5	[13.6, 22.2]	0.6	[0.3, 1.4]
Hispanic (n=263)	70.6	[60.9, 78.8]	27.5	[19.5, 37.3]	1.9	[0.9, 4.0]
Arab, Chaldean, or Middle Eastern (n=235)	75.6	[66.1, 83.1]	24.4	[16.9, 33.9]	0.0	
Other, multi-racial, or not reported (n=338)	75.6	[65.8, 83.4]	24.2	[16.5, 34.1]	0.1	[0.0, 0.9]
I may get a payment reduction if I complete an HRA						
Yes (n=1165)	80.0	[75.7, 83.7]	19.6	[15.9, 24.0]	0.4	[0.1, 0.9]
No/Don't know (n=2884)	76.5	[73.6, 79.1]	22.8	[20.2, 25.6]	0.7	[0.4, 1.5]
Some kinds of visits, tests, and medicines have no copays***						
Yes (n=3065)	78.2	[75.5, 80.7]	21.6	[19.1, 24.3]	0.2	[0.1, 0.5]
No/Don't know (n=987)	75.1	[70.4, 79.2]	23.1	[19.1, 27.6]	1.8	[0.8, 3.9]
Primary care barriers***						
Reported PCP barriers (n=848)	67.8	[62.0, 73.1]	31.5	[26.2, 37.3]	0.8	[0.3, 2.3]
Reported no PCP barriers (n=2818)	81.9	[79.3, 84.2]	17.8	[15.5, 20.4]	0.3	[0.2, 0.5]
No PCP (n=405)	66.0	[57.7, 73.4]	31.1	[24.1, 39.1]	2.9	[1.0, 8.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5.2 I keep my appointments

Universe: All respondents (N= 4082)

	I keep my appointments					
	Always		Sometimes		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4075)	**82.0**	**[79.9, 83.9]**	**17.7**	**[15.8, 19.8]**	**0.4**	**[0.2, 0.7]**
HMV cohort						
Longitudinal cohort (n=1473)	82.7	[79.8, 85.3]	17.1	[14.5, 19.9]	0.2	[0.1, 0.8]
New cohort (n=2602)	80.1	[78.2, 81.9]	19.2	[17.4, 21.1]	0.7	[0.4, 1.2]
Months enrolled in HMP-MC						
Less than 24 months (n=1687)	82.9	[80.7, 84.9]	16.2	[14.3, 18.4]	0.9	[0.4, 1.7]
24-47 months (n=1018)	78.5	[74.2, 82.3]	21.2	[17.5, 25.5]	0.2	[0.1, 0.8]
48+ months (n=1370)	82.9	[79.8, 85.5]	16.9	[14.2, 19.9]	0.3	[0.1, 0.9]
FPL*						
0% (n=1312)	79.9	[76.2, 83.1]	19.4	[16.2, 23.1]	0.7	[0.3, 1.4]
0.1 to 99.99% (n=1638)	83.0	[79.7, 85.9]	17.0	[14.1, 20.3]	0.0	[0.0, 0.1]
100% or more (n=1125)	84.6	[81.1, 87.5]	15.2	[12.3, 18.7]	0.2	[0.1, 0.6]
Age***						
19-34 (n=1660)	78.3	[74.8, 81.4]	21.3	[18.2, 24.8]	0.4	[0.2, 0.9]
35-50 (n=1148)	80.9	[76.9, 84.3]	19.1	[15.7, 23.1]	0.0	[0.0, 0.2]
51-65 (n=1267)	90.5	[87.5, 92.8]	8.9	[6.6, 11.8]	0.7	[0.2, 2.1]
Rurality***						
Urban (n=2892)	80.6	[78.2, 82.9]	19.0	[16.7, 21.4]	0.4	[0.2, 0.8]
Suburban (n=369)	86.4	[80.9, 90.5]	13.6	[9.5, 19.1]	0.0	
Rural (n=814)	89.6	[86.1, 92.3]	10.3	[7.6, 13.9]	0.1	[0.0, 0.4]
Gender**						
Female (n=2425)	79.0	[76.0, 81.8]	20.7	[18.0, 23.8]	0.2	[0.1, 0.7]
Male (n=1610)	84.9	[81.9, 87.4]	14.7	[12.2, 17.6]	0.5	[0.2, 1.1]
Race/Ethnicity						
White, non-Hispanic (n=2480)	84.8	[82.2, 87.0]	15.0	[12.8, 17.6]	0.2	[0.0, 0.9]
Black, non-Hispanic (n=756)	78.1	[73.3, 82.3]	21.4	[17.3, 26.2]	0.5	[0.2, 1.1]
Hispanic (n=262)	77.4	[67.9, 84.8]	21.6	[14.4, 31.1]	0.9	[0.1, 6.3]
Arab, Chaldean, or Middle Eastern (n=235)	84.6	[75.2, 90.9]	15.4	[9.1, 24.8]	0.0	
Other, multi-racial, or not reported (n=342)	77.4	[68.4, 84.4]	21.9	[14.9, 30.9]	0.7	[0.3, 2.1]
I may get a payment reduction if I complete an HRA**						
Yes (n=1166)	86.8	[83.3, 89.8]	13.1	[10.2, 16.7]	0.1	[0.0, 0.3]
No/Don't know (n=2886)	80.1	[77.5, 82.4]	19.5	[17.2, 22.1]	0.4	[0.2, 0.9]
Some kinds of visits, tests, and medicines have no copays						
Yes (n=3067)	82.4	[80.0, 84.6]	17.4	[15.2, 19.8]	0.2	[0.1, 0.5]
No/Don't know (n=988)	80.7	[76.5, 84.3]	18.6	[15.1, 22.8]	0.7	[0.2, 2.0]
Primary care barriers***						
Reported PCP barriers (n=851)	67.9	[62.2, 73.1]	31.4	[26.3, 37.1]	0.7	[0.2, 2.2]
Reported no PCP barriers (n=2819)	85.9	[83.6, 87.9]	14.0	[12.0, 16.3]	0.1	[0.1, 0.3]
No PCP (n=405)	84.8	[79.6, 88.9]	13.8	[10.0, 18.9]	1.3	[0.5, 3.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5.3 I know how to prevent problems with my health

Universe: All respondents (N= 4082)

	I know how to prevent problems with my health					
	Always		Sometimes		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4068)	**52.5**	**[49.8, 55.2]**	**45.5**	**[42.8, 48.2]**	**2.0**	**[1.4, 2.8]**
HMV cohort						
Longitudinal cohort (n=1472)	52.4	[48.7, 56.1]	45.8	[42.1, 49.5]	1.8	[1.0, 3.1]
New cohort (n=2596)	52.8	[50.6, 55.1]	44.8	[42.5, 47.0]	2.4	[1.8, 3.3]
Months enrolled in HMP-MC						
Less than 24 months (n=1686)	50.8	[47.9, 53.7]	46.9	[44.0, 49.8]	2.3	[1.5, 3.4]
24-47 months (n=1013)	51.3	[45.9, 56.8]	45.8	[40.4, 51.3]	2.8	[1.4, 5.5]
48+ months (n=1369)	53.4	[49.6, 57.2]	45.0	[41.2, 48.8]	1.6	[0.9, 2.8]
FPL						
0% (n=1306)	48.8	[44.2, 53.3]	49.1	[44.5, 53.6]	2.2	[1.3, 3.6]
0.1 to 99.99% (n=1636)	56.4	[52.1, 60.7]	41.7	[37.5, 45.9]	1.9	[0.9, 3.9]
100% or more (n=1126)	54.2	[49.3, 59.0]	44.2	[39.4, 49.0]	1.7	[0.9, 3.0]
Age						
19-34 (n=1659)	50.3	[45.9, 54.7]	47.8	[43.5, 52.2]	1.9	[1.0, 3.4]
35-50 (n=1142)	52.7	[47.9, 57.5]	44.9	[40.1, 49.7]	2.5	[1.3, 4.5]
51-65 (n=1267)	56.6	[52.0, 61.1]	41.8	[37.4, 46.4]	1.6	[0.9, 2.6]
Rurality						
Urban (n=2889)	52.8	[49.7, 55.8]	45.2	[42.1, 48.2]	2.1	[1.4, 3.1]
Suburban (n=368)	56.1	[47.7, 64.2]	42.1	[34.2, 50.5]	1.8	[0.7, 4.3]
Rural (n=811)	47.7	[41.3, 54.3]	51.2	[44.6, 57.6]	1.1	[0.5, 2.4]
Gender						
Female (n=2420)	54.0	[50.6, 57.5]	43.9	[40.5, 47.4]	2.0	[1.2, 3.5]
Male (n=1609)	50.8	[46.6, 54.9]	47.3	[43.1, 51.5]	1.9	[1.2, 3.2]
Race/Ethnicity**						
White, non-Hispanic (n=2476)	49.8	[46.3, 53.4]	48.6	[45.1, 52.1]	1.6	[0.8, 2.9]
Black, non-Hispanic (n=755)	55.8	[49.8, 61.6]	41.1	[35.4, 47.1]	3.1	[1.8, 5.5]
Hispanic (n=262)	50.0	[39.9, 60.0]	46.4	[36.5, 56.5]	3.6	[1.6, 7.9]
Arab, Chaldean, or Middle Eastern (n=234)	67.0	[57.3, 75.5]	31.9	[23.5, 41.7]	1.1	[0.3, 3.3]
Other, multi-racial, or not reported (n=341)	49.6	[40.3, 59.0]	49.7	[40.3, 59.1]	0.7	[0.3, 1.9]
I may get a payment reduction if I complete an HRA						
Yes (n=1165)	53.9	[48.9, 58.9]	45.2	[40.2, 50.3]	0.9	[0.4, 1.8]
No/Don't know (n=2880)	52.0	[48.8, 55.2]	45.7	[42.5, 48.9]	2.3	[1.5, 3.5]
Some kinds of visits, tests, and medicines have no copays						
Yes (n=3063)	52.2	[49.1, 55.3]	46.3	[43.2, 49.4]	1.5	[0.9, 2.5]
No/Don't know (n=985)	53.5	[48.0, 59.0]	43.3	[37.9, 48.8]	3.2	[1.8, 5.6]
Primary care barriers***						
Reported PCP barriers (n=843)	41.4	[35.8, 47.2]	55.2	[49.4, 60.9]	3.4	[1.7, 6.7]
Reported no PCP barriers (n=2821)	56.4	[53.2, 59.6]	42.2	[39.0, 45.4]	1.4	[0.9, 2.2]
No PCP (n=404)	48.4	[39.8, 57.1]	48.5	[39.7, 57.3]	3.1	[1.5, 6.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5.4 I am able to follow my doctor's treatment advice in between visits

Universe: All respondents (N= 4082)

	I am able to follow my doctor's treatment advice between visits					
	Always		Sometimes		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4057)	**82.0**	**[79.7, 84.1]**	**17.4**	**[15.3, 19.7]**	**0.6**	**[0.3, 1.3]**
HMV cohort						
Longitudinal cohort (n=1464)	81.0	[77.8, 83.9]	18.3	[15.5, 21.5]	0.7	[0.3, 1.7]
New cohort (n=2593)	84.5	[82.8, 86.0]	15.1	[13.5, 16.7]	0.5	[0.3, 0.9]
Months enrolled in HMP-MC						
Less than 24 months (n=1682)	84.9	[82.8, 86.8]	14.4	[12.6, 16.5]	0.7	[0.3, 1.3]
24-47 months (n=1014)	82.5	[77.6, 86.5]	17.3	[13.3, 22.2]	0.1	[0.0, 0.5]
48+ months (n=1361)	81.1	[77.7, 84.1]	18.2	[15.2, 21.5]	0.8	[0.3, 1.9]
FPL						
0% (n=1300)	81.3	[77.4, 84.7]	17.9	[14.6, 21.8]	0.8	[0.3, 2.2]
0.1 to 99.99% (n=1637)	81.3	[77.1, 84.8]	18.1	[14.6, 22.2]	0.7	[0.2, 2.1]
100% or more (n=1120)	84.8	[81.0, 88.0]	15.0	[11.9, 18.9]	0.1	[0.0, 0.5]
Age						
19-34 (n=1659)	81.7	[77.9, 85.1]	17.8	[14.5, 21.6]	0.5	[0.1, 1.6]
35-50 (n=1140)	80.0	[75.5, 83.8]	18.9	[15.2, 23.3]	1.1	[0.4, 3.1]
51-65 (n=1258)	85.3	[81.7, 88.2]	14.4	[11.5, 18.0]	0.3	[0.1, 0.8]
Rurality						
Urban (n=2879)	81.8	[79.1, 84.2]	17.5	[15.1, 20.1]	0.7	[0.3, 1.5]
Suburban (n=367)	80.1	[71.9, 86.3]	19.9	[13.7, 28.1]	0.0	
Rural (n=811)	85.7	[79.9, 90.1]	14.0	[9.7, 19.9]	0.2	[0.1, 0.8]
Gender						
Female (n=2419)	82.0	[78.8, 84.8]	17.1	[14.3, 20.2]	1.0	[0.4, 2.4]
Male (n=1598)	82.3	[78.7, 85.4]	17.5	[14.4, 21.0]	0.3	[0.1, 0.6]
Race/Ethnicity						
White, non-Hispanic (n=2468)	80.2	[77.0, 83.0]	19.3	[16.5, 22.5]	0.5	[0.2, 1.5]
Black, non-Hispanic (n=756)	85.1	[80.5, 88.8]	13.8	[10.3, 18.3]	1.1	[0.4, 3.5]
Hispanic (n=262)	82.5	[71.7, 89.8]	17.3	[10.0, 28.2]	0.2	[0.0, 0.7]
Arab, Chaldean, or Middle Eastern (n=234)	82.3	[70.6, 90.0]	17.3	[9.7, 29.2]	0.4	[0.1, 1.5]
Other, multi-racial, or not reported (n=337)	83.5	[73.5, 90.2]	16.1	[9.4, 26.2]	0.4	[0.1, 1.6]
I may get a payment reduction if I complete an HRA						
Yes (n=1161)	84.1	[79.7, 87.8]	15.5	[11.9, 20.0]	0.4	[0.2, 0.9]
No/Don't know (n=2876)	81.3	[78.4, 83.8]	18.0	[15.6, 20.8]	0.7	[0.3, 1.7]
Some kinds of visits, tests, and medicines have no copays						
Yes (n=3058)	82.4	[79.6, 84.8]	17.2	[14.8, 19.9]	0.4	[0.2, 1.0]
No/Don't know (n=982)	80.9	[76.2, 84.9]	17.9	[14.1, 22.4]	1.2	[0.4, 3.9]
Primary care barriers***						
Reported PCP barriers (n=846)	71.0	[65.3, 76.1]	27.9	[22.9, 33.6]	1.1	[0.4, 3.3]
Reported no PCP barriers (n=2815)	85.2	[82.5, 87.6]	14.5	[12.1, 17.2]	0.3	[0.1, 0.9]
No PCP (n=396)	83.4	[76.0, 88.9]	14.6	[9.6, 21.5]	2.0	[0.4, 9.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5.5 When I have health care visits, I bring a list of questions or concerns I want to talk about

Universe: All respondents (N= 4082)

	When I have health care visits, I bring a list of questions or concerns					
	Always		Sometimes		Never	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4072)	**49.4**	**[46.7, 52.1]**	**33.2**	**[30.8, 35.8]**	**17.4**	**[15.3, 19.6]**
HMV cohort						
Longitudinal cohort (n=1472)	49.4	[45.7, 53.2]	32.7	[29.3, 36.3]	17.9	[15.1, 21.0]
New cohort (n=2600)	49.3	[47.0, 51.5]	34.5	[32.4, 36.7]	16.2	[14.6, 17.9]
Months enrolled in HMP-MC						
Less than 24 months (n=1686)	49.0	[46.1, 51.9]	34.9	[32.1, 37.8]	16.1	[14.2, 18.2]
24-47 months (n=1017)	49.4	[44.0, 54.9]	33.3	[28.5, 38.5]	17.3	[13.6, 21.8]
48+ months (n=1369)	49.5	[45.6, 53.4]	32.8	[29.3, 36.5]	17.7	[14.9, 21.0]
FPL						
0% (n=1308)	49.7	[45.2, 54.3]	30.9	[26.9, 35.2]	19.4	[15.9, 23.4]
0.1 to 99.99% (n=1639)	49.6	[45.3, 54.0]	33.4	[29.5, 37.5]	17.0	[13.9, 20.6]
100% or more (n=1125)	48.3	[43.5, 53.2]	38.0	[33.3, 42.9]	13.7	[11.0, 16.8]
Age*						
19-34 (n=1661)	46.0	[41.6, 50.4]	36.6	[32.6, 40.9]	17.4	[14.2, 21.1]
35-50 (n=1144)	50.2	[45.4, 55.0]	29.8	[25.8, 34.2]	20.0	[16.4, 24.1]
51-65 (n=1267)	54.9	[50.3, 59.5]	31.1	[26.9, 35.6]	14.0	[11.0, 17.6]
Rurality						
Urban (n=2889)	50.3	[47.1, 53.4]	32.7	[29.9, 35.6]	17.1	[14.8, 19.6]
Suburban (n=368)	39.8	[31.6, 48.5]	36.8	[28.8, 45.6]	23.5	[17.1, 31.3]
Rural (n=815)	49.9	[43.4, 56.4]	35.1	[28.7, 42.1]	14.9	[11.6, 19.1]
Gender						
Female (n=2422)	51.5	[48.0, 54.9]	33.1	[30.1, 36.3]	15.4	[13.0, 18.2]
Male (n=1610)	47.3	[43.1, 51.5]	33.3	[29.5, 37.3]	19.4	[16.3, 23.0]
Race/Ethnicity*						
White, non-Hispanic (n=2479)	47.4	[43.9, 50.9]	34.0	[30.7, 37.4]	18.6	[15.9, 21.7]
Black, non-Hispanic (n=754)	53.7	[47.7, 59.6]	28.6	[23.7, 34.0]	17.7	[13.5, 22.8]
Hispanic (n=262)	37.3	[28.2, 47.4]	46.1	[36.0, 56.4]	16.6	[11.5, 23.4]
Arab, Chaldean, or Middle Eastern (n=235)	61.3	[51.3, 70.5]	31.6	[22.9, 41.9]	7.1	[4.3, 11.4]
Other, multi-racial, or not reported (n=342)	47.1	[37.9, 56.4]	35.5	[27.1, 44.9]	17.4	[11.1, 26.4]
I may get a payment reduction if I complete an HRA						
Yes (n=1165)	52.1	[47.1, 57.1]	33.5	[29.0, 38.3]	14.4	[10.8, 18.9]
No/Don't know (n=2887)	48.3	[45.1, 51.6]	33.1	[30.2, 36.2]	18.6	[16.2, 21.2]
Some kinds of visits, tests, and medicines have no copays						
Yes (n=3067)	50.5	[47.4, 53.6]	33.5	[30.7, 36.5]	16.0	[13.7, 18.5]
No/Don't know (n=987)	45.8	[40.2, 51.4]	32.6	[27.6, 38.1]	21.6	[17.5, 26.4]
Primary care barriers						
Reported PCP barriers (n=850)	48.7	[43.0, 54.5]	34.4	[29.2, 40.0]	16.9	[13.1, 21.5]
Reported no PCP barriers (n=2820)	49.5	[46.2, 52.8]	33.6	[30.6, 36.8]	16.9	[14.5, 19.6]
No PCP (n=402)	50.1	[41.4, 58.8]	27.7	[21.5, 34.9]	22.2	[15.5, 30.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

5.6 Self-efficacy score (0-5) [composite variable]

Universe: All respondents (N= 4082)

	Mean	95% CI
Total (n=4040)	**3.43**	**[3.36, 3.51]**
HMV cohort		
Longitudinal cohort (n=1460)	3.44	[3.35, 3.54]
New cohort (n=2580)	3.41	[3.35, 3.47]
Months enrolled in HMP-MC		
Less than 24 months (n=1672)	3.43	[3.36, 3.50]
24-47 months (n=1011)	3.37	[3.24, 3.51]
48+ months (n=1357)	3.46	[3.35, 3.56]
FPL		
0% (n=1294)	3.35	[3.22, 3.47]
0.1 to 99.99% (n=1631)	3.52	[3.42, 3.62]
100% or more (n=1115)	3.48	[3.35, 3.61]
Age		
19-34 (n=1654)	3.29	[3.18, 3.41]
35-50 (n=1132)	3.44	[3.30, 3.58]
51-65 (n=1254)	3.71	[3.60, 3.81]
Rurality		
Urban (n=2868)	3.42	[3.34, 3.51]
Suburban (n=366)	3.46	[3.27, 3.64]
Rural (n=806)	3.52	[3.41, 3.63]
Gender		
Female (n=2410)	3.47	[3.38, 3.56]
Male (n=1593)	3.40	[3.29, 3.52]
Race/Ethnicity		
White, non-Hispanic (n=2461)	3.39	[3.30, 3.48]
Black, non-Hispanic (n=750)	3.55	[3.39, 3.70]
Hispanic (n=261)	3.18	[2.94, 3.42]
Arab, Chaldean, or Middle Eastern (n=233)	3.72	[3.41, 4.02]
Other, multi-racial, or not reported (n=335)	3.33	[3.03, 3.62]
I may get a payment reduction if I complete an HRA		
Yes (n=1162)	3.57	[3.44, 3.70]
No/Don't know (n=2860)	3.38	[3.30, 3.47]
Some kinds of visits, tests, and medicines have no copays		
Yes (n=3046)	3.46	[3.37, 3.54]
No/Don't know (n=977)	3.37	[3.21, 3.52]
Primary care barriers		
Reported PCP barriers (n=837)	2.97	[2.80, 3.13]
Reported no PCP barriers (n=2808)	3.59	[3.51, 3.67]
No PCP (n=395)	3.35	[3.16, 3.54]

Total n may be less than universe N due to item non-response

Self-efficacy score ranges from 0 to 5, based on response of always to the following statements:

I know when I need to go to the doctor.

I keep my appointments.

I know how to prevent problems with my health.

I am able to follow my doctor’s treatment advice in between visits.

When I have health care visits, I bring a list of questions or concerns I want to talk about.

5.7 Compared to other things going on in your life right now, how important is taking care of your health?

Universe: All respondents (N= 4082)

	Importance of taking care of your health					
	Very important		Somewhat important		Not important	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4075)	**82.7**	**[80.6, 84.5]**	**16.0**	**[14.2, 17.9]**	**1.4**	**[0.8, 2.3]**
HMV cohort						
Longitudinal cohort (n=1474)	83.1	[80.2, 85.6]	15.5	[13.1, 18.3]	1.4	[0.7, 2.8]
New cohort (n=2601)	81.5	[79.8, 83.2]	17.1	[15.5, 18.7]	1.4	[1.0, 2.0]
Months enrolled in HMP-MC						
Less than 24 months (n=1687)	82.9	[80.8, 84.9]	15.5	[13.7, 17.5]	1.6	[1.0, 2.5]
24-47 months (n=1017)	80.9	[76.3, 84.9]	16.9	[13.5, 20.9]	2.2	[0.6, 7.4]
48+ months (n=1371)	83.2	[80.2, 85.7]	15.8	[13.3, 18.7]	1.1	[0.6, 1.8]
FPL*						
0% (n=1308)	83.3	[79.7, 86.3]	14.7	[11.9, 18.1]	2.0	[1.0, 4.1]
0.1 to 99.99% (n=1638)	84.4	[81.4, 87.1]	15.0	[12.4, 18.0]	0.5	[0.3, 1.1]
100% or more (n=1129)	78.5	[74.1, 82.3]	20.1	[16.4, 24.4]	1.4	[0.7, 2.7]
Age*						
19-34 (n=1661)	80.2	[76.7, 83.2]	18.8	[15.8, 22.2]	1.0	[0.6, 1.7]
35-50 (n=1147)	83.9	[80.4, 87.0]	14.9	[12.0, 18.5]	1.1	[0.6, 2.0]
51-65 (n=1267)	85.7	[81.9, 88.9]	11.9	[9.5, 14.7]	2.4	[0.8, 7.0]
Rurality						
Urban (n=2893)	83.7	[81.3, 85.8]	15.0	[13.0, 17.3]	1.3	[0.7, 2.4]
Suburban (n=369)	79.5	[72.8, 84.9]	18.9	[13.8, 25.4]	1.6	[0.5, 5.2]
Rural (n=813)	76.7	[70.7, 81.7]	21.5	[16.6, 27.4]	1.8	[0.8, 4.0]
Gender						
Female (n=2425)	82.5	[79.8, 84.9]	16.6	[14.2, 19.3]	0.9	[0.6, 1.5]
Male (n=1610)	82.7	[79.4, 85.5]	15.5	[12.9, 18.5]	1.8	[0.9, 3.8]
Race/Ethnicity***						
White, non-Hispanic (n=2481)	76.9	[73.9, 79.6]	21.8	[19.1, 24.8]	1.3	[0.8, 2.1]
Black, non-Hispanic (n=757)	95.3	[91.6, 97.4]	3.2	[1.9, 5.3]	1.5	[0.3, 6.6]
Hispanic (n=262)	81.6	[70.6, 89.2]	17.9	[10.4, 29.0]	0.5	[0.2, 1.6]
Arab, Chaldean, or Middle Eastern (n=235)	81.2	[72.0, 87.8]	16.7	[10.3, 25.9]	2.1	[0.8, 5.7]
Other, multi-racial, or not reported (n=340)	81.9	[73.7, 88.0]	16.7	[10.8, 25.0]	1.3	[0.6, 2.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6 Enrollee Knowledge and Experiences with HMP Features

Beneficiary Survey Supplemental Data Appendix

6.1 I could be dropped from the Healthy Michigan Plan for not paying my bill

Universe: All respondents (N= 4082)

	I could be dropped from HMP for not paying my bill					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4062)	**23.5**	**[21.3, 25.9]**	**20.9**	**[18.8, 23.1]**	**55.6**	**[52.9, 58.3]**
HMV cohort						
Longitudinal cohort (n=1472)	23.8	[20.8, 27.1]	21.2	[18.4, 24.3]	55.0	[51.3, 58.6]
New cohort (n=2590)	22.7	[20.8, 24.6]	20.1	[18.4, 21.9]	57.2	[55.0, 59.4]
Months enrolled in HMP-MC						
Less than 24 months (n=1677)	22.9	[20.7, 25.4]	20.1	[18.0, 22.4]	56.9	[54.1, 59.7]
24-47 months (n=1016)	24.8	[20.2, 30.0]	22.2	[18.0, 27.0]	53.0	[47.5, 58.5]
48+ months (n=1369)	23.2	[20.2, 26.6]	20.6	[17.7, 23.8]	56.2	[52.3, 60.0]
FPL*						
0% (n=1301)	19.9	[16.5, 23.7]	20.8	[17.4, 24.5]	59.4	[54.9, 63.7]
0.1 to 99.99% (n=1637)	24.7	[21.1, 28.6]	21.9	[18.6, 25.6]	53.4	[49.1, 57.7]
100% or more (n=1124)	29.2	[24.9, 34.0]	19.4	[15.6, 23.8]	51.4	[46.5, 56.3]
Age						
19-34 (n=1661)	24.6	[21.0, 28.7]	20.0	[16.8, 23.7]	55.4	[51.0, 59.7]
35-50 (n=1143)	21.1	[17.5, 25.2]	22.4	[18.7, 26.6]	56.5	[51.7, 61.2]
51-65 (n=1258)	24.5	[21.0, 28.3]	20.5	[17.1, 24.4]	55.0	[50.4, 59.5]
Rurality						
Urban (n=2885)	22.6	[20.2, 25.3]	21.0	[18.6, 23.6]	56.4	[53.3, 59.4]
Suburban (n=368)	29.1	[21.9, 37.6]	19.4	[13.9, 26.6]	51.4	[42.8, 60.0]
Rural (n=809)	26.2	[20.5, 32.9]	21.1	[16.6, 26.4]	52.7	[46.1, 59.2]
Gender						
Female (n=2412)	23.7	[20.8, 26.8]	21.1	[18.4, 24.0]	55.3	[51.8, 58.7]
Male (n=1610)	23.0	[19.8, 26.5]	20.6	[17.4, 24.1]	56.4	[52.3, 60.5]
Race/Ethnicity*						
White, non-Hispanic (n=2471)	24.4	[21.5, 27.4]	22.9	[20.1, 26.0]	52.7	[49.2, 56.2]
Black, non-Hispanic (n=754)	23.2	[18.4, 28.9]	16.7	[12.9, 21.2]	60.1	[54.1, 65.8]
Hispanic (n=262)	27.1	[18.5, 37.9]	15.9	[9.7, 25.0]	57.0	[46.5, 66.9]
Arab, Chaldean, or Middle Eastern (n=235)	23.9	[16.0, 34.1]	15.4	[10.2, 22.4]	60.7	[50.7, 69.9]
Other, multi-racial, or not reported (n=340)	16.7	[11.8, 23.0]	28.2	[20.0, 38.2]	55.2	[45.7, 64.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.2 I may get a reduction in the amount I have to pay if I complete a health risk assessment or a healthy behavior

Universe: All respondents (N= 4082)

	I may get a reduction in the amount I have to pay if I complete HRA					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4059)	**28.8**	**[26.4, 31.3]**	**10.0**	**[8.5, 11.8]**	**61.2**	**[58.5, 63.8]**
HMV cohort						
Longitudinal cohort (n=1468)	30.2	[27.0, 33.7]	9.8	[7.8, 12.4]	59.9	[56.2, 63.5]
New cohort (n=2591)	25.4	[23.5, 27.4]	10.5	[9.2, 11.9]	64.1	[61.9, 66.2]
Months enrolled in HMP-MC**						
Less than 24 months (n=1679)	27.5	[24.8, 30.3]	11.4	[9.8, 13.2]	61.1	[58.2, 64.0]
24-47 months (n=1015)	21.3	[17.7, 25.4]	12.1	[8.6, 16.7]	66.6	[61.5, 71.4]
48+ months (n=1365)	31.8	[28.3, 35.5]	9.0	[6.9, 11.5]	59.3	[55.4, 63.0]
FPL*						
0% (n=1295)	25.5	[21.7, 29.7]	11.4	[8.7, 14.8]	63.1	[58.5, 67.4]
0.1 to 99.99% (n=1637)	29.1	[25.3, 33.2]	9.8	[7.5, 12.7]	61.1	[56.7, 65.2]
100% or more (n=1127)	35.2	[30.7, 40.0]	7.6	[5.7, 10.1]	57.2	[52.3, 61.9]
Age						
19-34 (n=1659)	27.8	[23.9, 32.0]	9.8	[7.4, 12.9]	62.4	[58.0, 66.6]
35-50 (n=1140)	27.8	[23.7, 32.3]	10.7	[7.9, 14.2]	61.6	[56.8, 66.2]
51-65 (n=1260)	32.2	[28.3, 36.3]	9.6	[7.3, 12.5]	58.2	[53.7, 62.5]
Rurality						
Urban (n=2882)	27.7	[25.0, 30.5]	10.1	[8.3, 12.3]	62.2	[59.1, 65.1]
Suburban (n=368)	36.2	[27.8, 45.6]	8.8	[5.3, 14.3]	54.9	[46.1, 63.5]
Rural (n=809)	32.3	[26.8, 38.3]	10.1	[6.9, 14.4]	57.6	[51.2, 63.7]
Gender						
Female (n=2413)	27.7	[24.7, 30.9]	9.8	[7.9, 12.1]	62.5	[59.1, 65.8]
Male (n=1606)	29.9	[26.2, 33.9]	10.4	[8.1, 13.4]	59.7	[55.4, 63.7]
Race/Ethnicity						
White, non-Hispanic (n=2470)	32.0	[28.8, 35.3]	10.4	[8.3, 12.9]	57.6	[54.1, 61.1]
Black, non-Hispanic (n=754)	24.7	[19.7, 30.5]	9.3	[6.4, 13.1]	66.0	[60.0, 71.5]
Hispanic (n=262)	27.8	[19.8, 37.4]	5.9	[2.8, 12.2]	66.3	[56.5, 74.9]
Arab, Chaldean, or Middle Eastern (n=233)	27.0	[18.7, 37.3]	7.3	[3.7, 13.9]	65.7	[55.3, 74.7]
Other, multi-racial, or not reported (n=340)	24.0	[17.2, 32.3]	14.9	[8.6, 24.5]	61.1	[51.5, 70.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.3 There is a limit on the total amount I might have to pay each year for Healthy Michigan Plan coverage

Universe: All respondents (N= 4082)

	There is a limit on the total amount I might have to pay					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4064)	**32.1**	**[29.6, 34.6]**	**11.6**	**[10.1, 13.3]**	**56.3**	**[53.6, 58.9]**
HMV cohort**						
Longitudinal cohort (n=1471)	33.9	[30.5, 37.4]	11.0	[9.0, 13.4]	55.1	[51.4, 58.8]
New cohort (n=2593)	27.8	[25.8, 29.8]	13.3	[11.8, 14.8]	59.0	[56.8, 61.2]
Months enrolled in HMP-MC*						
Less than 24 months (n=1678)	27.1	[24.7, 29.6]	14.1	[12.3, 16.2]	58.8	[56.0, 61.6]
24-47 months (n=1018)	28.2	[23.9, 33.0]	13.1	[9.8, 17.4]	58.6	[53.3, 63.8]
48+ months (n=1368)	34.8	[31.2, 38.5]	10.5	[8.5, 12.8]	54.8	[50.9, 58.6]
FPL*						
0% (n=1299)	27.9	[24.0, 32.1]	12.2	[9.8, 15.1]	59.9	[55.5, 64.2]
0.1 to 99.99% (n=1637)	33.7	[29.7, 37.9]	11.4	[9.1, 14.2]	54.9	[50.6, 59.2]
100% or more (n=1128)	38.3	[33.6, 43.2]	10.8	[8.0, 14.5]	50.9	[46.0, 55.7]
Age						
19-34 (n=1660)	31.1	[27.1, 35.3]	11.3	[9.1, 14.0]	57.6	[53.3, 61.9]
35-50 (n=1141)	30.3	[26.2, 34.7]	13.3	[10.4, 16.9]	56.4	[51.6, 61.1]
51-65 (n=1263)	36.3	[32.1, 40.8]	10.1	[8.0, 12.8]	53.5	[48.9, 58.0]
Rurality						
Urban (n=2885)	31.1	[28.3, 34.0]	12.2	[10.5, 14.2]	56.7	[53.6, 59.7]
Suburban (n=368)	36.7	[28.7, 45.5]	10.5	[6.7, 15.9]	52.8	[44.2, 61.3]
Rural (n=811)	36.8	[31.0, 42.9]	7.7	[5.0, 11.6]	55.5	[49.2, 61.7]
Gender						
Female (n=2417)	33.0	[29.8, 36.3]	12.8	[10.7, 15.1]	54.3	[50.8, 57.7]
Male (n=1607)	31.4	[27.7, 35.3]	10.7	[8.5, 13.3]	57.9	[53.8, 62.0]
Race/Ethnicity						
White, non-Hispanic (n=2474)	35.1	[31.9, 38.5]	9.9	[8.1, 12.0]	55.0	[51.5, 58.5]
Black, non-Hispanic (n=752)	28.6	[23.4, 34.4]	15.3	[11.7, 19.8]	56.1	[50.1, 62.0]
Hispanic (n=263)	24.3	[16.8, 33.7]	9.2	[5.6, 14.7]	66.5	[56.9, 75.0]
Arab, Chaldean, or Middle Eastern (n=234)	31.8	[23.3, 41.8]	12.8	[8.0, 19.9]	55.3	[45.3, 64.9]
Other, multi-racial, or not reported (n=341)	29.5	[22.2, 38.0]	12.2	[7.6, 19.0]	58.3	[49.2, 67.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.4 Some kinds of visits, tests and medicines have no copays

Universe: All respondents (N= 4082)

	Some kinds of visits, tests, and medicines have no copay					
	Yes		No		Don't know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4062)	**75.4**	**[72.9, 77.7]**	**5.3**	**[4.2, 6.6]**	**19.3**	**[17.2, 21.6]**
HMV cohort						
Longitudinal cohort (n=1468)	76.5	[73.1, 79.6]	4.9	[3.6, 6.7]	18.6	[15.7, 21.8]
New cohort (n=2594)	72.7	[70.6, 74.7]	6.2	[5.1, 7.5]	21.1	[19.3, 23.0]
Months enrolled in HMP-MC						
Less than 24 months (n=1680)	73.5	[71.0, 75.9]	5.8	[4.6, 7.2]	20.7	[18.6, 23.0]
24-47 months (n=1017)	74.1	[68.9, 78.7]	5.0	[3.6, 7.0]	20.9	[16.6, 26.1]
48+ months (n=1365)	76.4	[72.8, 79.6]	5.2	[3.8, 7.3]	18.4	[15.5, 21.7]
FPL						
0% (n=1302)	73.3	[69.1, 77.1]	5.9	[4.2, 8.2]	20.9	[17.3, 24.9]
0.1 to 99.99% (n=1633)	76.5	[72.5, 80.1]	5.4	[3.8, 7.5]	18.1	[14.9, 22.0]
100% or more (n=1127)	78.1	[73.9, 81.8]	3.9	[2.4, 6.3]	18.0	[14.6, 22.0]
Age						
19-34 (n=1658)	73.6	[69.6, 77.3]	5.2	[3.8, 7.2]	21.1	[17.7, 25.0]
35-50 (n=1143)	74.2	[69.6, 78.3]	5.8	[4.0, 8.5]	20.0	[16.2, 24.3]
51-65 (n=1261)	80.4	[76.2, 83.9]	4.6	[2.8, 7.6]	15.0	[11.9, 18.7]
Rurality						
Urban (n=2885)	74.8	[72.0, 77.4]	5.7	[4.5, 7.2]	19.5	[17.1, 22.1]
Suburban (n=369)	79.0	[69.9, 85.9]	3.3	[1.7, 6.4]	17.7	[11.1, 27.0]
Rural (n=808)	77.3	[70.6, 82.9]	3.5	[2.1, 5.7]	19.2	[13.8, 26.0]
Gender						
Female (n=2417)	78.2	[75.2, 81.0]	4.3	[3.2, 5.7]	17.5	[14.9, 20.3]
Male (n=1605)	73.2	[69.3, 76.7]	6.2	[4.6, 8.5]	20.6	[17.4, 24.2]
Race/Ethnicity***						
White, non-Hispanic (n=2473)	79.8	[76.6, 82.6]	3.2	[2.3, 4.4]	17.1	[14.4, 20.2]
Black, non-Hispanic (n=754)	70.0	[64.2, 75.2]	9.2	[6.3, 13.1]	20.8	[16.3, 26.2]
Hispanic (n=263)	74.5	[66.4, 81.2]	3.2	[1.9, 5.5]	22.3	[15.9, 30.3]
Arab, Chaldean, or Middle Eastern (n=235)	56.8	[46.5, 66.5]	8.5	[4.7, 15.1]	34.7	[25.4, 45.4]
Other, multi-racial, or not reported (n=337)	80.1	[72.9, 85.7]	5.5	[2.4, 12.1]	14.5	[10.3, 20.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.5 The amount I have to pay overall for the Healthy Michigan Plan seems fair

Universe: All respondents (N= 4082)

	The amount I have to pay overall for the Healthy Michigan Plan seems fair									
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4004)	**32.9**	**[30.4, 35.5]**	**56.6**	**[53.9, 59.3]**	**6.2**	**[5.2, 7.5]**	**3.5**	**[2.7, 4.6]**	**0.7**	**[0.4, 1.3]**
HMV cohort**										
Longitudinal cohort (n=1460)	34.0	[30.6, 37.6]	56.7	[53.0, 60.4]	5.0	[3.7, 6.7]	3.6	[2.5, 5.1]	0.7	[0.3, 1.7]
New cohort (n=2544)	30.2	[28.2, 32.3]	56.3	[54.1, 58.6]	9.3	[7.9, 10.8]	3.4	[2.6, 4.5]	0.7	[0.4, 1.3]
Months enrolled in HMP-MC**										
Less than 24 months (n=1642)	30.4	[27.9, 33.0]	57.0	[54.2, 59.9]	8.3	[6.8, 10.0]	3.4	[2.4, 4.7]	1.0	[0.5, 1.8]
24-47 months (n=1003)	27.9	[23.3, 32.9]	61.5	[56.2, 66.5]	8.3	[6.2, 11.1]	2.1	[1.3, 3.3]	0.3	[0.1, 1.0]
48+ months (n=1359)	35.3	[31.8, 39.1]	54.8	[50.9, 58.7]	5.0	[3.6, 6.8]	4.1	[2.8, 5.9]	0.8	[0.3, 1.9]
FPL										
0% (n=1277)	30.4	[26.5, 34.7]	58.8	[54.3, 63.2]	6.4	[4.7, 8.7]	3.7	[2.4, 5.9]	0.6	[0.3, 1.5]
0.1 to 99.99% (n=1616)	34.9	[30.8, 39.1]	56.4	[52.1, 60.7]	5.7	[4.2, 7.6]	2.0	[1.2, 3.5]	1.0	[0.3, 3.0]
100% or more (n=1111)	35.1	[30.3, 40.2]	52.3	[47.4, 57.2]	6.7	[4.8, 9.2]	5.5	[3.6, 8.3]	0.4	[0.2, 0.8]
Age**										
19-34 (n=1630)	34.3	[30.1, 38.7]	53.9	[49.5, 58.3]	8.6	[6.7, 11.1]	2.7	[1.8, 4.1]	0.5	[0.2, 1.3]
35-50 (n=1126)	31.5	[27.4, 35.9]	58.6	[53.9, 63.2]	4.6	[3.3, 6.4]	3.9	[2.4, 6.4]	1.3	[0.5, 3.4]
51-65 (n=1248)	32.2	[28.1, 36.5]	59.3	[54.7, 63.7]	3.7	[2.6, 5.2]	4.5	[2.6, 7.7]	0.3	[0.1, 0.9]
Rurality										
Urban (n=2843)	32.9	[30.0, 35.9]	55.6	[52.5, 58.7]	6.7	[5.4, 8.1]	4.0	[3.0, 5.3]	0.8	[0.4, 1.6]
Suburban (n=364)	33.4	[26.4, 41.3]	61.0	[52.9, 68.5]	3.9	[2.1, 7.1]	1.7	[0.7, 3.9]	0.0	
Rural (n=797)	32.5	[27.3, 38.2]	61.7	[55.7, 67.3]	4.4	[2.8, 6.7]	1.4	[0.6, 3.3]	0.1	[0.0, 0.7]
Gender										
Female (n=2402)	34.8	[31.4, 38.3]	54.6	[51.1, 58.1]	5.8	[4.6, 7.2]	3.8	[2.7, 5.3]	1.1	[0.5, 2.3]
Male (n=1564)	31.4	[27.7, 35.4]	58.3	[54.1, 62.3]	6.7	[5.0, 8.9]	3.3	[2.1, 5.1]	0.4	[0.1, 0.9]
Race/Ethnicity***										
White, non-Hispanic (n=2448)	39.9	[36.4, 43.4]	54.1	[50.6, 57.6]	4.0	[3.1, 5.2]	1.7	[1.2, 2.5]	0.3	[0.1, 1.0]
Black, non-Hispanic (n=745)	26.7	[21.7, 32.4]	58.5	[52.4, 64.3]	8.0	[5.3, 11.9]	5.7	[3.4, 9.3]	1.2	[0.5, 2.8]
Hispanic (n=254)	21.6	[14.7, 30.6]	59.3	[49.2, 68.6]	13.4	[8.4, 20.8]	5.2	[2.2, 12.1]	0.5	[0.1, 1.9]
Arab, Chaldean, or Middle Eastern (n=227)	18.9	[11.4, 29.7]	60.5	[50.2, 70.0]	8.7	[5.5, 13.5]	8.8	[4.7, 15.8]	3.1	[0.7, 12.6]
Other, multi-racial, or not reported (n=330)	27.8	[20.7, 36.3]	61.3	[52.3, 69.6]	7.6	[4.6, 12.3]	2.9	[1.0, 8.0]	0.3	[0.1, 1.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.6 The amount I have to pay for the Healthy Michigan Plan is affordable

Universe: All respondents (N= 4082)

	The amount I have to pay for the Healthy Michigan Plan is affordable									
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=3996)	**32.8**	**[30.3, 35.5]**	**55.6**	**[52.9, 58.3]**	**7.2**	**[5.9, 8.8]**	**3.9**	**[3.0, 5.0]**	**0.5**	**[0.2, 0.8]**
HMV cohort										
Longitudinal cohort (n=1458)	34.1	[30.6, 37.7]	54.9	[51.1, 58.6]	6.7	[5.0, 8.9]	3.9	[2.8, 5.5]	0.4	[0.2, 1.0]
New cohort (n=2538)	29.8	[27.8, 31.8]	57.4	[55.1, 59.6]	8.5	[7.2, 10.0]	3.9	[3.0, 4.9]	0.5	[0.3, 0.8]
Months enrolled in HMP-MC*										
Less than 24 months (n=1639)	29.2	[26.7, 31.7]	57.9	[55.1, 60.7]	8.4	[6.9, 10.1]	3.8	[2.8, 5.1]	0.7	[0.4, 1.4]
24-47 months (n=1001)	28.0	[23.5, 33.1]	58.7	[53.2, 64.0]	9.2	[6.4, 13.0]	4.0	[2.2, 7.4]	0.1	[0.0, 0.4]
48+ months (n=1356)	35.5	[31.8, 39.3]	53.9	[50.0, 57.8]	6.2	[4.5, 8.6]	3.9	[2.8, 5.4]	0.5	[0.2, 1.2]
FPL										
0% (n=1276)	31.5	[27.4, 35.8]	56.7	[52.1, 61.1]	8.4	[6.1, 11.5]	3.2	[2.1, 4.8]	0.3	[0.2, 0.7]
0.1 to 99.99% (n=1612)	34.2	[30.2, 38.5]	55.3	[50.9, 59.7]	6.0	[4.4, 8.2]	4.1	[2.5, 6.5]	0.4	[0.1, 1.6]
100% or more (n=1108)	33.5	[28.7, 38.5]	53.9	[48.9, 58.8]	6.8	[4.8, 9.5]	5.1	[3.4, 7.7]	0.7	[0.3, 2.2]
Age**										
19-34 (n=1631)	34.9	[30.7, 39.3]	51.6	[47.1, 56.0]	10.0	[7.7, 12.9]	3.0	[1.9, 4.8]	0.5	[0.2, 1.1]
35-50 (n=1121)	31.1	[26.9, 35.6]	57.9	[53.1, 62.6]	5.5	[3.5, 8.6]	4.9	[3.1, 7.6]	0.5	[0.2, 1.8]
51-65 (n=1244)	31.1	[27.0, 35.4]	60.4	[55.9, 64.7]	4.0	[2.8, 5.7]	4.2	[3.0, 5.9]	0.3	[0.1, 0.7]
Rurality										
Urban (n=2835)	32.8	[29.9, 35.8]	54.8	[51.7, 57.9]	7.5	[6.1, 9.3]	4.3	[3.3, 5.7]	0.5	[0.3, 1.0]
Suburban (n=365)	33.1	[26.1, 40.9]	56.2	[47.4, 64.6]	9.5	[4.2, 19.9]	1.3	[0.5, 3.2]	0.0	
Rural (n=796)	33.2	[27.9, 38.9]	61.9	[55.9, 67.5]	2.7	[1.6, 4.5]	2.0	[1.0, 4.1]	0.2	[0.1, 0.9]
Gender*										
Female (n=2396)	35.0	[31.6, 38.5]	53.2	[49.7, 56.7]	6.2	[4.8, 8.0]	4.9	[3.5, 6.8]	0.7	[0.4, 1.5]
Male (n=1563)	31.0	[27.2, 35.0]	57.6	[53.4, 61.7]	8.4	[6.3, 11.2]	2.9	[1.9, 4.2]	0.2	[0.1, 0.4]
Race/Ethnicity***										
White, non-Hispanic (n=2444)	40.7	[37.2, 44.2]	52.0	[48.4, 55.6]	4.4	[3.1, 6.2]	2.6	[1.8, 3.8]	0.4	[0.1, 1.0]
Black, non-Hispanic (n=740)	25.3	[20.3, 31.1]	60.7	[54.6, 66.5]	9.6	[6.6, 13.8]	3.9	[2.4, 6.3]	0.5	[0.2, 1.1]
Hispanic (n=253)	22.0	[15.0, 31.1]	59.7	[49.5, 69.1]	11.8	[7.1, 19.1]	6.3	[2.7, 13.8]	0.2	[0.0, 1.7]
Arab, Chaldean, or Middle Eastern (n=226)	17.1	[10.2, 27.2]	56.9	[46.5, 66.7]	11.1	[6.9, 17.3]	13.2	[7.1, 23.2]	1.8	[0.5, 6.4]
Other, multi-racial, or not reported (n=333)	27.2	[19.8, 36.0]	58.7	[49.2, 67.6]	11.1	[6.2, 19.0]	3.1	[1.2, 7.9]	0.0	

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.7 I think about how much I might have to pay before getting a prescription, scheduling a doctor visit, or going to the ER

Universe: All respondents (N= 4082)

	I think about how much I might have to pay before getting service									
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4014)	**11.2**	**[9.6, 13.0]**	**37.2**	**[34.6, 40.0]**	**10.0**	**[8.5, 11.8]**	**29.6**	**[27.2, 32.1]**	**12.1**	**[10.4, 13.9]**
HMV cohort*										
Longitudinal cohort (n=1450)	10.0	[7.9, 12.6]	37.4	[33.7, 41.1]	9.8	[7.8, 12.3]	30.0	[26.8, 33.4]	12.9	[10.6, 15.5]
New cohort (n=2564)	13.9	[12.4, 15.6]	36.9	[34.7, 39.1]	10.4	[9.1, 11.9]	28.7	[26.7, 30.7]	10.1	[8.9, 11.5]
Months enrolled in HMP-MC*										
Less than 24 months (n=1657)	13.8	[12.0, 15.9]	38.3	[35.4, 41.3]	10.3	[8.7, 12.0]	28.1	[25.7, 30.7]	9.5	[8.1, 11.2]
24-47 months (n=1008)	10.5	[8.2, 13.4]	41.5	[36.1, 47.2]	12.5	[9.1, 16.9]	25.8	[21.5, 30.5]	9.7	[6.8, 13.5]
48+ months (n=1349)	10.6	[8.3, 13.5]	35.4	[31.7, 39.3]	9.1	[7.1, 11.6]	31.3	[27.9, 34.9]	13.6	[11.2, 16.4]
FPL										
0% (n=1285)	12.2	[9.5, 15.4]	39.6	[35.2, 44.2]	10.5	[7.9, 13.7]	27.0	[23.2, 31.1]	10.8	[8.3, 13.8]
0.1 to 99.99% (n=1612)	10.6	[8.2, 13.6]	37.7	[33.4, 42.2]	8.4	[6.5, 10.8]	30.1	[26.5, 34.0]	13.2	[10.4, 16.7]
100% or more (n=1117)	9.9	[7.5, 13.1]	31.5	[27.3, 36.0]	11.5	[8.7, 15.1]	34.1	[29.6, 39.0]	12.9	[9.9, 16.7]
Age										
19-34 (n=1646)	10.7	[8.5, 13.4]	39.1	[34.8, 43.5]	10.9	[8.4, 13.9]	28.2	[24.4, 32.3]	11.2	[8.7, 14.3]
35-50 (n=1130)	12.1	[9.0, 16.2]	34.0	[29.6, 38.8]	10.0	[7.4, 13.5]	30.4	[26.3, 34.9]	13.4	[10.5, 16.8]
51-65 (n=1238)	10.8	[8.3, 13.9]	37.7	[33.1, 42.5]	8.3	[6.4, 10.7]	31.2	[27.3, 35.4]	12.1	[9.2, 15.7]
Rurality										
Urban (n=2849)	11.2	[9.5, 13.3]	37.1	[34.1, 40.2]	10.3	[8.6, 12.4]	30.1	[27.4, 33.0]	11.3	[9.4, 13.4]
Suburban (n=364)	13.9	[7.8, 23.7]	40.8	[32.5, 49.7]	8.6	[4.8, 15.2]	22.0	[16.7, 28.4]	14.7	[9.9, 21.2]
Rural (n=801)	8.2	[6.0, 11.2]	35.3	[28.8, 42.5]	8.3	[6.2, 11.0]	31.6	[26.4, 37.3]	16.6	[11.7, 22.9]
Gender*										
Female (n=2398)	11.2	[9.1, 13.8]	34.8	[31.5, 38.3]	8.3	[6.7, 10.2]	33.3	[30.1, 36.6]	12.4	[10.2, 14.9]
Male (n=1578)	11.1	[8.8, 14.0]	39.1	[35.0, 43.3]	11.8	[9.3, 15.0]	26.0	[22.6, 29.8]	11.9	[9.5, 14.9]
Race/Ethnicity										
White, non-Hispanic (n=2453)	10.5	[8.6, 12.8]	36.1	[32.6, 39.6]	9.6	[7.7, 12.0]	30.2	[27.1, 33.6]	13.6	[11.6, 15.9]
Black, non-Hispanic (n=744)	12.2	[8.7, 16.9]	38.0	[32.3, 44.2]	10.5	[7.3, 14.9]	27.7	[23.0, 32.9]	11.5	[7.8, 16.6]
Hispanic (n=253)	12.9	[7.4, 21.7]	26.5	[19.1, 35.4]	15.6	[9.1, 25.4]	35.5	[26.4, 45.9]	9.5	[3.9, 21.4]
Arab, Chaldean, or Middle Eastern (n=229)	10.3	[5.0, 19.8]	49.8	[39.8, 59.8]	6.8	[4.1, 11.0]	28.2	[20.3, 37.8]	4.9	[1.8, 12.7]
Other, multi-racial, or not reported (n=335)	11.4	[7.5, 17.0]	38.9	[29.8, 48.8]	9.7	[5.5, 16.6]	28.7	[20.9, 37.9]	11.3	[6.7, 18.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.8 In the last year, have you received a statement from the state that showed the services you received through the Healthy Michigan Plan and how much you owed, if anything?

Universe: All respondents (N= 4082)

	Received statement from Healthy Michigan Plan in past year					
	Yes		No		Not sure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4039)	**71.5**	**[68.9, 73.9]**	**22.9**	**[20.7, 25.3]**	**5.6**	**[4.4, 7.1]**
HMV cohort***						
Longitudinal cohort (n=1469)	74.3	[70.7, 77.6]	19.8	[16.8, 23.2]	5.8	[4.2, 8.0]
New cohort (n=2570)	64.7	[62.4, 66.8]	30.4	[28.3, 32.6]	4.9	[4.0, 6.0]
Months enrolled in HMP-MC***						
Less than 24 months (n=1668)	63.7	[60.7, 66.6]	31.5	[28.7, 34.4]	4.8	[3.7, 6.3]
24-47 months (n=1004)	60.1	[54.4, 65.6]	32.6	[27.5, 38.2]	7.3	[4.4, 11.8]
48+ months (n=1367)	77.5	[73.9, 80.7]	17.3	[14.4, 20.7]	5.2	[3.7, 7.3]
FPL						
0% (n=1293)	68.1	[63.7, 72.2]	26.4	[22.6, 30.6]	5.5	[3.8, 8.0]
0.1 to 99.99% (n=1628)	72.5	[68.2, 76.4]	21.9	[18.5, 25.8]	5.6	[3.6, 8.6]
100% or more (n=1118)	77.0	[72.6, 80.9]	17.4	[14.1, 21.3]	5.6	[3.5, 8.8]
Age**						
19-34 (n=1648)	68.2	[64.1, 72.1]	26.0	[22.5, 29.9]	5.8	[4.1, 8.1]
35-50 (n=1133)	69.3	[64.4, 73.8]	24.7	[20.5, 29.3]	6.1	[3.9, 9.2]
51-65 (n=1258)	80.6	[75.9, 84.7]	14.8	[11.4, 19.0]	4.6	[2.5, 8.3]
Rurality						
Urban (n=2866)	70.7	[67.8, 73.4]	23.4	[20.9, 26.1]	5.9	[4.5, 7.8]
Suburban (n=366)	72.0	[61.9, 80.2]	26.2	[18.0, 36.4]	1.9	[0.9, 3.7]
Rural (n=807)	78.0	[71.5, 83.4]	16.3	[11.4, 22.8]	5.7	[3.5, 9.0]
Gender*						
Female (n=2405)	74.4	[71.2, 77.5]	21.3	[18.4, 24.5]	4.3	[3.1, 5.8]
Male (n=1594)	68.7	[64.6, 72.5]	24.5	[21.1, 28.3]	6.8	[4.8, 9.6]
Race/Ethnicity***						
White, non-Hispanic (n=2463)	77.6	[74.3, 80.6]	17.9	[15.1, 20.9]	4.5	[3.1, 6.5]
Black, non-Hispanic (n=747)	67.7	[61.9, 73.1]	25.3	[20.6, 30.6]	7.0	[4.2, 11.4]
Hispanic (n=262)	58.8	[48.3, 68.5]	34.1	[24.7, 44.9]	7.1	[3.8, 12.9]
Arab, Chaldean, or Middle Eastern (n=232)	57.6	[47.6, 67.1]	33.7	[25.0, 43.6]	8.7	[4.7, 15.6]
Other, multi-racial, or not reported (n=335)	64.9	[55.5, 73.3]	30.8	[22.7, 40.2]	4.4	[2.3, 8.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

6.9 Did any of your statements in the past year show a reduction or discount in the amount you had to pay?

Universe: Respondents who reported receiving a MIHA statement (N= 2894)

	Statement in past year showed reduction in amount to pay					
	Yes		No		Don't Know	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=2871)	**30.2**	**[27.5, 33.2]**	**42.8**	**[39.6, 46.0]**	**27.0**	**[24.3, 29.9]**
HMV cohort*						
Longitudinal cohort (n=1162)	31.4	[27.7, 35.3]	41.0	[36.9, 45.3]	27.6	[24.0, 31.5]
New cohort (n=1709)	27.1	[24.8, 29.5]	47.7	[44.9, 50.4]	25.2	[22.9, 27.7]
Months enrolled in HMP-MC						
Less than 24 months (n=1087)	24.3	[21.6, 27.2]	47.6	[44.2, 51.0]	28.1	[25.1, 31.3]
24-47 months (n=679)	34.0	[28.1, 40.4]	44.1	[37.8, 50.6]	21.9	[16.7, 28.2]
48+ months (n=1105)	30.5	[26.8, 34.5]	41.4	[37.1, 45.8]	28.1	[24.4, 32.1]
FPL						
0% (n=836)	29.2	[24.5, 34.5]	47.4	[41.9, 52.9]	23.4	[19.1, 28.3]
0.1 to 99.99% (n=1181)	29.5	[25.3, 34.1]	40.9	[36.1, 45.9]	29.6	[25.0, 34.6]
100% or more (n=854)	33.2	[28.5, 38.2]	37.2	[31.7, 42.9]	29.7	[24.7, 35.1]
Age						
19-34 (n=1044)	31.4	[26.7, 36.5]	40.0	[34.7, 45.5]	28.6	[23.9, 33.8]
35-50 (n=795)	28.8	[24.1, 33.9]	43.5	[37.9, 49.2]	27.7	[23.1, 32.8]
51-65 (n=1032)	29.9	[25.7, 34.5]	46.5	[41.7, 51.3]	23.6	[19.6, 28.2]
Rurality						
Urban (n=1991)	30.3	[27.0, 33.7]	43.5	[39.9, 47.3]	26.2	[23.1, 29.6]
Suburban (n=272)	27.8	[21.1, 35.8]	37.6	[29.6, 46.4]	34.6	[26.1, 44.1]
Rural (n=608)	31.8	[25.9, 38.4]	40.8	[33.8, 48.3]	27.3	[21.9, 33.5]
Gender**						
Female (n=1808)	34.8	[31.1, 38.7]	39.0	[35.2, 43.0]	26.2	[22.8, 29.8]
Male (n=1043)	25.3	[21.3, 29.8]	46.5	[41.5, 51.6]	28.1	[23.8, 32.9]
Race/Ethnicity						
White, non-Hispanic (n=1890)	30.6	[27.2, 34.3]	40.8	[37.0, 44.7]	28.5	[25.1, 32.3]
Black, non-Hispanic (n=485)	32.1	[25.7, 39.2]	45.7	[38.5, 53.1]	22.2	[16.6, 29.0]
Hispanic (n=165)	28.0	[19.1, 39.1]	34.5	[23.2, 47.8]	37.5	[26.3, 50.3]
Arab, Chaldean, or Middle Eastern (n=126)	26.6	[17.1, 38.9]	39.4	[27.1, 53.2]	34.0	[21.7, 49.0]
Other, multi-racial, or not reported (n=205)	25.8	[17.3, 36.6]	54.8	[43.1, 66.0]	19.4	[12.2, 29.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7 Financial Well-Being

Beneficiary Survey Supplemental Data Appendix

7.1 Employment status

Universe: All respondents (N= 4082)

	Employment status					
	Employed at job		Only self-employed		Not employed	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4081)	**43.7**	**[41.0, 46.3]**	**15.6**	**[13.7, 17.7]**	**40.8**	**[38.1, 43.4]**
HMV cohort*						
Longitudinal cohort (n=1475)	43.0	[39.4, 46.7]	16.9	[14.3, 19.9]	40.1	[36.5, 43.7]
New cohort (n=2606)	45.2	[43.0, 47.5]	12.3	[10.9, 13.9]	42.4	[40.2, 44.7]
Months enrolled in HMP-MC						
Less than 24 months (n=1690)	45.8	[43.0, 48.7]	12.1	[10.4, 14.0]	42.1	[39.2, 45.0]
24-47 months (n=1019)	43.7	[38.5, 49.0]	18.0	[13.6, 23.4]	38.3	[33.1, 43.8]
48+ months (n=1372)	43.1	[39.3, 46.9]	15.7	[13.1, 18.6]	41.3	[37.5, 45.1]
FPL***						
0% (n=1311)	33.1	[28.9, 37.6]	15.1	[12.1, 18.7]	51.8	[47.3, 56.3]
0.1 to 99.99% (n=1641)	47.2	[42.8, 51.5]	18.9	[15.7, 22.7]	33.9	[30.0, 38.0]
100% or more (n=1129)	60.2	[55.4, 64.9]	11.2	[8.4, 14.6]	28.6	[24.4, 33.3]
Age***						
19-34 (n=1663)	55.5	[51.1, 59.9]	10.1	[7.8, 13.0]	34.4	[30.2, 38.8]
35-50 (n=1148)	37.4	[33.0, 42.0]	22.9	[18.9, 27.5]	39.7	[35.1, 44.4]
51-65 (n=1270)	28.9	[24.9, 33.2]	16.6	[13.2, 20.7]	54.5	[49.8, 59.1]
Rurality						
Urban (n=2897)	45.0	[42.0, 48.1]	15.5	[13.4, 18.0]	39.4	[36.4, 42.5]
Suburban (n=369)	34.0	[26.8, 41.9]	14.3	[8.6, 23.0]	51.7	[43.1, 60.2]
Rural (n=815)	39.8	[33.6, 46.3]	16.9	[12.8, 22.0]	43.3	[37.2, 49.7]
Gender***						
Female (n=2426)	47.6	[44.2, 51.1]	12.5	[10.3, 15.1]	39.9	[36.6, 43.3]
Male (n=1615)	39.3	[35.3, 43.4]	19.0	[15.9, 22.5]	41.7	[37.6, 45.9]
Race/Ethnicity						
White, non-Hispanic (n=2484)	43.2	[39.8, 46.8]	15.2	[12.9, 17.8]	41.6	[38.2, 45.1]
Black, non-Hispanic (n=757)	45.2	[39.4, 51.1]	17.1	[12.8, 22.5]	37.7	[32.0, 43.7]
Hispanic (n=263)	43.7	[34.0, 53.8]	12.9	[7.9, 20.4]	43.4	[33.6, 53.8]
Arab, Chaldean, or Middle Eastern (n=235)	48.0	[38.2, 58.0]	13.8	[7.7, 23.3]	38.2	[29.1, 48.3]
Other, multi-racial, or not reported (n=342)	38.3	[29.7, 47.8]	16.7	[10.9, 24.6]	45.0	[35.9, 54.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.2 Employment status [collapsed]

Universe: All respondents (N= 4082)

	Employment status			
	Employed/Self-employed		Not employed	
	Row %	95% CI	Row %	95% CI
Total (n=4081)	**59.2**	**[56.6, 61.9]**	**40.8**	**[38.1, 43.4]**
HMV cohort				
Longitudinal cohort (n=1475)	59.9	[56.3, 63.5]	40.1	[36.5, 43.7]
New cohort (n=2606)	57.6	[55.3, 59.8]	42.4	[40.2, 44.7]
Months enrolled in HMP-MC				
Less than 24 months (n=1690)	57.9	[55.0, 60.8]	42.1	[39.2, 45.0]
24-47 months (n=1019)	61.7	[56.2, 66.9]	38.3	[33.1, 43.8]
48+ months (n=1372)	58.7	[54.9, 62.5]	41.3	[37.5, 45.1]
FPL***				
0% (n=1311)	48.2	[43.7, 52.7]	51.8	[47.3, 56.3]
0.1 to 99.99% (n=1641)	66.1	[62.0, 70.0]	33.9	[30.0, 38.0]
100% or more (n=1129)	71.4	[66.7, 75.6]	28.6	[24.4, 33.3]
Age***				
19-34 (n=1663)	65.6	[61.2, 69.8]	34.4	[30.2, 38.8]
35-50 (n=1148)	60.3	[55.6, 64.9]	39.7	[35.1, 44.4]
51-65 (n=1270)	45.5	[40.9, 50.2]	54.5	[49.8, 59.1]
Rurality*				
Urban (n=2897)	60.6	[57.5, 63.6]	39.4	[36.4, 42.5]
Suburban (n=369)	48.3	[39.8, 56.9]	51.7	[43.1, 60.2]
Rural (n=815)	56.7	[50.3, 62.8]	43.3	[37.2, 49.7]
Gender				
Female (n=2426)	60.1	[56.7, 63.4]	39.9	[36.6, 43.3]
Male (n=1615)	58.3	[54.1, 62.4]	41.7	[37.6, 45.9]
Race/Ethnicity				
White, non-Hispanic (n=2484)	58.4	[54.9, 61.8]	41.6	[38.2, 45.1]
Black, non-Hispanic (n=757)	62.3	[56.3, 68.0]	37.7	[32.0, 43.7]
Hispanic (n=263)	56.6	[46.2, 66.4]	43.4	[33.6, 53.8]
Arab, Chaldean, or Middle Eastern (n=235)	61.8	[51.7, 70.9]	38.2	[29.1, 48.3]
Other, multi-racial, or not reported (n=342)	55.0	[45.6, 64.1]	45.0	[35.9, 54.4]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.3 Are you currently employed at a job?

Universe: All respondents (N= 4082)

	Employed at a job			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**43.7**	**[41.0, 46.3]**	**56.3**	**[53.7, 59.0]**
HMV cohort				
Longitudinal cohort (n=1475)	43.0	[39.4, 46.7]	57.0	[53.3, 60.6]
New cohort (n=2607)	45.2	[43.0, 47.4]	54.8	[52.6, 57.0]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	45.8	[43.0, 48.7]	54.2	[51.3, 57.0]
24-47 months (n=1019)	43.7	[38.5, 49.0]	56.3	[51.0, 61.5]
48+ months (n=1372)	43.1	[39.3, 46.9]	56.9	[53.1, 60.7]
FPL***				
0% (n=1312)	33.1	[28.9, 37.6]	66.9	[62.4, 71.1]
0.1 to 99.99% (n=1641)	47.2	[42.8, 51.5]	52.8	[48.5, 57.2]
100% or more (n=1129)	60.2	[55.4, 64.9]	39.8	[35.1, 44.6]
Age***				
19-34 (n=1663)	55.5	[51.1, 59.9]	44.5	[40.1, 48.9]
35-50 (n=1148)	37.4	[33.0, 42.0]	62.6	[58.0, 67.0]
51-65 (n=1271)	28.9	[24.9, 33.2]	71.1	[66.8, 75.1]
Rurality*				
Urban (n=2898)	45.0	[42.0, 48.1]	55.0	[51.9, 58.0]
Suburban (n=369)	34.0	[26.8, 41.9]	66.0	[58.1, 73.2]
Rural (n=815)	39.8	[33.6, 46.3]	60.2	[53.7, 66.4]
Gender**				
Female (n=2427)	47.6	[44.2, 51.1]	52.4	[48.9, 55.8]
Male (n=1615)	39.3	[35.3, 43.4]	60.7	[56.6, 64.7]
Race/Ethnicity				
White, non-Hispanic (n=2484)	43.2	[39.8, 46.8]	56.8	[53.2, 60.2]
Black, non-Hispanic (n=758)	45.2	[39.4, 51.1]	54.8	[48.9, 60.6]
Hispanic (n=263)	43.7	[34.0, 53.8]	56.3	[46.2, 66.0]
Arab, Chaldean, or Middle Eastern (n=235)	48.0	[38.2, 58.0]	52.0	[42.0, 61.8]
Other, multi-racial, or not reported (n=342)	38.3	[29.7, 47.8]	61.7	[52.2, 70.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.4 Are you currently self-employed?

Universe: All respondents (N= 4082)

	Self-employed			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**16.6**	**[14.7, 18.8]**	**83.4**	**[81.2, 85.3]**
HMV cohort**				
Longitudinal cohort (n=1475)	18.0	[15.3, 21.0]	82.0	[79.0, 84.7]
New cohort (n=2607)	13.4	[11.9, 15.0]	86.6	[85.0, 88.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	13.1	[11.4, 15.1]	86.9	[84.9, 88.6]
24-47 months (n=1019)	18.9	[14.5, 24.3]	81.1	[75.7, 85.5]
48+ months (n=1372)	16.8	[14.2, 19.8]	83.2	[80.2, 85.8]
FPL**				
0% (n=1312)	15.9	[12.8, 19.5]	84.1	[80.5, 87.2]
0.1 to 99.99% (n=1641)	20.5	[17.1, 24.4]	79.5	[75.6, 82.9]
100% or more (n=1129)	12.0	[9.1, 15.5]	88.0	[84.5, 90.9]
Age***				
19-34 (n=1663)	10.9	[8.5, 13.9]	89.1	[86.1, 91.5]
35-50 (n=1148)	24.5	[20.4, 29.1]	75.5	[70.9, 79.6]
51-65 (n=1271)	17.4	[13.9, 21.5]	82.6	[78.5, 86.1]
Rurality				
Urban (n=2898)	16.6	[14.4, 19.0]	83.4	[81.0, 85.6]
Suburban (n=369)	16.3	[10.2, 25.1]	83.7	[74.9, 89.8]
Rural (n=815)	17.4	[13.3, 22.5]	82.6	[77.5, 86.7]
Gender**				
Female (n=2427)	13.6	[11.3, 16.3]	86.4	[83.7, 88.7]
Male (n=1615)	19.9	[16.8, 23.5]	80.1	[76.5, 83.2]
Race/Ethnicity				
White, non-Hispanic (n=2484)	16.1	[13.7, 18.8]	83.9	[81.2, 86.3]
Black, non-Hispanic (n=758)	18.6	[14.1, 24.1]	81.4	[75.9, 85.9]
Hispanic (n=263)	12.9	[7.9, 20.4]	87.1	[79.6, 92.1]
Arab, Chaldean, or Middle Eastern (n=235)	14.3	[8.2, 23.8]	85.7	[76.2, 91.8]
Other, multi-racial, or not reported (n=342)	18.1	[12.1, 26.1]	81.9	[73.9, 87.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.5 Are you currently not employed?

Universe: All respondents (N= 4082)

	Not employed			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**40.9**	**[38.3, 43.5]**	**59.1**	**[56.5, 61.7]**
HMV cohort				
Longitudinal cohort (n=1475)	40.2	[36.6, 43.8]	59.8	[56.2, 63.4]
New cohort (n=2607)	42.5	[40.3, 44.8]	57.5	[55.2, 59.7]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	42.3	[39.4, 45.2]	57.7	[54.8, 60.6]
24-47 months (n=1019)	38.3	[33.1, 43.8]	61.7	[56.2, 66.9]
48+ months (n=1372)	41.4	[37.6, 45.2]	58.6	[54.8, 62.4]
FPL***				
0% (n=1312)	52.0	[47.4, 56.5]	48.0	[43.5, 52.6]
0.1 to 99.99% (n=1641)	33.9	[30.0, 38.1]	66.1	[61.9, 70.0]
100% or more (n=1129)	28.7	[24.4, 33.3]	71.3	[66.7, 75.6]
Age***				
19-34 (n=1663)	34.4	[30.2, 38.8]	65.6	[61.2, 69.8]
35-50 (n=1148)	40.0	[35.4, 44.7]	60.0	[55.3, 64.6]
51-65 (n=1271)	54.5	[49.9, 59.1]	45.5	[40.9, 50.1]
Rurality*				
Urban (n=2898)	39.5	[36.6, 42.6]	60.5	[57.4, 63.4]
Suburban (n=369)	51.7	[43.1, 60.2]	48.3	[39.8, 56.9]
Rural (n=815)	43.3	[37.2, 49.7]	56.7	[50.3, 62.8]
Gender				
Female (n=2427)	39.9	[36.6, 43.3]	60.1	[56.7, 63.4]
Male (n=1615)	41.9	[37.8, 46.1]	58.1	[53.9, 62.2]
Race/Ethnicity				
White, non-Hispanic (n=2484)	41.8	[38.4, 45.3]	58.2	[54.7, 61.6]
Black, non-Hispanic (n=758)	37.7	[32.0, 43.7]	62.3	[56.3, 68.0]
Hispanic (n=263)	43.4	[33.6, 53.8]	56.6	[46.2, 66.4]
Arab, Chaldean, or Middle Eastern (n=235)	38.2	[29.1, 48.3]	61.8	[51.7, 70.9]
Other, multi-racial, or not reported (n=342)	45.0	[35.9, 54.4]	55.0	[45.6, 64.1]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.6 Are you working full time or part time?

Universe: Respondents who reported being employed at a job (N= 1865)

	Are you working full time or part time?			
	Full time		Part time	
	Row %	95% CI	Row %	95% CI
Total (n=1860)	**55.8**	**[51.8, 59.7]**	**44.2**	**[40.3, 48.2]**
HMV cohort				
Longitudinal cohort (n=632)	56.0	[50.4, 61.4]	44.0	[38.6, 49.6]
New cohort (n=1228)	55.2	[51.9, 58.4]	44.7	[41.4, 47.9]
Months enrolled in HMP-MC				
Less than 24 months (n=802)	58.5	[54.5, 62.3]	41.4	[37.6, 45.4]
24-47 months (n=477)	53.5	[46.3, 60.6]	46.3	[39.2, 53.6]
48+ months (n=581)	55.7	[49.8, 61.5]	44.3	[38.5, 50.2]
FPL***				
0% (n=422)	65.3	[57.5, 72.4]	34.7	[27.6, 42.5]
0.1 to 99.99% (n=795)	43.7	[37.6, 50.1]	56.2	[49.9, 62.3]
100% or more (n=643)	59.9	[53.7, 65.7]	40.1	[34.2, 46.2]
Age**				
19-34 (n=987)	59.8	[54.3, 65.1]	40.1	[34.8, 45.6]
35-50 (n=500)	55.9	[48.6, 63.0]	44.1	[37.0, 51.4]
51-65 (n=373)	40.4	[32.7, 48.6]	59.6	[51.4, 67.3]
Rurality				
Urban (n=1365)	56.6	[52.2, 61.0]	43.3	[39.0, 47.7]
Suburban (n=159)	51.7	[39.3, 63.9]	48.3	[36.1, 60.7]
Rural (n=336)	50.1	[39.2, 60.9]	49.9	[39.1, 60.8]
Gender***				
Female (n=1171)	47.5	[42.5, 52.5]	52.5	[47.5, 57.5]
Male (n=671)	66.9	[60.8, 72.5]	33.0	[27.4, 39.1]
Race/Ethnicity				
White, non-Hispanic (n=1077)	53.8	[48.2, 59.3]	46.2	[40.7, 51.7]
Black, non-Hispanic (n=394)	61.1	[52.9, 68.7]	38.9	[31.3, 47.1]
Hispanic (n=129)	68.9	[56.1, 79.3]	31.1	[20.7, 43.9]
Arab, Chaldean, or Middle Eastern (n=109)	39.5	[27.0, 53.5]	60.2	[46.2, 72.7]
Other, multi-racial, or not reported (n=151)	56.8	[42.3, 70.1]	43.2	[29.9, 57.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.7 Employment consistency

Universe: Respondents who reported being employed at a job or self-employed (N= 2428)

	Employment consistency					
	It changes week to week		It changes by season		It's pretty consistent	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=2406)	**33.1**	**[29.8, 36.5]**	**13.2**	**[11.0, 15.6]**	**53.7**	**[50.2, 57.3]**
HMV cohort						
Longitudinal cohort (n=869)	32.7	[28.3, 37.5]	13.0	[10.2, 16.5]	54.2	[49.3, 59.0]
New cohort (n=1537)	34.0	[31.2, 36.8]	13.5	[11.5, 15.7]	52.6	[49.6, 55.5]
Months enrolled in HMP-MC						
Less than 24 months (n=999)	33.1	[29.9, 36.6]	13.4	[11.0, 16.1]	53.5	[49.9, 57.1]
24-47 months (n=608)	32.2	[26.1, 39.0]	13.4	[9.4, 18.9]	54.4	[47.4, 61.1]
48+ months (n=799)	33.4	[28.7, 38.4]	13.0	[10.1, 16.7]	53.6	[48.4, 58.6]
FPL*						
0% (n=581)	36.5	[30.3, 43.2]	15.4	[11.4, 20.5]	48.1	[41.3, 54.9]
0.1 to 99.99% (n=1052)	33.0	[27.9, 38.4]	14.0	[10.6, 18.1]	53.1	[47.5, 58.6]
100% or more (n=773)	28.5	[23.7, 34.0]	8.9	[6.3, 12.4]	62.5	[56.8, 67.9]
Age						
19-34 (n=1133)	31.0	[26.3, 36.1]	13.7	[10.5, 17.7]	55.3	[50.0, 60.5]
35-50 (n=711)	38.3	[32.4, 44.5]	12.5	[8.9, 17.2]	49.3	[43.0, 55.5]
51-65 (n=562)	30.0	[23.9, 36.9]	12.9	[9.5, 17.3]	57.1	[50.1, 63.8]
Rurality						
Urban (n=1750)	33.8	[30.1, 37.7]	12.6	[10.3, 15.5]	53.5	[49.5, 57.5]
Suburban (n=199)	31.5	[21.8, 43.3]	11.5	[6.1, 20.6]	57.0	[45.0, 68.2]
Rural (n=457)	27.6	[21.0, 35.3]	19.1	[13.5, 26.4]	53.3	[44.5, 61.9]
Gender*						
Female (n=1445)	31.6	[27.7, 35.9]	10.5	[8.0, 13.7]	57.9	[53.4, 62.3]
Male (n=942)	35.2	[30.1, 40.8]	16.1	[12.8, 20.2]	48.6	[43.2, 54.2]
Race/Ethnicity						
White, non-Hispanic (n=1425)	33.5	[29.1, 38.1]	14.0	[11.2, 17.3]	52.6	[47.9, 57.2]
Black, non-Hispanic (n=481)	31.8	[25.2, 39.3]	10.3	[6.4, 16.3]	57.8	[50.2, 65.1]
Hispanic (n=160)	26.0	[16.7, 38.2]	19.4	[10.2, 33.9]	54.6	[41.7, 66.9]
Arab, Chaldean, or Middle Eastern (n=136)	34.5	[23.3, 47.8]	15.2	[8.2, 26.6]	50.2	[37.7, 62.8]
Other, multi-racial, or not reported (n=204)	38.2	[27.1, 50.6]	11.6	[5.9, 21.7]	50.2	[37.8, 62.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

It changes week to week includes those who reported both week to week and seasonal changes

7.8 How would you describe your work schedule? Would you say it changes from week to week?

Universe: Respondents who reported being employed at a job or self-employed (N= 2428)

	It changes week to week			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2428)	**32.7**	**[29.4, 36.1]**	**67.3**	**[63.9, 70.6]**
HMV cohort				
Longitudinal cohort (n=879)	32.2	[27.9, 36.9]	67.8	[63.1, 72.1]
New cohort (n=1549)	33.7	[31.0, 36.6]	66.3	[63.4, 69.0]
Months enrolled in HMP-MC				
Less than 24 months (n=1009)	32.8	[29.6, 36.2]	67.2	[63.8, 70.4]
24-47 months (n=612)	31.7	[25.6, 38.4]	68.3	[61.6, 74.4]
48+ months (n=807)	33.0	[28.4, 38.0]	67.0	[62.0, 71.6]
FPL				
0% (n=590)	35.6	[29.5, 42.3]	64.4	[57.7, 70.5]
0.1 to 99.99% (n=1062)	32.6	[27.6, 38.1]	67.4	[61.9, 72.4]
100% or more (n=776)	28.5	[23.6, 33.9]	71.5	[66.1, 76.4]
Age				
19-34 (n=1145)	30.6	[25.9, 35.7]	69.4	[64.3, 74.1]
35-50 (n=717)	38.0	[32.2, 44.2]	62.0	[55.8, 67.8]
51-65 (n=566)	29.1	[23.1, 36.0]	70.9	[64.0, 76.9]
Rurality				
Urban (n=1765)	33.4	[29.7, 37.2]	66.6	[62.8, 70.3]
Suburban (n=201)	31.3	[21.6, 43.0]	68.7	[57.0, 78.4]
Rural (n=462)	27.3	[20.8, 34.9]	72.7	[65.1, 79.2]
Gender				
Female (n=1459)	31.1	[27.2, 35.3]	68.9	[64.7, 72.8]
Male (n=950)	34.9	[29.7, 40.4]	65.1	[59.6, 70.3]
Race/Ethnicity				
White, non-Hispanic (n=1438)	32.9	[28.6, 37.5]	67.1	[62.5, 71.4]
Black, non-Hispanic (n=487)	31.5	[24.9, 38.8]	68.5	[61.2, 75.1]
Hispanic (n=161)	26.0	[16.6, 38.2]	74.0	[61.8, 83.4]
Arab, Chaldean, or Middle Eastern (n=136)	34.5	[23.3, 47.8]	65.5	[52.2, 76.7]
Other, multi-racial, or not reported (n=206)	38.1	[27.1, 50.5]	61.9	[49.5, 72.9]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.9 How would you describe your work schedule? Would you say it changes by season?

Universe: Respondents who reported being employed at a job or self-employed (N= 2428)

	It changes by season			
	Yes		No	
	Row %	**95% CI**	**Row %**	**95% CI**
Total (n=2428)	**15.5**	**[13.2, 18.3]**	**84.5**	**[81.7, 86.8]**
HMV cohort				
Longitudinal cohort (n=879)	15.5	[12.3, 19.3]	84.5	[80.7, 87.7]
New cohort (n=1549)	15.7	[13.7, 18.0]	84.3	[82.0, 86.3]
Months enrolled in HMP-MC				
Less than 24 months (n=1009)	15.5	[13.0, 18.3]	84.5	[81.7, 87.0]
24-47 months (n=612)	15.6	[11.2, 21.3]	84.4	[78.7, 88.8]
48+ months (n=807)	15.6	[12.2, 19.6]	84.4	[80.4, 87.8]
FPL				
0% (n=590)	17.7	[13.1, 23.4]	82.3	[76.6, 86.9]
0.1 to 99.99% (n=1062)	16.9	[13.3, 21.2]	83.1	[78.8, 86.7]
100% or more (n=776)	10.5	[7.8, 14.1]	89.5	[85.9, 92.2]
Age				
19-34 (n=1145)	15.1	[11.7, 19.1]	84.9	[80.9, 88.3]
35-50 (n=717)	16.1	[11.7, 21.8]	83.9	[78.2, 88.3]
51-65 (n=566)	15.9	[12.2, 20.5]	84.1	[79.5, 87.8]
Rurality				
Urban (n=1765)	15.1	[12.5, 18.2]	84.9	[81.8, 87.5]
Suburban (n=201)	12.2	[6.7, 21.2]	87.8	[78.8, 93.3]
Rural (n=462)	21.7	[15.9, 28.9]	78.3	[71.1, 84.1]
Gender**				
Female (n=1459)	11.7	[9.1, 14.8]	88.3	[85.2, 90.9]
Male (n=950)	19.8	[15.9, 24.4]	80.2	[75.6, 84.1]
Race/Ethnicity				
White, non-Hispanic (n=1438)	16.2	[13.3, 19.6]	83.8	[80.4, 86.7]
Black, non-Hispanic (n=487)	13.4	[8.5, 20.5]	86.6	[79.5, 91.5]
Hispanic (n=161)	20.1	[10.8, 34.4]	79.9	[65.6, 89.2]
Arab, Chaldean, or Middle Eastern (n=136)	18.2	[10.5, 29.7]	81.8	[70.3, 89.5]
Other, multi-racial, or not reported (n=206)	13.5	[7.4, 23.3]	86.5	[76.7, 92.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.10 How would you describe your work schedule? Would you say it's pretty consistent?

Universe: Respondents who reported being employed at a job or self-employed (N= 2428)

	It's pretty consistent			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=2428)	**54.4**	**[50.8, 57.9]**	**45.6**	**[42.1, 49.2]**
HMV cohort				
Longitudinal cohort (n=879)	54.5	[49.6, 59.2]	45.5	[40.8, 50.4]
New cohort (n=1549)	54.1	[51.2, 57.0]	45.9	[43.0, 48.8]
Months enrolled in HMP-MC				
Less than 24 months (n=1009)	55.1	[51.6, 58.7]	44.9	[41.3, 48.4]
24-47 months (n=612)	54.4	[47.4, 61.1]	45.6	[38.9, 52.6]
48+ months (n=807)	54.2	[49.0, 59.2]	45.8	[40.8, 51.0]
FPL**				
0% (n=590)	49.2	[42.5, 56.0]	50.8	[44.0, 57.5]
0.1 to 99.99% (n=1062)	53.4	[47.9, 58.9]	46.6	[41.1, 52.1]
100% or more (n=776)	63.1	[57.4, 68.4]	36.9	[31.6, 42.6]
Age				
19-34 (n=1145)	56.3	[51.0, 61.4]	43.7	[38.6, 49.0]
35-50 (n=717)	50.3	[44.1, 56.5]	49.7	[43.5, 55.9]
51-65 (n=566)	56.2	[49.0, 63.1]	43.8	[36.9, 51.0]
Rurality				
Urban (n=1765)	54.2	[50.2, 58.1]	45.8	[41.9, 49.8]
Suburban (n=201)	57.4	[45.5, 68.5]	42.6	[31.5, 54.5]
Rural (n=462)	54.2	[45.4, 62.7]	45.8	[37.3, 54.6]
Gender*				
Female (n=1459)	57.7	[53.2, 62.1]	42.3	[37.9, 46.8]
Male (n=950)	50.2	[44.7, 55.6]	49.8	[44.4, 55.3]
Race/Ethnicity				
White, non-Hispanic (n=1438)	53.0	[48.3, 57.7]	47.0	[42.3, 51.7]
Black, non-Hispanic (n=487)	58.3	[50.7, 65.6]	41.7	[34.4, 49.3]
Hispanic (n=161)	55.6	[42.6, 67.8]	44.4	[32.2, 57.4]
Arab, Chaldean, or Middle Eastern (n=136)	50.8	[38.2, 63.3]	49.2	[36.7, 61.8]
Other, multi-racial, or not reported (n=206)	52.1	[39.8, 64.2]	47.9	[35.8, 60.2]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.11 Does your health interfere with your ability to work, how much you can work, or the type of work you can do?

Universe: All respondents (N= 4082)

	Your health					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4076)	**37.8**	**[35.3, 40.4]**	**61.3**	**[58.7, 63.8]**	**0.9**	**[0.6, 1.5]**
HMV cohort						
Longitudinal cohort (n=1473)	37.8	[34.3, 41.4]	61.2	[57.6, 64.7]	1.0	[0.5, 1.8]
New cohort (n=2603)	37.9	[35.7, 40.1]	61.3	[59.1, 63.5]	0.8	[0.5, 1.2]
Months enrolled in HMP-MC						
Less than 24 months (n=1688)	37.8	[34.9, 40.7]	61.2	[58.2, 64.0]	1.1	[0.6, 1.8]
24-47 months (n=1018)	37.4	[32.4, 42.7]	62.4	[57.1, 67.4]	0.2	[0.0, 0.8]
48+ months (n=1370)	38.0	[34.4, 41.7]	60.9	[57.2, 64.5]	1.1	[0.6, 2.1]
FPL***						
0% (n=1308)	42.2	[37.9, 46.6]	56.6	[52.2, 60.9]	1.2	[0.6, 2.4]
0.1 to 99.99% (n=1641)	36.9	[32.8, 41.1]	62.3	[58.1, 66.4]	0.8	[0.3, 1.9]
100% or more (n=1127)	30.1	[26.0, 34.6]	69.4	[65.0, 73.5]	0.4	[0.2, 1.2]
Age***						
19-34 (n=1662)	27.2	[23.5, 31.3]	72.2	[68.1, 75.9]	0.6	[0.2, 1.5]
35-50 (n=1147)	43.4	[38.7, 48.1]	55.8	[51.0, 60.4]	0.9	[0.4, 2.1]
51-65 (n=1267)	51.1	[46.5, 55.7]	47.4	[42.8, 52.0]	1.6	[0.7, 3.3]
Rurality						
Urban (n=2893)	36.7	[33.8, 39.6]	62.4	[59.4, 65.3]	0.9	[0.5, 1.6]
Suburban (n=369)	44.6	[36.4, 53.1]	55.0	[46.5, 63.2]	0.4	[0.1, 1.2]
Rural (n=814)	42.1	[36.1, 48.4]	56.7	[50.5, 62.8]	1.1	[0.5, 2.5]
Gender						
Female (n=2425)	38.4	[35.1, 41.8]	61.0	[57.6, 64.3]	0.6	[0.3, 1.3]
Male (n=1611)	36.9	[33.1, 40.9]	61.9	[57.8, 65.7]	1.2	[0.7, 2.3]
Race/Ethnicity***						
White, non-Hispanic (n=2483)	42.7	[39.3, 46.2]	56.7	[53.2, 60.1]	0.6	[0.3, 1.3]
Black, non-Hispanic (n=755)	30.0	[25.1, 35.4]	68.7	[63.2, 73.7]	1.3	[0.5, 3.2]
Hispanic (n=263)	35.7	[26.4, 46.2]	64.2	[53.7, 73.5]	0.1	[0.0, 0.8]
Arab, Chaldean, or Middle Eastern (n=234)	27.9	[19.2, 38.5]	71.1	[60.5, 79.8]	1.0	[0.3, 3.7]
Other, multi-racial, or not reported (n=341)	40.5	[31.8, 49.8]	57.4	[48.1, 66.3]	2.1	[0.8, 5.4]
Employment status***						
Employed/Self-employed (n=2426)	28.7	[25.7, 31.9]	70.5	[67.3, 73.5]	0.8	[0.4, 1.5]
Not employed (n=1650)	51.1	[46.8, 55.3]	47.9	[43.6, 52.1]	1.1	[0.5, 2.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.12 Does transportation interfere with your ability to work, how much you can work, or the type of work you can do?

Universe: All respondents (N= 4082)

	Transportation					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4064)	**21.9**	**[19.7, 24.4]**	**77.5**	**[75.1, 79.8]**	**0.6**	**[0.3, 1.1]**
HMV cohort						
Longitudinal cohort (n=1471)	22.8	[19.8, 26.2]	76.6	[73.2, 79.6]	0.6	[0.3, 1.4]
New cohort (n=2593)	19.8	[18.0, 21.7]	79.8	[77.9, 81.6]	0.4	[0.2, 0.8]
Months enrolled in HMP-MC						
Less than 24 months (n=1681)	20.5	[17.9, 23.3]	79.2	[76.4, 81.8]	0.4	[0.2, 0.8]
24-47 months (n=1015)	19.0	[15.1, 23.5]	80.8	[76.2, 84.6]	0.3	[0.1, 0.9]
48+ months (n=1368)	23.3	[20.1, 26.9]	76.0	[72.4, 79.2]	0.7	[0.3, 1.6]
FPL***						
0% (n=1303)	28.8	[24.9, 33.1]	70.4	[66.1, 74.4]	0.8	[0.3, 2.0]
0.1 to 99.99% (n=1635)	18.2	[14.9, 22.2]	81.7	[77.7, 85.0]	0.1	[0.0, 0.3]
100% or more (n=1126)	13.4	[10.4, 17.2]	85.9	[82.1, 89.0]	0.7	[0.2, 2.0]
Age						
19-34 (n=1662)	22.4	[19.0, 26.3]	77.3	[73.5, 80.8]	0.3	[0.1, 0.8]
35-50 (n=1143)	23.2	[19.1, 27.9]	76.0	[71.2, 80.1]	0.8	[0.2, 2.7]
51-65 (n=1259)	19.3	[15.7, 23.6]	79.9	[75.7, 83.6]	0.8	[0.3, 1.8]
Rurality*						
Urban (n=2886)	21.8	[19.3, 24.5]	77.6	[74.9, 80.1]	0.6	[0.3, 1.3]
Suburban (n=367)	30.6	[21.8, 41.1]	69.2	[58.7, 78.0]	0.2	[0.1, 0.9]
Rural (n=811)	15.6	[11.6, 20.8]	83.9	[78.7, 88.0]	0.5	[0.2, 1.5]
Gender***						
Female (n=2418)	17.5	[15.1, 20.3]	82.1	[79.3, 84.6]	0.3	[0.1, 0.8]
Male (n=1606)	26.5	[22.8, 30.5]	72.7	[68.7, 76.4]	0.8	[0.3, 1.9]
Race/Ethnicity**						
White, non-Hispanic (n=2474)	19.8	[17.0, 22.9]	79.8	[76.7, 82.6]	0.4	[0.2, 0.8]
Black, non-Hispanic (n=753)	26.9	[21.9, 32.5]	73.0	[67.4, 78.0]	0.1	[0.0, 0.4]
Hispanic (n=263)	21.7	[14.0, 31.9]	77.0	[66.9, 84.8]	1.3	[0.4, 4.5]
Arab, Chaldean, or Middle Eastern (n=233)	14.9	[8.1, 25.8]	82.4	[71.1, 89.9]	2.8	[0.6, 12.5]
Other, multi-racial, or not reported (n=341)	25.6	[18.1, 34.9]	73.7	[64.4, 81.3]	0.7	[0.1, 4.8]
Employment status***						
Employed/Self-employed (n=2424)	16.8	[14.2, 19.9]	83.1	[80.0, 85.7]	0.1	[0.0, 0.3]
Not employed (n=1640)	29.3	[25.6, 33.4]	69.4	[65.4, 73.2]	1.2	[0.6, 2.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.13 Does a prior conviction or legal action interfere with your ability to work, how much you can work, or the type of work you can do?

Universe: All respondents (N= 4082)

	A prior conviction or legal action					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4055)	**5.8**	**[4.4, 7.7]**	**93.8**	**[92.0, 95.2]**	**0.4**	**[0.2, 0.7]**
HMV cohort*						
Longitudinal cohort (n=1465)	6.6	[4.7, 9.3]	93.0	[90.4, 94.9]	0.3	[0.1, 0.8]
New cohort (n=2590)	3.9	[3.1, 4.9]	95.6	[94.6, 96.5]	0.5	[0.2, 1.0]
Months enrolled in HMP-MC						
Less than 24 months (n=1679)	4.8	[3.7, 6.2]	94.4	[92.9, 95.6]	0.8	[0.4, 1.6]
24-47 months (n=1014)	6.9	[4.0, 11.7]	93.0	[88.2, 95.9]	0.1	[0.0, 0.4]
48+ months (n=1362)	5.7	[3.9, 8.4]	93.9	[91.2, 95.8]	0.4	[0.2, 0.9]
FPL						
0% (n=1299)	6.2	[4.1, 9.1]	93.5	[90.6, 95.6]	0.3	[0.1, 0.9]
0.1 to 99.99% (n=1632)	5.6	[3.3, 9.3]	93.9	[90.3, 96.3]	0.4	[0.2, 0.9]
100% or more (n=1124)	5.5	[3.2, 9.2]	94.1	[90.3, 96.4]	0.5	[0.1, 2.0]
Age						
19-34 (n=1659)	6.2	[4.0, 9.4]	93.6	[90.4, 95.8]	0.2	[0.1, 0.4]
35-50 (n=1139)	6.5	[4.2, 9.8]	92.7	[89.4, 95.1]	0.8	[0.3, 1.9]
51-65 (n=1257)	4.3	[2.2, 8.0]	95.5	[91.8, 97.6]	0.2	[0.0, 0.9]
Rurality**						
Urban (n=2879)	5.6	[4.1, 7.7]	94.0	[91.9, 95.6]	0.4	[0.2, 0.8]
Suburban (n=366)	12.5	[6.9, 21.5]	87.5	[78.5, 93.1]	0.0	
Rural (n=810)	2.3	[1.3, 3.9]	97.1	[95.2, 98.3]	0.6	[0.2, 2.3]
Gender***						
Female (n=2411)	1.9	[1.3, 3.0]	97.9	[96.9, 98.6]	0.1	[0.1, 0.3]
Male (n=1604)	9.8	[7.1, 13.2]	89.6	[86.1, 92.3]	0.6	[0.3, 1.3]
Race/Ethnicity						
White, non-Hispanic (n=2472)	5.4	[3.6, 8.0]	94.3	[91.7, 96.1]	0.3	[0.1, 0.7]
Black, non-Hispanic (n=751)	7.0	[4.2, 11.5]	92.5	[88.1, 95.3]	0.5	[0.2, 1.5]
Hispanic (n=263)	8.6	[3.6, 18.8]	91.4	[81.2, 96.4]	0.0	
Arab, Chaldean, or Middle Eastern (n=232)	4.1	[0.8, 18.8]	95.9	[81.2, 99.2]	0.0	
Other, multi-racial, or not reported (n=337)	4.7	[2.3, 9.3]	94.2	[89.3, 96.9]	1.1	[0.3, 4.5]
Employment status						
Employed/Self-employed (n=2419)	5.4	[3.6, 8.0]	94.2	[91.6, 96.0]	0.4	[0.2, 0.8]
Not employed (n=1636)	6.5	[4.5, 9.3]	93.1	[90.3, 95.2]	0.4	[0.1, 1.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.14 Do caregiving responsibilities interfere with your ability to work, how much you can work, or the type of work you can do?

Universe: All respondents (N= 4082)

	Caregiving responsibilities					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4055)	**17.6**	**[15.7, 19.8]**	**81.9**	**[79.7, 83.9]**	**0.5**	**[0.3, 0.8]**
HMV cohort						
Longitudinal cohort (n=1468)	17.9	[15.2, 20.9]	81.7	[78.7, 84.4]	0.4	[0.2, 0.9]
New cohort (n=2587)	17.0	[15.4, 18.7]	82.2	[80.5, 83.9]	0.8	[0.5, 1.3]
Months enrolled in HMP-MC						
Less than 24 months (n=1679)	16.6	[14.7, 18.7]	82.6	[80.4, 84.5]	0.8	[0.4, 1.6]
24-47 months (n=1011)	18.5	[14.7, 23.0]	81.1	[76.6, 84.9]	0.4	[0.2, 1.0]
48+ months (n=1365)	17.6	[14.8, 20.8]	82.0	[78.8, 84.8]	0.4	[0.2, 1.0]
FPL*						
0% (n=1299)	14.6	[11.6, 18.2]	84.8	[81.2, 87.8]	0.6	[0.4, 1.1]
0.1 to 99.99% (n=1632)	20.3	[16.9, 24.2]	79.4	[75.5, 82.8]	0.3	[0.1, 1.1]
100% or more (n=1124)	19.8	[16.4, 23.6]	79.7	[75.9, 83.1]	0.5	[0.1, 2.0]
Age						
19-34 (n=1660)	18.6	[15.5, 22.2]	81.3	[77.7, 84.4]	0.1	[0.0, 0.4]
35-50 (n=1142)	17.6	[14.3, 21.6]	81.6	[77.6, 85.0]	0.7	[0.4, 1.5]
51-65 (n=1253)	15.7	[12.6, 19.3]	83.4	[79.7, 86.6]	0.9	[0.4, 2.1]
Rurality						
Urban (n=2878)	18.0	[15.7, 20.5]	81.5	[79.0, 83.8]	0.5	[0.3, 0.9]
Suburban (n=367)	16.3	[11.2, 23.0]	83.6	[76.8, 88.6]	0.2	[0.0, 0.7]
Rural (n=810)	15.6	[11.9, 20.2]	83.7	[79.1, 87.5]	0.6	[0.3, 1.4]
Gender***						
Female (n=2415)	21.5	[18.8, 24.4]	78.1	[75.2, 80.8]	0.4	[0.2, 0.8]
Male (n=1600)	14.0	[11.2, 17.3]	85.4	[82.1, 88.2]	0.6	[0.3, 1.2]
Race/Ethnicity***						
White, non-Hispanic (n=2472)	17.5	[15.0, 20.3]	82.2	[79.4, 84.7]	0.3	[0.2, 0.5]
Black, non-Hispanic (n=749)	14.1	[10.3, 19.0]	85.5	[80.6, 89.4]	0.3	[0.1, 0.9]
Hispanic (n=262)	23.8	[16.3, 33.5]	75.8	[66.2, 83.4]	0.3	[0.0, 2.3]
Arab, Chaldean, or Middle Eastern (n=233)	30.7	[22.0, 41.1]	68.3	[57.9, 77.1]	1.0	[0.2, 6.1]
Other, multi-racial, or not reported (n=339)	14.6	[9.5, 21.9]	83.6	[76.2, 89.0]	1.7	[0.6, 5.2]
Employment status						
Employed/Self-employed (n=2421)	17.2	[14.7, 20.2]	82.2	[79.2, 84.8]	0.6	[0.3, 1.1]
Not employed (n=1634)	18.2	[15.3, 21.5]	81.5	[78.1, 84.4]	0.4	[0.2, 0.7]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.15 Does a lack of jobs in the area interfere with your ability to work, how much you can work, or the type of work you can do?

Universe: All respondents (N= 4082)

	Lack of jobs in the area					
	Yes		No		Unsure	
	Row %	95% CI	Row %	95% CI	Row %	95% CI
Total (n=4048)	**17.2**	**[15.1, 19.4]**	**80.7**	**[78.4, 82.8]**	**2.1**	**[1.4, 3.1]**
HMV cohort						
Longitudinal cohort (n=1465)	17.9	[15.2, 21.1]	80.0	[76.7, 82.9]	2.0	[1.2, 3.5]
New cohort (n=2583)	15.3	[13.7, 17.1]	82.3	[80.5, 84.0]	2.3	[1.7, 3.2]
Months enrolled in HMP-MC						
Less than 24 months (n=1673)	16.0	[13.6, 18.7]	81.2	[78.4, 83.7]	2.8	[1.9, 4.0]
24-47 months (n=1012)	14.3	[11.0, 18.3]	84.5	[80.4, 87.9]	1.2	[0.7, 2.1]
48+ months (n=1363)	18.5	[15.5, 21.9]	79.2	[75.7, 82.4]	2.3	[1.3, 4.0]
FPL**						
0% (n=1296)	21.3	[17.7, 25.5]	76.3	[72.1, 80.1]	2.4	[1.3, 4.2]
0.1 to 99.99% (n=1629)	14.4	[11.6, 17.7]	83.7	[80.2, 86.7]	1.9	[0.9, 3.9]
100% or more (n=1123)	12.9	[9.7, 17.0]	85.1	[80.9, 88.4]	2.0	[1.1, 3.8]
Age						
19-34 (n=1659)	17.0	[13.9, 20.6]	81.1	[77.3, 84.4]	1.9	[1.0, 3.6]
35-50 (n=1138)	19.4	[15.6, 23.8]	78.9	[74.5, 82.8]	1.7	[1.1, 2.7]
51-65 (n=1251)	14.8	[11.6, 18.6]	82.2	[77.9, 85.8]	3.0	[1.4, 6.4]
Rurality						
Urban (n=2873)	17.0	[14.7, 19.6]	80.9	[78.2, 83.4]	2.1	[1.3, 3.2]
Suburban (n=367)	13.5	[9.1, 19.6]	83.9	[77.2, 88.9]	2.6	[0.8, 7.9]
Rural (n=808)	21.7	[16.7, 27.7]	76.1	[70.0, 81.2]	2.2	[1.2, 4.3]
Gender***						
Female (n=2409)	14.4	[12.0, 17.2]	84.7	[81.9, 87.1]	0.9	[0.6, 1.3]
Male (n=1599)	19.7	[16.4, 23.4]	76.9	[73.0, 80.4]	3.4	[2.1, 5.4]
Race/Ethnicity						
White, non-Hispanic (n=2470)	15.6	[13.1, 18.6]	82.0	[78.9, 84.7]	2.4	[1.5, 3.7]
Black, non-Hispanic (n=748)	18.1	[13.7, 23.4]	80.3	[74.7, 84.8]	1.7	[0.5, 5.1]
Hispanic (n=262)	20.0	[12.7, 30.2]	77.7	[67.4, 85.5]	2.2	[0.5, 8.7]
Arab, Chaldean, or Middle Eastern (n=232)	24.6	[16.5, 35.0]	74.2	[63.8, 82.4]	1.2	[0.4, 3.6]
Other, multi-racial, or not reported (n=336)	16.2	[10.6, 23.9]	81.1	[73.2, 87.1]	2.7	[1.0, 7.1]
Employment status***						
Employed/Self-employed (n=2418)	13.3	[11.0, 16.1]	84.8	[81.9, 87.4]	1.8	[1.0, 3.4]
Not employed (n=1630)	22.8	[19.3, 26.8]	74.6	[70.6, 78.3]	2.5	[1.6, 4.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.16 Any reported barriers to work [composite variable]

Universe: All respondents (N= 4082)

	Any reported barriers to work			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4082)	**61.7**	**[59.0, 64.3]**	**38.3**	**[35.7, 41.0]**
HMV cohort				
Longitudinal cohort (n=1475)	62.4	[58.7, 66.0]	37.6	[34.0, 41.3]
New cohort (n=2607)	60.0	[57.7, 62.1]	40.0	[37.9, 42.3]
Months enrolled in HMP-MC				
Less than 24 months (n=1691)	58.9	[56.0, 61.6]	41.1	[38.4, 44.0]
24-47 months (n=1019)	59.4	[53.8, 64.8]	40.6	[35.2, 46.2]
48+ months (n=1372)	63.2	[59.4, 66.9]	36.8	[33.1, 40.6]
FPL***				
0% (n=1312)	66.8	[62.2, 71.0]	33.2	[29.0, 37.8]
0.1 to 99.99% (n=1641)	60.1	[55.8, 64.2]	39.9	[35.8, 44.2]
100% or more (n=1129)	53.6	[48.7, 58.4]	46.4	[41.6, 51.3]
Age***				
19-34 (n=1663)	54.1	[49.7, 58.4]	45.9	[41.6, 50.3]
35-50 (n=1148)	68.6	[64.1, 72.7]	31.4	[27.3, 35.9]
51-65 (n=1271)	67.4	[62.9, 71.7]	32.6	[28.3, 37.1]
Rurality**				
Urban (n=2898)	60.5	[57.4, 63.5]	39.5	[36.5, 42.6]
Suburban (n=369)	73.4	[66.6, 79.2]	26.6	[20.8, 33.4]
Rural (n=815)	62.4	[55.8, 68.5]	37.6	[31.5, 44.2]
Gender				
Female (n=2427)	60.6	[57.1, 63.9]	39.4	[36.1, 42.9]
Male (n=1615)	62.9	[58.7, 66.9]	37.1	[33.1, 41.3]
Race/Ethnicity*				
White, non-Hispanic (n=2484)	65.0	[61.6, 68.3]	35.0	[31.7, 38.4]
Black, non-Hispanic (n=758)	56.4	[50.3, 62.3]	43.6	[37.7, 49.7]
Hispanic (n=263)	60.2	[50.0, 69.6]	39.8	[30.4, 50.0]
Arab, Chaldean, or Middle Eastern (n=235)	53.6	[43.8, 63.2]	46.4	[36.8, 56.2]
Other, multi-racial, or not reported (n=342)	64.4	[54.6, 73.0]	35.6	[27.0, 45.4]
Employment status***				
Employed/Self-employed (n=2428)	50.2	[46.7, 53.7]	49.8	[46.3, 53.3]
Not employed (n=1653)	78.4	[74.5, 81.8]	21.6	[18.2, 25.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Any reported barriers to work is defined as a response of yes to any of the following interfering with their ability to work, how much they can work, or the type of work they can do: Health, Transportation, Prior conviction or legal action, Caregiving responsibilities, Lack of jobs in the area

7.17 In the last 12 months, have you been forced to move because you couldn't pay rent or mortgage?

Universe: All respondents (N= 4082)

	Moved in last 12 months because couldn't pay rent or mortgage			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4076)	**5.0**	**[3.8, 6.7]**	**95.0**	**[93.3, 96.2]**
HMV cohort				
Longitudinal cohort (n=1474)	5.2	[3.5, 7.6]	94.8	[92.4, 96.5]
New cohort (n=2602)	4.7	[3.8, 5.7]	95.3	[94.3, 96.2]
Months enrolled in HMP-MC				
Less than 24 months (n=1687)	5.5	[4.4, 7.0]	94.5	[93.0, 95.6]
24-47 months (n=1018)	6.5	[3.6, 11.3]	93.5	[88.7, 96.4]
48+ months (n=1371)	4.4	[2.8, 6.8]	95.6	[93.2, 97.2]
FPL				
0% (n=1307)	6.0	[4.0, 8.8]	94.0	[91.2, 96.0]
0.1 to 99.99% (n=1640)	3.5	[1.8, 6.9]	96.5	[93.1, 98.2]
100% or more (n=1129)	5.5	[3.2, 9.2]	94.5	[90.8, 96.8]
Age				
19-34 (n=1662)	5.3	[3.4, 8.2]	94.7	[91.8, 96.6]
35-50 (n=1143)	5.7	[3.3, 9.7]	94.3	[90.3, 96.7]
51-65 (n=1271)	3.6	[2.5, 5.3]	96.4	[94.7, 97.5]
Rurality				
Urban (n=2893)	5.4	[4.0, 7.2]	94.6	[92.8, 96.0]
Suburban (n=369)	5.5	[1.4, 18.8]	94.5	[81.2, 98.6]
Rural (n=814)	1.8	[1.0, 3.2]	98.2	[96.8, 99.0]
Gender				
Female (n=2424)	4.2	[3.0, 6.0]	95.8	[94.0, 97.0]
Male (n=1613)	5.8	[3.8, 8.9]	94.2	[91.1, 96.2]
Race/Ethnicity				
White, non-Hispanic (n=2483)	5.1	[3.3, 7.7]	94.9	[92.3, 96.7]
Black, non-Hispanic (n=755)	5.1	[3.1, 8.4]	94.9	[91.6, 96.9]
Hispanic (n=263)	2.7	[1.5, 4.9]	97.3	[95.1, 98.5]
Arab, Chaldean, or Middle Eastern (n=235)	4.5	[2.0, 9.9]	95.5	[90.1, 98.0]
Other, multi-racial, or not reported (n=340)	6.5	[2.5, 16.0]	93.5	[84.0, 97.5]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.18 In the last 12 months, have you been homeless at any time?

Universe: All respondents (N= 4082)

	Homeless in last 12 months			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4077)	**6.2**	**[4.8, 7.9]**	**93.8**	**[92.1, 95.2]**
HMV cohort				
Longitudinal cohort (n=1474)	6.3	[4.5, 8.8]	93.7	[91.2, 95.5]
New cohort (n=2603)	5.9	[4.9, 7.1]	94.1	[92.9, 95.1]
Months enrolled in HMP-MC				
Less than 24 months (n=1688)	6.7	[4.8, 9.3]	93.3	[90.7, 95.2]
24-47 months (n=1018)	7.5	[4.7, 11.7]	92.5	[88.3, 95.3]
48+ months (n=1371)	5.6	[3.8, 8.1]	94.4	[91.9, 96.2]
FPL**				
0% (n=1309)	9.0	[6.6, 12.2]	91.0	[87.8, 93.4]
0.1 to 99.99% (n=1640)	4.6	[2.6, 7.7]	95.4	[92.3, 97.4]
100% or more (n=1128)	2.9	[1.7, 5.0]	97.1	[95.0, 98.3]
Age				
19-34 (n=1663)	7.6	[5.4, 10.7]	92.4	[89.3, 94.6]
35-50 (n=1143)	6.0	[3.7, 9.7]	94.0	[90.3, 96.3]
51-65 (n=1271)	3.6	[2.3, 5.5]	96.4	[94.5, 97.7]
Rurality				
Urban (n=2893)	6.3	[4.8, 8.2]	93.7	[91.8, 95.2]
Suburban (n=369)	6.4	[2.0, 18.6]	93.6	[81.4, 98.0]
Rural (n=815)	5.3	[2.6, 10.6]	94.7	[89.4, 97.4]
Gender**				
Female (n=2424)	4.1	[2.9, 5.9]	95.9	[94.1, 97.1]
Male (n=1614)	8.3	[5.9, 11.4]	91.7	[88.6, 94.1]
Race/Ethnicity				
White, non-Hispanic (n=2483)	5.1	[3.5, 7.5]	94.9	[92.5, 96.5]
Black, non-Hispanic (n=756)	8.1	[5.4, 12.0]	91.9	[88.0, 94.6]
Hispanic (n=263)	5.6	[2.1, 14.2]	94.4	[85.8, 97.9]
Arab, Chaldean, or Middle Eastern (n=235)	4.1	[1.2, 12.5]	95.9	[87.5, 98.8]
Other, multi-racial, or not reported (n=340)	8.8	[4.0, 18.5]	91.2	[81.5, 96.0]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.19 In the last 12 months, have you worried whether your food would run out before you got money to buy more?

Universe: All respondents (N= 4082)

	Worried food would run out			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4079)	**28.1**	**[25.6, 30.7]**	**71.9**	**[69.3, 74.4]**
HMV cohort				
Longitudinal cohort (n=1475)	29.0	[25.6, 32.6]	71.0	[67.4, 74.4]
New cohort (n=2604)	25.9	[24.0, 27.9]	74.1	[72.1, 76.0]
Months enrolled in HMP-MC				
Less than 24 months (n=1689)	27.3	[24.7, 30.2]	72.7	[69.8, 75.3]
24-47 months (n=1018)	29.0	[24.3, 34.4]	71.0	[65.6, 75.7]
48+ months (n=1372)	27.9	[24.4, 31.7]	72.1	[68.3, 75.6]
FPL*				
0% (n=1310)	31.6	[27.5, 36.0]	68.4	[64.0, 72.5]
0.1 to 99.99% (n=1640)	26.2	[22.2, 30.6]	73.8	[69.4, 77.8]
100% or more (n=1129)	23.8	[19.6, 28.5]	76.2	[71.5, 80.4]
Age				
19-34 (n=1662)	27.7	[23.9, 31.9]	72.3	[68.1, 76.1]
35-50 (n=1146)	31.8	[27.2, 36.8]	68.2	[63.2, 72.8]
51-65 (n=1271)	23.9	[19.9, 28.5]	76.1	[71.5, 80.1]
Rurality				
Urban (n=2895)	28.6	[25.9, 31.6]	71.4	[68.4, 74.1]
Suburban (n=369)	30.3	[21.8, 40.3]	69.7	[59.7, 78.2]
Rural (n=815)	21.4	[16.2, 27.7]	78.6	[72.3, 83.8]
Gender				
Female (n=2426)	29.5	[26.3, 32.9]	70.5	[67.1, 73.7]
Male (n=1614)	26.7	[23.0, 30.8]	73.3	[69.2, 77.0]
Race/Ethnicity*				
White, non-Hispanic (n=2484)	25.4	[22.3, 28.8]	74.6	[71.2, 77.7]
Black, non-Hispanic (n=758)	33.4	[28.0, 39.4]	66.6	[60.6, 72.0]
Hispanic (n=262)	33.6	[24.2, 44.5]	66.4	[55.5, 75.8]
Arab, Chaldean, or Middle Eastern (n=235)	20.0	[12.7, 30.1]	80.0	[69.9, 87.3]
Other, multi-racial, or not reported (n=340)	30.7	[22.4, 40.5]	69.3	[59.5, 77.6]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

7.20 In the last 12 months, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

Universe: All respondents (N= 4082)

	Cut size of or skipped meals			
	Yes		No	
	Row %	95% CI	Row %	95% CI
Total (n=4076)	**23.4**	**[21.1, 25.8]**	**76.6**	**[74.2, 78.9]**
HMV cohort				
Longitudinal cohort (n=1475)	23.5	[20.4, 26.9]	76.5	[73.1, 79.6]
New cohort (n=2601)	23.1	[21.2, 25.1]	76.9	[74.9, 78.8]
Months enrolled in HMP-MC				
Less than 24 months (n=1685)	23.8	[21.2, 26.6]	76.2	[73.4, 78.8]
24-47 months (n=1019)	25.4	[20.9, 30.4]	74.6	[69.6, 79.1]
48+ months (n=1372)	22.6	[19.4, 26.1]	77.4	[73.9, 80.6]
FPL*				
0% (n=1310)	27.0	[23.2, 31.1]	73.0	[68.9, 76.8]
0.1 to 99.99% (n=1639)	19.7	[16.3, 23.6]	80.3	[76.4, 83.7]
100% or more (n=1127)	21.8	[17.8, 26.4]	78.2	[73.6, 82.2]
Age				
19-34 (n=1662)	24.4	[20.9, 28.3]	75.6	[71.7, 79.1]
35-50 (n=1146)	25.3	[21.2, 30.0]	74.7	[70.0, 78.8]
51-65 (n=1268)	18.8	[15.3, 23.0]	81.2	[77.0, 84.7]
Rurality				
Urban (n=2893)	24.1	[21.5, 26.8]	75.9	[73.2, 78.5]
Suburban (n=369)	22.5	[15.3, 31.9]	77.5	[68.1, 84.7]
Rural (n=814)	18.3	[13.2, 24.8]	81.7	[75.2, 86.8]
Gender				
Female (n=2422)	22.9	[20.0, 26.0]	77.1	[74.0, 80.0]
Male (n=1615)	23.9	[20.4, 27.8]	76.1	[72.2, 79.6]
Race/Ethnicity				
White, non-Hispanic (n=2482)	23.2	[20.1, 26.5]	76.8	[73.5, 79.9]
Black, non-Hispanic (n=757)	21.8	[17.4, 26.9]	78.2	[73.1, 82.6]
Hispanic (n=263)	33.4	[23.7, 44.6]	66.6	[55.4, 76.3]
Arab, Chaldean, or Middle Eastern (n=235)	23.1	[15.2, 33.7]	76.9	[66.3, 84.8]
Other, multi-racial, or not reported (n=339)	23.2	[16.7, 31.2]	76.8	[68.8, 83.3]

Pearson, *p<.05, **p<.01, ***p<.001

Total n may be less than universe N due to item non-response

Beneficiary Interviews Appendix

The Beneficiary Interviews Appendix includes additional quotations from the beneficiary interviews.

Beneficiary Interviews Appendix

Evaluation question 1.5: How has the Heathy Behaviors Incentives program, and HMP as a whole, affected beneficiaries' engagement in health behaviors and other efforts to maintain or improve health over time?
Hypothesis 1.5: Beneficiaries will describe assistance from primary care providers in setting health goals and engaging in behavior change to meet those goals.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to knowledge of the Healthy Behaviors Incentives program, experiences with the Health Risk Assessment, and engagement in behaviors to maintain or improve health.

Knowledge of the Healthy Behaviors Incentives program

Many interviewees had not heard of or had a limited understanding of the HMP Healthy Behaviors Incentives/Reward program.

> *I do recall something like that. I don't know a lot about it, though. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Some interviewees, including the few who reported receiving a healthy behavior reward, correctly described key aspects of the program. When asked specifically about it, only some interviewees recalled seeing, on their MI Health Account statement, that they could lower their health care costs by earning a healthy behavior reward.

> *It's setting goals for yourself and trying to abide by those goals…I guess seeing the doctor and talking to the doctor about some goals you have for yourself, such as you want to lose weight, gain muscle…And you get a really good discount for what would be the monthly bill. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*

> *I believe I had something they sent in the mail or in a newsletter. And I know seeing the doctor and stuff, I did get a healthy reward or sometimes the payments I made were 50% less if I saw the doctor yearly and had testing and stuff done. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *Well, it was just on one of my statements. They just said as long as you do that type of stuff, and for a while they used to, when I did my physical, if I turned my paperwork in, I used to get a gift card but don't mind doing it. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

Health Risk Assessment

A majority of interviewees recalled completing at least one Health Risk Assessment (HRA). Few interviewees said that the possibility of receiving a reduction in what they owed through the Healthy Behavior Reward program was what motivated them to complete the HRA. Primary

reasons for completing the HRA included encouragement or reminders from their doctor, health plan, or HMP to do so, and a desire to complete it for the benefit of their own health.

> *I was going to do it [the HRA] anyway. It [the HBR reward] might motivate other people, but I was going to do it anyway for my own personal health. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

> *They do push you to find a healthy behavior and do some things that it's like, it's like a reminder, you know… you need to step up a little bit. I don't have any problem with the health risk assessment, I think it's a good idea. I think that's more important than the— well, the healthy rewards part of it—but with the health risk assessment I do actually have to fill out a form and think about something and not just blow it all off, you know. I think they are helpful. And you sit down with the doctor and oh, what will you work now, or what's next or how you feeling? I've been so proactive with my doctor ever since I've had this. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Many interviewees who recalled completing an HRA said they worked with their doctor to select their healthy behavior goal, and some said that those conversations helped facilitate their engagement in health behaviors. Many interviewees said they had made progress toward the healthy behavior goal that they selected.

> *Many times, when I go to the doctor, I'm not quite sure how to put into words what I might be feeling. So having the health risk assessment helps me figure out what to say, and that helps steer the conversation so the doctor can help me do better at it. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

> *Well, yeah, getting healthier was always a good goal for me, food-wise and stuff. I didn't always do good choices, so just talking to her and knowing things about how to reach the goal food-wise or exercise always kept me motivated too. Just keeping doing it. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *Yep, because I was a little overweight. And that's what me and my doctor talked about. So that's what made me start eating more healthier and exercising. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

> *Well, it was like in consultation with my physician. We talked about some of the goals we have to work on, and it was like exercise, diet, taking the right medications, just staying on track with the program, the plan. It was kind of after going through the check-up and all of the issues; that was kind of how it was developed. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

Engagement in health behaviors and other efforts to maintain or improve health

Most interviewees were engaged in health behaviors and other efforts to maintain or improve their physical and mental health. Some attributed this to having HMP coverage. Interviewees

reported getting regular checkups and preventive care including dental care, engaging in exercise, healthier eating, quitting or cutting back on smoking, and taking their medications.

> *Well, my only goal was to get my weight down and I have, because I went from weighing 260; I weigh 210 now…So I am working on it every day. Just try to eat better, have smaller portions, just try to not snack so much in between there. But I have been actually making progress, and I haven't had my arthritis flare up in maybe 3 or 4 months now when I used to get them on the regular. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *I watch my diet. I watch my cholesterol. I had to quit smoking about three years ago now. So yeah, you know I feel good. Yeah, I do watch, I do go for checkups, you know, annually where I wouldn't have normally probably went. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *Well, just regular check-ups and things. I think I was avoiding those, but now it's more regularized. So, more checkups, more following regiments, exercise, kind of watching what I eat. I've definitely made changes. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *I'm in a quit smoking program…My biggest thing is smoking, was smoking, because it gives me COPD, you know. And I got shot in the neck and I got a lot of scar tissues in my neck, so the doctor always said the best thing to do is stop smoking…that's one thing I did to try to change…I'm down to maybe three a day. (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

> *I see my doctor more often. I follow the advice she gives me and take prescribed medications and always seem to find and get the good care when I need it. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

Interviewees commonly reported that getting information, including learning about their health, and encouragement from their doctor, helped them make positive behavior changes.

> *Just, whenever I go to the doctor, she usually has concerns about my being a little overweight or not eating healthier foods and stuff like that. And she helps convince me that that'd be the way to go for a longer and healthier life. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

> *Well, just going to regular check-ups and what not, those are kind of showing me the health issues that I need to address. So, cholesterol levels, and blood pressure, and things like that which I wasn't really monitoring. So, it…really kind of forced me to address those issues. I think before I was kind of lax and really not focused on them. So, just the awareness, did I have, you know, certain medical issues to address. It's definitely changed my kind of, you know, approach to my whole health. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *Right now I feel much better. Especially when I was informed that my thyroid was normal now after taking the medication and taking the doctor's advice of eating, for example, fish because it has iodine so yeah, it's really helped me. I really listen. I used to be a little stubborn to be honest when it comes to the health, but now I'm more open and I understand better. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *Between the information from the doctors and the insurance companies has helped me a lot, giving me different information on different types of stuff as far as different foods that I used to like to eat and they say, "ok you can have that, but you've got to cut it down as far as moderation." (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

Some interviewees described how HMP coverage facilitated their ability to get regular checkups and preventive care, including dental care.

> *It helps me stay focused on my health. The annual checkups are a big deal because it, you know, touch base with the doctor and she's like, she told me to watch my cholesterol and I'm expecting to hear that when I go in there. But you know, I wouldn't probably be going for my check-up if I didn't have this for my annual physicals. So, I really like it. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *I was able to go to the dentist for the first time in many years, and I've been able to take better care of my mouth thanks to that. And make a better effort to keep my teeth clean. Because it's easy to get lazy about that. But it's good to have a dentist and to have the information to really help me to motivate myself to make sure I do. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

> *But cutting out those wrong foods has really, really helped me. And those are things that I wouldn't have done if I didn't have the insurance to go to the doctor. So those are my two things that I really had to get under control, and I have. Especially with my weight. I have lost that weight, really have doing it the right way. And so, without those things I wouldn't be doing those things. I probably would be doing the same things I was doing and still be suffering probably right now. But I feel better, I am able to take the weight down, my knees are not so stiff, and those are things without my doctor I wouldn't do. So it's been good for me to be able to go, and that's the biggest thing. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

Some interviewees said that reminders about preventive care and other materials provided to them by their health plan helped them take better care of their health.

> *I always get like letters or updates on health care and things that are covered or stuff like that. Ways to take care of myself. They send me newsletters which I really enjoy. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *They remind me. Okay you got to go because you didn't visit the doctor for a while now. They send me letters in the mail to do the Risk Assessment, to go check up with the doctor or do some tests. That is also one of the things that caught my attention*

> *and felt like they really cared about our health to go do tests and checks once in a while…So when they encourage you to do so and it's covered, you gotta go check on your health. I didn't have someone to encourage me to do that before to be honest. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *Well, one thing I like about it is they keep you up to date on, like, it's time to go get your mammogram, you know what I'm saying? They let you know when the time comes, because you know it could slip by years and you don't know unless you get sick, you know what I'm saying? (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

Only a few interviewees mentioned barriers to taking care of their health. The barriers they reported included school, job, or family responsibilities or stressors, limited time, and environmental factors (e.g., weather, lack of sidewalks) and lack of internal motivation.

> *I try taking a walk, like I said, daily. But that sometimes gets messed up when your daughter's been up all night and your super tired the next day or that type of thing…or no sidewalks when we're up on vacation at my parent's house. They live in a rural kind of setting and there are no sidewalks, so I don't walk on the side of the road because it's just more dangerous. (Age 19-35, Male, 100-133% FPL, W/E/Central)*

> *I think just throughout the year, as opposed to the summer months, it's difficult to take care of my physical and mental health all together as one. Because I'm busy studying. (Age 19-35, Female, 100-133% FPL, Detroit Metro)*

> *…there's nothing really, to really prevent me. You just have to be sort of focused and determined to follow through. I think I've been lagging on the exercise regimen and try to keep up on that level that I was at earlier. But, you know, with the heat, there's always little things that make you want to procrastinate and what not. But there's nothing to really prevent me from doing that other than kind of my will. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

Summary of response to evaluation question 1.5

These interviews suggest that the Healthy Behaviors Incentives Program is not the primary motivator of beneficiaries' engagement in healthy behaviors. Most interviewees were not aware of details of the program. While many recalled completing at least one HRA, the possibility of a reward was not their reason for adopting a healthy behavior goal. Most reported that self-motivation or encouragement from their providers encouraged them or supported their adoption of healthy behaviors. Many beneficiaries reported that supportive information and guidance from their primary care providers and health plans (e.g., health education, reminders, goal setting, monitoring), along with HMP coverage itself, were important to their efforts to maintain or improve their health over time.

Evaluation question 2.3: Are beneficiaries able to understand the MI Health Account statement?

Hypothesis 2.3: Beneficiaries will understand where to find the amount they owe, but may not understand how that amount is calculated.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to the MI Health Account Statement, knowledge of costs, and knowledge of consequences of nonpayment.

MI Health Account Statement

Most interviewees recalled receiving a MI Health Account statement. Many expressed a general understanding of the statement and described some of the statement's key features (e.g., a list of the services they received, how much the services cost, the amount they owed). Most said they were able to easily tell how much they owed from the statement. Some interviewees reported not reading the statement closely, focusing instead on the amount they owed.

> *The doctors that I had saw, what I had done, prescription costs, and things like went up or went down and I always checked to make sure I was charged for the correct services. They were really easy to read and understand and they were always correct for me…and I liked getting them to make sure, you know, I saw the right people. It was a good tool also. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *It just tells the doctor's name, and it tells how much they charge, and it says how much my program pays, and then it tells how much each copay is and stuff. But I check that out and I understand what that means, yes. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *I just got one that said I got an echocardiogram not very long ago, and I got one that said this is the service I received, and if I didn't receive the service, I need to contact them. And it says how much it was, and how much I owe, and that's what I remember on my account. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)*

> *I'm not 100% sure if it was from Michigan or from the Meridian, but they usually send me a letter that says I have received this service or I have done this or I have seen this doctor just to make sure it's me, which is convenient in my opinion because a lot of scam happens. So, I really appreciate that. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *I don't know if I review them that close but I review them enough so I can go in and pay them. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

Only a few interviewees said they learned about the cost of the services they received from reviewing their statements.

> *Yeah, it kind of says. I don't know if the charge is different…from when you go in the hospital to what the insurance pays, I know there's a big difference to what they allow, so I don't ever usually see the full price. But it says the partial, you may owe, and it shows 0. So I'm like okay...It just makes it to where there's no extra worrying on my part. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *It's excellent. I love getting that statement and seeing what things actually cost and what they pay. I tell friends, it's just incredibly efficient. You're able to see how much costs are, how much they pay, and my share is just minimal. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

Knowledge of costs

Many interviewees said they knew the amount they expected to owe from their statement. Most found the amount they owed to be reasonable. However, some interviewees described feeling surprised and confused when they received a statement or other communications that showed an increase in the amount owed or indicated they owed something when they thought they did not.

> *My biggest surprise is some of the things that they're, they're pretty reasonable.…I was just surprised about some of the costs because I know I've paid out of pocket before, and it seems like I paid more than some of those. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *Well, I thought it was more than reasonable to be totally honest with you… I wasn't ever shocked that it was a lot. You know, I was happy to pay what I owed. So, I think everybody should pay, participants should pay something what they can afford, you know, I do believe that everybody should have some skin and game. But I was, I was happy with what I was paying. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *I remember, they usually send me every couple months or so a copay, and it's really, really, affordable. Like $6 or $8 the most. So it's so, so affordable which is also convenient in my case because I'm also a student. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *I was never told that I was going to pay a copay, and I think I owe them still. I'm still confused why I had a copay. I don't know if anything changed because of the benefits, or if it was because of my income. And this has been going on for like two years that they have been billing me. (Age 19-35, Female, 0-99% FPL, S Central/SW/SE)*

> *I just thought it [the MI Health Account statement] was just something they send out. I didn't know I would actually owe money on it. So I really, it's not something I normally paid attention to until I started getting these phone calls. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

Some interviewees had a limited understanding of how the total amount they owe is calculated, but the majority did not know. Few interviewees understood which services do and do not have copayments associated with them.

> *I don't know how they determine that… Because one time I wasn't paying nothing then they came up with $50 a month. (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

> *I know that they were saying something about a copay. But, no I don't know because when it started I didn't have to pay anything. So I'm not sure how they determine what you owe. I just know that they said that that's what I owed. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *I thought it was determined based off the visits. (Age 19-35, Male, 0-99% FPL, Detroit Metro)*

> *I do think a lot of it is income contingent and that kind of thing. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *Not really, no. It seems if I saw the doctor a lot it always seemed a little less, I guess. I didn't really know how they arrived at the cost sometimes. But you know they were easy to read, I just didn't know for sure. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *No I don't [know how the amount was calculated], but I don't care. I understand that some medications cost money and some don't. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Knowledge of consequences of nonpayment

Many interviewees did not know what would happen if they did not pay the amount they owed. Some interviewees thought they could lose their coverage if they did not make their payments.

> *I mean I'm sure there's some kind of penalty. But I'm really not sure since I'm usually able to pay it off. (Age 36-49, Male, 0-99% FPL, UP/NW/NE)*

> *Well I think that you could eventually lose your coverage, right? I think that's one of the things that they mention. You could lose your coverage, yeah. So I'm aware of the consequences, it's very important to keep on time and stay current and not get behind on those. Because I know, ultimately you could lose your coverage. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

Summary of response to evaluation question 2.3

Most interviewees recalled receiving a MI Health Account Statement. Most said they focused on reviewing how much they owed. Few interviewees knew how the amount they owed was

calculated. Most were satisfied with the amount they owed; only a few expressed surprise or disappointment. Most interviewees did not know the consequences for non-payment.

Evaluation question 2.4: What are barriers and facilitators for beneficiaries to pay the amount owed?
Hypothesis 2.4: Beneficiaries will report financial barriers more often than logistical barriers to paying the amount owed.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to the payment process and barriers to making payments.

Payment methods and process

Most interviewees reported making MI Health Account payments. Most who made payments reported mailing in a check or money order; some reported making the payments online.

> *I usually make out a check and mail it to them. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *I just did a money order…Because I think it was like $3 a slip or something like that. So just got a money order, filled out a slip, put it in there with the slip, and sent it back. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *I do it all online. Honestly, the state's website is kind of archaic looking, but it's pretty easy to put your information in to pay for it. As weird as that sounds, as first it kind of sounds like a sketchy website. But you realize that this is the official site. When I first did it, I was like, is this going to the right place? It seems like it did, I hope so. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*

Most interviewees said that the process of making payments was easy. Many reported that they would pay the full amount on their statement at one time rather than paying monthly. Some said they liked having the option to make smaller monthly payments.

> *They give you plenty of time, so I've never been late on those or had a problem paying those. They send a pretty good schedule and it's clear. All the statements will be for a certain month. They'd break it down like for July, August. So it was very clear, very easy. No problems there at all it was very easy to do. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *I just send the whole thing in. I'm not going to get three envelopes, and pay for three stamps, and pay for three money orders for $14…but then your talking three stamps, three envelopes, whatever stamps are now a days. And I'm pay sixty cents for a money order, I might as well just pay it either at the beginning or at the very end. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

> *Depending on the cost, sometimes it's only a few dollars. I'll usually pay off three months at one time unless it's a little higher than usual then I'll pay it monthly…A lot depends on, you know, how much I'm working at the time. Sometimes I work a lot more. I continued to work through COVID, but it was shorter hours. So if it was a little more than usual than I paid it every month. Otherwise, I'd do it every three months. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *…if it was something I couldn't take care of at that time, they could break it up. So, that was nice to have that option as well. (Age 36-49, Female, 0-99% FPL, Detroit Metro)*

Barriers to payment

Some interviewees described financial barriers that made it more difficult to pay the amount owed or to make payments on time.

> *Well, I mean, I was working at one time, part time, and I paid it and now I'm not working part time, and I'm just living off my Social Security checks. So, I mean, I do pay it, but it is a little bit harder. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)*

> *Well at first, because I wasn't working, it took me awhile because I didn't have any extra money. But I didn't find it hard to pay it, it's pretty simple the way that it's set up for you to do. So, no I didn't have an issue paying it. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

> *I'm supposed to pay it monthly. No, I can't say I'm always accurate. But I have paid them…I have bills. I have to buy food. Food is the most highest thing now going. Now gas went up. Do you know what I'm saying? It's not that I like make so much money. Because I don't…I work 32 hours a week. That's not much, you know what I'm saying? (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

> *Like the copayments just came out of nowhere, so that's where I was like maybe because my income went up, but I still had like car insurance I had to pay. I was a single parent, like literally no help at all. (Age 19-35, Female, 0-99% FPL, S Central/SW/SE)*

A few interviewees described other factors that influenced whether and when they paid including competing demands on their time, forgetting to pay, or not receiving the statement.

> *I work long hours and days, and when I get home, I am exhausted, and I don't think of things like that. I think about trying to get my house clean, or do a load of laundry, or put the dishes away. I have other things to do than go on there and pay a $3 bill. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)*

Summary of response to evaluation question 2.4

Most interviewees had made MI Health Account payments, typically by check or money order. Most reported the process of making payments was easy. While many reported paying for all three months at one time, some paid monthly and appreciated the option to pay in smaller amounts. While the majority of interviewees did not describe barriers to making payments, some described financial and other barriers.

Evaluation question 5.5: How has HMP impacted beneficiaries' physical, mental, and oral health and their use of health care services over time?
Hypothesis 5.5: Beneficiaries will describe HMP as allowing them to receive services that have a significant positive impact on their health and well-being.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to access to different types of health care and the impact on health, the impact of the COVID-19 pandemic on service use, and impact of having HMP on overall wellbeing.

Access to health care and impact on physical health

Most interviewees said having HMP coverage has allowed them to access needed health care services and medications that they otherwise would not have been able to get due to cost. Many interviewees said they were more likely to seek out needed care, for both acute and chronic conditions, because of their HMP coverage. Interviewees described how their increased access to care has led to improvements in their health.

> *Well, before, when I didn't have healthcare, I couldn't go to the doctor when I was maybe in pain…But now that I have the Healthy Michigan Plan, now I can go to my scheduled appointments, you know, every six months….I'm a pre-diabetic, and so I have to go to the doctor to check my A1C and stuff so that's all doing well. And I'm just happy about the insurance now, because without insurance, your health will decline, especially if you don't go to the doctor to keep up on your health. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

> *I actually had COVID and it covered all the inhalers and like special medications and stuff they put me on, stuff like that back in October. So, without it, I would have really been in big trouble. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

> *I would absolutely say it's improved. I was able to get glasses a few years ago, which improved my eyesight tremendously. And varicose veins, relief in my legs and feet was tremendous, tremendous relief. I didn't know I was living in such pain, so I was able to get that done…. I'm part time, so I don't make a lot of money. I couldn't tell you off the top of my head what the cost of my kidney surgery was, but I'd probably never be able to pay that off in this lifetime…I would probably be in the grave if I*

> *didn't have this coverage to be honest…I don't know if I would be here today without this Healthy Michigan. (Age 50-64, Male, 100-133% FPL, UP/NW/NE)*

> *Since I'm able to go to the doctor's and get regular physicals done, and my teeth and eyes done…Otherwise, I wouldn't be able to afford to go to a dentist or doctor because I wouldn't have any other insurance to pay for it. So, it has improved me a lot since I'm able to go through this health plan…I had insurance [before] but it didn't take care of a lot of the things I take care of now like my teeth and my eyes and stuff. It was limited on what I could take and what I could do. And this I like a lot better because I get my teeth checked every six months and I can go to the eye doctor every year and get my eyes checked. And I keep up with my physical health because I'm sixty years old. I try to keep my health healthier as I get older…And it's helping me take care of my medication more than I was able to before…I've lost weight, I feel healthier than I was because I was very limited on with what I could do when I was with my other insurance. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

Some interviewees said they were less likely to use the ED or visit an urgent care center as result of now having a regular source of care.

> *I don't use the emergency room much anymore. I just only go to my regular doctor or if I have to go to a specialist, I go to them…I didn't really like to go to the emergency room because I ended up paying for a lot of that. I didn't have any other way. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *I guess, if I didn't have coverage and there was a problem, I'd be more likely to go to urgent care. Just because it was cheaper…When I have coverage, I like to, or I prefer to have that established relationship with the primary care physician so they can monitor my health long term. So, if I have any issues then it seems a lot more in-depth and better care that I'm receiving if I can go to a primary care versus an urgent care. (Age 19-35, Female, 0-99% FPL, W/E/Central)*

> *I am able to say "hey this is going on" and can I get a doctor's appointment. And I am able to go there, whereas before if it was something with that or I was having issues, I didn't have a choice but to go to the emergency. So, it's been a lot better with that. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

A few interviewees noted delays in accessing specialist care or difficulty finding a specialist that accepted HMP in their area.

> *The neurologist. I was told they are very backlogged in their patients…the nearest appointment I got was like three months, like I was at the DMV. (Age 50-64, Female, 0-99% FPL, Detroit Metro)*

> *And there were no neurologists up in this area. The nearest neurologist was Grand Rapids, which is 2.5 hours. In the winter it's a treacherous drive down 131. So, I just blew that off and she [doctor] was able to get me samples of the medicine for a*

> *while… If I had good health insurance, I could see a neurologist locally, make a few visits, and get a prescription. It's because I live in [location]. Otherwise, Medicaid's been pretty good up here. I had some trouble finding a dermatologist, but now I got a dermatologist, really good, right in town. So things have been pretty good. For specialists, kind of a gap up here it seems of people who take Medicaid. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

> *I know it was a little bit tricky, it wasn't that tricky, just had to be intentional about finding a place that would take my insurance for my cyst draining because it was dermatology. But we did find a place, it just took a little while to get in. I don't know if I can blame that on the Healthy Michigan Plan or COVID-19. (Age 19-35, Male, 0-99% FPL, W/E/Central)*

> *In my area, I was very disappointed with the coverage. I literally couldn't find an eye doctor to get into to get my glasses…there's not a lot of places that take that specific coverage here. And the couple that did were so overbooked and packed you couldn't even get in. And I'm literally half-blind…my old glasses were broken and I needed them right away, so I had no choice but to find an alternative and it ended up costing me $200 out of pocket. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

Access to dental care and impact on oral health

Many interviewees said that their HMP coverage allowed them to get regular dental care and motivated them to focus on their oral hygiene at home, both of which improved their oral health.

> *It helps a lot, which I'm able to get my teeth cleaned periodically. If I didn't have this plan, I wouldn't go anywhere. Or I basically wouldn't cover anything to do with my teeth and problems would occur from that. Such as if I had a tooth pain in my mouth that I can immediately get checked out. Not too long ago, I had a problem with my teeth, and they were able to address it and I was able to get that treated. It was my wisdom teeth. If I didn't have that [coverage], I would have been in a lot more pain and I wouldn't have known what to do for getting that treated. (Age 19-35, Male, 0-99% FPL, S Central/SW/SE)*

> *Now I can go to the dentist and get my teeth cleaned like I should, you know what I'm saying. I mean I've lost a few teeth but, you know, I thank God for the few teeth I do have. I at least can go to the dentist and get them cleaned. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

Some interviewees had not received needed dental care or had delayed getting dental care due to limited availability or difficulty finding an oral health provider in their area that accepted HMP.

> *There really isn't a dentist around here that takes the dental health plan that I'm on. There's one but my teeth are so bad, I did have a while back an abscess and I had to go to the ER and they wanted me to go to like an oral surgeon. But the one in [location] don't take the plan no more, so I'd have to go down state…But they gave*

> *me IVs so I've just been trying to keep it as best as I can. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*
>
> *There's one dentist in my city who actually goes through UPHP, so I was unfamiliar with him. So, I hadn't really considered going to him. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*
>
> *I've had a couple of teeth pulled out. I've had a couple of fillings. But it's hard to find dentists in my part of the state that takes [health plan]. I live in [location], and I have to go to Bay City to find a doctor. (Age 50-64, Male, 0-99% FPL, W/E/Central)*
>
> *I had an abscess tooth and I tried to get into the dentist and they couldn't get me in for like a month or two later. And it was severe tooth pain and I just felt like that wasn't really doable. You shouldn't have to suffer and wait when it's an emergency-type situation like that…I ended up going to another place and paying cash. Just to get the antibiotic and the tooth taken care of faster. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

Access to mental health care and impact on mental health

Some interviewees described receiving mental health services covered by HMP that led to improved mental health. A few interviewees said behavior changes they had made since getting their HMP coverage led to improvements in both their physical and mental health.

> *The counselor helps a lot, and the medication, the doctor, all of them help a lot. My mental health is probably the best it's ever been in my life…The insurance helps me get the care that I need. Without the insurance I would not be where I am today, and that's a fact. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)*
>
> *I would say I was a bit depressed because of my thyroid issue, but with the help from the Medicaid itself and the program and the doctors and everything, I would say yeah, it's improved my mental health as well. I used to be stressed or depressed, but with the advice to take the medication constantly and take my vitamins, it helped. It definitely helped. Right now I feel much better. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*
>
> *I saw her [therapist] for about three years and she helped me through some anger issues so I'm a lot more calmer, which has helped in my health because it's lowered my blood pressure…I'm thankful for the therapist, and I'm thankful for the insurance. Because if not, I wouldn't have been able to afford it. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

A few interviewees said they had trouble finding a mental health care provider that accepted HMP coverage.

> *I feel like there aren't as many providers that participate with it when it comes to mental health. It's really limited in the area. It makes it a little stressful when scheduling appointments because the only ones I found are between certain hours so I generally have to take time off of work, where I know other people can go after work or on a Saturday or something like that. (Age 19-35, Female, 0-99% FPL, W/E/Central)*

> *I called my Medicaid card place, and they gave me a few listed, but the listed people were full, or they didn't accept the [health plan]. So, it's just the point of finding someone that accepts it. (Age 19-35, Female, 0-99% FPL, S Central/SW/SE)*

Learning about and monitoring health conditions

Many interviewees received new diagnoses and/or were better able to monitor existing health conditions because HMP covered regular doctor visits and tests.

> *I've learned that sometimes my bloodwork numbers don't always come back good. Like triglycerides and cholesterol and stuff, so. But doing the preventative – I get it done yearly – so if something goes up, I have a chance to work on getting it back down…Instead of letting it go and then causing chronic illness or something else bad to happen later on. It helps me so I can monitor that type of stuff regularly instead of it getting into a bad situation. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

> *Like blood pressure, I mean that was something that I was unaware of. And then the diabetic condition, found that out after a blood test. So, really that's been the biggest change. It's kind of I'm more aware of all the health issues I have and have to address…So, that's made it easier to confront them, and the medication and everything has helped. And kept it under control, you know the blood pressure and cholesterol. The diabetes I'm taking metformin for that…Before, I think, just not having that awareness really hurt me and really hurt my health situation overall…I think the health plan is really good in that regard. Encouraging you -- that you go to screenings and check-ups and all -- that has been really helpful. It just kind of makes you get out there and do it instead of procrastinating. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*

> *I know what's going on in my body more than before…I know what I need to do, what I need to eat…And every six months they ask me to check with them the blood pressure to watch my sugar level, blood sugar. (Age 36-49, Female, 0-99% FPL, Detroit Metro)*

> *As far as learning, probably the most I've learned from is when they do like labs blood work and stuff, you know. I had the high white blood count and I've learned—and that's one of the things that on the reason why I quit smoking. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

Impact of the COVID-19 pandemic on service use

Many interviewees reported delays in getting care in the past year, especially dental care, due to COVID-19-related office closures, appointment backlogs, and concerns about the risk of infection. Other interviewees said their use of health care services had not changed much in the past year and that they were able to receive care in person.

> *I've delayed care when it comes to my dental. I'm a little apprehensive about the virus and being unmasked and everything. Generally, I've had really healthy teeth in the past so I've just kind of put that off, I don't think I've gone in the last year. But other than that, I feel comfortable with the practices they have at my family doctor. (Age 19-35, Female, 0-99% FPL, W/E/Central)*

> *But they're [the dentist] so backed up from being closed from COVID that it's been hard to get in to get what you need done in a timely manner. They're like months and months out between appointments and stuff at the one place I can go to. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

> *I was able to make my appointments to go in and see the dentist if I needed to. They had two different regulations where you had to wear masks and different things, but I was still able to go in and see the doctor if I needed to. It didn't impact me too much. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *With COVID happening it was impossible for me to consider going to the doctors for an annual check-up. I think it was in the summer of last year that they asked me if I wanted a check-up, and I was like 'no way', just because it seemed very dangerous and there was an influx of patients at the local hospital here. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*

> *Yeah, I don't think that my regular care was delayed too much, because I only do that once a year anyways. I was able to do my once a year check-up, I think I went to my primary care doctor twice last year. Once to get a referral to get my cyst drained and to get it checked and that took a long time to get in there. (Age 19-35, Male, 0-99% FPL, W/E/Central)*

Some interviewees reported getting care via telehealth visits in the past year. Most were satisfied with their experience although some interviewees felt that telehealth visits were not as good as getting care in person. A few interviewees said they preferred getting care via telehealth.

> *I didn't notice much of a difference between video chats and in person. Obviously, temperature, and blood pressure, and those types of things are different. But it didn't make much of a difference; it felt like I was right there in the office. (Age 19-35, Male, 100-133% FPL, W/E/Central)*

> *I think for the COVID it [telehealth] was probably nice, so the spread was lessened. But I don't like that a doctor can't check your vital lines and really check you out. It's not the same…But I've been vaccinated since February. I've been going in person to*

> *all my visits…I don't think it's [telehealth] thorough enough for someone that's truly got stuff wrong with them. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

> *It [telehealth visit] was actually preferable because it wasted less time and energy, and medicine. It doesn't work for everything, for things you have to do in person or whatever, but it allowed me to talk to the doctor or professional that I needed to. (Age 19-35, Female, 0-99% FPL, UP/NW/NE)*

> *I had COVID, and I had the COVID rash, and it was all over my body. So, I had called him [doctor] about that, and he could look at it and it was perfect. So, it [telehealth] was better than going in and exposing people or him, or anything like that. It was very beneficial and helpful….My therapy - actually, we still do video conference. I don't know if I got lazy, but we just do them over the video. It's just convenient. I'm at home, I'm comfortable, and we just talk. It's great. (Age 36-49, Female, 0-99% FPL, Detroit Metro)*

> *Well like the mental health I've been doing virtual and then everything else has been in-person care…It's been video every time except once I was having problems with my phone then we were able to do it just as a call. I think it's really helpful. I kind of like it better that way because then I am kind of in my own place and it feels a little less formal. I really like the virtual for mental health. I think it's a good idea for me. (Age 19-35, Female, 0-99% FPL, W/E/Central)*

Impact of having HMP on overall wellbeing

Many interviewees said that having HMP coverage reduced their stress and worry about being able to access care when needed.

> *I'm much less anxious and knowing that I'm not going to have to fight with multiple insurance companies and just not knowing how much I'm going to have to pay out of pocket for any potential emergencies. (Age 19-35, Male, 100-133% FPL, UP/NW/NE)*

> *But it's less stressful knowing I have coverage. I was stressed out for years, watching my friends go medically bankrupt and having to deal with that. Knowing that I had coverage if I had to go to the ER took a lot of stress off me. First good health insurance I've had in my life…best insurance I've had. (Age 50-64, Male, 0-99% FPL, UP/NW/NE)*

> *It's a great relief knowing that I have this plan because compared to not having it, it would have been way more stressful. Because I would have been more prone to weighing my options rather than being able to make the choice of going to the doctor or getting a check-up. (Age 19-35, Male, 0-99% FPL, S Central/SW/SE)*

> *I'm more comfortable in going and doing whatever I need to do because I know I have the coverage. You know and you don't have to worry, how my going to pay this bill, I'm not going to pay that bill. (Age 50-64, Female, 100-133% FPL, W/E/Central)*

Many interviewees expressed gratitude for, and satisfaction with, their HMP coverage.

> *I'm thankful I have this program, otherwise I wouldn't be going to the doctors at all because I wouldn't be able to afford to go. (Age 50-64, Female, 0-99% FPL, UP/NW/NE)*

> *But I would say overall, I'm really satisfied. I always receive services for whatever I need, and it really helps because it covers almost everything. It's really helpful especially to students or people who are working part-time. (Age 19-35, Female, 0-99% FPL, Detroit Metro)*

> *Now I've been able to go to the doctor like I should and all and keep up on my health, you know, that way. Because without the insurance I couldn't go to the doctor then I'd bleed, and my health would probably fail. So yeah, I thank God for this Healthy Michigan Plan. (Age 50-64, Female, 0-99% FPL, W/E/Central)*

Summary of response to evaluation question 5.5

Most interviewees said having HMP coverage has allowed them to access needed physical, mental/behavioral, dental, vision and other health care services and medications that they otherwise would not have been able to receive due to cost. Some interviewees described access barriers to specialists, including few dental and mental health providers in their area that would accept HMP coverage. Many interviewees said they were more likely to seek out needed care for both acute and chronic conditions because of their HMP coverage. Interviewees described how increased access to health care services has led to improvements in their knowledge of how to take care of their health, and in their health overall. The pandemic often delayed care or led to changes in care location, including increased use of telehealth. Many interviewees described how HMP coverage improved their general sense of wellbeing by reducing their stress and worries related to avoided or delayed care or medical bills. Many expressed gratitude for their HMP coverage and its positive impact on their lives.

Evaluation question 6.3: How has HMP affected beneficiaries' financial and material well-being over time?
Hypothesis 6.3: Beneficiaries will describe examples of how HMP has improved their financial and material well-being.
Data source: Interviews with beneficiaries (as described in D.2.3)

Results

These results relate to the impact of HMP on financial well-being and ability to work.

Impact of HMP on financial well-being, including out-of-pocket costs for health services

Many interviewees reported that HMP has had a positive impact on their financial situation. Interviewees described reduced out-of-pocket medical expenses and/or insurance costs. Several noted how these savings had improved their ability to pay for other living expenses.

> *Yes, it's helped, you know, because if I didn't have the Healthy Michigan Plan, I don't know what the affordable health care premiums are anymore. But I have that extra money to pay for utilities and things like that. So, it works, it works out well. And I don't have no surprise medical bills, you know, so yeah, I really like it. (Age 50-64, Male, 0-99% FPL, W/E/Central)*

> *Well, it definitely gives you a little bit more money to be able to pay for daily living and expenses because you don't have to come out of pocket as much. Just like certain co-pays and stuff. To be honest, I wouldn't be able to afford to pay for healthcare coverage without it. (Age 36-49, Female, 100-133% FPL, S Central/SW/SE)*

> *It definitely helps because I'm paying less than health insurance would be otherwise, paying a lot less than some other people. And that of course leaves more money to pay for food and rent and other things. (Age 19-35, Male, 0-99% FPL, W/E/Central)*

> *Yeah, it may have given us that freedom, that ability to pay those other expenses like heat, and electricity bills, and what not. It certainly freed us up to purchase a bigger vehicle when now we are soon to have two kids and a dog and those kinds of things. It probably freed us up to do those kinds of things. (Age 19-35, Male, 100-133% FPL, W/E/Central)*

Impact of HMP on ability to work

Many interviewees reported that HMP has had no impact on their employment situation or their ability to work. However, a few interviewees described how HMP has improved their ability to work or their performance at work by allowing them to get the care they needed to address health concerns that were previously barriers to employment.

> *I was not working before I went on the Healthy Michigan Plan and now I have been working….I've been working ever since certainly after I got on the Healthy Michigan Plan and started seeing doctors. So, it helped me get to work…Both of my shoulders, I had surgery on. And if I didn't have the Healthy Michigan Plan and that didn't happen, I wouldn't be working because I'm telling you they were broke bad. (Age 50-64, Female, 0-99% FPL, S Central/SW/SE)*

> *It's just made me more healthy and more in control of my health…I mean the eye coverage and things, and contacts…Now they have like a special lens…that's what made it easier on the job…I used to have vision problems with the old contacts, because I'd have to wear those hard gas permeable ones. Sometimes they'd pop out, and when you're driving…It's scary when that happens…But with these new ones, that doesn't happen. They just go on the eye and it's easier, which is great…because usually I would sort of have that concern, what if my contacts popped out? I can't*

> *take an assignment. It would kind of prevent me or make me rethink an assignment…but now I feel secure that that's not going to be a problem. Visually, I feel as good as I can be right now with these new ones that I've gotten. They're more expensive I believe, but they're much better and just in that one instance, that example shows it's just really helped me in terms of employment. (Age 50-64, Male, 0-99% FPL, Detroit Metro)*
>
> *Well, it's keeping me healthy, that's for sure. My legs feel much better since those verrucous veins got done. I'm a chef so I'm on my feet quite a bit. So, that's a tremendous relief. (Age 50-64, Male, 100-133% FPL, UP/NW/NE)*

Summary of response to evaluation question 6.3

Many interviewees described how HMP has had a positive impact on their financial situation, describing how reduced out-of-pocket medical expenses and/or insurance costs had improved their ability to pay for other living expenses. A few interviewees described how having HMP coverage had improved their ability to work.

Key Informant Interviews (Social Impact of HMP) Appendix

The Key Informant Interviews (Social Impact of HMP) Appendix includes additional quotations from the key informant interviews on the broad social impact of HMP.

Evaluation question 7.4: How does HMP support new or broadened initiatives to address social determinants of health for low-income adults in Michigan?
Hypothesis 7.4: State officials and safety-net providers will describe specific examples of health-promoting initiatives that build on HMP's continuity, breadth of coverage, and primary care emphasis.
Data source: Key informant interviews (as described in D.2.5)

Results

Several key themes emerged from these key informant interviews on the role of HMP in supporting new or broadened initiatives:

- Innovations and collaborations around the HMP enrollment process led to more streamlined and integrated enrollment in other programs that address SDOH.
- Innovative policies were initiated or revised that supported the health and social needs of HMP beneficiaries. This included coverage expansions, expanded roles for CHWs, new reimbursement and billing practices, telehealth, and the HRA.
- HMP's coverage expansions led to more integrated and sustainable safety net provider and health plan programs and services, including those that address SDOH.
- HMP increased access to care that promoted positive health outcomes, greater independence, and improved quality of life.
- Partnerships among diverse organizations enhanced outreach and communications to beneficiaries and providers about initiating and maintaining enrollment, meeting HMP requirements, and planning for reinitiating redeterminations.

Innovations and collaborations around HMP enrollment

Innovations in the HMP enrollment process includes changes to MI Bridges which allowed people to enroll in multiple programs they qualified for, many of which address SDOH.

> *In the new application system for HMP…. we not only improved the application process from the amount of time it takes to complete, the complexity of the application, just the sheer and length of questions; all of those things streamlined but, for online application, I think for the first time ever in Michigan, presented community resources alongside state benefits programs. So part of what MI Bridges does is brings in the statewide 211 database and so when you look for resources in MI Bridges, you see things like Medicaid or HMP or cash assistance or food assistance but you also see a local food pantry, a community action agency offering weatherization support and so there was a broader context of social supports provided in that application context; and that type of resource was also available as a person was maintaining benefits online…you were getting access to community resources in a more integrated way than ever had been. (Safety net organization)*

Innovations included providing community-based organizations access to MI Bridges for their clients and greater use of enrollment counselors, navigators, and community health workers (CHWs) to support and maintain enrollment.

> *It was also the first time community partner organizations had any level of access in the [MI Bridges] system so one of the things we introduced was for a MI Bridges community partner, which includes big and small community organizations all across the state, you actually have a login and you could have like a navigator ID to associate yourself to a person and that person could give you permission to see some things about their benefits so like you could keep track of when that person might need to renew and so if you have an ongoing relationship with that individual, they grant you access to see somethings about their benefits and then you can help them remember "hey time to renew your coverage" or "oh you missed that letter; let's go get that letter out of the online account from DHHS," or some of those features that also had never existed. (Safety net organization)*

> *Our [program name] that our community health workers work at...We do [enrollment] consistently across several agencies, through scripts and protocols… We always want to make sure that we're, you know, if someone is eligible for some type of health insurance, we want them to be able to be enrolled not only to receive the services that we can provide for them, but also from all the other providers and that [program name] as part of the Community Health Innovation Region, which is a huge partnership of local agencies that created a steering committee that oversees that work. (County health)*

These streamlined enrollment practices built upon actions to assess needs and integrate services at the clinic/health department/health center level.

> *We don't have huge populations…And so when somebody comes to the health department, whether they're calling for their appointment, or they show up at a clinic, we assess not only the needs they're there for, but what else do they need…it's just built into our protocols, and we've really tried hard to work together as health departments to accomplish that across Northern Michigan so that there's equity across the board. And certainly, I think that that [HMP] insurance eligibility is the first door into the gate for those integrated services. (County health)*

Innovative policies to support health and social needs

These policies included expanded coverage and innovations around the dental benefit, immunizations, hospital reimbursement, and new collaborative care codes.

> *We tried to encourage the dental community to respond to the opportunity for input on what should be included in HMP….What was successful in this process was having the dental coverage under HMP be a dental health plan, part of the whole managed care plan contracted through dental organizations, and not a FFS carve out. (MDHHS)*

> *HMP covers adult immunizations, but not all primary care practices stock the full array of adult vaccines. So, the Immunization Program worked with Medicaid to allow HMP enrollees to get vaccines at pharmacies and local health departments*

> *without requiring a separate contract with each health plan. Note that previously this would have been viewed as "out of network" and thus not covered, unless the specific pharmacy had a contract that brought it into the plan's provider network – which didn't happen very often…. Due to the pandemic, Medicaid has allowed race*/ethnicity data to be transferred into the state's immunization registry. This *allowed the state to look at COVID vaccination patterns by race/ethnicity. Prior to COVID, that data wasn't shared. So this has opened up a whole new opportunity. (MDHHS)*

> *Special financing policy and payment programs for HMP…I would say those programs have been extremely crucial to hospitals being able to take on the new patients because payment rates are higher than what base Medicaid rates would pay. Health plan/provider organization)*

> *[HMP] really helped us in working with the state, HHS, and with locals, to test out new coding ideas, like collaborative codes. So, Medicaid has made some policy changes… There's a collaborative medicine code...And it's actually now a billable code, it's like combining several other different treatment team entities into one code. (MDHHS)*

Medicaid health plan contract requirements to hire or contract for CHWs helped support HMP beneficiaries in using their new coverage and navigating the health care system; and helped health systems, plans and providers address SDOH.

> *[The health plans] use community health workers for social determinants of health…that's how they're addressing, or at least trying to dig into, what social determinants of health their members are facing and getting them the resources that they need. (Health plan/provider organization)*

> *There's a knowledge gap, right, and there's a language gap. And really, the folks that serve to close that gap are the community health workers, are the navigators, are the folks that are likely asking the questions on the HRA. You know, it's not necessarily the clinician asking the questions on the HRA during screenings with beneficiaries but even at a health plan level, or at the provider level, it's usually an RN case manager, an MA, a CHW, a navigator. And so when we were thinking about our model to kind of push forward this design and support systematic screening of social needs and the kind of system of care, including the connections to resources associated with those needs, it became apparent to us that we needed to expand the medical model to include CHWs as a core component because there wasn't currently a payment methodology within Medicaid to support that, even though it's kind of assumed under other ancillary services as what could be engaged in providing support. (MDHHS)*

Policies that facilitated telehealth coverage for services increased access and addressed barriers to enrollment and care during the pandemic.

> *We advocated that MDHHS work to help us with the ability to provide more remote enrollment systems….The department [MDHHS] came out with a guiding document about how you do that safely, making sure you keep information secure, and sort of who hits what buttons….Having some of the flexibility to do that was really very important to get that new population at the beginning of the pandemic, there was a bunch of people that were, again, newly eligible to Healthy Michigan because they had lost jobs, got their hours cut…It also exposed [some] people to something like telehealth for the first time…and they hadn't interacted with a care providing organization in that way before… there have not been a lot of bright spots in Covid but, boy, what a good unintended component, to expose people. (Safety net organization)*

> *[Telehealth] was really key and helped at the onset of the pandemic, but then people wanted to come back in and see their providers. So, we have really gone down to very minimal telehealth, although each time there's a surge it increases and we ramp up our availability, and then we shift when we need to just so we're utilizing our resources the best way possible and getting folks the care that they're looking for. Because some folks love telehealth and some folks want to be face to face in an office with folks...Having the telephone capabilities. Just having that option for when you try, and try, and try to get that video connection but after about 5 minutes you've got to just kind of move on, so that's been really helpful. We know that you're not going to be able to make the best connection and the best care, but especially for individuals that would have an ongoing relationship with their PCP, they've been talking to their patients on the phone for a long, long time and doing a lot of things that they can do in telehealth now, in an audio only telehealth, and get paid for it because they are really conducting a visit but it just wasn't an option before. (Safety net organization)*

Health risk assessments provided health care providers and health plans with opportunities to engage HMP beneficiaries in their own care and provided a tool to identify and address both health and social needs.

> *The HRA…that's the start of making sure that individuals are accessing the care that they need. And then, depending on the results of the HRA, and different outreaches that the [health plans] complete, then they may be enrolled in care management or some type of a case management program and trying to connect with them that way to make sure that they're accessing the care that they need…Whether it's a mammogram or its their colorectal screening or their annual flu shot, the [health] plans are always sending out those types of reminders. In addition, they're working with their CHWs to make sure that CHWs…have the list of the things that they need [to] access services that they should be accessing…making sure that they're getting in for their annual visits with their physicians and talking about their healthy behaviors. (Health plan/provider organization)*

> *I think there was some greater understanding that occurred across the provider community around how the behaviors that they might identify in an HRA were*

> *impacted by the social needs that an individual had, right. So, the determinants of health, kind of how that trickled into the needs that the individual…. It also aided the clinical staff that were supporting HMP beneficiaries to have the conversations with someone that were more person centric. Say, is this the goal you wanted to work on? Is this the primary healthy behavior that we need to address right now? Or maybe there's other things we can look at that might be higher priority so that you can continue one of your coping mechanisms right now? You know, so it's more of a harm reduction type perspective that they could take and say, we'll get to that. Let's table it for now. But let's see something that you can see some achievement in that's still going to be promoting healthy behaviors. And I think that was really something they were able to hone in on with HMP population because of that required HRA, because of a system we created around screening. And so, it's really just more of a patient centered or person-centered environment, because of the connection of those things. (MDHHS)*

The HRA purpose and process took time to be effectively communicated, with challenges that affected understanding and uptake by providers and by beneficiaries. Increased information and support led to improvements over time.

> *The healthy behaviors were tied towards decreasing the amount that people had to pay on contributions and then it was supposed to also be tied to whether or not people could keep their health care…The real goal of the MI Health account or the healthy behaviors…was all about is getting people in for their preventive care medicine…the issue is, is how well did they understand the message?….If they just did one thing, they could qualify for it, but I don't think the uptake was as high as we wanted…It takes a little while for it to really come to fruition… We did reach out to navigators and CHWs and our safety net providers and let them know what it is that we were trying to really improve on preventive care and having the health plans message people. (MDHHS)*

> *The front end became very focused on the process of completing a health risk assessment; and so health centers developed almost registry-like functionalities in their populations health systems to track which people have completed a health risk assessment and which people have not…and making sure it gets back to where it needed to be I think maybe distracted from intent, which was having a person actually come get engaged in some type of healthy behavior better. I do think that it's a little better now, people have found a better a balance between getting the form done and having a realistic and engaging conversation about a health behavior. (Safety net organization)*

> *As we were getting the Healthy Michigan Plan implemented and shortly after implementation, it was tough to get providers to understand what [the HRA] was and why it's important. And I think that we've seen a couple of different iterations of the HRA form itself. It used to be a little bit longer, it's been shortened up some...So that's been, you know, sometimes that's the barrier, and then just getting providers on board that they need to sign off on that. But actually, in the last few years, we*

> *haven't heard a lot about pain points, and it seems to be going better than it was at the beginning. (Health plan/provider organization)*
>
> *We actually talked for a long time and eventually succeeded with the Healthy Michigan Plans to allow us to assist people to complete [health risk assessments] because a lot of the times they were just dropping off between us giving them instructions and going to their primary care provider to get those HRAs completed. And so, once we were able to directly assist people with that, our rates went way up. And they liked that, you know, that we were qualified and able, and then successfully completing them. (County health)*

Integrated and sustainable safety net provider and health plan programs and services

For the new adult population not previously covered by Medicaid, HMP coverage increased access to reimbursable care and contributed to interagency partnerships and coalitions and innovations in programs and service delivery that could be sustained over time.

> *In public health, we receive categorical funding for some of the things we do. It's never enough to cover the services that we provide. So, certainly, having most people eligible for a payer has been a huge gamechanger in the flexibility and the ability to provide a wide variety of services and employ the staff that we need to be able to do that...Certainly billing for individual services has been a really important process for us. We bill for immunizations, we bill for family planning services, we bill for women's health services, we bill for a variety of home visiting services…It's our biggest source of revenue, and a really important measure for public health sustainability, to do all of the things that we do. Our health department actually owns a system of eight public health dental clinics, and the Healthy Michigan Plan has been a huge game changer for adults who need dental care. I remember the days when we had to hold a huge, huge, huge unmet needs fund to serve adults because there was no other source to reimburse them for their dental care. The ability of us to bill for dental services has allowed us to provide services to more people. (County health)*
>
> *The Medicaid expansion and Healthy Michigan Plan was really a game changer for community health centers in Michigan…because community health centers are, of course, a core fabric of the safety net and predominantly served the underserved, uninsured or underinsured populations in our communities. So, from a business perspective…the uninsured rate across health centers dropped at about half when the combination of the ACA marketplace and the Healthy Michigan Plan really came into play because it was able to really get individuals from the uninsured or underinsured state enfranchised into the health insurance environment. (Safety net organization)*
>
> *I think we were successful in leveraging our Medicaid health plans and embedding some requirements in their contract to continue to address and expand, even, the work that we saw and the patients on our Medical Home Model and the State Innovation Model by then expanding to other providers in the network, requiring*

> *social needs screening, creating these value-based payment models that embed the social needs screening as a part of them to providers that weren't initially engaged in our pilot program. (MDHHS)*
>
> *Before these people had [HMP] coverage, it was much harder for the nonprofits to sustain the change. So, it's really changed everything. Sustainability of innovative change in terms of bolstering new and creative ideas. Nonprofits are much more likely to propose something if they know there's at least this Healthy Michigan funding stream. (MDHHS)*

HMP contributed to the financial stability of safety net provider organizations and the ability to expand critical services to meet the growing need, including those for substance use disorder.

> *We [FQHCs] have seen that number of contracts grow so that heath centers are even more part of the provider network for those [health plans] than maybe we were when first started…And then we're in relationship with a health insurance company that spans multiple products and that's been positive for us I would say. (Safety net organization)*
>
> *HMP is allowing for a huge chunk of that 25 to 30,000 people a year receiving dental services [locally] because we wouldn't be able to provide them any other way. We have no other source of funding for those dental clinics. And so, you know, I think that really speaks for itself. I think it allows for people to get the health services they need to get services earlier so that they can engage in preventative care. And then I think that it allows us to function more effectively as a local health department in all the services that we provide. (County health)*
>
> *It allows us to expand access to treatment services which the substance use disorder, mental health treatment which has just had such a need over the last, well for a long time but certainly since 2014 this has just been a huge lifeline that was needed to be able to help this state. Certainly, in the world of substance use as this crisis has continued to explode in terms of the number of lives lost during this time. So, being able to have a sustainable funding source to be able to provide treatment, to be able to provide the continuity that is needed for the lives of people who receive services but also for those treatment providers that know they can get reimbursed. (MDHHS)*

Interviewees described several specific examples of sustainable programs facilitated by HMP.

> *Prescription for Health...it's a collaboration between the food banks, Medicaid health plans, the people who need the service, and it's kind of like a prescription for actually getting food…All about taking the Medicaid Health Plan where the Healthy Michigan people are and getting them fast tracked to food access...the Medicaid health plans through their managed care, have active care managers following through to make sure people made it. (MDHHS)*

> *The Healthy Michigan Plan has been incredibly helpful to creating volume within our programming within the Behavioral Health and Developmental Disabilities Administration generally, as well as in the specific programs…meaning the Opioid Health Home, the SMI/SED Health Home, as well as the Certified Community Behavioral Health Clinic demonstration….[HMP] added so many new potential recipients to a lot of integrative care coordination…in conjunction with MSA and now HASA. (MDHHS)*

> *When you think about [going from] 12% of your jail [eligible for traditional Medicaid]; …to almost 90% of them getting access because of Healthy Michigan to care. It's huge. So again, sustainable continuity of care…The [jail] population is overly represented for people who are mentally ill by four times…just a huge impact on access to mental health care as well as healthcare services and addiction services….They're going to open up CareConnect 360 to jail administrators' intake staff….It's going to tell you whether a person who comes into a jail is a hit for Medicaid or not, it's going to open up who's the care manager, right? So, it's going to help make that much more seamless. And then on the way out the door, it will make the day they get released… this automated field is going to turn on and off Medicaid. On the day they come in, right, it's going to suspend and then reengage Medicaid like same day. This is huge. (MDHHS)*

Promoted positive health outcomes

For many beneficiaries who were not traditionally served by Medicaid and/or were uninsured, HMP served as an entry point to health and social services.

> *The big thing is being able to get people into the healthcare system and then get them connected with a provider who can assess for these issues…That's what Healthy Michigan did, is it allowed us to connect these people who were maybe close to being disabled but didn't meet any of the Medicaid eligibility criteria, so this allowed us to cast a wider net…our safety net providers, health departments, FQHCs, and even our physicians and other providers that once you can get them into the system, they get eyes on them, and they can start evaluating them and looking for diseases. And then once they establish that relationship, then some of the social determinants of health will bubble up and will be identified…One thing that was really interesting about Health Homes is that it took several touches with a provider before that relationship was established. Once it was established, then people began opening up to certain providers. I think that's all part of the equation is that if people have problems, if we can just get them into the healthcare system and establish those relationships, I think that goes a long way with helping people with whatever their issues are…just by being in the healthcare system it really helped with social determinants of health. (MDHHS)*

> *But what it [HMP] did change was we got people a place to belong, which is the first step in giving people the true access to the healthcare system, at least we gave people a door to say that this is your assigned door to walk through. You might not be*

comfortable there but it's a place to start, and for so many people there really wasn't a door, and I really took great comfort in that we could provide something, as opposed to for many people who are uninsured, nothing…People cry when they tell you about their spend down and to not have people have to cry about qualifying for healthcare coverage, I think that was a big win. (Health plan/provider organization)

One of the most interesting things and I'd say really rewarding things [about] HMP being introduced, was this whole slew of individuals…it was mostly adults who were not eligible for health coverage before became eligible [for HMP]…and what we found when [we] were providing enrollment assistance is really that the HMP application process was more of an entry point...that enrollment assistor was also able to ask some other questions along the way and even get to know that person through the application process and they found themselves providing access and linking people to many other resources based on what they were learning and the relationship and trust they were developing through the process of helping somebody get HMP: so like apply, understand eligibility, pick a plan - through that process, they learned things about people they didn't know very well because they were often folks that weren't interacting with the health system in a very proactive or preventative way because they didn't have coverage. (Safety net organization)

Through HMP, beneficiaries had access to innovative models of patient-centered primary care and integrated care.

And then there was our Patient-Centered Home Initiative, which was our second component [of SIM] that engaged primary care providers in our state that are contracted with Medicaid Health Plans to provide services that were really patient-centered…to their Medicaid beneficiaries and beyond. It also incorporated systematic screening for social needs in the program using a standardized format that was collaboratively driven through engagement with those Community Health Innovation regions, the other component of the program, and provided enhanced payment to develop these systems as well as to then have the supports available to individuals that had what we might call a positive screening. …So, anything from an MA community health worker, RN case manager to kind of support individuals as they move through identifying their needs and the supports to gain access to services to alleviate those needs. (MDHHS)

We have an integrated model of care. So, because of that integration, people can come to our clinics, and they know that they can go to the dentist, but, right down the office, or right down the hallway, is our primary care providers, or down another hallway is our behavioral health folks. And sometimes, our behavioral health and our primary care are working really close together. Sometimes, our dentist and primary care have to work really close together….We do offer nutrition and exercise counseling at annual wellness visits. We offer tobacco and alcohol cessation counseling. We have registered dietitians who holds cooking and nutrition classes. We have health educators that hold exercise classes, like, within the facility. They have access to our gyms, in terms of wanting to do exercise. The other thing that

stands to mind for me, is that we started a project of a multidisciplinary team…for chronic disease management of diabetes. And what we bring in is all the disciplines, so that when the patient comes for their diabetic appointment, they get to see the dietitian, they get to see the primary care provider, they get to see the health educator, they get to see the behavioral health consultant. (Safety net organization)

HMP's support for positive health behaviors and focus on primary care and the access it provided to preventive care and other health care services, including dental care, vaccinations, specialist care, mental health and substance use disorder care, and surgery, led to improved health, well-being, and other outcomes.

Being the health care provider, the main thing we're trying to do is empower individuals on how to change and make an impact on their health outcomes…If you don't have insurance and you're only going to the doctor when you're truly, truly sick, you're not going to be able to understand the preventive things that can be done and the behavioral changes that need to done to improve your overall health. So, just being part of those conversations is just by virtue of them having coverage and coming in more regularly, having more preventive treatment, going to their physicals, diabetes management, hypertension, how do we make sure they're on the right meds, that we have the right actions in place. The door being open just by having the coverage I think has been the most important thing to be able to make an impact on those healthy behaviors. (Safety net organization)

Prior to HMP, most low-income adults did not have any insurance coverage or a way to pay for adult vaccines. HMP provides that. (MDHHS)

One of the most important aspects…about the Healthy Michigan Plan and their suite of benefits that come along with it, is the inclusion of a much better dental benefit for the adult population that has historically had no access to dental services….that's just been a life-changer…from a whole person perspective and the social determinants that are associated with having poor oral health and poor oral hygiene, 'how do you get a job when your teeth are messed up?'...the only time it is a priority is when folks are in pain. But being able to have that ongoing coverage, they're now able to get into the preventive care… [it] helps them get ready for if they were, say, in need of dentures. They now have benefits that are going to get them to the point and they may have to pay out-of-pocket for costs for some of the materials. For uninsured folks, they pay out-of-pocket, but with Medicaid, as long we can follow along with the right guidelines, we can get people teeth and they can get gainful employment. And, and, not just gainful employment, but nutrition. They can actually eat, they can, you know, feel better and more confident about themselves. And, I do think, that – that makes it a very, very big difference for out patients' lives. (Safety net organization)

Healthy Michigan. It is the single biggest thing we've done to address this epidemic that's killing thousands of people every year. Expanding access to substance use disorder health coverage, it has made a huge impact on the number of people that we can get into treatment and there are many people, we just know that there are many

people who have gone into treatment because they wanted to and were able to and are alive today because they were able to get coverage through Healthy Michigan Plan...The advent of Healthy Michigan really enfranchised hundreds of thousands of more people, particularly those that had a lot of substance use disorder type issues to the Medicaid system and sometimes health care system, you know, broadly for the first time. (MDHHS)

We had somebody ask if it would cover cataract surgery, and there was one person that responded and said well, yeah, they were on the old ABW program which only covered bits and pieces of it. Come to find out it was someone in their early 50s who worked in a restaurant. They washed dishes and what not. And their cataracts were so bad they couldn't work anymore because they couldn't see. And so, they got on Healthy Michigan and the cataract, it was covered. They had surgery within about three weeks or so getting on the program, and you know, you restored somebody's sight and you're like, wow, how great is that. And we had one, you know, one after another, just learning about what this population was dealing with. So it was pretty powerful. (MDHHS)

During the pandemic, HMP maintained access to coverage and care for beneficiaries and offered coverage for new beneficiaries affected by job and coverage losses.

[During the pandemic], HMP has offered care management. It's offered individuals some access to other services that they might not have had otherwise. It offers, because we're looking at social determinants of health, we may be able to help some of these members related to food or clothing or housing or help with utility bills…We're trying to connect to get them access to the care or services that they need that aren't just medically related. And then we've also been able to really work on outreach for COVID education, so educating members on what COVID benefits are available. Testing sites, vaccine availability…that the COVID vaccine is safe and the benefits to getting the vaccination. And then when members of health plans have COVID positive tests, many of them are assigned to a case manager that reaches out and ensures that all of their needs are being met… In addition, plans are sharing information about 211 services and how 211s can help individuals. Non-emergent medical transportation so, during the pandemic, providing that transportation to vaccination clinics or treatment for COVID or for whatever other services that they need...providing outreach and trying to connect with [Health Plan] members that may be socially isolated and making sure that they have services that they need. (Health plan/provider organization)

So the health plans that we work with are now providing food resources to their beneficiaries…They also have opened up the transportation resources so clients or beneficiaries can get to those food distribution sites. So yeah, so I think those are, you know, both beneficial additions that have come out of this disastrous pandemic. (County health)

The pandemic led to new health and social challenges, limits on health service capacity and access that led to delayed or missed care, and some setbacks in the delivery of innovations in care to HMP beneficiaries. Some safety net providers continued to experience backlogs in services and staffing shortages.

> *We look at people who have multiple complex chronic disease like diabetes. So, they might have one or two or three issues that are complex. So, they're diabetic, they're hypertensive, they might have some heart disease. And so, what we did was create this multidisciplinary team…over time, can we actually drop that A1c...So, we were just starting that initiative before COVID struck. We were starting to see some success and we're waiting to be able to go full swing and open it back up again. (Safety net organization)*

> *[Due to the pandemic] the biggest problem is that dental offices were closed for 3 months; then slowly started to gear up. The lack of availability of PPE really played a big role last year in limiting dental care. Can people get in to care? The workforce has changed, scheduling has changed, clinics are not seeing as many patients. Demand for oral health care has come back, but there are still delays in being able to get care…. It's hard right now because COVID created a lot of workforce issues (e.g., [dental] hygienists have left the workforce). (MDHHS)*

> *From the pandemic, from a staffing perspective it's extremely hard right now to find good, qualified individuals to recruit and there's been a lot of turnover because of burn out in the healthcare system. (Safety net organization)*

Partnerships among diverse organizations

Organizations worked collaboratively to understand, plan for, and implement communications to maximize the ability of HMP beneficiaries to meet program requirements and maintain enrollment. Many organizations have worked together to plan for the continuation of the redetermination process at the end of the public health emergency.

> *We were doing everything from working with MDHHS to coordinate promotional materials to sharing outreach strategies, to actually doing hands on training for people who would ultimately assist individuals in enrolling so they could get used to the new program, the new eligibility components, and those types of things. We started with a focus on health centers, but it really became more of a coalitional effort and so free clinics, rural health clinics, community-based organizations came together and joined in on that effort really all across the state and so on the front end a lot of health coverage outreach, promotion of Healthy Michigan enrollment assistance coordination. (Safety net organization)*

> *All of the [health] plans are working with their members on a regular basis to conduct outreach and working with providers, not just the HMP members…to remind both providers and individuals that a redetermination day is near… there's monthly outreach calls that the plans are conducting. They're also sending postcard*

reminders reminding them that redeterminations coming up, that they need to complete an annual HRA, that they need to work on their healthy behaviors. (Health plan/provider organization)

HMP provides a mechanism to get information to a large group of low-income adults. e.g., information about COVID vaccination – [The] Immunization Program can share info with Medicaid Health Plans, and they can send messages to their members….The Immunization Program has been invited to present to Medicaid Health Plans about immunization topics...[including] strategies to promote immunization, including sending reminders to people who are eligible or overdue for a vaccine dose. (MDHHS)

We work really closely with the health plans to make sure that we're reaching out. Like I said, outreach is a really important part of what we do and that sometimes means we're outreaching about different services than what the person might be calling for or presenting for. Or maybe it means that we're taking a list of clients who have received a certain service and calling them and making sure that they're still enrolled in their insurance and that they're still getting that care, whether they're getting it from us or somebody else, and if they're not, is there something we can do to help them get reconnected in whatever way. (County health)

We've paused the redetermination process, and I anticipate our HMP population is going to be most at risk at the end of the public health emergency because of this. So there's certainly significant focus from a department standpoint for us to really assess that population that's right now covered by HMP benefits to make sure that the appropriate supports are in place, that we're engaging with various stakeholders that are in direct connection with HMP beneficiaries, whether that be the Medicaid health plans, whether it be various associations like the Primary Care Association, or physicians associations, Health and Hospital Association, community entities…to make sure that we're amplifying messages to our beneficiaries to ensure maintenance of coverage at the end of the public health emergency. And if not maintenance of coverage, a smooth transition to the federal marketplace should they qualify for that. (MDHHS)

Summary of response to evaluation question 7.4

Key informant interviews with Michigan health and human services organization leaders highlighted numerous examples of the role that HMP has played in stimulating and sustaining expansions of coverage and innovations in service delivery, including approaches that address SDOH among low-income adults in Michigan. Innovations in the HMP enrollment process led to more streamlined and integrated enrollment in other programs, in addition to HMP, that address SDOH. Policy innovations have included coverage expansions; support for CHWs who work with beneficiaries to identify and address SDOH, achieve and use their HMP coverage, and navigate the health care system; new reimbursement and billing practices; coverage of telehealth services; and use of the HRA as a tool to improve primary care engagement and support healthy behaviors.

HMP coverage for large numbers of adults, including new populations not previously covered by Medicaid, increased access to reimbursable care, contributed to interagency partnerships and coalitions and innovations in programs and service delivery, including those that address SDOH, that could be sustained over time. This expanded coverage contributed to the financial stability of safety net provider organizations and the ability to expand critical services to meet growing needs, including those for substance use disorder. HMP increased access to care and was associated with improved health and other outcomes for beneficiaries, many of whom were previously uninsured or unconnected to services addressing SDOH. During the pandemic, HMP maintained access to coverage and care for beneficiaries and offered coverage for new beneficiaries affected by job and coverage losses. Partnerships among diverse organizations enhanced outreach and communications about initiating and maintaining enrollment, meeting HMP requirements, and planning for reinitiating redeterminations.

Credit Report Data Appendix

The Credit Report Data Appendix includes a more detailed description of the methods that will be used for the credit report data.

Credit Report Data Appendix

Analytic Methods

Planned primary analyses

Our planned primary two-way fixed effects model specification is as follows:

$$Y_{icp} = \boldsymbol{\beta}_p + \boldsymbol{\beta}_c + Expansion_i * [\sum_{y=-11}^{-2} \boldsymbol{\beta}_y * I(q - q^s = y) + \sum_{y=0}^{27} \boldsymbol{\beta}_y * I(q - q^s = y)] + \boldsymbol{X}_i + \epsilon_{icp}$$

Here, i denotes individuals, p denotes semi-annual periods (January 2013, July 2013, January 2014, etc.), and c denotes cohort. $\boldsymbol{\beta}_c$ is a vector of "cohort" fixed effects; cohort is defined by the quarter of enrollment for HMP beneficiaries, while all individuals in the comparison group are a single cohort. Y_{ip} is our outcome of interest for individual i in cohort c in period p. $\boldsymbol{\beta}_p$ is a vector of period fixed effects and $\boldsymbol{X}_i$ is a vector of individual-level covariates. $Expansion$ is a binary variable equal to 1 if an individual is an HMP enrollee and 0 if they are in the comparison group. For HMP beneficiaries, indicator variables $I(q - q^s = y)$ measure the number of quarters relative to q^s, their first quarter of enrollment in HMP. The quarter immediately prior to enrollment ($y = -1$) is excluded as the reference quarter. Standard errors will be clustered at the individual level.

Our parameters of interest are the set of estimates $\boldsymbol{\beta}_y$ that show how credit outcomes evolved among HMP beneficiaries relative to the comparison group, with the quarter immediately prior to enrollment as the reference quarter. If coefficients on quarters prior to HMP enrollment (i.e., β_{-11} through β_{-2}), are close to zero and not statistically significant, this provides support for the parallel-trends assumption under our difference-in-difference estimation of the impact of HMP enrollment. This indicates that before HMP enrollment, HMP beneficiaries and individuals in the comparison group experienced similar trends in outcomes. Any estimated divergence in outcomes between the two groups of states during the post-periods (β_1 through β_{27}) is then attributed to the effect of HMP enrollment.

We estimate effect sizes by quarter to gain better precision in our estimates of effect size over time. Because we are estimating effects size by quarter, but observe only credit outcomes semi-annually, not all individuals contribute to all $\boldsymbol{\beta}_y$ coefficient estimates. This can be illustrated with a brief example. Consider the cohort of individuals who enrolled in the third quarter of 2014. The first credit report that we observe for them immediately prior to enrollment is in January of 2014, two quarters prior to their enrollment. Their credit outcomes in July 2014 occur in the same quarter they enrolled in (quarter zero), and the first credit report we observe after their enrollment is in January 2015 (two quarters after enrollment). This cohort of individuals will therefore contribute to the estimates of β_{-2}, β_0, and β_2, but not those of β_{-3} or β_1.

Sensitivity analyses

The key assumption of our analysis is that, in the absence of enrolling in HMP, credit outcomes for HMP beneficiaries would have paralleled those of the comparison group. The is the "parallel

trends" assumption of all difference-in-differences analyses. While this assumption cannot be directly tested, an important test of this assumption is conducted by examining the values for the pre-enrollment $\boldsymbol{\beta}_y$ coefficients. If these are statistically different from zero, it suggests statistically different trends in outcomes between the HMP beneficiaries and the comparison group prior to enrollment which may subsequently bias effect estimates post-enrollment. If this occurs with any of the credit outcomes, we will explore using propensity-score matching to select an alternative comparison group for the HMP enrollee population.

We will also perform several additional sensitivity analyses from the baseline model specification, including:

1) Estimating the main model using months pre/post enrollment instead of quarters;
2) Clustering standard errors at the Zip code rather than the individual level; and
3) Adding an additional category of "missing" for individual-level covariates that are missing.

In addition, recent work by Goodman-Bacon suggests that the results of difference-in-differences models that have cohort-level variation in treatment timing can contain bias from several sources. One of the most concerning sources of bias comes from the fact that in the presence of time-varying treatment effects, the use of earlier treated units as a control group for later treated units can introduce bias in the overall effect size estimates.[1] This domain is a rapidly evolving area of econometric methods, and there is not yet agreement in the economics literature about how best to manage this potential bias methodologically. Therefore, for selected outcomes, we will also estimate a simpler version of the model that does not include two-way fixed effects estimators. To do this, we will limit the treatment group only to HMP beneficiaries who enrolled between April to June of 2014 (2014q2) and use the following model specification:

$$Y_{ip} = \boldsymbol{\beta}_p + Expansion_i + \sum_{y=2013m1}^{2013m7} \boldsymbol{\beta}_y * Expansion_i * I(p = y) + \sum_{y=2014m7}^{2021m7} \boldsymbol{\beta}_y * Expansion_i * I(p = y) + \boldsymbol{X}_i + \epsilon_{icp}$$

As with the baseline model above, i denotes individuals and p denotes semi-annual periods (January 2013, July 2013, January 2014, etc.). Rather than including cohort fixed effects as above in the baseline model, we will instead collapse the cohort into a binary variable $Expansion_i$, which is equal to one for HMP beneficiaries and zero for the comparison group. We then include a set of period fixed effects $\boldsymbol{\beta}_p$ and a set of interaction variables between period fixed effects and $Expansion_i$. We exclude the period January 2014 as the reference category. This specification will also include the same set of individual-level covariates $\boldsymbol{X}_i$ as the baseline model, and standard errors will again be clustered at the individual level.

[1] Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*, *225*(2), 254-277.

This is also an event study specification, but instead of using variable treatment timing as above, everyone in the treatment group is treated in the same period, the third quarter of 2014. However, this sensitivity analysis limits our ability to assess differences in pre-trends, as we now only have two pre-enrollment periods (January 2013 and July 2013). However, this analysis also avoids the potential bias inherent in using a TWFE estimation model as we do in the baseline model. If the results from this sensitivity analysis vary significantly from the baseline model specification, we will consider using the above model as our primary analysis specification, or modifying the baseline model to use other new econometric methods that have been recently developed as alternatives to TWFE difference-in-differences regression, such as those proposed by Deshpande and Li (2019)[2] or Callaway and Sant'Anna (2019).[3]

[2] Deshpande, M., & Li, Y. (2019). Who is screened out? Application costs and the targeting of disability programs. *American Economic Journal: Economic Policy*, *11*(4), 213-48.
[3] Callaway, B., & Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, *225*(2), 200-230.

Credit Report Data Appendix

Additional Tables and Figures

Credit Report Data Appendix Table 1. Characteristics of HMP enrollees and random sample

	HMP enrollees N (col %)	Random sample N (col %)
Total	**757,389**	**1,000,000**
Sex		
Female	393,389 (51.9%)	474,466 (47.5%)
Male	364,000 (48.1%)	449,668 (45.0%)
Unknown	0	75,866 (7.6%)
Marital Status		
Married	251,384 (33.2%)	402,343 (40.2%)
Single	206,364 (27.3%)	276,607 (27.7%)
Unknown	206,196 (27.2%)	321,050 (32.1%)
Missing	93,445 (5.3%)	0
Education		
Less than high school	78,151 (10.3%)	205,618 (20.6%)
High school	195,183 (25.8%)	300,550 (30.1%)
Some college	195,999 (25.9%)	226,522 (22.7%)
Bachelor's degree	55,467 (7.3%)	80,054 (8.0%)
Graduate degree	27,188 (3.6%)	33,373 (3.3%)
Unknown	111,956 (14.8%)	153,883 (15.4%)
Missing	93,445 (12.3%)	0
Imputed income		
<$25,000	53,337 (7.0%)	114,027 (11.4%)
$25,000-$29,999	109,230 (14.4%)	447,671 (44.8%)
$30,000-$34,999	121,634 (16.1%)	438,229 (43.8%)
$35,000-$49,999	228,155 (30.1%)	72 (0.01%)
$50,000 or more	133,397 (17.6%)	0
Missing	111,636 (14.7%)	0
Homeowner	212,896 (28.1%)	235,019 (23.5%)
Renter	64,914 (8.6%)	98,071 (9.8%)

Notes: Values are from Jan 2014 Experian data, except for sex, which is updated for HMP enrollee information. Homeowner and renter status were provided as flags only.

Credit Report Data Appendix Table 2a. Demographic characteristics of HMP early enrollees (initial enrollment in 2014 and 2015)

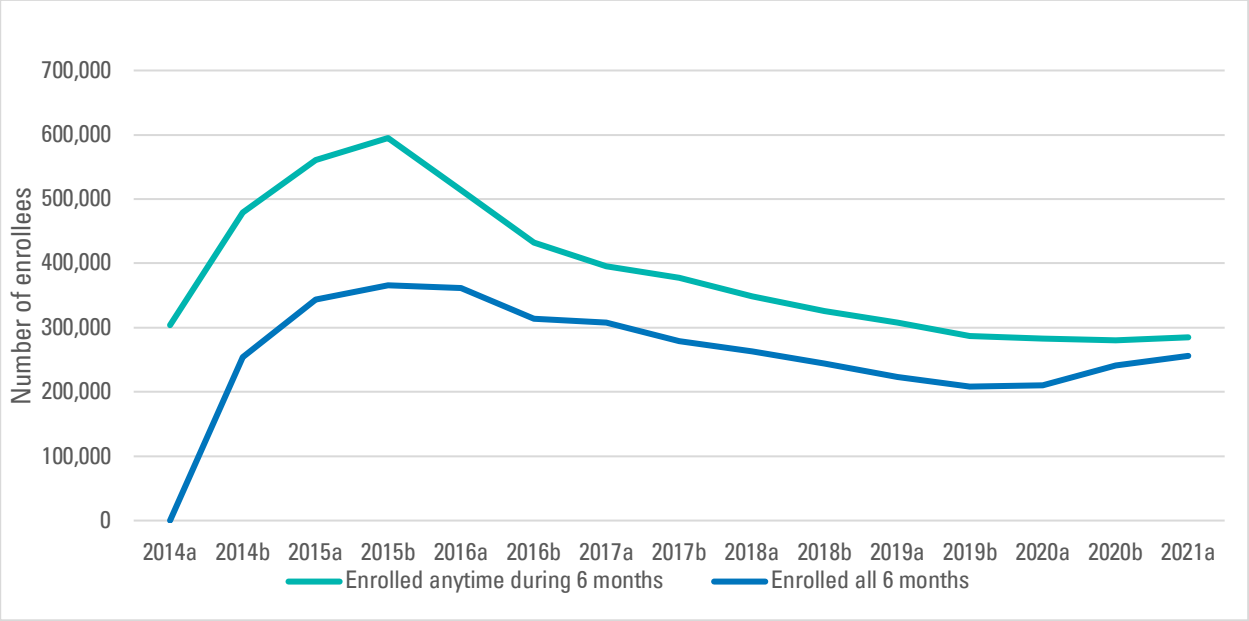
	Percent	Count
Total		757,389
Age at enrollment	39.1 [39.0, 39.1]	
Gender	51.9% Female	393,389
FPL January 2014	23.9% [23.8, 24.0]	
Region at enrollment		
Central UP	1.21	9,147
Detroit Metro	30.55	231,393
East	7.93	60,050
East Central	4.62	34,987
Eastern UP	0.4	3,035
Northeast	1.98	14,981
Northwest	2.24	16,949
South Central	3.4	25,735
Southeast	5.3	40,109
Southwest	5.98	45,305
West	8.48	64,223
West Central	1.58	11,929
Western UP	0.58	4,384
Missing	25.77	195,162
Quarter of enrollment		
2014 Q2	40.05	303,360
2014 Q3	12.12	91,760
2014 Q4	13.41	101,571
2015 Q1	12.45	94,261
2015 Q2	7.19	54,420
2015 Q3	6.61	50,038
2015 Q4	8.18	61,979

Credit Report Data Appendix

Credit Report Data Appendix Table 2b. HMP enrollment details of HMP early enrollees (initial enrollment in 2014 and 2015)

	Mean [95% CI]
Average months of total HMP enrollment 2014 - 2021	35.6 [35.6,35.7]
Average months of continuous HMP enrollment after first enrollment	25.2 [25.1,25.3]
Average months of partial non-HMP Medicaid coverage 2014 - 2021	1.6 [1.6,1.6]
Average months of full non-HMP Medicaid coverage 2014 - 2021	10.8 [10.8,10.9]
Average months of third-party liability 2014 - 2021	17.1 [17.0,17.1]
Average months of no Medicaid coverage 2014 - 2021	30.1 [30.0,30.1]
Percent of people who were ever enrolled in non-HMP Medicaid program at any point after enrollment	38.6% (292,317)
Average number of insurance transitions (number of 6-month periods with > 1 type of coverage) 2014 - 2021	3.9 [3.9,3.9]

Credit Report Data Appendix Figure 1. HMP enrollment over time (6-month intervals) among those initially enrolled between 2014 and 2015



BRFSS Appendix

The BRFSS Appendix includes additional tables related to the methods and results using BRFSS data.

BRFSS Appendix

Target and Comparison Populations

BRFSS Appendix Table 1. Baseline sample characteristics, 2013 BRFSS respondents in Michigan and comparison states

Characteristics		Michigan % (95% CI)	Other Medicaid expansion states % (95% CI)	Non-expansion states % (95% CI)
N		984	14742	18188
Age	18-29	23.85 (19.87, 27.84)	20.31 (18.80, 21.83)	18.34 (17.04, 19.64)
	30-39	20.02 (16.55, 23.49)	24.29 (22.82, 25.76)	25.12 (23.68, 26.56)
	50-64	56.13 (51.82, 60.44)	55.4 (53.64, 57.15)	56.55 (54.91, 58.18)
Gender	Male	44.46 (40.18, 48.74)	45.2 (43.42, 46.98)	43.43 (41.78, 45.08)
	Female	55.54 (51.26, 59.82)	54.8 (53.02, 56.58)	56.57 (54.92, 58.22)
Race/ ethnicity	White non-Hispanic	73.36 (69.36, 77.37)	53.67 (51.87, 55.48)	43.17 (41.62, 44.72)
	Black non-Hispanic	17.74 (14.11, 21.37)	14.08 (12.90, 15.26)	20.02 (18.78, 21.27)
	Hispanic	4.51 (2.56, 6.46)	23.72 (21.81, 25.63)	31.29 (29.53, 33.06)
	Other	4.38 (2.88, 5.89)	8.52 (7.65, 9.40)	5.51 (4.75, 6.27)
Marital status	Married/coupled	59.44 (55.37, 63.52)	61.31 (59.67, 62.95)	67.18 (65.73, 68.62)
Education	No school	0 (0.00, 0.00)	0.65 (0.13, 1.17)	0.67 (0.13, 1.21)
	Less than high school	22.94 (18.61, 27.27)	28.73 (26.87, 30.59)	31.44 (29.79, 33.10)
	High school/GED	36.25 (32.33, 40.16)	35.47 (33.91, 37.02)	34.16 (32.64, 35.68)
	Some college	34.23 (30.31, 38.14)	26.78 (25.33, 28.23)	25.83 (24.52, 27.14)
	College graduate	6.59 (5.12, 8.05)	8.23 (7.47, 8.99)	7.71 (6.98, 8.43)
Annual household income	< $10,000	18.55 (15.39, 21.71)	17.23 (16.05, 18.40)	16.72 (15.65, 17.78)
	$10,000 to < $15,000	17.46 (14.36, 20.56)	17.18 (15.87, 18.50)	17.87 (16.61, 19.12)
	$15,000 to < $20,000	23.62 (19.98, 27.27)	24.35 (22.78, 25.92)	23.98 (22.64, 25.32)
	$20,000 to < $25,000	20.7	21.08	21.52

BRFSS Appendix

		(17.15, 24.25)	(19.64, 22.53)	(20.07, 22.97)
	$25,000 to < $35,000	15.74 (12.58, 18.90)	14.97 (13.72, 16.22)	16.22 (14.92, 17.52)
	$35,000 to < $50,000	3.49 (1.73, 5.24)	5.1 (4.25, 5.94)	3.59 (2.93, 4.25)
	$50,000 to < $75,000	0.44 (-0.11, 0.99)	0.1 (0.04, 0.15)	0.11 (0.02, 0.20)
Employment status	Employed	32.64 (28.63, 36.65)	36.63 (34.93, 38.34)	38.48 (36.83, 40.13)
Sampling mode	Cell phone sample	28.55 (24.40, 32.69)	28.16 (26.49, 29.84)	35.05 (33.45, 36.65)

BRFSS Appendix Table 2. State classifications for comparison states in BRFSS analyses

Expansion comparison states (20)	Non-expansion comparison states (16)	Excluded*
Alaska	Alabama	California
Arizona	Florida	Connecticut
Arkansas	Georgia	Delaware
Colorado	Idaho	District of Columbia
Hawaii	Kansas	Indiana
Illinois	Mississippi	Iowa
Kentucky	Missouri	Maine
Louisiana	Nebraska	Massachusetts
Maryland	North Carolina	Minnesota
Montana	Oklahoma	New Jersey
Nevada	South Carolina	New York
New Hampshire	South Dakota	Vermont
New Mexico	Tennessee	Virginia
North Dakota	Texas	Wisconsin
Ohio	Utah	
Oregon	Wyoming	
Pennsylvania		
Rhode Island		
Washington		
West Virginia		

*Exclusion rationale:

- Indiana, Iowa have a healthy behavior related waiver similar to Michigan.
- Massachusetts, District of Columbia, Vermont, Delaware, New York, California, Connecticut, Minnesota, New Jersey, Wisconsin had Medicaid expansions prior to 2014.
- Maine, Virginia expanded Medicaid in the middle of our analysis period (2017-2019).

BRFSS Appendix

Additional Results

Evaluation question 1.1: How has the health and healthy behavior engagement among Michigan adults changed since introduction of HMP and its Healthy Behaviors Incentives Program?

BRFSS Appendix Table 1.1.1. Pre/Post changes in health and health behavior outcomes among low-income adults ages 18 to 64 in Michigan before and after the Healthy Behaviors Incentives Program implementation in 2014

Outcome	Years	Pre-Post change[1] (95% CI)	*p* value
Excellent/very good health	2020 vs. 2013	**8.39 (0.82, 15.95)**	**0.030**
Functional limitations due to poor physical health	2020 vs. 2013	**-1.82 (-3.62, -0.02)**	**0.047**
Functional limitations due to poor mental health	2020 vs. 2013	1.49 (-1.94, 4.93)	0.394
Functional limitations due to poor physical/ mental health	2020 vs. 2013	-0.05 (-2.08, 1.99)	0.965
Quit smoking in past year	2020 vs. 2013	1.31 (-14.08, 16.70)	0.868
Current smoker	2020 vs. 2013	-4.09 (-12.64, 4.47)	0.349
Binge drinking[2]	2020 vs. 2013	-0.23 (-7.93, 7.47)	0.953
Any physical activity	2020 vs. 2013	5.11 (-3.06, 13.28)	0.220
Physical activity - min/week	2019 vs. 2013	0.20 (-0.06, 0.45)	0.129
Fruit intake - times per day	2019 vs. 2013	0.07 (-0.10, 0.24)	0.411
Vegetable intake - times per day	2019 vs. 2013	-0.12 (-0.30, 0.05)	0.161
Had a routine checkup in past year	2020 vs. 2013	**15.63 (7.03, 24.24)**	**<0.001**
Ever had blood cholesterol screening	2019 vs. 2013	4.66 (-1.28, 10.59)	0.124
Ever received a HIV test	2020 vs. 2013	0.16 (-9.44, 9.76)	0.974
Received a HIV test in past year	2020 vs. 2013	1.73 (-6.25, 9.72)	0.670
Colorectal cancer screening[3]	2020 vs. 2012	-3.50 (-14.03, 7.02)	0.515
Mammogram screening[4]	2020 vs. 2012	9.34 (-5.17, 23.85)	0.207
Cervical cancer screening[5]	2020 vs. 2012	**-21.52 (-41.97, -1.08)**	**0.039**
Had a flu shot in past year	2020 vs. 2013	**9.59 (0.14, 19.04)**	**0.047**

[1]Post-regression average marginal effects were used to estimate the pre to post changes in outcomes using regression estimates from the difference-in-differences models with 2013 or 2012 designated as the pre-period year and either 2019 or 2020 designated as the final post-period year, depending on data availability of the variable.
[2]Binge drinking was defined as males having five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.
[3]Colorectal screening was recommended for individuals aged 50-75 years. Respondents were considered adherent to colorectal cancer screening guidelines if they had a stool test in the last year, sigmoidoscopy in the last 5 years, or colonoscopy in the last 10 years.
[4]Mammogram screening was recommended for women aged 50-75 years. Women were considered adherent to mammogram screening if they received a mammogram in the last 2 years.
[5]Cervical screening was recommended for women 21-65 years old. However, due to age coding in BRFSS, we applied the guidelines to women aged 25-65 years old. Women under age 30 were considered adherent to cervical cancer screening guidelines if they received a Pap smear in the last 3 years. Women aged 30-65 years old were considered adherent to cervical cancer screening guidelines if they received a pap smear and HPV testing in the last 5 years.

BRFSS Appendix

BRFSS Appendix Table 1.1.2. Difference-in-Difference analysis comparing low-income adults ages 18 to 64 in Michigan to low-income adults ages 18 to 64 in other Medicaid expansion states and non-expansion states before and after HMP implementation in 2014

Outcome	Year	Michigan	Other Medicaid expansion states	Non-expansion states	Difference-in-Difference (DID)[1]			
		% / # of days/ minutes per week / times per day (95% CI)	% / # of days/ minutes per week / times per day (95% CI)	% / # of days/ minutes per week / times per day (95% CI)	DID (95% CI) - Other Medicaid expansion states	*p* value	DID (95% CI) - Non expansion states	*p* value
Excellent/very good health %	2013	70.01 (66.45, 73.56)	67.90 (66.40, 69.40)	67.90 (66.40, 69.40)	NA	NA	NA	NA
	2014	72.98 (68.12, 77.84)	68.56 (67.22, 69.91)	66.68 (65.19, 68.17)	NA	NA	NA	NA
	2015	64.24 (58.99, 69.48)	68.33 (66.71, 69.95)	67.24 (65.46, 69.01)	-6.20 (-12.91, 0.51)	0.07	-6.10 (-12.83, 0.63)	0.076
	2016	67.65 (62.88, 72.41)	68.08 (66.50, 69.66)	67.40 (65.54, 69.26)	-2.54 (-8.88, 3.79)	0.431	-2.86 (-9.24, 3.53)	0.381
	2017	67.46 (62.36, 72.56)	64.88 (63.25, 66.52)	66.82 (64.60, 69.04)	0.47 (-6.13, 7.07)	0.888	-2.46 (-9.21, 4.29)	0.475
	2018	66.25 (60.57, 71.93)	65.81 (64.12, 67.51)	65.21 (63.01, 67.42)	-1.67 (-8.75, 5.40)	0.643	-2.07 (-9.26, 5.13)	0.574
	2019	63.22 (57.53, 68.91)	64.67 (62.82, 66.52)	63.76 (61.41, 66.12)	-3.55 (-10.67, 3.56)	0.328	-3.65 (-10.89, 3.60)	0.324
	2020	78.39 (71.71, 85.08)	73.31 (71.49, 75.13)	73.54 (71.12, 75.96)	2.98 (-4.95, 10.90)	0.462	1.75 (-6.32, 9.82)	0.671
Functional limitations due to poor physical health (# of days)	2013	7.37 (6.25, 8.49)	6.67 (6.27, 7.06)	6.67 (6.27, 7.06)	NA	NA	NA	NA
	2014	6.55 (5.20, 7.90)	6.45 (6.05, 6.84)	5.95 (5.54, 6.36)	NA	NA	NA	NA
	2015	7.41 (6.06, 8.75)	6.31 (5.90, 6.73)	6.13 (5.65, 6.62)	0.39 (-1.45, 2.24)	0.676	0.21 (-1.65, 2.08)	0.825
	2016	7.73 (6.05, 9.41)	6.99 (6.48, 7.49)	6.46 (5.94, 6.99)	0.04 (-2.09, 2.16)	0.972	0.20 (-1.93, 2.33)	0.853
	2017	6.64 (5.40, 7.88)	6.67 (6.25, 7.08)	6.04 (5.33, 6.75)	-0.73 (-2.50, 1.04)	0.419	-0.46 (-2.33, 1.41)	0.628
	2018	6.75 (5.50, 8.00)	7.16 (6.62, 7.70)	6.87 (6.27, 7.47)	-1.11 (-2.92, 0.70)	0.229	-1.18 (-3.01, 0.64)	0.204
	2019	7.69 (6.19, 9.19)	7.25 (6.70, 7.81)	6.18 (5.59, 6.76)	-0.27 (-2.26, 1.72)	0.79	0.45 (-1.55, 2.45)	0.66
	2020	5.55 (4.15, 6.95)	5.50 (5.03, 5.97)	5.15 (4.49, 5.80)	-0.66 (-2.56, 1.24)	0.498	-0.66 (-2.62, 1.30)	0.507
Functional limitations due to poor mental health (# of days)	2013	7.96 (6.66, 9.25)	7.43 (6.92, 7.94)	7.43 (6.92, 7.94)	NA	NA	NA	NA
	2014	7.67 (6.22, 9.13)	7.65 (7.08, 8.22)	7.45 (6.93, 7.96)	NA	NA	NA	NA
	2015	8.97 (7.40, 10.54)	7.01 (6.50, 7.51)	7.79 (7.14, 8.43)	1.44 (-0.72, 3.60)	0.192	1.03 (-1.17, 3.22)	0.359
	2016	7.41 (5.66, 9.16)	7.76 (7.17, 8.35)	8.43 (7.70, 9.16)	-0.88 (-3.20, 1.43)	0.454	-1.18 (-3.53, 1.17)	0.325
	2017	8.58 (6.57, 10.59)	8.42 (7.87, 8.96)	7.53 (6.73, 8.32)	-0.36 (-2.86, 2.14)	0.777	0.90 (-1.67, 3.47)	0.493
	2018	8.08 (6.48, 9.67)	8.60 (7.78, 9.43)	8.66 (7.90, 9.42)	-1.05 (-3.33, 1.22)	0.364	-0.74 (-2.98, 1.50)	0.518
	2019	8.65 (6.84, 10.47)	9.19 (8.43, 9.94)	8.36 (7.55, 9.17)	-1.06 (-3.47, 1.35)	0.387	0.13 (-2.29, 2.56)	0.914

BRFSS Appendix

	2020	9.45 (6.27, 12.63)	8.68 (7.96, 9.39)	7.83 (6.85, 8.82)	0.25 (-3.30, 3.79)	0.892	1.46 (-2.15, 5.07)	0.428
Functional limitations due to poor physical or mental health (# of days)	2013	7.03 (6.08, 7.98)	7.03 (6.53, 7.53)	7.03 (6.53, 7.53)	NA	NA	NA	NA
	2014	8.21 (6.72, 9.70)	6.32 (5.99, 6.66)	5.97 (5.58, 6.36)	NA	NA	NA	NA
	2015	7.40 (6.01, 8.80)	6.27 (5.84, 6.69)	5.65 (5.25, 6.05)	1.14 (-0.67, 2.95)	0.218	0.85 (-0.93, 2.62)	0.35
	2016	7.31 (5.95, 8.66)	6.12 (5.72, 6.53)	5.25 (4.82, 5.68)	1.18 (-0.59, 2.96)	0.191	1.14 (-0.61, 2.89)	0.2
	2017	7.49 (5.93, 9.05)	6.41 (6.02, 6.80)	5.40 (4.93, 5.88)	1.08 (-0.85, 3.02)	0.272	1.18 (-0.75, 3.10)	0.23
	2018	7.93 (6.47, 9.39)	6.27 (5.83, 6.71)	6.62 (5.95, 7.30)	1.66 (-0.21, 3.52)	0.082	0.39 (-1.52, 2.30)	0.686
	2019	7.35 (5.77, 8.94)	6.76 (6.28, 7.24)	5.98 (5.45, 6.52)	0.59 (-1.38, 2.57)	0.556	0.46 (-1.51, 2.42)	0.647
	2020	6.98 (5.18, 8.79)	6.51 (6.00, 7.02)	6.05 (5.35, 6.75)	0.47 (-1.69, 2.63)	0.668	0.02 (-2.17, 2.21)	0.984
Quit smoking in past year %	2013	63.80 (56.94, 70.67)	63.59 (61.00, 66.17)	63.59 (61.00, 66.17)	NA	NA	NA	NA
	2014	58.48 (48.34, 68.61)	63.15 (60.35, 65.94)	67.97 (65.11, 70.83)	NA	NA	NA	NA
	2015	66.50 (57.49, 75.51)	61.58 (58.54, 64.62)	63.29 (59.76, 66.82)	4.71 (-7.30, 16.72)	0.442	5.09 (-7.04, 17.21)	0.411
	2016	62.49 (53.38, 71.61)	60.86 (57.62, 64.10)	64.76 (61.21, 68.31)	1.42 (-10.73, 13.56)	0.819	-0.39 (-12.61, 11.82)	0.95
	2017	64.73 (55.93, 73.53)	59.50 (56.16, 62.83)	60.92 (56.44, 65.40)	5.02 (-6.92, 16.95)	0.41	5.68 (-6.60, 17.97)	0.365
	2018	65.51 (56.05, 74.97)	57.77 (54.36, 61.18)	61.09 (56.50, 65.68)	7.53 (-4.92, 19.97)	0.236	6.29 (-6.51, 19.10)	0.335
	2019	61.63 (50.12, 73.13)	61.32 (57.70, 64.95)	61.71 (57.37, 66.04)	0.09 (-14.03, 14.20)	0.99	1.79 (-12.51, 16.09)	0.806
	2020	65.11 (51.34, 78.88)	54.71 (50.66, 58.77)	56.40 (51.48, 61.31)	10.19 (-5.93, 26.31)	0.215	10.59 (-5.76, 26.93)	0.204
Binge drinking[2] %	2013	13.84 (10.96, 16.73)	15.19 (13.70, 16.69)	15.19 (13.70, 16.69)	NA	NA	NA	NA
	2014	18.21 (13.21, 23.20)	13.42 (12.24, 14.60)	12.25 (11.10, 13.41)	NA	NA	NA	NA
	2015	10.95 (7.22, 14.68)	13.19 (11.79, 14.59)	10.94 (9.68, 12.20)	-0.89 (-6.03, 4.25)	0.735	-1.92 (-6.91, 3.07)	0.451
	2016	16.90 (12.58, 21.22)	13.30 (11.96, 14.64)	11.78 (10.23, 13.33)	4.95 (-0.62, 10.52)	0.082	3.19 (-2.33, 8.71)	0.257
	2017	12.89 (8.93, 16.84)	13.04 (11.69, 14.38)	12.56 (10.89, 14.23)	1.20 (-4.10, 6.50)	0.657	-1.60 (-6.88, 3.68)	0.553
	2018	17.93 (13.26, 22.59)	12.20 (10.88, 13.52)	12.71 (11.09, 14.34)	7.08 (1.25, 12.92)	0.017	3.29 (-2.53, 9.10)	0.268
	2019	9.03 (5.63, 12.43)	12.82 (11.33, 14.31)	13.90 (11.54, 16.26)	-2.43 (-7.37, 2.50)	0.333	-6.79 (-11.95, -1.64)	0.01
	2020	13.61 (6.47, 20.75)	12.27 (10.74, 13.80)	11.48 (9.46, 13.50)	2.69 (-5.30, 10.69)	0.509	0.20 (-7.84, 8.23)	0.962
Any physical activity %	2013	68.17 (64.12, 72.23)	65.31 (63.58, 67.04)	65.31 (63.58, 67.04)	NA	NA	NA	NA
	2014	63.15 (57.73, 68.57)	66.64 (65.14, 68.13)	63.09 (61.46, 64.72)	NA	NA	NA	NA
	2015	64.37 (58.34, 70.40)	65.82 (63.98, 67.66)	62.74 (60.72, 64.75)	-4.31 (-12.01, 3.38)	0.272	-5.42 (-13.14, 2.31)	0.17

BRFSS Appendix

	2016	68.35 (63.50, 73.20)	65.23 (63.52, 66.94)	61.10 (58.87, 63.33)	0.26 (-6.52, 7.03)	0.941	0.20 (-6.72, 7.11)	0.955
	2017	64.64 (59.15, 70.12)	64.13 (62.26, 66.00)	60.56 (57.92, 63.20)	-2.36 (-9.64, 4.92)	0.526	-2.98 (-10.48, 4.53)	0.437
	2018	65.63 (60.08, 71.17)	62.84 (60.98, 64.71)	61.82 (59.29, 64.36)	-0.08 (-7.40, 7.25)	0.983	-3.25 (-10.76, 4.27)	0.397
	2019	60.97 (54.73, 67.22)	60.50 (58.44, 62.55)	62.17 (59.58, 64.75)	-2.39 (-10.30, 5.53)	0.554	-8.25 (-16.31, -0.19)	0.045
	2020	73.29 (66.19, 80.38)	63.03 (60.86, 65.20)	59.00 (56.22, 61.79)	7.39 (-1.23, 16.02)	0.093	7.24 (-1.56, 16.03)	0.107
Physical Activity - min/week	2013	253.91 (221.19, 286.62)	221.80 (209.84, 233.76)	221.80 (209.84, 233.76)	NA	NA	NA	NA
	2015	274.65 (222.92, 326.39)	246.11 (230.61, 261.61)	210.65 (198.35, 222.94)	-3.57 (-67.87, 60.73)	0.913	20.10 (-43.25, 83.45)	0.534
	2017	265.10 (206.97, 323.23)	241.69 (226.55, 256.82)	206.51 (190.29, 222.72)	-8.70 (-78.18, 60.78)	0.806	14.69 (-54.79, 84.16)	0.679
	2019	309.09 (242.07, 376.10)	242.61 (225.47, 259.75)	238.31 (220.04, 256.58)	34.36 (-43.14, 111.86)	0.385	26.87 (-50.68, 104.42)	0.497
Fruit intake - times per day	2013	0.62 (0.57, 0.68)	0.61 (0.59, 0.64)	0.61 (0.59, 0.64)	NA	NA	NA	NA
	2015	0.59 (0.50, 0.68)	0.65 (0.62, 0.68)	0.58 (0.55, 0.61)	-0.07 (-0.18, 0.03)	0.185	-0.04 (-0.15, 0.06)	0.433
	2017	0.59 (0.50, 0.67)	0.72 (0.69, 0.75)	0.67 (0.63, 0.71)	-0.15 (-0.25, -0.04)	0.006	-0.13 (-0.24, -0.02)	0.017
	2019	0.67 (0.57, 0.77)	0.67 (0.64, 0.70)	0.65 (0.61, 0.69)	-0.01 (-0.13, 0.11)	0.857	-0.03 (-0.15, 0.09)	0.638
Vegetable intake - times per day	2013	0.35 (0.32, 0.39)	0.34 (0.33, 0.36)	0.34 (0.33, 0.36)	NA	NA	NA	NA
	2015	0.36 (0.31, 0.41)	0.36 (0.34, 0.38)	0.35 (0.34, 0.37)	-0.01 (-0.07, 0.05)	0.751	0.01 (-0.05, 0.07)	0.798
	2017	0.34 (0.29, 0.38)	0.34 (0.32, 0.35)	0.36 (0.34, 0.38)	-0.01 (-0.07, 0.05)	0.803	-0.02 (-0.08, 0.04)	0.558
	2019	0.31 (0.27, 0.35)	0.33 (0.31, 0.35)	0.36 (0.33, 0.39)	-0.03 (-0.09, 0.03)	0.358	-0.05 (-0.11, 0.02)	0.169
Had a routine checkup in past year %	2013	61.04 (56.80, 65.28)	58.67 (56.91, 60.43)	58.67 (56.91, 60.43)	NA	NA	NA	NA
	2014	68.36 (63.13, 73.59)	61.33 (59.70, 62.96)	59.42 (57.76, 61.09)	NA	NA	NA	NA
	2015	76.60 (71.47, 81.73)	64.25 (62.44, 66.05)	60.19 (58.20, 62.19)	9.99 (2.87, 17.10)	0.006	15.58 (8.45, 22.71)	<0.001
	2016	66.97 (61.83, 72.12)	64.97 (63.22, 66.73)	61.32 (59.05, 63.60)	-0.37 (-7.48, 6.75)	0.919	4.82 (-2.41, 12.04)	0.191
	2017	69.54 (64.06, 75.03)	65.91 (64.19, 67.64)	63.00 (60.48, 65.51)	1.26 (-6.09, 8.62)	0.736	5.72 (-1.83, 13.26)	0.138
	2018	76.69 (71.43, 81.96)	73.58 (71.90, 75.26)	70.49 (68.13, 72.85)	0.75 (-6.44, 7.94)	0.838	5.37 (-1.97, 12.72)	0.151
	2019	73.70 (67.67, 79.74)	72.35 (70.43, 74.27)	69.36 (66.92, 71.80)	-1.01 (-8.84, 6.81)	0.799	3.52 (-4.42, 11.45)	0.385
	2020	76.67 (69.18, 84.16)	71.74 (69.58, 73.90)	67.47 (64.67, 70.27)	2.56 (-6.48, 11.61)	0.579	8.37 (-0.82, 17.56)	0.074
	2013	87.22 (83.35, 91.09)	80.57 (78.34, 82.81)	80.57 (78.34, 82.81)	NA	NA	NA	NA

Ever had blood cholesterol screening %	2015	90.54 (86.30, 94.77)	83.97 (82.28, 85.65)	79.59 (77.37, 81.81)	-0.08 (-6.46, 6.31)	0.981	7.25 (0.89, 13.60)	0.026
	2017	96.48 (93.58, 99.37)	91.35 (89.93, 92.78)	93.29 (91.82, 94.77)	-1.52 (-7.03, 3.99)	0.589	-0.52 (-5.82, 4.79)	0.849
	2019	91.87 (87.38, 96.37)	92.98 (91.51, 94.44)	92.16 (90.08, 94.24)	-7.75 (-14.25, -1.24)	0.02	-3.99 (-10.47, 2.50)	0.229
Ever received a HIV test %	2013	46.25 (42.19, 50.32)	44.68 (42.91, 46.45)	44.68 (42.91, 46.45)	NA	NA	NA	NA
	2014	53.42 (47.99, 58.85)	43.49 (41.86, 45.12)	47.16 (45.46, 48.85)	NA	NA	NA	NA
	2015	49.89 (43.76, 56.02)	43.57 (41.62, 45.52)	48.47 (46.36, 50.58)	4.75 (-3.07, 12.56)	0.234	3.89 (-3.95, 11.74)	0.331
	2016	48.12 (42.84, 53.41)	44.60 (42.71, 46.49)	46.44 (44.22, 48.67)	1.95 (-5.21, 9.10)	0.594	4.15 (-3.08, 11.38)	0.261
	2017	53.18 (47.37, 59.00)	45.58 (43.57, 47.60)	48.41 (45.61, 51.21)	6.03 (-1.56, 13.61)	0.119	7.24 (-0.58, 15.06)	0.069
	2018	51.28 (45.24, 57.32)	44.41 (42.42, 46.39)	47.32 (44.64, 50.00)	5.30 (-2.46, 13.05)	0.18	6.42 (-1.52, 14.37)	0.113
	2019	47.73 (41.55, 53.92)	46.20 (44.12, 48.29)	54.34 (51.60, 57.08)	-0.05 (-7.94, 7.84)	0.991	-4.14 (-12.22, 3.93)	0.315
	2020	46.41 (37.72, 55.10)	43.41 (41.08, 45.74)	50.53 (47.65, 53.41)	1.43 (-8.61, 11.46)	0.78	-1.65 (-11.82, 8.52)	0.751
Received a HIV test in past year %	2013	11.23 (8.28, 14.18)	13.60 (12.22, 14.97)	13.60 (12.22, 14.97)	NA	NA	NA	NA
	2014	15.87 (11.32, 20.43)	13.83 (12.60, 15.06)	14.97 (13.67, 16.26)	NA	NA	NA	NA
	2015	16.27 (11.06, 21.48)	14.20 (12.75, 15.65)	16.95 (15.23, 18.68)	4.43 (-1.88, 10.75)	0.168	2.80 (-3.57, 9.17)	0.389
	2016	9.35 (6.25, 12.44)	11.92 (10.67, 13.18)	14.31 (12.60, 16.02)	-0.21 (-4.87, 4.45)	0.93	-1.47 (-6.26, 3.32)	0.547
	2017	13.69 (8.97, 18.40)	12.99 (11.61, 14.37)	16.81 (14.53, 19.09)	3.06 (-2.83, 8.95)	0.308	0.37 (-5.79, 6.52)	0.907
	2018	12.20 (7.05, 17.34)	13.58 (12.12, 15.03)	14.37 (12.45, 16.28)	0.99 (-5.27, 7.25)	0.757	1.32 (-5.05, 7.69)	0.685
	2019	11.49 (6.68, 16.30)	14.30 (12.73, 15.87)	17.97 (15.63, 20.32)	-0.44 (-6.46, 5.57)	0.885	-2.99 (-9.25, 3.26)	0.348
	2020	12.96 (5.54, 20.39)	11.72 (10.13, 13.32)	13.70 (11.40, 16.01)	3.61 (-4.65, 11.87)	0.392	2.75 (-5.67, 11.17)	0.522
Colorectal cancer screening[3] %	2012	13.48 (7.67, 19.29)	14.53 (12.59, 16.46)	14.53 (12.59, 16.46)	NA	NA	NA	NA
	2014	14.10 (7.50, 20.70)	13.56 (11.69, 15.44)	13.54 (11.39, 15.68)	NA	NA	NA	NA
	2016	12.39 (6.20, 18.57)	14.65 (12.56, 16.73)	18.10 (14.27, 21.93)	-1.22 (-10.16, 7.73)	0.79	-7.23 (-16.78, 2.31)	0.138
	2018	20.11 (10.86, 29.36)	17.46 (14.57, 20.35)	16.43 (13.37, 19.50)	3.70 (-7.77, 15.16)	0.527	2.16 (-9.39, 13.70)	0.714
	2020	9.98 (1.20, 18.76)	17.31 (14.60, 20.03)	19.01 (15.66, 22.36)	-6.29 (-17.33, 4.75)	0.264	-10.55 (-21.80, 0.70)	0.066
Mammogram screening[4] %	2012	68.14 (61.07, 75.20)	65.17 (62.58, 67.77)	65.17 (62.58, 67.77)	NA	NA	NA	NA
	2014	73.41 (64.68, 82.14)	66.30 (63.40, 69.19)	64.67 (61.52, 67.83)	NA	NA	NA	NA
	2016	69.70 (58.70, 80.70)	68.37 (65.10, 71.64)	66.67 (61.97, 71.37)	-1.64 (-15.36, 12.09)	0.815	-5.06 (-19.42, 9.31)	0.49
	2018	82.10 (73.90, 90.30)	68.37 (64.26, 72.48)	68.01 (63.76, 72.27)	10.77 (-1.09, 22.63)	0.075	6.00 (-6.19, 18.19)	0.335

	2020	77.48 (64.80, 90.15)	70.34 (66.47, 74.20)	68.21 (63.40, 73.03)	4.18 (-11.06, 19.42)	0.591	1.18 (-14.54, 16.90)	0.883
Cervical cancer screening[5] %	2012	65.02 (50.92, 79.13)	62.67 (58.13, 67.21)	62.67 (58.13, 67.21)	NA	NA	NA	NA
	2014	73.93 (59.73, 88.14)	55.16 (50.98, 59.34)	51.65 (47.69, 55.61)	NA	NA	NA	NA
	2016	56.20 (47.98, 64.42)	47.19 (44.35, 50.02)	43.33 (40.00, 46.66)	6.66 (-10.52, 23.84)	0.447	8.55 (-8.57, 25.68)	0.328
	2018	57.66 (46.39, 68.93)	55.59 (52.22, 58.96)	49.64 (45.58, 53.70)	-0.28 (-19.20, 18.64)	0.977	3.71 (-15.22, 22.63)	0.701
	2020	43.50 (28.70, 58.30)	48.66 (44.71, 52.60)	47.74 (43.03, 52.46)	-7.51 (-28.82, 13.80)	0.49	-8.56 (-29.91, 12.79)	0.432
Had a flu shot in past year %	2013	28.57 (24.65, 32.50)	31.16 (29.47, 32.85)	31.16 (29.47, 32.85)	NA	NA	NA	NA
	2014	29.06 (23.99, 34.12)	31.87 (30.38, 33.37)	28.67 (27.13, 30.22)	NA	NA	NA	NA
	2015	28.07 (22.33, 33.82)	33.66 (31.84, 35.48)	30.08 (28.19, 31.98)	-3.00 (-10.39, 4.39)	0.426	-1.55 (-8.93, 5.84)	0.682
	2016	25.46 (20.82, 30.10)	31.74 (30.02, 33.46)	27.35 (25.28, 29.41)	-3.70 (-10.23, 2.84)	0.268	-1.42 (-8.03, 5.19)	0.673
	2017	33.72 (28.22, 39.22)	34.27 (32.33, 36.21)	31.76 (29.12, 34.40)	2.04 (-5.20, 9.27)	0.581	2.42 (-5.01, 9.85)	0.523
	2018	22.60 (17.76, 27.44)	28.88 (27.06, 30.71)	21.67 (19.78, 23.57)	-3.70 (-10.41, 3.01)	0.28	1.39 (-5.31, 8.09)	0.685
	2019	30.04 (24.16, 35.92)	32.35 (30.45, 34.25)	31.21 (28.51, 33.91)	0.28 (-7.24, 7.79)	0.943	-0.70 (-8.43, 7.03)	0.859
	2020	38.16 (29.57, 46.76)	35.20 (32.94, 37.46)	31.09 (28.48, 33.70)	5.55 (-4.31, 15.41)	0.27	7.53 (-2.40, 17.46)	0.137

[1]Difference-in-differences analyses included an interaction term between group (three-level state categories: MI vs. other Medicaid expansion states and MI vs. non-expansion states) and year, controlling for age, gender, race/ethnicity, marital status, education, income, employment status, cell phone sample status, and state fixed effects. Each outcome was included as the dependent variable in separate regression models. Post-regression average marginal effects were used to estimate the difference-in-differences comparing Michigan with the comparison state groups, with 2013 or 2012 designated as the pre-period year and either 2019 or 2020 designated as the final post-period year, depending on data availability of the variable.

[2]Binge drinking was defined as males having five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

[3]Colorectal screening was recommended for individuals aged 50-75 years. Respondents were considered adherent to colorectal cancer screening guidelines if they had a stool test in the last year, sigmoidoscopy in the last 5 years, or colonoscopy in the last 10 years.

[4]Mammogram screening was recommended for women aged 50-75 years. Women were considered adherent to mammogram screening if they received a mammogram in the last 2 years.

[5]Cervical screening was recommended for women 21-65 years old. However, due to age coding in BRFSS, we applied the guidelines to women aged 25-65 years old. Women under age 30 were considered adherent to cervical cancer screening guidelines if they received a Pap smear in the last 3 years. Women aged 30-65 years old were considered adherent to cervical cancer screening guidelines if they received a pap smear and HPV testing in the last 5 years.

ACS, HCUP, and Medicare Cost Report Appendix

The ACS, HCUP, and Medicare Cost Report Appendix includes additional information related to the methods for the ACS, HCUP, and Medicare Cost Report analyses.

ACS, HCUP, and Medicare Cost Report Appendix

ACS, HCUP, and Medicare Cost Report Appendix Table 1. State classifications for comparison states in ACS, HCUP, and Medicare cost report analyses

Traditional expansion states	Non-expansion states
Arizona	Alabama
California	Florida
Colorado	Georgia
Connecticut	Kansas
Delaware	Mississippi
District of Columbia	Missouri[3]
Hawaii	North Carolina
Illinois	Oklahoma[3]
Kentucky	South Carolina
Maryland	South Dakota
Massachusetts	Tennessee
Minnesota	Texas
Nevada	Wisconsin
New Jersey	Wyoming
New York	
North Dakota	
Ohio	
Oregon	
Rhode Island	
Vermont	
Washington	
West Virginia	

The categorization of states for the ACS, HCUP, and Medicare Cost Report analyses reflects the following decisions:

1. The following 11 states are dropped from all analyses because they expanded Medicaid between August 2014 and October 2020 and (date of expansion in parentheses): New Hampshire (8/2014), Pennsylvania (1/2015), Indiana (2/2015), Alaska (9/2015), Montana (1/2016), Louisiana (7/2016), Virginia (1/2019), Maine (1/2019), Idaho (1/2020), Utah (1/2020), Nebraska (10/2020).
2. Arkansas and Iowa expanded Medicaid through waivers similar to Michigan's in 2014 and are dropped from these analyses. New Mexico implemented a traditional Medicaid in 2014 but since 2019 has operated under a waiver similar to Michigan's and is therefore also dropped from these analyses.
3. Oklahoma and Missouri are treated as non-expansion states in these analyses because our data are for the period ending in December 2020 and their expansions occurred in 2021 (July 2021 for Oklahoma and August 2021 for Missouri).
4. The following states are not included in the HCUP data and are therefore not present in HCUP analyses: DC, CT, AL. Idaho and New Hampshire are also not included in the HCUP data but would have been dropped anyway because they expanded Medicaid between August 2014 and October 2020 (see note 1 above).

ACS, HCUP, and Medicare Cost Report Appendix

Sources for Medicaid expansion dates:

- https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/

Sources for information on waivers:

- https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state/
- https://www.macpac.gov/medicaid-101/waivers/

Survey Instrument and Interview Guide Appendix

This appendix includes the following survey instruments and interview guides:

- 2021-22 Healthy Michigan Voices Survey Instrument
- 2021 Beneficiary Interview Guide
- 2022 Primary Care Provider Interview Guide
- 2021 Key Informant Interview Guide (Social Impact of HMP)
- 2022 Key Informant Interview Guide (Costs of HMP)

Survey Instrument and Interview Guide Appendix

2021-22 Healthy Michigan Voices Survey Instrument

These first questions are about your health overall.

Q1. In general, would you say your health is:
- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

Q2. In general, would you say your mental health is:
- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

Q3. In general, would you say the health of your teeth and gums is:
- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

Q4. In the last year, would you say your physical health has:
- ☐ Gotten better
- ☐ Stayed the same
- ☐ Gotten worse

Q5. In the last year, would you say your mental health has:
- ☐ Gotten better
- ☐ Stayed the same
- ☐ Gotten worse

Q6. In the last year, has the health of your teeth and gums:
- ☐ Gotten better
- ☐ Stayed the same
- ☐ Gotten worse

The next questions ask about your health over the last 30 days.

Q7. For how many days during the last 30 days was your physical health not good?
[*number between 0 and 30*]

Q8. For how many days during the last 30 days was your mental health not good?
[*number between 0 and 30*]

Q9. During the last 30 days, for how many days did poor physical or mental health keep you from doing your usual activities?

[*number between 0 and 30*]

The next questions are about different behaviors related to your health.

Q10. In the last 7 days, how many days did you have sugary drinks, which include soda or pop that contains sugar, sweetened fruit drinks, sports drinks, or energy drinks?

- ☐ Every day (7 days)
- ☐ Most days (3-6 days)
- ☐ 1-2 days
- ☐ 0 days

Q11. In the last 7 days, how many days did you eat 3 or more servings of fruit or vegetables?

- ☐ Every day (7 days)
- ☐ Most days (3-6 days)
- ☐ 1-2 days
- ☐ 0 days

Q12. In the last 7 days, how many days did you exercise for at least 20 minutes?

- ☐ Every day (7 days)
- ☐ Most days (3-6 days)
- ☐ 1-2 days
- ☐ 0 days

Q13. In the last 7 days, how many days did you have [*autofill "*5 or more" *for men* / "4 or more" *for women*] alcoholic drinks?

- ☐ Every day (7 days)
- ☐ Most days (3-6 days)
- ☐ 1-2 days
- ☐ 0 days

Q14. In the last 30 days have you smoked or used tobacco in any form?

- ☐ Yes
- ☐ No
- ☐ Other *[record relevant details]*

Q15. How often do you use drugs or medications which affect your mood or help you relax, other than exactly as prescribed for you? Would you say: Almost every day, sometimes, rarely or never?

- ☐ Almost every day
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

The next questions are about your experiences getting health care.

Q16. Is there a place that you usually go for a checkup, when you feel sick, or when you want advice about your health?

- ☐ Yes *[continue to Q17]*
- ☐ No *[skip to Q19]*

Q17. What kind of a place is it? a clinic, doctor's office, urgent care/walk-in clinic, ER …

- ☐ Clinic *[continue to Q18]*
- ☐ Doctor's office *[continue to Q18]*
- ☐ Urgent care/walk-in clinic *[Skip to Q19]*
- ☐ ER *[Skip to Q19]*
- ☐ Other *[record relevant details]* *[Skip to Q19]*

Q18. And is this your primary care provider for your Healthy Michigan Plan coverage?

- ☐ Yes *[skip to Q21]*
- ☐ No *[continue to Q19]*
- ☐ Don't know *[continue to Q19]*

<table>
<tr><td colspan="2">Q19. Do you have a primary care provider through your health plan?
☐ Yes [Skip to Q21]
☐ No [go to Q20]
☐ Don't know [go to Q20]
↓</td></tr>
<tr><td></td><td>Q20. Have you had difficulty getting set up with a primary care provider?
☐ Recently changed plans
☐ Had to change PCP
☐ Other [TEXT BOX]
☐ No difficulties
☐ None
[then skip to next section - Q37]</td></tr>
</table>

Q21. How long have you been going to this primary care provider's office? Less than a year, 1-2 years, or more than 2 years?

- ☐ Less than a year
- ☐ 1-2 years
- ☐ More than 2 years

Q22. Have you had an appointment with your primary care provider in the last 12 months?

- ☐ Yes
- ☐ No
- ☐ Don't know

Q23. Have you had any difficulties getting care at the primary care provider's office? *[open-ended; check all mentioned]*

- ☐ Hard to get appointment
- ☐ Transportation/office too far away
- ☐ See a specialist instead
- ☐ Healthy/don't need to go
- ☐ Had to change/delay in getting PCP
- ☐ Other *[record relevant details]*
- ☐ No difficulties

Q24. In the last 12 months, how easy or difficult was it to get an appointment with your primary care provider? Very easy

- ☐ Easy
- ☐ Difficult
- ☐ Very Difficult
- ☐ Not applicable – did not try to get an appointment

Q25. In the last 12 months, when you contacted your primary care provider's office for advice or information, how often did you get a response within 24 hours?

- ☐ Always
- ☐ Usually
- ☐ Sometimes
- ☐ Never
- ☐ Not applicable – did not contact PCP

[If Q22=NO PCP, Skip to Q33]

Q28. The Health Risk Assessment is a form for people enrolled in the Healthy Michigan Plan that asks about health habits and has a section about choosing a healthy behavior to work on. In the last 12 months did you discuss the Health Risk Assessment with your doctor or someone at your primary care provider's office?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Other *[record relevant details]*

In the last 12 months, did your doctor or someone at your primary care provider's office do any of the following?

	Yes	No	Don't know
Q26. ask about your eating, exercise, and other health habits			
Q27. talk with you about quitting or cutting back on smoking or other tobacco use? *[if Q14=yes*]			
Q29. talk with you about specific goals for your health			
Q30. ask you if there are things that make it hard for you to take care of your health			

Q31. ask you about things in your life that worry you or cause you stress			
Q32. ask questions or have you fill out a form about social needs like having enough food, housing, or employment			

Q33. In the last 12 months, did you go to a hospital emergency room?
- ☐ Yes
- ☐ No *[skip to Q37]*

Q34. Thinking about the most recent time you went to the emergency room, did you try to contact your primary care provider's office first?
- ☐ Yes *[answer Q35, then skip to intro to Q37]*
- ☐ No *[skip to Q36]*
- ☐ Don't know *[skip to intro to Q37]*

Q35. What happened that you ended up going to the ER? [*check all mentioned*]
- ☐ No response from provider
- ☐ Told to go to the ER
- ☐ Advice wasn't helpful
- ☐ Symptoms didn't improve or got worse
- ☐ Couldn't get an appointment soon enough
- ☐ Other *[record relevant details]*

Q36. What happened that you didn't contact your primary care provider's office? [*open-ended question; check all mentioned]*
- ☐ Knew it was an emergency
- ☐ Office wasn't open
- ☐ Didn't think they could help
- ☐ Other *[record relevant details]*

The next questions ask about your experiences getting other types of health care in the last 12 months.

Q37. In the last 12 months, have you seen any specialists for a medical condition?
- ☐ Yes
- ☐ No
- ☐ Was supposed to but couldn't/didn't go

Q38. Did you have any difficulties getting care from specialists? *[open-ended; check all mentioned]*
- ☐ Did not need specialist care
- ☐ Plan wouldn't cover/had restrictions on service
- ☐ Couldn't find provider who accepted my insurance
- ☐ Problems getting appointment
- ☐ Transportation
- ☐ Problems getting referral
- ☐ Other *[record relevant details*]
- ☐ Just didn't follow through to get care
- ☐ No difficulties

Q39. In the last 12 months, have you seen a counselor, therapist, psychiatrist, or other mental health specialist?

- ☐ Yes
- ☐ No
- ☐ Was supposed to but couldn't/didn't go

Q40. Did you have any difficulties getting mental health care? *[open-ended; check all mentioned]*

- ☐ Did not need mental health care
- ☐ Plan wouldn't cover/had restrictions on service
- ☐ Couldn't find provider who accepted my insurance
- ☐ Problems getting appointment
- ☐ Transportation
- ☐ Problems getting referral
- ☐ Other *[record relevant details*]
- ☐ Just didn't follow through to get care
- ☐ No difficulties

Q41. In the last 12 months, have you seen a dentist or dental hygienist?

- ☐ Yes
- ☐ No
- ☐ Was supposed to but couldn't/didn't go

Q42. Did you have any difficulties getting dental care? *[open-ended; check all mentioned]*

- ☐ Did not need dental care
- ☐ Couldn't find a dentist that takes my insurance
- ☐ Prior dentist stopped taking my plan
- ☐ Plan didn't cover treatment/service I needed
- ☐ Got charged for services
- ☐ Hard to get appointment
- ☐ Transportation/office too far away
- ☐ Afraid of going to the dentist
- ☐ Just didn't want to go
- ☐ Other *[record relevant details]*
- ☐ No difficulties

Q48. Preventive services are things like mammograms, colonoscopies, pap tests, and vaccinations. Did you have any difficulties getting any preventive services? *[open-ended; check all mentioned*]

- ☐ Did not need any preventive services
- ☐ Prior authorization/insurance approval
- ☐ Couldn't find provider
- ☐ Long wait for appointment
- ☐ Other *[record relevant details]*
- ☐ No difficulties

Q49. Now think about other types of services – things like lab tests, vision care, physical therapy, or x-rays. Did you have any difficulties getting any of these other types of services? *[open-ended; check all mentioned*]

- ☐ Did not need any other services
- ☐ Prior authorization/insurance approval
- ☐ Couldn't find provider
- ☐ Long wait for appointment
- ☐ Other *[record relevant details]*
- ☐ No difficulties

Q43. In the last 12 months, have you been on any prescription medications?

- ☐ Yes
- ☐ No *[skip to Q50A]*
- ☐ Was supposed to but couldn't/didn't get them *[skip to Q47A]*

Q44. Who prescribed the medications: Your primary care provider, a specialist, or another type of provider? *[check all mentioned]*

- ☐ Primary care provider
- ☐ Specialist
- ☐ Mental health provider
- ☐ Another provider *[record relevant details]*
- ☐ Don't know

Q45. In the last 12 months, were you ever charged more than you expected for your prescription?

- ☐ Yes
- ☐ No
- ☐ Other *[record relevant details]*

Q46. In the last 12 months, have you done any of the following?

	Yes	No	Don't know
A. Delayed or avoided picking up your prescription because of the cost			
B. Taken less than instructed or skipped doses to make your medicine last longer			
C. Missed doses because you didn't get a refill on time			
D. Stopped taking your medicine or took a different dose without talking to your provider			

Q47. Any other difficulties getting your prescription medication? *[open-ended; check all mentioned*]

- ☐ Prior authorization/insurance approval
- ☐ Getting refills from my doctor
- ☐ Problem at pharmacy
- ☐ Charged a copay/higher amount
- ☐ Other *[record relevant details]*
- ☐ No difficulties

Q50. Sometimes people feel like they did not get fair treatment from health care providers. In the last 12 months, has a health care provider treated you unfairly because of any of the following?

	Yes	No	Unsure
A. Your race or ethnic background			
B. Your appearance			
C. Your age			
D. Your gender			
E. Your gender identity or sexual orientation			
F. Your Medicaid coverage			

Q50G. Any other reasons you felt treated unfairly?
- ☐ Yes *[record relevant information]*
- ☐ No

Sometimes people need to use the internet for health-related things, like connecting with health care providers or submitting information to the state.
Q51. Do you have internet access at home?
- ☐ Yes
- ☐ No [Skip to Q53]
- ☐ Other *[record relevant details]*

Q52. How would you rate your internet connection at home?
- ☐ Good
- ☐ Fair
- ☐ Poor

Q53. How comfortable are you using the internet to take care of health-related needs?
- ☐ Very comfortable
- ☐ Somewhat comfortable
- ☐ Not comfortable

Q54. A patient portal is a website that lets you set up a personal, password-protected connection to a health care practice. Have you set up a patient portal with any of your health care providers?
- ☐ Yes – with primary care provider office
- ☐ Yes – with specialist (medical or MH)
- ☐ No
- ☐ Other *[record relevant information]*

Q55. Video and phone visits with a provider are sometimes called telehealth visits. In the last 12 months, have you had a telehealth visit with any of your providers?
- ☐ Yes
- ☐ No *[skip to Q60]*
- ☐ Supposed to have one but it didn't work *[skip to Q60]*

Q56. Were the telehealth visits by video or by phone? *[check all responses mentioned]*
- ☐ By video
- ☐ By phone
- ☐ Supposed to be by video but ended up phone only

For the next questions, think about your most recent telehealth visit:

Q57. Who decided to do the visit by telehealth: you or the provider? *[open-ended; check all responses mentioned]*

- ☐ Provider/practice
- ☐ Respondent
- ☐ Mutual decision – provider & respondent
- ☐ Other *[record relevant information]*

Q58. Why did you want to have a telehealth visit? *[open-ended; check all mentioned]*

- ☐ Transportation
- ☐ Childcare
- ☐ Don't have to miss work
- ☐ Cost of travel/parking
- ☐ Quicker to get an appointment
- ☐ Fear of COVID-19
- ☐ Other *[record relevant information]*

Q59A. Did technical problems make the visit difficult?

- ☐ Yes
- ☐ No
- ☐ Partial / Not sure
- ☐ Other *[record relevant information]*

Q59B. Did your provider adequately address your health concerns during the telehealth visit?

- ☐ Yes
- ☐ No
- ☐ Partial / Not sure
- ☐ Other *[record relevant information]*

Q59C. Did using telehealth help you get care that you couldn't or wouldn't get otherwise?

- ☐ Yes
- ☐ No
- ☐ Partial / Not sure
- ☐ Other *[record relevant information]*

The next questions are about how people take care of their own health.

Q61. Compared to other things going on in your life right now, how important is taking care of your health? Would you say: very important, somewhat important, or not important?

- ☐ Very important
- ☐ Somewhat important
- ☐ Not important

Q60. I'm going to read some statements about how people take care of their own health. For each statement, please indicate if it is true for you always, sometimes, or never.

	Always	Sometimes	Never
A. I know when I need to go to the doctor.			
B. I keep my appointments.			
C. I know how to prevent problems with my health.			
D. I am able to follow my doctor's treatment advice in between visits.			
E. When I have health care visits, I bring a list of questions or concerns I want to talk about.			

Q63. I'm going to make some statements about the Healthy Michigan Plan coverage and costs. If you think the statement is correct, say "yes." If you think it is not correct, say "no." If you don't know, say "don't know."

	Yes	No	Don't know
A. I could be dropped from the Healthy Michigan Plan for not paying my bill.			
B. I may get a reduction in the amount I have to pay if I complete a health risk assessment or a healthy behavior.			
C. There is a limit on the total amount I might have to pay each year for Healthy Michigan Plan coverage.			
D. Some kinds of visits, tests and medicines have no copays.			

For the next statements, tell me if you: *Strongly agree, Agree, Are neutral, Disagree, or Strongly disagree.*

Q64B. The amount I have to pay overall for the Healthy Michigan Plan seems fair.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

Q64C. The amount I have to pay for the Healthy Michigan Plan is affordable.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

Q64A. I think about how much I might have to pay before getting a prescription, scheduling a doctor visit, or going to the ER.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

Q65. In the last year, have you received a statement from the state that showed the services you received through the Healthy Michigan Plan and how much you owed, if anything? It's called your Healthy Michigan Plan statement or your MI Health Account Statement.

- ☐ Yes
- ☐ No *[skip to Q68]*
- ☐ Not sure if it was in past year *[skip to Q68]*

Q66. Did any of your statements in the past year show a reduction or discount in the amount you had to pay?

- ☐ Yes
- ☐ No *[skip to Q68]*
- ☐ Don't know *[skip to Q68]*

Q67. Do you remember what the reduction or discount was for? *[open-ended; check all mentioned]*

- ☐ Healthy Behavior Reward
- ☐ Preventive service
- ☐ Chronic condition service
- ☐ Other *[record relevant information]*
- ☐ Don't know

This last section is about you and your personal characteristics.

Q68. Are you currently employed at a job, self-employed, or not employed?

- ☐ Employed at a job
- ☐ Self-employed
- ☐ Not employed

Q69. Are you working full time or part time?

- ☐ Full time
- ☐ Part time
- ☐ N/A – self employed

Q70. How would you describe your work schedule?

- ☐ It changes from week to week
- ☐ It changes by season
- ☐ It's pretty consistent

Q71. Do any of the following interfere with your ability to work, how much you can work, or the type of work you can do?

	Yes	No	Unsure	IVR skip	R skip
A. your health					
B. Transportation					
C. A prior conviction or legal action					
D. Caregiving responsibilities					
E. Lack of jobs in the area					

Q71F. Anything else that interferes with your ability to work?
- ☐ Yes *[record relevant information]*
- ☐ No

Q72. What is the highest grade of school or the highest degree you have completed?
- ☐ Less than high school
- ☐ High school graduate or GED
- ☐ Some college
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Graduate degree

Q73. What race or races do you consider yourself to be? *[open-ended; check all mentioned*]
- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian
- ☐ Pacific Islander: Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander
- ☐ Hispanic or Latino *[Skip to Q75]*
- ☐ Arab, Chaldean or Middle Eastern *[Ask Q74 then skip to GEN]*
- ☐ Other [*record comment*]

Q74. Are you of Hispanic or Latino ethnicity?
- ☐ Yes
- ☐ No

Q75. Are you of Arab or Chaldean or Middle Eastern descent?
- ☐ Yes
- ☐ No

GEN What is your gender? *[open-ended question; check all mentioned]*
- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ Transgender
- ☐ Other *[record relevant details]*

Q76. Are you married?
- ☐ Married
- ☐ Not married
- ☐ Separated (if specified)
- ☐ Partnered (if specified)

Q77. In the last 12 months, have you been forced to move because you couldn't pay rent or mortgage?
- ☐ Yes
- ☐ No

Q78. In the last 12 months, have you been homeless at any time?

- ☐ Yes
- ☐ No

Q79. In the last 12 months, have you worried whether your food would run out before you got money to buy more?

- ☐ Yes
- ☐ No

Q80. In the last 12 months, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

- ☐ Yes
- ☐ No

Q81. How often do you need to have someone help you read information from a doctor, pharmacy or health plan? Would you say: never, sometimes or often?

- ☐ Never
- ☐ Sometimes
- ☐ Often

Q82. And the last question: Do you have any comments about your Healthy Michigan Plan coverage?

- ☐ Yes [*record open-ended response]*
- ☐ No

2021 Beneficiary Interview Guide

For letter follow-up calls start here:

Hi, can I speak with [RESP first name]? This is [INT first name] with the Healthy Michigan Voices project at the University of Michigan.

> *[If answered by another person]*
> We want to give [RESP] an opportunity to participate in the Healthy Michigan Voices project. What would be a good time to reach [RESP]? [*record info in tracking sheet*]
>
> *[If sent to voicemail]*
> Hi, this message is for [RESP]. This is the Healthy Michigan Voices project at the University of Michigan. We're hoping to talk with you about the project and your opportunity to earn a $50 gift card. You can give us a call back at 844-263-8402. We'll also try you again at a later time. Thanks.

For scheduled interviews start here:

Hi, can I speak with [RESP first name]? This is [INT first name] with the Healthy Michigan Voices project at the University of Michigan.

Healthy Michigan Voices is a project at the University of Michigan – [you may remember getting a letter about it recently.] We're speaking with people across Michigan to learn more about their experiences getting health care through the Healthy Michigan Plan. The interview takes 30 to 45 minutes, and you'll receive a $50 gift card for participating.

Is this a good time to do the interview?

Okay, just a couple of quick things for you to know before we start:

- The Healthy Michigan Voices interview is voluntary.
- The interview is confidential. Your answers will be kept separately from your name and phone number, and our report to the state will not contain any personal information. The University of Michigan will give the State a summary of answers from all people who participate in the interviews to help improve the services offered.
- Remember, I don't work for the state or any doctor's office, so this really is confidential.
- The interview questions ask about your health, experiences getting health care, and using your Healthy Michigan Plan coverage.
- We'll talk more about the gift card at the end, to make sure you have all the information about that.
- Do you have any questions before we begin?

To make sure we get everything you say down accurately, and to help us go a little quicker, can I record this call?
No [*verify that recorder is turned off*]

Yes [*once recorder is on*]

Ok, the recorder is on for ID <SAY THE ID NAME SO IT'S ON THE RECORDING>

To begin, to confirm:
I have that you first enrolled in the Healthy Michigan Plan in ____ and you're currently enrolled in _____ plan. Does that sound accurate?

Taking Care of Your Health

To get us started…
We're going to ask you a few questions about how having HMP coverage may impact how you take care of your health.

Since you started your HMP coverage, have you changed any things that <u>you</u> do to take care of your health?

[IF YES] What have you changed and why?

[IF YES] What or who has helped you to make these changes?

Probe for mental health and the health of their teeth and gums (if not mentioned)

[IF NO] It sounds like you haven't made any changes related to how you take care of your health since [MONTH of YEAR]. Am I understanding that correctly?

What are things that make it easier or harder for you to take care of your health? Does your HMP coverage help ?

Probes:
Is there anything else? This may include conversations with your health care providers or communications from your health plan.

Health

Thinking about your health since you enrolled in HMP coverage…

How has your health changed, if at all, since enrolling in HMP coverage?

What have you learned about your health since having your HMP coverage?

How, if at all, has having HMP coverage affected your physical health?

How, if at all, has having HMP coverage affected your mental health?

How, if at all, has having HMP affected the health of your teeth and gums?

How, if at all, has having HMP affected your vision?

Health Care Service Use

Now, we're going to ask you a few questions about how having HMP coverage may have affected your use of health care services.

How, if at all, has having HMP coverage affected your use of health care services over time?

> *Probe: Given that this past year may have been different due to the COVID-19 pandemic, it may be easier to reflect on the years between [MONTH of YEAR] and March 2020 first and then we can talk about the past year.* Thinking back to the period between [MONTH of YEAR] and March 2020, how, if at all, has having HMP coverage affected your use of health care services?

How, if at all, has having HMP coverage affected the decisions you make about seeking health care?

> *Probe:* How has having HMP coverage changed your use of the emergency department?

What, if anything, has changed about your use of health care services in the past year?

Since March 2020, have you had a visit with a health care provider by video or phone. This is sometimes called a telehealth visit? [IF YES] What was that experience like?

> *Probes:*
> Was that using video or on the phone?
> Did you have any problems with the telehealth visit?
> How did it compare to in-person care?

How have you gotten health care services in the past few months? If so, were your appointments in-person, by telehealth, or both?

Was there any time when you had HMP coverage that you needed health care but did <u>not</u> get it? If so, tell me a little bit more about that.

> *Probe:*
> Are there any other types of care you needed but did not get that you would like to mention?

Healthy Behavior Reward

Now I'm going to ask you about specific features of the Healthy Michigan Plan.

Have you heard about the HMP Healthy Behavior Reward program?

[IF YES] Where did you hear about it? What do you know about the program?

Have you received a healthy behavior reward?

[IF YES] How did you know you received it?

[IF YES] Do you know what you did to earn it?

Health Risk Assessment

The Health Risk Assessment is a form that asks a set of questions about behaviors that affect your health like eating, exercise, and smoking, and it asks you to select a healthy behavior goal with your health care provider. Based on our records, it appears that you completed a Health Risk Assessment or HRA in the past year.

Does that sound familiar? Do you remember completing an HRA?

[IF HRA] Why did you complete the Health Risk Assessment?

Probe:
Did the possibility of receiving a reduction in what you owe motivate you to complete the HRA?

[IF HRA] How did you choose the healthy behavior goal you selected on the HRA?

[IF HRA] Have you made any progress towards the healthy behavior goal you selected?

[IF YES] What helped you make progress?

[IF YES OR NO] What got in the way of trying to meet your goal?

[IF NO HRA] The Health Risk Assessment is a form that asks a set of questions about behaviors that affect your health like eating, exercise, and smoking, and it asks you to select a healthy behavior goal with your health care provider. It appears from our records that you have not completed an HRA in the past year. Do you remember ever completing a Health Risk Assessment?

[IF YES] Why did you complete it?

[IF NO] Is there a reason you did not complete it?

MI Health Account

Many people on HMP receive a statement every 3 months that shows the services they received through the Healthy Michigan Plan and how much, if anything, they owe. It's called the MI Health Account Statement.

Have you reviewed a MI Health Account Statement?

[IF YES] Can you tell me what you remember seeing on your MI Health Account statement?

Probe:
Anything else?

[IF YES] Have you learned anything in reviewing your statement about the services you have received and how much they cost?

[IF YES] Are you easily able to tell how much you owe?

The MI Health Account statement mentions that you can lower your health care costs by earning a healthy behavior reward. Do you remember seeing/hearing about that? Do you know anything more about it?

[IF NO] There is a healthy behavior reward for enrollees who agree to address or maintain healthy behaviors on their Health Risk Assessment form. This may reduce the amount you are asked to pay.

Have you had any questions about your MI Health Account statement?

[IF YES] What questions did you have?

[IF YES] What did you do, if anything, to get your questions answered?

What determines how much you owe as shown on your MI Health Account statement?

Probe:
[IF MIHA FEES] How is the amount that you owe/owed for MI Health Account fees determined?
[IF MIHA FEES] How is a MI Health Account fee different from a copay?

Do you know which services do and do not have a copay?

Have you ever felt surprised by what you owed on your MI Health Account statement?

[Tentative, given that some people may not have owed anything for a while, if at all] When did you last owe something for your Healthy Michigan Plan coverage?

How do you usually pay what you owe on your MI Health Account statement?

What has been hard or easy about making these payments?

What affects your ability or decision to make a timely payment?

Do you know what could happen if you don't pay the amount you owe?

Do you know what to do if you're unable to pay the amount you owe?

Finances

Now I'm going to ask a few questions about your employment and how HMP may have impacted your work and your financial situation.

Are you currently employed?

How, if it all, has having HMP coverage affected your employment?

How, if at all, has having HMP coverage affected your ability to work?

Probe: Are there things that get in the way of your ability to work?

How, if it all, has having HMP coverage affected your financial situation?

> *Probe: This includes your ability to pay bills, medical debt, other living expenses, and any other aspect of your financial situation; try to get them to provide examples*

Other (new)

Have you received paperwork from the state to redetermine your eligiblity for your HMP coverage? If so, did you understand it?

Conclusion

We're wrapping up now. Is there anything else that you would like to add about your experience with HMP?

We may be conducting follow-up calls for this project. Would you be willing to have us re-contact you for that?

- ☐ Yes
- ☐ No

Thank you for sharing your experiences with us today. The information we gather will be used to improve services for HMP enrollees. We appreciate your participation in this interview.

I am turning off the recorder. [Turn off recorder]

Now let's talk about that gift card! It is a $50 Visa gift card, so you should be able to use it anywhere that accepts Visa.

To make sure you get your gift card, let's confirm the address where you want it sent.
Should we send it to:
[read address from your tracking sheet; note if there's a new address]

You should receive the gift card in 1-3 weeks at that address. In the envelope, you'll find a green sheet of paper that has directions on how to activate the gift card and some tips on how to use it. Please follow the directions on that card so you don't have any problems.

Thanks so much for talking with me today! Look for your gift card in 1-3 weeks.

Other notes:

If you have any questions about your HMP coverage, you can reach the Beneficiary Help Line at 800-642-3195.

2022 Primary Care Provider Interview Guide

Thank you for agreeing to participate in this interview. Our team at the University of Michigan is evaluating the Healthy Michigan Plan. We're talking with primary care providers to learn about their experiences with the Healthy Michigan Plan and its emphasis on primary care and prevention, especially the Health Risk Assessment. We'll synthesize the provider information with what we're hearing from beneficiaries, to give a broad perspective on how the Healthy Michigan Plan is impacting the health and health care of Michigan residents.

With your permission, I'd like to record the interview. We'll use the recording as we create a summary of comments across all provider interviews, which will be part of our evaluation report. That report will not contain any provider or practice names. Do I have your permission to start recording?

Tell me a bit about your practice:
Roughly what proportion are enrolled in HMP or other Medicaid coverage?
Besides primary care, what other services do you have on site?

Experiences with the Health Risk Assessment (HRA)
This first section will focus on your experiences around the Health Risk Assessment.

In the past 2 years, roughly how many HRAs have you completed with patients?

- Did those represent the first HRAs for those patients? Or were some patients doing repeat HRAs?
- Did the number of HRAs change substantially with COVID?

What's the most common way that HRAs come up? Is it:

- When a patient requests it?
- Something the practice is proactive in asking about?
- Something done only for new patients?

When patients bring up the HRA, what do you think is motivating them?

Thinking about your discussions with patients about the HRA:

- How useful is the HRA as a tool to engage patients and encourage healthy behaviors?
- Are you able to offer resources or assistance to the patient to help meet their behavior change goals? What resources are scarce or missing?
- What feedback have you received from patients about their experience completing the HRA?

To what extent do you think the HRA encourages patients to make regular primary care visits?

What do you know about the financial incentive to patients (Healthy Behavior Rewards) for completing an HRA?

Have you received any communications from Medicaid health plans about the HRA?

- Do you get communication about completing them?
- Do you have any sense of how the health plans might use the HRA information?

Do you have any difficulty submitting the HRA to the patient's health plan?

HMP emphasis on primary care

The Healthy Michigan Plan was designed to encourage beneficiaries to get regular primary care and reduce the use of the emergency department for non-emergent problems.

Do you think your HMP patients seek out primary care advice or visits instead of using the ED for non-emergent problems? What gets in the way?

Additional Remarks

HMP has been in place since 2014. Over time, do you feel like you've become more knowledgeable about HMP and what it offers your patients? In what way?

Is there anything more you would like to say about the impact of the Healthy Michigan Plan on you and your patients?

2021 Key Informant Interview Guide (Social Impact of HMP)

Thank you for agreeing to participate in an interview about how the Healthy Michigan Plan (HMP) has contributed to the development, facilitation, and maintenance of innovative approaches to health system development and service delivery, including efforts to address social determinants of health. We are interested in the entire time period after HMP implementation in 2014, and specifically interested in the period starting in 2019.

This interview is a component of the independent evaluation of the Healthy Michigan Plan being conducted by the University of Michigan Institute for Healthcare Policy & Innovation. The IHPI team will provide the Michigan Department of Health and Human Services (MDHHS) with a report that includes a summary of the themes from these interviews. Your name will not be included in this report.

To ensure that I have an accurate record of today's conversation, it will be helpful to record this interview. If that's okay, I will start recording now. [Turn on recorder]

What is your current role within your organization?

In what roles did you interact with the Healthy Michigan Plan since its implementation in 2014?

How has the Healthy Michigan Plan (the coverage itself and its implementation) helped your organization meet the needs of low-income adults in Michigan?

- Probe for examples
- More specifically, how has it helped your organization address social determinants of health?
- Have you been able to maintain these activities/programs?

How has your organization encouraged and supported eligible adults to enroll and maintain enrollment in Healthy Michigan Plan?

- What worked? What didn't?
- Was this effort supported by, or in collaboration with, MDHHS and/or any other organizations? Probe for which organizations and more about the collaboration, if needed.
- Have you been able to maintain these activities/programs?

What initiatives or efforts has your organization been involved with that aimed to facilitate access to care for HMP enrollees?

- What was your organization's role?
- What worked? What didn't?
- Have you been able to maintain these activities/programs?

What initiatives or efforts has your organization been involved with that aimed to engage HMP enrollees in health behaviors?

- What was your organization's role?
- What worked? What didn't?
- Have you been able to maintain these activities/programs?

Do you have any comments on how the Healthy Michigan Plan has helped the people that you serve during the pandemic?

Thank you very much for taking the time to participate in these interviews. This information will be very helpful for our HMP evaluation.

2022 Key Informant Interview Guide (Costs of HMP)

INTRODUCTION AT BEGINNING OF EACH INTERVIEW:

Our team from the University of Michigan Institute for Healthcare Policy and Innovation (IHPI) is conducting the independent evaluation of the Healthy Michigan Plan (HMP) for MDHHS, as required by CMS.
In addition to these interviews about the costs of administering HMP, other evaluation components include:

- Analysis of utilization of key health care services
- Beneficiary interviews
- Provider interviews
- Key informant interviews focused on innovations in care delivery
- Analysis of credit ratings over time for HMP enrollees
- Tracking state trends over time in % uninsured and hospital uncompensated care costs.

We'll report high-level findings in the Interim Evaluation Report due later this year. We may ask for a brief follow-up interview next year, to help us prepare more detailed findings for the Final Evaluation Report at the end of 2024.

As noted in the document we sent, CMS required us to include "*research questions concerning the demonstration's administrative costs, particularly related to Health Risk Assessments and the healthy behavior incentive program, as well as the cost-sharing provisions of HMP*." While our evaluation report will focus on the current waiver period (2019-present), we'll also ask about the initial waiver period, so we understand the history and trajectory of the program's administrative costs.

Interview with Customer Service Division

Walk us through the responsibilities of the Customer Service Division, Medicaid Health Plans, and contractors (e.g., Maximus) related to the following:

- Facilitating Health Risk Assessment (HRA) completion
- Administering the Healthy Behavior Incentive Program
- Calculating, informing about, and collecting cost-sharing obligations

How have those responsibilities shifted over time?

Does the Customer Service Division have specific performance benchmarks or targets for HMP administrative tasks?

Do contracts include performance targets or incentives for these areas?

Within Customer Services, how do you monitor the costs of HMP administration?
Can you identify annual costs/expenditures for administration of HMP?
Can you identify FTE devoted to administration of HMP?

How do the administrative costs for HMP differ from administrative costs for other Medicaid benefit plans?

Since HMP began, how have MDHHS and contractor costs changed for administering the program components related to HRAs, Healthy Behavior Incentives, and beneficiaries' cost-sharing obligations?

Do you use any information or processes from HMP administrative tasks to facilitate other initiatives?

What preparations are you doing for potential implementation of HMP3 (which would require beneficiaries >100% FPL and >48 months of HMP enrollment to complete healthy behavior requirements to maintain coverage)?

Interview with Actuarial & Managed Care Operations

How are HMP administrative costs calculated for Medicaid Health Plan contracts? Has that changed over time?

Do you break down HMP administrative costs into those related to:

- clinical needs of the population
- SDOH needs of the population
- unique HMP features like the HRA/healthy behavior incentive program and cost-sharing

Has the proportion of the PMPM attributed to administrative costs changed over time for HMP-MC?

If yes, was that related to changing expectations of the plans? Other reasons?

How do HMP administrative costs compare to other adult benefit plans (e.g., HMP-MC vs MA-MC)?

- From an actuarial perspective
- From the plan perspective

A provision in the health plan contract (pg 28) notes *Supplemental payments to build practice-based infrastructure and enrollee management capabilities*. Do Medicaid Health Plans use this to support the administration of HMP features? Do they report the amount and purpose of these payments?

Do contracts with the Medicaid Health Plans include performance targets or incentives for:

- HRA completion
- Healthy behavior incentive program
- Cost-sharing

Do the Medicaid Health Plans use information from HMP administrative tasks to facilitate other initiatives? Do you (or do they) calculate cost benefits from that type of synergy?

From the broader Department perspective, what are the costs for MDHHS contracts with organizations other than Medicaid Health Plans to administer specific HMP features such as MI Health Accounts?

Does the Medicaid program track the administrative costs of HMP?

- By HMP feature (e.g., HRA/healthy behaviors, cost-sharing, work requirements)?
- By unit (e.g., Customer Services, BIC)

How have costs changed for Medicaid to administer the HMP program components?

Have you examined whether HMP's administrative costs are "balanced out" by decreases in expenditures for health care utilization? If yes, what did you find?

Are there situations where Department uses information from HMP administrative tasks to facilitate other initiatives, either within the Medicaid program or across the Department? Do you calculate the cost benefits of that type of synergy?

What documents do you suggest we request from Budgeting and Financial Operations that would best demonstrate administrate costs over time?

Interview with Budgeting and Financial Operations

Does the Medicaid program track the administrative costs of HMP?

- For fee-for-service vs managed care enrollees
- By HMP feature (e.g., HRA/healthy behaviors, cost-sharing, work requirements)?
- By unit (e.g., Customer Services, BIC)
- For specific contracts, other than Medicaid Health Plans (e.g., Maximus)

Have costs changed over time for Medicaid to administer HMP? What documents would help to illustrate administrative costs over time?

Have you examined whether HMP's administrative costs are "balanced out" by decreases in expenditures for health care utilization? If yes, what did you find?