THE EFFECTS OF MANAGED COMPETITION ON THE DELIVERY OF MEDICAL CARE TO THE UNINSURED AND UNDERINSURED IN GENESEE COUNTY, MICHIGAN

BY

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ABSTRACT

This study explored the financing effects of a national health care reform program of universal coverage for Genesee county. In this study "uninsured" was defined as those persons having no health insurance coverage at all and "underinsured" was defined as the 18 million people in the United States with inadequate coverage. Most of these people are workers, and their dependents, insured by small businesses that can afford only very minimal coverage group employee plans.

Data used for this study was from unpublished Blue Cross and Blue Shield of Michigan (BCBSM) data for three major Flint, Michigan hospitals; National Center for Health Statistics - estimates from the National Health Interview Survey - 1990; Healthy People - 1991; and the Genesee County Census - 1990.

Total hospitalization costs for just the three disease classifications studied (respiratory, circulatory, and digestive) were estimated. Projected costs were $213,115,270. Sources of revenue to meet these costs were discussed.

After calculating possible methods of funding this new health care bill, such as, a federal health care tax and a cigarette tax, a $29 million dollar gap was discovered. It is apparent that along with new taxes a reduction in health care spending will be needed if universal health care coverage is to be implemented.

Obvious ways to reduce health costs are to have primary care physicians manage and coordinate care, including some form of rationing of health care. In addition, an increased emphasis on health education and disease prevention will be required.

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TABLE OF CONTENTS

INTRODUCTION

There are 37 million people (12 percent of the population) in the United States who currently are not covered by any form of health insurance. These people are primarily the poor and working-class people not covered by medicaid. Only about 40 percent of the population with incomes below the federal poverty level receive Medicaid (Aukerman, 1991).

Americans are now spending more per capita on health care than any other nation in the world (Casper, 1993). The total health care bill for 1992 is projected to be $800 billion. Translated into per capita figures, that equals $3,600 per person (Wright, 1993). Health care costs now consume 12 percent of the gross national product (Brown, 1992). A national health care reform program offering coverage to this formerly uncovered group will face enormous problems paying for the delivery of medical care.

Spending more money to provide universal health coverage may not be what is needed. What may be needed is to spend the existing funds more efficiently. Currently, it is estimated that $41.4 billion in health care services is spent on the uninsured. This figure was part of a 1993 analysis by Lewin-VHI, a Fairfax, Va. consulting firm. The Lewin-VHI report further speculated that increased costs and revenue needs, under managed competition, would come mostly from two sources: First, expanding coverage to everyone who is now noncovered would hike hospital spending on the uninsured group by 56 percent and would result

in a 116 percent hike in physician services, for a combined spending increase of $30.6 billion (Wagner, 1993). Second, additional costs from the health care reform program would have to come from federal subsidies. These subsidies would be used for limiting employer costs to a percentage for their payroll and also to limit employee premium costs to a percentage of their income (Wagner, 1993), but nonetheless would be new federal outlays.

Mindful of the coverage-expenditure issues of health care reform, this paper will look at how delivery of health care to the uninsured in Genesee county, Michigan will be accomplished under the "Managed Competition" concept of reform.

BACKGROUND

Origin and Definition of The Managed Competition Concept

The origin and definition of "Managed Competition" can be traced to a Jackson Hole, Wyoming group who have met informally for the past 20 years to discuss issues in U.S. health care. This group, led by policy analyst Paul Ellwood, M.D., has proposed "managed competition" for national health care reform. Their central idea is to restructure the health care marketplace so competitive forces can lower costs and improve the quality of care (Zablocki, 1993).

Alain C. Enthoven, Marriner S. Eccles Professor of Public and Private Management at Stanford University, outlined the principles of managed competition at a workshop conducted by the Alpha Center, January 7-8, 1993, in Washington D.C. The task force: "Rethinking Competition in the Health Care System: Emerging New Models, " was sponsored by the Robert Wood Johnson Foundation, under its changes in Health Care Financing Initiative (Enthoven, 1993). Here, Enthoven defined "managed competition" as:

> "... a purchasing strategy to obtain maximum value for consumers and employers, using rules for competition derived from microeconomic principles. A sponsor (either an employer, a governmental entity, or a purchasing cooperative), acting on behalf of a large group of subscribers, structures and adjusts the market to overcome attempts by insurers to avoid price

competition. The sponsor establishes rules of equity, selects participating plans, manages the enrollment process, creates price-elastic demands, and manages risk selection. Managed competition is based on comprehensive care organizations that integrate financing and delivery. Prospects for its success are based on the success and potential of a number of high-quality, cost-effective, organized systems of care already in existence, especially prepared group practices. As it is outlined here, managed competition as a means to reform the U.S. health care system is compatible with Americans' preferences for pluralism, individual choice and responsibility, and universal coverage" (Enthoven, 1993, p.25).

Rivalry will be fierce among newly-formed Managed-care networks and some hospitals may be forced to close. In order to provide a broad continuum of care to a community for a per-capita fee the successful hospitals will be collaborating with big insurers and teaming up with nearby hospitals to form a web of service (Sebastian, 1993).

In addition to affiliation with insurers and other providers hospitals will need to sharpen and update any managed care efforts that they may currently have in place. Hospitals are already embracing fundamental managed care principles like utilization management, pre-admission certification, and case management. The next step is moving to the next generation of managed care: integrating finance, administration and delivery. According to Ellwood, the message for hospitals today is clear: "Attract a set of very strong primary care physicians and tie them as

closely to the hospital as possible. Establish trusting working relationships with carriers and emphasize accountability for results" (Johnsson, 1992, p.36).

Ellwood proposes that for managed care to flourish hospitals must improve in three key areas: (1) Information-better data on patients functioning and well-being to aid physicians on what treatment to choose. (2) Integrated delivery-overcome animosity between insurance and delivery sides of managed care. (3) Hospitals need to define how integrated a delivery system they want to play a role in. Physicians and hospitals could be closely integrated with one hospital based managed care organization, and physicians in salaried and group-practice arrangements. Smarter buyers-employers, and other payers must purchase health care wisely (Johnsson, 1992).

Goals of the managed competition reform are universal coverage, affordability, high quality, and equitable financing. Employers would be mandated to offer coverage if they employed 25 or more people. Federal Government would fund the unemployed and the poor. The program would be administered from the state level. Standard benefits would be offered by the health care service provider network with the best bid, probably a basic HMO type. Equitable financing may come about through insurance market reform. At least 26 states have already reformed their own health care markets (Budden, 1993).

States With Aggressive Proactive Health Care Reform Plans

California

In California the effectiveness of managed competition in holding down costs of health care is being demonstrated. California's Public Employees Retirement System (CalPers) held its health care premium increases to 1.5 percent for its 887,000 members and dependents in 1993. The increase was 6.1 percent in 1992. The total increase for the two years was only 7.6 percent which is only about one-quarter of the 30 percent increase in national health care costs for those two years (Haggerty, 1993).

CalPers attributes their success to a "health insurance purchasing cooperative" (HIPC) on behalf of the 800 public employers in California. CalPers is one of the largest risk pools for health insurance in the country. By demanding cost and performance data they can do comparison shopping before they write any checks to purchase coverage for their employees (Haggerty, 1993).

Taking its most aggressive strike at health care costs yet, Calpers has told 18 Managed-Care companies that it expects a five percent rollback in health-care premiums for its 900,000 public employee families. They expect the rollback to be effective in the 1994-1995 contract year, which begins August 1, 1994 (Chase, 1993).

Providers have been advised to achieve the savings by eliminating waste and unnecessary medical procedures-without cost shifts or benefit reduction. This savings attempt will be an early test, on a state level, of claims by the Clinton administration that billions of dollars of waste and duplication can be wrung out of the health-care system with a national plan (Chase, 1993).

Providers in California expressed surprise at the depth of the cutback proposal. Jerry Fleming, vice president of Kaiser Permanente, the Oakland - based health-maintenance organization that cares for 320,000 subscribers, almost one-third of Calpers beneficiaries, called the proposal "... a very aggressive target. We haven't figured out how we might deal with it ... The message is: This isn't business-as-usual. I don't want to discount their will. They're in a very, very powerful position, especially as health-care reform looms." (Chase, 1993, p.B6).

The assistant executive officer of Calpers, Tom Elkin, explains that the five percent rollback figure was based on several studies of individual health maintenance organization fiscal data and also on Rand Corporation studies showing the persistence of waste and overutilization in health care. According to Elkin, the Rand data demonstrated excessive caesarean deliveries, overuse of magnetic resonance imaging, overprescribing of drugs, and performance of un-necessary surgery where less invasive procedures could have been used (Chase, 1993).

Evidence of growing investor interest for managed-care companies is seen by the sale of a 17.5 percent stake in WellPoint Health Networks Inc., owned by Blue Cross of California to a $476 million initial public offering. Stock analysts say the stock is in a good industry and has had tremendous momentum in earnings so far (Anders, 1993).

WellPoint was started in 1986 by Blue Cross of California with a mandate to focus on managed care. It currently operates an HMO with 423,000 members, and a preferred provider network with 1.5 million members. It also has a variety of special plans covering pharmacy, dental and mental-health services (Anders, 1993).

WellPoint earned $142.8 million in the first nine months of 1992. This represents a 38 percent jump in earnings and a 20 percent rise in revenue from 1991. This growth is unusual for a Blue Cross company. Most are not for profit and must take on high-risk subscribers shunned by other carriers (Anders, 1993)

The California Medical Board is planning to issue tickets to physicians for minor negligence on violations of medical practice law. Similar to traffic tickets, doctors tagged with an infraction could pay a fine or protest the alleged infraction. Also, the board plans to increase the amount of information released to the public on individual doctors. Typically this information would include, if the doctor has ever lost a license in any state, is currently under investigation, lost a malpractice case worth over $30,000, or has been convicted of a felony. Consumers

may even be able to learn about hospital peer review committees reprimands (Kirn, 1993).

Four California Health Maintenance organizations, HealthNet; Concord, California-based TakeCare; San Francisco-based Blue Shield of California; and Woodland Hills, California-based PruCare of California, are testing a paperless electronic claim system. The new all-payer electronic data interchange system is called the California Health Information Network and was designed by EDS of Plano Texas. The four company groups cover 3.5 million people statewide and expect to reduce administrative costs by $40 million each year (Kenkel, 1993).

Florida

Florida's plan for comprehensive health care reform was the first state level managed competition act. Governor Lawton Chiles signed legislation in March of 1992 requiring universal coverage by 1995. This act created a state agency charged with devising and implementing a universal health plan by 1994. Initially the plan was to be voluntary and if that failed, phase two was set-up as mandatory, charging the legislature with creation of a reform system. The governors plan was reworked in countless ways, but he was able to sign the final version into law in just over one year (Sommerville, 1993).

Eighty cents of each new dollar of revenue is now allocated to health care, which literally may bankrupt the state. The state hopes for federal support perhaps in the form of more state control over medicaid. Florida

may be able to set an example for other states trying to set up similar measures (Ruffenach, 1993, p. B6).

Florida's director of Health Care Administration, Douglas Cook, believes you won't reform health care from the top down but from the bottom up. He feels states have to get involved and "get their noses bloodied. Otherwise, you're still on a runaway train" (Ruffenach, 1993, p. B6).

The plan's central idea is the formation of purchasing groups called Community Health Purchasing Alliances (CHPA). Eleven regions in Florida will each have their own CHPA, which will be open to small businesses, government employees, and Medicaid recipients. The CHPAs will contract with state certified health networks, each with a basic benefits package (Sommerville, 1993).

Florida also passed the Patient Self Referral Act. This law prohibits physicians from sending patients to clinical labs, imaging centers, physical therapy centers or radiation therapy programs if they have an ownership interest in the facility (Health Care Reform, 1993).

The Health Care and Insurance Reform Act, passed by Florida in 1993, is similar to the Clinton approach in many respects. However, the act does not set a global budget as the national reform plan is likely to. It also does not cap doctors' fees. Florida's plan is expected to accelerate the statewide trend toward managed care (Terry, 1993).

Florida's HMOs and PPOs already cover about 40 percent of the state's population. As more and more of the population are being drawn into managed care programs solo physicians and small group practices are concerned that they could be shut out of this structure if they do not affiliate somehow (Terry, 1993).

Michigan

In Michigan, the state's largest insurer, Detroit based-Blue Cross and Blue Shield of Michigan covering 4.3 million people (45 percent of the state's population), Henry Ford Health Systems, and Mercy Health Services have announced their plans to form a "community care partnership" linking the delivery and financing of health care. This plan closely follows the principles of managed competition outlined by the Jackson Hole Group and the expected national health care reform plan (Lumsdon, 1993).

The partnership's planned goal is to have an integrated system capable of assuming and managing risk while providing incentives for keeping people healthy through an emphasis on primary care and prevention. To join the partnership, which operates from Detroit Michigan, a hospital must demonstrate the existence of well-structured relationships between hospital and physicians. Most of the physicians at Detroit's Ford Hospital are employees. Mercy Hospital has set up physician/hospital organizations that enable risk-sharing (Lumsdon, 1993).

The plan is being offered in Flint, Lansing, and Grand Rapids, Michigan. Requests for proposals were sent to all interested hospitals who will coordinate responses from physicians and other key network components. Blue Cross and Blue Shield of Michigan will choose the hospitals who are able to offer the best package of health care delivery for participation in the partnership (Lumsdon, 1993).

The partnership faces a number of hurdles as they gear up for implementation. How to divide up capitated payments and how to improve on managing patients are two major issues. Providers will be at risk for the health care delivery so they will need to be concerned about utilization-monitoring of both out-of-network as well as in-network usage (Lumsdon,1993).

New York, Maryland, and others

New York and Maryland are testing the managed competition concept for treating their medicaid population rather than waiting for national health care reform. State legislature in New York requires 50 percent of its 2.1 million medicaid recipients to move into managed care programs by 1996. The rest would remain in the fee for service system. New York feels that if they can reach 50 percent enrollment in managed care the structure would be in place to enroll the rest quickly (Mitka, 1993).

In Maryland almost all of the 400,000 medicaid recipients are either in HMO's or are being treated under a "primary care case management" plan. Both states believe these actions will improve access, reduce

costs, and attract more physicians through higher reimbursement (Mitka, 1993).

Maryland legislators, Casper R. Taylor, Paula C. Hollinger, and Paul G.. Pinsky have introduced bills leading the state into managed competition without waiting for national reform (American Medical News, 1993). Among the proposed changes would be a governor's task force, health insurance pools, insurance through tax vouchers, establishing basic standards for small-group insurers, establish community rating on a geographic basis, banning pre-existing condition exclusions, and to replace private insurance with a state-wide plan funded by an employer pay-roll tax and a progressive income tax. All would receive the same coverage.

North Carolina is considering a plan for managed competition. Regional Purchasing plans for buying basic coverage would be created. The groups would be called Health Plan Purchasing Cooperatives (HPPC) (American Medical News, 1993).

Minnesota has a universal access program called Minnesota Care and is being swamped with applications. Officials say that they will need 32 million dollars more for operating in fiscal 1997 than was originally forecast. The program provides basic coverage and became available January 1, 1993 to families with low incomes. Also a two percent tax on hospital bills went into effect this year. The state plans a similar tax on physicians and other providers for 1994 (American Medical News, 1993).

Oregon

In Portland, Oregon, competition, capitation, and collaboration are already re-shaping the local health care market. Physician groups and hospital systems are integrating service delivery along a corridor from Seattle to the California border along Interstate-5 (Cerne, 1993).

Several large group practices are bringing in primary care physicians. Hospitals are putting together capitated programs and are buying up these large primary care group practices. Three major hospital systems are leading Oregon's reform: Legacy, Sisters of Providence, and Kaiser-Permanette. These three systems control more than 60 percent of inpatient admissions and 75 percent of all patient visits (Cerne, 1993).

The fourth largest provider, Oregon Health Sciences University, has established health and education centers around the state. Kaiser and Sisters of Providence have developed managed care plans of their own. Legacy is collaborating with Blue Cross and Blue Shield of Oregon on an integration plan for payment and delivery of health care services (Cerne, 1993).

Reorganization and restructuring have been in process with the growth of Managed care. At least one hospital is being closed by Legacy and three hospitals in the downtown area will be consolidated (Cerne, 1993).

Competition has forced some collaboration between the three systems. A lithotripsy regional service is one of the joint projects. Heart and kidney transplant resources are shared between Legacy and Sisters of Providence rather than each maintaining separate programs. Another collaborative venture is the establishment of a joint system to immunize and track immunization records for children up to five years of age (Cerne, 1993).

Portland providers are ahead of others on capitation as a payment source. More than 60 percent of those aged 65 and over are already in HMO's. In 1994 that number will rapidly increase as the Medicaid program in Oregon will start enrolling beneficiaries in managed care plans. This program will expand Medicaid eligibility to 100 percent of the federal poverty level. The program will also limit the number of procedures that will be covered. However, state health officials expect that the Oregon plan will allow earlier illness detection, expansion of preventive medicine and thereby will improve outcomes while lowering the cost of providing health care (Cerne, 1993).

Cost Containment

Health Insurance Purchasers Cooperatives

Cost containment in a reformed system would occur by large purchasers working through agents-Health Insurance Purchasers Cooperatives (HIPCs). These organizations would concentrate the power of individuals and employee groups. The scope and responsibility of HIPC's as Reinhardt envisions them would be:

> "... a nationwide network of public HIPC's, each organized at the state level but coordinated by a national body that can transmit federal directives to the local level and create some uniformity in health policy across states. But, HIPC's would serve also as the coordinating bodies that supervise the fee-for-service sector of a state's health system. They could gather and disseminate reliable information on the individuals providers' conversion factors. Finally, they could be the body that coordinates statewide negotiations of a uniform conversion factor, if the nation decided eventually to convert the fee-for-service sector on and all-payer basis (mainly to preclude cost shifting among payers)" (Reinhardt, 1993, p. 191).

Consumers would pay extra for more expensive and more comprehensive plans. Electronic billing systems would be improved. The system for medical malpractice suits would be reformed with caps and limitations (Budden, 1993). Quality of care would be addressed by publishing outcomes (Budden, 1993). For instance, in Flordia, medical associations will be represented on an advisory committee that will develop standards and methods for collecting outcome data from hospitals. This data will be used in combination with national practice guidelines to establish state practice parameters. Public identification of those networks providing the best outcomes at the lowest cost will take place (Terry, 1993).

Financing and Regulation

The price tag of reform is projected to be $30 to $90 billion, which will come from savings and new taxes. Theoretically, there will be more subscribers so insurance companies will pass costs on to subscribers (Budden, 1993). However, for national health care reform to cover the formerly uninsured and underinsured, problems of quality of care and access to health care are created. Any system that succeeds in constraining costs must ration care. The major complaint against our current system is that it does not constrain costs but still manages to ration care to those with little or no insurance. Most analyst agree that the key questions of what care will or should be rationed and who decides should be a major objective of health services research over the next decade.

Managed competition inevitably and necessarily involves extensive regulation and bureaucracy. Large health insurance purchasing cooperatives (HIPC's) will need to be organized. These will need to licensed or certified by some type of regulatory agency. The market power of the HIPC's will enable them to organize provider systems in such a way that care can be managed. To attract subscribers the HIPC's have an obvious incentive to offer generous benefits at low (risk adjusted) premiums (Hadley, 1992).

The uninsured population is growing and is currently well over 30 million persons. The uninsured, compared to those covered persons, have less access to necessary medical care. When care is obtained by

the uninsured the costs are shifted to other payers or are absorbed, as losses, by providers. Together the completely uninsured and the inadequately insured are estimated to make up about one fourth of the population and total around 70 million people (Brown, 1992).

Beyond agreement on the goals for health care reform, constraining costs, making coverage universal, and improving the quality of care, are differing methods of how to accomplish these goals. If all people are to be covered, a fusion plan combining elements of managed competition and regulation of private-sector initiatives and public-sector ground rules, is needed (Simmons and Goldberg, 1993).

The National Leadership Coalition for Health Care

One such plan, which considers the underinsured, was proposed by the National Leadership Coalition for Health Care Reform. This coalition consists of a diverse group of businesses, unions, consumer and other nonprofit groups, and associations of health care providers. The coalition's plan contains key elements of the managed competition model, "purchasing consortia" representing small businesses and individual buyers, organized delivery systems, and better information about outcomes and quality of care. The plan also includes national and state expenditure targets, expanded use of preventive care, reduced defensive medicine, single claim form, standard benefits, uniform rates, and electronic billing (Simmons and Goldberg, 1993).

Universal coverage through employers is featured, or enrollment in Pro-Health (a state level consortium) by the employers. A payroll tax would help finance Pro-Health. Those people not otherwise covered would be insured through Pro-Health (Simmons and Goldberg, 1993).

A 0.5% payroll tax on employers and employees to finance coverage of the uninsured is favored by the coalition. New and small businesses not currently providing coverage would be phased into the plan over a span of three years (Simmons and Goldberg, 1993).

The coalition lists three reasons for advocating a fusion plan. First, Managed competition alone is a high-risk strategy. It is still only an

unproven and untested model. Secondly, with average private sector insurance premiums rising about 20% annually, the time element is very important. Plans emerging before the coalition's fused plan would take as long as 10 years to implement. Third, managed competition will not work everywhere. An area will need a large critical mass of health care consumers to support enough competition. These reasons indicate that a fusion plan is a more prudent way to reform the health care system (Simmons and Goldberg, 1993).

Uninsured and Underinsured

According to a recent survey by the Employee Benefit Research Institute (EBRI) a nonprofit company in Washington D.C., roughly 17 percent of the population under the age of 65 spent all of 1991 without insurance coverage. People who are covered by their spouse's insurance were not included in the count. The EBRI study indicates that, in general, young people fared worse than older Americans. Nearly one in three of the adults aged 21 to 23 was without any insurance coverage (Martin, 1993).

Of the 36.3 million people identified by the EBRI study, as being uninsured for the year 1991, 42 percent had family incomes below $15,000. While the middle class, those with incomes between $15,000 and $50,000, outnumber the poor with 48 percent being uninsured for the same year 1991 (Martin, 1993).

Sarah Snider, an EBRI research analyst, points out that in the age group 21 to 24 non-coverage is sometimes a voluntary decision based on the premise that: due to their youth and present good health nothing will happen to them and that paying for coverage is not needed. The EBRI reports that about 20 million Americans have jobs but no insurance. Most of this number work for small businesses. However, about four million or 22 percent of the working uninsured work at companies that employ 1,000 or more. Many of this group lack coverage either because of a part-time work status or tragically, because of a, pre-existing health condition (Martin, 1993).

Additional description of those persons with no health care coverage is revealed in the results of a survey that was conducted in 1989 by the U.S. Bureau of the Census for the National Health Interview Survey (NHIS). The survey consisted of an average 52 weeks of household interviews. The survey measured a person's coverage status at the time of the interview only. No prior coverage was considered (Ries, 1991).

Overall results of the survey estimated that in 1989 an estimated 33.9 million persons in the civilian noninstitutionalized U.S. population had no health care coverage. Noncoverage was relatively higher for young people, males, nonwhites, those persons with low incomes, persons who were 18 years of age and older who were also unemployed or had less than a high school education, those persons living in the South and West areas of the country, and residents of central cities in metropolitan statistical areas (MSA's) (Ries, 1991).

As table I points out, more than 20 percent of persons in the following groups were without coverage: Unemployed workers 18 years old and above (38.3 percent), those living below the poverty level (32.5 percent), those family members in households with low annual incomes (27.7 percent for $5,000 - $9,999; 27.1 percent for less than $5,000; and 24.3 percent for $10,000 - $19,999), young adults 18 - 24 years old (27.4 percent), and black persons (20.2 percent) (Ries, 1991). Table I also indicates the lowest proportions of those without health care coverage were 65 years old and above (1.2 percent), because of the medicare

program, and those in families with an annual income of $50,000 or more (3.6 percent) (Ries, 1991).

In addition, table I shows the estimates of noncoverage for persons under 65 years of age ranging from 36.9 percent to 3.7 percent for the corresponding family income groups of $5,000 - $9,999 and $50,000 or more (Ries, 1991).

Percentage of persons without health care coverage, by age and sociodemographic characteristics: United States, 1989

Sociodemographic characteristics	All ages	Under 65 years					
		Total	Under 18 years	18-24 years	25-44 years	45-64 years	65 years and over
				Percent *			
All persons not covered ^	13.9	15.7	14.9	27.4	15.5	10.5	1.2
Sex							
Male	15.1	16.7	15.1	31.3	17.6	9.6	1.3
Female	12.7	14.6	14.7	23.7	13.6	11.2	1.2
Race							
White	12.8	14.5	14.0	26.3	14.4	9.4	1.0
Black	20.2	21.9	18.9	34.3	22.5	17.5	2.5
Other	19.7	20.4	18.9	27.8	20.7	17.5	8.4
Family income							
Less than $5,000	27.1	31.3	25.5	27.3	42.4	35.5	1.5
$5,000-$9,999	27.7	36.9	31.6	43.5	43.5	32.2	1.6
$10,000-$19,999	24.3	30.1	30.2	37.5	32.0	21.3	1.1
$20,000-$34,999	10.6	11.6	10.9	22.1	11.8	6.8	1.0
$35,000-$49,999	5.8	6.0	4.0	18.4	5.8	3.9	0.8
$50,000 or more	3.6	3.7	2.3	12.9	3.7	1.9	1.6
Poverty Status							
In poverty	32.5	36.0	32.5	35.9	42.2	35.9	2.3
Not in poverty	10.3	11.5	9.6	23.5	11.7	7.8	1.1
Employment status @							
Currently employed	13.9	14.3		26.6	13.6	9.0	1.5
Unemployed	38.3	39.2		44.5	40.8	26.5	
Not in labor force	10.8	18.5		26.0	21.2	12.8	1.2
Education @							
Less than 12 years	20.8	30.1		42.1	35.5	19.9	1.5
12 years	14.4	16.6		29.8	16.8	8.5	0.7
More than 12 years	8.4	9.2		16.0	9.0	5.8	1.3
Region							
Northeast	9.6	11.0	9.9	22.0	10.9	6.6	1.7
Midwest	9.6	10.8	8.8	22.3	10.6	7.6	0.8
South	17.5	19.7	20.5	30.9	19.2	13.4	1.1
West	17.1	18.9	16.7	32.7	19.7	13.1	1.6
Place of residence							
MSA	13.7	15.3	14.4	27.4	15.2	9.8	1.3
Central city	17.2	19.4	18.2	30.0	20.1	12.9	1.6
Not central city	11.4	12.7	12.1	25.4	12.1	8.0	1.1
Not MSA	14.7	17.1	16.5	27.6	17.0	12.6	1.1

* Percent calculated excluding the 9.7 million persons with undetermined coverage status.

^ Includes persons with unkown sociodemographic characteristics.

@ Excludes persons under 18 years of age.

Note: MSA is metropolitan statistical area.

Source: Advance Data No. 201, June 18,1991.

The Task Force

The major goal of national health care reform is universal coverage. This approach is at variance with conventional wisdom, which holds that right now the United States simply can not afford to bring additional millions of people into comprehensive health insurance coverage. That health care costs need to be controlled is a thought that has been the beacon of American health policy throughout the postwar period and according to leaks from "The Task Force" currently is held by some members (Reinhardt, 1993). Ira Magarziner, White House senior advisor for policy development and key member of the task force, believes that ensuring universal access to health care could mean as much as $30 to $90 billion, increased expense, annually for the federal government by 1997 (American Hospital News, 1993).

Other key members of the task force, which is said to number about 50, under the leadership of Hillary Clinton are:

Tipper Gore - Vice President Gore's wife, working on mental health care issues.

Judith Feder - the former staff director of the Pepper Commission. Ms. Feder left Georgetown University's School of Medicine, where she co-directed the Medical School's Center for Health Policy.

Carol Rasco - Assistant to President Clinton for domestic policy.

Lloyd Bentsen - Secretary of the Treasury - Mr. Bentsen probably possesses the strongest health care background and as

chairman of the Senate Finance Committee, introduced so-called small group health insurance reform legislation.

Donna Shalala - Secretary of Health and Human Services.

Laura Tyson - Chairperson of the Council of Economic Advisors (Geisel, 1993).

However, regardless of how untenable such a position seems, a final reform plan probably will not be presented until universal coverage is included. A rapid move to universal coverage will mean an additional $50 billion annually over what is currently being spent (Reinhardt, 1993). Universal coverage should be the main point from which the rest of the final health care reform plan builds.

Reinhardt points out that by international standards the average American tax burden is low. Japan is the only nation even coming close to the U.S. low ratio of taxes to gross domestic product enjoyed by Americans. By this tax comparison there should be enough taxable capacity left in the U.S. to support the health reform plan.

Reinhardt states, referring to the savings and loan bailout, that

> "if our government had so little trouble financing this economic waste, might it not pledge to America's working mothers and their children that they, like any of their peers in the rest of the industrialized would, are entitled to the security of adequate health insurance?" (Reinhardt, 1993, p 2553).

The American people should expect that President Clinton, would be able to sell that idea to the American people (Reinhardt, 1993).

Summary

It has been established that in the United States there are 37 million people not covered by health insurance and another 40 million inadequately covered. National consciousness has been raised and is poised to seek a solution for this problem.

Exactly how to accomplish this feat is currently unknown. Many theories have been presented. The most widely known proposal is the "managed competition" theory. Managed competition appears to be the favored theme of the Clinton administration's national reform plan.

Nationwide there has been a keen awareness of the increasing expenditures for health-care. Over 12 percent of the gross national product is now going for health care and related services.

Many attempts have been made to control rising costs. The National Leadership Coalition for Health Care Reform, representing businesses, unions, consumers, other non-profit groups, and providers is one such attempt at getting diversified groups together to study and propose viable cost saving measures.

Numerous states have taken a proactive position not waiting for a national reform plan which will be sometime in the future. Public investor interest has been created as seen in the sale of stock in the managed care "Wellpoint" organization owned by Blue Cross of

California. In Florida a state agency was created to devise and implement a universal health plan by 1994.

Participation in HMO's over the last few years has increased dramatically. Many states are using very strong tactics to encourage their employees to participate in available HMO's.

Some states are monitoring physician behavior more closely. In Florida the patient Self Referral Act prohibits physicians from sending patients to labs, imaging centers, or radiation therapy programs if they have an ownership interest in the facility. Information on treatment success, previous reprimands, and even referrals to peer review committees may become available to consumers.

A key component in the managed competition concept is the creation of cooperatives representing great numbers of people seeking insurance coverage. The size of such a group insures greater purchasing power and the ability to shop for the most competitive coverage. Some of these cooperatives are Reinhardt's California's Health Insurance Purchasers Cooperatives (CHIPCs), North Carolina's Health Plan Purchasing Cooperatives (HIPPCs), and Florida's Community Health Purchasing Alliances (CHPAs).

In response to the inevitable competition many hospitals are restructuring, collaborating, and forming alliances with physician groups. Sharing arrangements have been developed for some of the expensive diagnostic and treatment centers such as MRIs and lithotripsy facilities.

THE RESEARCH QUESTION

The focus of this research is to determine what coverage, and the extent of coverage, will be extended to the currently uninsured and underinsured people of Genesee County under health care reform. The research will estimate total dollar coverage costs for this new group. A projection of services and their costs will be made, outlining a care package that will emphasize prevention and primary care as its main features.

Primary and preventive care will be emphasized in the health care reform plan. This research can be used to show how funds can be directed to diseases and health conditions that demonstrate not only the highest expenditure of health care dollars in Genesee county but also the highest potential reduction in expenditures through education and health promotion. Ancillary services such as home health care agencies and durable medical equipment companies can utilize data from this study to plan and revise their strategy to remain viable and competitive in their industries.

Allocation of Genesee county's allotment of "public" funds (funds available under a reformed delivery system) for newly covered persons needs to be managed as efficiently as possible. Predicting case mix and forecasting the medical costs required to care for this group will be very important. Staffing at the appropriate levels of care required can be projected more accurately if statistical information is available for this group. This research hopefully will demonstrate that national health care

reform under the concept of managed competition will not be able to provide adequate health care to a newly covered group in Genesee county. The study will show that the county's health care budget will not be large enough to cover both the presently insured and the previously uninsured groups requirements for treatment and hospital stays. The research will focus on diseases which require the greatest expenditures. This research will support the fact that some form of rationing of the available health care dollars for Genesee county may need to be instituted.

A national health care reform which will offer health care coverage to all Americans will be a major policy change. If the universal coverage calls for "basic" coverage for all, ethical implications must be considered. For example, who will decide what treatments are basic and necessary and what treatments are not considered basic and therefore not covered. This issue must be addressed because under managed competition ethical boards are likely to be required for making decisions on what procedures and treatments are necessary. Ethical decision making boards represent additional costs to be considered under a national reform plan of managed competion.

The American people believe that health care is a right rather than a privilege. They believe that they should be able to choose their own doctor and treatment methods, any policy changes that may interfere with these beliefs will have a great societal impact. Educating the public to accept the changes that managed competition would bring involves yet another cost.

METHODOLOGY

1990 census data and cross-sectional data from the 1990 National Health Interview Survey was used to determine the number of people in Genesee County falling into the study group. This group included only adults age 18 to 65 who are uninsured or underinsured.

Underinsured refers to the 18 million people in the United States (Gleicher, 1991) with inadequate coverage. Most of these people are workers, and their dependents, insured by small businesses that can afford only very minimal coverage group employee plans. This type of "bare-bones" coverage may only pay for partial hospitalization and nothing towards physician visits or medications.

The BCBSM data used covered the same age, adults not over 65, and included persons covered through large group plans, both salary, hourly, and small groups. The data also included those with individual coverage.

Thirty diagnostic-related groups (DRG'S) were used to define the health status of the newly covered group. DRG'S were chosen for their relatability (chronicity) to the health needs of the uninsured and underinsured group. Admissions for chronic obstructive pulmonary disease-(COPD), congestive heart failure-(CHF), coronary artery disease-(CAD), peripheral vascular disease-(PVD), and diabetes mellitis-(DM), were among those selected. These diseases are as likely to be

found in insured adults under age 65 as in the underinsured and uninsured groups.

Using data from BCBSM's 1992 paid claim listings, patients were averaged according to the DRG under which their claim was paid to determine average length of stay (LOS) and cost per case (CPC). The percentage of this insured population in Genesee county requiring hospitalization during the time period under study was projected to the newly covered group. Hospital days and costs likely to be required by the newly insured group for a comparable time period were projected. This study was exempt from human subjects standards review because no identifiable individual information was used. Only people who were hospitalized in a major Genesee county hospital in 1992 were sampled.

This study used charges rather than costs because the charges reflect the actual total of the itemized bill. The total contract charges from the itemized bill represent the amount that is billed to the insurance company on the universal billing form (the UB-82 or UB-92).

The facility cost is calculated by BCBSM by multiplying the actual contract charges by the cost/charge ratio. This ratio was determined by the BCBSM provider audit department. Factors that were considered in setting this ratio include pass though costs such as teaching status, building and equipment costs, and depreciation. Other factors used were non-acute case (NAC) ratings from previous BCBSM audits and hospital peer and tier groupings.

DATA CAVEATS

In the evaluation of hospitalization costs for the uninsured and underinsured, only data from catastrophic cases was used. Routine and/or elective short stays were not studied.

As has been pointed out by other studies, socioeconomic status (SES) is strongly associated with risk of disease and mortality. On an individual basis SES is inversely related to all-cause mortality and disease incidence (Adler, et al, 1993). A majority of the uninsured and underinsured group fall in the lower half of the SES scale. Many are either unemployed, part time employees, or work in small companies with little or no access to health care. It is likely, due to a history of minimal health care encounters and lack of participation in prevention and maintenance programs, that many of the people seeking care under the reformed health care system will be in poor health with advanced medical conditions requiring catastrophic funding to cover the costs of their care.

A new federal tax will probably be levied to pay for national health care. Multiplying the tax by the number of tax payers in Genesee county will indicate the amount that will be available for health care delivery in Genesee county.

PROCEDURES

The data is from patient stays at three Flint hospitals that were reimbursed by BCBSM in 1992. The diagnostic-related groupings that were evaluated, fall under three major body system groupings: respiratory, digestive, and circulatory. Included in the circulatory grouping were diseases and disorders of the blood forming organs and immunological disorders.

Tables 2, 3, and 4, identify ten patients for each of the three major body system groupings and reflect one hospital stay for each patient (at one of three major Genesee county hospitals) during a one year period. In addition, the three tables further detail, total charges, length of stay, DRG the case was paid under and the age and sex of the patients.

In table 2, Diseases and Disorders of the Respiratory System, the "charges" column reflects both male and female and totals $1,686,716 for the ten patient sample. Per person charges averaged $168,672 and the female charges were approximately 1.5 times greater than the male charges.

For table 3, Diseases of the Circulatory System, Blood forming Organs and Immunological Disorders, the total charges were $578,039. The average per patient charge was $57,804 for the ten patient sample. This is slightly more than one third of the average per patient charge, in table 2, and the male-female discrepancy was nearly gone.

In table 4, Diseases and Disorders of the Digestive System, total charges were $585,615. The average per patient charge in Genesee county was $58,562 and, as in table 3, the male-female discrepancy is minimal.

Table 5 is a projection of the number of the above disease occurrences by governmental body in Genesee county. The data was taken from the "National Center For Health Statistics", Current estimates From the National Health Interview Survey, 1990 (see Appendices A, B, & C). These appendices reflect the number of selected reported chronic conditions, per 1,000 persons, by age and by disease classification in the United States. The Genesee county census by governmental body was divided by 1,000 and the results were multiplied by the total of each disease classification in that governmental body. The results are an estimate of the total incidences by disease classification and age group for Genesee county.

Figure 1, is the estimate of Genesee county's uninsured and the estimated cost of their health care by the three disease classifications. The uninsured in Genesee county by age group is calculated by multiplying the Genesee County Census Breakdown total from table 5 by 12 percent, which is the estimate of the uninsured in the state of Michigan (see appendix D). The Genesee county total by disease classification (table 5) was multiplied by 12 percent (see appendix D). The resulting figures were the estimated uninsured in Genesee county by disease classification and age grouping. To calculate the number of hospital stays by age group and disease classification the projection was

made that 7.9% of people 18 through 44 and 6.5% of people 45 through 64 would require one hospital stay per year (Healthy People, 1991). The two age groups were totaled and multiplied by the average cost of a hospital stay for each disease classification (tables 2, 3 & 4). The total cost for the three disease classifications were added and project the total estimated cost to Genesee county for the currently uninsured people that will require hospitalization under a national reform plan.

Appendix E is an estimate of Michigan resident population by age and sex for the time period July 1, 1990 to July 1, 1992. The population figures appear to be consistent with the 1990 figures and further validates the population projections.

Table 2

MEDICAL DISEASE CLASSIFICATION #4

Diseases and Disorders of the Respiratory System

DRG	LOS	AGE	SEX	CHARGES
100	117	64	F	$341,877
483	130	60	M	$314,567
483	67	64	F	$153,823
475	27	49	F	$73,856
483	253	57	F	$139,655
88	162	58	F	$264,736
483	75	63	F	$189,418
79	52	63	M	$73,776
76	21	48	M	$38,173
483	79	61	M	$236,477
Sub total	**282**		**M**	**$662,993**
Sub total	**701**		**F**	**$1,023,723**
TOTALS	**983**			**$1,686,716**
AVERAGE				**$168,672**

Source: 1992, Blue Cross and Blue Shield of Michigan unpublished data from major Flint Hospitals.

Table 3

MEDICAL DISEASE CLASSIFICATION #5,9,16, & 17

Diseases and Disorders of the Circulatory System, Blood Forming Organs and Immunological Disorders

DRG	LOS	AGE	SEX	CHARGES
395	23	61	M	$44,079
112	30	63	F	$51,568
114	21	33	M	$53,240
124	19	51	F	$29,190
105	11	50	M	$74,153
104	35	56	M	$100,881
473	62	60	F	$104,709
401	26	54	F	$62,737
127	18	63	M	$28,669
259	26	63	F	$28,812
Sub total	**108**		**M**	**$301,023**
Sub total	**163**		**F**	**$277,016**
TOTALS	**271**			**$578,039**
AVERAGE				**$57,804**

Source: 1992, Blue Cross and Blue Shield of Michigan unpublished data from major Flint Hospitals.

Table 4

MEDICAL DISEASE CLASSIFICATION #6

Diseases and Disorders of the Digestive System

DRG	LOS	AGE	SEX	CHARGES
154	53	63	F	$66,876
151	32	29	F	$23,200
152	21	64	F	$50,382
154	16	33	M	$68,836
182	39	63	F	$43,074
149	37	64	M	$86,626
180	75	64	F	$56,402
149	44	63	M	$119,412
198	24	60	F	$48,951
179	26	38	F	$21,856
Sub total	**97**		**M**	**$274,873**
Sub total	**270**		**F**	**$310,742**
TOTALS	**367**			**$585,615**
AVERAGE				**$58,562**

Source: 1992, Blue Cross and Blue Shield of Michigan unpublished data from major Flint Hospitals.

Table 5

GENESEE COUNTY CENSUS BREAKDOWN - 1990 / PROJECTION OF RESIDENT DISEASE OCCURRENCE

Government Body	AGE GROUPING / DISEASE OCCURANCE								
	18 to 44 years	Diges-tive	Cirula-tory	Respira-tory		45 to 64 years	Diges-tive	Circu-latory	Respira-tory
Argentine township	2082	208	482	746		879	140	573	350
Atlas township	2326	233	538	834		1252	200	817	498
Burton city	11552	1156	2672	4140		5597	894	3651	2228
Clayton township	3159	316	731	1132		1568	251	1023	624
Clio city	1206	121	279	432		453	72	296	180
Davison city	2351	235	544	843		1097	175	716	437
Davison township	6953	696	1608	2492		2969	474	1937	1182
Fenton city	3455	346	799	1238		1650	264	1076	657
Fenton township	4247	425	982	1522		2382	381	1554	948
Flint city	59815	5987	13835	21438		23094	3690	15067	9191
Flint township	13843	1386	3202	4961		7693	1229	5019	3062
Flushing city	3188	319	737	1143		1941	310	1266	773
Flushing township	3764	377	871	1349		2092	334	1365	833
Forest township	1874	188	433	672		919	147	600	366
Gaines township	2272	227	526	814		1169	187	763	465
Genesee township	9802	981	2267	3513		5044	806	3291	2008
Grand Blanc city	3433	344	794	1230		1547	247	1009	616
Grand Blanc township	11271	1128	2607	4040		5652	903	3687	2249
Linden city	1029	103	238	369		464	74	303	185
Montrose city	763	76	176	273		302	48	197	120
Montrose township	2601	260	602	932		1140	182	744	454
Mount Morris city	1442	144	334	517		533	85	348	212
Mount Morris township	9898	991	2289	3547		5297	846	3456	2108
Mundy township	4949	495	1145	1774		2631	420	1716	1047
Richfield township	3205	321	741	1149		1431	229	934	570
Swartz Creek city	2038	204	471	730		1029	164	671	410
Thetford township	3762	377	870	1348		1554	248	1014	618
Vienna township	5601	561	1296	2007		2707	433	1766	1077
Gen. County Total	181881	18206	42069	65186		84086	13437	54858	33466

Source: Genesee county census breakdown, 1990.

Figure 1

Estimated cost to Genesee Co. for hospital stays of the currently uninsured
Projections made from the Genesee County Census Breakdown, 1990

Uninsured in Genesee Co.
age 18-44 = 21,826
age 45-64 = 10,090

Digestive
age 18-44
2,185
age 45-64
1,612

Circulatory
age 18-44
5,048
age 45-64
6,583

Respiratory
age 18-44
7,822
age 45-64
4,016

All other:
excluded because
most are handled
as out patient
treatment

Assume one hospital stay per year per person *
age 18 - 44 is 7.9%**
age45-64 is 6.5%**

18-44 is 7.9%*
172.6
45-64 is 6.5%*
104.8

18-44 is 7.9%*
398.8
45-64 is 6.5%*
427.9

18-44 is 7.9%*
617.9
45-64 is 6.5%*
261.0

Total # of hosp stays
277

Total # of hosp stays
827

Total # of hosp stays
879

Total estimated cost of hospital stays
$16,221,674

plus

Total estimated cost of hospital stays
$48,630,908

plus

Total estimated cost of hospital stays
$148,262,688

equals

Total estimated cost to Genesee Co. for current uninsured hospital stays
$213,115,270

Source: Average cost of hospital stay by Disease classification.
Digestive $58,562 chart #4
Circulatory $57,804 chart #3
Respiratory $168,672 chart #2

* 7.9% of age 18 - 44 with one of the three studied diagnoses will require 1 hospital stay per year.
* 6.5% of age 45 - 64 with one of the three studied diagnoses will require 1 hospital stay per year.
** Percentage by age group requiring hospitalization developed from Healthy People, 1991.

DISCUSSION

This study projects a one year expenditure of $213,115,270 for the 31,916 uninsured persons in Genesee county between the ages of 18 to 64. This projection is for just three medical classifications, for the most expensive portion of their care-hospitalization. It is estimated that 7.9 percent of those persons age 18 through 44, in the three disease classifications, or 1,189.3 and 6.5 percent, or 793.7, of those persons age 45 through 64, in the three disease classifications, will require at least one hospitalization per year.

Additional health care dollars are needed to cover the increased numbers of persons requiring hospital stays. A new federal health care tax of 2 percent would generate $184,389,120 of new revenue for Genesee county. This figure is estimated by using the number of taxpayers in Genesee county, age 20 and over, (288,000) multiplied by the median household income in Genesee county of $32,000. These figures indicate that new federal taxing will be inadequate to cover the projected additional health care expenditures for the currently uninsured in Genesee county.

The cigarette tax increase of 75 cents per pack, proposed by President Clinton is expected to raise about $12 billion a year (Birnbaum and Wartzman, 1993). For Genesee county's 288,000 persons age 20 and over, 34 percent, or 98,000, are estimated to be smokers (Healthy People, 1991). Calculating $1.72 per smoker, per year $168,560 will be raised for health care (Ibid).

The above revenue will leave Genesee county short of covering projected health care expenses for the three disease classifications by $28,577,630. This means that additional taxes from both the public and private sectors will be required. Also, additional savings must be realized from the managed competition area.

CONCLUSION

This research demonstrates that for just the three disease classifications studied, there will be a projected $29 million short fall in health care dollars for Genesee county when costs for the currently uninsured and underinsured groups are added to the total county health care bill. To reduce the total health care bill and to shrink the $29 million gap, Genesee County will have to push for health care to be managed and coordinated by primary care physicians. Emphasis must shift to health care and disease prevention. Patient education will have to take on a larger role as a means of reducing health care costs. Health care costs for the three disease classifications looked at in this research could be reduced substantially with earlier and more intensive detection and patient educational programs. Patient education in nutrition, diet modification, exercise programs, stress management, and behavior modification could reduce health costs by preventing disease occurrence or even delaying an inevitable onset of disease.

In Genesee county diseases involving the respiratory system account for the greatest expenditure of health care dollars of the three disease classifications studied. Therefore, it would be advisable to escalate the development of health education programs aimed at reducing incidence, where possible, and encouraging early treatment in actual occurrences of respiratory conditions.

Efficient use of health care dollars is, as the Clinton proposal advocates, to emphasize wellness , prevention, and education. In order

to succeed, national health care reform will need to include a federal health care tax, a cigarette tax, and also to continue a program of more effective utilization of health care dollars by featuring as key elements health education and the prevention of disease.

Managed competition is a broad-based concept of strategies from which more efficient utilization of health care dollars can emerge. Over 12 percent of the gross national product is now going for health care and related services. The key feature of managed competition is the integration of health care delivery with financing systems. A major step in achieving this integration is to direct more persons into managed care programs, primarily health maintenance organizations.

Genesee county has already started the process of integrating health care delivery with financing systems. Genesys and McLaren health systems have affiliated with smaller health systems in the area to form larger and more efficient systems. This tactic gives the two systems greater purchasing and bargaining power and can also create leverage to persuade physician groups to affiliate with them.

Nationally, physicians, due to increasing awareness of the need for health care reform, have been changing their ideas on how patient care should be delivered. In Michigan these changes in physician behavior can be evidenced by newly formed networks such as Grand Rapids Advantage Health Organization that links 27 family practice physicians with St. Mary's Health Services, a health system featuring a 330-bed hospital, clinics, home care, and other services (Natinsky, 1994).

Advantage Health is similar to previously existing networks in the state, Detroit's Community Care Partnership network formed by Blue Cross and Blue Shield and Henry Ford Health System also headquartered in Detroit and Mercy Health Services based in Farmington Hills, Michigan. For physicians, belonging to a large group offers advantages of reduced overhead, better standards of practice, and the opportunity to improve the quality of their care internally by perfecting treatment protocols through large group communication (Ibid).

It is reasonable to expect that in Genesee County physicians are prepared to give serious consideration to becoming part of an alliance or affiliation with a large health care network. They have had the opportunity to see such networks saving health care dollars nationally and also in Michigan. Additionally, it is expected the physician community in Genesee County will follow national trends and give quality of care issues top priority as they consider changing their practice methods from private to group practice.

Also, in Genesee County there has been a sharp focus on the preliminary analysis of area health care that was initiated in 1989 by Genesys Health System with the assistance of health care consultants from the Detroit firm of Deloitte and Touche. Some of the key points revealed by the analysis were that there will not be enough money to take care of sick people. Providers need to emphasize prevention and health promotion. Also, that more care will have to be rendered in non-hospital settings. The study pointed out the possibility that there could

be only two hospitals in the Flint area by the year 2000. Managed care by a primary care physician would be the mechanism of delivery. To be successful the system must become more cost effective without compromising quality of care (Health Care Strategic Management, 1994).

Two areas of the health care industry that are already being effected by health care reform are home health care agencies and durable medical equipment (DME) companies. The Genesys Health System study stressed that non-hospital settings for health care will continue to grow. These areas of escalating growth are promising possibilities for shaving health care costs. The home health care and (DME) agencies have experienced rapid growth in the last few years as hospital in-patient days shrink. Patients are being sent home "quicker and sicker" than in the past.

The home health care industry has many problems to solve before substantial savings can actually be realized. For example, a major problem is: How to monitor quality and utilization of care given in the home?

Highly technical procedures are under consideration for home use. One example is blood transfusions. This is a potentially dangerous procedure. What should the qualifications be for the provider of this service? How will the service be paid by the insurance company? A blood transfusion crosses many provider lines. There is the professional component, the blood product itself, the pharmacy charges for intra-

venous (IV) solutions and medications that may be needed during the procedure, and the actual DME charges for the IV pump, tubing, needles, and other supplies. Billing and payment problems such as these need to be resolved.

Another area of concern for home health and DME agencies is patient education. These agencies need to develop their patient, caregiver, and family teaching programs more intensely as a way of saving health care dollars. More effort needs to be given to convincing patients and families that they can learn to safely receive treatment and care at home in a less costly setting. Discharge planning should be started earlier in hospitals. Ideally, discharge planning should start on the first day of the admission. In reality, this does not always happen. A closer cooperative arrangement between the hospital discharge planners and the outside home health and DME agencies could help shave health care dollars from the total health care bill.

Appendix A

Number of selected reported chronic conditions per 1,000 persons, by age: United States, 1990

Type of chronic condition	18 - 44 years	45 -64 years
Selected digestive conditions		
Ulcer	19.5	28.6
Hernia of Abdominal cavity	9.5	29.3
Gastritis of duodenitis	13.2	17.9
Frequent indigestion	27.6	32.7
Enteritis or colitis	9.3	12.9
Spastic colon	6.8	11.2
Diverticula of intestines	1.8	12.9
Frequent constipation	12.4	14.3
Total	**100.1**	**159.8**
Average	**12.51**	**19.98**

Data from "National Center For Health Statistics", Current estimates from the National Health Interview Survey, 1990

Appendix B

Number of selected reported chronic conditions per 1,000 persons,by age: United States, 1990

Type of chronic condition	18 - 44 years	45 -64 years
Selected circulatory conditions		
Rheumatic fever with or without heart disease	6.6	15.7
Heart disease	38.1	118.7
Ischemic heart disease	4.8	58.6
Heart rhythm disorders	25.2	35.9
Tachycardia or rapid heart	4.9	8.1
Heart Murmurs	16.5	18.3
Other & unspecified heart rhythm disorders	3.8	9.5
Other selected diseases of heart excluding hypertension	8.0	24.1
High blood pressure (hypertension)	55.7	218.3
Cerebrovascular disease	1.7	16.7
Hardening of the arteries	0.4	10.8
Varicose veins of lower extremities	24.6	46.8
Hemorrhoids	41.0	70.9
Total	**231.3**	**652.4**
Average	**17.8**	**50.2**

Data from "National Center For Health Statistics", Current estimates from the National Health Interview Survey, 1990

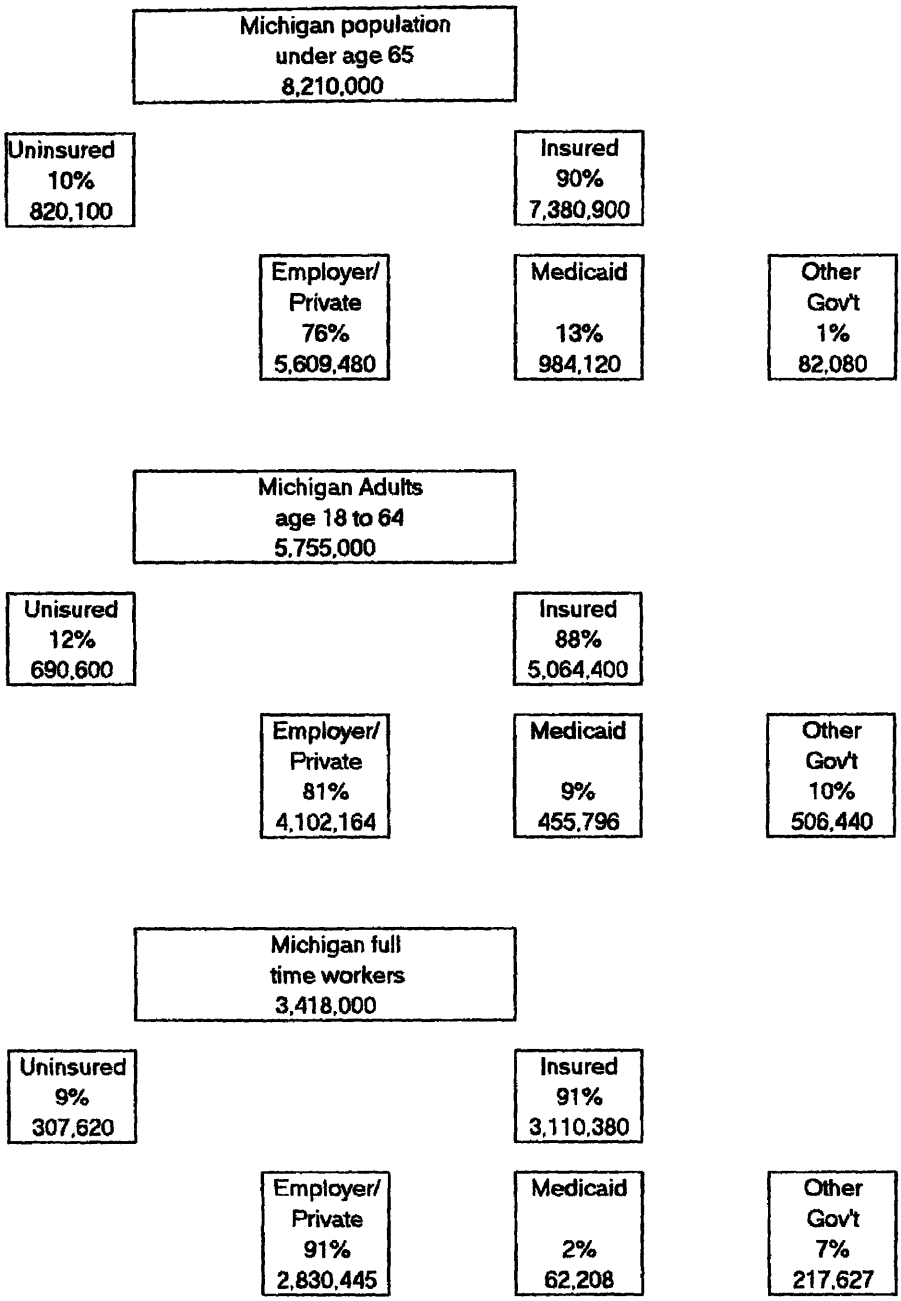
Appendix C

Number of selected reported chronic conditions per 1,000 persons,by age: United States, 1990

Type of chronic condition	18 - 44 years	45 -64 years
Selected respiratory conditions		
Chronic bronchitis	41.5	57.4
Asthma	35.2	38.6
Hay fever or allergic rhinitis without asthma	115.0	95.1
Chronic sinusitis	149.0	181.9
Deviated navel septum	7.0	8.4
Chronic disease of tonsils or adenoids	10.0	3.8
Emphysema	0.7	12.8
Total	**358.4**	**398**
Average	**51.2**	**56.9**

Data from "National Center For Health Statistics", Current estimates from the National Health Interview Survey, 1990

Appendix D



Genesee County population age 18 to 64 = 279,591 (from table 8)
The uninsured portion will equal 10.33% or 28,882

Appendix E

Estimates of Michigan Resident Population by Age and Sex: July 1, 1990 to July 1, 1992

(In Thousands, Includes Armed forces residing in each State)

Age and Sex	Ap. 01, 1990 (Census)	July 01, 1990	July 01, 1991	July 01, 1992
Male				
20 to 44 years	1814	1818	1840	1829
45 to 64 years	841	841	848	873
Female				
20 to 44 years	1871	1875	1896	1881
45 to 64 years	898	898	904	927

Source: U.S.Department of Commerce; *Economics and Statistics Administration* and The Bureau of the Census. "State Populationn Estimates by Age an Sex: 1980 to 1992".

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LIST OF TABLES AND FIGURES