

# A CASE FOR YOUTH-INFORMED POLICY: HOW BOUNDARY OBJECTS CAN ACT AS A MODE OF INFRASTRUCTURING TO BRIDGE COMMUNICATION GAPS BETWEEN YOUTH AND POLICYMAKERS

By: Katherine Jones

M.P.P., University of Maryland, Baltimore County School, Baltimore, MD, 2013

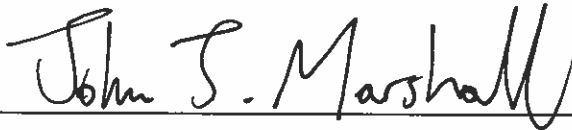
B.A., University of Connecticut, Storrs, Connecticut, August 2007

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Penny W. Stamps School of Art and Design  
University of Michigan  
Ann Arbor, Michigan

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Approved by:



John Marshall, Graduate Committee Chair



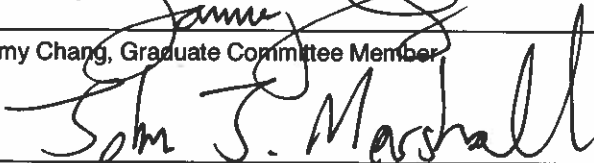
Kelly Murdoch-Kitt, Graduate Committee Member



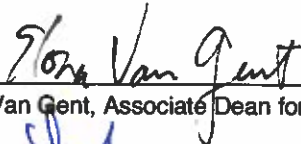
Neeraja Aravamudan, Graduate Committee Member



Tammy Chang, Graduate Committee Member



John Marshall, Director MDes Graduate Program



Elona Van Gent, Associate Dean for Academic Programs



Gunalan Nadarajan, Dean, Stamps School of Art and Design

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# APPROPRIATE CARE CO-DESIGN AS A MEANS OF INSTITUTIONING AND INFRASTRUCTURING FOR YOUTH INFORMED POLICY

Katherine Jones

Candidate, MDes  
University of Michigan  
Spring 2019

Katherine Jones MDes '19







UNIVERSITY OF MICHIGAN

APPROPRIATE CARE

CO-DESIGN AS A MEANS  
OF INSTITUTIONING AND  
INFRASTRUCTURING FOR  
YOUTH-INFORMED POLICY:  
How integrative design can bridge  
communication between youth  
and policymakers to improve the  
creation of adolescent health  
policy.

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# Abstract

For those who seek to investigate opportunities to achieve appropriate care within healthcare policy, identifying points at which to engage can be overwhelming and intimidating. This is due to decision-making within public policy being a highly complex network with a multitude of viewpoints, interests, and levels of power which intersect at various level of government. Due to the complexity and vastness of the network, competing interests and miscommunication often lead to ineffective public policies and marginalized communities, as policymakers lack a general understanding of the needs of the public in their everyday lives. Citizen engagement in policymaking has become an area of interest in recent years as both the fields of public policy and design have investigated opportunities to create public policies from a citizen-centered approach. This thesis explores the consideration of institutioning as a means to achieve appropriate care through improved healthcare policy creation and communication between disparate actors within and across institutions who engage in adolescent health policy in Washtenaw County, Michigan. Through a case study, infrastructuring through a single page report that acts as a boundary object was leveraged as a means to strengthen pathways of communication between healthcare researchers and policymakers as a means to leverage youth opinions to improve the creation of adolescent health policy and align disparate communities of practice within the county.

## Keywords

Co-design, Institutioning, Infrastructuring, Boundary object, Integrative design, Sense-Making, Sensemaking, Public-policy, Civic engagement, Adolescent health policy, Appropriate care, and Policymaking.



# Key Definitions

**Citizen-centered policy:** taking an ‘outside-in’ approach in which citizens preferences, opinions, and lived experiences are considered as valuable evidence to inform public policy creation.

**Decision-making:** a process of activities which includes problem identification and definition, search for information or evidence, identifying and clarifying alternatives, and selection of final decision.

**Evidence:** information used to inform decision-making.

**MyVoice:** a national text message-based survey of youth aged 14 to 24 years.

**MyVoicers:** respondents who participate in the MyVoice survey

**Policymaker:** an individual tasked with creating public policy for a governing body or public agency.

**Provider:** healthcare providers such as a doctor or nurse.

**Public policy creation:** a staged process including the following; policy formulation, policy adoption, policy implementation, and policy evaluation.

**Youth-informed policy:** policy that is defined and created with the use of youth preferences either through direct engagement or youth opinion data. Evolving from “informed policymaking” which is an approach to policy decisions that aim to ensure that decision-making is well-informed by the best available research evidence (Greenhalgh & Russell 2009).

**Youth opinions:** Text message survey responses captured through MyVoice from youth ages 14-24, analyzed and summarized into themes by MyVoice staff and volunteers.



## Preface

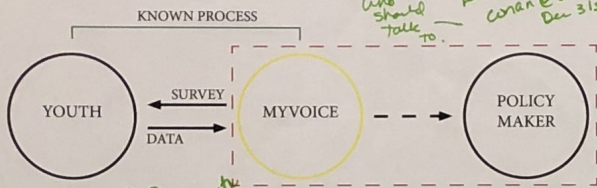
Ever since I can remember my grandfather told me stories of the Civil War. A New England Republican at his core, my grandfather's storytelling of Lincoln-era politics was more like legends than actual accounts, and yet they cultivated a deep commitment to democracy and the role of citizenship in ensuring we sustain and advance our democratic freedoms generation after generation. Building on my own commitment to public service and desire to live out the values embedded within the stories told by my grandfather, I began my career serving as an AmeriCorps member with Public Allies Connecticut. Trained as a community organizer, I would continue to work within the realm of policymaking for the next ten years listening to the lived experience of my community and co-creating stories to affect policy change.

I am community-centric, influenced by a desire to create an equitable society and utilize collective knowledge-sharing to broaden my understanding of appropriate policy reform. While my career has spanned multiple sectors, one thing remains the same, the issue of ineffective public policy. Across those ten years, I continued to witness failing policy implementation as a result of what I believe to be legislators' resistance to gathering, listening, and understanding the true lived experience of their constituents. Citizen representation is at its core storytelling and fundamental to democracy. Yet here within the twenty-first century we as a people no longer carry the power, influence, and access to meaningful modes of civic engagement. I believe the intersection of design and public policy is an opportunity to take the best of both fields and create new modes of civic engagement. This thesis project has provided the space to explore the earliest skill I learned, storytelling, with design and public policy. It is my opportunity to continue to dedicate my career towards developing new modes of engagement to ensure all people of this democracy are heard, valued, and rewarded by the promise made over 200 years ago.

- Felicia
- Andy - not formal on health

bbrabec@

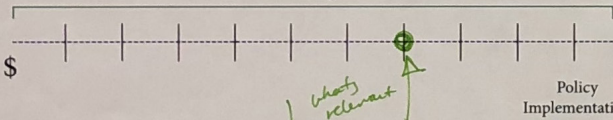
Who should talk to. Demos come @ which Dec 31st. term



play into the what good information need to ensure that info is relevant. - have content ready to go.

system must ask how why, what form

Policy Development "Decision Making Process"



what's relevant today -

Policy Implementation

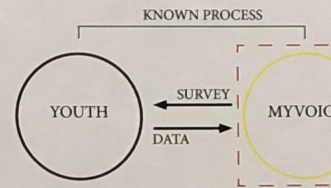
- what issues do you wish county would do
- what are county priorities - youth health

What I hope to Offer:

- Articulation of critical workflows + decision making processes
- Key players involved in critical decision making and how to influence
- Key player respective roles and relationships/interactions
- Critical communication channels to leverage design intervention
- Ecology map of the political landscape within Washtenaw County

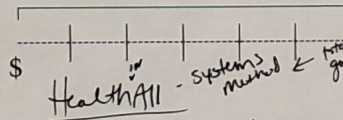
- 1 - Ordinance writing stage
  - 2 - justification of policy choices - for why my position is right one
  - 3 - How does health dept identify partners - which are the right ones.
  - 4 - eval
- identify the issues @ this time

Ellen Ripenowit



Who developed the WHP as groups went in. how

Policy Development "Decision Making Process"



HealthAll - systems method - how to rebrand health as more than healthcare

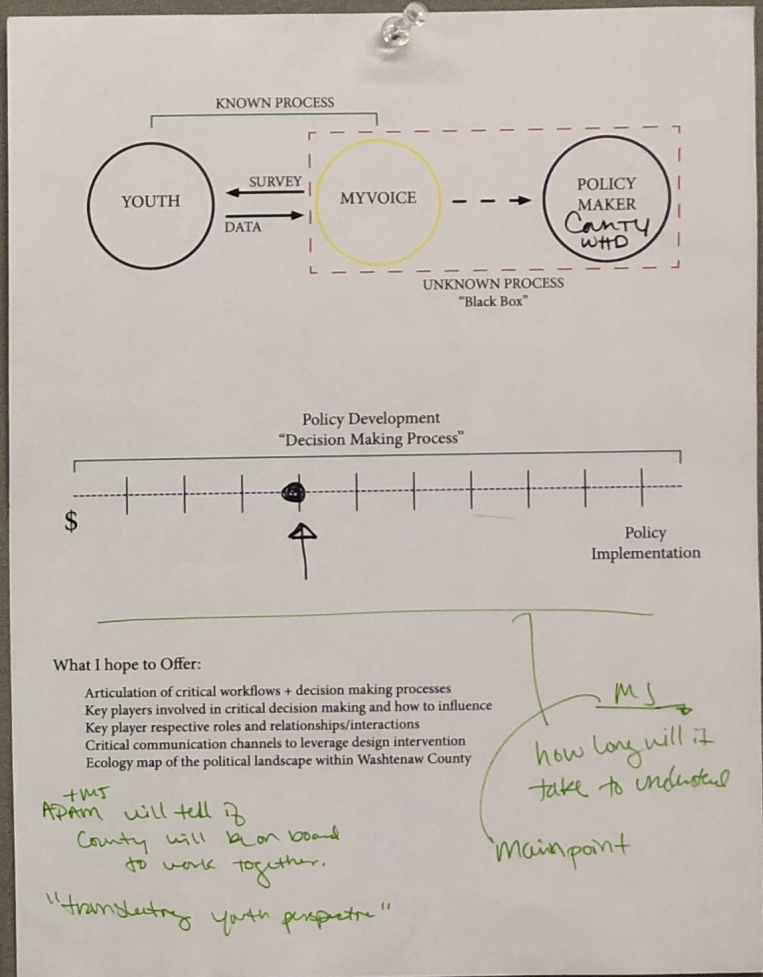
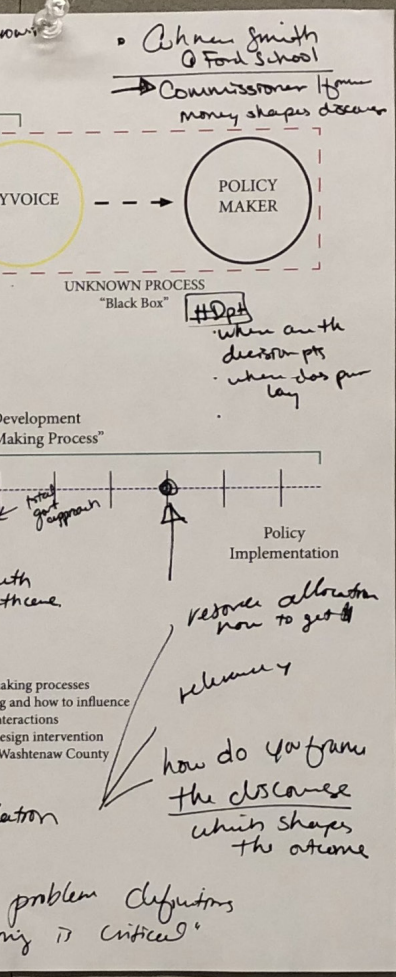
notions of fairness

- Articulation of critical workflows + decision making processes
- Key players involved in critical decision making and how to influence
- Key player respective roles and relationships/interactions
- Critical communication channels to leverage design intervention
- Ecology map of the political landscape within Washtenaw County

The Dance of legislators AmeriCorps. Policies respond to program framing

# INTRODUCTION

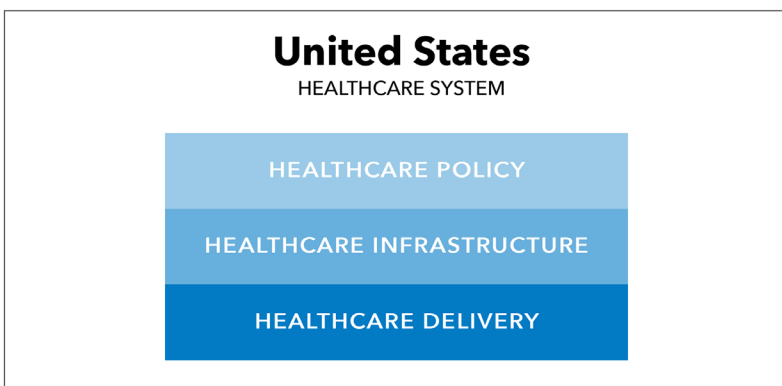




In the United States, active citizen participation within public policy creation continues to decline. Now more than ever citizens desire meaningful opportunities to voice their interests in the public realm, however barriers to engage remain prevalent including access and responsiveness of public officials, political influence, and education of the political system (Ekman and Amnå 2012). This is especially the case for adolescent health policy, in which those who are directly affected by the policy outcomes, youth, have limited modes of

engagement to ensure policymakers are making informed decisions regarding adolescent appropriate care. “Young adults are gathering information about the political world from their own personal experience...youth have issues that engage them, and which could provide the raw material for action if organizers are able to develop a means for tapping into these concerns” (Andolina et al. 2002). Appropriate care can be broadly defined as providing the right treatment, at the right time, for the right patient (Corrigan 2005). Within the healthcare system, including healthcare policy, healthcare infrastructure, and healthcare delivery (see Fig. 1), there exist various modes in which to achieve appropriate care.

Currently, efforts have focused on downstream interventions by targeting healthcare delivery at points of care between providers and patients to improve direct communication. Similarly, within healthcare infrastructure which includes sites of care such as hospitals, interventions have focused on improving relationships with healthcare administrators and providers to ensure staff are enabled with the tools and processes needed to succeed in providing appropriate care. Due to prioritizing downstream interventions, limited efforts have



*Figure 1: Components of the United States Healthcare System*

investigated healthcare policy as a means to improve direct communication between policymakers and the public. As the healthcare system is based on hierarchical principles, it would seem prudent for patients, as the public, to advocate for healthcare needs directly to those who create healthcare policies and regulations at the highest levels. In doing so, policymakers are provided valuable knowledge and expertise to inform their decision-making which ensures the overall structure of the healthcare system is positioned to respond appropriately and effectively in delivering care reflective of the needs of the public.

For those who seek to investigate opportunities to achieve appropriate care within healthcare policy, identifying points at which to engage can be overwhelming and intimidating. Decision-making within public policy is highly complex due to the multitude of viewpoints, interests, and levels of power which intersect at various level of government. Within the public realm, healthcare policy creation exists as a complex network of disparate communities of practice, those “who work as a community in a certain domain doing similar work” (Arias & Fischer 2000), including federal, state, county, and local governing bodies. Within each community of practice, there exists an even more complex network of disparate communities of practice such as public service agencies and elected boards (see Fig. 2). In attempting to solve policy problems like healthcare, each community of practice—an elected commission for example—brings their own institutional framing to the policy problem requiring direct communication through information sharing within and across fellow communities of practice to support effective decision-making. Within this context, framing can be described as “an operation of selectivity and organization, which is required for the very task of making sense of complex, information-rich situations” (Castell 2016), whereas institutional framing in the context of the public realm can be described as “a notion which aims to include all frames used by a specific institution” (Castell 2016).

Due to the complexity and vastness of the network, competing interests and miscommunication often lead to ineffective public policies and marginalized communities as policymakers lack a general understanding of the needs of the public in their everyday lives (Irvin & Stansbury 2004).

With that said, citizen engagement in policymaking has become an area of interest in recent years as both the fields of public policy and design have investigated opportunities to create public policies from a citizen-centered approach. Previous research demonstrates including citizen participation in the creation of public policy has the potential to lead to more effective outcomes (Irvin & Stansbury 2004). Effective outcomes, or effectiveness, can be described as “the extent to which the policies are achieving the benefits they are supposed to achieve plus any unanticipated side benefits” (Nagel 1986). In an effort to address miscommunication and improve effectiveness through collaboration, applications of co-design are on the rise in the public realm. Co-design can be described as “the creativity of designers and people not trained in design working together in the design development process” (Sanders & Jan Stappers 2008). Co-design in

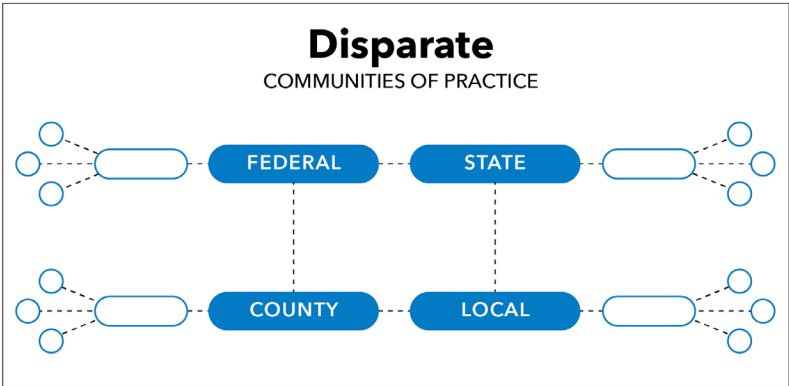


Figure 2: Disparate Communities of Practice within a Healthcare Policy Network

the public realm most often involves a designer embedded within a singular community of practice—a public service agency for example—in an attempt to improve the implementation and administration of public services. As a result, co-design outcomes remain limited in scope and effectiveness as they focus solely on the delivery of public services and overlook the opportunity for increased communication and information sharing across governing bodies to improve public policy creation. If co-design is to achieve long-standing social and political change within the public realm, there needs to be more effective pathways to communication within and across communities of practice to improve decision-making in public policy creation.

There is an acknowledgment from designers practicing co-design within the public realm for “continuous dialogue and interaction between public institutions, citizens and other societal actors in defining priorities for the public sector” (Seravalli et al. 2017). ‘Institutioning’ as an evolving practice to address the need for strengthened communication of diverse actors within an institution has shown to be effective in improving co-design by seeking to shift institutional framing of actors over time. Institutioning can be described as the “gradual process of altering (consolidating or challenging) existing frames of institutions” (Huybrechts et al. 2017). Successful institutioning requires continuous dialogue between disparate actors as shifting institutional framing occurs through “articulating and reflecting on the ways in which various public and private institutions explicitly or implicitly ‘participate’ in PD [participatory design] and Co-Design processes” (Huybrechts et al. 2017). As healthcare policy in the public realm is such a complex network, the consideration of institutioning as a means to achieve appropriate care through improved healthcare policy creation could have the capacity to act as a catalyst for change not only for improved service delivery, but the subsequent improved communication between disparate actors within and across institutions who engage in the co-design process.

In seeking to achieve institutioning through co-design within healthcare policy creation, there is a need to investigate new tools and processes which create a sustained and continuous dialogue between disparate communities of practice over time. Through a process known as infrastructuring, “characterized by a continuous process of building relations with diverse actors” (Hillgren et al. 2011), successful infrastructuring can improve communication and classification systems by sustaining co-design beyond the initial engagement. Within the context of investigating appropriate care within healthcare policy, infrastructuring to achieve institutioning has the potential to move disparate communities of practice into aligned communities of interest—“groups similar to CoPs [communities of practice], but from different backgrounds coming together to solve a particular (design) problem of common concern” (Arias & Fischer 2000)—through both identifying disparate institutional framing of appropriate care and establishing structures to shift framing over time. With an interest to work within and across disparate communities of practice to improve healthcare policy creation, there is precedence of new modes of infrastructuring that target appropriate care for the formation of communities of interest and thereafter achieve institutioning.

## **Project Background**

As of 2015, youth suicide rates were at a forty year high across the nation with Washtenaw County seeing the highest rates within Michigan (Slagter 2017). To address the growing concern, the Washtenaw County Board of Commissioners in Michigan recently passed an eight-year millage for the creation of new prevention, crisis management, and stabilization services (BOC 2018). There is no greater time than now for local Washtenaw County policymakers to seek citizen input to inform their decision-making and yet there are currently no effective structures to support gathering such a broad spectrum of local youth opinions. Youth-led social movements are gaining energy across the nation and yet even with increased

activism, current opportunities for civic engagement (letter writing, calling elected officials, testifying, protesting) are limited in power and influence (Schultz 2017). Policymakers in Washtenaw County explain while there is a great need for youth opinions to inform public policy decision-making, a common sentiment across local government administrations is that youth are considered vulnerable populations, out of reach from inclusion within the policy creation process.

To address this gap of youth opinions within adolescent health policy creation, a team of providers and researchers at the University of Michigan created a tool known as MyVoice. The MyVoice tool delivers surveys through an interactive SMS platform to over 1,800 youth nationwide on a weekly basis to gather responses which aid in understanding youth health needs and preferences which affect their lives. Upon receipt of the text message responses, the MyVoice team of staff and volunteers analyze and summarize the responses into themes which they hope to deliver as evidence to inform public policy creation. However, the MyVoice team has yet to deliver the evidence in a mode which is both informational and actionable—evidence which gives enough scope and context to a health issue area (informational) and sparks discourse and negotiation within a community of practice in addressing the health issue area (actionable).

## **Problem Statement and Research Aims**

Both the MyVoice team and Washtenaw County policymakers operate within disparate communities of practice. The MyVoice tool is positioned to collect, characterize, and amplify the real-life experience of youth. This is the valuable expertise, and evidence policymakers seek to inform their decision-making in addressing the health needs of their youth constituents. However, initial attempts by the MyVoice team in developing relationships with policymakers to deliver the evidence have fallen short due to lack of time, staff capacity, and knowledge of the policy creation process. As such, there is a need to develop tools and

processes which not only identify effective access points within the policy creation process to deliver the evidence but align institutional framing of adolescent mental health across the MyVoice team and Washtenaw County policymakers for the creation of a community of interest. In doing so, the evidence—youth opinions—can act as a boundary object within the decision-making process which sparks discourse and negotiation to ensure adolescent health policy problems are deliberated and framed in a manner which leads to equitable representation of youth preferences and needs over time (see Fig. 3).

Boundary objects are artifacts which “serve to communicate and coordinate perspectives of various constituencies” (Arias & Fischer 2000) and can be used to translate, coordinate and align institutional frames across communities of practice (Fischer & Reeves 1995). The effectiveness of a boundary object relies on the familiar; all actors involved must have some familiarity with the form in order for the object to resonate with disparate audiences. Boundary objects are those which carry “different meanings in different social worlds, but their structure is common enough to more than one world to make them recognizable, a means of translation” (Bowker & Star 2000). Due

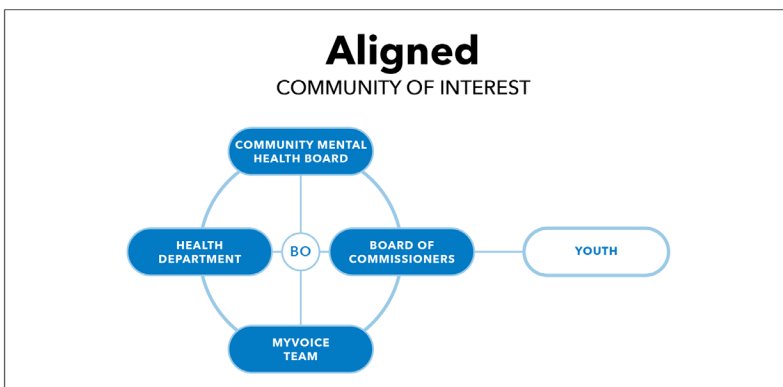


Figure 3: Aligned Community of Interest through Boundary Object



to the nature of public policy creation which relies on single page reports known as 'one-pagers' for information sharing, designing a one-pager leveraging youth opinion to act as a boundary object has the potential to translate the youth experience to policymakers, coordinate policy, and program creation, and align institutional framing of adolescent healthcare. By establishing infrastructuring which supports the continuous sharing of one-pagers, this boundary object can act as a catalyst to shift institutional framing across the MyVoice team and Washtenaw County policymakers to create an aligned community of interest regarding adolescent mental health to achieve institutioning over time.

The current paper proposes a new integrative design approach, combining Sense-Making and co-design, as a means to establish infrastructuring which bridges communication gaps between youth and policymakers for the formation of a community of interest regarding adolescent mental health to improve communication and decision-making in adolescent health policy creation. In doing so, continuous dialogue within the community of interest can achieve institutioning to ensure the healthcare system can evolve and sustain appropriateness over time. Sense-Making as a methodology can be described broadly as a process to investigate and improve communication between two actors (Dervin et al. 2003). With this integrative design approach, the designer is more equipped to identify institutional framing across disparate communities of practice through Sense-Making while leveraging co-design as a means to create modes of infrastructuring which seek to align institutional framing for the formation of a new community of interest regarding adolescent mental health. Focusing on the recent rise in suicide rates among Washtenaw County youth, the intended goal was to create infrastructuring to deliver one-pagers as boundary objects which informed and aligned policymakers' decision-making with the needs of youth in the creation of adolescent mental health policy and programs (see Fig. 4).

The major specific aims of the research are these:

1. to design a one-pager leveraging youth opinions in a manner which acts as a boundary object to support alignment of institutional framing of adolescent mental health.
2. to design infrastructuring for continuous dialogue between the MyVoice team and Washtenaw County policymakers for the creation of a community of interest regarding adolescent mental healthcare.
3. to demonstrate the value of integrating Sense-Making and co-design methodologies to achieve institutioning within a complex health policy system.

# Theory of Change

DISPARATE TO ALIGNED COMMUNITY

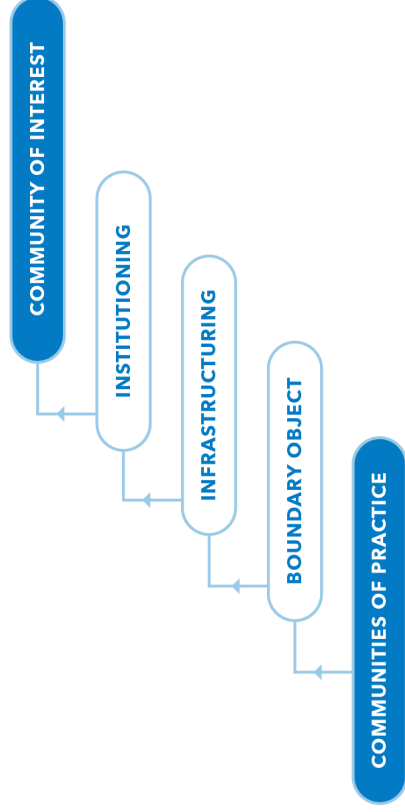


Figure 4: Theory to move communities of practice to a community of interest

ME A CHANCE  
TO FOLLOW PPL?

PERSON  
CAN LE  
DATA

WHAT ARE THE  
COUNTY WIDE  
YOUTH DEVELOPMENT  
NETWORKS?

**CONTEXTUAL  
REVIEW**

How DO ST  
VIEW TR  
-perception

CULTURE  
ON WITH  
LEVERAGE  
A?

STAKEHOLDERS  
THE DATA?  
on of  
value-

IS THERE A  
POLICY ARENA  
IN WHICH  
DISCOURSE IS  
OPEN?

WHAT IS THE  
POLICY

## Defining Public Policy Systems

A public policy system can be defined as “a dynamic, complex, and interactive system through which public problems are identified and countered by creating new public policy or by reforming existing public policy” (John 1998). Traditional methods of policy design can be described as “the deliberate and conscious attempt to define policy goals and connect them to instruments or tools expected to

realize those objectives” (Howlett et al. 2015). Due to the multitude of processes required to achieve successful public policy, policymakers interact with a diverse sector of private and public actors which seek to address diverse areas of need. This has led to a fragmented system lacking coordination in governance, execution, and evaluation of public policy. Policymaking is not a linear and direct process (Black & Donald 2001), it is comprised of a complex system of actors each bringing their own institutional framing of a policy problem which influences their decision-making. Thus, it is imperative that those who wish to inform said decisions create structures to provide evidence which shapes and frames the discussion rather than points to a preferred solution. “If we wish to better understand the deliberative processes involved in policymaking, and how evidence actually gets ‘talked into practice’ (or not) at a micro level of social interaction, then we require a theoretical framework that places central focus on language, argumentation, and discourse” (Greenhalgh & Russell 2009). It is in understanding how various actors within and external to the community of practice frame policy problems, that one can begin to understand policymakers’ needs for evidence.

## **Evidence-based Policymaking**

In an effort to increase relevance in the creation of public policy, an approach known as evidence-based policymaking was developed to ensure that decision-making is well-informed by the best available research. “In this model, a policy problem is defined, and research evidence used to fill an identified gap, thereby solving the problem (Greenhalgh & Russell 2009). Utilizing a highly quantitative approach, evidence-based policymaking was viewed at its inception as an improvement in decision-making practices due to its ability to identify the breadth of issues facing communities. However, criticism grew over time as the approach often lacks depth and detailed narratives direct from citizens’ lives which is shown to be effective in shaping

decision-making and policy outcomes (Gambarato & Medvedev 2015). “Evidence-based policymaking assumes that ethical and moral issues faced by policymakers can be reduced to questions of ‘best evidence,’ and that what is actually going on in the world can be equated with what chosen metrics indicate is going on” (Greenhalgh & Russell 2009). While shortcomings of the current model of evidence-based policymaking have been well documented, scholars note there remains value in providing evidence to policymakers with attention to a redefinition of what “evidence” comprises and when it is most useful in the public policy creation process. Thus, in understanding the system, practitioners can identify points in which evidence is most useful to the workflow of policymakers in an effort to begin to understand what type of evidence is needed across communities of practice.

## **Sensemaking & Sense-Making**

As policymakers are tasked with developing interventions within an ever-growing complex system, there is value in attempting to understand the pathways of communication as well as the various institutional framing of policy problems within the network in order to identify when and how evidence can be useful to improve information sharing and aid in decision-making. “In a time when policymakers are tasked with developing innovative solutions to increasingly complex policy problems, the need for the intelligent design of policies and a better understanding of the policy formulation processes they involve has never been greater” (Howlett et al. 2015). ‘Sensemaking’ and ‘Sense-Making’ can prove to be of value within in this context as at their core they focus on communication and synthesis of information in regard to how individuals or groups make sense of the world around them. Many scholars have contributed to the theoretical foundations of Sense-Making and sensemaking across fields including communications, data science, and design. For the purposes of this paper, the theories of Brenda Dervin, Gary Klein, Jon Kolko, and Karl

Weick will be discussed.

'Sensemaking' can be broadly described as the act of making sense of the world. According to Gary Klein, sensemaking is defined as "a motivated, continuous effort to understand connections (which can be among people, places, and events) in order to anticipate their trajectories and act effectively" (Klein et al. 2006). Sensemaking occurs "when people try to make sense of events, they begin with some perspective, viewpoint, or framework...[called] the frame... sensemaking can involve elaborating the frame by adding details and questioning the frame and doubting the explanations it provides" (Klein et al. 2006). Similarly, as described by Karl Weick, sensemaking occurs when "the current state of the world is perceived to be different from the expected state of the world or when there is no obvious way to engage in the world" (Weick et al. 2005), thus there is a need to make sense of the situation. Both Klein and Weick describe sensemaking as a cycle in which individuals or groups frame and reframe information in order to make sense of a situation at hand. While Klein leverages mental models—an explanation of someone's thought process—to understand the sequence of loops an individual takes to frame and reframe information, Weick focuses on groups to understand how information is synthesized when multiple people engage in collective sensemaking.

According to Weick, group sensemaking is "about the enlargement of small cues. It is a search for contexts within which small details fit together and make sense. It is people interacting to flesh out hunches. It is a continuous alternation between particulars and explanations with each cycle giving added form and substance to the other" (Weick 1995). It is important to note that sensemaking is shaped by one's own social construct both due to, and because of group norms— "institutional constraints, organizational premises, plans, expectations, acceptable justifications, and traditions inherited from predecessors" (Weick 2005)—and how one experiences the



world. As such, the act of sensemaking varies from individual to individual and group to group. In context to this paper, by identifying how sensemaking occurs—the internal decision-making process—for various actors within disparate communities of practice, one can begin to make sense of the institutional framing for the policy problem at hand. Essentially, how the MyVoice team engages in sensemaking to analyze the youth opinions will impact how the evidence, one-pager, is designed. Similarly, how Washtenaw County policymakers engage in sensemaking to comprehend the evidence will frame and shape future policy interventions. Identifying points at which both modes of sensemaking can be aligned will be critical to achieving institutioning.

Sensemaking has evolved within the field of design as a method of thinking to aid designers in making sense of the complexity of design problems in which they work. Similar to Klein and Weick, sensemaking is a reflexive method which anyone can leverage by integrating experiences in order to make sense of the world around them. Quite often aligned with abductive thinking, “a logical way of considering inference or “best guess” leaps” (Kolko 2010), with sensemaking—

“it is less important to be “accurate” and more important to give some abstract and tangible form to the ideas, thoughts, and reflections. Once externalized, the ideas become “real”—they become something that can be discussed, defined, embraced, or rejected by any number of people, and the ideas become part of a larger process of synthesis” (Kolko 2010).

Due to the need to both uncover institutional frames across communities of practice and create structures to sustain continuous dialogue over time, sensemaking as a method of synthesis can be applied by the practitioner to make sense of the nature of relationships within public policy creation as well as decision-making within a complex network of communities of practice to begin to identify whom would be most receptive to engaging in a community of interest.

While sensemaking is the act of making sense of a situation at hand, 'Sense-Making' is an approach used to gather insight into on how, when, and where individuals engage in making sense of the world around them. 'Sense-Making,' as a methodology by Brenda Dervin, focuses at the individual level in attempting to understand the institutional and situational frames of an individual's decision-making by aiding practitioners in assessing how individuals make sense of "their institutions, media, messages, and situations" (Dervin 1999). Stemming from the communications field in which practitioners were searching for new approaches to gain a deeper understanding of communication, through communication-as-dialogue (Dervin and Foreman-Wernet 2003), the approach of Sense-Making leverages methods which ask research participants to narrate how, when, and where they communicate and how they make sense of information within a particular situation. In development since the 1970s, Sense-Making grew from the acknowledgement "that the new approach ought to focus on finding effective ways to hear how members of the audience make sense of their everyday lives and how their personal actions are linked to both the messages they attend to and the social structures they live in" (Dervin 1989). Sense-Making today is used as an approach to "provide a systematic approach to listening to the audience—how they see their situations, past, present, and future—and how they move to construct sense and make meaning of these situations" (Dervin 1989). A core construct is the gap, essentially "how people define and bridge gaps [of information and communication] within their everyday lives" (Dervin 1989). Using the Sense-Making approach, one can identify the nature of communication as well as the gaps between individuals to begin to gain a deeper understanding of when and how institutional frames affect communication between actors (Dervin et al. 2003).

In attempting to understand the policymaker and how they engage with others, Sense-Making can assist in knowing what type of evidence to highlight. As Dervin states, "seeking and use of

information is best predicted based on how they see their situations, the constraints they face, the gaps they need to bridge, and the kind of bridges they would like to build across their gaps” (Dervin 1989). Similarly, with collective deliberation in public policy creation as in context to this project, it is imperative we give attention to the “selection and presentation of evidence in a way that an audience will find credible and appealing” (Greenhalgh & Russell 2009). Thus, Sense-Making can be used to gain deeper insight into the evidence required to spark discourse and negotiation between actors for the formation of a community of interest to improve the effectiveness of public policy creation.

In context of building a community of interest across the MyVoice team and Washtenaw County policymakers, understanding ‘the gap’ for decision-making including what type of information is valued and missing between both communities of practice, and the power structures which inhibit the ability to bridge communication, one can begin to understand the necessary attributes for a boundary object to achieve alignment of institutional framing. “In its attention to movement, Sense-Making requires us to focus on power by attending to forces that facilitate movement and forces that inhibit and constrain movement” (Dervin 1999). In the context of working to align disparate communities of practice into an aligned community of interest to improve public policy creation, leveraging both sensemaking as a synthesis method and Sense-Making as a methodology provides the tools and processes to understand the adolescent health policy ecosystem within Washtenaw County as well as identify how, when, where, and by whom information is shared, communication, and translated to aid in decision-making.

## **Co-design in the Public Realm**

Co-design in the public realm is often viewed as co-production in

which designers collaborate with public sector employees and citizens “to deliver services that respond better to specific local conditions while activating and empowering citizens” (Seravalli et al. 2017). Co-design stems from the co-creation movement which seeks to engage two or more participants in a creative process (Huybrechts et al. 2017) and is often considered an umbrella methodology to the development of participatory design. Beginning in Scandinavia in the 1970s, participatory design practitioners were seeking to create ‘democracy at work,’ i.e. the embedding of democratic values within the workplace to develop strategies for inclusive design (Björgvinsson, et. al 2010). Traditional applications of co-design involved the designer moving “beyond consultation by building and deepening equal collaboration between citizens affected by, or attempting to, resolve a particular challenge” (Chisholm 2017). Both co-design and participatory design are related to the recent pivot towards ‘the social’ in design and design research (e.g. ,Markussen 2017). Social design is a design methodology which takes a critical view of the designer by inviting the designer to take responsibility for their role within society and use the design process in an effort to bring about social change.

A fundamental pillar of co-design is the understanding that users are just as much experts in the process as the designer as they bring their personal experience with a problem and become a central role within the design process. Benefits of co-design can include the “generation of better ideas with a high degree of originality, improved customer experience, more efficient decision making, and lower development costs” (Chisholm 2017). The practice of co-design has evolved today, pivoting more explicitly into the public realm through the exploration of designing with democracy. “Co-design today goes beyond the workplace, industrial relations, and the institutional framework for ‘democracy at work’ and engages in and with diverse emerging publics as an actor in ‘democratic design experiments’...” (Binder et al. 2015). The approach is rigorous, one that requires sustained and effective leadership, frequent communication between participants,

and a willingness to invest in the collaborative mission in order to be successful. Co-design can just as easily lead to ineffective results due to challenges such as conflicting beliefs, confidentiality concerns, differences in decision-making styles, and lack of trust between participants. “Whatever commitments they make [designers], the implications of their choices are not in their control. Social design projects have ambiguous ends and articulate several agendas and visions, and their outcomes are ambiguous and unforeseeable” (Chen et al. 2015).

With this in mind, the growing usage of co-design methodology to address problems within the public realm has called into question its effectiveness in improving service outcomes. Co-design literature (Kimbell & Bailey 2017) has acknowledged the need for greater relationship-building with legislators and high-level policymakers prior to policy implementation for greater collaboration and ownership of the policy outcome among both citizens and policymakers. For designers seeking to achieve successful co-design engagement, there is great need for processes and tools which aid in identifying and articulating institutional frames across communities of practice if they are to be aligned to improved communication in working towards more effective policy outcomes. Considering the lack of empirical evidence demonstrating the value of co-design engagements working across disparate communities of practice, there is a need to investigate new applications of co-design in the public realm which leverage infrastructuring in order to evaluate if and how co-design efforts can be proven an effective approach to achieve institutioning.

## **Institutioning and Infrastructuring in the Public Realm**

Giving citizens an opportunity to engage in decision-making through

co-design can build a broader base of citizen involvement leading towards the creation of stronger, more inclusive public policies. “In addition to supporting policy officials in the use of design methods in a service mode, design expertise shapes the emergence of new hybrid policymaking practices” (Kimbell 2016). Scholars Huybrechts, Benesch, and Geib who engage in co-design within the public realm, have introduced a new concept in recent years known as ‘institutioning’ as a means to “promote the movements being made within these fields [participatory design and co-design] to re-engage with institutions and find new relations within the complexity of the contemporary public realm” (Huybrechts et al 2017). Interested in the role and effect of participatory design and co-design within public institutions, Huybrechts and colleagues sought new tools and processes for designers “to be more critically attentive and responsive in relation to our contexts of operation and thus to the potential for effecting political change” (Huybrechts et al. 2017). Through their own co-design engagements within the public realm, they believed the capacity of co-design to create political and social change relies heavily on a designer’s and thus co-design’s ability to incorporate institutioning as a means to work with and oppose entrenched institutional frames within public institutions (Huybrechts et al. 2017). It is believed that by actively articulating and reflecting on existing institutional frames, institutioning can bring attention to the nature of communities of practice including their limitations as a means to shift towards more effective decision-making and improve operations. Due to the limited availability of literature regarding institutioning, there is precedence to explore new tools and process to successfully engage in institutioning as a means for political and social change through design.

Infrastructuring is one process which could prove to be of value as it seeks to establish structures that sustain co-design beyond initial engagement (Bjorgvinsson et al. 2014). Overall, infrastructuring considers “how designers can build up community capacities, and how they can align with community leadership” (Chen et al. 2015) rather

than simply providing a service as a design outcome. Early references to Infrastructuring were inspired by the notion of information infrastructure within new media and the internet from Star and Bowker in which they argue the “social and theoretical understanding of infrastructure is key to the design of new media applications in our highly networked, information convergent society” (Star and Bowker 2006). Therefore, understanding how to create effective information infrastructure, i.e. clear and responsive classification systems and pathways to communication, is imperative “for the user of the infrastructure to first become aware of the social and political work that the infrastructure is doing and then seek ways to modify it (locally or globally) as need be” (Star and Bowker 2006). Similarly, as stated by Karasti regarding infrastructuring in participatory design, “information infrastructure is viewed as constantly ‘becoming’” (Karasti 2014). For co-design engagements within the public realm which seek to improve communication between disparate communities of practice, understanding the nature of current information infrastructure within the system as well as how to design infrastructuring tools which augment the current system in an effective manner, is critical to successful institutioning.

Due to the complexity of designing within the public realm, there is value in structuring co-design engagements which focus on flexibility and adaptation as a means to navigate the ever-changing environment (Seravalli et al. 2017). “Infrastructuring, then, is the work of creating socio-technical resources that intentionally enable adoption and appropriation beyond the initial scope of the design” (Le Dantec and DiSalvo 2013). Similar to institutioning, effective infrastructuring in co-design must occur over time due to entrenched institutional framing and power structures which require continuous dialogue between disparate actors including designers, public servants, and the public. “Design is a process of inscribing knowledge and activities in new material forms. With artful integrations, change is perceived as an aspect of everyday practice where a need for continuity mandates

that new forms emerge through juxtapositions and connections with existing forms. Artful integration comes from the ongoing alignment of disparate actors” (Karasti 2014). Thus, infrastructuring is effective in not only sustaining co-design engagements over time but establishing clear and concise classification systems and pathways of communication to ensure information is continuously transferred effectively. In the context of this paper, institutioning through infrastructuring can create new structures for communication between Washtenaw County policymakers and the MyVoice team to ensure adolescent health policy can evolve and sustain appropriateness over time.

## **Civic Engagement Through Communities of Interest & Boundary Objects**

The American Psychological Association defines civic engagement as “individual and collective actions designed to identify and address issues of public concern” (Delli 2016). It is widely believed that an engaged and proactive public is fundamental to the efficacy of democracy while ensuring public approval for policy implementation. “With citizen participation, formulated policies might be more realistically grounded in citizen preferences, the public might become more sympathetic evaluators of the tough decisions that government administrators have to make, and the improved support from the public might create a less divisive, combative populace to govern and regulate” (Irvin & Stansbury 2004). If the primary goal is to create an equitable and sustainable government system, then it would seem proactive to provide citizens meaningful opportunities to engage. However, within the United States there continue to be barriers to civic engagement including access to policymakers and lack of education regarding the policy creation process resulting in a small minority setting the policy agenda for the nation (Kim & Ball-Rokeach 2006).



The opportunity to participate in decisions that affect the social welfare of a nation is an intrinsic value of democracy and right of being an empowered citizen of said democracy, yet citizens are questioning the availability of meaningful access to such rights. “In countries across the world affected by the spread of democratization, the key problems of poverty and inequality remain, prompting some to ask when they will get the ‘democracy dividends’ from their new-found opportunities for political participation.” (Gaventa et al. 2010). Specific to youth, “young adults are gathering information about the political world from their own personal experience...youth have issues that engage them, and which could provide the raw material for action if organizers are able to develop a means for tapping into these concerns” (Andolina et al. 2002). It is imperative to identify new structures for civic engagement which meet the needs of the 21st-century public that build upon the values of democracy to ensure consequential and equitable ownership of the government system.

Creating communities of interest through boundary objects which leverage youth opinions is one form of infrastructuring which can act as an intermediary to civic engagement. As challenges to communities of interest include the need for continuous building of a shared understanding of how to address a problem, boundary objects are one tool which can initiate and sustain communities of interest as they “inhabit several communities of practice and satisfy the informational requirements of each” (Bowker & Star 2000). Boundary objects can act as a tool for legitimacy in aligning institutional framing as they seek to “manage tension between divergent viewpoints” (Bowker & Star 2000). Through providing regular evidence which is based on the lived experiences of youth to disparate communities of practice, boundary objects can act as a catalyst to continually align institutional frames across disparate communities of practice while creating the potential for public policy creation which limits marginalization over time. “When an object becomes naturalized in more than one community of practice, its naturalization gains enormous power to the extent

that a basis is formed for dissent to be viewed as madness or heresy” (Bowker & Star 2000). In working towards more effective public policy creation, bringing together communities of interest with the support of boundary objects proposes a new opportunity to engage across disparate communities of practice to align institutional framing.



Q "IDEALLY I'D x  
LIKE TO TALK TO  
A PROFESSIONAL  
BECAUSE THEIR  
PERSPECTIVE IS  
REMOVED AND  
OBJECTIVE."

Q "WHEN I CRY  
& FEEL SAD  
EVERY DAY. I  
KNOW WHEN  
ENOUGH IS ENOUGH  
& MY HUSBAND TELLS  
ME IT'S TIME TO GO  
TO DOCTOR."

Q "A  
FRIEND  
I CAN  
THEY A  
TO RELA  
EMPATHY  
ME."

Q "I WOULDN'T  
UNLESS I TELL  
SOMEONE HOW  
I'M FEELING AND  
THEY TELL ME  
TO SEEK HELP."

Q "IF YOU DON'T  
HAVE PROPER  
MOOD ACTIVITY,  
YOU NEED TO  
MAKE SURE THAT  
SOMETHING IN  
YOUR LIFE ISN'T  
CONTROLLING THEM."

Q "BECA  
SHOWS W  
DENIAL,  
STANDA  
EXPECTAT

Q "WHEN I'M  
FEELING SELF  
DESTRUCTIVE OR  
DEPRESSED."

Q "PEOPLE MY  
AGE ARE MADE  
FUN OF BY OLDER  
GENERATIONS FOR  
HAVING THESE  
ISSUES WE ARE  
'SENSITIVE' WE'RE  
TO 'SENSITIVE'."

Q "I DON'T  
I'D TALK  
ANYONE  
FOR GETT  
OF THE S  
I ALSO FE  
HUGE PR  
OF MENTA  
STIGMA

# METHODOLOGY

A CLOSE  
AND THAT  
N TRUST.  
ARE ABLE  
LATE AND  
ATHLZE WY  
E."

👤 "MY MOM  
AND PRINCIPAL  
OR SCHOOL COUNSELOR  
THEY ALL KNOW  
WHAT THEY ARE  
TALKING ABOUT  
AND IT'S EASY TO  
GO TO THEM."

👤 "THEY ARE  
AFRAID OF  
STEREOTYPES  
IN SOCIETY."

CAUSE II  
WEAKNESS,  
L, SOCIAL  
DARDS, AND  
ATIONS."

👤 "I JUST DON'T  
LIKE TALKING  
ABOUT THIS  
STUFF."

👤 "I WOULD TRY  
TO TALK TO MY  
DOCTOR BECAUSE  
I WOULD HAVE  
CONFIDENTIALITY."

DON'T THINK  
TALK TO  
NE. I'M ALL  
GETTING RID  
E STIGMA, BUT  
FEEL A  
PRESSURE  
NTAL HEALTH  
A ON MYSELF."

👤 "FOR ONE IT'S  
HELLA EXPENSIVE  
AND LOTS OF  
PEOPLE MY AGE  
CAN'T AFFORD IT."

👤 "SOMEONE OTHER  
THAN MY FRIENDS  
OR FAMILY, SINCE  
I WOULD FEEL  
LIKE A BURDEN."

## Rationale

On its own, seeking to inform public policy is inherently wicked, "a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize" (Rittel & Webber 1973). When intersecting fields of communication, public policy, and design as this project sought, the need for a methodology not bounded by traditional constraints was

imperative. Integrative design is one such approach in which the practitioner is not bounded by a singular method or discipline, rather reaches across disciplines to determine the appropriate methods and theory to develop a cohesive methodology which addresses the needs of the problem. For the purposes of this paper, integrative design is characterized as both multidisciplinary and transdisciplinary design in which collaboration and complex problems are pillars. In multidisciplinary design, “teams [in this case policymakers, healthcare professionals, and a designer] share the knowledge and experience from the viewpoint of their own disciplines, and the result is a co-designed outcome” (Muratovski 2016). Whereas transdisciplinary design “is most suitable for working on complex problems for which no single discipline possesses the necessary methods on its own to frame or resolve them (Muratovski 2016). Through integrating multidisciplinary and transdisciplinary design frameworks, the designer is best equipped to navigate the complexity of making a case for leveraging boundary objects as a mode of infrastructuring to achieve institutioning in the public realm.

Through an exploratory case study, this integrative design approach combined phases of both co-design and Sense-Making methodologies

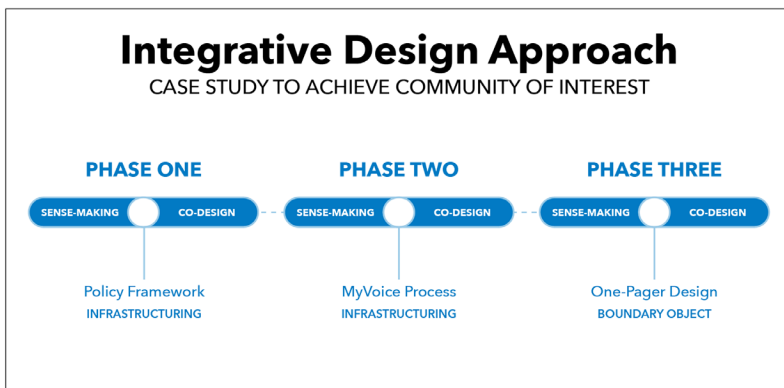


Figure 5: Integrative Design Process with Outcomes

(see Fig. 5) leveraging design methods including semi-structured interviews, micro-moment time-line interviews, sensemaking as a method, and generative research tools. As no literature has investigated opportunities to leverage co-design and Sense-Making to inform public policy creation, an exploratory case study provides the practitioner an opportunity to understand the “individual, organizational, social and political phenomena” (Yin 2009) at play in order to design relevant and effective interventions. “Case studies are the preferred strategy when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context” (Yin 2009). Due to the Washtenaw County Board of Commissioners passing an eight-year millage to address the continued rise in youth suicide rates (BOC 2018), this millage provides a recent phenomenon to explore how co-design and Sense-Making can be used within a real-life complex policy system and systematize how said approaches could be applied in future contexts.

## Methods

### Semi-structured Interviews

Semi-structured interviews can be described as those “in which you can ask key respondents for the facts of the matter as well as for the respondents’ opinions about events” (Yin 2009). Semi-structured interviews are best used when constrained by time and/or limited engagements to speak to research participants about both current and past events which may inform the research. Practitioners are able to prepare questions ahead of time in order to structure the interview and allow participants the time needed to provide extended responses. Participants were asked semi-structured questions that probe for insight and understanding of the current role of evidence or citizen engagement in the creation of health policy at the County level.

### Micro-Moment Time-line Interviews

Using what Dervin calls the Sense-Making Triangle (a situation, gap/bridge, and outcome) as a framework, this project leveraged micro-moment time-line interviews to gain details of a policymaker’s workflow in order to construct an understanding of their decision-making process. “Interviewers ask the respondent to describe one or more critical situations in detail: first in terms of what happened first, second third and so on; then for each Time-Line event, in terms of the situations (e.g. barriers, constraints, history, memory, experience), gaps (e.g. confusions, worries, questions, muddles), bridges (e.g., ideas, conclusions, feelings, opinions, hypotheses, hunches, stories, values, strategies, sources), and outcomes (e.g. helps, facilitations, hurts, hindrances, outcomes, effects, impacts) (Dervin 1999). Micro-moment time-line interviews were utilized with Washtenaw County policymakers and health administrators to map the county public policy creation process.



## Generative Research Tools

Generative Research tools are defined as “a series of collaborative activities involving people (designers and non-designers) using tangible artifacts to represent aspects of their personal experience with the aim of generating meaningful solutions for the issue to solve” (Sanders & Stappers 2012). Generative research tools are commonly used in co-design projects in order to give both the practitioner and the participants a tool to focus the interview and provide the practitioner with more descriptive details to the participant’s experience. Within this project, generative research tools included diagrams, mental models, and process maps. Modeling is the process of reviewing and selecting information which is then rendered either two or three-dimensionally to identify and articulate relationships (Simonsen et al. 2014). “The traditions of modeling (and mapping) relate in a commonsense way to design, since illustrating ideas, building physical models, and drawing maps are essential for thinking about design” (Simonsen et al. 2014). Creating mental models and maps are valuable tools for designers, especially those working within wicked problems, as they can be used to ground the audience to the context of a problem, situate changes, and demonstrate how changes in one part of a system can influence the whole (Simonsen et al. 2014). For the purposes of this project, mental models will be described as those which “can represent different situated factors, whether the relationships involve human or nonhuman actors (objects, places, events, etc.)” (Simonsen et al. 2014). Creation and use of generative research tools supported the practitioner and participants in knowledge sharing.

## Sensemaking Tools

Sensemaking is a critical component to design engagements within the public realm due to high-level ambiguity found within complex policy problems. It can be especially valuable when leveraged as a synthesis process to support identifying key relationships and “to uncover hidden meaning in the behavior that is observed” (Kolko 2010). Effective

sensemaking relies on a designer's ability to leverage abductive thinking during periods of synthesis. Abductive thinking "is about synthesizing the data and making sense of it in a way that probably hasn't been done before and thus finding a new, best plausible explanation even your own personal and professional experience" (Stickdorn et al. 2018). To leverage sensemaking, various design methods were used including activity maps, stakeholder maps, mind mapping, and affinity diagramming. An activity map is "a map that shows a company's strategic position in relation to company activities" (Curedale 2013). "Stakeholder maps help to visually consolidate and communicate the key constituents of a design project, setting the stage for user-center research and design development" (Hanington & Martin 2012). Mind mapping "provides a method of visually organizing a problem space in order to understand it" (Hanington & Martin 2012). Affinity diagramming is "a process used to externalize and meaningfully cluster observations and insights from research" (Hanington & Martin 2012).

## **Ethical Implications**

Due to leveraging sensemaking through abductive thinking for analysis, the outcomes of this paper are subjective to the practitioner's understanding of the design problem. Effective qualitative research relies on individual choices by the practitioner for the construction of a narrative, as such there will always be a wide range of possible narrative options due to shifting institutional frames (Saldana 2013). In order to achieve successful infrastructuring, there is a need for curation of evidence, youth opinions, in order to create the boundary objects i.e., selection of which youth experiences encapsulate the narrative. As such, this practitioner emphasizes the importance of documenting the curation process and establishing design attributes so that future designers and the MyVoice team are able to initiate a similar curation process which aligns with the original intention of the sensemaking process.

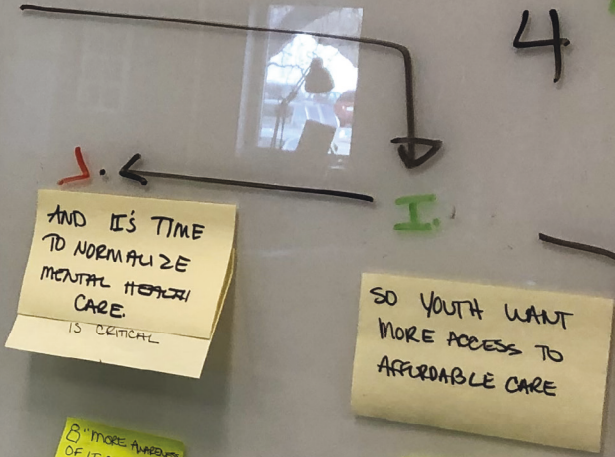




# 3 STIGMA

# 4 ACCESS TO CARE

# 5 ACCEPTANCE



AND IT'S TIME TO NORMALIZE MENTAL HEALTH CARE.  
IS CRITICAL

SO YOUTH WANT MORE ACCESS TO AFFORDABLE CARE

☐ "MORE AWARENESS OF IT AND PEOPLE BEING AWARE THAT THESE THINGS ARE REAL. MANY KIDS HAVE BEEN TOLD THEIR MENTAL HEALTH ISN'T REAL."

☐ "PUBLIC ACCESS TO HELP LINES OR THERAPY WOULD BE GREAT. TAKE THE COST OUT OF GETTING MENTAL HELP."

☐ "I THINK MENTAL HEALTH IS SOMETHING WE DON'T TALK ABOUT ENOUGH IN THIS COUNTRY."

☐ "MORE COUNSELORS + BETTER COUNSELORS IN SCHOOLS."

☐ "IF MORE PEOPLE TALKED ABOUT IT AND WHAT THEY WERE GOING THROUGH, NORMALIZE IT. NOT BEING OKAY."

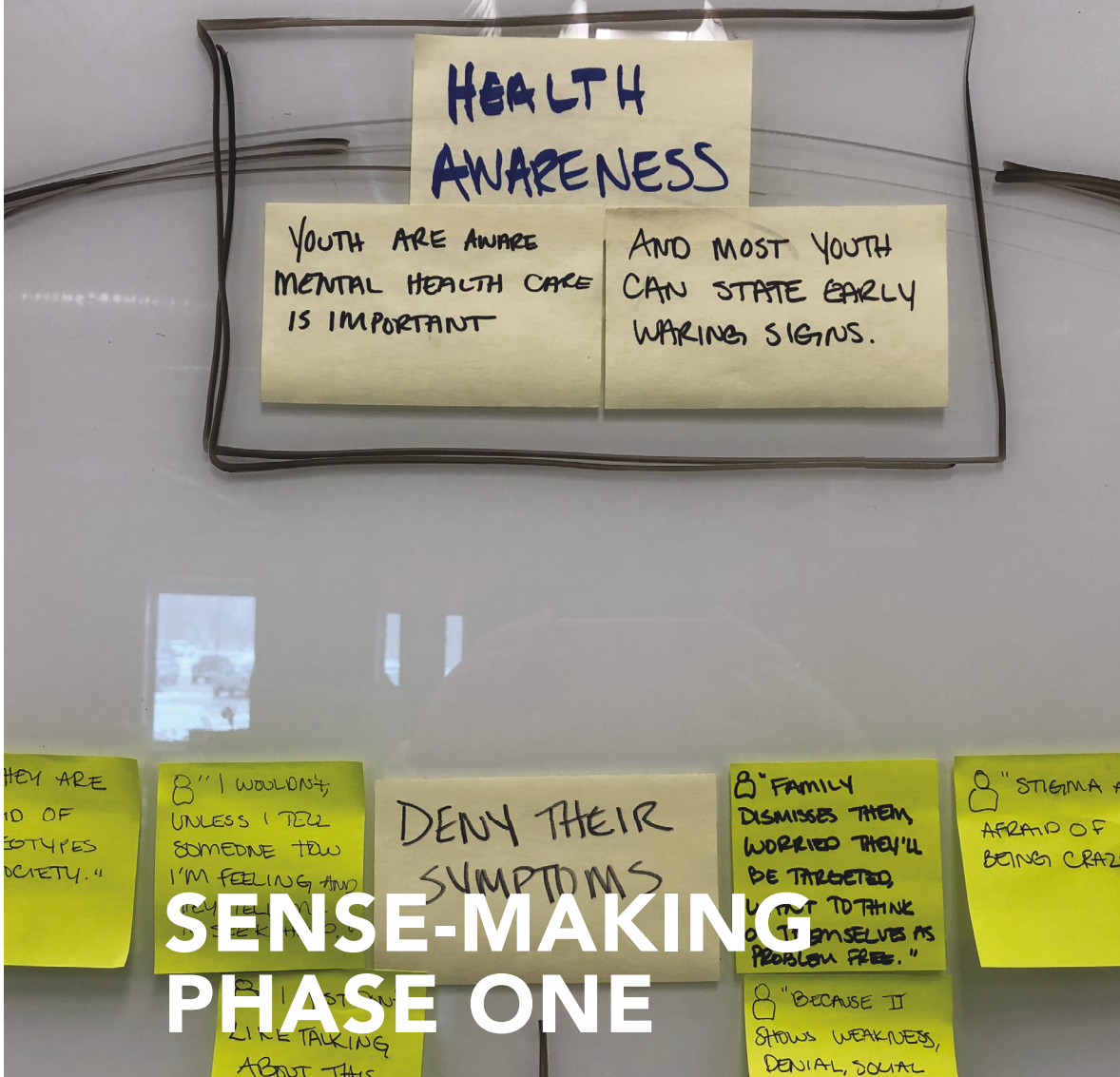
☐ "OFFERING ACCESS TO MENTAL HEALTH IN SCHOOLS."

TRAINING TRAINED  
MINDS IS  
& EXPOSURE

2. ONE IT'S  
APPROX  
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## Semi-Structured Interviews

Due to the complexity of the Washtenaw County adolescent health policy ecosystem, leveraging Sense-Making as a starting point for this case study aids the practitioner in developing a foundation of knowledge regarding key actors and activities within the system. In identifying the pathways to communication and the key stakeholders with power and credibility in the county, one is able to design the boundary

object in a manner which ensures familiarity, relevancy, and efficacy in working towards the goal of a community of interest. Over the course of three months in the Fall of 2017, twenty-two community experts and stakeholders were interviewed from Washtenaw County within the fields of public health, youth development, community engagement, health policy, and county government. Interview participants were asked a series of semi-structured interview questions to assess the current Washtenaw County political landscape and identify perception and interest in the youth opinions. Essentially, it was necessary to validate assumptions that youth opinions as evidence were, in fact, useful to policymakers while also understanding their greatest needs in creating adolescent health policy. All interview responses as cited below remain anonymous to protect participant identities and allow for free and open responses to the interview questions.

Upon completion of the interviews and affinity diagramming the interview highlights (see Fig. 6), the strongest theme which arose was the overwhelming appetite for youth opinions. As one Board Commissioner stated, “we don’t know what’s going on in the minds of kids.” It isn’t from a lack of wanting to engage with youth as many stakeholders agreed “we need more youth generated policy formation,” as stated by a policy analyst. When speaking with local policymakers about the barriers to connecting with youth, they stated youth are considered “vulnerable” or “at a distance” due to the limitations of current political structures which allow for citizen engagement. It was viewed that the MyVoice team has an opportunity to remove said barriers through the use of the MyVoice tool, and it is by amplifying the personal accounts youth share that the MyVoice team can have the most agency in aiding decision-making. “Facts alone don’t change minds. You need to connect to the relevancy of someone’s life”, stated one subject matter expert. “MyVoice is helping to tell a story in a way that leads to very different programs. If the story is not being told the right way, the level of funding won’t be allocated right”, stated one Board Commissioner. Clearly, first-hand accounts provided by youth through the MyVoice



tool, youth opinions, are considered valuable evidence to inform policymakers and aid in decision-making. In asking how the youth opinions could be actionable for decision-making, one interview participant highlighted the ability to leverage this information as a means to connect disparate communities of practice. “There’s a disconnect between boards and commissions; some divisions were created politically, some tension with selecting the board director” as stated by a Board Commissioner and as a result, communication channels have fractured. Thus, delivery of the youth opinions as a boundary object could not only aid decision-making of programs and policy but has the potential to shift pathways to communication back into alignment by having the youth opinions act as an intermediary between communities of practice, and to create a community of interest.

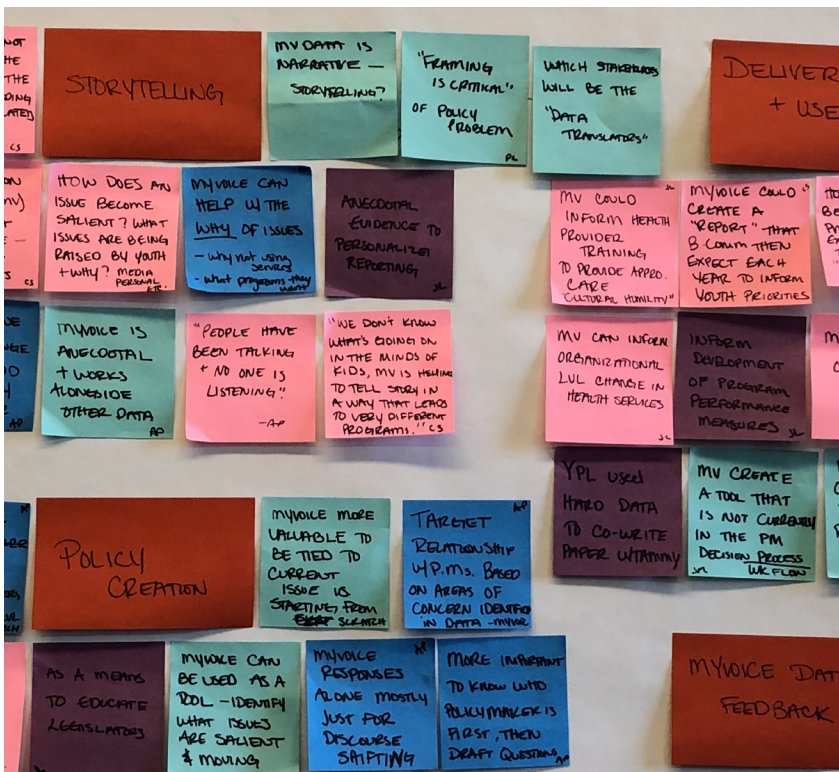


Figure 6: Affinity diagramming of interview highlights

## Sensemaking in Phase One

To begin to understand the possibility of creating a community of interest between the MyVoice team and the Washtenaw County policymakers, it was necessary to examine the current structures and ecosystem in which the MyVoice team was operating. In doing so, one is able to identify how decisions are made by the MyVoice team including how information is analyzed, translated, and distributed in order to identify points of alignment with policymakers. A variety of sensemaking tools including activity mapping and stakeholder mapping were conducted to investigate both the barriers and opportunities of the MyVoice tool in current practice in order to be better equipped with the knowledge required to appropriately align the MyVoice team within the current Washtenaw County political landscape. Activity mapping (see Fig. 7) indicated the lack of current mechanisms in place for the MyVoice team to establish key partnerships with policymakers including lack of knowledge regarding policy creation and lack of capacity to engage in this type of work. While efforts had been made to target local and federal policy groups, there was a need for strategies to organize relationship-building in order to create the infrastructure required to create a community of interest.

With this in mind, four iterations of stakeholder mapping were conducted which provided greater insight into the nature of current relationships for the MyVoice team. Strong in diversity including those within the University of Michigan network and at the national policy level, the MyVoice team had yet to identify key stakeholders who could act as ‘data translators’ at any level of government, those with the power and influence to be both informed of the youth opinions and act upon them. For the county level, identifying data translators would be critical to initiating the community of interest as they already possessed similar institutional framing as the MyVoice team in terms of leveraging youth opinions as evidence to inform policymaker decision-making. To identify data translators locally, the stakeholder map

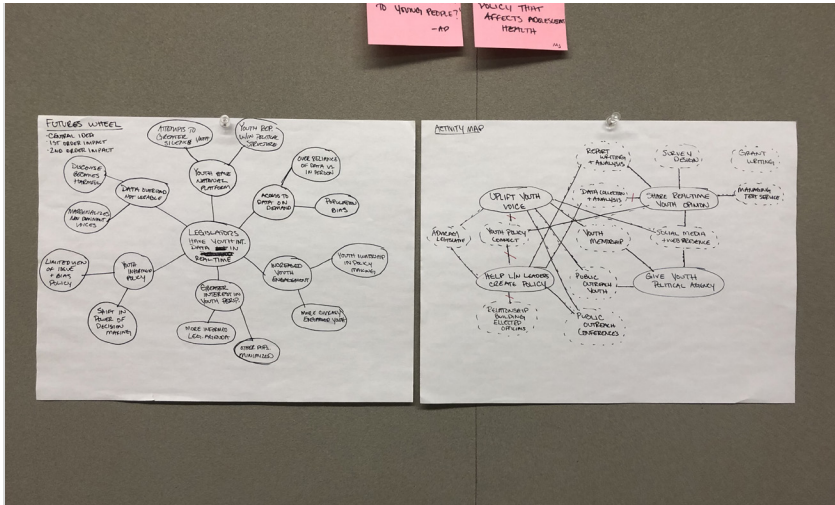


Figure 7: Activity Mapping

was expanded to include the Washtenaw County political ecosystem to understand when and where policy decisions were being made regarding adolescent health. The goal was to identify where stakeholders position themselves in terms of adolescent health, what their intended impact is, and how youth opinions could be relevant to their work. In doing so, one can begin to narrow the scope and target relationships with the most potential to achieve the policy engagement goals set by the MyVoice team.

In speaking with stakeholders who are engaged in youth development and public policy, it was explained that adolescent policies are created by multiple governing bodies at varying levels of government. As shown in Figure 8, adolescent policy can occur within local school boards all the way to state or federal agencies, making it difficult to decide which level is the most appropriate to engage. Like all political landscapes, Washtenaw County is a complex network with varying levels of socioeconomic status and resources available to its citizens resulting in a complicated, confusing, and intimidating process. In order to aid decision-making, subject matter experts stated the need to understand the difference between adolescent health policy and policy

that affects adolescent health. As a former county official commented, “Adolescent health policy is being made [at]...community mental health or the county level public health.... policy that affects adolescent health is how we design neighborhoods, how we do zoning for housing and housing developments.” This perspective takes a holistic view on health policy in which overall health is affected not solely by physical or mental health, but how one experiences the world through housing, socioeconomic status, or education for example. Thus, it is necessary to be mindful of the complexity of decisions being made by policymakers at any given time and responding accordingly to those needs when engaging.

Through this process of sensemaking, it was identified while the MyVoice team had no current connections to data translators at the Community Mental Health Board and County Board of Commissioners, there were a few connections to the health department. In speaking with health department staff; however, it was determined the connection was rather limited in scope due to the MyVoice team again struggling to articulate the value of youth opinions in the policy creation process. This alluded to the need for a deeper understanding

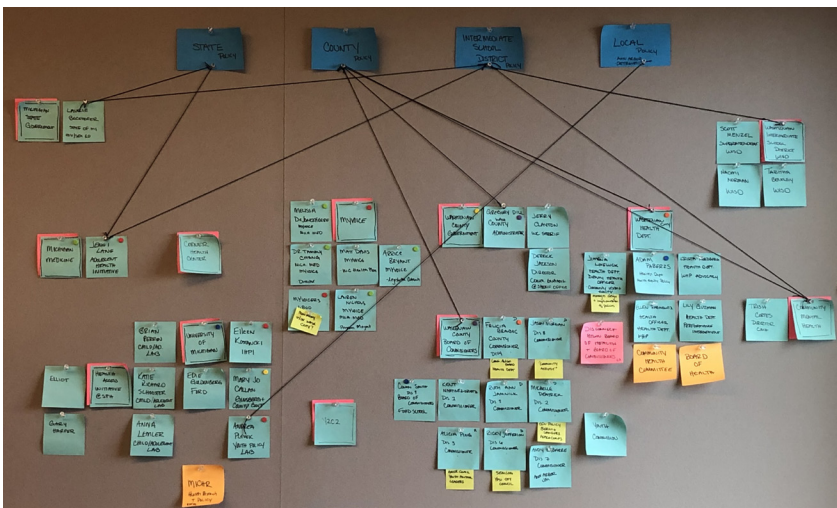


Figure 8: Stakeholder Mapping of the Washtenaw County Policy Ecosystem

of the stages to the decision-making process for each agency first, to determine specific inflection points in which the youth opinions would be most useful as evidence. Then one would be able to target key stakeholders to share youth opinions. Overall this process was critical to determining the institutional framing of different groups within the county—how they are thinking about adolescent health policy and what language is used to describe it. Additionally, visualizing key stakeholders and their relationships throughout the county aided in identifying the need to target data translators to begin to initiate a community of interest, however not specifically whom. It was clear the MyVoice team lacked a general understanding of the policy process and needed a strategic framework as a mode of infrastructuring to act as a tool to not only educate the MyVoice team but determine how to sustain engagement through continuous dialogue between the MyVoice team and the Washtenaw County policymakers.

## **Micro-Moment Timeline Interviews**

With a baseline understanding of the disparate institutional framing of adolescent health policy through the county and the MyVoice team internal operations and stakeholder relationships, there was a need to investigate the operations and decision-making process of county policymakers. In an effort to gain a deeper understanding of the Washtenaw County policy process to support the development of a strategic framework, three micro-moment timeline interviews were conducted with both County Board of Commissioners and County Health Department staff. These interviews attempted to identify effective access points within the policy creation process to deliver youth opinions as well as how policymakers engage in sensemaking for decision-making. As the youth opinions were intended to act as a boundary object between communities of practice, there was a need to gain more nuance into the decision-making process in order to inform the design and delivery of the evidence. Additionally, it was critical to conduct separate

interviews with both institutions in order to identify key points of similarity and difference in terms of decision-making processes which could determine opportunities for alignment for the community of interest.

In the first interview, a Board Commissioner sat alongside the practitioner narrating a typical policy process while the practitioner quickly sketched a diagram based on the narration (see Fig. 9). The participant was asked a series of questions such as how a policy problem is identified and by whom, when is evidence requested, when are citizens included in the process if at all, and how the participant evaluates information to aid in their decision-making. Upon completion of the first interview, it was clear there were various points of entry in which either evidence is collected, or public opinion is requested to inform decision-making, seemingly easy access points to share the youth opinions. There is “setting discourse, being able to defend that there is a problem to be solved, departmental level with the design of programs... that’s where this kind of information would be helpful”, stated one Board of Commissioner. However, the needs of policymakers change based on the stages of the policy process, and the push for quantitative data continues to be the norm. “The county is metrics-driven, [this could help in] identifying needs, scoping needs, helping to understand which interventions would be most relevant...tie public opinion data to more robust data.” Thus, understanding more explicitly what type of decisions are being made in varying stages would aid in understanding how to design youth opinions as a boundary object.

While the first sketch provided a high-level overview of the overall county policy process including how policy priorities are identified, it lacked an understanding of how policymakers are making decisions regarding policy interventions. It was necessary to investigate deeper into specific decision-making points where policymakers are determining policy outcomes for implementation for the second micro-moment timeline interview. Selecting the most relevant content from the first micro-moment timeline interview sketch, including narrowing to specific stages in which policymakers are attempting to collect

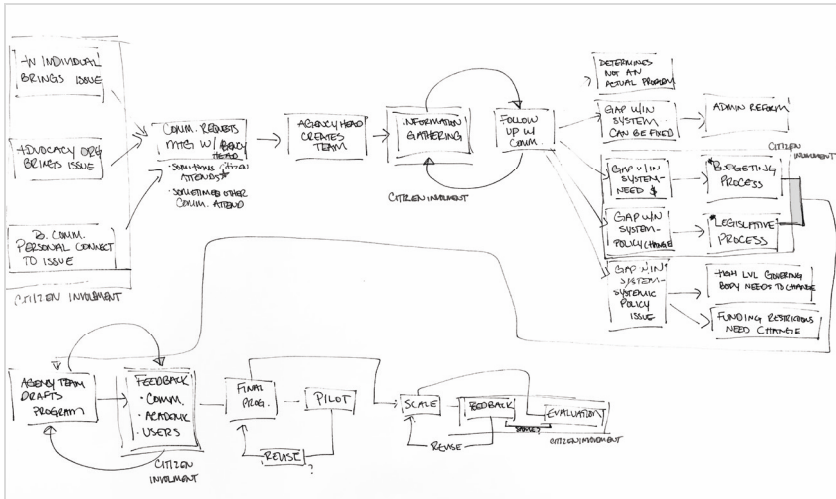


Figure 9: Washtenaw County policy process sketch

citizen input, a diagram was created to act as a generative research tool to gather deeper insights into the decision-making process and validate current assumptions. With a new participant, a health department administrator, the second interview conducted, however, the generative research tool did not prove to be as effective as the original process in which the practitioner was sketching while the interview participant narrated a policy process. The stages were too broad which inhibited the participant from understanding what information would be useful, leaving the practitioner to extrapolate the decision-making process from the content versus explicit narration.

For the third and final micro-moment timeline interview, the original county policy process sketch was improved through increasing the fidelity and highlighting specific points in which citizen input is collected (see Fig. 10). In doing so, the intent of the final interview was to gain a mid-level understanding of the county policy process as well as gather insight into public service program design. The participant, a health policy analyst with the health department, was asked to narrate a county policy process from their perspective using the diagram as

a sample. The participant was encouraged to both validate and challenge the stages in the process if their understanding deviated from what was shown. Additionally, more targeted questions were asked to gain a deeper understanding of how citizen input is collected and where the youth opinions could inform decision-making. Using the diagram was much more successful as the participant understood the system in which the questions were being asked versus a staged process, allowing the participant to identify gaps and validate stages within the process. With the third interview complete, all three sketches and diagrams were consolidated to create a map of the county policy creation process.

In analyzing this map alongside the semi-structured interview responses, it was determined youth opinions would be useful throughout the entirety of a policy process. However, they have the most potential to be impactful in agenda-setting and program design. In agenda-setting, policymakers are seeking advice and information to identify the top issue areas to address. Youth opinions can bring awareness to growing health concerns among youth in order to prioritize which adolescent health policy areas are in need of immediate attention. For government programs and service design, youth opinions can determine how youth are experiencing a targeted issue area to inform decision-making and create more relevant and accessible resources. Additionally, while unable to conduct a micro-moment timeline interview with the County Community Mental Health Board, they were identified by all three interview participants as the agency who would be most eager to develop a relationship with the MyVoice team as they were in the process of allocating millage dollars to developing new programming and awareness campaigns regarding adolescent mental health. Thus, through these interviews, key decision-making processes were identified as well as potential data translators (essentially stakeholders who were eager to gain youth opinions on a policy problem they were addressing at that moment). This was counter to the MyVoice team's current relationship-building strategy in which they were targeting a



broad scope of policymakers who address a wide variety of adolescent health issues. With these insights, research moved from Sense-Making to co-design to develop a strategic framework to educate the MyVoice team on how to leverage the youth opinions as evidence to aid in decision-making to improve public policy creation.

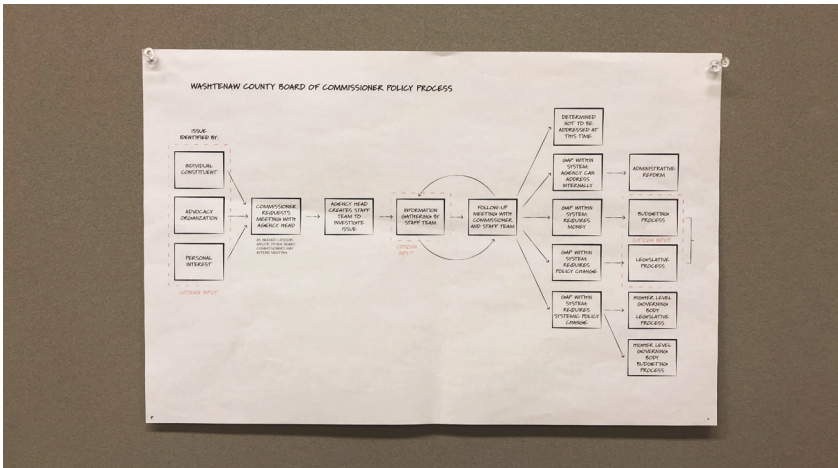


Figure 10: Diagram of Washtenaw County policy process

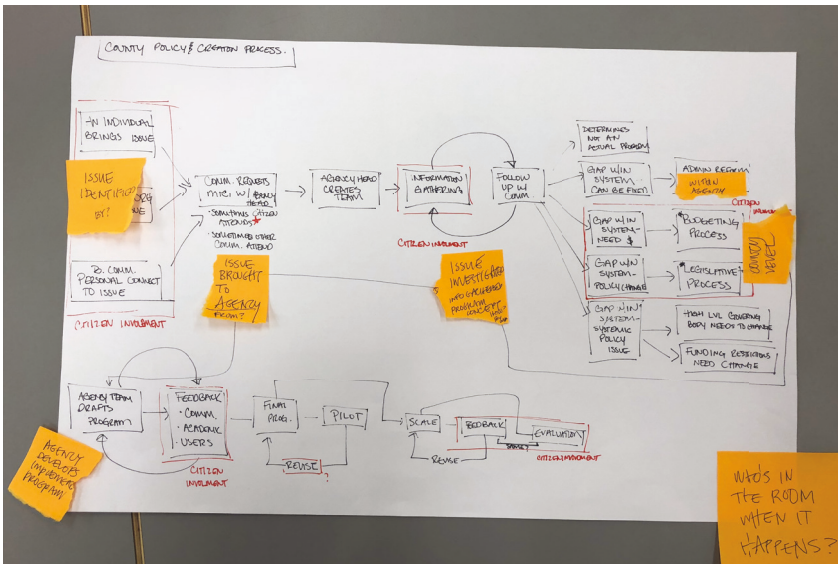


Figure 11: Early Iterations of Washtenaw County policy process



"RESIDENTS THAT  
SHAPE POLICY  
ARE ANGRY OR  
CONNECTED."

MS

INFORMING  
VS.  
INFLUENCING

EK

"CAN WE GIVE UP  
CONTROL OR  
DECISION MAKING  
TO YOUNG PEOPLE?"

-AD

ADOLESCENT  
HEALTH POLICY  
VS.  
POLICY THAT  
AFFECTS ADOLESCENT  
HEALTH

MJ

# CO-DESIGN PHASE ONE

## MyVoice Strategic Policy Framework

Due to a lack of knowledge regarding the policy creation process, the MyVoice team was eager to understand how to develop timely and effective access points within the policy creation process to deliver the youth opinions in a manner which is aligned with the workflow and decision-making needs of policymakers. It was critical then, to co-design a framework which identified key points within the policymaking

process that determine when, how, and to whom evidence can be delivered to be most impactful in informing policy creation. As a form of infrastructuring, this framework is designed as both an educational and strategic planning tool for the MyVoice team and is intended to support the creation of strategies to increase engagement with policy-makers at varying levels of government.

This framework is not exhaustive in nature regarding the policy creation process, it is intended to provide a baseline of knowledge from which the MyVoice team can begin to think critically about how knowledge is transferred, to whom, and when in public policy creation. With this information in hand, the MyVoice team can position any adolescent health policy problem in the framework to devise strategies for engagement in various government contexts. The MyVoice Strategic Policy Framework (see Fig. 12) is an important tool not only to support the MyVoice team in distributing evidence to inform policy creation, but it also acts as a road map to initiate the creation of communities of interest regarding adolescent health policy. Through continued engagement with the framework, the MyVoice team can strategically establish relationships with policymakers interested in the youth opinions to begin to shift institutional framing of adolescent health policy problems over time. In doing so, the MyVoice team can work towards creating a community of interest regarding adolescent mental health.

Adapted from Lasswell's policy stages model (Lasswell 1956), the MyVoice Strategic Policy Framework, broadly defines the decision-making tasks within each stage of public policy creation (formulation, adoption, implementation and evaluation), identifies the type of stakeholders to target in each stage, how youth opinions can be leveraged as evidence at each stage, and key tasks for the MyVoice team. As with most policy models, the four stages are cyclical with the outcomes of evaluation identifying new issue areas to be discussed in formulation. This model combines the theory of Lasswell's policy model with what was observed through the initial Sense-Making phase to

create a broad framework which can be applied towards various levels of government as public policy creation essentially occurs the same way in terms of these four stages. With this framework, the MyVoice team can adjust strategies based on the context of location, policy problem, and goals regarding engagement. For Washtenaw County, this framework aided in identifying key data translators with the County Community Mental Health Board staff and how youth opinions could inform program design within the implementation stage to begin to lay the foundation for continuous dialogue between the MyVoice team.

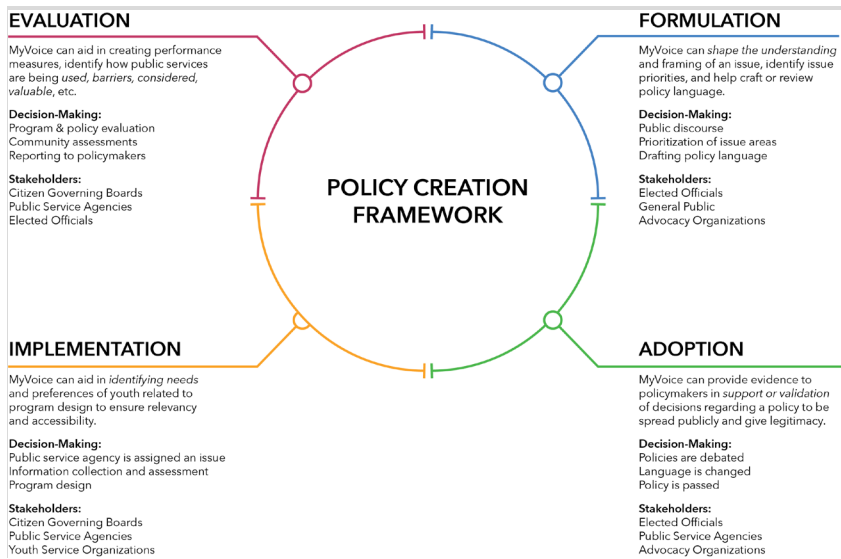


Figure 12: MyVoice Strategic Policy Framework





that are both informational and actionable based on the new context of county policymaker decision-making needs? In doing so, one is better equipped to understand the nature of the evidence available and adjust processes as needed in order to collect the right evidence which aligns with the needs of policymakers. This analysis occurred in collaboration with the MyVoice team to ensure future viability with the intention to align with and build upon their data analysis process.

A review was conducted of current materials policymakers receive, known as “one-pagers” (see Fig. 13), to assess their benefits and limitations in support of decision-making to identify preferences regarding how to design youth opinions to be valuable and aligned with policymaker needs. Based on interview feedback, most one-pagers are considered informational, but not actionable. While helpful in identifying broad health policy problems within a certain population, the content of these materials is developed for a variety of audiences and diverse locations, primarily summarizing quantitative research to give a high-level overview of a problem. During the interviews, a Board Commissioner mentioned “we’re not experts,” so there is a need to seek out evidence that informs their own decision-making specific to their constituent population, specific evidence that highlights localized problems and articulates the lived experiences of the populations they serve. In doing so, policymakers are more capable of making decisions based on the actual needs of their constituents rather than extrapolating from indeterminate evidence. As one subject matter expert shared, “MyVoice is one piece of a larger puzzle for what policymakers need to know to be responsive,” MyVoice youth opinions can provide that relevancy.

Recognizing the need for both informational and actionable evidence, sensemaking outcomes from the first phase regarding the MyVoice team operations were referenced to identify the process for how youth opinions are collected and analyzed. Starting with seeking input (see Fig. 14), the MyVoice team works collaboratively to identify an issue



## HEALTH AND WELL-BEING



### CHANGE IN HEALTH STATUS SINCE ENROLLING IN HMP

-  **48%** reported improved physical health
-  **40%** reported improved dental health
-  **38%** reported improved mental health

### HEALTHY BEHAVIORS

-  **52%** reported greater ability to get help staying healthy or preventing health problems since enrolling
-  **75%** of those who used tobacco products said they wanted to quit and 91% of those were working on cutting back or quitting
-  **81%** of those who completed a Health Risk Assessment (HRA) reported choosing to work on at least one health behavior

### CHRONIC HEALTH CONDITIONS

-  **69%** reported they have a chronic health condition
  - 95% of those with a chronic condition saw a primary care provider in the past 12 months
  - Enrollees with chronic health conditions were more likely to report getting a flu shot, not drinking sugary drinks, exercising every day, and not engaging in unhealthy alcohol use
-  **30%** of all respondents reported that they had a newly diagnosed health condition since enrolling

### FINANCIAL WELL-BEING

-  **89%** agreed that the amount they pay for HMP is affordable
-  **86%** of those who had problems paying medical bills before HMP reported that their problems paying medical bills had gotten better
-  **49%** of respondents reported being employed or self-employed
  - 69% of employed respondents said having HMP helps them do a better job at work
-  **28%** of respondents reported being out of work
  - 55% of those out of work said having HMP made them better able to look for a job

Figure 13: 'One-pager' from IHPI at the University of Michigan

based on what MyVoice youth state as priorities or what area of research might be of interest. Once an issue area is selected, four to five survey questions

are drafted and piloted for feedback from a multidisciplinary group of MyVoice supporters. Upon approval, said questions are sent out to over 1800 MyVoicer youth, again, ages 14 to 24 across the county, of which around 250 are located within Washtenaw County. MyVoicers respond to the questions via text message in real time sharing their opinions in a way that fits within their lives. What is really critical about

the MyVoice tool is that it fits into the needs of youth today—most teenagers have cell phones, and they value the privacy and confidentiality of being able to engage civically through the tool. With all the text messages collected, the MyVoice team analyze the youth opinions to develop key themes with the intention of sharing these themes with stakeholders through a summary report which includes major themes and sample text messages that give evidence to why said themes are relevant. This analysis can take anywhere from one month to a couple of months based on time and capacity within the MyVoice team. Finally, distribution of summary reports varies based on engagement and as mentioned have resulted in policymakers stating the information is interesting, but not useful. As currently operating with standard qualitative research analysis, the MyVoice team is not analyzing the text messages in a manner which provides the information needed to aid in decision-making. As such, it was determined to approach the analysis of the text messages via sensemaking to determine if any new insights could be gathered to aid in decision-making by trying to understand what the whole youth experience is rather than providing just themes with text messages.

Responding to the need in the county, a new question set targeting mental health care was sent through the MyVoice tool to the MyVoicers, to understand their needs and experiences with mental health care. Having a new set of text message responses provided the opportunity to investigate what “actionable” evidence could mean in this context by evaluating the nature of the survey responses, the text messages themselves. The majority of MyVoicers send short one to two sentence answers to each of the five questions, with some MyVoicers sharing up to four to five sentences. Often providing very honest and vulnerable details into their day-to-day lives, the text messages include rich qualitative information that is the localized and relevant evidence policymakers seek. Currently, the MyVoice team uses a mixed methods approach to analyze the text messages including natural language processing (NLP) techniques to cluster responses (DeJonck-

# How can policymakers leverage a MyVoice partnership?

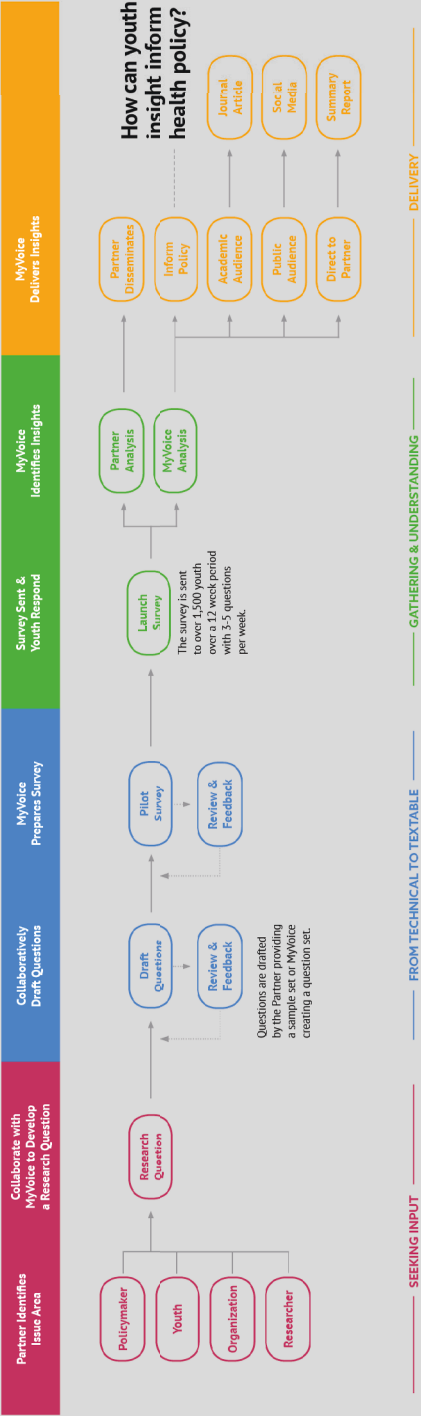


Figure 14: MyVoice Youth Opinions Collection and Delivery Process

heere et al. 2017). "Using NLP, responses are parsed, and synonymous words are first grouped into word clusters" (DeJonckheere et al. 2017) or codes. "A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative...attribute for a portion of language-based or visual data" (Saldana 2013). These initial codes are leveraged to create codebook, "a compilation of the codes, their content descriptions, and a brief data example for reference" (Saldana 2013), in which each question receives its own set of codes to analyze the entirety of the text messages per question focusing on generating themes within each question versus major themes across the questions within the set. It is from this codebook of the mental health care question set which this practitioner's analysis of the text messages began. In combination with the Excel file of all the text messages from the question set, the codebook was leveraged to establish a baseline understanding to the nature of the text messages by cross-referencing the codes with the content of the text messages. Over the course of an hour of sensemaking, it became evident the relationships between codes held a stronger underlying narrative of the youth experience than just the individual text messages themselves.

Based on this hunch, this practitioner spent the next four hours independently coding the text messages by the codebook across all five questions. Coding in this context can be defined as "a way of indexing or categorizing the text in order to establish a framework of thematic ideas about it" (Gibbs 2007). With a brief understanding of the more prominent codes, it was important to understand the frequency of codes within each question to identify if codes occur across all questions, some questions, or vary by frequency within the questions. With an understanding of both prominence and frequency, all codes from the codebook were transferred to post-its for sensemaking through affinity diagramming to identify relationships. Through this process, five major themes arose from the text message responses (awareness, trust, access to care, acceptance, and stigma) which encapsulate the main experiences of youth regarding mental health care. These themes

can be described as “an outcome of coding, categorization, or analytic reflection, not something that is, in itself, coded” Saldana 2013). These five themes were validated with the MyVoice team that was analyzing the mental health care question set via the regular process in tandem with this practitioner. From the themes, sensemaking was leveraged to gain more definition to each theme by understanding the overall experiences of youth across the question set as a means to attempt to create a narrative encapsulating all MyVoicer experiences rather than telling a single MyVoicer story (see Fig. 15). For instance, within the mental health care question set youth state being aware that mental health care is important, however even if they know the warning signs, they choose not to seek care because there is such strong stigma. Similarly, with trust as a theme, how can the youth opinions be visualized in a manner that demonstrates not only what trust means, but how it changes between peer to peer or youth to adult and how do trust and stigma relate to each other to bring more nuance and understanding to the particular themes?

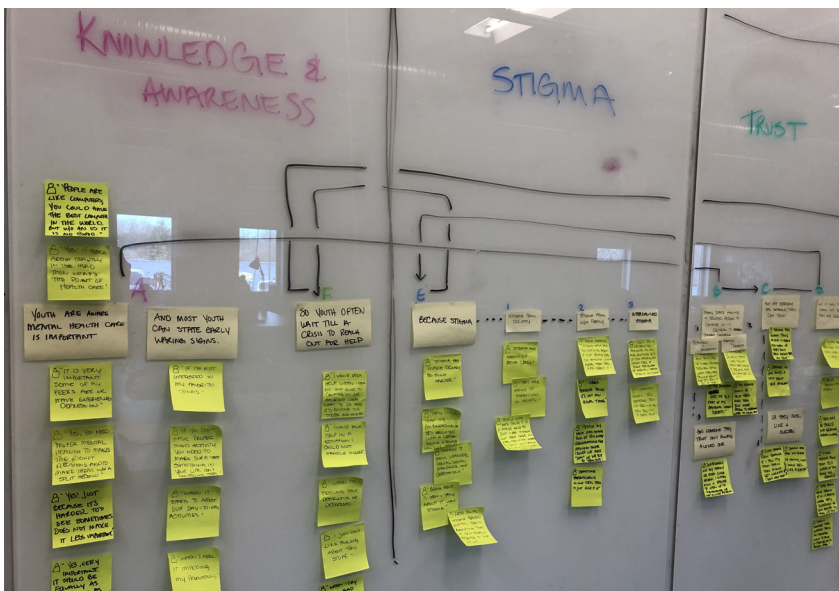


Figure 15: Mapping the MyVoicer Narrative on Mental Health

In analyzing the nature of the text message responses over the course of two weeks, the outcome of generating themes resulted in being similar to how the MyVoice team currently operates. However, through sensemaking, the individual text messages, the definition, and nuance of the themes as well as the relationships across themes became much stronger evidence and a richer narrative to present to policymakers in addition to the process taking two weeks versus a month or more. Additionally, it was evident current phrasing of questions did not probe deeply enough into the experiences of youth to provide actionable evidence. A singular question set with broad questions only gathers informational data as the questions are attempting to gather the scope of the problem. There was a need to explore a new data collection and analysis process to ensure the MyVoice team was able to collect enough youth opinions to develop actionable evidence. This is critical to achieving institutioning as developing a community of interest requires the alignment of institutional framing of a policy problem. By generating evidence which is more descriptive, one is better prepared to create a one-pager which can achieve translation, coordination, and alignment across communities of practice.









# CO-DESIGN PHASE TWO

## **New MyVoice Data Collection & Analysis**

### **Process**

The MyVoice team is small and nimble, comprised of a few staff members, healthcare researchers at the University of Michigan and volunteers including undergraduate and graduate students. As a result, the current operational strategy is to administer weekly question sets,

of four to five questions, through the MyVoice tool regarding various health topics over the course of a twelve-week period. This process occurs three times a year as a means to gather information about youth experiences with the intent to inform research and policy. Each weekly question set is analyzed by members of the MyVoice team over the course of a month or more, summarized, and distributed via academic journals, social media, and summary reports to partners. As previously mentioned, the MyVoice team uses natural language processing (NLP) techniques to cluster responses into codes which generate an initial codebook. Prior to this co-design engagement, the next step in the analysis was to take the initial word clusters and group them “using word similarity measures resulting in semantic word clusters” (DeJonckheere et al. 2017) known as themes for each question. While operationally different than the analysis conducted through sensemaking by this practitioner, the outcome from the MyVoice process, overall themes, remains the same. The key difference within this analysis is the practitioner focused on the relationships between the themes across all questions within the set to generate the overall narrative of the youth experience. In doing so, the analysis generated an outcome closer to fitting the needs for actionable evidence by policymakers. Additionally, it is concluded that administering one round of five questions and analyzing through traditional qualitative research methods did not provide enough actionable evidence and a new analysis process including a follow-up set with targeted questions to the underlying narrative is necessary.

It is important to note that the field of qualitative research is vast and the act of analysis through sensemaking within design has learned from and continues to use similar methods as qualitative researchers. It is not the intent of this paper to state that qualitative research methods are limited, it is intended to state the analysis conducted through sensemaking as documented here has the potential to generate richer insights faster than the current MyVoice team analysis process. Through leveraging methods such as affinity diagramming and

mapping themes in combination with the initial codebook, the MyVoice team using this process can generate evidence which is both informational and actionable to aid in policymaker decision-making. It is through integrating both design and qualitative research methods that a stronger outcome can be produced.

In terms of infrastructuring to create institutioning for the creation of a community of interest, the MyVoice team can continue to administer broader question sets to collect a vast repository of evidence which can be routinely shared with policymakers in an effort to establish key relationships within the community of interest over time. As a secondary mode of infrastructuring, the MyVoice team can respond as needed to salient adolescent health policy problems by administering targeted question sets which provide actionable evidence to the underlying themes and barriers within the salient adolescent health policy problems. It is the salient adolescent health policy problems for which policymakers are seeking more actionable evidence to support responding effectively and appropriately in real-time. Finally, as this co-design engagement continues, providing ongoing training to the MyVoice team regarding sensemaking methods can establish new processes of data analysis which support operational goals of aiding policymaker decision-making and informing public policy creation.





# SENSE-MAKING PHASE THREE

## Exploring One-pager Design

With a general understanding of the evidence available, including individual text messages as data points and five major themes which categorize a narrative of the overall experience of MyVoicers, determining how to visualize the evidence in a manner which aided in decision-making for policymakers became the area of focus. As stated previously, the goal was to create a boundary object that is both

informational and actionable which translates the youth experience, coordinates policy and program design across disparate communities of practice, and aligns institutional framing of adolescent health between the MyVoice team and Washtenaw County policymakers. It is important to note this project does not intend to leverage the evidence to create conceptual models of administering mental health care to adolescents. It is intended to leverage the evidence to design decision-making aids for policymakers to inform the creation of policies and programs. This is an imperative distinction as policymakers are often seeking solutions or recommendations to policy problems which this tool does not intend to do. Therefore, the focus of the evidence is to support creating a shared language and community regarding the experiences of youth for a specific health policy in working towards aligning disparate communities of practice towards a shared institutional framing of a problem to begin to work in collaboration towards solving a policy problem.

Through Sense-Making phases one and two it was determined current one-pagers can be either text heavy, highly quantitative, or missing narratives. The MyVoice summary reports were found to be interesting due to the youth opinions which resonated as policymakers want information which gives context to the youth experience and they value reports which are actionable by fitting the needs of their workflow. To investigate what design attributes to consider when designing the evidence as an actionable boundary object to aid in decision-making, various methods and tools were used to create sixty-two iterations of sketches, diagrams, and process maps. These iterations were used as sensemaking tools to aid the practitioner in identifying attributes for the boundary object as well as generative research tools to gather feedback from both the MyVoice team and the Washtenaw County policymakers in understanding how the viewer would interact with the boundary object. To begin, policymakers stated they wanted quick and straightforward evidence to fit the pace and complexity of their workflow. "Give me the facts and then give me the experiences" as stated

by a health policy analyst. Thus, in investigating how to visualize the relationships across the themes including multiple relationships, mind mapping was explored as a means to “visually organizing a problem space in order to better understand it” (Martin and Hanington 2012). As shown in Figure 16, the five themes from the mental health care question set (awareness, trust, access to care, acceptance, and stigma) are positioned in relation to one another with short text explaining each theme. Stigma is placed in the center of the map to signify this theme being the root cause of the barriers youth experience in managing mental health concerns with short text explaining said barriers. However, in this iteration, positioning stigma at the center of the map placed too much emphasis on said theme and confused the viewer, leading to the wrong conclusion. “I’m concerned we’re sharing the wrong message,” as stated by a MyVoice team member (see Fig. 17). Stigma as a theme was in fact not the center of the issue but manifested across all four subsequent themes in differing ways. Additionally, one intention of the goal of the boundary object is to highlight youth experiences as a means to align institutional framing towards creating a community of interest to address adolescent health. Thus, emphasis needed to be placed on the youth experiences themselves with the themes as supporting institutional framing.

Moving from overall themes to specific text messages, policymakers showed a strong interest in reading the first-person accounts of MyVoicers, “personalized quotes have more weight” as one health policy program manager shared. However, it was unclear how many to include as so many MyVoicers share such intimate and powerful messages. In regard to curation, it is imperative to be fair in the representation of the experience, while not overwhelming the viewer with too much information. Thus, in a second iteration of a mind map focusing on text messages, (see Fig. 18), the theme of stigma was moved to the outer circle to demonstrate the pressure it places on youth in relationship to the subsequent four themes in the inner circle which are only represented by title and without description as in the previous iteration.

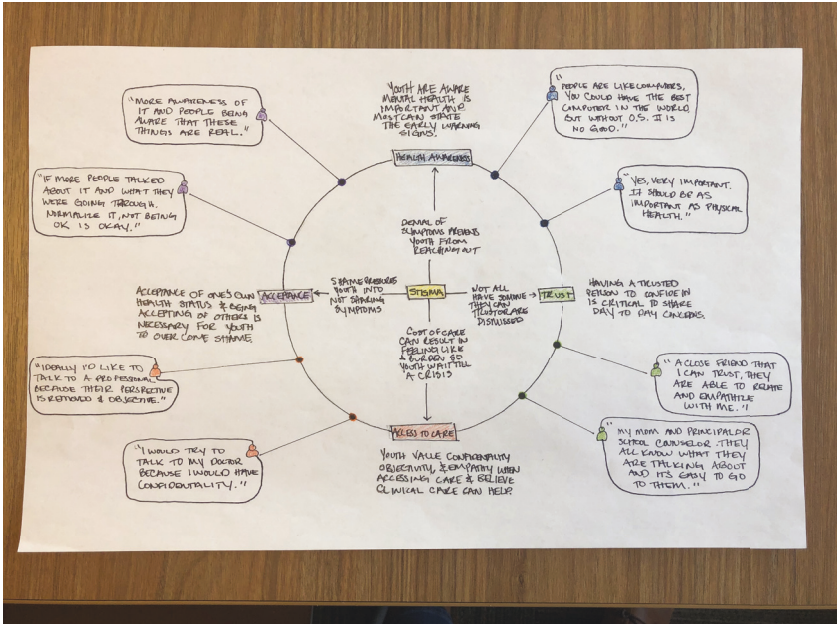


Figure 16: Iteration of conceptual model of major themes

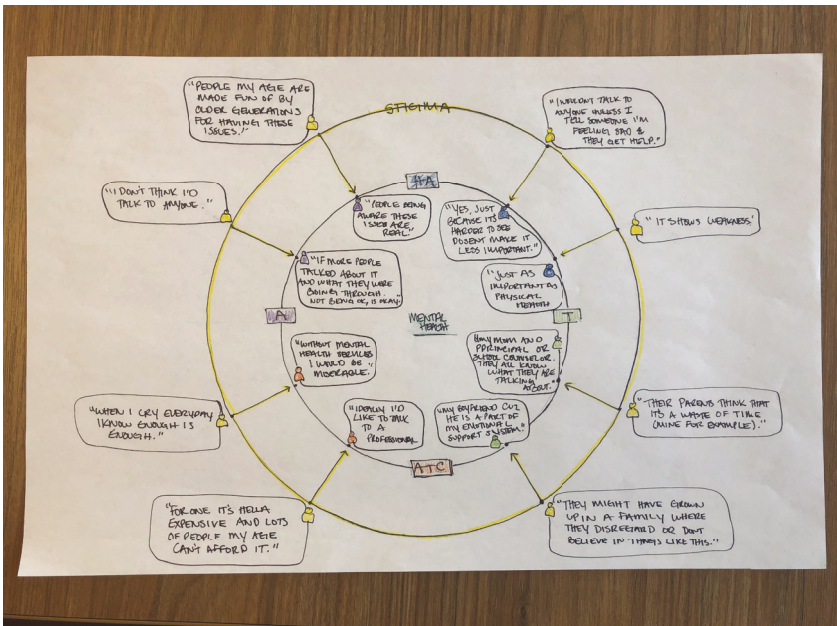


Figure 18: Iteration of a conceptual model of text messages with one theme





Figure 17: MyVoice team reviews models

The text message quotes are intended to be in ‘pairs’ with a MyVoicer experiencing positive mental health on the inside and a different MyVoicer experiencing negative mental health on the outside as some youth do in fact have access to emotional support, trust, and health-care whereas others do not, resulting in denial of their own symptoms or dismissal by trusted adults. Initial testing found policymakers desired only one text message quote to give evidence to a youth experience within a theme, “I want one really powerful [emotional] statement” as stated by a health policy analyst. However, positioning opposing

experiences next to one another evoked the strongest emotional response as it demonstrates the complexity of the health issue as well as the MyVoicers attempting to navigate the many choices in addressing the health issue. As noted previously, there is a need to identify evidence which policymakers find appealing and credible. Visualizing the evidence in pairs to evoke an emotional response demonstrated clear value to the policymakers as one subject matter expert shared “facts [alone] do not change policymakers minds...anecdotal evidence can”.

Due to the complexity of decision-making required by policymakers, framing their understanding of an issue area through the lens of upstream versus downstream interventions were determined to be valuable. “I want to come away with an idea of what I can do to understand navigation and challenges [of youth],” according to a subject matter expert. “MyVoice can help with the ‘why’ of issues, why do you want programs, why not, why not using services,” as stated by another. As such, being able to identify trade-offs based on differing courses of action is helpful to determine appropriate policy interventions, i.e., what can a policymaker do on the ground today to improve conditions and what do they need to allocate money towards or pass a new policy for that can help tomorrow. As the youth opinions are not intended to give direct policy recommendations, it is necessary to structure the evidence in a manner which builds learning over time leading to an understanding of potential consequences of inaction. As shown in Figure 19, by including probing questions the viewer is asked to bring their own knowledge and understanding of the policy problem to the evidence.

In presenting the evidence with questions which lead to multiple courses of action, the policymaker can begin to strategize what might be available and desirable to their constituent needs to determine the most appropriate policy intervention. For example, in the context of Washtenaw County, policymakers can be informed that of the 250 MyVoicers in their community the majority have a high level of health awareness—youth know mental health is a current problem, and they

can recognize the warning signs. However, some youth don't have a lot of trusted adult relationships, and if a policymaker chose to follow the trust and relationships path, they would be making the choice to not act on health awareness by building more health educational programs. In structuring the information in this manner, enough evidence is provided to allow policymakers to determine the best course of action within context to their own community and to bring their own knowledge to decision-making by understanding the various trade-offs. Additionally, initial tests demonstrate an interest in a prompt which directs policymakers to determine their own questions which might be relevant after reading the one-pager, "I kind of like there is blank space to add my own questions" according to a health policy analyst" (see Fig. 20, 21). Thus, creating this level of engagement beyond reading which supports decision-making and encourages action was determined to be valuable.

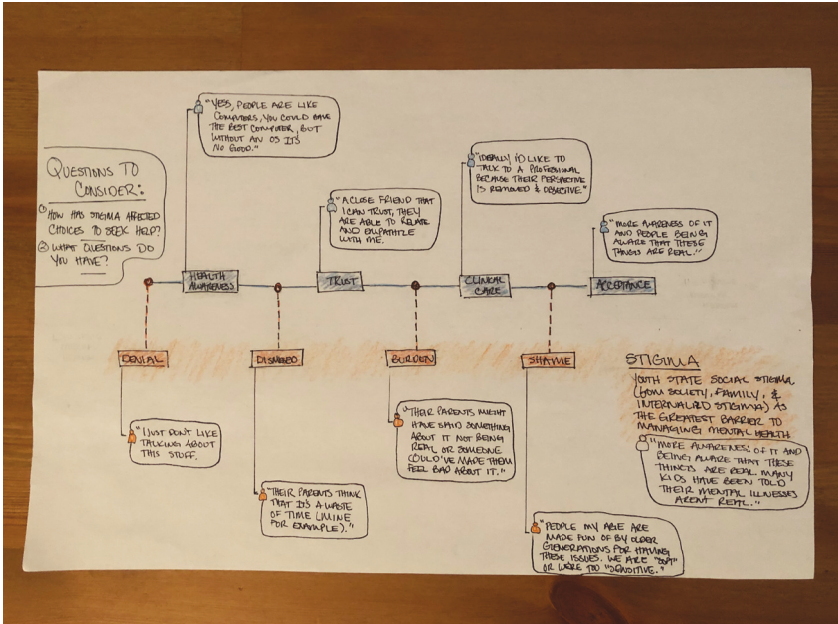


Figure 19: Iteration of a conceptual model of major themes with questions



Figure 20: County policymaker reviews various iterations of one-pagers







# CO-DESIGN PHASE THREE

## Design Attributes for Boundary Objects to Inform Decision-making

As the intended goal was to create a one-pager leveraging youth opinions that are both informational and actionable to act as boundary object as a mode of infrastructuring in working towards institutioning for the formation of a community of interest between the MyVoice team

and Washtenaw County policymakers, three key design attributes were identified as necessary (see Fig. 22); (1) depict a mental model of the major themes to visualize the issue area; (2) show a comparison of youth experiences through pairing quotes; and (3) demonstrate consequences of inaction by giving evidence towards upstream and downstream policy options.

(1) Depict a mental model of the major themes to visualize the issue area

Within this context, mental models have proven to be a viable method to depict an adolescent health policy problem while demonstrating relationships across the themes which are found within the youth opinions. “People tend to behave in ways consistent with dearly held beliefs. The mental model diagram can help you articulate root causes behind behaviors and develop solutions that deeply resonate with people” (Hanington & Martin 2012). In crafting narrative-rich mental models, the viewer is able to achieve a baseline of understanding of the issue area themes within a short period of reading. As stated by a health policy administrator upon review of the prototype, “It didn’t take us very long to get there [prompt discussion], so it’s working perfectly right now.” As the intended goal of the boundary object is to translate, coordinate, and align institutional framing, leveraging mental models provides a tool which identifies “behaviors, beliefs, and emotions, and then teases them apart to represent differences, can illuminate what people are trying to accomplish regardless of the tools, products, and services they use” (Hanington & Martin 2012). As a mode of structuring, including mental models within the boundary object, presents evidence in a manner to educate policymakers of the broader issue area to ensure they have a baseline of knowledge to begin making decisions. “The perfect marriage of using data [youth opinions] to inform strategies” as stated by a health agency Deputy Director. “We can bring this to meetings with WISD [school district officials] to align messaging,” as stated by another. By presenting evidence through a



# 4

## COMPONENTS OF MENTAL HEALTH

Our analysis identified four main components of mental health: Awareness, Trust, Access to Care, and Acceptance. We believe youth who have the knowledge and resources in each component will have the greatest potential to navigate mental health concerns with the most ease. However, many MYVoiceers state social stigma is the greatest barrier to navigating mental health and manifests differently across all four components.

## STIGMA & Mental Health

Affecting relationships with adults and peers, stigma inhibits one's ability to access care when needed most. We've created a few questions to consider when creating new health policies and programs to support youth mental health.

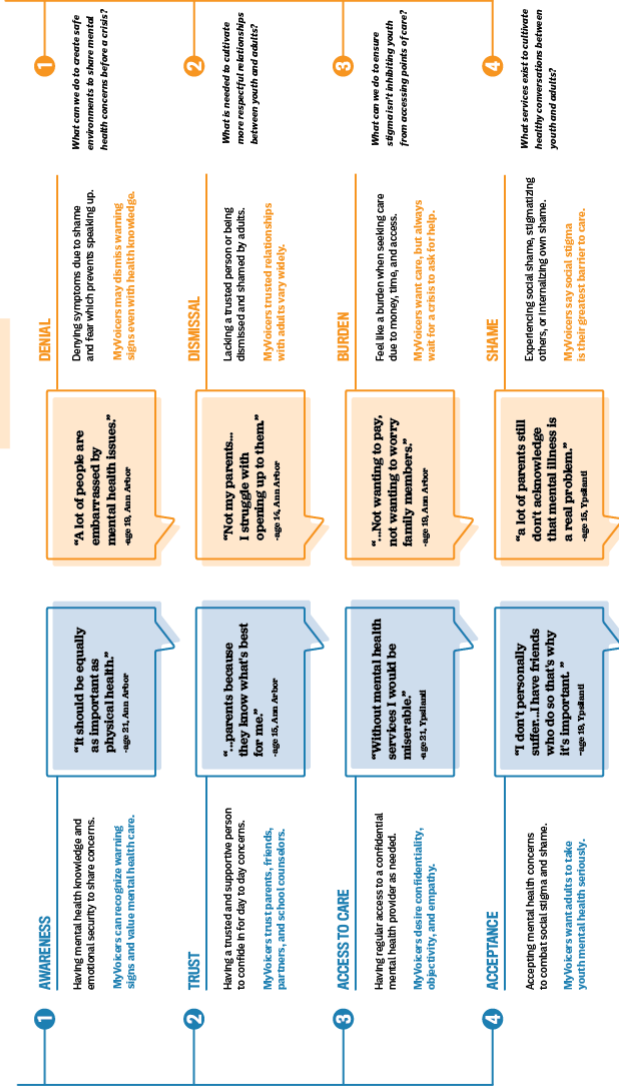


Figure 22: Final one-pager as a boundary object prototype

mental model, the boundary object succeeds in sparking an interest to create a shared language to communicate within and across communities of practice.

(2) Show a comparison of youth experiences through pairing quotes

With the push for meaningful opportunities for civic engagement, policymakers are feeling the pressure to meet the array of citizen demands in an efficient and proactive manner. Thus, it would seem imperative to unite communities of practice through a boundary object to increase dialogue between disparate actors in an effort to develop shared language regarding public needs. It was acknowledged throughout this integrative design process that leveraging youth opinions as evidence through a boundary object could spark a new level of engagement between the MyVoice team and Washtenaw County policymakers. "People often cannot see what they take for granted until they encounter someone who does not take it for granted" (Bowker & Star 2000). Pairing quotes of youth experiences proved to be the attribute which highlighted the experiential differences between MyVoicers within an issue area and drew policymakers to the boundary object. As stated by a senior health administrator, "Each district can [use this to] start thinking about how to inform campaigns, inform programming." As boundary objects "can serve as objects to support the interaction and collaboration between different communities of practice" (Arias & Fischer 2000), placing emphasis on the quotes by positioning them in the middle reminds the viewer the youth experience is of most important and improving the experience is intended to be the overall goal across all communities of practice. As achieving institutioning occurs over time, continued interest in the youth opinions and a desire to use this one-pager in meetings with other agencies provide the foundation to begin developing a community of interest between the MyVoice team and Washtenaw County policymakers.

(3) Demonstrate the consequences of inaction by giving evidence towards upstream and downstream policy

Understanding how policymakers make decisions as well as how they use language to classify problems is critical to understanding institutional framing. “Humans are tool-using, tool-making species; we also rely on culturally devised ways of thinking, learning, working, and collaborating” (Arias & Fisher 2000). As such, complex policy problems such as adolescent health policy cannot be solved by individuals; there is a need for tools which articulate shared experiences using recognizable language as a means to develop a shared understanding. “Classifications as technologies are powerful artifacts that may link thousands of communities and span highly complex boundaries” (Bowker & Star 2000). Initial conversations with policymakers by the MyVoice team prior to this integrative design process demonstrated a need by policymakers to be told exactly how to solve problems. Due to the complexity of policy problems today, policymakers want to jump to the end with interventions in an effort to address constituent needs responsively. However, as the goal of the boundary object was not to give specific policy recommendations, but to aid in decision-making, classifying the evidence through probing questions which signal to upstream versus downstream opportunities provided enough recognizable language to trigger decision-making. “This is helping me processing the data rather than you processing it for me,” stated a health administrator. Similarly, as a form of infrastructuring, distributing various one-pagers continuously can support ongoing dialogue between the MyVoice team and Washtenaw County policymakers to reinforce a shared language. “They may not know they need the data, sending a packet regularly that they can hold on to for when they need it [is valuable]” as stated by a health agency Deputy Director. By supporting policymakers in bringing their own knowledge to the boundary object through questions, there is more incentive to align within a community of interest as well as shift institutional framing over time.

Initial testing of said prototype with Washtenaw County policymakers demonstrated success in achieving said goal of a one-pager which is both informational and actionable. Within two minutes of placing the one-pager in front of a team of three Community Mental Health Board staff, negotiation and deliberation was sparked. In reflecting upon how this prototype aligns with the workflow of policymakers and their needs in decision-making we can return to the MyVoice Strategic Policy Framework. In terms of meeting the needs of policymakers within the formulation stage, “this helps me to check my assumptions about differences in communities,” as stated by one participant. Unprompted questions were being asked by participants to one another such as “What is my framing about the problem? Does it align with how youth are framing a problem?”. Having the evidence clearly defined for all participants to use as a shared language streamlined communication and deliberation. Upon further reflection, another participant stated, “This lines up with what we are hearing and validates our choices. I now know the community knows stigma and mental health is a problem”, which supports the needs of policymakers within the adoption stage. As the Community Mental Health Board had already moved forward on a particular program design intervention, they felt positive in reading the youth opinions on the one-pager aligned with what they are currently working on. As stated by one participant “I can tell the public—I heard from MyVoice this would be helpful. This is what we’re doing”. Aiding policymakers in their decision-making through this tool not only creates the opportunity for shared language, but it also engenders trust between disparate communities of practice and creates the opportunity to begin working together in supporting the needs of youth. Finally, for implementation, the stage in which this case study focused primarily, “this is a component that is missing from current outreach strategies,” as stated by the third participant. In reflecting on the information, the Community Mental Health Board staff were currently using design interventions; there was recognition of youth opinions and tools like the one-pager were lacking from their process. Due to the simplic-

ity and compelling narrative within the one-pager participants were able to reflect on current practices and begin to identify where this information could be used throughout their workflow. Thus, creating a one-pager in a manner which acts like a boundary object provides clear value to policymakers working within the realm of program design.

BUT NOT EVERYONE  
HAS SOMEONE THEY  
CAN TRUST

AND IF THEY DO  
REACH OUT, SOMETIMES  
THEY ARE DISMISSED

👤 "BECAUSE  
MIGHT  
NO ONE  
FOR THEM  
THEY DO  
HAVE AN  
CAN TR

👤 "THEIR  
PARENTS THINK  
THAT IT'S A  
WASTE OF TIME  
(MINE FOR  
EXAMPLE)..."

👤 "OLDER PEOPLE  
TELLING THEM  
THEY HAD IT  
WORSE."

👤 "THEY MIGHT  
HAVE GROWN  
UP IN A FAMILY  
WHERE THEY  
DISREGARD OR  
DON'T BELIEVE IN

# DISCUSSION

BECAUSE THEY  
DON'T THINK  
THERE IS THERE  
FOR THEM OR  
DON'T  
ANYONE THEY  
TRUST."

# TRUST

MANY STATE HAVING  
A TRUSTED PERSON TO  
CONFIDE IN IS  
CRITICAL TO ~~HAVING~~  
SHARING CONCERNS

AND SOMEONE THEY  
TRUST ISN'T ALWAYS  
A LOVED ONE

This paper proposed a new integrative design process which leveraged co-design and Sense-Making methodologies as a means to establish infrastructuring which bridged communication gaps between youth and policymakers to create institutioning for the formation of a community of interest regarding adolescent mental health. In doing so, it was proposed communication pathways would be strengthened to provide policymakers with valuable youth knowledge and expertise to aid in their decision-making to improve public policy creation and en-

sure the adolescent healthcare system within Washtenaw County can evolve and sustain appropriateness over time. Designing one-pagers as a boundary object was chosen as a mode of infrastructuring due to their inherent familiarity and common use as a form of communication between policymakers. As key to a successful community of interest requires creating infrastructure for continuous dialogue between actors over time to ensure consistent alignment of institutional framing, leveraging mental models in the boundary object provided a formal classification system to work across communities of practice in “an attempt to regularize the movement of information from one context to another, to provide a means of access to information across space and time”. (Bowker & Star 2000). As highlighted by a Board Commissioner, regular reporting through youth opinions can create “a culture in Washtenaw County organizations which pays attention to youth and their needs. Through an annual report on youth health priorities which can become a drum beat, there is a consistency that is becomes a thing, something I have or should respond too”. By leveraging one-pagers with youth opinions as boundary objects as a means to provide evidence to aid in policymaker decision-making, infrastructure through the form of new communication pathways was created between two disparate communities of practice, the MyVoice team and Washtenaw County policymakers.

Highlighting a comparison of youth experiences in a manner which is streamlined and easy to read provided information regarding the youth experience as well as a nudge towards action as the quotes evoked an emotional response. Policymakers were eager to align their program interventions to the needs of youth as they now had a roadmap to explore possibilities. By providing questions which probed thinking towards upstream or downstream interventions, policymakers were able to bring their own knowledge to the policy problem as it directly relates to youth constituents within their community as well as gain a shared language to communicate and deliberate across agencies seeking to address youth mental health. In doing so, policymakers can determine



if interventions are needed based on the youth experience, what type of interventions as it relates to the themes, and which direction is most relevant for the context at hand. By limiting confusion as it relates to the youth experience, leveraging the one-pager within and across communities of practice has the potential to aid policymakers in future interactions by reframing the adolescent mental health experience, identifying gaps between agencies, and negotiating future interventions. As institutioning occurs through sustained engagement over time, creating the infrastructure to share the one-pager as a boundary object provides a foundation of framing around a particular policy problem that can then be shared continually to allow a community of interest to grow. Additionally, creating a strategic policy framework as a mode of infrastructuring as well as modifying the collection and analysis process of the MyVoice tool provided education and operational strategies for the MyVoice team to continue engaging with Washtenaw County policymakers and others beyond this initial integrative design engagement. As such, a foundation was laid to support the creation of a community of interest in working towards successful and sustainable institutioning to improve policymaker decision-making within an adolescent healthcare policy context over time.

As this case study hoped to convey, institutioning is critical to improving effectiveness within public policy creation as it can aid in understanding and aligning the complex network of disparate communities of practice in public policy. Successful institutioning “involves a practice of interweaving between—as well as producing—various insides and outsides in participatory processes, by consolidating and challenging existing institutional frames as well as by forming new ones” (Huybrechts et al. 2017). Due to the need for continuous engagement, designing infrastructuring which established tools and strategies for stronger communication pathways between the MyVoice team and Washtenaw County policymakers provided the environment for institutioning of adolescent healthcare to initiate and thus cultivate over time. As adolescent healthcare policy and healthcare policy, in general,

exists within a complex network of institutions, the consideration of institutioning as a means to achieve appropriate care through improved policy creation has demonstrated the capacity to act as a catalyst for change not only for improved adolescent mental health care services, but the subsequent improved communication between actors within and across institutions who engaged in this integrative co-design process for the formation of a community of interest.

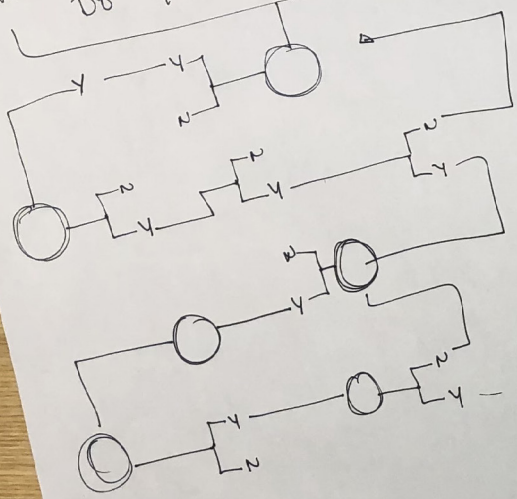
Engaging in co-design with the intention of institutioning can initiate new forms of civic engagement as this paper documented through leveraging youth opinions as a mode of representation within public policy creation. If policymakers continue to neglect citizen preferences and experience within the creation of public policy, there will continue to be a failure of implementation due to limiting their understanding of the relevance of the lives of the constituents they serve. As a result, the citizens will continue to be marginalized in terms of receiving the proposed benefits of the policies or programs that are rightfully ours. Co-design can be a process which connects citizens and policymakers in working towards the common goal of creating an equitable and sustainable government system.

As the application of co-design within the public realm continues, there is a need for tools and processes which aid designers in making sense of the ever-growing complex systems in which they engage. With attention to pathways of communication, integrating Sense-Making with co-design through a fluid and iterative phased process proved to be valuable in investigating the role of youth opinions within the Washtenaw County adolescent health policy ecosystem. With an integrative design approach, a designer is more equipped through Sense-Making to identify the nature of relationships and means of communication within a problem while leveraging co-design to support the collective expertise necessary to create sustainable infrastructure and interventions to improve the system over time. The effectiveness of this approach calls to attention the role of a designer within co-design

processes which engage in the public realm and the need for multi-disciplinary and transdisciplinary expertise. The complexity of wicked problems requires the intersection of various fields in order to achieve the necessary, multiple skill sets and multiple perspectives to achieve viable outcomes, and the role of a designer is pivotal to facilitating and orchestrating a successful integrative design process. Finally, as a pillar of co-design methodology is to bring diverse perspectives together in the design process as a means to create holistic outcomes, it is important to note that the practice of co-design is an inherently political act. Due not only to its history and foundation in participatory design, a co-design practitioner is incapable of objectivity if they value and seek out multiple frames of understanding to inform a design outcome. It is paramount designers practicing co-design, especially within the public realm, acknowledge their own political subjectivity throughout the engagement, as entering a community of practice and amplifying multiple frames of understanding will alter existing institutional frames.

Flow chart of options - or the

WHAT MENTAL HEALTH SERVICES DO YOU WANT/USE?



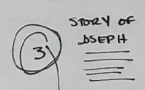
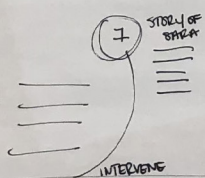
Policy Issue

ISSUE 1

UPSTREAM VS. DOWNSTREAM

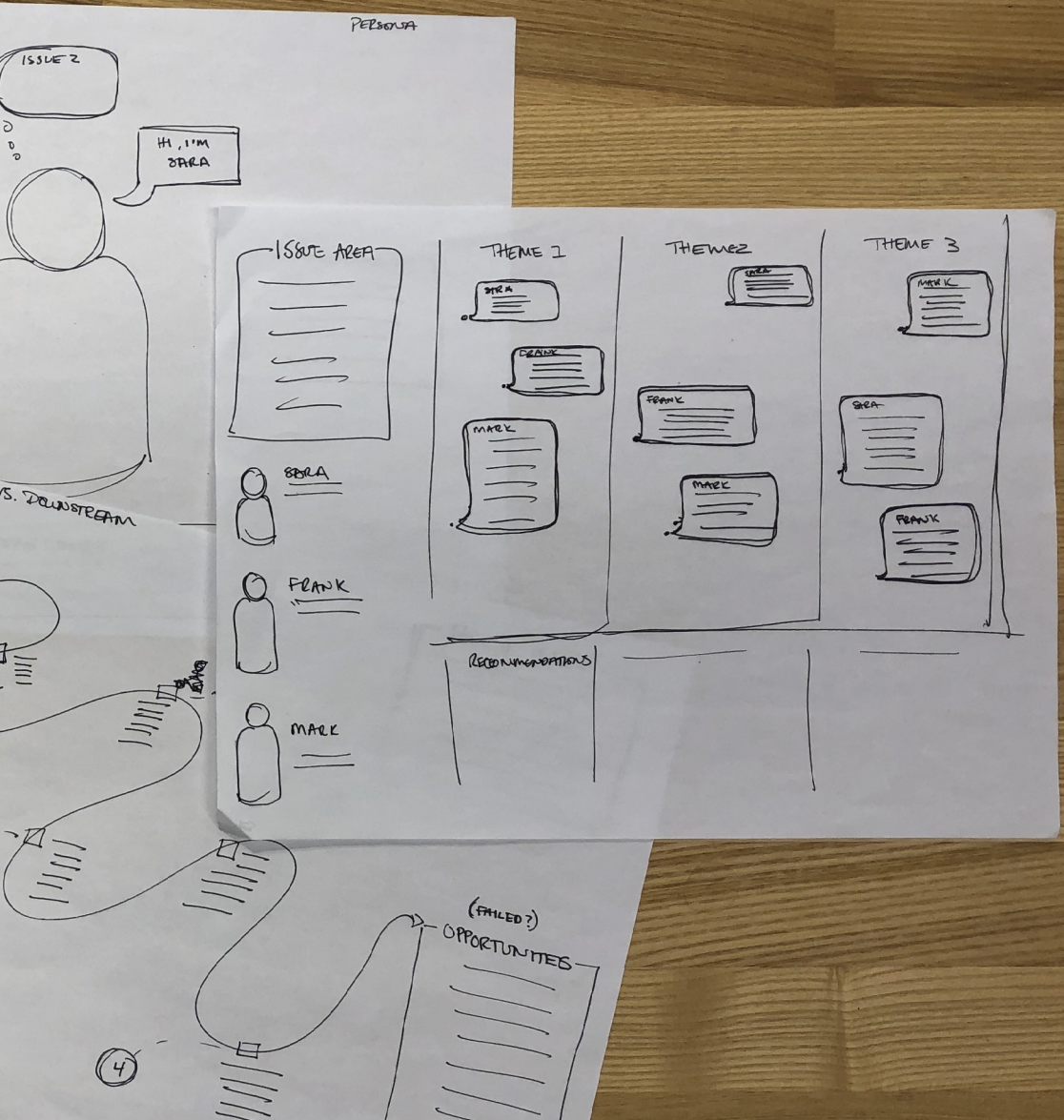
STORY OF FRANK

COMPARISON OF EXPERIENCE OPPORTUNITIES



LEAST OPTIMAL OUTCOME

# LIMITATIONS AND FUTURE WORK



First and foremost, the outcomes of this integrative design process are limited to the context of mental health care for youth ages 14-24 and public policy creation in Washtenaw County, Michigan. Due to the current adolescent mental health crisis in Washtenaw County and the allocation of millage dollars to the issue, there was a strong desire for youth opinions and experiences to inform program design. As such, Washtenaw County policymakers were eager to collaborate in order to support not only this integrative design process but to be provided

with the information to respond accordingly and effectively to youth needs at hand. There is a need then to acknowledge one-pagers as a boundary object could have the most potential within a public policy context in which policymakers are seeking to work together to solve an emergent problem. The outcomes of this case study will need to be tested in different contexts and different policy problem to validate effectiveness. There are a number of adolescent health policy problems areas and varying levels of governmental contexts to explore further as a means to validate current findings and build upon the outcomes presented here.

A few recommendations are as follows:

- Administer a second round of questions which target stigma specifically as a root cause to the barriers of mental health care. In doing so, visualize this data through the proposed design attributes to test if targeted questions regarding a specific theme gather more actionable evidence for policymaker's decision-making needs. Additionally, a new question set within the same policy problem provides the opportunity to begin training the MyVoice team in sensemaking methods. By adjusting the current analysis process to include sensemaking has the potential to reduce the time required to gather the information needed to support policymakers and allow the MyVoice team to become more responsive to policymakers seeking to address a salient issue. Both the second question set and training are still in process with the MyVoice team at the time of writing this paper.
- Build upon this initial integrative co-design engagement by collaborating with a diverse set of Washtenaw County policymakers including the school district and local city councils to determine if there is a possibility to strengthen the community of interest. Additionally, gather more feedback on the one-pager to determine if it is indeed salient with a variety of audiences beyond the scope of this case study and an effective form of infrastructuring as the network within the community of interest grows. In doing so, the MyVoice Strategic Policy

Framework can be tested to validate assumptions and determine scalability and viability across various levels of government.

- Broaden the policy problem scope beyond mental health to determine if key stakeholders in adolescent health policy including healthcare providers and administrators could leverage the boundary object in their decision-making. In doing so, the MyVoice team can cultivate a diverse community of interest across multiple communities of practice in working towards institutioning to improve the creation adolescent health policies and services.
- This paper proposed moving disparate communities of practice to aligned communities of interest by leveraging a one-pager as a boundary object to act as a mode of infrastructuring to achieve institutioning. In doing so, policymaker decision-making would be aided by youth opinions to improve adolescent health policy creation. Thus, there is further exploration required to determine if one-pagers are in fact effective, but also are they the most effective or are other modes of communication available which can be leveraged as a boundary object to achieve success. Further investigation of communication pathways between communities of practice could identify alternative modes of communication to be tested.

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