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# Community Coalition and Key Stakeholder perceptions of the community opioid epidemic before an intensive community-level intervention

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## Abstract

**Introduction:** Opioid overdoses are a major public health emergency in the United States. Despite effective treatments that can save lives, access to and utilization of such treatments are limited. Community context plays an important role in addressing treatment barriers and increasing access. The HEALing Communities Study (HCS) is a multisite community-level cluster-randomized trial that will study implementation and outcomes of a community coalition-based intervention (Communities that HEAL [CTH]) that implements evidence-based practices (EBPs) to reduce opioid overdose deaths in four states. To examine contextual factors critical to understanding implementation, we assessed the perspectives of community members about their communities, current substance use–related services, and other important issues that could impact intervention implementation.

**Methods:** Researchers conducted 382 semi-structured qualitative interviews in the HCS communities. Interviews were audio-recorded and transcribed; researchers subsequently analyzed data using directed content analysis based on the constructs of the RE-AIM/PRISM implementation science framework to identify key themes within the external community context.

**Results:** Despite the diversity in states and communities, four similar themes related to the external community context emerged across communities: These themes included the importance of understanding: 1) community risk perceptions, 2) levels of stigma, 3) the health services environment and the availability of substance use services, and 4) funding for substance use services.

**Conclusion:** Understanding and addressing the external community context in which the CTH intervention and EBPs are implemented are crucial for successful health services-related and

community engaged interventions. While implementing EBPs is a challenging undertaking, doing so will help us to understand if and how a community-based intervention can successfully reduce opioid overdose deaths and influence both community beliefs and the community treatment landscape.

**Keywords**

Opioid use disorder; Qualitative research; Community-engaged research; Evidence-based practices

## 1. Introduction

Opioid overdoses are a major public health emergency in the United States, and the problem is not waning. In 2019, more than 70,000 individuals in the United States died of drug overdoses; of these deaths, opioids were involved in almost 75% (Mattson et al, 2021). Despite effective medications for opioid use disorders (MOUD) that can save lives, access to and utilization of MOUD are limited (Substance Abuse and Mental Health Services Administration, 2017; National Academies of Sciences, Engineering and Medicine, 2019; Wakeman et al., 2020; Sordo et al., 2017; Larochelle et al., 2018; Creedon & Cook, 2016; Morgan et al., 2018).

People with OUD or those at risk for overdose experience a wide range of barriers to accessing substance use treatment and overdose prevention services to meet their needs (Mojtabai et al., 2019; National Academies of Sciences, Engineering and Medicine, 2019; Sordo et al., 2017). These challenges to treatment access occur at multiple levels, both individual and structural, and include personal attitudes, interpersonal and community stigma, limited service availability, cost, and low provider uptake of interventions (Luoma et al., 2007; Earnshaw et al, 2013; Allen et al, 2019; Kuleza et al., 2016; Wakeman et al., 2016). Elements of the community context, such as local governance and funding, community access to health care, social determinants of health, and stigma may play a significant role in the ability to address these barriers and increase access to treatment services and lifesaving interventions.

In response to the opioid epidemic, the NIH funded the HEALing (Helping to End Addiction Long-term$^{SM}$) Communities Study (HCS) with the goal of improving access to and utilization of evidence-based services in communities with high levels of opioid overdose deaths. HCS is a multisite, wait-listed, community-level cluster-randomized trial (ClinicalTrials.gov identifier NCT04111939) that seeks to test a community-level intervention, called Communities that HEAL (CTH), in 67 communities in Kentucky, Massachusetts, New York, and Ohio (Chandler et al., 2020; HEALing Communities Study Consortium., 2020; Knudsen et al., 2020; Sprague Martinez et al., 2020; Lefebvre et al., 2020; Winhusen et al., 2020). HCS seeks to expand an integrated set of evidence-based practices (EBPs), such as MOUD or the use of naloxone, across multiple settings and sectors in each community to encourage consumer uptake of these EBPs and thereby reduce opioid overdose mortality. HCS proposes to use the CTH community-engaged approach to build

diverse stakeholder coalitions in each community to drive selection, creation, expansion, and usage of the EBPs.

The CTH intervention that will be tested in the HCS includes three pillars: 1) a community engagement strategy that uses local coalitions to guide and implement the CTH intervention; 2) provision of technical assistance, resources, and other supports to assist coalitions to implement the EBPs using a menu called the Opioid-overdose Reduction Continuum of Care Approach (ORCCA); and 3) multiple communication campaigns with the goal of increasing awareness about and demand for the EBPs and reducing stigma (HEALing Communities Study Consortium, 2020). The specific EBPs promoted in the ORCCA target three areas: 1) overdose education and naloxone distribution (OEND), 2) effective delivery of medications for opioid use disorder (MOUD), and 3) safer opioid prescribing. Within each of the three areas, a menu exists of specific EBPs that can be selected. For example, within the OEND menu of options, a coalition can elect to focus on the direct distribution of OEND to individuals at high risk of overdose and their social networks, direct distribution of OEND at high-risk locations, or immediate availability of naloxone at overdose hotspots, such as through NaloxBoxes. Within the MOUD menu of options, some examples include expanding the availability of MOUD prescribing in medical, mental health, addiction treatment, or criminal justice settings; linking individuals to MOUD through bridge clinics or patient navigation; and enhancing MOUD treatment engagement and retention through the use of retention care coordinators and/or concrete resources, such as cell phones and transportation services, to reduce barriers to treatment access and increase retention. Within the safer prescribing menu, coalitions may select strategies to improve prescribing for both acute and chronic pain, safer dispensing practices within pharmacies, and safer medication disposal strategies (Winhusen et al., 2020).

HCS also includes a mixed-methods evaluation of the CTH implementation that is grounded in a mixed methods implementation science (IS) approach and the RE-AIM/PRISM IS framework (Feldstein & Glasgow, 2008; Glasgow et al., 2019; Harden et al., 2019; Kwan et al., 2019). The RE-AIM/PRISM framework emphasizes the inter-relationships among the external context, internal context, intervention(s), implementation strategies, and implementation outcomes. To examine the contextual factors critical to understanding implementation, before the CTH intervention began in January 2020, the implementation science team (IS Team) in each state conducted a mixed-methods assessment using surveys and qualitative interviews with community coalition members and key stakeholders in each community. The goal of these surveys and interviews was to obtain an in-depth understanding of community members' perspectives about their communities, current substance use–related services, and other important contextual issues that could impact the CTH process and implementation of EBPs in communities.

While many single-state studies exist, as well as studies that examine a small number of similar states, and studies that assess different communities within one state, fewer large multi-state studies exist that take community context into account before their implementation. Our goal was to understand that context prior to implementation of the CTH intervention. Given the large number of communities being studied, the current manuscript aims to explicate key themes related to the external community context identified

through qualitative interviews conducted prior to CTH implementation that could have an impact on their ability to implement services in their communities. The specific research question we address in this study is, What are the external factors at play prior to CTH implementation? We believe answering this question is foundational for understanding the ability of communities to implement the EBPs and the ultimate reach of those EBPs. We were particularly interested in understanding community coalition members' and key community stakeholders' perspectives about current and missing resources, insights about community needs, perceptions of community attitudes related to OUD, and suggestions regarding how to best address the opioid overdose epidemic in their communities.

## 2. Material and methods

### 2.1 Data collection instrument

Study staff conducted interviews with members of existing substance use community coalitions, or, if coalitions were not yet formed, those who we identified as key community informants on substance use issues. The data collection instrument was a semi-structured qualitative interview guide designed to elicit participants' views of the external context of their community and the internal context of their community coalition based on the constructs within the RE-AIM/PRISM framework. The interviewers used one of two versions of the interview guide depending on whether the interviewee was an existing coalition member or a key informant in a community without a pre-existing coalition. The interviewer inquired about each participant's coalition or community involvement prior to each interview to determine which guide to use. Both guides employed framework-directed questions and flexible prompts to solicit participants' understanding of and experiences with opioid-related issues in their broader communities (external context). Interview questions related to the external community context inquired about the nature of the local opioid use problem; existing initiatives to address opioid-related overdoses; community attitudes toward opioid use, treatment and prevention; and the need for additional services. The study team included questions about the external context in both versions of the guides and those questions are the focus of the current analysis. The interview guides have been previously published (Knudsen et al., 2020).

Both guides began by asking the participant to describe the opioid use problem within their communities. Following this, the background section of the interview guide for coalition members asked the participant to describe their role within the coalition, how long they had been part of the coalition, and the goals of the coalition. In contrast, the key stakeholder guide asked the participant to describe their role in the community related to addressing opioid use prevention and treatment, any role their organization has had in addressing the opioid epidemic, and the goals of their community in developing strategies to address the epidemic. The second section of the interview guide for coalition members asked them to describe their coalition structure and resources, with questions such as, "Please describe how your coalition is structured" and "How do organizations or individuals become part of your coalition?" This section also addressed how the coalition works to achieve its goals, as well as challenges and opportunities for the coalition. The key stakeholder guide asked a similar set of questions, but focused on community structure and resources related to

opioid use disorder, with questions such as, “How do organizations in your community work to help address the opioid use epidemic?” and generally exploring challenges and opportunities within the community. The third section of the interview guide for coalition members focused on coalition activities underway that pre-dated HCS to address and prevent OUD deaths and activities planned by the coalition, while the key stakeholder guide focused these questions on broader community activities. The interview questions on both guides then focused on community attitudes and community members’ perceptions and awareness, asking the same questions of both, such as “In your community, what is the general perception about people who use opioids?” and “What services are missing or need to be expanded in your community?” Finally, both interview guides concluded by asking about what interviewees would change and anything else the interviewer should know.

Prior to finalizing the instruments, we pilot tested the baseline interview guides with stakeholders from coalitions, treatment agencies, and prevention organizations in non-HCS communities. The pilot testing process focused on the understandability of the interview guides and the relevance of the questions. The team revised the interview guides to incorporate feedback from the pilot testing. The Institutional Review Board of Advarra Inc, the HCS single institutional review board approved all procedures (Pro00037850 for pilot test; Pro00038088 for final guide).

### 2.2 Participant recruitment

The sample for the baseline qualitative interviews included community coalition members and key stakeholders in all HCS communities. For HCS, states could broadly define community. The funding opportunity announcement (FOA) for the HCS allowed states to select a definition of what constituted a community. Kentucky, New York, and Ohio defined communities as single counties, while Massachusetts focused on single towns or small groups of towns. Community characteristics by urban-rural status within the four states are presented in Table 1. Across the four states, the 67 communities represented approximately 10.1 million people, with 43% of the communities being located in rural areas. In terms of the adult population’s age distribution, rural communities in Massachusetts, New York, and Ohio tended to have a greater percentage of older adults than urban communities within these states. Most communities had a slightly higher proportion of females relative to males. Across the four states, rural communities had markedly higher percentages of adults who were white. Urban communities in Massachusetts had larger representations of Hispanic adults than urban communities in the other three states, while urban communities in Ohio had the greatest representation of Black adults. Area deprivation indices, which integrated information on income, education, employment, and housing conditions, were lowest for rural HCS communities in Massachusetts (indicating greater affluence) and highest in rural Kentucky communities (representing greater deprivation). Educational attainment was largely similar across the communities, with the exception of urban HCS communities in Massachusetts where education attainment was lower than other communities. Rural HCS communities in Kentucky had the lowest median income, while rural Massachusetts communities had the highest median income. Rural and urban communities within New York and Ohio were largely similar in terms of households receiving public assistance, but Kentucky and Massachusetts had sizable rural-urban differences that occurred in the

opposite directions with higher rates of public assistance in Kentucky rural communities and Massachusetts urban communities.

The study conducted all baseline interviews prior to any CTH intervention activities. While 67 communities were initially expected to participate in HCS, one community dropped out before data collection began, thus qualitative data collection occurred in 66 communities. In each state, researchers sampled potential participants (Palinkas et al., 2015) from rosters of existing community substance use coalitions or from a list of key stakeholders identified through public health and substance use treatment contacts in communities without pre-existing opioid coalitions. This distinction was required due to differences across states. While all 16 communities in Kentucky and Ohio had existing coalitions, in Massachusetts 12 of the 16 communities had existing coalitions, and in New York 9 of the 16 communities had existing coalitions. In cases that had no pre-existing coalition, substance use and public health leaders within the community were asked to identify individuals who were likely to be major opinion leaders and/or who were likely to become community coalition members.

To obtain broad community perspectives, the study team set a recruitment target of at least four individuals per community. Purposive sampling prioritized relevant roles and sectors for the HCS, including individuals working in health care (e.g., hospitals, community health centers), behavioral health (e.g., specialty addiction services, community mental health centers), harm reduction (e.g., syringe service programs), and criminal justice (e.g., jails, courts, police departments, probation/parole). Sampling aimed to include individuals with lived experience of OUD, either personally or through a family member, although we were unable to purposively sample for this. In communities with pre-existing coalitions, we also sought to obtain the perspectives of the coalition chairperson and/or coordinator. Researchers recruited participants through an initial email invitation describing the study, followed by reminders via email, telephone, text, or mail.

### 2.3 Data collection

Data collection occurred between November 2019 and January 2020 with interviews conducted by trained members of the IS team from each research site. Interviewers scheduled interviews according to participant convenience, and they occurred in person or remotely via telephone or videoconference, based on participant preference. Due to the size of the study, it had multiple interviewers: seven each from Kentucky and Massachusetts, six from New York, and eight from Ohio. Interviewers ranged from new interviewers who were familiar with the content but less knowledgeable about qualitative interviewing to very skilled qualitative interviewers. Given the large number of interviews and the cross-site nature of the project, the study desired general consistency in interviewing rather than a completely free-form interview process. Therefore, prior to beginning the interview process, all interviewers both across sites and within sites were trained in qualitative interviewing by senior qualitative researchers. Training on data collection included topics such as goals of qualitative research, basics of qualitative methods, uses of qualitative data, qualitative data collection approaches, types of qualitative data, a brief review of mixed methods study designs (sequential explanatory, sequential exploratory, parallel), developing and using an interview guide and interviewing techniques. The majority of

time was spent on interviewing techniques, which included the conduct of multiple practice interviews occurring within teams at each study site. The interview guides also included specific probes to support consistency in interviewing if interviewees did not provide the information following the initial question. For example, the question "Please describe how your coalition is structured" was followed by two directive probes: "Who is included? (e.g. agencies, stakeholders) and "How do you work together as a coalition?" When asking about community attitudes, the main question was, "How aware are community members about opioid use and overdose prevention and treatment options available in your community?" This question was followed by three specific probes: "What specific activities or programs do you think they are familiar with?"; "What do you think community members know or don't know about the availability and distribution of naloxone?"; and "What do you think community members know or don't know about the availability of treatment medications like Suboxone, methadone and Vivitrol?"

Study staff obtained written consent for in-person interviews, and obtained verbal consent and documented it in writing during telephone or video conference interviews. After the consent process, the semi-structured interviews commenced, with interviewers asking the basic questions in the semi-structured interview guide followed by probes as needed. All interviews were audio-recorded with interviewee permission. The 382 completed qualitative interviews ranged from 18 minutes to 86 minutes in length, with most interviews lasting 45–60 minutes. As a small number of interviews included more than one person, a total of 388 individuals participated in the 382 interviews. The study compensated participants in Kentucky, Massachusetts, and New York unless they declined or were unable to accept compensation. Ohio did not compensate interview participants.

### 2.4 Data analysis

Interview audio recordings were transcribed verbatim by a professional transcription company or through transcription software. A member of the IS team reviewed each transcript for accuracy. Each site stored transcripts on a secure server and prepared them for analysis using the qualitative software program NVivo 12.0.

We conducted a directed content analysis (Hsieh & Shannon, 2005) adapted to the needs of a very large cross-site project with a large analysis team. We first created a codebook based on the domains of the RE-AIM/PRISM framework, beginning with identifying four overarching conceptual "Parent" codes based on the framework: 1) external context, 2) internal context, 3) intervention and implementation, and 4) outcomes. As these were baseline, pre-intervention interviews, coding, and codebook development focused on the external and internal context codes of the PRISM framework. External context referred to the broader community setting in which the coalition and services existed, as well as the state, and federal/national environment. This parent code is the focus of this manuscript. Internal context reflected the context of the coalition itself and referred to the HCS community coalition and key stakeholders who may or may not have been part of the HCS coalition. The study team then sub-coded the external and internal context codes (see supplemental material for the codebook).

Research staff at each site identified their qualitative coding team. Prior to beginning coding, all coders participated in an online, cross-state qualitative training that included the basics of qualitative analysis, coding in and using NVivo, inductive and deductive coding, coding approaches and process, consensus coding, using codes to identify themes, memoing, and the basics of moving from coding to analysis. Next, two experienced qualitative researchers from one state developed an initial draft of the codebook and drafted code definitions as well as inclusion and exclusion criteria for each code, based on the RE-AIM/PRISM framework.

We then focused on building cross-site consensus, meaning a shared understanding of code definitions and inclusion/exclusion criteria, across the coders from the four sites. We used the following process to build cross-site consensus. First, we began by having two senior coders from each of the four research sites read and review one transcript from each site. Coders applied the codes from the draft codebook to refine the qualitative codebook. The two coders then brought this coding consensus to weekly larger cross-site qualitative coding meetings to discuss and review their coding, in detail. In these cross-site meetings, the group of eight coders worked to review coding consistency, refine inclusion and exclusion criteria for each code, and discuss problematic constructs, to achieve cross-site consensus. The study team achieved initial codebook consensus after reviewing four transcripts.

After the study reached cross-site coding consensus across the eight initial coders from the four sites, the same rigorous process began within sites to achieve coding consistency across the full group of 25 coders. Before beginning within-site coding, we conducted a second all-coder training focused on using the codebook. In this training, we introduced the qualitative codebook, reviewed each code definition, and provided at least two illustrative quotes relevant to each code. The study recorded this training session so that all team members across sites were able to go back and review coding guidance as needed. Following the training, all coders within a site worked on the same transcripts from their site until the individual designated as the coding supervisor (i.e., one of the two initial cross-site senior coders) was comfortable that the entire site coding team had reached a level of consistency and consensus to allow for individual coding. Each site reviewed these same transcripts via weekly or semi-weekly coding meetings to discuss areas of consistency and discrepancy until the lead coder at each site was confident that sufficient internal consensus was reached to allow for individual coding. This process of all individuals coding the same transcript within each site required consensus coding of 3–7 transcripts at each site. Bi-weekly cross-site coding team meetings of the senior coders continued during this time to review areas of concern or discrepancy that arose at their site, refine codebook definitions, and clarify inclusion and exclusion criteria as needed. When the coding lead for each site was comfortable that the site’s coding team had reached consensus, coders independently coded the remaining transcripts. The study held monthly cross-site coding meetings with all 25 coders during this period to discuss any concerns and areas of discrepancy.

We maintained a log of all final coding decisions and construct clarifications in the codebook to document our decisions and to enable use of the codebook by others. Coding began in August 2020 and the study completed it in December 2020. (An in-depth description of the novel approach HCS employed to achieve consensus coding across four research sites and dozens of coders is forthcoming).

Following completion of coding, we conducted a thematic analysis to identify key findings within the external and internal context codes. While we coded for and conducted thematic analysis within both the external and internal context codes, the current manuscript focuses solely on common external contextual themes across the four states that could potentially impact communities' ability to implement the EBPs.

# 3. Results

## 3.1 Sample characteristics

Table 2 describes the demographics of interview participants. Participant characteristics were similar across the four sites, with just over a third aged 35–49 or aged 50–64 at the time of the interview, almost two-thirds female, and more than 90% identifying as white. Less than four percent of interviewees identified as Black and less than three percent identified as Latinx. Almost 90% of participants held a bachelor's degree or greater, and almost half held a master's degree.

## 3.2 Common themes

Despite the diversity in states and communities, four themes related to the external community context emerged consistently across communities that are especially important to consider when planning for CTH and EBP implementation. These themes included the importance of understanding: 1) community risk perceptions, 2) levels of stigma, 3) the health services environment and the availability of substance use services, and 4) funding for substance use services. This paper described these themes in detail below, along with illustrative quotes from study participants. We identify study participants by their primary organizational affiliation.

**3.2.1 Community risk perceptions—**Participants spoke about what they considered prominent risks within their communities associated with the opioid epidemic and the consequences of these risk factors. Participants had a general perception that the opioid epidemic was not only worsening, but also more difficult to understand and more dangerous than past substance use epidemics. The result of these perceptions was a sense of increased fear within communities:

> "[city] in particular has had a lot of trouble with addictions over the years. The city is accepting of programs and services being in there, but the heroin piece is certainly concerning… or opiates in general is a concerning nuance that a lot of people don't understand. People will understand alcoholism more. When they think of drug use they think of other substances. The idea of heroin and needles, and particularly fentanyl, and the danger of a small amount of powder, that has them more nervous than some of the other substances." (MA #1301, Community Social Service Agency)

Concerns about community risks associated with opiates were coupled with worries about the unpredictable nature of overdose trends:

> "The opioid use, you know, it tends to fluctuate from month to month. It has been a big problem here for years with mostly the Oxycodone and the pills. And then

> it went from that to other stuff…But the trends change all the time. Well, like at one time you'll hear that, you know, we're having lots of overdoses. And then for a little while, then, it seems to subside. But then the numbers will peak again. So, it just varies constantly. But the overall problem is a big problem." (KY #0037, Education)

Amid a perceived worsening of the opioid epidemic and changes in drug supply and drug composition, particularly fentanyl and associated analogs, made it difficult for communities to get a handle on the problem and created a major risk:

> "Um, you know, the, the, the fentanyl, uh, and especially carfentanyl is game changer. And, um, you know, the other barrier is that every time we would, uh, attempt to through legislation ban certain substances, um, you know, the, the manufacturers would be one step ahead of us changing the chemical pump compound, um, in somewhat minor way. And, um, you know, so there, there just seems to be an endless supply of potential additives…" (NY #3630, Government)

The following participant described how it is challenging to protect the community when the precise nature of the risk is constantly evolving:

> "One of the big ones I think is, is the changing, the way that the composition of opiates changes. So, there are constantly new analogues of fentanyl that are introduced into the, into the community. And so, keeping up with what those look like and how the protect people from them is difficult." (OH #5743, Behavioral Health)

**3.2.2. Levels of stigma—**Many participants spoke about stigma at the levels of the community, service providers, and individual users themselves. In its various forms, stigma forms part of the external context of OUD treatment and services, as do stakeholder perceptions of uncertain and unpredictable community risk. Participants spoke frequently about the broader community's stigma toward people who have a history of substance use or active OUD, as well as toward different treatment and harm reduction approaches. Interviewees indicated that although more people within their communities were starting to understand substance use disorder as a disease, a strong view remained of substance use disorder as a choice and a moral failing, and that persons with substance use disorder were "other" or different from themselves:

> "…I think people here – a lot of people. Not all, but certainly a good chunk of them still believe that drug addiction is a choice and… they – a lot of people don't feel, um, you know, compassion for somebody who is struggling with addiction if they made the choice– if they feel like they made the choice to be that way." (NY #3375, Public Health/ Harm Reduction)

One participant described the viewpoint of many in the community as: *"These are lazy people and they are bringing it upon themselves…" (OH #1662, Education).*

The following participant noted concerns about the absence of a public health framing of OUD:

> "Stigma's huge. Despite the fact that all the evidence shows that this--opioid use disorders is treatable brain diseases--people still want to think it's a choice. They want to view it as a moral issue. They try to guilt people into recovery rather than seeing as a true public health and individual health problems, you know, a health-related lifestyle or health related problems as result of lifestyle choices. And it just, it's a lot of stigma there." (KY #0021, Healthcare)

Participants noted familial stigma as an additional barrier to promoting a disease-based model of service delivery:

> "I would say you have two camps in [community]. One camp is people who are willing to consider SUD as a disease. There's not too many of those. And I would say the other camp is the people who believe that SUD is a choice and that people who are using are doing so because they don't want to be clean. And I'd tell you that a lot of my patients' families feel that way and they just think that they should just be able to stop using. And if they can't stop using, that's a moral failing. And I would say that that is probably predominantly the feeling here." (MA #3526, Behavioral Health)

Bommunity coalition members and key informants had a strong feeling that even individuals from the community working in the treatment and prevention fields often thought of MOUD as simply "substituting one drug for another":

> "It varies widely and you definitely still have pockets of folks even within the treatment community or recovery community maybe I should say who view the medication assistance piece as not being truly in recovery. You don't hear it as much as you used to, but you still do sometimes. And it's sort of like trading one drug for another, the kind of thought process." (MA #1134, Behavioral Health)

The following comment suggests that this viewpoint may be widespread and particularly relevant to Suboxone:

> "Oh, I'm with professional people every day and I watch eye rolls when someone's on Suboxone. So, it's just a crutch, would be their vision or those druggie clinics over there. They're just a, I'm going to be the devil's advocate here, drug addicts are just drug addicts. And they're just a lower group of people." (KY #0067, Behavioral Health)

Participants viewed stigmatizing attitudes from the community as creating a vicious cycle of internalized stigma that prevented people from seeking treatment and ultimately lead to more deaths:

> "So, the stigma around that. That is getting a little better. There's been so much work in the last couple years with the community looking at the issue, and people starting to realize it's not just way over there somewhere hidden. But another problem is also because it is hidden, it's taken a while to step forward to talk about their use, and where it popped up, and how it came about and how it just, so to speak, grabs them and takes over their life after awhile. Sometimes, it takes awhile because of the stigma, because of other things, for the person to speak up, and even reach out for help, of course. That's a really scary part is they can't reach

> out to somebody, and the deaths that have happened because of that." (MA #1005, Community Social Service Agency)

In addition to describing a general external community context of stigma, participants uniformly spoke about significant stigma from—and stress experienced by—provider groups, such as medical providers, substance use treatment providers, law enforcement, and other first responders. Participants viewed this as contributing to compassion fatigue and burnout, further perpetuating community risk:

> "So they're just tune that shit out. The cops, and the firemen, and the social workers, and the medical people in the emergency rooms, and the first responders, those are the ones that I really worry about, because that shit takes a toll on them. Seeing that kind of stuff day after day, you know, it's like going to a fatal crash and you see body parts. It's just you see lives falling apart when you're in the hospital room. You see these kids that you walk into a room and you don't know what to expect. You know, these kids are all wasted and, you know, you got people passed out. You got people jumping out of windows trying to get away from the cops. I mean, it's kind of I feel sorry for the first responders. And unless you're a first responder or you work with the first responders all the time, you know, you kind of forget the impact that that has on them, and then that impact has on their families and their children and you know, it's just kind of crazy." (OH #2345, Government)

Participants noted the stress of the opioid epidemic as leading to a sense of frustration or futility associated with overdose response by law enforcement officers:

> "I have a brother who's in law enforcement…I can tell you his feeling is they did it to themselves. Why should I carry Narcan? So, there's, there's, I think there's a resentment by some communities where they see people overdosing time and time and time again and there's really no repercussions…I think that is that is one perception, a community perception" (OH #5635, Criminal Justice)

#### 3.2.3 Health services environment and availability of substance use services

—The nature and structure of the community's health services environment were further integral components of the external context. In planning for a community-level intervention, participants raised issues within their communities related to availability, access to, and need for different types of substance use services and other related services. In general, participants stated that substance use treatment and recovery services were largely lacking across the board, including access to MOUD, longer-term treatment options that support people leaving unhealthy environments for those that support recovery, and locally available aftercare. Participants consistently described the scarcity of both treatment and aftercare services in their communities:

> "We definitely need more treatment facilities. We need clean houses, and in particular, places that men can go to get clean where they're going to be protected from the temptations and access to drugs. We definitely need more Suboxone clinics." (OH #1056, Education)

The challenge of accessing needed services was coupled with the problem of service deficits, as explained by the following participant:

> "We need to have local treatment here, that's available, so that they don't have to travel outside, of you know, because most of them don't have transportation or have vehicles or the gas money. Even if they do, to get somewhere we have to make sure that we can bring the help to them, you know….Meet them where they are. And then also, to have the follow-up care, you know, the residences for them…places where they can escape from what they were coming from." (KY #0037, Education)

A common perspective was that an overall medical provider workforce shortage hindered access to services:

> "We have a serious lack of primary care doctors and mental health people. So particularly for children, it's even worse. We don't have enough social workers. We want to get grants to hire social workers, but I don't even know where we would get the social workers. There's not enough medical professionals, not enough mental health professionals." (MA #1020, Criminal Justice)

Participants also identified a lack of MOUD prescribers:

> "I think there is always challenges. I mean, one is providers, if we do not have providers that can provide Suboxone, because that is a method is being chosen here in [county] that is supported, but if you don't have those providers that can do that, then that is a challenge." (OH #2350, Community Social Service Agency)

To address these shortages and find new ways to address the OUD epidemic, participants in every state described new service delivery models that directly focused on preventing overdose deaths. Often these grassroots efforts were peer-run or established by individuals with lived experience of OUD:

> "Well, to prevent opioid deaths. So we've - uh - there we had a grassroots, um, peer run organization and you know, emerged over the past few years that - you know, the started by a father, who lost his son. And you know, there's - there's been - so, you know, there's been a couple of organizations formed that way from - from - from - from people who, you know, themselves, you know, recovered or lost a loved one or has a loved one in recovery. And you know, they've been very sort of active and - and - and vocal. But that organization…seem to really be more than just vocal was like on the ground pulling people out of houses…" (NY #4052, Government)

The family models were typically less formal and often focused on providing education and support. One participant described a family model that had sprung up across the state that included education, support services, and OEND:

> "So you've probably heard of Learn to Cope with [name], lots of education there. We have a meeting every Wednesday night in [community] in the Learn to Cope. And we reach out all the time, like I say, on the local breakfast shop here in town, and anytime I hear of somebody reaching out, saying they're struggling with that. And that's for families, the Narcan training. It's not for the addicted loved one. It's

> for our families, to help them learn more about it, and just what it says, learn to cope with this, what's a tragedy to a family." (MA #3489, Community Group)

Another participant described a focus on education about MOUD with a particular emphasis on family education:

> "I think education about the fact that there are distinct pieces of the puzzle that that come together and that recovery support services are a piece that is often missing and not listed. So you have prevention. You have treatment. You have enforcement. I think you have recovery support services on the back end of that. So, the recovery support service piece which includes the family education, so I think when I look at some of the moms who call me and say "Well, my kids are on medication. They're not really in recovery. They're not really trying, they're cheating. They're taking a shortcut." That's where community organizations like ours and the ability of community organizations to provide that information that is missing about the education. So, to be able to come in and say to families: This is what addiction is in your brain. This is what substance use disorder is truly about. It isn't a choice. It isn't a moral failing. It is a brain process. To understand the roots of it lets families know better how to deal with it. It lets them have education about MOUD and how that might fit into their loved ones recovery whether it is buprenorphine or naltrexone. Whether it is access to different types of services--that residential care isn't always the first place that you go." (KY #0064, Behavioral Health)

Across states, participants described the health services environment as moving toward intervention models led by the criminal justice system and local police departments engaging in what they considered non-punitive and non-traditional prevention efforts designed to reduce deaths and engage people in treatment:

> "We implemented an at-risk system, so anyone can call their police department in [county] and ask for a visit. The at-risk requests have gone up significantly, so police and recovery coaches are going out and visiting homes as requested, invited to do so, before there's an overdose, and that's preventative in that nature. They're bringing out Narcan, they're bringing out fentanyl strips, testing strips, as well." (MA #1066, Healthcare)

Another participant described a model that integrated police into a larger team of clinical individuals to holistically address people's issues:

> "…the [Town] Police Department, they really have a huge initiative on trying to help people… We call it the Bridge Program. I'm part of a team that responds to all substance abuse…,We have a couple of recovery coaches. We have a police officer that when someone is admitted to us for opiates that we try to get them into facilities and to services. We also have a domestic officer who works with us as well, because it crosses boundaries. And from the [Town] Police Department side, I'm a Narcan responder… We do Narcan training. And then of course the police side responds to overdoses." (MA #1162, Government/Policy)

Some participants described other police-engaged or collaborative models that incorporated both police and other components of the criminal justice system, such as drug courts after an arrest:

> "We have a Vivitrol program here in [name] county. [Name] is our county prosecutor. And if you are an opioid user caught in a robbery or what have you, [name] will say, "If you go on our Vivitrol program, we won't prosecute you, but you must come every month and get your appointment, you must show up for counseling sessions. Otherwise, we will prosecute you. If you go on our program, we won't prosecute you." So he has incentive for them to say yes, and for some of them, actually I must say for many of them, that's the only way to get them on the program. It's hard for them to say yes, but [name] will. He's pretty successful because he either prosecutes them and sends them to jail, or they go on the Vivitrol program. And they started on the program, and he did it first for nine months, and they get addiction counseling, and he sees them. They have to show up and get their Vivitrol shot every month. And if they don't show up, then he does goes them again, because he threatens them with prosecution." (OH #0971, Harm Reduction)

**3.2.4. Funding for substance use services—**The structure of funding shapes the service delivery landscape. Participants considered the lack of resources and funding available to support substance use services in the community to be a major driver of the challenges within the health services environment. Communities are required to rely on a limited tax base for core dollars to support services:

> "Lack of funding. Unfortunately, a lot of things come down to money. I mean, we in [Community Q], we are very, very, very fortunate in that we are able to provide resources, but unfortunately you could have an unlimited budget and still, you would need more. But with that being said, that has really taught us how to be crafty and work with what exactly we have to provide education and resources to our community. It's funny because you always hear about this federal funding, billions of dollars that are being allocated, but I mean we here in the little cities and towns, we don't really see any of that funding." (MA #1151, Government).

The next excerpt further reveals that funding schemes vary across communities and counties, which impacts service access:

> "We're fortunate in H, J and K counties. We have a payroll tax that is then redistributed to social service agencies. So, between the three counties we have about six million dollars a year that we accept applications for…" (KY #0004, Government)

Communities, as well as substance use treatment and prevention agencies, focus on applying for grant funding to maintain services and respond to the opioid epidemic, often competing with other social service programs for limited funding:

> "We…went and competed with our community mental health centers for similar grants, only to find out that our grants are so different but they both get awarded,

you know, and we will be able to support one another in terms of offering support to some of their initiatives to do so." (KY #0021, Healthcare)

## 4. Discussion

Baseline community coalition member and key stakeholder interviews allowed us to obtain a broad understanding of pre-existing community contexts that could facilitate or hinder the implementation of the CTH intervention within the 66 participating communities. Specifically, participants identified a range of issues that enabled us to contextualize implementation and may provide an understanding of future study results. Within the health services environment, community members perceived insufficient availability of substance use treatment services in general and expressed concerns about a treatment provider workforce shortage that hinders access to services in a range of areas. Participants identidied primary care, behavioral health, access to Suboxone, longer-term treatment, aftercare services beyond MOUD, and recovery housing as areas of great need, as well as the availability of affordable or insurance-covered services. Largely due to the dearth of services, participants indicated that innovative community responses included the creation of new service delivery models that were often grassroots and peer-driven, as well as police-led initiatives. Community members expressed great concern about the need to rely on the tax base and grant funding to maintain current services and create new services, which may not be sustainable over the long term. Participants described how their communities perceived the opioid epidemic as different from other substance use epidemics; they viewed this epidemic as having more immediate and dangerous consequences due to shifting drug supply and drug composition changes that are difficult to monitor. Participants viewed stigma at multiple levels as underlying many of the concerns related to access and willingness to receive services, as well as to community response. Interviewees saw stigma within the community and from service providers and first responders, in particular, as negatively impacting people's willingness to seek treatment or participate in harm reduction services, ultimately leading to more deaths.

Our findings related to the external context in these communities are consistent with prior studies that have found that, despite the ongoing magnitude of the opioid crisis, resources are lacking, which leads to low rates of treatment among people with OUD (Substance Abuse and Mental Health Services Administration, 2017; National Academies of Sciences, Engineering and Medicine, 2019; Wakeman et al., 2020; Sordo et al., 2017; Larochelle et al., 2018; Creedon et al., 2017; Morgan et al., 2018; Beetham et al., 2019). Treatment rates are particularly low for individuals who are poor and those from racial and ethnic minority groups (Andrews et al, 2018).

While it is important to note that our participants hoped that the HCS study, with its focus on implementing and expanding EBPs, could bring more services to their communities overall, they were clear that this did not mean solely MOUD. Participants considered improved access to MOUD necessary but not sufficient to reduce opioid deaths. Interviewees perceived access to other treatment resources as critically important to fully addressing the myriad needs for services within communities. Our findings are similar to those from other studies that identified barriers to other needed services beyond those solely focused on

substance use treatment, such as primary care for people with substance use disorders (Ross et al., 2015; Levinson Miller et al., 2003). Access barriers to all types of services have been found to be even more pronounced in rural areas (Edmond et al., 2015; Oser et al., 2011), which constitute about a third of the communities in the HCS.

Interviewees often noted that to address service gaps in communities, communities introduced new models of service. These models included approaches stemming from the criminal justice system, such as police-assisted referral to treatment programs, which have become common in the United States (Schiff et al., 2016; Schiff et al., 2017;). While these programs may offer more rapid access to some services and create new alliances within communities (Davoust et al., 2021), they may bring a host of inherent challenges for those mistrustful of the criminal justice system, particularly persons of color, due to systemic and structural racism within communities (El-Bassel et al., 2021; Kunins., 2020). Other new service delivery models that have emerged within HCS communities include those created and led by family members and others with lived experience of substance use disorder. These models may be more acceptable to community members, particularly to individuals with lived experience, than police-initiated models, but they may struggle with limited resources due to their grassroots nature. These types of family/peer-led models will also not address the medical and treatment provider shortages noted by interview participants, which are driven by larger structural forces.

When participants discussed risks within their communities, they described the complexity of the opioid epidemic, with their comments overwhelmingly expressing concern that the opioid crisis was different from other substance use epidemics and was worsening. Numerous studies describe these differences and the complex nature of OUD, including how opioid initiation via prescription of opioids has led to transitioning to injection drug use and then the use of more dangerous drugs and drug combinations. This is due in part to easier access to heroin and synthetic opioids throughout the country (Volkow & Blanco., 2021; Nolte et al., 2020; Schneider et al., 2020). When describing risks within their communities, participants did not indicate poor prescribing of opioids as a current major community risk. However, their concerns about the different and deadly nature of the opioid epidemic point to the importance of addressing the complexity of the relationship between opioid prescribing and later heroin and fentanyl deaths, as well as polysubstance use–related dangers (Compton et al., 2021). Importantly, studies have shown that targeting the supply of illicit drugs will not reduce overdose deaths and may, in fact, have the opposite effect (Dobkin et al., 2014: Lee et al., 2021; Rhum et al., 2019). Moreover, simply targeting prescribing or drug supply will not address the social, environmental, and structural issues in communities that need to be addressed to reduce overdose deaths (Volkow & Blanco., 2021; Dasgupta et al.,2018). These structural issues were a concern before the emergence of the COVID-19 pandemic, which has since only exacerbated these issues.

It was remarkable that even within these communities that expressed the desire to participate in the CTH intervention to enhance services and reduce overdose deaths, participants reported an extremely strong perception of a high degree of stigmatization of people who use opioids from the general public and service providers. Moreover, the principle of harm reduction was not universally embraced, even within coalitions. The stigma identified within

the treatment system and the community overall is likely to contribute to care avoidance even if that care is available, as earlier studies have found (Ross et al., 2015; van Boekel et al., 2013; Thornicroft, 2008).

The common themes identified in these baseline interviews have several points of intersection with the design of elements within the CTH intervention that the HCS is testing. The three core components of the CTH consist of community engagement with coalitions, a series of communication campaigns, and the implementation of EBPs reducing opioid overdose deaths (The HEALing Communities Study Consortium, 2020). Participants in the qualitative interviews commonly noted two intertwined but distinct issues related to perceptions, specifically how communities perceived their risk in relation to the evolving opioid epidemic as well as community stigma toward individuals with OUD as well as EBPs for addressing the overdose crisis. The CTH intervention includes multiple communication campaigns that seek to increase community acceptance of EBPs, to increase demand for EBPs among persons with OUD, to reduce stigma toward persons with OUD, and to reduce stigma toward EBPs, particularly MOUD. Community coalitions provided extensive input into the design of the campaigns, and prior to deployment, campaign messages were tested by more than 100 individuals across the four states, including community leaders, health care providers, and people with lived experience. In addition, communities can customize images within each campaign to better represent the community, such as including photographs of community members. Each community's distribution plan was developed through collaboration among community coalition members, subject matter experts, and health communication scientists. The impacts of these communication campaigns on perceptions of EBPs and stigma will be evaluated (Lefebvre et al., 2020).

As numerous participants noted, many communities had limited access to MOUD in their existing health services environment and faced challenges in funding services. As part of the CTH intervention and with substantial input from community coalitions, major efforts are underway among communities in the first wave of implementing an EBP within the Opioid-overdose Reduction Continuum of Care Approach (ORCCA). Expanding access to MOUD within health care, behavioral health, and criminal justice organizations is a substantial emphasis within the ORCCA; all communities are required to select at least one MOUD expansion strategy as well as at least one MOUD linkage strategy and one MOUD retention strategy (Winhusen et al., 2020). Furthermore, the four research sites are providing considerable training and technical assistance around the ORCCA, which should promote workforce development within these communities (Knudsen et al., 2020). ORCCA implementation is further supported through the allocation of funding to communities, although the research sites vary in how resources are provided (e.g., directly to partner organizations, through coalitions to which they allocate funds) based on community needs (HEALing Communities Study Consortium, 2020).

### 4.1 Strengths and limitations

This analysis includes only a high-level summary of baseline themes related to the external context of these communities before intervention implementation. Studies should conduct additional, deeper analyses of these individual themes and assess perceptions of change over

time as EBPs are implemented in the HCS communities. The stigma code is one area that is underdeveloped and provides room for additional, in-depth exploration. While stigma and stigma from service providers emerged as an important external contextual factor in this initial analysis, all types of stigma likely have an impact on how well communities are able to implement and sustain EBPs and whether individuals are able to access available services. This concept requires significant additional study. As with any qualitative work, these results are not generalizable beyond the interview sample. However, the magnitude of this work, with 382 interviews, makes it likely that our findings are transferrable to other settings. To our knowledge, no other study on community responses to the opioid epidemic included this number of qualitative interviews. Therefore, in addition to informing the CTH implementation in the HCS communities, these perspectives provide a robust assessment of community-level factors that influence community responses to the opioid epidemic. This information may provide a reference point for other communities beyond those in the HCS that aim to implement EBPs to reduce opioid fatalities. At the same time, the size of this study necessitated a large number of interviewers, 28 across the four sites. Such a large interview team, combined with the many types of individuals interviewed, could create concerns about inconsistency across interviews. We addressed this through cross-site training, interviewing practice, and supervision at each site by a skilled qualitative researcher. We also ensured that the interview guide included directive prompts to minimize inconsistency. Additionally, while this contextual overview identified multiple similarities among the states, we did not specifically examine differences by rural/urban communities or conduct an in-depth analysis of other state differences. This type of comparative analysis based on geography may be useful for a more granular understanding, particularly as the CTH intervention unfolds over time in these communities. It is also important to note that the sample of interviewees was not reflective of the communities in HCS; this sample lacked representation from African American, Black, and Latinx populations and may not reflect the views of these individuals. At the same time, these interviewees reflect the members of the community coalitions charged with supporting implementation of the new interventions and likely include powerful community voices. Yet we must acknowledge that other important powerful voices, particularly from more diverse communities, were not represented here and may be excluded from the conversation. The community-engaged CTH model may offer an important opportunity for coalitions to assess their membership and identify methods for outreach and greater inclusivity of diverse populations and perspectives.

## 5. Conclusions

Despite differences among the four states included in the HCS in terms of geography, demography, and socio-political environments, as well as differences by community within states, across communities, opioid coalition members and key stakeholders noted similar overall external contextual factors. Health services–related, community-engaged interventions must understand and address the external community context in which the CTH intervention and the EBPs will be implemented if they are to be successful. Annual follow-up data collection with these individuals should assess the impact of intervention implementation on addressing the resource shortages, treatment availability, and changes

in stigma that have the potential to save lives and improve quality of life within these communities, as well as to modify community perceptions. While implementing EBPs is a challenging undertaking, understanding if and how a community-based intervention can be successful in reducing opioid overdose deaths and its impact on the beliefs and treatment landscape with communities is important. These qualitative data will be important for contextualizing and informing study results related to the implementation of the CTH intervention and its impact on overdose deaths. They are also useful in informing other communities considering this type of community engaged intervention to reduce overdose deaths or to address other local issues related to social determinants of health.

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## Highlights

- HCS tests a community-level intervention to address the opioid epidemic
- Community contextual data are regularly collected via qualitative interviews
- Understanding external context is needed for intervention planning

**Table 1:**

Characteristics of communities participating in the HEALing Communities Study by state and urban-rural areas

| | Kentucky | | Massachusetts | | New York | | Ohio | |
|---|---|---|---|---|---|---|---|---|
| | **Urban % or Est. (SD)** | **Rural % or Est. (SD)** | **Urban % or Est. (SD)** | **Rural % or Est. (SD)** | **Urban % or Est. (SD)** | **Rural % or Est. (SD)** | **Urban % or Est. (SD)** | **Rural % or Est. (SD)** |
| **Number of randomized communities** | 9 | 7 | 11 | 5 | 8 | 8 | 10 | 9 |
| **Population aged 18 or older, 2019** [1] | 1,205,069 | 223,977 | 570,429 | 127,341 | 1,638,921 | 415,858 | 3,571,154 | 410,168 |
| **Distribution of population, aged 18 or older by age** [1] | | | | | | | | |
| Age 18–34 | 31% | 31% | 33% | 23% | 31% | 26% | 31% | 29% |
| Age 35–54 | 32% | 32% | 32% | 33% | 31% | 29% | 31% | 31% |
| Age 55+ | 37% | 38% | 35% | 44% | 38% | 44% | 38% | 41% |
| **Distribution of population. aged 18 or older by sex** [1] | | | | | | | | |
| Female | 52% | 52% | 53% | 51% | 52% | 50% | 52% | 50% |
| Male | 48% | 48% | 47% | 49% | 48% | 50% | 48% | 50% |
| **Distribution of population, aged 18 or older, by race and ethnicity** [1] | | | | | | | | |
| Black | 15% | 5% | 11% | 1% | 13% | 4% | 22% | 3% |
| Hispanic | 4% | 2% | 24% | 3% | 12% | 6% | 4% | 2% |
| White | 78% | 91% | 55% | 92% | 70% | 88% | 70% | 93% |
| Other | 3% | 1% | 9% | 3% | 5% | 2% | 4% | 1% |
| **Area Deprivation Index (ADI; scale of 0–1, 1 being highest)** [2] | 0.58 (0.21) | 0.78 (0.11) | 0.50 (0.22) | 0.28 (0.11) | 0.43 (0.25) | 0.58 (0.15) | 0.64 (0.18) | 0.69 (0.10) |
| **High school education or more, % of adults aged 25+, 2014–2019** [3] | 89% | 82% | 82% | 94% | 89% | 89% | 90% | 87% |
| **Median household income, 2014–2019** [3] | 31,538 (9,983) | 22,828 (5,100) | 27,956 (9,087) | 38,062 (4,237) | 34,195 (10,257) | 30,882 (4,799) | 31,557 (9,196) | 28,079 (3,843) |
| **Households receiving public assistance, %, 2014–2019** [3] | 10% | 20% | 24% | 8% | 9% | 7% | 12% | 14% |

*Note.* Percentages may not sum to 100% due to rounding.

[1] For HCS communities that represent counties (n=48 of 67 communities), population information is drawn from: U.S. Census Bureau. (2021). Bridged-Race Population Estimates. Retrieved via https://www.cdc.gov/nchs/nvss/bridged_race.htm on December 7, 2021. For communities that represent units smaller than counties (e.g., townships; n=19 of 67 communities), population information is drawn from: U.S. Census Bureau. (2021). *2015–2018 American Community Survey 5-year Averages.* Retrieved via https://data.census.gov/cedsci on December 8, 2021.

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[3]U.S. Census Bureau. (2021). *2014–2019 American Community Survey 5-year Averages.* Retrieved via the TidyCensus R package, https://walker-data.com/tidycensus/ on November 1, 2021.

**Table 2:**

Characteristics of Interview Participants

| Characteristics of Interview Participants | KY N=80[1] | MA N=101 | NY N=85 | OH N=122[2] | Total N=388 |
|---|---|---|---|---|---|
| **Age (n (%))** | | | | | |
| 18–34 years | 8 (10.0) | 14 (13.9) | 4 (4.7) | 14 (11.5) | 40 (10.3) |
| 35–49 years | 34 (42.5) | 39 (38.6) | 29 (34.1) | 36 (29.5) | 138 (35.6) |
| 50–64 years | 28 (35.0) | 37 (36.6) | 34 (40.0) | 50 (41.0) | 149 (38.4) |
| 65–74 years | 8 (10.0) | 6 (5.9) | 18 (21.1) | 17 (13.9) | 49 (12.6) |
| 75 years or older | 1 (1.3) | 1 (1.0) | 0 (0.0) | 4 (3.3) | 6 (1.5) |
| Missing | 1 (1.3) | 4 (4.0) | 0 (0.0) | 1 (0.8) | 7 (1.8) |
| **Gender (n (%))** | | | | | |
| Male | 20 (25.0) | 27 (26.7) | 40 (47.1) | 45 (39.3) | 132 (34.0) |
| Female | 59 (73.8) | 68 (67.3) | 45 (52.9) | 74 (60.7) | 246 (63.4) |
| Transgender | 0 (0.0) | 1 (1.0) | 0 (0.0) | 0 (0.0) | 1 (0.3) |
| Other | 0 (0.0) | 1 (1.0) | 0 (0.0) | 0 (0.0) | 1 (0.3) |
| Missing | 1 (1.3) | 4 (4.0) | 0 (0.0) | 0 (0.0) | 5 (1.3) |
| **Latinx (n (%))** | | | | | |
| Yes | 2 (2.5) | 4 (4.0) | 1 (1.1) | 3 (2.5) | 10 (2.6) |
| No | 77 (96.3) | 95 (94.1) | 84 (98.8) | 119 (97.5) | 375 (96.6) |
| Missing | 1 (1.3) | 4 (4.0) | 0 (0.0) | 0 (0.0) | 5 (1.3) |
| **Race (n (%))** [3] | | | | | |
| African American/Black | 5 (6.3) | 4 (4.0) | 0 (0.0) | 4 (3.3) | 13 (3.4) |
| Caucasian/white | 74 (92.5) | 89 (88.1) | 83 (97.6) | 113 (92.6) | 359 (92.5) |
| Other | 0 (0.0) | 5 (5.0) | 2 (2.3) | 7 (5.7) | 14 (3.6) |
| Missing | 1 (1.3) | 6 (5.9) | 0 (0.0) | 1 (0.8) | 8 (2.1) |
| **Education (n (%))** | | | | | |
| < high school diploma | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| High School | 1 (1.3) | 4 (4.0) | 3 (3.5) | 3 (2.5) | 11 (2.8) |
| Some college | 3 (3.8) | 10 (10.0) | 1 (1.1) | 14 (11.5) | 28 (7.2) |
| Associate’s degree | 2 (2.5) | 3 (3.0) | 2 (2.3) | 6 (4.9) | 13 (3.4) |
| Bachelor’s degree | 32 (40.0) | 24 (23.8) | 18 (21.1) | 25 (20.5) | 99 (25.5) |
| Master’s degree | 36 (45.0) | 41 (40.6) | 42 (49.4) | 58 (47.5) | 177 (45.6) |
| Professional degree | 2 (2.5) | 5 (5.0) | 7 (8.23) | 9 (7.4) | 23 (5.9) |
| Doctorate | 3 (3.8) | 10 (10.0) | 12 (14.1) | 7 (5.7) | 32 (8.2) |
| Missing | 1 (1.3) | 4 (4.0) | 0 (0.0) | 0 (0.0) | 5 (1.3) |
| **Organizational Perspective (n (%))** [4] | | | | | |
| Behavioral Health | 26 (32.5) | 23 (22.8) | 3 (3.5) | 28 (22.7) | 80(20.6) |
| Community Group | 7 (8.7) | 11 (10.9) | 3 (3.5) | 13 (10.6) | 34 (8.8) |
| Criminal Justice | 7 (8.7) | 13 (12.9) | 11 (12.9) | 4 (3.2) | 35 (9.0) |

| Characteristics of Interview Participants | KY N=80[1] | MA N=101 | NY N=85 | OH N=122[2] | Total N=388 |
|---|---|---|---|---|---|
| Education | 6 (7.5) | 8 (7.9) | 2 (2.3) | 12 (9.7) | 28 (7.2) |
| First Responder | 1 (1.2) | 0 (0.0) | 0 (0.0) | 9 (7.3) | 10 (2.6) |
| Government/Policy | 5 (6.3) | 9 (8.9) | 21 (24.7) | 16 (13.0) | 51 (13.1) |
| Harm Reduction | 15 (18.7) | 10 (9.9) | 24 (28.2) | 26 (21.1) | 75 (19.3) |
| Healthcare | 10 (12.5) | 18 (17.8) | 10 (11.7) | 11 (8.9) | 49 (12.6) |
| Other | 3 (1.3) | 9 (8.9) | 11 (12.9) | 3 (2.4) | 26 (6.7) |

Notes: Percentages may not sum to exactly 100% due to rounding

[1] In Kentucky, one interview included two participants, and one interview included three participants. Thus, there were 80 individuals who participated in 77 interviews.

[2] In Ohio, three interviews included two participants; thus there were 122 individuals who participated in 119 interviews.

[3] Greater than 100%, as individuals could select more than one race.

[4] Community Group includes individuals who represented community-based religious or fraternal organizations, non-religious civic or volunteer groups, or community-based agencies who serve youth or homeless individuals. Other includes persons in recovery or persons who are using substances, family members of individuals with substance use or who have experienced overdose, or local businesses that do not fall into the community group category.