

RESEARCH ARTICLE

# Mixed Methods Evaluation of State Targeted Response to the Opioid Crisis in Ohio

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## ABSTRACT

**Background:** In 2017, the Substance Abuse and Mental Health Services Administration awarded State Targeted Response (STR) grants through the 21st Century Cures Act to help states address the opioid crisis. While there are publications that discuss how each state allocated their STR grant awards, there is a paucity of evaluations illustrating the impact of STR grant activities on clients of opioid use disorder (OUD) treatment, family members of persons living with OUD, community professionals whose work involves addressing OUD, as well as impacts on local communities. This longitudinal qualitative study assessed the impact of STR grant-funded projects on communities in Ohio particularly hard hit by the opioid epidemic.

**Methods:** Data were collected through a mixed research methodology from November 2017 through April 2019. Epidemiologists conducted focus groups and administered surveys in 4 geographically different areas of the state. Study objectives included assessments of community messaging related to opioids, level of perceived stigma for OUD, knowledge of available services and processes for accessing them, and perception of community treatment service needs.

**Results:** A total of 940 respondents participated in 3 cycles (6 months each) of focus groups. Key findings included increased naloxone knowledge and experience, increased proportion of persons living with OUD receiving medication-assisted treatment (MAT), and a 2.5 time increase in the number of reported positive observations of community change. While the level of perceived stigma for OUD remained consistent (moderate) throughout the study, respondents throughout cycles observed an increasing number of community approaches, such as public awareness campaigns and recovery rallies, to impart knowledge, change attitudes, and reduce stigma.

**Conclusion:** Evaluations of STR funded activities and programs could help illustrate the value that additional funding might have over time in reducing stigma related to OUD and increasing knowledge of available treatment services in communities.

**Keywords:** Cures Act; Medication-assisted treatment; MAT; Naloxone; Opioids; SUD treatment; Mixed methods

## INTRODUCTION

Nationally, Ohio is one of the states that has been most adversely affected by the opioid epidemic.<sup>1-3</sup> According to data from the National Survey on Drug Use and Health (NSDUH), approximately 7.8% of Ohio's population 12 years of age and over (747 000 of 9 561 700 Ohioans) reported a substance use disorder (SUD) within the past year.<sup>4</sup> Additionally, an estimated 1.1%, or 103 000 Ohioans, demonstrated an opioid use disorder (OUD) within the last year, which is higher than the national OUD prevalence of 0.6%.<sup>4</sup>

Since 2007, unintentional drug overdose has been the state's leading cause of injury death, surpassing motor vehicle crashes.<sup>5</sup> Ohio's most recent data show that the unintentional drug overdose death rate increased 6.4% from a rate of 34.2 deaths per 100 000 population in 2018 to a rate of 36.4 deaths per 100 000 population in 2019.<sup>5</sup>

In 2016, the US Congress passed into law the 21st Century Cures Act to accelerate the discovery, development, and delivery of new cures and treatment.<sup>6</sup> In 2017, the Substance Abuse and Mental





Health Services Administration (SAMHSA) awarded Ohio a State Targeted Response (STR) to the Opioid Crisis Grant. The STR grants were funding to help states address the opioid crisis by providing support for increasing access to treatment, reducing unmet treatment need, and reducing opioid-related overdose deaths.<sup>7</sup>

As part of the evaluation of Ohio's STR projects, the Ohio Substance Abuse Monitoring (OSAM) Network designed a targeted response initiative to determine the impact of STR project activities on individuals, families, and local communities in targeted areas of the state over the 2-year STR grant period. The OSAM Network is a well-established mixed methods epidemiological research initiative that tracks drug trends in Ohio and produces biannual descriptions of regional substance use, using data collected through focus groups with persons engaged in SUD treatment and with community professionals whose work is impacted by substance use.<sup>8</sup>

In March 2020, the Office of Inspector General within the US Department of Health and Human Services released a report in brief outlining findings from a review of states' use of STR funds. The report outlined information that suggested that STR grants were likely successful in expanding access to general OUD treatment and recovery support services.<sup>9</sup> There are many publications that discuss how each state allocated their STR grant awards, yet very few recipients have published individual studies evaluating the impact of STR funded programs on targeted communities. Of the states that have published, most reported on preliminary data or data from pilot studies, rather than data collected over the entire 2-year grant program.<sup>10,11</sup> Additionally, the outcomes reported within these evaluations almost entirely focused on lessons learned to improve navigating bureaucracy and creating effective partnerships to successfully implement STR funded programs.<sup>10,11</sup> Evaluations illustrating the impact of STR grant activities on clients of OUD treatment, family members of persons living with OUD, community professionals whose work involves addressing OUD, as well as impacts on local communities, were nonexistent at the time of this present study.

Evaluating STR funded activities and programs could help illustrate the value that additional funding might have over time on reducing stigma related to OUD and increasing knowledge of available treatment services in communities. This paper seeks to assess the impact of STR funded activities on communities in diverse regions across Ohio. It was hypothesized that STR grant funding would have a positive effect over time on reducing stigma related to OUD, increasing knowledge of available treatment services in communities, and in identifying treatment needs.

## METHODS

Data were collected through a mixed research methodology, utilizing quantitative and qualitative instrumentation from November 2017 through April 2019. There were 3 data collection cycles, each

spanning 6 months: months 1 to 6 (cycle 1), months 7 to 12 (cycle 2), and months 13 to 18 (cycle 3). During each cross-sectional assessment period, 4 regional epidemiologists (REPIs), each assigned to 1 of the study's 4 designated county behavioral health board areas, conducted focus groups and administered surveys. Ohio has 50 county behavioral health boards that are the local planning authorities for services to communities in the areas of mental health and substance use and may encompass more than 1 county. The REPIs were professionals with at least a master's degree in a social science with relevant research experience in mixed methods data collection.

The study's 4 designated board areas represented communities particularly hard hit by the opioid epidemic. A participating board area either had the highest overdose death counts, the highest overdose death rates (particularly fentanyl deaths), or the highest overdose death rates and a high need for illicit drug treatment.<sup>12</sup> To ensure a diverse and representative sample of Ohio communities, researchers purposefully selected 4 highly impacted board areas, representing a total of 12 of the state's 88 counties, from 4 geographically different regions of the state: Appalachia, North Central, Northeast, and South.

Our sampling plan was based on strategies for mixed purposeful sampling. Purposeful sampling is selecting information-rich cases for in-depth study with sample size and specific cases dependent on the study's purpose.<sup>13</sup> The purpose of this research initiative was to gain a statewide perspective of communities particularly hard hit by the opioid epidemic. Our sampling combined the strategies of maximum variation sampling and convenience sampling. Maximum variation sampling picks a wide range in variation among persons of interest. Our sample size was determined based on time allotted and resources available for the study.

Participants were persons receiving treatment for OUD (clients), family members of persons living with OUD, and community professionals whose work involved addressing OUD (treatment providers and law enforcement). The REPIs aimed to conduct focus groups with a minimum of 50 clients, 20 family members, and 20 community professionals per board area every 6 months. Thus, the study's target sample size across the 3 data collection cycles was 1080: 600 clients, 240 family members, and 240 community professionals.

## Data Collection

Clients were recruited to participate in the study through SUD treatment programs, usually an intensive outpatient program (IOP). The REPIs and the study coordinator contacted SUD treatment agencies by phone or email within designated board areas to invite study participation of agency staff, treatment clients, and family members of persons living with OUD who participated in agency family programming. Physicians, nurses, law enforcement officers, and other professionals whose work involved addressing OUD within designated board areas were contacted by phone or



email and solicited for study participation. Due to difficulty in obtaining parental consent for minor participants, only individuals aged 18 years or over were invited to participate in this study. The REPIs obtained participant informed consent, administered brief surveys, and conducted focus groups following scripted protocols. All focus group proceedings were conducted in person and audio recorded with participant full knowledge and informed consent. Each focus group consisted of no more than 12 participants and lasted approximately 1 to 2 hours. Clients and family members received a \$20 retail gift card for focus group participation. An applicable institutional review board approved this study.

Study participation was voluntary. Participants were assured that all information shared/gathered was strictly confidential and they agreed not to reshare information provided by other participants in the focus group. All focus groups with clients and with family members were conducted at the location of an OUD treatment program. Potential participants were informed about the nature of the questions to be asked before consent for participation in the study was secured. All participants were provided with contact information for the study's principal investigator and study coordinator.

Prior to focus group start, all participants across participant types completed a brief pencil and paper demographic survey. The researchers wrote these surveys to capture the following information: sex, ethnicity, race, as well as additional characteristics by participant type. The client survey also captured age, level of education, household income, employment status, mental health diagnosis, illicit opioid use during the past 6 months, current medication-assisted treatment (MAT) status, and history of intravenous drug use. The family member survey also captured number of family members living with OUD and relationship to family member(s). The community professional survey also captured type of care provided, current profession, and length of time working with persons with OUD. In addition, all participant types were surveyed on their knowledge and experience with naloxone (medication to reverse an opioid overdose).

Client perceived stigma of addiction was measured using the Perceived Stigma of Addiction Scale (PSAS) prior to focus group start. The PSAS is a validated, 8-item, self-report pencil and paper questionnaire that measures the level of perceived stigma toward people who misuse substances.<sup>14</sup> Each item is measured on a 4-point Likert scale of 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). The PSAS scoring scale is 8 to 32. The closer the score is to 32, the greater the perceived stigma.

In focus groups, all participant types were asked open-ended questions to assess community messaging related to opioids in examination of perceived stigma around OUD. Clients and family members were asked a series of open-ended and Likert-scale questions to assess their knowledge of available community treatment services, as well as their knowledge of how to access needed services. Community professionals were asked open-ended and

Likert-scale questions to assess their perceptions of community treatment service needs. All open-ended and Likert-scale responses were collected via round-robin method, meaning REPIs recorded an individual response from each participant during the focus group. For focus group questions (scripted protocols), see Appendix.

### Data Analysis

All analyses of quantitative data were conducted using the Statistical Package for the Social Sciences (SPSS) and consisted of counts, frequencies, comparisons of means (one-way ANOVA), chi-square tests, and Fisher exact tests of independence. An alpha level of 0.05 was used for all statistical tests. All percentages provided in the Results section are valid percentages reflecting the number of participants that provided answers.

Qualitative data were analyzed using grounded theory, with response categories generated and abstracted to reflect the viewpoints of participants. Grounded theory is an inductive, systematic methodological process used in social science research. Through an iterative, nonlinear process of discovery, response categories are identified and defined.<sup>15</sup> A professional transcription service was used to transcribe focus group audio recordings for cycle 1. The REPIs and the study's authors independently analyzed transcripts, coded for participant responses per study question, and identified recurrent responses to generate question response categories. Authors reviewed and discussed the initial response categories, then independently analyzed category discrepancies, and further discussed additional discrepancies to establish full consensus on response categories. They reviewed and discussed this final coding until full consensus was reached on categories. The REPIs transcribed and coded for cycles 2 and 3 using question response categories established in cycle 1. Authors then reviewed REPI transcript coding to confirm response categories and to identify additional response categories not given in the previous cycle(s).

### RESULTS

A total of 940 unique participants enrolled in 157 focus groups during the 3 data collection cycles, meeting 87.0% of the study's target enrollment goal (940/1080). All participant data were collected in focus groups stratified by participant type. The participant breakdown was: 554/600 consumers (92.3%), 156/240 family members (65.0%), and 230/240 professionals (95.8%). For number of focus groups and participants stratified by participant type for each data collection cycle, see Table 1.

Of 554 participating clients, most were female (55.2%), White (94.3%), and non-Hispanic (96.3%). The mean age was 33.9 years. In terms of employment, 46.9% of clients reported employment during the past 6 months. For additional client (study participant) demographic information and descriptive information for Ohio and designated board areas (study areas), see Table 2. In terms of drug use, 78.3% of clients indicated opioids as their primary drug of choice, while 71.6% reported having ever used needles to inject drugs. Of 394 clients that reported having used needles, 80.3%

**Table 1. Number of Focus Groups and Participants by Participant Type per Cycle**

| Participant Type | Cycle | Number of Groups | Number of Participants | Participant Group Mean |
|------------------|-------|------------------|------------------------|------------------------|
| Client           | 1     | 24               | 183                    | 7.6                    |
|                  | 2     | 26               | 199                    | 7.7                    |
|                  | 3     | 28               | 172                    | 6.1                    |
|                  | Total | 78               | 554                    | 7.1                    |
| Family           | 1     | 8                | 54                     | 6.8                    |
|                  | 2     | 15               | 54                     | 3.6                    |
|                  | 3     | 10               | 48                     | 4.8                    |
|                  | Total | 33               | 156                    | 4.7                    |
| Professional     | 1     | 19               | 97                     | 5.1                    |
|                  | 2     | 13               | 65                     | 5.0                    |
|                  | 3     | 14               | 68                     | 4.9                    |
|                  | Total | 46               | 230                    | 5.0                    |

**Table 2. Demographic Profiles for Ohio, Study Areas, and Study Participants**

| Indicator <sup>a</sup>               | Ohio       | Study Areas | Study Participants           |
|--------------------------------------|------------|-------------|------------------------------|
| Total population, 2019               | 11 689 100 | 1 036 831   | 554                          |
| Gender (female), 2019                | 51.0%      | 55.2%       | 55.2%                        |
| White, 2019                          | 81.7%      | 85.9%       | 94.3%                        |
| African American, 2019               | 13.1%      | 9.2%        | 7.7%                         |
| Hispanic or Latino origin, 2019      | 4.0%       | 1.9%        | 3.7%                         |
| High school graduation rate, 2015-19 | 90.4%      | 89.2%       | 78.6%                        |
| Median household income, 2019        | \$56 602   | \$46 195    | \$16 000-19 999 <sup>b</sup> |
| Persons below poverty level, 2019    | 13.1%      | 15.2%       | 64.8%                        |

<sup>a</sup>Ohio and study areas' statistics were obtained from the 2019 estimates of the US Census.

<sup>b</sup>Participants reported income by selecting a category that best represented their household's approximate income for the previous year.

reported having shared needles with other persons. Nearly two-thirds (65.3%) of all clients reported ever having a mental health diagnosis.

Of 156 participating family members, 66.0% reported having 1 family member currently in treatment for OUD, reporting their relationship to their family member living with OUD most often as parent (35.9%), followed by sibling (17.9%). Community professionals described their current workplace as providing the following types of care/services: outpatient SUD treatment (66.4%), services for persons living with dual diagnosis (33.6%), inpatient SUD treatment (26.6%), and community-based mental health (24.0%). Of the 230 professionals, 52.9% reported their current profession as therapist/counselor or social worker and 35.5% reported having worked with individuals with OUD for more than 10 years.

### Stigma

In focus groups, all participant types reported that messaging about the opioid epidemic was overwhelmingly negative. Participants discussed persons living with OUD as often assigned stigmatizing labels. A client shared, "When [the opioid epidemic] is talked about, it is putting that person [living with OUD] down.... It is the social norm nowadays to put the 'addict' in this disgusting category below any human being and it makes you not want to talk about [addiction]." For a complete list of preferred messaging, see Table 3.

The mean overall Perceived Stigma of Addiction Scale (PSAS) score for all clients throughout the study was 23.10 ( $n = 543$ ,  $R = 21$ ,  $SD = 3.65$ ). There were no statistically significant differences between cycle means as determined by one-way ANOVA ( $F(2, 540) = 2.53$ ,  $p = 0.08$ ). Thus, PSAS mean scores did not differ significantly by cycle, suggesting that clients perceived a moderate level of stigma toward persons living with OUD and that these perceptions did not significantly differ throughout the study. For a comparison of client PSAS mean scores by cycle, see Table 4.

### Community Approaches

Participants discussed many approaches employed in their communities to combat the opioid crisis. In focus groups, clients, along with family members and community professionals in all communities, discussed MAT as a common approach and critical strategy.

**Table 3. Preferred Community Messaging Related to Opioids**

Addiction affects the entire family/community  
 Addiction does not define a person  
 Addiction does not discriminate  
 Addiction is a disease  
 Do not use drugs/opioids  
 Family support is important  
 If you are going to use, be safe  
 People are dying/opioids kill  
 Recovery is a process  
 Stop stigma  
 Treatment/help is available  
 Treatment works



Table 4. Comparison of Client PSAS Cycle Mean Scores

| Cycle | N                | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |         |         |
|-------|------------------|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|       |                  |       |                |            | Lower Bound                      | Upper Bound | Minimum | Maximum |
| 1     | 179              | 23.60 | 3.82           | 0.29       | 23.03                            | 24.16       | 11      | 32      |
| 2     | 197              | 22.81 | 3.61           | 0.26       | 22.31                            | 23.32       | 13      | 32      |
| 3     | 167              | 22.90 | 3.50           | 0.27       | 22.37                            | 23.44       | 15      | 32      |
| Total | 543 <sup>a</sup> | 23.10 | 3.65           | 0.16       | 22.79                            | 23.41       | 11      | 32      |

<sup>a</sup>Eleven cases were excluded due to missing or invalid responses.

Analysis of survey data found that, of 413 clients who reported opioids as a primary drug of choice, 58.6% reported receiving MAT. They reported Suboxone® (buprenorphine and naloxone) and Vivitrol® (naltrexone, a monthly injectable suspension) as the most common forms of MAT received. In terms of differences between cycles, there was a significant increase in the proportion of clients reporting current MAT from cycle 1 (50.3%) to cycle 2 (62.7%) to cycle 3 (63.6%) ( $n = 413$ ,  $\chi^2 = 6.29$ ,  $df = 2$ ,  $p = 0.04$ ).

In focus groups, quick response teams (QRTs) were discussed as an important mode of outreach that has been successful in linking persons living with OUD to treatment. Quick response teams typically consist of a law enforcement officer, a paramedic, and a counselor/social worker that provide community outreach to those who have suffered an overdose, offering resources to persons who have overdosed and their families with the goal to connect them to treatment. There were a few additional approaches identified in cycle 3 that were not identified in previous cycles. Family members, along with clients, discussed the staffing of peer recovery coaches in emergency departments as a new approach to linking persons who have overdosed to treatment services. Another approach first reported in cycle 3 was wraparound services in which community-based services and supports wrap around a person with OUD to facilitate recovery. For a complete list of community approaches, see Table 5.

Analysis of survey data found that, of all clients across cycles ( $N = 554$ ), 93.1% reported having heard of naloxone. In focus groups, clients discussed naloxone as an important community response to the opioid epidemic. A client commented, "Since everyone is finding out about Narcan® (naloxone), there have been less deaths." Another client said, "There are kids today who know how to use Narcan® ... [to prevent] losing their parents to OD (opioid overdose)." While cycle 3 community professionals observed an increase in access to naloxone from the previous 2 cycles, in focus groups, they continued to report pushback within their communities to the provision of naloxone, citing that some community members believed that too many resources were being consumed by those who "choose" to use opioids and that naloxone provides a safeguard to overdose, thus enabling continued opioid use. For changes in affirmative responses to naloxone survey questions across participant types, see Table 6.

## Community Response

When cycle 3 participants were asked in focus groups to rate how well their community was responding to the identified approaches for combating the opioid crisis, clients most often reported 4, while family members and community professionals most often reported 4 to 5 on a scale of 1 (not well at all) to 7 (extremely well); for cycle 2 the most common scores were 3 to 4 and 3, respectively. Moderate response scores reflected the perception that the opioid epidemic, particularly in terms of overdose, had remained consistent throughout the study period. However, par-

Table 5. Participant Identified Community Approaches per Cycle<sup>a</sup>

| Community Approaches                          | Cycle 1 | Cycle 2 | Cycle 3 |
|---|---------|---------|---------|
| 12-step programs                              | +       | +       | +       |
| Anti-drug coalitions/task forces              | +       | +       | +       |
| Child Protective Services (CPS) interventions | +       | -       | +       |
| Community awareness campaigns                 | +       | +       | +       |
| Counseling                                    | +       | +       | +       |
| Detoxification                                | +       | +       | +       |
| Drug courts                                   | +       | +       | +       |
| Drug take-back events                         | +       | -       | -       |
| Educating medical staff on addiction          | -       | -       | +       |
| Faith-based initiatives                       | +       | +       | +       |
| Family drug courts                            | +       | -       | +       |
| Family support groups (eg, Al-Anon)           | +       | +       | +       |
| Helplines                                     | +       | +       | -       |
| Incarceration                                 | +       | +       | +       |
| Medication-assisted treatment (MAT)           | +       | +       | +       |
| Naloxone                                      | +       | +       | +       |
| Needle exchange programs                      | -       | +       | +       |
| Peer-to-peer supports                         | +       | -       | +       |
| Quick response teams (QRTs)                   | +       | +       | +       |
| School-based prevention                       | +       | -       | +       |
| Sober living/housing                          | +       | +       | +       |
| Staffing EDs with peer recovery coaches       | -       | -       | +       |
| Treatment programs                            | +       | +       | +       |
| Warm hand-offs                                | -       | +       | +       |
| Wraparound services                           | -       | -       | +       |

<sup>a</sup>A '+' indicates an approach discussed by participants in that cycle; a '-' indicates an approach not/infrequently discussed by participants in that cycle.



Table 6. Proportional Change in Naloxone Knowledge and Experience Cycle 1 to Cycle 3

| Survey Question   | % Yes Response |         | % Change           |
|---|----------------|---------|--------------------|
|   | Cycle 1        | Cycle 3 |                    |
| Have you heard of naloxone?                                       |                |         |                    |
| Clients ( <i>n</i> = 183; <i>n</i> = 172)                         | 85.8           | 97.1    | +11.3 <sup>a</sup> |
| Family ( <i>n</i> = 54; <i>n</i> = 48)                            | 74.1           | 100.0   | +25.9 <sup>a</sup> |
| Professionals ( <i>n</i> = 97; <i>n</i> = 68)                     | 100.0          | 100.0   | 0.0                |
| Do you know where to obtain naloxone?                             |                |         |                    |
| Clients ( <i>n</i> = 157; <i>n</i> = 166)                         | 72.6           | 72.9    | +0.3               |
| Family ( <i>n</i> = 40; <i>n</i> = 48)                            | 57.5           | 83.3    | +25.8 <sup>a</sup> |
| Professionals ( <i>n</i> = 97; <i>n</i> = 68)                     | 93.8           | 100.0   | +6.2 <sup>a</sup>  |
| Have you ever obtained naloxone?                                  |                |         |                    |
| Clients ( <i>n</i> = 157; <i>n</i> = 167)                         | 41.4           | 41.9    | +0.5               |
| Family ( <i>n</i> = 40; <i>n</i> = 48)                            | 27.5           | 45.8    | +18.3              |
| Professionals ( <i>n</i> = 97; <i>n</i> = 68)                     | 69.1           | 75.0    | +5.9               |
| Do you currently possess naloxone?                                |                |         |                    |
| Clients ( <i>n</i> = 157; <i>n</i> = 166)                         | 17.8           | 20.5    | +2.7               |
| Family ( <i>n</i> = 40; <i>n</i> = 48)                            | 15.0           | 35.4    | +20.4 <sup>a</sup> |
| Professionals ( <i>n</i> = 97; <i>n</i> = 68)                     | 56.7           | 63.2    | +6.5               |
| Have you ever used naloxone to save someone from an overdose?     |                |         |                    |
| Clients ( <i>n</i> = 155; <i>n</i> = 166)                         | 14.8           | 25.9    | +11.1 <sup>a</sup> |
| Family ( <i>n</i> = 40; <i>n</i> = 48)                            | 0.0            | 4.2     | +4.2               |
| Professionals ( <i>n</i> = 97; <i>n</i> = 68)                     | 20.6           | 19.1    | -1.5               |
| Has naloxone ever been used on you to reverse an opioid overdose? |                |         |                    |
| Clients ( <i>n</i> = 154; <i>n</i> = 166)                         | 42.2           | 34.3    | -7.9               |

<sup>a</sup>Significant change at  $p \leq 0.05$ .

Participants generally acknowledged that community efforts had increased. When participants were asked in focus groups to share observations of community changes that have occurred during the study's time frame, the number of positive observations increased 2.5 times from cycle 1 to cycle 3. Moreover, there were half as many negative observations discussed in cycle 3 compared to cycle 2. For reported observations of community change per cycle, see Table 7.

### Treatment Needs

All participant types reported in focus groups that additional services were needed a great deal. Most agreed that demand continued to outpace the availability of services. They spoke of needing more capacity across the treatment spectrum. Clients in rural communities continued to report that a person with OUD typically had no option but to leave their community to receive needed services, often traveling considerable distances from home. Community professionals pointed to continued wait times for services as an indication that more services were needed. Family members emphasized that while there were more treatment options than previously, there were not enough professionals/staff to expand treatment services.

In focus groups throughout cycles, when asked, 'did you receive the kind of services you needed' and 'were the services you received the right approach for helping you,' clients in all commu-

nities overwhelmingly responded 'yes' to both questions. Most clients felt that they had received the services they needed from the program in which they were currently enrolled and that they would recommend the same services to a friend or loved one who needed similar help. When asked, 'is there any type of service that you felt you needed but had not received,' the most frequent response for cycles 2 and 3 was 'no'; 'yes' was the most frequent response given in cycle 1. However, while clients overwhelmingly said that they had received all needed services, they discussed a lack of certain services in their communities. For a list of services needed, as well as a list of barriers to treatment services, see Table 8.

In general, participants throughout cycles reported that it was relatively easy to access treatment services if one were arrested, pregnant, had overdosed, or had insurance. When asked in focus groups how easy or difficult it was for people to access treatment services in the community on a scale from 1 (very difficult/cannot access treatment) to 7 (very easy/no trouble accessing treatment at all), accessibility rating scores varied between communities. Throughout cycles, 1 community consistently reported low accessibility scores of 1 to 3, while 2 communities reported moderate to high scores of 4 to 6, and the other community reported high scores of 6 to 7. Clients in the community reporting low accessibility to treatment assigned their scores based on wait times for inpatient treatment and detox services. Community professionals throughout cycles most often reported accessibility to treatment



Table 7. Observed Changes of Community Approaches per Cycle

| <b>Positive observations</b>  | <b>Cycle(s)<sup>a</sup></b> |
|---|-----------------------------|
| Naloxone is saving lives  | 1, 2, 3                     |
| Increase in awareness/understanding of opioid addiction (stigma reduction)      | 1, 2, 3                     |
| Increase in number of people seeking help/entering treatment                    | 1, 2, 3                     |
| Increase in needle exchanges  | 1, -, 3                     |
| Increase in treatment as an alternative to incarceration                        | 1, 2, 3                     |
| Increase in resources/treatment/MAT programs (eg, naltrexone)                   | 1, 2, 3                     |
| Increase in people in recovery  | 1, 2, 3                     |
| Increase in younger people entering treatment                                   | -, 2, 3                     |
| Decrease in stigma/less shame in seeking treatment                              | -, 2, 3                     |
| Increase in support/support groups  | -, 2, 3                     |
| Decrease in overdoses   | -, 2, 3                     |
| Increase in policing (drug interdiction)  | -, 2, 3                     |
| Increase in coordination among community partners                               | -, 2, 3                     |
| Increase in community involvement/volunteerism                                  | -, 2, 3                     |
| Decrease in treatment wait times  | -, -, 3                     |
| Access/distribution of fentanyl test strips                                     | -, -, 3                     |
| Decrease in crime rate  | -, -, 3                     |
| Quick response teams linking overdose victims to treatment                      | -, -, 3                     |
| <b>Negative observations</b>  |                             |
| Increase in methamphetamine use   | 1, 2, 3                     |
| Resistance to treatment centers in the community                                | 1, 2, -                     |
| Treatment programs only reaching a small proportion of people who need services | 1, 2, -                     |
| Community pushback/people not caring (compassion fatigue)                       | 1, 2, 3                     |
| More attention directed to policing/increased incarceration                     | 1, 2, 3                     |
| Lack of coordination among community partners                                   | 1, 2, 3                     |
| Opioid epidemic is worsening  | -, 2, 3                     |
| Limited prevention work   | -, 2, -                     |
| Denial of epidemic/opioid problem   | -, 2, -                     |

<sup>a</sup>A '-' in place of a cycle number indicates a theme not/inrequently discussed in that cycle.

as 4 on the above scale, while family members most often reported 4 (cycle 3), 3 (cycle 2), and 1 to 3 (cycle 1). Community professionals discussed programs/agencies not reaching some populations at risk (eg, older adults, LGBTQ+ populations, and people with serious mental illness).

## DISCUSSION

This study presented observations of community change as reported by 940 participants from communities particularly hard hit by the opioid epidemic. Study assessment objectives were met. Study findings support the hypotheses that STR grant funding would have a positive effect over time on increasing knowledge of available treatment services in communities and in identifying treatment needs; findings did not support the hypothesis that STR grant funding would have a positive effect over time on reducing stigma.

Participants throughout communities reported misconceptions or general lack of understanding regarding addiction in community messaging. They shared frequently hearing that addiction is a choice and a moral issue. All participant types indicated wanting people in the community to hear and understand that addiction is a disease, and since addiction is a disease and a chronic condition,

it should be treated as other chronic diseases. Education on addiction may be helpful in combating stigma in communities. Training and educational programs targeting counselors/therapists, medical professionals, and police officers have demonstrated effectiveness in reducing stigma-related outcomes.<sup>16,17</sup> Moreover, acknowledging the far-reaching impact of addiction when addressing stigma would raise awareness of the many ways that addiction negatively impacts family members of persons living with OUD as well as entire communities. Other research has found that addressing the effects of drug use on familial relationships and other related social problems is beneficial to long-term recovery.<sup>18</sup> Community members should also be made aware of the many people in recovery who are productive members of society. The sharing of recovery stories with those not in recovery is likely to decrease stigma.<sup>19,20</sup>

Positive messaging pertaining to treatment and recovery would likely aid stigma reduction. Research has found that portraying persons with SUD as successfully treated and in recovery, as well as sharing their personal stories that highlight structural barriers to treatment, are effective strategies for reducing stigma and discrimination and increasing the public's willingness to invest in SUD resources.<sup>19,20</sup> Messages such as change is possible and that



there is hope for persons with OUD to get needed treatment and to recover and that recovery takes time and is a challenging, yet rewarding process, would likely improve community attitudes. In addition, efforts to increase empathy among community members is needed to increase understanding that people with addiction are people like everyone else. Anyone is susceptible to addiction and the opioid crisis is a public health issue. Family members and community professionals agreed that stigmatization is equally as harmful as addiction itself. While consistent PSAS scoring did not indicate a reduction in perceived stigma toward persons living with OUD during the study time frame, participants throughout cycles observed an increasing number of community approaches, such as public awareness campaigns and recovery rallies, to impart knowledge, change attitudes, and reduce stigma.

Participants identified and discussed many approaches employed in their communities to combat the opioid crisis, demonstrating knowledge of available treatment services. When cycle 3 participants were asked to rate their community's response to approaches to combat the opioid crisis, they assigned slightly higher rating scores across the board from cycle 2 to cycle 3, indicating perhaps that communities had become more responsive to addressing OUD. Participants generally acknowledged that community efforts to address the opioid epidemic had increased and that progress had been made. Cycle 3 treatment providers noted that wait times for services had gotten shorter since cycle 1, and family members reported increased service accessibility from cycles 2 and 1. However, most participants spoke of needing more capacity across the treatment spectrum.

Service expansion is needed, both in terms of additional services and a higher volume of existing services. Communities need to address the unmet needs and barriers to treatment identified in this study to combat the opioid epidemic more effectively. For instance, MAT is a critical strategy to assisting those addicted to opioids to recover; however, only approximately half of all clients reported currently receiving MAT. Additional MAT prescribers and more MAT choices are needed. Clients of 1 county behavioral health board area noted needle exchanges (also known as syringe exchanges) operating in their communities when 71.6% of all clients reported past intravenous drug use and 80.3% of these clients reported having shared needles while injecting drugs: 42.1% of all clients reported having tested positive for hepatitis C. Needle exchanges provide more than just clean needles to people who use opioids, oftentimes these programs provide information on available community resources. Further expansion of needle exchanges should be evaluated. In addition, recovery support services are needed. The consensus among clients was that they did not receive all the services they felt they needed from their treatment programs; most often cited as lacking or missing were housing and job placement services and transitional support/aftercare programming when exiting treatment.

## Limitations

This study has limitations. Our sampling plan might have created selection bias due to the exclusive recruitment of persons living with OUD from treatment programs. The experiences of persons receiving treatment for OUD might have differed from persons living with OUD who were not in treatment or from those who had never accessed OUD treatment. To minimize this bias, client data were corroborated with data collected from family members of persons living with OUD, many of whom shared experiences of loved ones not in treatment or of loved ones who had never accessed OUD treatment. Also, although study epidemiologists were assigned to 4 geographically different county behavioral health board areas, findings of this study may not be wholly generalizable to all county behavioral health board areas within the state. Moreover, since the proportion of clients who identified as White was considerably higher than the Ohio general population, the limited racial diversity of the sample may not fully capture the experiences, feelings, and beliefs of the state's diverse populations. Lastly, due to the nature of focus groups, it was possible that some participants may have selectively reported attitudes and beliefs that were perceived as socially desirable. To reduce social desirability bias, all participants were assured that all information shared/gathered was strictly confidential. Moreover, during recruitment, and again during the consent process, all potential par-

**Table 8. Identified Types of Services Needed and Barriers to OUD Treatment**

### **Services needed**

- Detox in jail
- Detox in the community
- Employment services
- GED classes
- Housing assistance
- Inpatient treatment
- Life skills training
- Medical services
- Mental health services
- Parenting classes
- Transitional housing/sober living
- Transitional support/aftercare
- Transportation
- Trauma-informed care
- Wraparound services

### **Barriers to OUD treatment**

- Fear of going to jail due to outstanding warrants
- Lack of awareness of treatment options
- Lack of family support/family enabling drug use
- Lack of financial support/insurance
- Lack of readiness (person with OUD not ready for treatment/to give up drug use)
- Lack of transportation/no public transportation
- No detox in the community
- Not enough staff to deliver/expand treatment services
- Poor attitudes of some providers/past negative experiences with treatment
- Shortage of doctors who specialize in addiction/MAT
- Stigma
- Strict guidelines/cumbersome processes to enrolling in treatment
- Strict program rules (no absence policy)
- Treatment is time consuming (difficult to manage with work/childcare responsibilities)
- Wait lists/too few treatment facilities/beds (no treatment on demand)



ticipants and those who decided to decline participation, as well as participating and nonparticipating programs/agencies/organizations, were assured that they, as well as the locations where focus groups were conducted, would not be named in any report or publication.

## PUBLIC HEALTH IMPLICATIONS

While study findings did not support the hypothesis that STR grant funding would have a positive effect over time in reducing stigma, we support additional research of community efforts to reduce stigma as public health policymakers need to better understand how local and regional efforts should be modified to best provide prevention, treatment, and recovery supports to persons affected by OUD. Specifically, a better understanding of how STR funding has impacted stigma related to OUD could provide evidence that further funds in this area would likely yield additional benefits. This is especially important since states often cited stigma related to MAT as a barrier to spending their STR grant dollars.<sup>13</sup> Furthermore, since all participant types reported that messaging about the opioid epidemic is overwhelmingly negative and often assigns stigmatizing labels to persons living with OUD, public health practitioners should utilize the preferred community messaging discussed in this study to positively influence social norms related to opioid addiction and recovery. Stigma related to SUD has been previously cited as a reason for why there is not more available funding for addiction issues broadly.<sup>21</sup> Therefore, amending messaging about the opioid epidemic to express hope might make it more feasible to either initiate or expand access to the needed services identified in this study.

## Conclusion

This targeted response initiative met its objectives of generating data to aid in assessing Ohio's response to the 21st Century Cures Act to address the opioid crisis. Since the disbursement of STR grant dollars to communities to the conclusion of this study, many observations were recorded to indicate that STR grant-funded services had a positive effect. Although a direct causal relationship between STR grant-funded services and improved community responses to the opioid crisis cannot be stated, it can be reasonably inferred from this study's key findings, which were based on the perceptions of several hundred community stakeholders, that these services likely made a positive impact. And, while the duration of this study was perhaps too short to realistically change stigma related to OUD, the data generated through this study have the potential to inform/refine public health strategies to reduce stigma and enhance treatment services.

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## ERRATUM

2/1/2023: Corrected text visibility on tables

**APPENDIX.**

## Client Focus Group Questions

Opioid Messaging

1. What is the most consistent message you hear about opioids/heroin?
2. What messaging about opioids/heroin would you want people in your community to hear? (If you were to reframe the messages, what would they say?)

Current Community Approaches

3. What are your community's approaches to combating the opioid crisis?
  - a. How well is your community responding to these approaches on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well?' Please explain.
  - b. What changes have you noticed in your community as a result of these approaches?

Treatment Needs

4. How great do you think the need is for additional treatment services in your community on a scale from 1 to 7, where 1 is 'not needed at all' and 7 is 'needed a great deal?' Please explain.
5. How well do you think current treatment services address the needs of populations at risk on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well?' Please explain.

Your Community's Treatment System

6. How satisfied are you with the information that is available on the range of treatment services in your community on a scale from 1 to 7, where 1 is 'completely dissatisfied' and 7 is 'completely satisfied?' Please explain.
7. How did you hear about this program/agency/organization?
8. Who first suggested that you come here?
9. Why did you come to this program/agency/organization as opposed to somewhere else?
10. Are you under any pressure to come to this program/agency/organization, for example, from the courts, your employer, school, or family?
  - a. If yes, please identify source(s) of pressure and why you are being pressured?
11. How satisfied were you with the recommendations for treatment services given the options that were presented to you on a scale of 1 to 7, where 1 is 'completely dissatisfied' to 7 'completely satisfied?' Please explain.
12. What is the ease in which people access treatment services on a scale from 1 to 7, where 1 is 'very difficult/felt I could not access treatment' and 7 is 'very easy/I had no trouble accessing treatment at all?' Please explain.
13. In your opinion, what can be done to make accessing treatment services easier?
14. Please describe the way in which you accessed treatment services. What, if any, were the barriers you encountered when trying to access services?
15. Did you receive the kind of services you needed? Please explain.
16. Were the services you received the right approach for helping you? Please explain.
17. Was there any type of service that you felt you needed from the program/agency/ organization but had not received?
  - a. If yes, what?
18. If a friend or loved one were in need of similar help, would you recommend the same services? Please explain.
19. Please describe your level of satisfaction with the services/care you have received on a scale from 1 to 7, where 1 is 'completely dissatisfied' and 7 is 'extremely satisfied.' Please explain.

Coordination of Care

20. If you received treatment services from more than one program/agency/organization (eg, assessment at one agency with treatment referral to another agency), how satisfied are you with the way that different programs/agencies/organizations exchanged treatment information about you on a scale of 1 (completely dissatisfied) and 10 (completely satisfied)? Please explain.

If participant received treatment services from more than one program/agency/organization, please ask the following two questions (numbers 21 and 22). If not, skip to number 23.

21. How satisfied are you with the information that each program/agency/organization provided to you about the other's treatment services on a scale of 1 (completely dissatisfied) and 7 (completely satisfied)? Please explain.
22. How satisfied are you with the way the treatment staff of the different programs/agencies/organizations worked together to help you with your problems on a scale of 1 (completely dissatisfied) and 7 (completely satisfied)? Please explain.
23. In your opinion, how well do treatment programs/agencies/organizations in your community work together, on a scale from 1 to 7, where 1 is 'they don't seem to work together at all' and 7 is 'they work together completely?' Please explain.
24. In your opinion, why do some people drop out of treatment?
25. How smoothly do medical services (eg, family doctor, MAT prescriber) and addiction treatment services (eg, this program) work together on a scale from 1 to 7, where 1 is 'they don't seem to work together at all' and 7 is 'they work together completely?' Please explain.
26. What roles do family members play in a person's treatment?
27. What roles have your family members played in your treatment?

Closing Question

28. Are there any other thoughts or ideas that you would like to share?



## Family Member Focus Group Questions

Opioid Messaging

1. What is the most consistent message you hear about opioids/heroin?
2. What messaging about opioids/heroin would you want people in your community to hear? (If you were to reframe the messages, what would they say?)

Current Community Approaches

3. What are your community's approaches to combating the opioid crisis?
  - a. How well is your community responding to these approaches, on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well'? Please explain.
  - b. What changes have you noticed in your community as a result of these approaches?

Treatment Needs

4. How great do you think the need is for additional treatment services in your community on a scale from 1 to 7, where 1 is 'not needed at all' and 7 is 'needed a great deal'? Please explain.
5. How well do you think current treatment services address the needs of populations at risk on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well'? Please explain.
6. What is the ease in which people access treatment services in your community on a scale from 1 to 7, where 1 is 'very difficult/cannot access treatment' and 7 is 'very easy/no trouble accessing treatment at all'? Please explain.
  - a. In your opinion, what can be done to make accessing treatment services easier?

Your Community's Treatment System

7. Did your loved one receive the kind of services you think he/she needed? Please explain.
8. Were the services your loved one received the right approach for helping him/her? Please explain.
9. If a friend or another loved one were in need of similar help, would you recommend the same services? Please explain.
10. Please describe your level of satisfaction with the treatment services your loved one has received on a scale of 1 to 7, where 1 is 'completely dissatisfied' to 7 is 'completely satisfied.' Please explain.

Coordination of Care

11. In your opinion, how well do treatment programs/agencies/organizations in your community work together on a scale from 1 to 7, where 1 is 'they don't seem to work together at all' and 7 is 'they work together completely?' Please explain.
12. What is the relationship between medical services (eg, family doctor, MAT prescriber) and addiction treatment services (eg, this program)?
13. What roles do family members play in a loved one's treatment?
14. What role do you play in your loved one's treatment?

Closing Questions

15. Have you participated in any trainings/classes/conferences related to treating/preventing opioid use disorder?
  - a. If yes, what, when and where? Please describe.
16. Are there any other thoughts or ideas that you would like to share?

## Community Professional Focus Group Questions

Opiate Messaging

1. What is the most consistent message you hear about opiates/heroin?
2. What messaging about opiates/heroin would you want people in your community to hear? (If you were to reframe the messages, what would they say?)

Current Community Approaches

3. What are your community's approaches to combating the opiate crisis?
  - a. How well is your community responding to these approaches on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well'? Please explain.
  - b. What changes have you noticed in your community as a result of these approaches?

Treatment Needs

4. How great do you think the need is for additional treatment services in your community on a scale from 1 to 7, where 1 is 'not needed at all' and 7 is 'needed a great deal'? Please explain.
5. How well do you think current treatment services address the needs of populations at risk on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well'? Please explain.
6. How easy or difficult do you think it is for people to access treatment services in your community on a scale from 1 to 7, where 1 is 'very difficult/cannot access treatment' and 7 is 'very easy/no trouble accessing treatment at all'? Please explain.
  - a. In your opinion, what can be done to make accessing treatment services easier?
7. In your opinion, why do some people drop out of treatment?

Your Community's Treatment System

8. Do you view your program/agency/organization as part of a community treatment system?
  - a. If yes, how would you describe your program/agency/organization's role in your community's current treatment system?



9. Please identify other stakeholders and their roles in your community's treatment system.
10. By your estimate, how many treatment programs/agencies/organizations exist in your community?
11. Are there differences in the types of clients seen at each program/agency/organization? Please explain.
12. Are different treatment programs/agencies/organizations aware of one another?
  - a. If yes, please describe the extent of cooperation among participating service providers.
13. In your opinion, how well would you say treatment programs/agencies/organizations in your community work together on a scale from 1 to 7, where 1 is 'they don't seem to work together at all' and 7 is 'they work together completely?' Please explain.
14. How well do you think these stakeholders communicate with each other about clients' needs on a scale from 1 to 7, where 1 is 'not well at all' and 7 is 'extremely well?' Please explain.
15. Is there clarity in boundaries with other health and social services systems? Please explain.
16. How efficiently do you think people move into, through and out of the various help systems, on a scale from 1 to 7, where 1 is 'completely inefficiently' and 7 is 'completely efficiently?' Please explain.
17. Please describe your community treatment system's capacity to respond to change.
18. What are the gaps that you perceive in your community treatment system?
  - a. In your opinion, what could be done to fill these gaps?

#### Coordination of Care

19. Has your program/agency/organization been successful in linking people with needed treatment services? Please explain answer, describing success(es) and to what/whom do you attribute success(es)?
20. Have you referred clients in the past?
  - a. If yes, why, and where?
  - b. If no, why not?
21. Do you intend to refer clients in the future? Please explain.
22. What criteria are used to determine appropriate client referral?
23. How satisfied are you with the way the treatment staff of different programs/agencies/organizations work together to ensure that persons with opioid use disorder get the help they need on a scale of 1 (completely dissatisfied) and 7 (completely satisfied)? Please explain.
24. How smoothly do medical services (eg, family doctor, MAT prescriber) and addiction treatment services (eg, this program) work together on a scale from 1 to 7, where 1 is 'they don't seem to work together at all' and 7 is 'they work together completely?' Please explain.
25. What roles do family members play in a person's treatment?

Ask questions 26-29 of treatment professionals. Skip to the closing questions for all other community professionals (Question 30).

26. If your program/agency/organization were to close, where would your clients go to receive treatment services?
27. Is your program/agency/organization reaching all those for whom it was intended?
  - a. If no, why not?
28. Do the services your program/agency/organization deliver meet the expressed needs of your clients?
  - a. If no, why not?
29. In your opinion, are the services offered by your program/agency/organization of good quality? Please explain.

#### Closing Questions (Ask all professionals)

30. Have you participated in any trainings/classes/conferences related to treating/preventing opioid use disorder?
  - a. If yes, what, when and where? Please describe.
31. Are there any other thoughts or ideas that you would like to share?