



Cuyahoga County Overdose Data to Action Initiative

Year Three Evaluation Report: September 1, 2021 – August 31, 2022



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Cuyahoga County
Overdose Data to Action (CCOD2A Initiative)
Year-End Report - Year Three (February 2023)

Acknowledgements

The Begun Center for Violence Prevention Research and Education, Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University promotes social justice and community development by conducting applied, community-based and interdisciplinary research on the causes and prevention of violence, and by educating and training social workers, teachers, law enforcement and other professionals in the principles of effective violence prevention. The Center also develops and evaluates the impact of evidence-based best practices in violence prevention and intervention, and seeks to understand the influence of mental health, substance use, youth development and related issues on violent behavior and public health.

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Introduction

The Begun Center for Violence Prevention Research and Education (Begun Center) at Case Western Reserve University serves as the evaluator for the Cuyahoga County Board of Health (CCBH) Cuyahoga County Overdose Data to Action (CCOD2A) Initiative funded by the Centers for Disease Control and Prevention (CDC) grant, 5-NU17CE925005-02-00. The overarching purpose of CCOD2A is to obtain high-quality, comprehensive, and timely data on overdose morbidity and mortality and to use those data to inform prevention and response efforts.

This report covers activities for the CCOD2A Initiative during Year Three (September 1, 2021 – August 31, 2022) and summarizes the outcomes and achievements of 12 partner agencies. Activities are centered on six consecutively numbered strategies identified by the CDC. **Strategy Three** focuses on surveillance activities, and **Strategies Four** through **Eight** address prevention and intervention efforts.

In addition to the Begun Center and the Cuyahoga County Board of Health, there are ten partner agencies: the ADAMHS Board of Cuyahoga County, Cuyahoga County Medical Examiner’s Office, Center for Health Affairs, The Centers (formally Circle Health Services), Cleveland Department of Police Fusion Center, Cleveland State University, MetroHealth, St. Vincent Charity Medical Center, Thrive Peer Support, and The Woodrow Project. In Year Three, technical assistance was also provided by the CDC Foundation.



The following is a list of acronyms used to identify partner agencies.

ADAMHSB	Alcohol Drug Addiction and Mental Health Services Board of Cuyahoga County
Begun Center	Begun Center for Violence Prevention Research and Education
CCBH	Cuyahoga County Board of Health
CCMEO	Cuyahoga County Medical Examiner’s Office
CDP	Cleveland Division of Police
CHA	Center for Health Affairs
Centers	Centers for Families and Children
CSU	Cleveland State University
ESC-NEO	Educational Service Center of Northeast Ohio
MetroHealth	Metro Health Medical Center
NaRCAD	National Resource Center for Academic Detailing
PAXIS	PAXIS Institute
SVCMC	St. Vincent Charity Medical Center

Major accomplishments and findings from the evaluation are summarized in this report. Outcome measures associated with each activity provide quantitative data measuring the success of each strategy. Qualitative data is collected via partner agencies' self-reported documentation of activity implementation, barriers encountered, and innovative ideas.

The number of lives touched by the opioid epidemic includes those experiencing OUD, their family and friends, first responders, healthcare workers, and many more. A survey administered in the spring of 2022 revealed that an overwhelming number of staff from partner agencies believe that the CCOD2A Initiative has improved care for patients with opioid use disorder (OUD), increased the availability of information on the opioid crisis in Cuyahoga County, including collaboration among County agencies, and improved access to resources for patients. The evaluation continued to expand in Year Three to examine how individuals and agencies play a role in combatting the rise of fatal and nonfatal overdoses.

Evaluation Design and Reporting

Institutional Review Board Approval

The Case Western Reserve University's Institutional Review Board (IRB) determination that the evaluation was not research involving human subjects remains in effect. IRB approval and monitoring is not required at this time. No additional IRB submissions or modifications were made in Year Three.

Methods

The evaluation uses multiple evaluation methods to facilitate a comprehensive integration and analysis of primary and secondary data, including outcome and process measures to assess Cuyahoga County's effectiveness in acquiring data on opioid prescribing, understanding local opioid-related morbidity and mortality, and assessing the ability of the CCOD2A to use these data to inform prevention. Some data collection occurs within partner agencies and data also is accessed from multiple community and law enforcement agencies.

Surveillance project analysis. Cuyahoga County has established relationships with access to various datasets that improve our understanding of the drug overdose (OD) burden locally. Surveillance data generated from the initiative includes these data and expands on this information in order to develop a surveillance infrastructure that: 1) provides data to inform the CCOD2A prevention strategies to generate greater insight for action, and to drive prevention and response activities; 2) creates comprehensive drug overdose epidemiologic profiles; 3) allows for more timely dissemination of drug overdose related information; and 4) creates a mechanism for sharing data with local (including the public), state, and federal partners.

Other data collection. Data collection includes local-Naloxone distribution by Cuyahoga County EMS, Ohio Department of Public Safety Division of EMS, Ohio EMS Incidence Reporting System and data from the State of Ohio Board of Pharmacy. Additional data sources include the ODH Office of Vital Statistics, EpiCenter data, Cuyahoga County Drug Courts, data identifying local-Ohio High Intensity Drug Trafficking areas. Data collection also includes tracking of referrals and linkages to treatment services, training, etc.

Online Surveys. Data collection methods also include secure surveys of selected partners, programs and service providers using REDCap. Access and use of REDCap was made possible through the Clinical and Translational Science Award (UL1TR002548). REDCap allows evaluators to develop and distribute online assessments and send and track participant invitations and reminders. REDCap accommodates online surveys containing quantitative and qualitative methods. Data inputted into REDCap are compatible with Excel, SPSS, R, and SAS, which allows for more rigorous data analyses. REDCap-collected data is also used to assess the effectiveness of all CCOD2A initiative training efforts.

Focus groups and interviews. The Begun Center collects data relating to CCOD2A process development and implementation. The process evaluation is conducted on an ongoing basis and data are also collected annually via focus groups and interviews with agencies and organizations participating in the project. The focus groups/interviews provide an opportunity to explore descriptions of protocols, experiences, perceptions, and opinions of barriers that hinder the ability to collect real-time opioid prescribing, morbidity and mortality data that can be used to inform prevention. Questions also examine barriers and successes in reaching users and linking them to treatment.

Sharing and accessing data among collaborators is determined based upon the type of data collected and the risk category for the type of data being accessed or shared. Data that carries a higher risk priority include requirements for data transmission through a secure data environment (SDE), such as identified data that includes personal health information (PHI). CWRU's SDE provides services for storing and analyzing sensitive research data in line with regulatory standards including HIPAA and FISMA. This includes data access and transfer via encrypted USBs and laptops. CWRU maintains a private cloud environment that delivers virtual desktops, and a secure internal network for web application delivery using a risk-based information security program, which includes the implementation of controls that meet recommendations or requirements of regulatory and information security standards. Data dictionaries, codebooks and other documentation relevant to using the data sets are included in the repository.

The information collected from the partner agencies is reported by strategy, then by activity. During Year Three, data collection tools for each agency continued to be refined and revised, with REDCap serving as the primary data collection tool for monthly reporting by partner agencies. Although the overarching objective is consistency in the monthly data reported from partner agencies, there are differences in data collected from each agency due to the variability in programs and services.

Long Term Outcomes

The CCOD2A identified several long-term outcomes to assess patterns and trends related to opioid use among residents of Cuyahoga County. Some of these outcomes were required as part of the application for the funding and others were identified as important for measuring the impact of the initiative.

In the last three years of the CCOD2A, there has been an increase in the number of evidence-based programs and/or services (EBPs) available in Cuyahoga County as reported by agencies registered with *drughelp.care*. The initiative has also seen increases in the linkages to treatment for individuals who have experienced a nonfatal overdose and/or individuals with opioid use or substance use disorders. While there has been a decrease in the number of emergency department visits for suspected drug overdose, it is unclear whether the decline is due to reduced usage of opioids, heroin and other stimulants or whether the decrease is due to more individuals administering naloxone in private settings without the aid of first responders. In either event lives are being saved. Unfortunately, the number of nonfatal overdoses and prevalence of individuals with opioid use disorder continues to increase in Cuyahoga County over the last several years evidencing the impact opioids and opioid analogs, especially fentanyl, have had in the county. Long-term outcomes are summarized in Table 1. Data is reported based on a calendar year unless otherwise noted.

Agencies

Cuyahoga County Board of Health (CCBH)

The Begun Center for Violence Prevention Research and Education (Begun Center)

Table 1

CCOD2A Long Term Outcomes

Description	Baseline	YR 1 Data	YR2 Data	YR3 Data	Outcome Status
Prevalence of Opioid Misuse and Opioid Use Disorder	17,332	14,408	18,061	Not Available	Increase of 4% from baseline to Year Two
Evidence-based Treatment for OUD	N/A	1,280	2,208	2,839	Over 100% increase from Baseline to Year Three
Emergency Department Visits for Suspected Overdose	1678	1585	1539	Not Available	Decrease of 8% from baseline to Year Two
Unintentional Drug Overdose Death Rate	34.65	37.64	44.25 ^a	Not Available	Increase of 28% from baseline to Year Two
Linkage of Nonfatal Overdose Clients to Treatment ^b	Not collected	463	759	720	Increase of 56% from Year One

^a2021 data is still considered preliminary therefore subject to change.

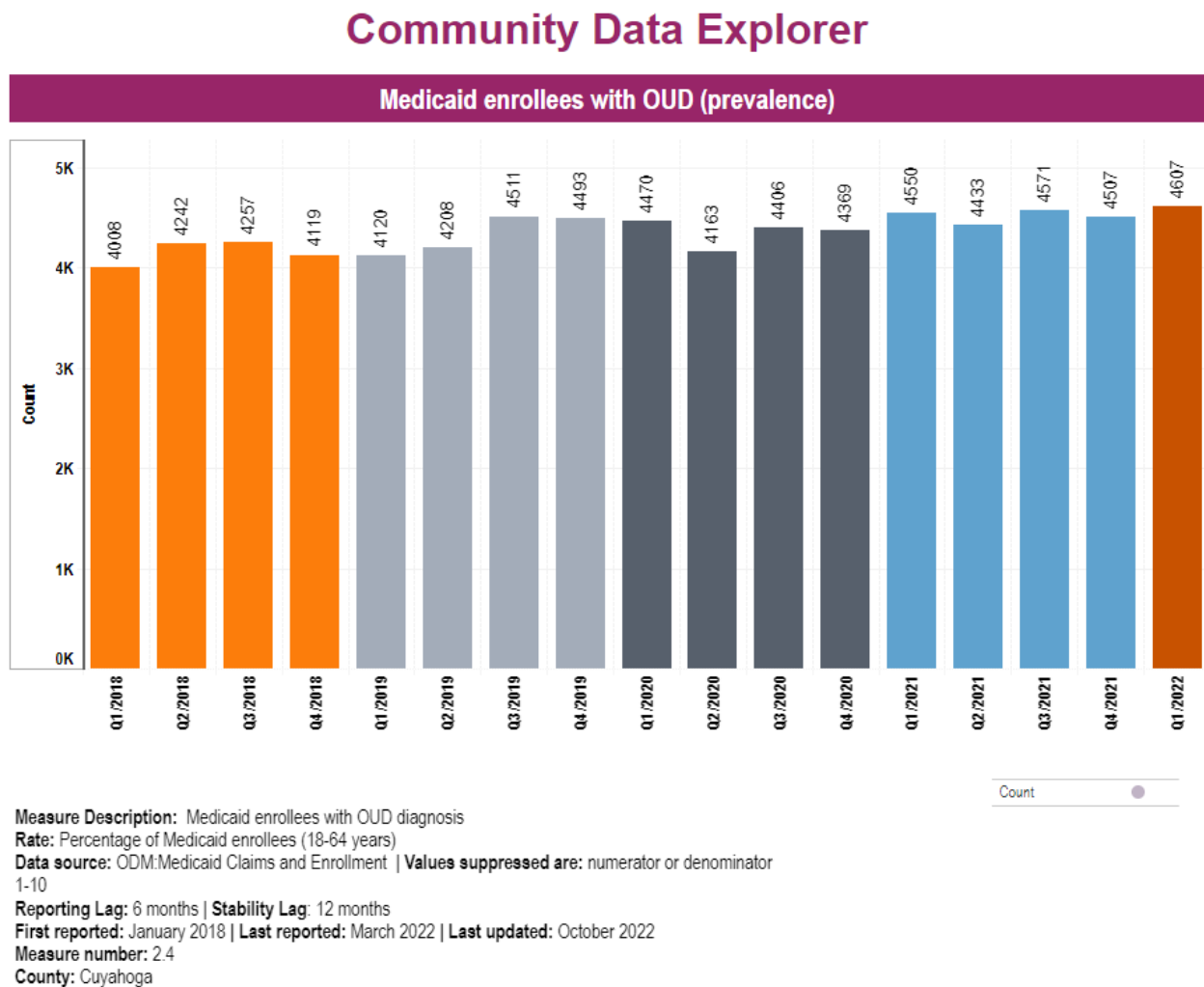
^bData is reported based on the grant year.

Prevalence of Opioid Misuse and Opioid Use Disorder

To examine rates of opioid misuse and opioid use disorder CCBH collects Medicaid data. Currently, the data is collected as part of the Healing Communities Study (HCS) until CCBH gains direct access to the data. Rates are calculated based on the number of Cuyahoga County Medicaid enrollees with a diagnosis of OUD. Data is collected annually, however there is a reporting lag of six months. In 2019 (baseline) the number of Medicaid enrollees with OUD was 17,332. The number of enrollees has slightly increased each year: 2020 = 17,408 and 2021 = 18,061 (Figure 1). From baseline to Year Two, the number increased by 4%. Data is not currently available for 2022, except for the first quarter. Although the prevalence of OUD has increased, not decreased in the last several years, this may be due to better tracking of OUD by medical providers.

Figure 1

Cuyahoga County Medicaid Enrollees with OUD (Prevalence)



Evidence-based Treatment for OUD

To assess the provision of evidence-based treatment for OUD, data is collected from the partner agency, Cleveland State University (CSU). CSU collects information on the number of registered services utilizing evidence-based practices (EBPs) from 2019 to 2021 on *drughelp.care*. Nine different EBPs were identified (Table 2). Data is reported based on a calendar cycle and not the grant-funded cycle.

Table 2

Evidence-Based Practices on drughelp.care

Evidence-Based Practice	Active Services			
	Year One (2019)	Year Two (2020)	Year Three (2021)	Change (n) ↑
Cognitive Behavioral Therapy (CBT)	47	172	291	244
Motivational Interviewing	238	381	480	242
Harm Reduction	111	189	296	185
MAT (Buprenorphine, Methadone or Vivitrol) and Allow (but don't prescribe)	210	367	557	347
Twelve-Step Programs	201	316	407	206
Psychoeducation	124	222	332	208
Dialectical Behavior Therapy (DBT)	127	200	290	163
Trauma Focused Counseling	183	319	416	233
Contingency Management Therapy	39	42	130	91
Total	1,280	2,208	2,839	1,559

From 2019 to 2022 the number of EBPs offered by agencies registered on *drughelp.care* has increased by over 100%. Please note that the reported data is collected from agencies registered on the website and does not include data from additional agencies in Cuyahoga County who provide EBPs for OUD but are not registered with *drughelp.care*. Increases may also be attributed to more agencies registering services on the website, not necessarily more services being offered in a particular year.

Emergency Department Visits for Suspected Overdose

EpiCenter data is used to examine emergency department visits for suspected drug overdoses. At baseline there were 1678 suspected drug overdoses in Cuyahoga County due to opioids/heroin and/or stimulants. The number has been declining over the last few years. In 2020, the number of suspected drug overdoses was 1585 and 1539 in 2021. Data is not available for 2022 except for the first half of the year, 610 suspected drug overdoses in Cuyahoga County due to opioid/heroin and/or stimulants. While there has been a decrease in the number of emergency department visits for suspected drug overdose, it is unclear whether the decline is due to reduced usage of opioids,

heroin and other stimulants or whether the decrease is due to more individuals administering naloxone in a private setting without the aid of first responders.

Unintentional Drug Overdose Death Rate

Vital Statistics and American Communities Survey (ACS) population data for Cuyahoga County is used to assess unintentional drug overdose death rates. The unintentional drug overdose age-adjusted death rate at baseline was 34.65 per 100,000 population. Death rates are age-adjusted to the 2010 U.S. standard population to allow comparisons between different populations. In 2020 the rate was 37.64 per 100,000. In 2021 the age-adjusted rate increased to 44.25 per 100,000; however, the 2021 data is considered preliminary and therefore subject to change. Although a full year of data is not available for 2022, the mid-year age-adjusted death rate is 21.16 per 100,000.

Linkage of Nonfatal Overdose Clients to Treatment

Linkage to treatment for the CCOD2A Initiative is derived from evaluation data collected from partner agencies who are participating in the grant. Data is not routinely collected in Cuyahoga County regarding whether clients link with treatment following a nonfatal overdose, therefore, only data from the evaluation of Cuyahoga County's OD2A Initiative is available. The programs providing individual level service and linkage to treatment include Thrive and Woodrow's Peer Recovery Services (PRS), MetroHealth's ExAM program, The Centers Syringe Services Program, SVCMC Screening, Brief Intervention, and Referral to Treatment (SBIRT) program, and MetroHealth's Quick Response Team (QRT). In Year One, 463 individuals were reported as linking to treatment, compared to 759 in Year Two and 720 in Year Three. One reason for the dramatic increase from Year One to subsequent years is due to additional hospitals added to the PRS programs. More detailed analyses of clients' linkage to treatment are broken down by each program can be found in Strategies Six (Linkage to Care) and Eight (Partnerships with Public Safety and First Responders).

Strategy Three - Surveillance

Strategy Three focuses on developing and implementing innovative surveillance of nonfatal and fatal opioid overdoses in Cuyahoga County to disseminate lessons learned and inform prevention strategies. Efforts focus on the collection and integration of diverse datasets from both public and private data sources. Several data surveillance activities are associated with Cuyahoga County's OD2A Strategy Three. The targeted activities are:

- Assess data sources for quality and linkage ability;
- Develop a drug overdose integrated epidemiologic profile;
- Identify trends, patterns, and risk factors of overdose;
- Link and overlay OD data from different sources to enhance OD surveillance;
- Enhance and maintain a communication framework and timely data sharing with local, state and federal stakeholders; and
- Assess and respond to prevention partner data to action needs.

Agencies

Cuyahoga County Board of Health (CCBH)

The Begun Center for Violence Prevention Research and Education (Begun Center)

Cuyahoga County Medical Examiner's Office (CCMEO)

Monitoring and Reporting of Key Surveillance Indicators

In Year Three, the CCOD2A surveillance team continued to access data from various sources to monitor and report on key indicators, primarily disseminating findings through the [Overdose Data Dashboard](#), the [Quarterly Surveillance Bulletin](#), and the [Drug Overdose Integrated Epidemiological Profile](#) (DOIEP). Drug-related deaths in Cuyahoga County have remained high, as have suspected nonfatal overdose incidents. In 2021, the county recorded the second-highest number of drug-related fatalities in history (n=675), an increase of 22% from 2020 (n=553). While mortality rates rose from 2020 to 2021, the number of naloxone doses administered by EMS, and the total number of EMS events reported as suspected opioid poisonings showed virtually no change (Table 3). However, hospital emergency departments (EDs) in Cuyahoga County reported a slight decrease in suspected drug overdoses from 2020 to 2021 and naloxone kits distributed through Project Dawn (Deaths Avoided with Naloxone) increased.

Table 3*Key CCOD2A Public Health Surveillance Indicators for Cuyahoga County, Ohio, 2019-2022¹*

Cuyahoga County Surveillance Indicator	2019	2020	2021	2022*
Drug-Related Deaths	582	553	675	658 ^a
EMS Events with Suspected Opioid Poisoning	2,029	1,829	1,872	1,784 ^a
Emergency Department Suspected Overdoses	4,577	4,330	4,186	3,946 ^a
Project DAWN Naloxone Kits Distributed	4,239	8,347	14,386	19,200 ^a
Opioid Prescriptions (thousands)	525	484	446	442 ^a

^a2022 counts are estimated.

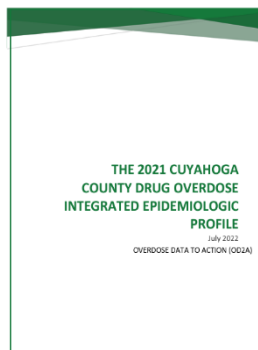
According to Project DAWN data, there were 14,386 kits distributed to Cuyahoga County residents in 2021, compared to 4,239 two years prior.² It is estimated that over 19,000 will be distributed in 2022. The distribution of such a large quantity of naloxone is helpful and necessary but potentially has an unintended consequence. If individuals are using naloxone to reverse an overdose and in turn avoiding contacting emergency services, this results in fewer intervention opportunities by way of public safety personnel. For example, police responses to suspected overdoses in Cleveland in 2020 and 2021 shows that at least 75% (2,410 of 3,214) of subjects were transported to a local hospital.³ Interactions with public safety often result in engagements with intervention services in emergency departments after transport from the overdose scene. Public safety interactions are also the key data source utilized by Quick Response Teams (QRT), which is yet another intervention opportunity. Although the distribution of naloxone to the community is a vital response to the opioid epidemic, friends and family who may be responsible for administering naloxone may not have the same ability, resources, or desire to encourage someone to seek treatment. A lost opportunity for public safety personnel to engage with someone who has experienced an overdose is a potential lost opportunity to help them access treatment.

¹ Drug-Related Deaths: CCMEO Overdose Statistics (https://cuyahogacounty.us/docs/default-source/me-library/heroin-fentanyl-cocaine-deaths/2022/september-report.pdf?sfvrsn=cd8e89ab_1); Emergency Department Suspected Overdoses and Opioid Prescriptions: CCBH Data Dashboard (<https://www.ccbh.net/overdose-data-dashboard/>); Project DAWN Naloxone Kit Distribution source CCBH Quarterly Surveillance Bulletins (<https://ccbh.net/overdose-data-dashboard/>); EMS Events with Suspected Opioid Poisoning: HEALing Communities Study Ohio (login required) (<https://hcsOhio.osu.edu/Cuyahoga/Dashboard>)

² Naloxone distribution counts in Cuyahoga County have been challenging to track and verify.

³ CDP suspected overdose incident data are collected and reported by the Crime Strategies Unit, Cuyahoga County Prosecutors Office.

Drug Overdose Integrated Epidemiological Profile (DOIEP)



The [2021 DOIEP](#) was published in July of 2022. To produce this report, the CCBH utilized (a) drug mortality data from Ohio Vital Statistics, (b) syndromic surveillance data for nonfatal overdoses through EpiCenter, and (c) the Ohio Department of Public Safety's Emergency Medical Services Incidence Reporting System (EMSIRS) which records naloxone dose administrations provided by local, participating EMS agencies. The report includes descriptive statistics, rates, and geographic analyses. The assessments of the epidemiology of the overdose crisis in the county, as outlined in the DOIEP, is an essential component of overdose prevention, as it provides information to effectively guide prevention and care activities for diverse organizations. The profile also provides education and insight to healthcare providers, first responders, policymakers, and other stakeholders, including the public.

The DOIEP combines multiple data sources to create a comprehensive picture of the drug overdose burden in Cuyahoga County.

*The Hispanic population in Cuyahoga County experienced the highest rate of unintentional drug overdose deaths (UDODs) in both 2020 and 2021. This population also experienced a **32% increase** in UDODs from 2019 to 2020 (2021 DOIEP).*

Identifying New Data Sources for Surveillance

Incorporating drug testing data. In Year Three, the CCOD2A gained access to new data sources that continue to improve our understanding of the opioid epidemic in Cuyahoga County. Millennium Health is a nation-wide specialty laboratory that performs comprehensive drug testing for various health care providers. This past year [Millennium Health](#) agreed to provide drug testing results for Cuyahoga County patients. These data will help inform several important areas, including (a) drug use trends, (b) assessing what prescription drugs are potentially being diverted for illicit use, and (c) identifying emerging trends related to the introduction/re-introduction of dangerous drugs in the supply (e.g., carfentanyl). Millennium Health data will be incorporated into the Cuyahoga County Overdose Data Dashboard as a key indicator in early 2023.

Incorporating Improved Toxicology Reports. The CCMEO continues to improve their data systems of drug-related deaths through expanded coding of toxicology reports that have been underway for several years. Forensic epidemiologists continue to utilize toxicology reports of decedents whose deaths were caused by various drugs, and are developing a comprehensive dataset that was made available to the surveillance team in Year Three. This information can improve intervention opportunities (e.g., education, outreach, harm reduction) by understanding

what specific drugs have historically had the most impact in a given neighborhood or ZIP code. These data will be made available to the public through the data dashboard in early 2023.

Potential to improve interventions

through the justice system. Through continued collaboration with the Cuyahoga County Prosecutors Office (CCPO) on surveillance activities, the Crime Strategies Unit (CCPO-CSU) expanded their queries for persons reported in overdose incidents. Specifically, CCPO-CSU analysts researched if individuals were on probation or involved in any part of the justice system. Preliminary analysis performed by CCPO-CSU found that in their sample of 119 persons who experienced more than one overdose in 2021, 29% (n=35) were either on probation or connected to a pending court case. This work should create an additional pathway for targeted interventions by working with probation officers and the justice system.

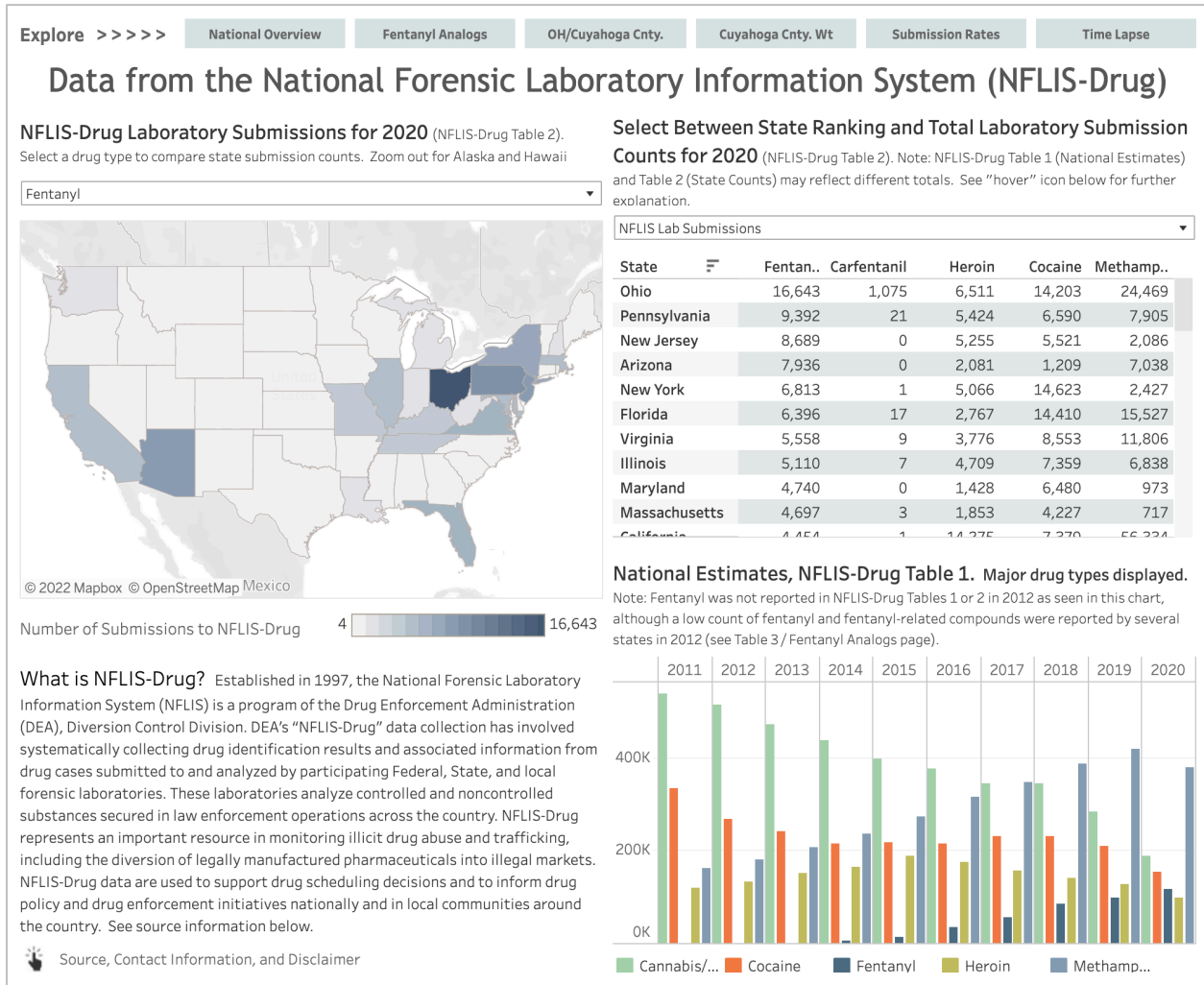
The Analysts at the Crime Strategies Unit are now querying probation and court databases to determine if persons who experience an overdose are involved in the justice system and are currently sharing the information with relevant contacts (i.e., probation officers) for potential intervention opportunities beyond QRT engagement.

Drug Chemistry and Drug Seizure Dashboard. This last year the surveillance team published a comprehensive drug chemistry and drug seizure data dashboard to better understand the long-term changes in drug supply at the local, state, and national levels (Figure 2). The surveillance team coordinated with personnel from the DEA National Forensics Laboratory Information System (NFLIS-Drug) to utilize existing publicly available national and state drug-chemistry testing data for all drug types submitted by law enforcement. NFLIS-Drug publishes annual results of drug chemistry submissions—aggregated by state—from hundreds of forensics laboratories across the United States. To complement the Ohio data gathered through public NFLIS-Drug reports, the team compiled drug chemistry results published by the Cuyahoga County Regional Forensics Science Lab (CCRFSL). These datasets developed by the surveillance team were used to create an interactive dashboard that displays national, state, and local drug chemistry data in various visualizations. Visitors who view the dashboard can compare state forensics laboratory submissions for dozens of drug types. The dashboard also provides detailed data for more than 70 fentanyl analogs reported in the United States since 2011. The county-specific data provided by CCRFSL are also accessible to the public and inform drug trends at the local level.

The surveillance team published an interactive, public-facing dashboard specific to drug chemistry and drug seizure data. The team utilized ten years of national, state, and local data from multiple sources to better inform local and national drug trends. This dashboard was reviewed and approved by DEA NFLIS-Drug and has been used by CDC personnel to monitor trends.

Figure 2

Drug Chemistry and Drug Seizure Dashboard



Published on the Cuyahoga County Board of Health's Overdose Data Dashboard Page, see: <https://ccbh.net/overdose-data-dashboard/>

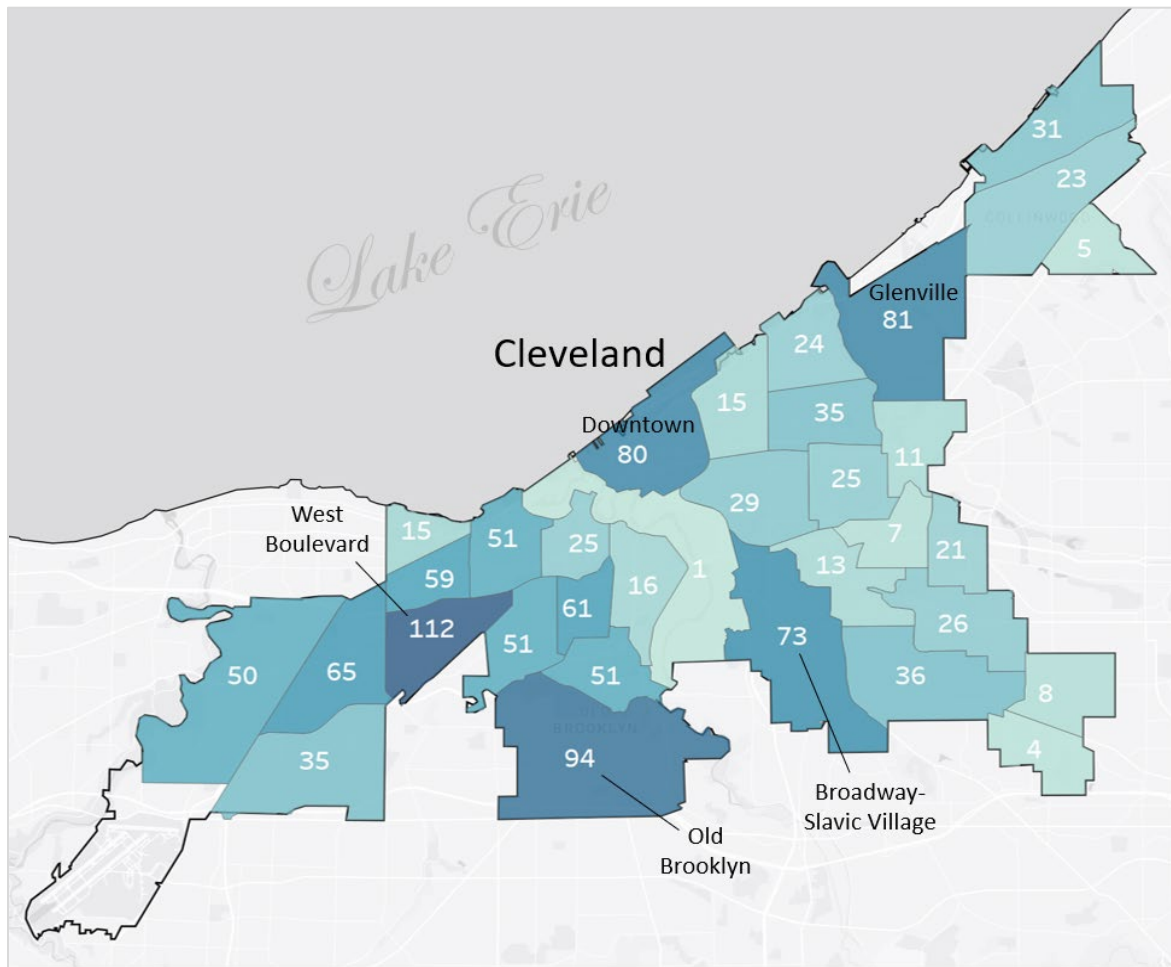
Overdose Trends and Patterns

Identified Cleveland Police incident data made available for analysis. Since 2020, the Cuyahoga County Prosecutors Office (CCPO) has utilized analysts to compile suspected drug overdose incident reports from the Cleveland Division of Police (CDP) records management system (RMS). From 2020 to 2021, the CCPO collected 2,393 suspected overdose records submitted by CDP and disseminated these reports to the MetroHealth QRT; these data have been the primary source of information used by the QRT but were not further utilized for analysis until this year. Although it is likely that CDP does not respond to all suspected overdoses in

Cleveland, these data represent a large sample of overdoses. Because these incident reports are available through public records requests, the CCOD2A surveillance team continues to request access to conduct various analyses to identify trends and patterns involving law enforcement response to suspected drug overdose. The Fusion Center director facilitated the surveillance team’s access to these data, which was made available late in Year Three. See an example of 2021 incidents reported by CDP, by neighborhood, in Figure 3.

Figure 3

Cleveland Division of Police Responses to Suspected Drug Overdoses in 2021, by Neighborhood (n=1,233). The Top Five Neighborhoods are Labeled on the Map

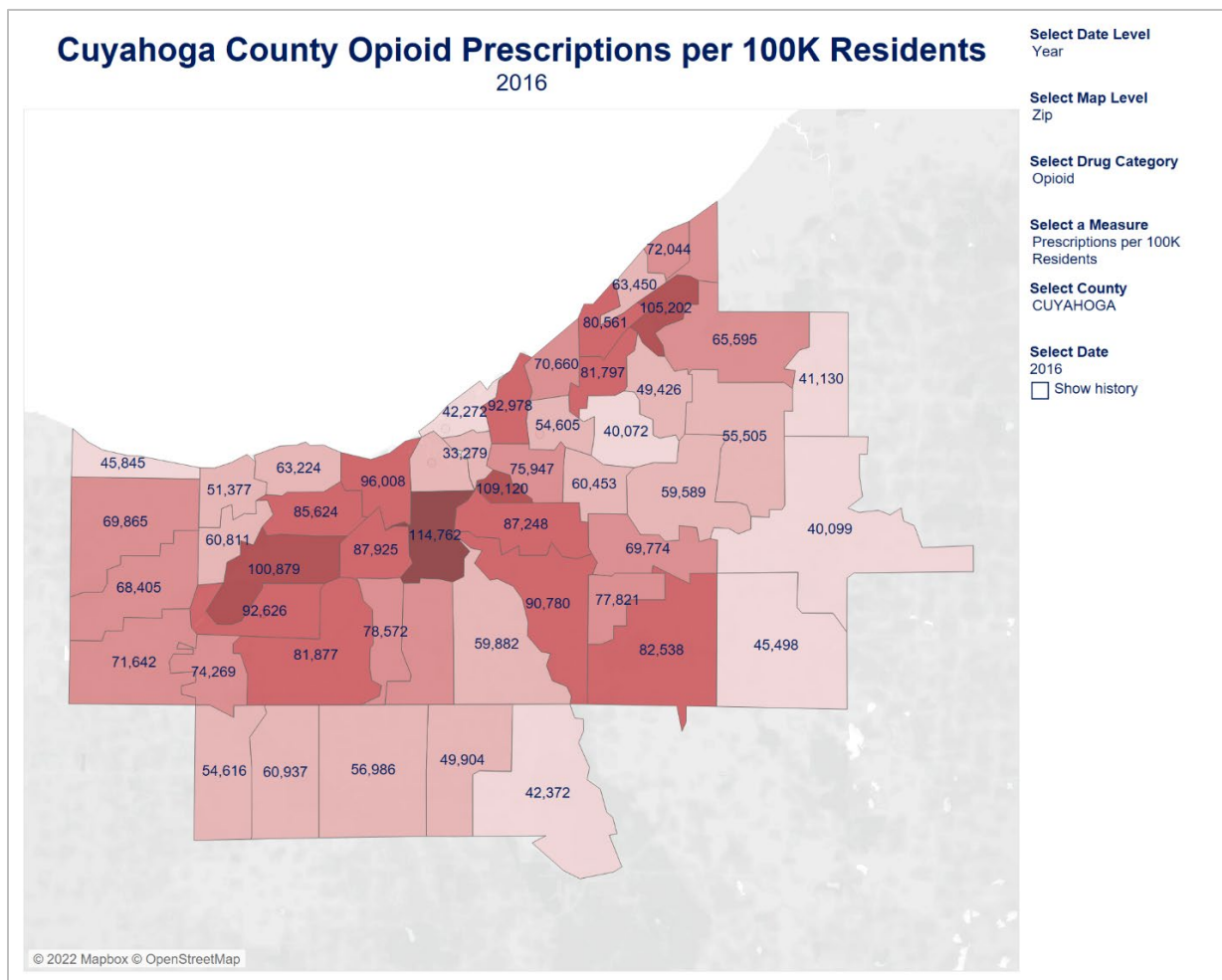


Incorporating PDMP location data. Publicly available prescription drug monitoring program (PDMP) data has been utilized for surveillance since the beginning of the CCOD2A grant; this indicator is published on the Cuyahoga County Overdose Data Dashboard. PDMP data are accessed by the CCBH informatics team whose technical expertise allows them to extract the data from the Ohio Board of Pharmacy Ohio Automated Rx Reporting System (OARRS)

[interactive data tool](#) (Figure 4). Prior to Year Three, access to these data included aggregate county-level patient prescriptions for five drug categories: opioids, gabapentin, stimulants, benzodiazepine, and buprenorphine. In Year Three, CCBH was able to develop a method for access to patient location information at the ZIP code level, allowing the surveillance team to identify and publish where opioid prescriptions have historically been the highest in the county. The surveillance team will incorporate these data in the Cuyahoga County Overdose Data Dashboard in early 2023.

Figure 4

Ohio Board of Pharmacy PDMP Interactive Data Tool: Mapping Opioid Prescription Rate for Cuyahoga County, see: <https://www.ohiopmp.gov/stats>



Analyst note: The darkest red ZIP code displayed in the PMDP map (Figure 2) is ZIP code 44109. In 2015 and 2016 (2016 is displayed above), ZIP code 44109 experienced the highest rate of opioid prescriptions in Cuyahoga County. Since 2015, ZIP code 44109 also experienced the highest number of drug-related deaths in the County, except for 2021, which it ranked second.

Communication Networks with Stakeholders and Response to Prevention Partner Data to Action Needs

In Ohio, the Revised Code ([ORC Section 4765.44](#)) allows for law enforcement agencies to request the names of individuals who received naloxone from either Fire or EMS agencies; the name and address can be used for investigation or treatment referral.

After a multi-year process that included several requests and petitions facilitated by the team members at [MetroHealth Office of Opioid Safety](#) (OOS) and the Begun Center, identified Cleveland EMS data was shared with QRT social workers for individual engagement/response in 2022. The CCOD2A-funded CDP analyst located at the Northeast Ohio Regional Fusion Center

The Cleveland EMS, the agency likely responsible for the most interactions with persons experiencing overdoses in Cuyahoga County, began sharing identified data with the Cleveland Division of Police for the purposes of QRT engagement.

(NEORFC) now requests EMS suspected overdose information each week. The names and addresses of individuals are provided to the Fusion Center and disseminated to the MetroHealth QRT for engagement opportunities which is further discussed in Strategy Eight. The Fusion Center analyst played a vital role in developing key relationships with Cleveland EMS and facilitated both identified and aggregated overdose-related data sharing. Aggregated EMS data will likely be incorporated in CCOD2A surveillance products in early 2023.

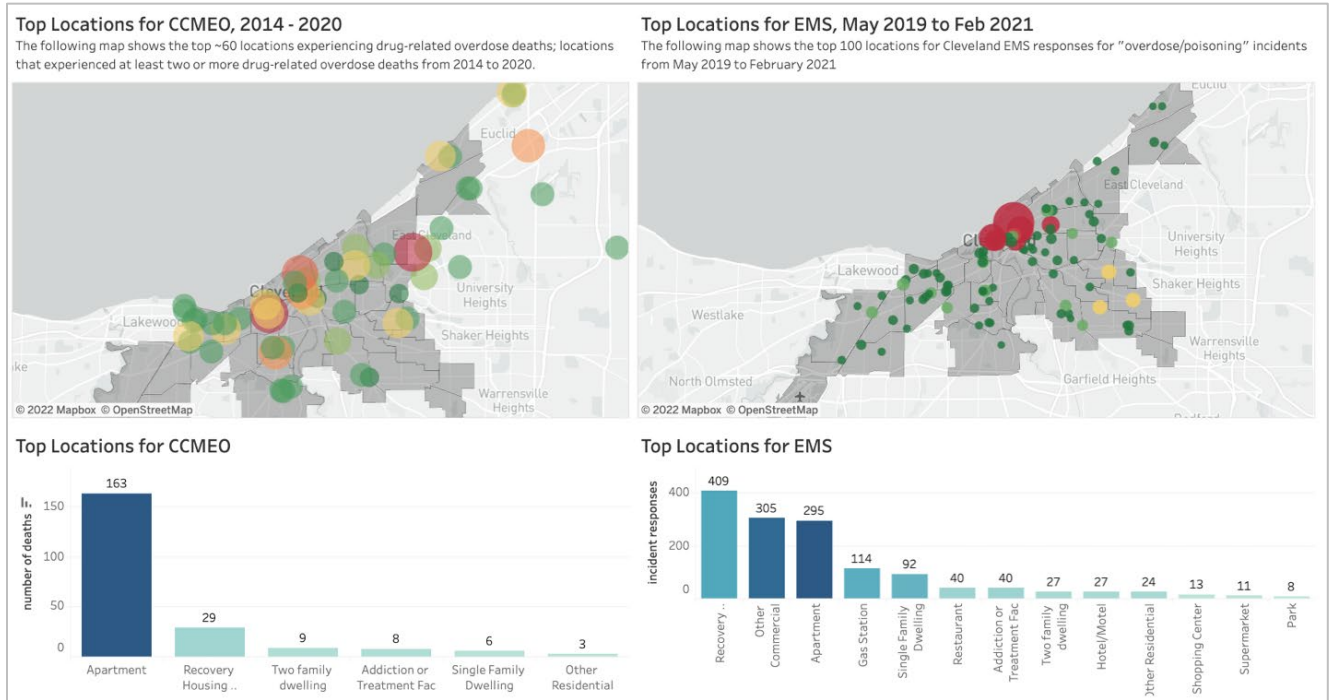
Providing detailed maps for harm reduction activities. The surveillance team continued to improve and update various geospatial products shared directly and only with harm reduction partners. Agencies use these maps to (a) plan upcoming outreach events and (b) distribute naloxone and fentanyl test strips. The maps identify high-burden areas (based on fatal and nonfatal overdoses) and include demographic data based on American Community Survey estimates. Demographic information was specifically requested to help partner agencies identify areas where they should be prepared to provide materials in Spanish.

In one case, geospatial analysis performed by the surveillance team was used by Thrive Peer Support to draft a recommendation to the Cuyahoga Metropolitan Housing Authority (CMHA) to allow naloxone distribution on CMHA properties; these activities were previously unauthorized. The analysis revealed that several CMHA properties experienced relatively high numbers of suspected overdoses and provided the data needed to drive policy change (Figure 5).

The Geospatial analysis and interactive dashboards shared by the surveillance team were used to influence policy change in Year Three. Thrive Peer support approached the Cleveland City Council with a request to distribute harm reduction supplies (i.e., naloxone) on CMHA properties. The request incorporated analysis accomplished through the OD2A surveillance work.

Figure 5

Identifying Top Locations Experiencing Fatal and Nonfatal Drug Overdoses in Cuyahoga County and Cleveland, Ohio



Strategy Four – Prescription Drug Monitoring

Strategy Four is prevention-focused and addresses Prescription Drug Monitoring Programs (PDMP). The targeted activities include:

- Enhance PDMP review and reporting of high-risk clients (MetroHealth);
- Enhance PDMPs through an evidence-based program peer review model to better track opioid clients and prescriptions and develop Toolkit (MetroHealth, CHA and CCBH);
- Expand peer review model for educating high-volume prescribers (MetroHealth and CHA); and
- Expand implementation of PDMP in non-traditional healthcare settings (CCBH).

Agencies

MetroHealth Medical Center
(MetroHealth)

Center for Health Affairs
(CHA)

Cuyahoga County Board of
Health (CCBH)

Enhance PDMP Review and Reporting of High-Risk Clients – MetroHealth

The ongoing opioid overdose epidemic will require a variety of measures to bring it under control, including efforts to reduce excessive prescribing. Mandatory use laws for prescription drug monitoring programs (PDMP) require prescribers to review patient prescription history of controlled substances prior to prescribing opioids and have emerged as a promising strategy to impact the epidemic (Brandeis University, 2017; Strickler et al., 2019). PDMP administration, funding, and capabilities vary by state, which can lead to differences in access and data sharing across states (Christianson et al., 2018). Integrating PDMP data into an existing electronic health record management system (EHR) can facilitate timely access and utilization, however, implementation is a challenge. A recent study found that only 10% of hospitals in counties with high opioid prescribing rates reported EHR integration with their state’s PDMP (Holmgren and Apathy, 2020). Another frequent challenge was expanding access to users. Each state has legislative hurdles when attempting to expand access such as defining who is a user, who is responsible for user actions or if users are included in PDMP use mandates (Elder et al., 2018; Radomski et al., 2018). It is also important to note that mandating registration does not always increase actual system use (Shev et al., 2018).

The State of Ohio Board of Pharmacy created Ohio’s PDMP, known as the Ohio Automated Rx Reporting System (OARRS). OARRS collects information on outpatient prescriptions for controlled substances and one non-controlled substance (gabapentin) dispensed by licensed pharmacies and prescribers (Ohio Automated Rx Reporting System (OARRS) <https://www.ohiopmp.gov/About> . access 12/27/2022). For this activity MetroHealth is enhancing its management of OARRS data for identifying high-risk prescribing activity to trigger proactive reports to providers for action. The CCOD2A evaluators are examining available data to assess *the extent to which an increase in the implementation and use of the PDMP in healthcare settings decreases the number of opioids dispensed*. In Year Three,

MetroHealth revised its metrics of how a PDMP review is recorded. Previously it was limited to instances where the provider included a dot.phrase in MetroHealth’s EPIC system (MetroHealth’s electronic medical records system). It was revised to also include those instances where OARRS was accessed through EPIC. MetroHealth was able to retroactively report PDMP reviews by its providers starting with baseline, which caused some previously reported baseline, Years One and Two data to change. Those changes are noted in this report.

Table 4

Short-Term and Intermediate Outcomes for Enhancing PDMP Review and Reporting of High-Volume Prescribers

Description	Baseline	Target	YR 1 Data	YR2 Data	YR3 Data	Outcome Status
Develop algorithms to identify high-volume prescribing activity and protocols to notify providers	Data not previously collected.	2	In progress	In progress	Achieved	Achieved: Although MetroHealth continues to refine their algorithms as needed
Identify enhanced prescribing metrics and controlled substances reported	Data not previously collected	N/A	Data not previously collected	Data not previously collected	Focus Group with MetroHealth staff	Provider Education Team and Controlled Substance Scorecards were identified as enhanced merits
Opioid prescriptions when providers checked the PDMP prior to issuing the prescription^a	64%	↑10%	62%	60%	60%	6% decrease from baseline to Year Three
Use of PDMP by providers (pre/post)^b	56%	↑10%	50%	48%	50%	9% decrease from baseline to Year Three
Co-occurring prescriptions of opioids and benzodiazepines	6614	↓10%	4033	3,055	2,915	56% decrease from baseline to Year Three
Prescriptions each year greater than 50 Morphine Milligram Equivalents (MME)	Data not previously collected	↓10%	N/A	16,893	17,027	Less than 1% increase from Year Two to Year Three

^a In Year Three MetroHealth revised its metrics for determining whether the PDMP was checked. The change was retroactive to baseline; therefore, the numbers have been revised from previous reporting periods.

^b *Ibid.*

Define and identify high-risk clients and high-volume providers.

MetroHealth has completed its development of algorithms and reportable database metrics, to recognize and track high-risk patients and high-volume prescribers. To identify high-volume prescribers,

MetroHealth uses reports from EPIC and OARRS data. Each provider is reviewed in comparison to others in the same department or specialty. This allows MetroHealth to identify and educate high-volume prescribers. During a focus group with MetroHealth, staff discussed hospital efforts to monitor provider prescribing.

The team at MetroHealth formed a Provider Education Team which includes the academic detailer, database manager, a case manager, and a pharmacist. The team reviews the top 15 providers and devise plans to provide feedback.

We can essentially see if there's been decreases in opioid prescribing. I know like OARRS will put that out on their own dashboard countywide, but we can specifically see it within, you know, our activities through OD2A. And they've been able to try to figure out how many providers are checking OARRS. So, those types of things, just watching, like that decrease of prescriptions, or the prescriptions that are kind of dangerous when they're together like the benzos and opioids. Using data to identify the high-risk prescribers and then targeting those prescribers for academic detailing.

Enhanced Prescribing Metrics and Controlled Substances Reported. In the first year of the grant, MetroHealth created the Narcotics Report Card which summarized opiate prescribing habits of prescribers with a Drug Enforcement Administration (DEA) number. These report cards were finalized and distributed at the end of the first year of the grant up until June 2022, the third year of the grant. In June 2022, MetroHealth revised the cards, now known as Controlled Substance Scorecards. Unlike the Narcotics Report Card, all providers, not just those with a DEA number, who prescribe any substance reported in OAARS will receive a Controlled Substance Scorecard. Each Control Substance Scorecard contains information regarding the type of medication prescribed, the number of pills prescribed, the number of pills prescribed per 100 encounters, percentage of OAARS checks, percentage of co-occurring opioid and benzodiazepine prescriptions and percent of prescriptions below the 80-morphine equivalent daily dose (MEDD).

MetroHealth also developed a Provider Education Team. The new Provider Education Team was explained by a focus group participant.

Now this year, after we formed the Provider Education Team, we meet every week and we discuss, using the data we have which providers would benefit from, having a meeting with us. So instead of just picking providers willy-nilly, we are using data. So, we've already met with the group of us. So, the data analyst, the utilization review nurse, and we meet with providers, and we go over their prescribing metrics, and we talk to them about how those can be improved. Or if they require any assistance or have any concerns about their patients, we have ways to help them as well. And we found that working as a team is very beneficial for both the providers and the patients.

The benefits of these new processes were explained in the following way:

Working as a group has been extremely helpful. It's nice to have everybody's input and feedback on how to proceed with helping these providers. [. . .] I can tell you that from my point of view, it is very beneficial to learn more about the providers and what's going on with them. And to see that the interventions we're using or the conversations we're having with these providers are affecting each of our jobs, I guess, is the best way to say it. So, like I can hear that [A] is meeting with the patients. And [M] is working, you know, starting to work on some cases for the providers who have concerns and just, it's been very nice for me.

Analysis of Medical Providers who check PDMP before prescribing.

Providers are required by law to review OARRS prior to prescribing opioids, to be self-reported in EPIC. One desired intermediate outcome for Strategy Four is an increase in the number of providers utilizing OARRS prior

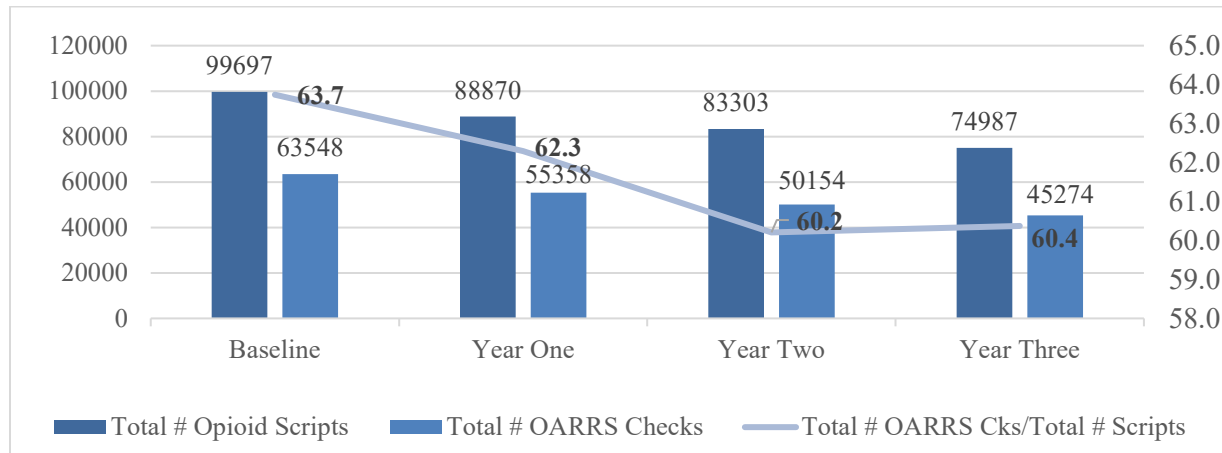
to issuing a prescription for an opioid. MetroHealth has provided data on the number of its providers that issued an opioid prescription each month and whether OARRS was checked. The data provided by MetroHealth includes all providers and is not broken down by department or specialty. The data only includes provider activity and is not differentiated by clients; therefore, the same client could be reported more than once in the database. As mentioned earlier in this report, MetroHealth revised its metrics for determining whether an OARRS check was done by a provider. In light of this revision numbers previously reported for baseline, Year One and Two were revised.

A continuing education campaign began at MetroHealth for primary care outpatient sites on completing the controlled substance agreements correctly.

Baseline covers the period of September 1, 2018 through August 31, 2019, wherein 64% of the providers checked OARRS ($n=63,548$) prior to issuing an opioid prescription ($n=99,697$). In Year One, 62% of the providers checked OARRS ($n=55,358$) prior to issuing an opioid prescription ($n=88,870$), a decrease of 2%. In Year Two, 60% of the providers checked OARRS ($n=50,154$) prior to issuing an opioid prescription ($n=83,303$). In Year Three, 60% of the providers checked OARRS ($n=45,274$) prior to issuing an opioid prescription ($n=74,987$). A review of OARRS checks from baseline through Year Three shows a 6% decline in the overall number of providers checking OARRS prior to issuing an opioid prescription (Figure 6).

Figure 6

Summary of MetroHealth Provider OARRS Checks When Issuing Opioid Prescriptions across the Three Years



Another intermediate outcome of this activity is the extent to which prescribers increase their PDMP (OARRS) utilization prior to issuing an opioid prescription. The goal is to increase the use of the PDMP (OARRS) over time by 10% for providers and pharmacists. Provider checks of the PDMP overtime was examined. Comparing baseline to Year Three for the same providers, 56% of the providers (n=542) checked OARRS prior to issuing an opioid prescription at baseline while in Year Three, these same providers checked OARRS 50%, a decrease of 9%. A paired samples t-test revealed a *significant difference* between mean levels of OARRS checks prior to issuing an opioid prescription, $t(541) = -4.49; p < .00$; providers checked OARRS much less when issuing an opioid prescription in Year Three ($M=50.1, SD=38.7$) than at baseline ($M=55.6, SD=35.8$).

It is unknown why providers are decreasing their checking of the PDMP. During a focus group with MetroHealth one possible explanation was noted by staff could be due to the amount of time it took providers to check OARRS and document in EPIC.

At MetroHealth, we have an extra step. Because prior to a change in a lot that took place last November, it was required that you had to document an impression of what you saw in the report. So, it was a little more time consuming . . . So, it was a little more time consuming for the provider.

Although MetroHealth providers have not increased their checks of the PDMP prior to issuing an opioid prescription as intended, **the number of opioid prescriptions each year have decreased; 99,697 at baseline to 74,987 in Year Three representing an overall decrease of 25%**. The number of opioid pills issued has also declined in the last several years, 5,995,899 at baseline to 4,009,292 in Year Three, a decrease of 33%.

Analysis of Co-occurring Prescriptions of Opioids and Benzodiazepines. Another intermediate outcome is to reduce by 10% the number of co-occurring prescriptions of opioids

and benzodiazepines. MetroHealth uses an internal dashboard to identify patients using an opioid with an active benzodiazepine prescription. At baseline 6,614 co-occurring prescriptions were issued by a MetroHealth provider, an average of 551 prescriptions each month. In Year One, the number of co-occurring prescriptions decreased to 4,033, an average of 336 per month. In Year Two the number decreased again to 3,055 patients, an average of 254 per month. ***In this last year the total number of prescriptions decreased to 2,915, an average of 243 per month, representing a 56% decrease in co-occurring prescriptions since baseline.***

Analysis of Prescriptions Greater than 50 MME. MetroHealth is also seeking to reduce by 10% the number of unique patients with prescriptions greater than 50 MME. Data for this outcome was collected initially in Year Two which serves as baseline. MetroHealth reported 16,893 unique patients having an opioid prescription totaling more than 50 MME in Year Two. In Year Three the number increased to 17,027 but the increase was less than 1%.

Summary. MetroHealth’s efforts have generated greater insight into the benefits of using the PDMP by high volume prescribers. Although providers’ checking of the PDMP prior to issuing an opioid prescription somewhat decreased across the last three years instead of an intended increase, from 64% at baseline to 60% in Year Three, the number of opioid prescriptions each year have decreased. An overall decrease of 25%. Co-occurring prescriptions of opioids and benzodiazepines have also decreased by 56% from baseline to Year Three.

Enhance PDMPs through an Evidence-Based Practice (EBP) Peer Review Model to Better Track Opioid Clients and Prescriptions and Develop Toolkit–MetroHealth, CHA and CCBH

The evaluation question associated with this activity is ***what additional tools can be used to supplement the PDMP to enhance provider adherence to best prescribing practices.*** MetroHealth continues to explore ways to increase providers’ use of the PDMP (OARRS) by providing them with guidance and educational resource information regarding their prescribing behaviors, including Narcotics Report Card, know called Controlled Substances Cards, and Stewardship Cards.

The Center for Health Affairs (CHA) developed a toolkit of best practice information that has been made available to other healthcare settings in Cuyahoga County.

MetroHealth has been providing technical assistance to CHA on the toolkit design to enhance utilization of OARRS data based on best practices that can be replicated in other health systems.

The CHA Opioid Management Toolkit available online from the CHA website to hospitals and medical staff focuses on four areas: Opioid Training Courses, Opioid Prescribing Mitigation Resources, Peer Review Program, and Academic Detailing Program.

The toolkits and training courses are available to any healthcare employee as a resource to provide training on opioid addiction issues and, provide resources to evaluate and assess prescribing practices. The Toolkit also includes two separate and distinct resources to assist health care facilities create their own Academic Detailing (AD) and Peer Review programs. The finalized Toolkit is posted on the CHA website www.opioidconsortium-education.org.

Table 5

Short-Term and Intermediate Outcomes for Developing Toolkit

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Identify ways collaboration & communication among medical providers can be improved to increase use of PDMP	Data not previously collected.	2	N/A	Completed	Completed	Peer review, chart review and Stewardship Report Card
Reviews of providers for high-volume prescribing^b	Data not previously collected	100	62 ^a	331	1,457	Achieved
Improve prescribing behaviors for high-volume prescribers	Data not previously collected	↑10%	Analysis not completed	89%	84%	6% decrease reported

^aIn the Year One report the number was reported as 59 but should have been 62.

^bIn previous years this outcome tracked narcotics report cards issued to providers. In Year Three, MetroHealth revised the reports which are now called Controlled Substance Scorecard

Collaboration and Communication Among Medical Providers to Increase Use of PDMP.

MetroHealth continues to explore ways to increase providers’ use of the PDMP (OARRS), including sending out the Controlled Substances Cards more frequently where previously they were sent annually. As one team member explained during a focus group with MetroHealth staff,

One of the changes that we made was that we used to send out narcotic report cards to the different groups [e.g., Primary Care, Internal Medicine, Emergency Medicine] and we changed that now. One of the struggles was that we could only run OARRS reports if a provider had their own DEA number. Now, we've changed that. And we're sending out controlled substance scorecards, and we're using EPIC data, which allows us to pull data on all of the providers that prescribe now. So rather than just a small group that had their individual DEA numbers, we can now look at all of their activity. So, anybody, which gives us a better idea of where they're falling in their groups.

Peer review practices also have evolved. As one participant, an RN, noted,

We established . . . what is called a 'stewardship report card.' So, what this is, is when I go through the charts, I'm looking for their best practice, and making sure they're following and as I say, utilizing the tools that are available for them, and I try to identify needs of education, things like that. We've been sending those out to the docs. I tried to go for every six months, but it's getting a little cumbersome. So as soon as I can. And then, we established the Provider Education Team, to go over both the report card and the stewardship piece and assist the physicians.

Analysis of Reviews of Providers for High-volume Prescribing. MetroHealth engages in additional measures to identify and address possible high-volume prescribing behavior. One intermediate outcome is to increase reviews of providers for high-volume prescribing and to provide them with guidance and educational resource information regarding their prescribing behavior. In the first two years of the grant, MetroHealth distributed Narcotics Report Cards. MetroHealth revised the scorecards in Year Three, now known as Controlled Substance Scorecards. *In Year Three, MetroHealth issued 70 Narcotic Report Cards to prescribers and Controlled Substance Scorecards were distributed to 1,457 providers.*

Analysis of High-Volume Prescribing Behavior. MetroHealth also issues Stewardship Report Cards to high-volume prescribers. This report card is given to each provider who prescribes opioids to those with chronic pain. Information on the card includes whether they used OARRS properly, how many prescriptions for both opioids and benzodiazepines were issued, as well as a review of the number of morphine milligram equivalents (MME) prescribed to determine whether the physicians were high or low in their prescribing and whether they had patient agreements in place. For high-volume prescribing providers, who received a Stewardship Report Card, their prescribing behavior was examined from the OARRS data for the period of January 2021 through August 2022. A total of 47 providers were selected to compare changes in their prescribing behaviors, with those having data available six months before (pre) and six months after (post) receiving the Stewardship Cards. The analysis focused on the percentage of providers who checked OARRS prior to issuing an opioid prescription. Due to asymptotic data distribution, Wilcoxon Matched Pairs Signed Rank Test (Wilcoxon Signed Rank Test) was used. The median percentage of OARRS checks by providers before receiving the Stewardship Cards was 89% and 84% six months after receiving the Stewardship Cards representing a 6% decrease instead of the intended 10% increase. The test revealed no significant differences in the prescribing behaviors between pre (median = 88.8, SD=30.9) and post (median = 84.0, SD=29.8), n=47, Z=-0.12, p=0.90.

Summary. MetroHealth continues to explore ways to increase providers' use of the PDMP and educating prescribers about their prescribing practices through Controlled Substance Scorecards and Stewardship Cards.

Expand Peer Review Model of High-Volume Prescribers to Additional Hospitals - CHA & Expand Implementation of PDMP in Non-Traditional Healthcare Settings - CCBH

The evaluation question associated with these activities is *to what extent is the peer review model effective in reducing high-volume prescribing behavior within the healthcare setting and to what extent does an increase in the implementation and use of PDMP in healthcare settings decrease the number of opioid doses dispensed*. MetroHealth is assisting CHA in incorporating its peer review model practice into the Opioid Management Toolkit. In Year Two, the toolkit was finalized and CHA posted toolkit resources to their website www.opioidconsortium-education.org.

Table 6

Short-Term and Intermediate Outcomes for Expansion of Peer Review Model to Additional Hospitals and Implementation of PDMP review in Non-Traditional Healthcare Settings

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Providers involved in the peer review process	Data not previously collected	100	0	334	208	Achieved
Hospitals downloading the best practice model	Data not previously collected	5	N/A	6	4	Achieved
Hospitals adopting the best practice model (peer review)	Data not previously collected	3	N/A	1	0	In Progress
Nontraditional healthcare settings adopting PDMP review	Data not previously collected	1	N/A	CCBH is working with CWRU School of Dentistry	0	In Progress

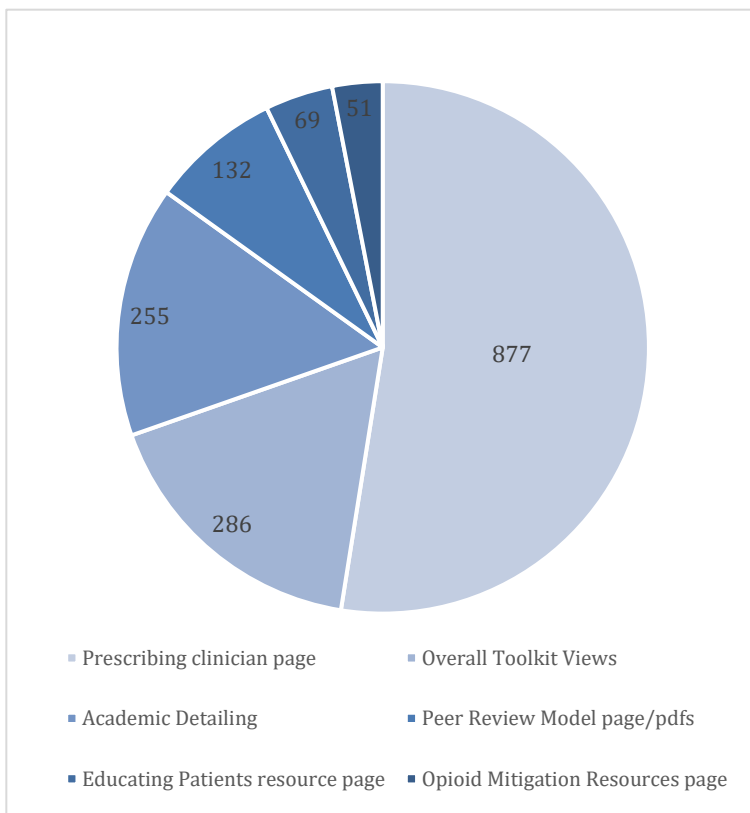
High-Volume Prescribing Behaviors. A best practice model incorporated into the toolkit is MetroHealth’s peer review model. Peer review is a chart review of all providers who continue to prescribe opioids for chronic conditions exceeding 90 days. All providers at MetroHealth can be considered for peer review except for those providers with acute prescriptions, such as providers in the emergency department. Providers with chronic opioid prescriptions in primary care roles (Family Practice, Internal medicine, Pain & Hearing, and Geriatrics) have chart reviews every 6 months. Providers in specialized departments who have chronic opioid prescriptions have their charts reviewed biennially.

Each provider who is selected for review will have 10 charts pulled for examination. Reviews of these charts include: (1) if the patient has a controlled substance use agreement (must be renewed annually), (2) did the provider use the OARRS Review/.dot phrase, (3) number of co-occurring opioid/benzodiazepine prescriptions, (4) number of MME > 50 with a naloxone prescription, and (5) was a urine drug screen performed. If there are deficiencies, the provider will be reviewed by the Provider Education Team. The top 15 providers will be submitted for academic detailing (AD) in addition to any other providers the team determines necessary. If a provider did not show improvement in the months following AD, the provider will go before the Peer Review Committee, which meets quarterly. ***In Year Three, there were 208 providers who went through peer review.***

Hospitals Downloading and Adopting the Best Practice Model. MetroHealth is identifying providers who would benefit from peer review, AD and other educational resources based upon their prescribing practices. CHA is working with MetroHealth using this process to create resources to assist medical administrators in identifying providers with prescribing practices who would benefit from training or peer review. The peer review portion of the toolkit was completed in Year Two.

Figure 7

CHA Opioid Toolkit Website Engagement



Over the course of Year Three, those resources were engaged by more than 1,000 users who tallied more than 8,364 interactions with information from those sources. The Education Portal was engaged more than 6,500 times by 750 users. Users then engaged with the Prescribing

Clinicians page next most often with 877 interactions, followed by Overall Toolkit interactions at 286 and AD Resources at 255 (Figure 7).

CHA can track the number of downloads of the toolkit with respect to the peer review model. In Year Three, there were four downloads of information on peer review. CHA attempted to capture detailed end-user information for those who downloaded the CHA Toolkit resources but have been unsuccessful. Utilizing a sign-up page to engage users did not result in collection of contact information. Therefore, that process was discontinued at the end of Year Three. CHA website analytics have been successful in collecting general information regarding traffic on their pages and levels of engagement across their

resources, but unfortunately information on hospitals that have adopted the peer review model is not available. In the final year of the grant, CHA intends to conduct a survey or interviews with hospital staff regarding the utilization and adoption of the toolkit.

Non-traditional Healthcare Settings Adopting PDMP Review. CCBH seeks to enhance OARRS data utilization in non-traditional settings such as dental, private medical, and veterinary practices. CCBH worked with The Center for Health Affairs (CHA) to increase PDMP efforts in non-traditional settings. Through the Heroin Task Force education sub-committee, Aaron Marks connected CCBH and CHA with Dr. Roger Hess. Dr. Hess is a specialist in periodontics with expertise in implantology and has been a partner with Periodontal Associates over 25 years. Additionally, he is an Assistant Clinical Professor at the Case Western Reserve University School of Dentistry. Since he is an Assistant Clinical Professor at CWRU dental school, he offered to introduce CHA and CCBH CCOD2A staff members to the head clinical professor at the dental school. Dr. Hess is highly involved with the school of dentistry and it was the hope that this would be a fruitful relationship. However, with changes in staff at CHA and new focus of the education subcommittee, there was no meeting scheduled with the dental school staff. Moving forward in Year Four, CHA will reengage with Dr. Hess to assess if this avenue is still a possibility. In addition, partnerships with Federally Qualified Health Centers (FQHC) will be a priority for CHA in Year Four regarding increasing PDMP usage.

Summary MetroHealth is providing guidance and educational resource information to providers regarding best practices for prescribing behaviors to providers through its Controlled Substances Cards and Stewardship Cards. CHA has worked closely with MetroHealth to disseminate materials based on the MetroHealth Peer Review Program. CHA has made these materials available for download on their website and while CHA website traffic has indicated there is interest in these programs, CHA has not been able to obtain direct feedback regarding implementation of the Peer Review Model in other hospital systems. In Year Three, CHA initiated focus groups and key informant interviews to identify facilitators and barriers in program implementation and those results will be finalized in Year Four. With respect to peer review, a best practice model was adopted to assist in reducing the number of opioids prescribed by providers who are chronic opioid prescribers. CHA in conjunction with MetroHealth worked toward creating resources to medical administrators to help identify prescribers who would benefit from such training.

Strategy Five – Enhancing Prevention and Response Efforts

Prevention Strategy Five focuses on enhancing prevention and response efforts by identifying opportunities for linking state and local resources and entities. Activities that fall under this strategy are:

- Enhance overdose fatality review, including adding an Opioid Use Disorder Specialist;
- Develop a Rapid Response Lay Responder Narcan® Distribution Protocol for overdose spikes;
- Increase overdose response trainings and naloxone distribution;
- Implement OD2A Quarterly Implementation Roundtable and
- Media campaigns to populations at high-risk for overdose.

Agencies

Alcohol Drug Addictions and Mental Health Services Board (ADAMHSB)

Cuyahoga County Board of Health (CCBH)

Cuyahoga County Medical Examiner's Office (CCMEO)

MetroHealth Medical Center (MetroHealth)

Previously, the Northeast Ohio Educational Services Center and PAXIS were involved in this strategy. Unfortunately, due to continuing barriers around COVID-19, including some schools remaining remote or hybrid, the activity to expand the PAX evidence-based Good Behavior Game into schools in high-risk neighborhoods has been put on hold indefinitely.

Enhance Overdose Fatality Review, Including Adding Opioid Use Disorder (OUD) Specialist – CCMEO, CCBH, ADAMHSB and Begun Center

The CCMEO and the CCBH oversee Cuyahoga County's Overdose Fatality Reviews. OFR cases are selected based on emerging trends in the overdose epidemic or re-occurring system gaps, identified by CCMEO or other committee members. Cases are usually identified during the daily discussion of all CCMEO cases or from a case that illustrates an emerging trend as evidenced from a toxicology report. The evaluation question for this activity assesses *the impact of linking datasets across platforms and agencies, and how this information enhances the OFRs*. The target number of OFRs to complete in Year Three was eight and the committee completed 18. The total number of OFRs completed over three years was 49, more than doubling the Three-Year targeted outcome of 24. The OFR will continue to meet bimonthly, holding six meetings annually and reviewing three cases per meeting.

Table 7

Short-Term and Intermediate Outcomes for Enhancing OFRs

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
OFRs completed each year	0	8/yr.	14	17	18	Achieved
Families of decedents interviewed by OUD specialist	0	24	N/A	16 ^a	7	96% complete
Identification of intervention points for treatment	0	2/yr.	7	0	0	Achieved
OFR reports completed each year	0	8/yr.	14	17	18	Achieved

^a16 NOK interviews were completed in Year Two, one of the deaths was later ruled a non-drug suicide, that interview, while included in the total, was not analyzed.

Incorporate Prescription Drug Monitoring Program (PDMP), investigative reports, autopsy and cause of death (COD) reports into OFR. The CCMEO did not report the incorporation of any new data sources this year, but did add a new representative from The Woodrow Project (peer recovery support) in Year Three. The OUD Specialist from the ADAMHS Board was also able to share themes from next-of-kin interviews beginning this year, names of decedents were shared prior to the OFR and when possible, interviews were conducted beforehand. Additionally, the OFR hosted guests from other agencies throughout the year; e.g., Frontline Services attended in April, and although they were not permitted to share any information about the decedent, they directly interacted with the decedent’s children and provided valuable insight. Table 8 describes new permanent and guest stakeholders who attended the OFR.

Table 8

OFR Year Three New Representatives and Guests

Agency	Status	Date Added/Attended
Hamilton County Health Department	Guest	February 9, 2022
Cuyahoga County Veterans Treatment Court Docket	Guest	October 21, 2021
Frontline Services	Guest	April 13, 2022
Lorain County Drug Task Force	Guest	June 8, 2022
The Ohio Board of Pharmacy	Guest	August 22, 2022
CDC Foundation	Guest	June 8, 2022
Lorain County Public Health OFR	Guest	August 22, 2022
The Woodrow Project	Permanent	December 8, 2021

OFR Committee Participation.

Participation at the OFR committee meeting was tracked during this past year by agency and the number of attendees from each agency. Due to continued restrictions related to COVID-19, most OFR meetings were held virtually, the exception being in April, which was a hybrid format. Table 9 provides an

overview of participating agencies and the number of meetings attended by each agency. Some agencies sent multiple representatives to each meeting.

The OFR participated in a mentor site visit with Ocean County OFR that was facilitated by the Institute for Intergovernmental Research (IIR). The OFR was able to observe Ocean County's process and speak with a behavioral health treatment provider to better understand data sharing. Ocean County also observed an CCOFR meeting and provided feedback.

Table 9

OFR Membership and Attendance

Agency Name	Meetings Attended (Total meetings held=6)
Cuyahoga County Board of Health	5
Cuyahoga County Medical Examiner's Office	6
Cuyahoga County Dept. of Family and Children Services	1
Alcohol Drug Addiction and Mental Health Services Board - CC	5
Case Western Reserve University (Begun Center)	6
MetroHealth	5
Cleveland Dept. of Health	4
Cuyahoga County Office of Re-entry	1
Cuyahoga County Drug Court	6
WestShore Enforcement Bureau	6
Cleveland Division of Police	0
Parma Police Department	0
VA Northeast Ohio Health Care System (VANEOHS) and Louis Stokes Cleveland VA Medical Center	4
The Woodrow Project	4

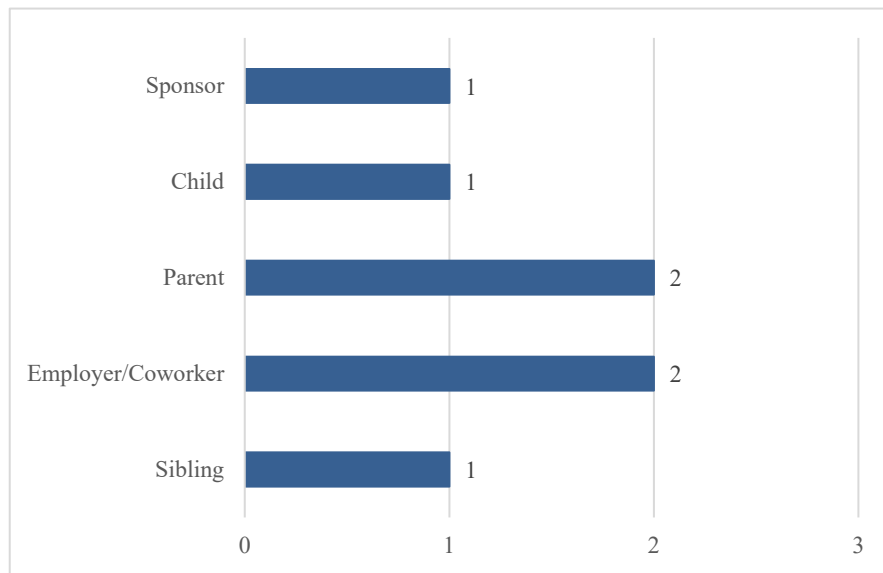
ODU Specialist Interviews of Families of Decedents. The ODU Specialist from the ADAMHS Board continued to interview OFR decedents' next-of-kin. In Year Three, seven interviews were completed for a total of 23, just one shy of the three-year outcome. Given that no interviews were conducted in Year One due to issues related to the COVID-19

The ODU Specialist from the ADAMHS Board was also able to share themes from next-of-kin interviews beginning this year, names of decedents were shared prior to the OFR and when possible, interviews conducted beforehand.

pandemic, a 96% completion toward the outcome is a success. However, some pandemic-related barriers persisted, including the forensic epidemiologist position at the CCMEO remaining unfilled and continued surges in COVID-19 cases resulting in bimonthly OFRs instead of monthly. In Year Three, 37 individuals were approached for interviews, 17 consented, and seven were completed. All interviews were conducted by phone and participants received a \$40.00 gift card. Figure 8 summarizes the NOK's relationships to the decedent.

Figure 8

NOK Interviewed and their Relationship to Decedents



Reasons for interviews not being conducted with the NOK included: no desire to participate, consent form was not returned, no response to initial attempts at contact, phone numbers were out of service or addresses were incorrect, and scheduling conflicts. There were also some months where the OUD Specialist did not receive any NOK names from the CCMEO.

The CCMEO conducted a gabapentin information session at the Northeast Ohio Hospital Consortium and Case Western Reserve University's Physician Assistant program. CCMEO also presented gabapentin information at the National Association of Medical Examiners Annual Meeting in October 2021. Communicating information about prescribing behaviors for gabapentin is one of the recommended OFR Intervention Points

Identification of Intervention Points for Treatment. While no new recommendations were identified in Year Three, those developed continue to be refined and updated. The OFR added target audiences for each existing goal and added highlights from 2021 and 2022 to describe movements made in certain areas. The recommendations/intervention points are summarized here and a more detailed description can be found in the annual report published by the OFR.

Goal 1: Harm Reduction

Target audience: Medication-assisted treatment (MAT) providers; Office of Re-Entry; Dept. of Children and Family Service (DCFS); domestic violence shelters; homeless shelters; business sector (food service, hotel/motel, trades industry, retail), etc.

Objective 1.1 Increase knowledge and awareness of harm reduction efforts by supporting outreach/grassroots efforts for making fentanyl test strips (FTS) and naloxone available within local communities and targeted hot spots, advocating for training of DCFS staff regarding naloxone distribution to families in need and for naloxone training for kinship families through Project DAWN.

Objective 1.2 Increase availability of harm reduction tools (naloxone, fentanyl test strips, syringes, NaloxBox, etc.) supporting access to fentanyl test strips to encourage testing drug supplies for fentanyl and fentanyl analogs and wide-scale distribution of harm reduction materials.

Objective.1.3 Support the Implementation of the NaloxBox program in Cuyahoga County by advocating for the installation of NaloxBoxes in various locations (e.g., Project DAWN service entities) and supporting facilitation of training on the use of the NaloxBoxes

Highlights: In 2021 the ADAMHS Board of Cuyahoga County provided community outreach and grassroots efforts to distribute fentanyl test strips. They also worked with MetroHealth’s Project DAWN program to determine and install over 40 NaloxBoxes throughout various locations in the County. In 2022 a small workgroup developed a media campaign around harm and stigma reduction and increase awareness of drug supply toxicity and dangers of using alone. A workgroup comprised of representation from MetroHealth, The Centers, and CCBH collaborated to create an overview of harm reduction for communities and presented the information at the city managers and mayors meeting in Feb. 2022. The document is posted on the CCBH data dashboard page.

Goal 2: Medical Prevention and Treatment

Target audience: Qualified practitioners including physicians, Nurse Practitioners (NPs), Physician Assistants (PAs), Clinical Nurse Specialists (CNSs), Certified Registered Nurse Anesthetists (CRNAs) and Certified Nurse-Midwives (CNMs)

Objective 2.1 Increase the number of Medication-Assisted Treatment (MAT) providers through the promotion of access to DATA 2000 waiver.

Objective 2.2 Support education and training of medical providers on the illicit use of prescription medications by focusing on education on illicit use of prescription medications and appropriate prescribing for chronic pain and co-occurring SUD or mental health diagnosis.

Highlights: In 2021 the CCMEO conducted a gabapentin information session at the Northeast Ohio Hospital Consortium and Case Western Reserve University's Physician Assistant program. CCMEO also presented gabapentin information at the National Association of Medical Examiners Annual Meeting in October 2021.

Goal 3: Linkage to Care

Target audience: Qualified practitioners including physicians, Nurse Practitioners (NPs), Physician Assistants (PAs), Clinical Nurse Specialists (CNSs), Certified Registered Nurse Anesthetists (CRNAs) and Certified Nurse-Midwives (CNMs)

Objective 3.1 Advocate for increased availability of peer support programs to provide outreach to high-risk populations (e.g., previous nonfatal overdose, diagnosed with SUD, or at risk for substance use disorder) by encouraging hospital EDs and specialty court dockets to adopt peer support programs.

Objective 3.2 Encourage collaboration among first responders and treatment providers to improve linkages to treatment for individuals experiencing a nonfatal overdose through supporting the utilization of the QRT and the Cuyahoga County Diversion Center.

Objective 3.3 Support linkage to MAT and recovery housing/sober living appropriate to a person's needs.

Highlights: In 2021 a local Quick Response Teams (QRT) was able to connect 60 individuals (out of 225) who experienced a nonfatal overdose with treatment using law enforcement incident reports. Project SOAR (Supporting Opioid Addiction Recovery) has expanded to all Cleveland Clinic Emergency Departments through a partnership with Woodrow to provide 24/7 access to peer support services. This collaboration was supported by ADMAHSCC utilizing Opioid Settlement Funding for Cuyahoga County.

Goal 4: Education

Target audience: General public, local public defenders, judges, lawyers, OVI intervention programs, youth bereavement programs, Ohio Workers Compensation, the business sector (food service, hotel/motel, trades industry, retail), etc.

Objective 4.1 Advocate for increased eligibility for drug court by supporting continuing education for public defenders, lawyers, and judges on individuals appropriate for drug court.

Objective 4.2 Support the enhancement of substance use education and prevention initiatives including the progression of addiction, polysubstance use, and addressing adverse childhood experiences. This will be accomplished by an increased understanding among the business sector (food service, trade, retail etc.) on the impact of substance use on employees, patrons, and property; promote the implementation of OhioBWC drug-free safety program. Bereavement interventions for youth and young adults (utilization of healthy coping mechanisms after exposure to traumatic experiences) will also be promoted.

Objective 4.3 Promote appropriate and targeted communication efforts to increase public awareness regarding existing and emerging substances via media and awareness campaigns on emerging trends such as the fentanyl adulterated drug supply, increase in gabapentin prescriptions, and illicit use.

Goal 5: Building System Capacities

Target audience: EMS; law enforcement; specialty court dockets (including pre-arraignment); parole officers, treatment centers; Office of Re-entry; MetroHealth ExAM Program, Cuyahoga County Corrections Center, municipality jails, Grafton Correctional institution, Cuyahoga County Juvenile Detention Center

Objective 5.1 Enhance SUD treatment for incarcerated populations.

Objective 5.2 Promote timely communication systems to notify appropriate agencies of nonfatal overdose events.

Objective 5.3 Advocate for uniform practices and policies for providing individuals upon release from incarceration at both private and public facilities with treatment resources and harm reduction materials

Goal 6: Community Outreach

Target audience: Sober living facilities (certified and non-certified); detoxification centers; rehabilitation centers, shelters.

Objective 6.1 Promote outreach to community agencies regarding the importance of relapse and recovery plan review, wrap-around services, and accessibility for support group meetings.

Objective 6.2 Support community outreach to vulnerable populations (including homeless populations) by providing resources and information in applicable locations.

Goal 7: Surveillance and Dissemination

Target audience: OFR, OFR Stakeholder Meeting, local meetings (HOTF, CCOTF); Ohio Injury Prevention Partnership

Objective 7.1 Routinely disseminate trends reviewed from the OFR along with supporting data.

Objective 7.2 Convene quarterly stakeholder meetings to review recommendations and call for action

Objective 7.3 Enhance the case review process by identifying new/relevant OFR review participants and data sources (e.g., hospital partners, peer supporters, law enforcement partners/data) by supporting data sharing between the Office of Veterans Affairs and the CCMEO.

Highlights: Highlights from 2021 included CCOFR participated in a mentor site visit with Ocean County OFR that was facilitated by the Institute for Intergovernmental Research (IIR). The CCOFR was able to observe Ocean County's process and speak with a behavioral health treatment provider to better understand data sharing. Ocean County also observed a CCOFR meeting and provided feedback for improvement.

Summary. In the last three years, linking datasets across platforms and agencies has allowed the OFRs to have greater insight into systemic issues, but more specifically has provided an opportunity to identify missing touchpoints in lives of those who experienced a fatal overdose. Inviting agencies that provide services to participate in the conversation and review of individual cases has facilitated dialogue and lead to identifying overarching themes present in fatal OD cases. This collaboration has created an avenue to further the work in the field by identifying goals and potential facilitators to overcome barriers to reduce the number of fatal overdoses in the community.

Rapid Response Lay Responder Narcan Distribution Protocol, Responder Training and Naloxone Distributions - MetroHealth & CCBH

In 2021 the ADAMHS Board of Cuyahoga County provided community outreach and grassroots efforts to distribute fentanyl test strips. They also worked with MetroHealth's Project DAWN program to determine and install over 40 NaloxBoxes throughout various locations in the County.

MetroHealth and CCBH developed a Rapid Response Lay Responder Narcan® distribution protocol for overdose spikes which includes identifying potential hotspots of overdose activity. This activity also seeks to increase the distribution of Project DAWN (Deaths Avoided with Naloxone) kits. The evaluation question tied to this activity is *in what ways does implementing of naloxone education and*

distribution programs increase participant access to naloxone. MetroHealth is providing overdose response trainings to lay responders, law enforcement (LE), and community agencies. During these trainings information on where to access Project DAWN (Deaths Avoided with Naloxone) kits is provided.

Table 10

Short-Term and Intermediate Outcomes for Overdose Response Training and Naloxone Distribution

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Lay responders trained in overdose response	Data not previously tracked	200	955	3,970	2,796	Achieved
LE trained on overdose response	0	100	48	26	49	Achieved
Community agency staff trained on overdose response	615	600	202	352	443	Achieved
Identify through focus groups provider barriers to distributing naloxone at discharge at ED and Inpatient Units	Data not previously tracked	2	N/A	0	Focus group held in Year Three (different from year-end programmatic focus groups)	No real barriers for naloxone at discharge. A Project Dawn Kit can be ordered to the floor. Meds-to-beds was good but don't know if patient will pick up kits.
Knowledge gained from overdose response training (pre/post)	Data not previously tracked	↑10%	0	85%	93%	Achieved - increased knowledge across all 9 domains by 85% or more each year.
Naloxone distributions	3,375	3,975	4,804	5,761	5,098	Achieved – an increase of 51% from baseline.

Develop Narcan® Distribution Protocol. Protocols for naloxone administration were developed prior to the start of the grant and act as a template for Naloxone distribution. The protocol includes a clinical pharmacology of naloxone, indications for use, precautions, contraindications, and adverse reactions to naloxone along with a place to record the training, dates, and frequency of reviews.

Identify Hotspots for Naloxone Distribution by Zip Code. As part of Surveillance Strategy Three, CCBH and the Begun Center analyzed zip code level data from the following sources: (1) overdose fatalities recorded by CCMEO, (2) EpiCenter (syndromic surveillance), (3) EMS naloxone administration (number of doses), and (4) a sample of calls for service for sudden illness by the Cleveland Division of Police (CDP) and overdose calls for service by Cleveland Emergency Medical Services (CEMS). The outcome provided a ranked zip code list to identify locations which would benefit from an increased distribution of naloxone.

Overdose Response Training. Overdose response trainings were tracked based on the entity receiving the training (e.g., LE, lay responder, service entity).

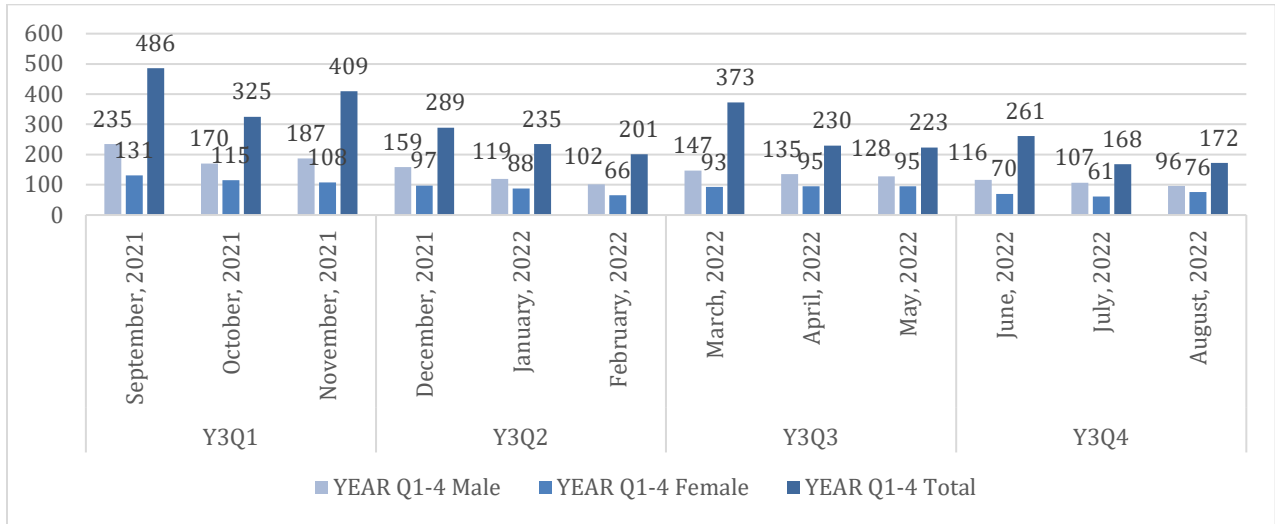
Number of lay responders trained on overdose response. Lay responder training provides free education on opioid overdose risks, how to recognize the signs and symptoms of an opioid overdose, how to respond to an opioid overdose and use of naloxone. Training is provided at a number of locations in Cuyahoga County. The objective is to provide training to 200 lay responders. *In the last three years, training has been provided to 7,721 lay persons, 2,796 in Year Three.* MetroHealth has achieved its objective. Individuals who have already been trained can also visit these locations to receive additional Project DAWN kits. Figure 9 depicts the total number of Project DAWN kits distributed via the three walk-in clinics (Hispanic Urban Minority Alcoholism Drug Abuse Outreach Program (HUMADAOP), The Centers for Families and Children (The Centers), and CCBH) and the county jail. There are two doses of naloxone per kit.

Number of Law Enforcement (LE) trained on overdose response. MetroHealth is projected to host 10 LE trainings with 100 LE personnel through this grant. During Year Three, there were three LE trainings with 49 LE personnel trained, a total of 123 LE personnel trained to date. MetroHealth has achieved its objective.

Number of community agency staff trained on overdose response. MetroHealth is also projected to host 65 trainings with 600 service entity personnel trained during the project. During Year Three, 82 service entities received training with a total of 443 service entity staff trained this year, a total of 997 service entity staff trained to date. MetroHealth has achieved its objective.

Figure 9

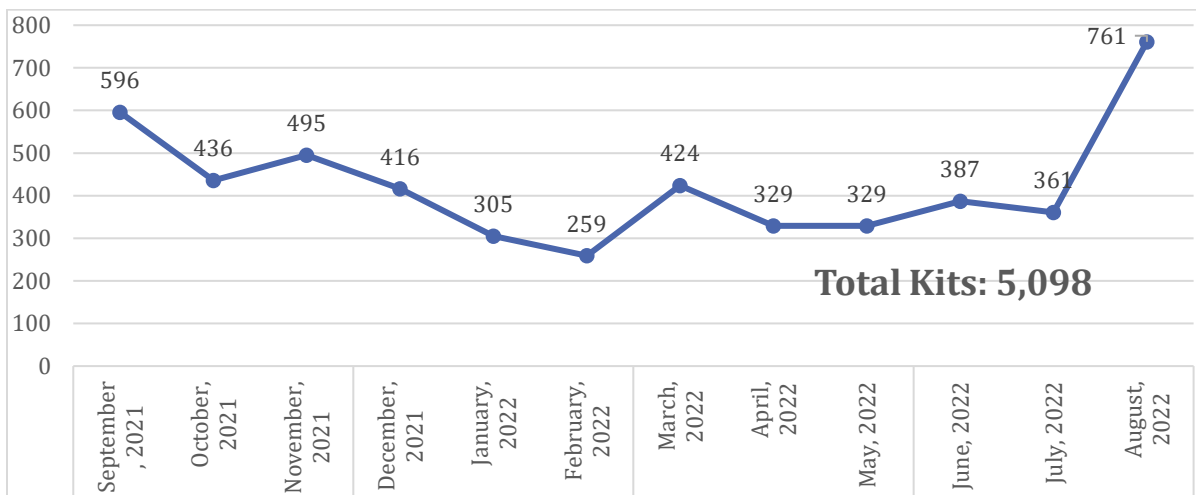
Project DAWN Kits Distributed by Individual by Month



Naloxone Distribution. Through the CCOD2A Initiative, MetroHealth is working to increase the distribution of naloxone. Project DAWN kits are provided at a number of locations in Cuyahoga County, including Cleveland Emergency Medical Services (CEMS), Cuyahoga County Corrections Center, HUMADAOP (with The Centers’ Syringe Services Program), The Centers, CCBH, Cleveland Department of Public Health’s Thomas McCafferty Health Center, and Project DAWN Expanded Mobile Unit. Figure 3 shows the total number of Project DAWN kits distributed. In Year Three 5,098 kits were distributed (Figure 10). *While a slight decrease from Year Two (n=5,761), this still represents a 51% increase since baseline.*

Figure 10

Project DAWN Kits Distributed



The Centers for Families and Children (The Centers) are an CCOD2A partner and became a Project DAWN site this year through their Syringe Exchange Program (SEP). During a focus group with staff from The Centers SEP, staff discussed its work on distributing kits to individuals through the SEP.

I believe earlier this spring and summer, two of our Project DAWN walk-in clinics actually applied to be their own Project DAWN walk-in clinics to distribute naloxone. So, we pulled our staff out of those locations. Now we're able to utilize them more on our mobile unit and doing community outreach.

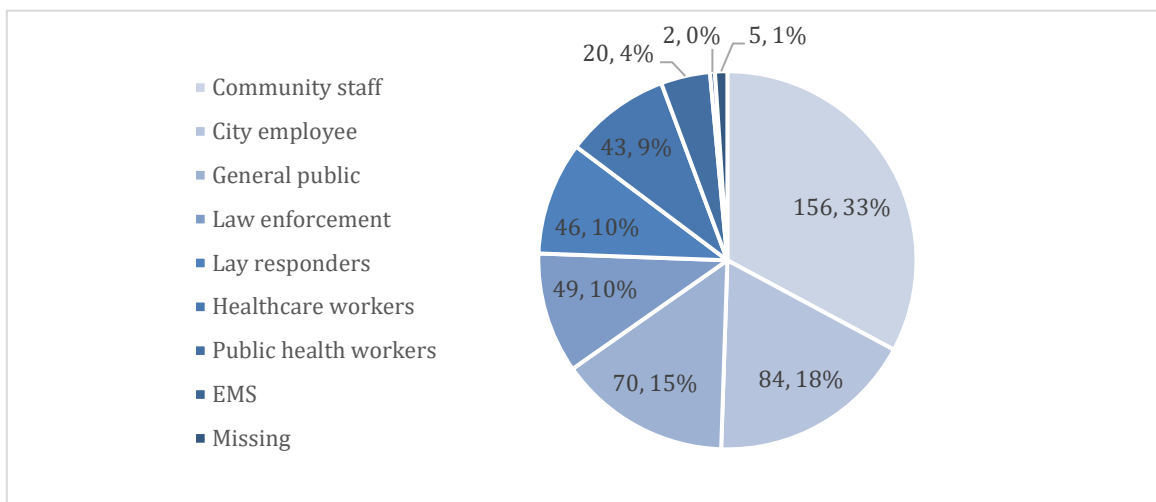
Staff also noted that in addition to Narcan, some Project DAWN sites are also distributing fentanyl test strips.

We actually became a Project DAWN site within that time, so we were able to offer Narcan, instead of just the one day a week that we had contracted with Metro, we are now able to offer it every day that we have services. We also have fentanyl [test] strips, I believe that was represented in our last one [report], as well, yeah. But we kind of tied them together and also kind of expanded our advertising, not just to our syringe exchange clients, but to all utilizers of The Centers. That's kind of a little slow going, but like we are definitely trying to make sure that folks know we are a Project DAWN site and that we have fentanyl strips available.

Increase knowledge gained from overdose response training. In July 2021, MetroHealth began using a survey tool developed by the Begun Center to capture the knowledge gained from the naloxone training delivered by MetroHealth. In Year Three of the CCOD2A grant, 475 surveys were completed by individuals who received naloxone training (Figure 11).

Figure 11

MetroHealth Naloxone Training Survey Participants (n=475)



These surveys show that approximately 36% (n=176) of respondents had prior training on naloxone. Most individuals (83%, n=394) had never used naloxone prior to taking the training. Of the 81 individuals who had used naloxone prior to taking the survey and responded, the majority (60%, n=49) had administered it as part of their job, 5% (n=4) had administered it to a friend, and 6% (n=5) had administered to a family member. About 20% of the respondents reported administering naloxone in some other situation (n=16). The survey also asked individuals to assess their level of knowledge across nine topics covered during the training including: signs and symptoms of an opioid overdose, factors to consider prior to administration, different methods used to administer naloxone, role/use of rescue breathing when responding to a suspected opioid overdose, potential reactions to naloxone, use of recovery position, amount of time naloxone is effective, physical health issues that could impact a victim and responder safety protocols. Respondents were asked to rate their knowledge before viewing the training video. Responses were scored on a 5-point Likert scale ranging from “very knowledgeable” to “very limited knowledge.” At the conclusion of the training, participants were then asked to assess whether the training had “increased knowledge” or if there was “no change” across those 9 topics. Consistently 93% or more of respondents indicated “increased knowledge” in each or in at least one area of the training.

Self-report surveys from Narcan training show that people are benefiting from the training either as a refresher or for beginners.

Summary. Implementing naloxone education and distribution programs has seemingly furthered access to naloxone distribution. Over the past three years, over 7,500 individuals have received training on naloxone use and surveys from overdose response trainings indicate that individuals are gaining knowledge about opioid overdose, how to respond and use of naloxone. Combining education and distribution programs has increased the access to naloxone across Cuyahoga County.

Implement OD2A Quarterly Implementation Roundtable – CCBH

As part of Ohio’s OD2A Initiative, the Quarterly Implementation Roundtable (QIR) was created to connect opioid epidemic leadership at the state and county level. CCBH, the Ohio Department of Health (ODH) and the boards of public health of Franklin (Columbus) and Hamilton (Cincinnati) counties are included within the QIR. Its purpose is to focus on critical issues impacting surveillance, prevention and evaluation at the state and local levels, including prevention efficacy, barrier analysis, best practice dissemination, surveillance coordination (common data dashboards) and data sharing that will enhance statewide and regional activities. The evaluation question examines *how Ohio can improve upon state and local efforts to impact surveillance, prevention, and evaluation of opioid prescribing, morbidity and mortality.*

Table 11

Short-Term and Intermediate Outcomes for OD2A QIR

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Collective impact of OD2A QIR participants	Data not previously collected	10%↑	N/A	Shared vision M=3.5 Shared measurement systems M =3.3 Mutually reinforcing activities M =4.1 Trust among collaborators M =3.8	Shared vision M =3.8 Shared measurement systems M =3.4 Mutually reinforcing activities M =3.8 Trust among collaborators M=3.7	Varied
Identification of barriers to sharing and integration of state and local surveillance data	Data not previously collected	N/A	N/A	Identified	Timely data for OD deaths, staffing, time necessary to facilitate new partnerships, and inability to obtain data from the state.	In progress
Training and technical assistance provided to Partner agencies to assist them in their efforts to address the opioid epidemic.	Data not previously collected	↑10%	41	126	159	Increase of over 100%
Involvement in state and local prevention efforts through OD2A Roundtable meetings	Data not previously collected	10	1	2	7	Year Three includes full QIR and subcommittee meetings
Preparedness and response at the state and county level, as measured by reports from the data surveillance dashboard	Data not previously collected	4/year	N/A	6	12	Achieved
Common data dashboards identified by the OD2A roundtable	Data not previously collected	4/year	N/A	0	4	In progress

Summary of Quarterly Implementation Roundtable (QIR) Meetings. The QIR meetings were reconvened in the summer of 2022, with membership expanded to all participating County boards of health (Cuyahoga, Franklin, Hamilton), the Ohio Department of Health (ODH), as well as evaluation experts from the Case Western Reserve University Begun Center (Begun Center) and the Ohio University (OU). A total of 41 participants joined the full QIR Committee, of which 11 joined the Prevention Subcommittee, 7 joined the Evaluation Subcommittee, 16 joined

the Surveillance Subcommittee, and 9 joined the Grants/Administration Subcommittee. The Full QIR Committee has met twice since reconvening this summer (August and November 2022). The Grants/Administration Subcommittee has met twice (August and October), and each of the other three Subcommittees has met once in summer/fall 2022 with meetings scheduled for later in November 2022.

Topics of interest discussed at the QIR Full Committee meetings included how to best utilize and communicate findings from the state to the counties and the counties to the state (e.g., surveillance data and overdose fatality review training) and cross-cutting efforts across the Surveillance and Prevention subcommittees. Fentanyl Test Distribution (FTS) was also discussed, with both Franklin and Hamilton Counties discussing their distribution programs and Hamilton County sharing the survey they include on their FTS packaging. ODH indicated they would share with Cuyahoga County information on other local health departments' distribution of FTS. Other topics and presentations discussed included harm reduction policies in other states and CDC technical assistance and training on dashboard development.

The Prevention Subcommittee shared their experiences with prevention programming and shared materials and resources. Subcommittee members expressed an interest in discussing the sustainability of programming after funding ends. An ODH representative from the Community Drug Overdose Prevention program reviewed the ODH-funded Emergency Department Comprehensive Care Program and shared materials that were distributed to the Subcommittee. Hamilton County discussed the challenges around their PDMP work. In addition, Hamilton County described the Recovery Friendly Hamilton County program and provided materials to everyone. CCBH discussed their issues with peer supporters staffing of their "warm line." In response, Hamilton County mentioned that they created a mentorship program that paired peers paired with fire stations.

Evaluators from CWRU and OU have been meeting in an ad hoc manner for the past year and the recent expansion of the Evaluation Subcommittee membership allowed for the addition of county board of health representatives interested in evaluation. Topics of interest that have been discussed at these QIR subcommittee meetings include the following:

- Develop feedback for the CDC regarding the importance and use of evaluation data.
- Discussion of similar activities evaluated by the county agencies including QRT, Peer Recovery Support Specialists, Syringe Exchange Services, and Overdose Fatality Review.
- Ways to combine evaluation and surveillance data to identify points of interest.
- Development of joint evaluation products, including data briefs.
- Suggestions for enhanced evaluation in next round of CDC funding.

Topics of interest for this Grants/Administration subcommittee included Year Three Continuation funding and spending down of unobligated funds, sustainability planning, and Year 5&6 Grant Applications. The group decided to meet bi-monthly the next year. The second meeting focused on peer recovery specialists and efforts to fund them outside of grant dollars,

including dual Community Health Certification and Medicaid billing. In addition, opportunities for networking and support for peer recovery specialists were discussed.

Topics of interest for the Surveillance Subcommittee included:

- OD2A Dashboards, county reports and common definitions
- Data Access and Sharing (real-time) – Barriers and Facilitators, including accessing data available to ODH and Recovery Ohio at the county level
- Alert protocols and procedures
- Dashboard tutorial, discussion and opportunity for feedback

The group decided that meeting quarterly would be good for the next year and that the next meeting will focus on EMS data and how counties gained access to data, alert protocols, and improved relationships with county medical examiner's office.

Collective Impact of the QIR. Evaluators from the Begun Center attempted to measure the perceived collective impact of the QIR initiative by distributing an online survey to QIR members across the state, using the same survey that was distributed in 2021. The survey, adapted from Collective Impact for Public Health Practice, Global Health and Education Projects Inc. (2018), was distributed to members and 6 completed surveys were received. On average, the six survey respondents in 2022 agreed that the collaborative is highly functioning in some areas (e.g., members support each other, leaders are responsive to change, the collaborative supports others points of view, and internal communication uses multiple platforms) but not as high functioning in other areas. The exceptions in 2022 were the same as the exceptions reported in 2021: the development of an action plan to outline how identified problems within communities will be addressed and results being measured using the same metrics or indicators. There were also indications from some members that the collaborative fails to involve community members when identifying priority areas of need.

One objective is to improve county capacity for sustainable surveillance and prevention efforts, as measured by statewide coordination and data sharing efforts of the OD2A QIR. Collective impact is measured through four different domains: shared vision for change, shared measurement systems, mutually reinforcing activities and trust among collaborators. Baseline data was collected in 2021. Table 12 summarizes the results for the last two years. Although participants view of the QIR's shared vision for change and shared measurement systems improved, there were slight decreases in participants view of the QIR in terms of mutually reinforcing activities and trust among collaborators.

Table 12*Collective Impact of the OD2A QIR Comparison from 2021 to 2022*

	Baseline 2021 (Mean Score)	2022 (Mean Score)	Percent Change
Shared vision for change	3.5	3.8	8%↑
Shared measurement systems	3.3	3.4	3%↑
Mutually reinforcing activities	4.1	3.8	7%↓
Trust among collaborators	3.8	3.7	3%↓

Table 13 summarizes responses from members regarding sharing, access to, and integration of state and local surveillance data. Specific barriers named by respondents were a lack of timely data for unintentional overdose deaths in 2019 and 2020, stretched capacity/hiring delays/staff transitions, longer than anticipated timeline to facilitate new partnerships, and inability to obtain data from the state due to access barriers, unclear processes, capacity/time limitations.

Table 13*Barriers to Sharing and Integration of State and Local Surveillance Data*

In the previous year of the OD2A project, did your agency experience barriers to...	Yes		No		N/A	
	Yr1	Yr2	Yr1	Yr2	Yr1	Yr2
sharing state surveillance data?	0%	33%	33%	17%	67%	50%
accessing state surveillance data?	33%	--	33%	--	33%	--
integrating state surveillance data?	17%	33%	17%	33%	50%	33%
sharing of local surveillance data?	33%	50%	33%	17%	33%	33%
accessing local surveillance data?	17%	83%	50%	17%	33%	0%
integrating local surveillance data?	17%	67%	50%	33%	33%	0%

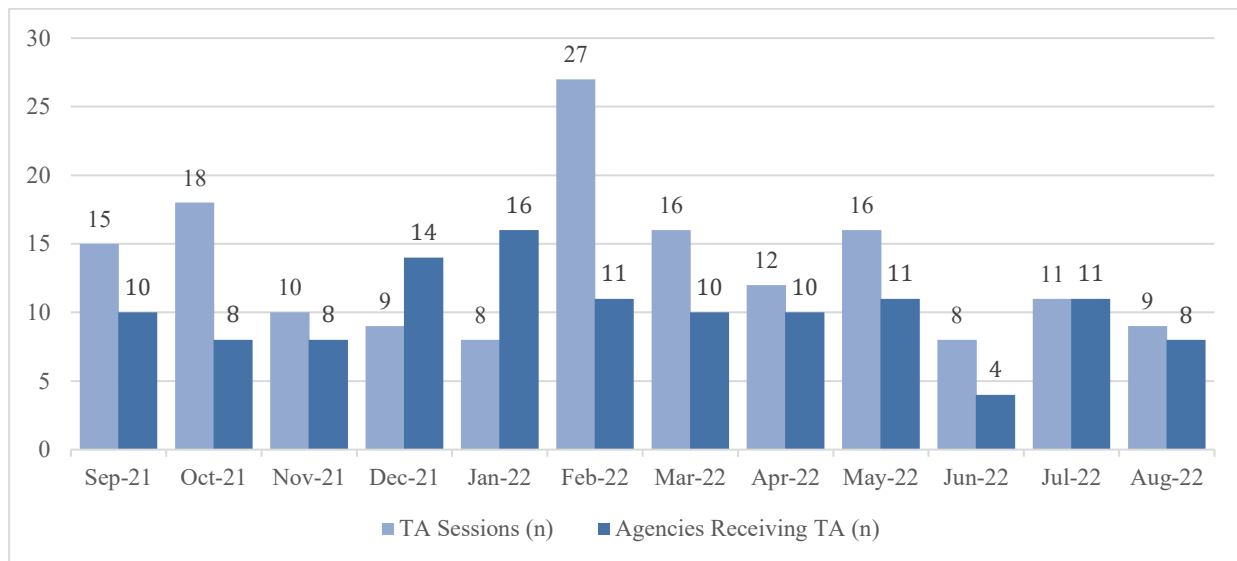
Eighty-three percent (n=5) of the respondents believed the OD2A Initiative has led to the identification and use of data dashboards, and the same number indicated that the Initiative led to the development of data dashboards, including their own agency creating a dashboard. Five out of six respondents shared the types of data included in their dashboard (e.g., ED visits, 911 dispatches, drug seizure testing, test strips, syringe exchange, OD morbidity and mortality, community demographics, naloxone data, and drug lab data). Dashboard update frequency varied for the six respondents, with one agency reporting they update their dashboard daily, one indicating weekly and one indicating monthly, while two reported that it varies (one agency

didn't respond). Several common data dashboards were identified across agencies in 2022 including ER data, 911 dispatch data, drug seizure data and morbidity/mortality data.

Increase training and technical assistance provided to partner agencies to assist them in their efforts to address the opioid epidemic. In Year Three the CCBH reported 159 training and technical assistance (TA) sessions provided to partner agencies, an increase from 126 in Year Two and 41 in Year One. A total of 126 TA sessions were held with the different agencies (Figure 12). Topics covered included: ensuring that data disseminated was presented accurately, the development of supplemental surveys, the development and launch of the CHA toolkit, budget revisions and work plans.

Figure 12

CCBH-Provided Technical Assistance by Month



Increase Collaboration for CCOD2A Partner Agencies. The Begun Center administered a survey to gain insight from partner agency staff about their experiences working with various partners involved in CCOD2A. Members were asked to consider their experiences working with the different partners involved in this Initiative, including information on how they work together and any barriers or difficulties they believe impede the ability of the project to fully understand the needs of individuals affected by the opioid epidemic. A detailed survey report was completed and shared with CCBH and all subgrantees.

The survey, adapted from the Internal Collaborative Functioning Scales assessment⁴, was administered via REDCap. The survey link was distributed to 37 partner agency staff members representing ten different agencies via email. There were 19 survey responses, all of which were completed, representing an overall response rate of 51%. Staff from nine agencies responded to the survey.

To measure collaborative efforts between partner agencies, survey respondents were asked if they have worked with any other CCOD2A partners as part of the Initiative. Respondents could select multiple agencies. Those who responded “yes” were asked to describe the collaboration and any outcomes that resulted from it. Because some agencies are involved in multiple strategies, they have connected with more partners than others. However, all agencies involved in the CCOD2A Initiative reported having worked with at least two of the other partners. These responses (n=14) included items such as “care coordination” “peer recovery support services” and data sharing. One respondent reported:

Agencies have been instrumental with our project of developing a website for substance use treatment resources in the community. They are registered on our site and also many of them collaborate intimately to come up with new ideas and features and also figure out what the needs in the community are.

Two partners (both from Thrive Peer Support) indicated they work closely with St. Vincent Charity Medical Center, specifically that “we are embedded into their emergency department, 24 hours a day 7 days a week. We provide peer support to individuals that present in the ED with substance use disorder and/or medical health needs.” A staff member from the Fusion Center (CDP) also noted that their:

Data is sent to MetroHealth for the QRT (Quick Response Team) program. I feel as if my work is geared towards nonfatal overdoses, although I think there is potential for collaboration between the ME’s (Medical Examiner) office and the ADAMHS Board. I would like to see how often police and EMS were touchpoints before a fatal overdose, because these are potentially missed opportunities to intervene/offer resources. Some other states collect this data during Overdose Fatality Reviews (OFR) and I think it is information that we should be able to provide on each fatal overdose.

Another respondent said they “Primarily work with MetroHealth on Strategies Four & Seven, we are attempting to conduct education assessment interviews with The Centers and have completed interviews with the ADAMHS Board and Thrive.” Most (n=9) described positive outcomes resulting from agency collaborations, for example:

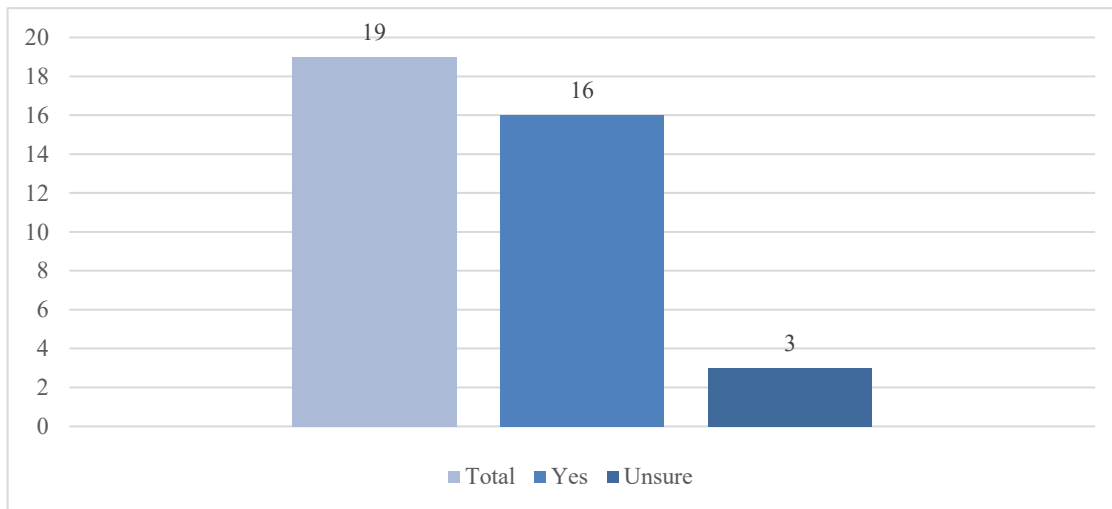
⁴Based on Internal Collaborative Functioning Scales, p. 89, in Evaluating Collaboratives: Reaching the Potential (G3658-8). Ellen Taylor- Powell, Boyd Rossing and Jean Geran. 1998. University of Wisconsin-Extension.

We have seen extremely positive outcomes from being able to collaborate with the hospital systems through OD2A. Our engagement rate with peers in the emergency department has been 84% overall, which is fantastic. We appreciate that St. Vincent and MetroHealth believe in our mission and we have really enjoyed working with them and being able to come together to help those with SUD in our community. One outcome of this partnership that has had a positive impact is that our community members now know where to go/who to call if they need SUD treatment/resources. Thanks to OD2A and the distribution and promotion of the cards we have been circulating with the peers in the emergency departments, word has spread about how to access these resources.

To gauge partner perspectives on community impact due to the CCOD2A Initiative, one question asked if staff believed the CCOD2A Initiative has improved access to and sharing of overdose data (Figure 13). Another question asked if the Initiative had improved resources for patients, resources for responders, prescription drug monitoring, or collaboration among County agencies (Table 14).

Figure 13

Data Access and Sharing^a



^aThere were zero “no” responses.

Table 14

Community Improvements

Improvement Type^a	Percent Yes
Care for patients/clients with OUD/SUD	74%
Availability of information on the opioid crisis in the County	89%
Resources for patients	84%
Resources for responders	58%
Prescription drug monitoring	32%
Collaboration among County agencies	74%
Not sure	10%

^aRespondents could indicate none of these items have improved, there were zero “yes” responses to that option.

There were 17 responses to the question, “how has the OD2A Initiative benefited Cuyahoga County residents impacted by the opioid epidemic.” While responses varied, several staff (n=6) said they believed one benefit has been improved communication among agencies, including the sharing of data, “Information sharing among county agencies has identified gaps, improved coordination of resources, and improved continuity of care.” Others noted an increase in awareness as a result of the project.

Staff also indicated that CCOD2A funding has significantly increased their ability to provide much-needed services to patients and clients:

The OD2A Initiative has benefitted Cuyahoga County residents impacted by the opioid epidemic by providing additional opportunities for accessing care and treatment regardless of ability to pay. Additionally, these funds and efforts have allowed for individuals seeking help in St. Vincent emergency department to have the ability to speak to a peer who has lived experience in substance use disorder and/or mental health diagnosis. Allowing for a peer supporter to share their story, inspire hope, and meet the peer where they are is an empowering experience--one in which we hope the peer supporters can instill the recovery opportunities that are available to them or to at least plant the seed of recovery-based thinking and goals.

Many responses referenced increased access to treatment as a benefit of the Initiative, one person did note that although access to information and resources has improved, motivating county residents to utilize these services “is an entirely different question.”

When asked specifically if partners believed the Initiative has improved access to and sharing of data, there were 16 “yes” responses while three said they were unsure. Of those who said “yes,” 11 also described how access and sharing has improved. Below is a sample of responses.

It has improved communication between agencies about overdose trends, and fostered new relationships with nonprofit/harm reduction agencies through different stakeholder meetings, and assigned tasks through the OD2A grant.

The collection of the standardized data through improved data collection methods and also the wide dissemination of the data increased the access and sharing of the data. The credibility of the agencies involved in the OD2A initiative also helps with the dissemination of the data.

We now have access to CDP data. While we don't have EMS data yet, I believe we are very close. Without OD2A, I don't believe these relationships would/could have been established.

There are quarterly meetings in which agencies [that are] part of the OD2A project gather and discuss current successes as well as challenges. We review data as a team and discuss ways to improve the OD2A project.

Survey respondents also answered questions about specific data products from both surveillance and evaluation. **Seventy-four percent (n=14) reported that evaluation products, such as reports or infographics, have been useful to date.** One partner said:

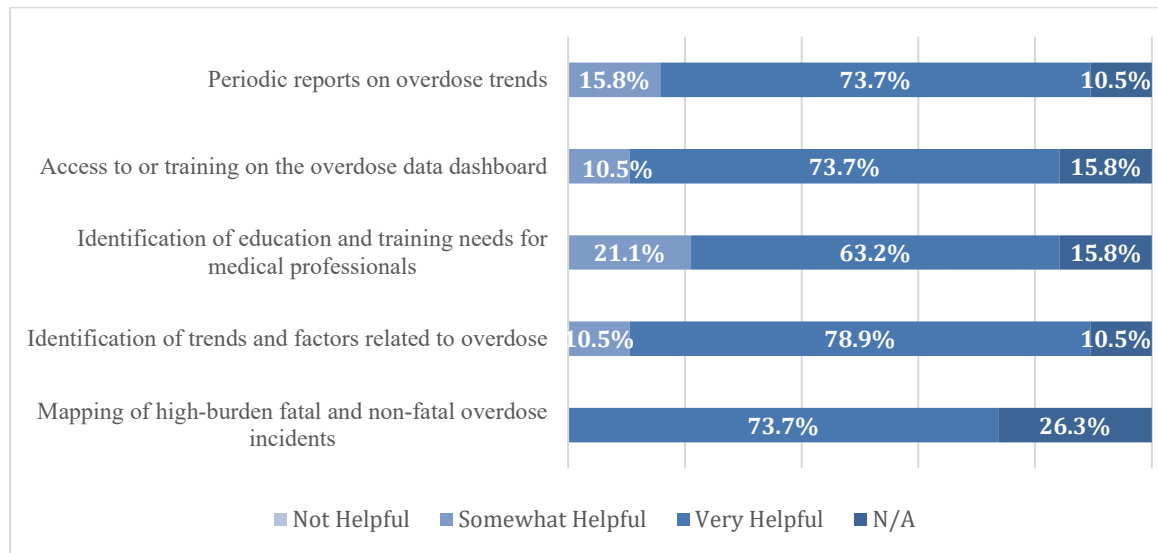
These products show what data has been collected and analyzed – this helps avoid duplication of work. Then it shows what is not being collected and where the gaps are – these are areas I can try to fill in and provide that data.

Respondents were also asked, “what additional evaluation data or reports would help with your work?” One respondent indicated that obtaining data from medical staff at the Cleveland Clinic Foundation would be helpful. Another respondent expressed concerns about whether or not data collected from partners is actually an indicator of success, and that “there is some fear that if the metrics do not show huge improvements for their agency, there is concern they [the partner agencies] will lose funding.”

In terms of surveillance, respondents were asked to rate how helpful a surveillance product would be in informing prevention (Figure 14). All products were perceived as either being somewhat helpful or very helpful.

Figure 14

Surveillance Products



The final two questions on the survey asked respondents to indicate if their agency has identified any additional training, resources, or assistance needed to help address the opioid epidemic in their community. Sixty-three percent (n=12) responded “yes,” of those nine described ways to further address the epidemic. The following summarizes recommendations from partners.

- One respondent noted their plans to go through HIPAA training to gain access to EMS data and recommended stigma training for first responders. Yet another stated the need for further training for law enforcement and community health agencies on overdose prevention and education.
- Others focused on prescribing practices, such as knowledge of co-prescribing, new drugs being introduced into the market, and dissemination of drug supply trends to physicians. Another respondent said they have “discovered... clinicians other than physicians who do not have adequate training on screening and treatment for SUD/OD.”
- Additional training needs identified by one agency including a mandatory education module on safe prescribing for physicians, advanced practice providers, pharmacists, and nurses.
- Another respondent identified long-term recovery supports - recovery housing and ongoing peer support, as a community need.
- One agency believes the community is still underserved in terms what resources are available.
- Lastly, the need for polysubstance abuse training and awareness, tapering protocols, and improved MAT education was indicated.

Many of those who responded to the survey indicated that they collaborate with other partner agencies which has positively impacted their work. Additionally, respondents agreed that the

Initiative overall has improved access to and sharing of data, and that they believe communication among agencies has also increased. Many agencies utilize evaluation and surveillance data in their prevention efforts. The survey will be repeated during the Year Three extension.

Summary. Although the objective of the QIR was to meet quarterly, COVID-19 continued to impact the ability of the leadership to meet in the first few years of the Initiative. This last year the QIR reconvened and was motivated to determine how the committee could best utilize and communicate findings from the state and counties involved in CCOD2A. Virtual and in-person meetings and activities are planned to occur in the Year Three extension.

Media Campaigns to Populations at High-risk for Overdose – CCBH

The CCBH is developing media campaigns targeting populations at high-risk for overdose. The objectives include linking clients to clinics, gaining community feedback and support, and decreasing the number of fatal overdoses in Cuyahoga County.

Table 15

Short-Term and Intermediate Outcomes for Media Campaigns

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Create awareness and education campaign for populations at risk of overdose	Data not previously tracked	2	2	1	1	Achieved
Outreach through social media campaign and radio spots	Data not previously tracked	↑10%	Radio One reported 252,542 social media views and iHeart radio reported 345,200 people reached	Twitter campaign produced 14 Tweets and 2,916 Tweet Impressions	Streaming radio/video platforms/Facebook/Twitter: 2 million+ impressions	Unable to compare as outreach efforts changed in Year Two

Increase Outreach through Social Media Campaigns and Radio Spots. In Year Three the CCBH created a harm Reduction Outreach Campaign containing two messages aimed at harm reduction and drug supply toxicity, and two messages regarding supporting recovery. A Facebook interview with the Cuyahoga County Chief Medical Examiner, Dr. Thomas Gilson was conducted highlighting the work of the CCMEO and how our drug OD deaths are significantly affecting communities of color. CCBH also participated in Overdose Awareness Day events, Project Noelle Overdose Awareness Day Candlelight Vigil and Stella Maris Planting Awareness. CCBH provided free naloxone and resources at both events. Naloxone was obtained through their partnership with ODH's Project DAWN program. Analytics regarding the media campaigns are included in Table 16.

A small workgroup is developing a media campaign around harm and stigma reduction and increase awareness of drug supply toxicity and dangers of using alone. A workgroup comprised of representation from MetroHealth, The Centers, and CCBH collaborated to create an overview of harm reduction for communities and presented the information at a city managers and mayors meeting in February 2022.

Table 16

CCBH Media Campaign Analytics

Type	Impressions	Reach	Frequency	Clicks	Completion Rate	Video Plays	Platform
Streaming Audio	44,483				99.01%		Spotify, Alexa, OmnyStudio
Video Platforms	36,577			342			Roku, AppleTV, AFV, truTV
Facebook Ads	1,880,570	538,495	3.49	4,524		1,375,269	

Summary. Over the past 3 years, emphasis on increasing media awareness regarding overdoses has been a focus of this grant. Analytics indicate that these media campaigns are spreading awareness and the message of harm reduction and danger of using alone is further being circulating through the county.

Strategy Six – Linkage to Care

Strategy Six seeks to establish linkages to care. The agencies involved in this strategy are The Centers Syringe Exchange Programs (The Centers), Cleveland State University (CSU), St. Vincent Charity Medical Center (SVCMC), Thrive, Woodrow, and MetroHealth. The following activities are encompassed within this strategy:

- Expand Thrive peer supporters in the Emergency Departments (ED);
- Expand Project SOAR (Supporting Opiate Addiction and Recovery) to Lutheran and Lakewood hospitals;
- Incorporate Screening Brief Intervention Referral and Treatment (SBIRT) training and practice into existing primary care operations;
- Increase warm handoff to Medication Assisted Treatment (MAT) for at risk-populations – Expanding Access to Medication Assisted Treatment (ExAM) program;
- Enhance *drughelp.care* resource linkage tool;
- Enhance awareness and outreach efforts of Syringe Services Program (SSP);⁵
- Expand Project SOAR to include a Patient Navigator;
- Development of Workforce Program to Support and Encourage Individuals to Become Peer Recovery Supporters (PRS);
- Community-Based PRS for uninsured individuals; and
- Outreach to Service Entities Providing Immediate Services and Harm Reduction Services.

Thrive utilizes a Center for Medicare and Medicaid evidence-based peer-to-peer support model that employs certified peer recovery supporters. These peer supporters connect directly with individuals (or their family or friends) who present in the SVCMC emergency department with a behavioral health diagnosis (particularly Opioid Use Disorder) to ensure awareness of and connection to treatment and other medical and/or social services in the community, if the client is willing to engage with the peer supporter.

Agencies

The Centers for Families and Children (The Centers)

Cleveland State University (CSU)

MetroHealth Medical Center (MetroHealth)

St. Vincent Charity Medical Center (SVCMC)

Thrive Behavioral Health Center (Thrive)

The Woodrow Project (Woodrow)

Sisters of Charity

⁵ The SSP was previously administered by Circle Health Services which merged with The Centers for Families and Children.

Woodrow uses a peer recovery supporters on-call model called Project SOAR, which provides services in the Cleveland Clinic Lakewood ED and Cleveland Clinic Lutheran Hospital ED. The peer recovery supporters connect directly with individuals (or their family and friends) in the ER who have experienced an overdose or have an Opioid Use Disorder and agree to meet with the Woodrow peer recovery supporters, in order to ensure awareness of and connection to Opioid Use Disorder (OUD) treatment and other medical and/or social services in the community.

SVCMC provides referrals and linkages to care using the SBIRT tool for individuals who have experienced a drug overdose or are otherwise at risk of experiencing an overdose based on a prescreen assessment. Case managers will provide care coordination to those clients who express interest, including referral to treatment for those with high assessment scores, assistance with navigating substance abuse treatment processes, and coordination of wraparound services.

MetroHealth's ExAM program is a case management system that helps to identify and assess inmates incarcerated at the Cuyahoga County Corrections Center who may have OUD. The objective is to provide MAT treatment and direct client care during incarceration, including the administration of buprenorphine and monitoring for medication adherence. Upon release from jail, ExAM will link clients with community-based MAT and other services.

The Centers (formerly Circle Health Services) has enhanced its outreach services within its SSP by encouraging linkages to care for the drug-using community who visit their mobile sites. Care coordinators work with clients to provide referrals for treatment and linkages for basic needs.

How agencies define 'encounter,' 'engage,' 'refer,' and 'link' is included in Table 17 and an overview of client demographics for clients served by this initiative is included in Table 18. It is important to note that not all individuals encountered will be referred or linked to treatment which could be due to a variety of reasons. If possible, partner agencies attempt to gather additional data from individuals to identify reasons and/or barriers as to why they do not link with treatment.

Table 17

Agency Definition of Encounter, Engage, Refer, and Link

Agency	Encounter	Engage	Refer	Link
The Centers	Total encounters with Syringe Services Program participants and engage with outreach workers		Clients referred to any treatment services	Referred clients who attended their MAT appointment
MetroHealth - ExAM	Inmates identified/ approached for participation in the ExAM Program	Inmates who participate in the ExAM program	Inmates referred to community-based MAT programs (inpatient/ outpatient) when released	Clients (former inmates) who attend treatment appointments once released
SVCMC	Clients screened positive on SBIRT for SUD and approached for a secondary screen	Clients who received a secondary SBIRT screen (Drug Abuse Screening Tool = DAST) for Drug Use Disorder (DUD)	Clients referred for treatment services for DUD	Clients who attended their referred appointment as confirmed by a social worker
Thrive	Notifications to peer recovery supporters of potential clients	Clients who agreed to participate in the peer recovery program	Clients referred to treatment services by peer recovery supporters	Clients who are known to have linked with treatment services, usually inpatient
Woodrow	Clients who agreed to speak to a peer recovery supporter about options	Clients who agreed to participate in the peer recovery program	Clients referred to treatment services by peer recovery supporters	Clients known to have linked with treatment services, usually inpatient

Table 18

Key Demographics for Clients

		Peer Support Services Program		ExAM Program ^a	SSP Care Coordination Program ^b	SBIRT Program ^c
		Thrive ^d	Woodrow ^e	MetroHealth	The Centers	SVCMC
N		628	166	527	1142	149
Age (average yrs., SD)		43(12.8)	39(10.7)	36(8.9)	40(11.1)	50(14.2)
Race	White	242	125	396	983	40
	Black	304	43	102	107	108
	Other(multi)/Unknown	82	0	29	52	1
Ethnicity	Hispanic	32	21	24	56	1
	Non-Hispanic/Unknown	526	145	503	1086	148
Gender	Male	381	102	363	702	90
	Female	175	64	163	439	59
	Other/Unknown	72	0	1	1	0
Homelessness		180	32	N/A ^f	N/A ^f	14
Time spent with Client (minutes) (average, SD)		63.7 (59.5)	110.3 (58.7)	N/A ^f	N/A ^f	N/A ^f
Encounter		628	166	528	1142	232
Engage (Agree to Participate)		559	166	527	1142	232
Referred to Community Treatment Services		524	156	72	107	229
Linked with Community Treatment Services		405	145	65	N/R ^f (MAT = 47)	44

^aExAM referrals for community treatment only represent those individuals released from jail not representative of all clients participating in the program.

^bThe Centers data includes individuals counted only once. These individuals however can participate in the SSP Care Coordination more than once.

^cSBIRT demographic data is for the new clients (subsequent encounters/returning clients excluded). Encounter, engagement, referral and linkage data is for all (new and returning) clients.

^dThrive clients represented here are the ones encountered in SVCMC ED and Rosary Hall.

^eWoodrow's initial approach are with clients who have already agreed to speak with a peer supporter.

^fNA: Not Applicable vs. NR: Not Reported

Overall characteristics for the clients served by the CCOD2A partner agencies are provided. This report includes separate sections for each agency as there are differences in activities, and primary indicators across the agencies. For example, each agency uses different indicators for program participation, referral for services, and linkage to care.

Expand Project SOAR to Lutheran and Lakewood Hospitals and Expand Thrive ED – Woodrow and Thrive

The CCOD2A project is working to expand peer recovery supporters to assist more individuals in need of treatment services and link them to care. The core functions of ED-based peer recovery services are the integration of peer support within ED settings, identification of patients with opioid use disorder (OUD) in the ED, engagement of patients with peer support and facilitating linkage with treatment and other recovery services (McGuire et al, 2019). The peer recovery supporters (PRS) working in similar programs across the country provide ED with overdose prevention education, naloxone training, support, and linkage with treatment and other recovery services (Waye et al, 2019, Welch et al, 2019, Powell et al, 2019).

Addiction professionals acknowledge the importance of treatment that enables engagement and helps an individual with skills needed for overcoming substance addiction. Historically substance use disorders have been treated through intensive professional treatment; however, as the field has shifted towards a model that emphasizes a continuum of care, PRS are becoming valuable assets to help individuals actively engage in their recovery (Bassuk et al, 2014). Studies have shown that individuals who engage with PRS are less likely to relapse as PRS helps an individual find a pathway of recovery that will help sustain their recovery journey (Eddie et al, 2019). Patients who engaged with PRS saw them as a model of hope and encouragement for behavior change, and someone who could provide support, and fill service gaps. The patients highlighted the need to address privacy concerns, concerns related to cost, insurance coverage and sustainability (Wagner KD et al, 2020); and identified lack of basic resources such as ID, cell phones, medical insurance, access to transportation, and homelessness as barriers to treatment (Powell KG et al, 2019).

In Cuyahoga County, Thrive Peer Recovery Services and the Woodrow Project are two agencies that have incorporated this client-centered treatment into their work.

In Year Two, the CCOD2A Initiative provided funding for Thrive peer support services in two additional outpatient settings, MetroHealth Parma (MHP) and MetroHealth Broadway (MHB) for community-based peer recovery services which continued in Year Three. Peer recovery services also continue to be provided in the emergency department (ED) for SVCMC. Data were collected for peer recovery support services within these hospitals. Woodrow continued Project SOAR at Lutheran and Lakewood Hospitals. The

Thrive changed workflows to triage peers at the time of admission so that “peers are now assessed at presentation and if applicable will go directly to Rosary Hall if detox was the main reason for presentation at the emergency department. This new workflow frees up space in the emergency department for peers who have emergent medical needs and want resources/referrals for their SUD.”

evaluation question for these activities is *how does the expansion and enhancement of peer recovery supporters (PRS) in local hospitals increase the ability to engage and link clients who have experienced a nonfatal overdose into treatment?* During the last three years, Thrive and Woodrow have been able to link 58% and 86% of the individuals they have encountered in the ED with treatment, respectively.

Thrive Key Indicators

Thrive PRS connect directly with individuals (or their family or friends), if they agree to speak with the peer recovery supporter, who present in the ED with a behavioral health diagnosis (particularly OUD), at SVCMC to ensure awareness of and connection to treatment and other medical and/or social services in the community. Thrive continued to make progress by hiring three additional peer recovery supporters to provide peer recovery support-client linkage. Thrive on-call staff is notified and arrive at the ED within 30 minutes to meet with the client.

Table 19

Short-Term and Intermediate Outcomes for Thrive Peer Recovery Support Services

Description	Measure	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Personnel trained on linkage programs and services	Short-term	0	N/A	43 ^a	51	23	In progress
Time spent by PRS with clients	Short-term	0	↑10%	65 mins (average)	51 mins (average)	64 mins (average)	Over 25% increase from Year Two to Year Three.
Notifications to PRS of potential clients (Encounter)	Intermediate	0	↑10%	230	681 ^b	628 ^b	There was an 8% decrease in encounters between Year Two to Year Three.
Clients who agreed to participate in program (Engage)	Intermediate	0	↑10%	197	573	559	In Year Three, 89% of the clients encountered by Thrive PRS were engaged compared to 84% in Year Two, a 6% increase.
Clients referred to treatment services by PRS (Refer)	Intermediate	0	↑30%	132	539	524	In Year Three, 83% of the clients encountered were referred for services, compared to 79% in Year Two, a 5% increase.
Clients linked with treatment (Link)	Long Term	0	↑10%	63	425	405	In Year Three, 64% of the clients encountered were linked with treatment, compared to 62% in Year Two.

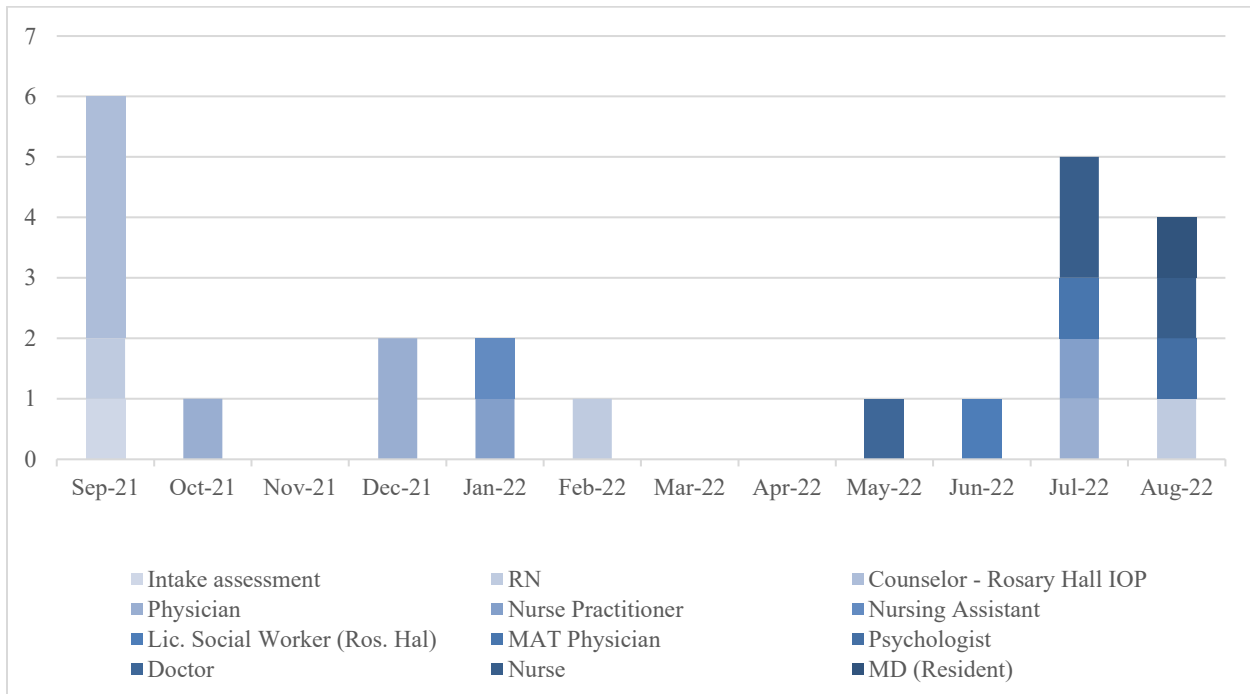
^aIncorrectly reported as 75 in the Year One Report.

^bThrive clients encountered in SVC MC ED and Rosary Hall.

During Year Three, Thrive trained additional ED staff in peer support services (n=23) (Figure 15).

Figure 15

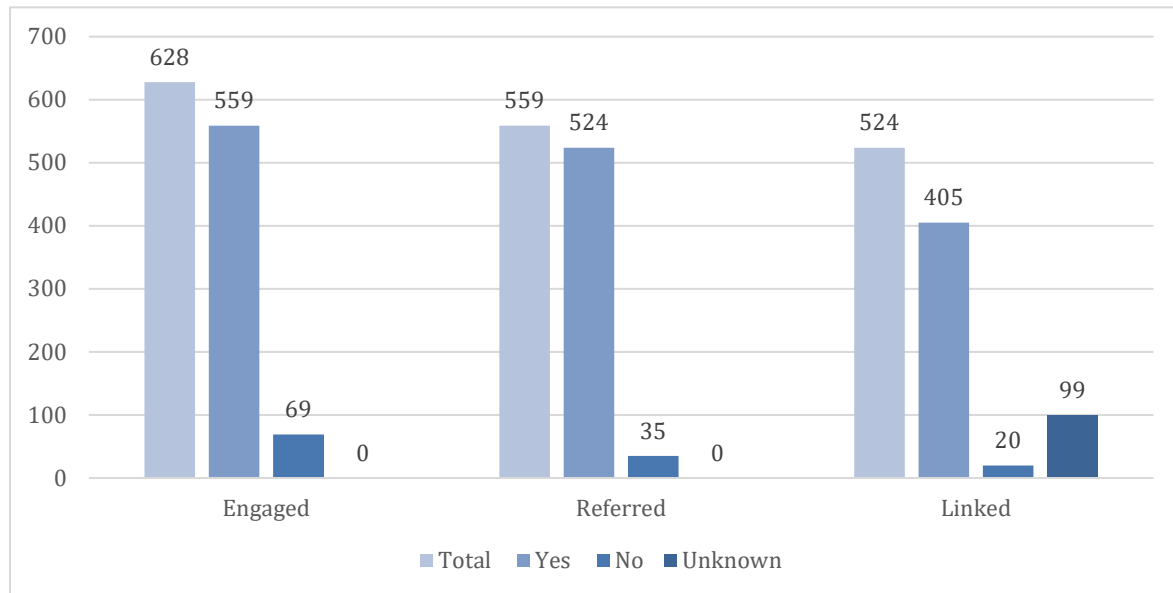
Thrive Staff Trained by Month from September 2021 to August 2022 (n=23)



Encounter/Engagement in Program Services. In Year Three, Rosary Hall data started to be collected in February 2022. Thrive peer recovery supporters are notified by ED staff of individuals with a behavioral health diagnosis (particularly OUD). Data is only available for those individuals for whom Thrive received a referral. It is unknown at this time whether there were other individuals who experienced an overdose and came to an ED, but for whom Thrive peer recovery supporters received no referral, and therefore unable to track. This additional data would allow more insight into those who may be overlooked for treatment intervention. Thrive continues to have 24-hour coverage. When only examining peer recovery support services provided by Thrive at SVCMC in Year Three, Thrive peer recovery supporters encountered 628 individuals a decrease of 8% from the previous year (n=681). ***Of those individuals encountered by Thrive peer recovery support staff, 89% agreed to participate in peer support services (n=559)*** (Figure 16).

Figure 16

Individuals Thrive Engaged/Referred/Linked from September 2021 to August 2022



Referral to Treatment Services. From September 1, 2021 to August 31, 2022, 94% of the individuals who agreed to engage with Thrive peer recovery supporters were referred for treatment services (n=524) (Figure 16), 83% of all individuals encountered by Thrive and a 18% increase from Year Two. The most common referrals (Table 20) made were detoxification and inpatient treatment. Of individuals referred to detoxification, 73% were successfully linked to services (n=294). Approximately 27% (n=141) of the clients were referred to more than one treatment service. Thrive reported in their programmatic summary that

The pandemic has lengthened the amount of time it is taking to get peers placed and to their treatment destination because peers now have to wait until they receive their COVID-19 test results and wait even longer for rideshares because of the decrease in those services.

Table 20*Type of Treatment Referral by Thrive from September 2021 to August 2022*

Types of Treatment ^a	No. of Clients Referred (n=524)		No. of Clients Linked (n=405)	
	N	Percent	N	Percent
Detoxification	349	67%	294	73%
Inpatient	251	48%	108	27%
Outpatient	41	8%	0	0%
Non-Professional (AA, etc.)	25	5%	0	0%
Medication Asst. Treatment	9	2%	3	1%

^aClients could be referred and linked to more than one treatment service.

Referral to Other Services. In addition to referrals for treatment services, many Thrive clients are referred for additional services (86%, n=539). The majority of the non-treatment referrals were for community peer support, Medicaid/Medicare assistance, and other support programs (Table 21). Please note a client could have been referred for more than one type of non-treatment service.

Table 21*Thrive Client Referrals for Other Services from September 2021 to August 2022*

Other Service Referrals	Multiple Cases by Client ^a	
	Multiple- Ns	% of referrals
Community Peer Support	526	98%
Children and Family Services	1	<1%
Child Support/Child Care	1	<1%
Employment/Education Services	0	<1%
Housing/ Shelters	0	<1%
SSI/SSD	1	<1%
ADC/TANF/Food Pantries/Food Stamps (EBT card)	1	<1%
Identification (DL, state ID, birth certificate, social security)	1	<1%
Clothing	1	<1%
Legal Assistance	1	<1%
Transport Assistance	2	<1%
Medicaid/Medicare assistance	4	1%
Other	0	0%
Total	539	100%

^aClients could be referred to more than one service.

Linkage to Treatment. Of those clients who were referred to treatment (n=524), 77% (n=405) were known to have linked with treatment services (Figure 16), representing 64% of the clients encountered by Thrive. Of those individuals linking to care, 73% of the clients were linked to detox (n=294), 27% to Inpatient (n=108), and 1% to Medication Assisted Treatment (n=3). *During the last two quarters of Year Three, linkage of clients to treatment services continued to rise and reach 100%.*

Thrive clients cited varied reasons for not linking with a referred treatment service. Early departure before linkage (n=7), and client’s testing positive for COVID-19 (n=3) were the most common reasons. Other reasons for clients not linking with treatment services are listed below (Table 22).

Table 22

Reasons Thrive Clients did not Link with Treatment Services from September 2021 to August 2022

Types of Reasons ^a	N	Percent
Peer left before linking/ completing admission process/ not willing	7	33%
Peer tested positive for COVID-19	3	14%
Peer had insurance issues	1	5%
Peer had appointment scheduled	1	5%
Peer waiting for inpatient center to contact them	1	5%
Peer wanted options/resources only	1	5%
Beds not available	1	5%
PRS unable to find center for the peer	1	5%
Peer's Medicare could not be verified	1	5%
Peer was released from hospital	1	5%
Peer wanted to wait until the following day	1	5%
Peer believed there was no solution	1	5%
Peer refused to give urine sample	1	5%
Total	21	100%

^aClients could give more than one response.

Transportation to Treatment. Thrive offers transportation to individuals that qualify for services after completing the initial screening survey. Thrive transported 288 people to treatment and one person to other services in Year Three.

Self-Reported Substance Use. Clients were asked substances use. Many clients reported using alcohol (36%, n=227), cocaine (24%, n=152) and opioids (23%, n=146) (Table 23).

Table 23*Thrive Client Self-Reported Substance Use from September 2021 to August 2022 (n=628)*

Self-reported Substance Use ^a	N	Percent of clients
Alcohol	227	36%
Cocaine	152	24%
Opioid	146	23%
Cannabis	83	13%
Other non-specified	70	11%
Methamphetamine	33	5%
Hallucinogen	12	2%
Rx Stimulant	5	<1%
Sedative	4	<1%
Inhalant	2	<1%

^aClients could give more than one response.

Although 43% of the clients only reported using one substance (n=271), many clients did report using two (18%, n=116) or three substances (8%, n=53) (Table 24).

Table 24*Thrive Client Self-Reported Polysubstance Use from September 2021 to August 2022 (n=628)*

Polysubstance Use	N	Percent
One substance	271	43%
Two substances	116	18%
Three substances	53	8%
Four substances	22	4%
Five substances	4	<1%
Six substances	1	<1%
Nine substances	1	<1%
Unknown	160	26%
Total	628	100%

Community-based PRS. Starting in Year Two, Thrive PRS also engaged clients presenting at MHP and MHB outpatient clinics in addition to those presenting at the ED for community-based peer support. These services continued into Year Three. This past year, Thrive encountered 41 clients in the MHP and 30 clients in the MHB locations, compared to 145 clients in MHP and 52

clients in MHB in Year Two. Similar to the 197 clients in Year Two, this cohort of 71 clients included those who were already linked with treatment when they were encountered by Thrive PRS, and they spent a mean of 48.9(SD=35.9) minutes with their PRS. Alcohol (n=12, 17%), opioid (n=15, 21%), and cocaine (n=8, 11%) were the most commonly used substances reported by the clients. One client had their family member present or contacted by the PRS.

Of the 71 clients, 21(30%) engaged with their PRS. In comparison, in Year Two, 51% of clients encountered in MHP and MHB (101 out of 197) engaged with PRS. The mean age of the Year Three clients with available demographic information was 38.6(SD=9.7) years. Of these 21 clients, 17 clients were white (81%), and 4 (19%) were Black. None of the clients reported homelessness at the time of encounter.

Since many of these clients are already linked with treatment services, there were very few additional treatment referrals, three of the clients (14 %), and none of the clients was known to have linked with these additional treatment services. Clients were referred to non-professional services such as Alcoholics Anonymous and one client was referred to MAT. Again, the referrals and linkages in Year Three were lower than the referrals and linkages observed in Year Two (32% referrals and 11% linkages).

Some of the clients who engaged with the PRS also were referred to other social services. These services include ADC/TANF/Food Pantries/Food Stamps, transportation assistance, or help with obtaining identification such as a driver's license or birth certificate. One of the 21 clients had their family members present or contacted by the PRS (5%).

Summary. In Year Three, Thrive PRS encountered 628 clients at the SVCMC ED, out of which 89% engaged with the PRS, 83% were referred to treatment services, and 64% were known to have linked with those services, five times increase in linkages from Year One. The majority of clients (with known demographic information) were non-Hispanic, Black males, with an average age of 43 years. Detoxification and inpatient treatment remained the most commonly linked treatment services, and a vast majority of clients were referred to Thrive's community-based PRS and other social services. Thrive provided transportation to 55% of the clients who were referred to treatment. The status of treatment linkage remained unknown for about a fifth of the clients referred to treatment. Leaving the ED before linkage and COVID-19 infection were the most commonly reported barriers to treatment linkage.

Woodrow Key Indicators

Woodrow uses a PRS on-call model called Project SOAR. Project SOAR provides services in the Cleveland Clinic Lakewood and Cleveland Clinic Lutheran Hospital EDs. Woodrow continues to provide peer support services virtually. The hospitals have iPads programmed to call a Project SOAR phone that is in service 24 hours, seven days per week. Individuals who agreed to speak Woodrow staff are then connected directly with a peer recovery supporter.

Table 25

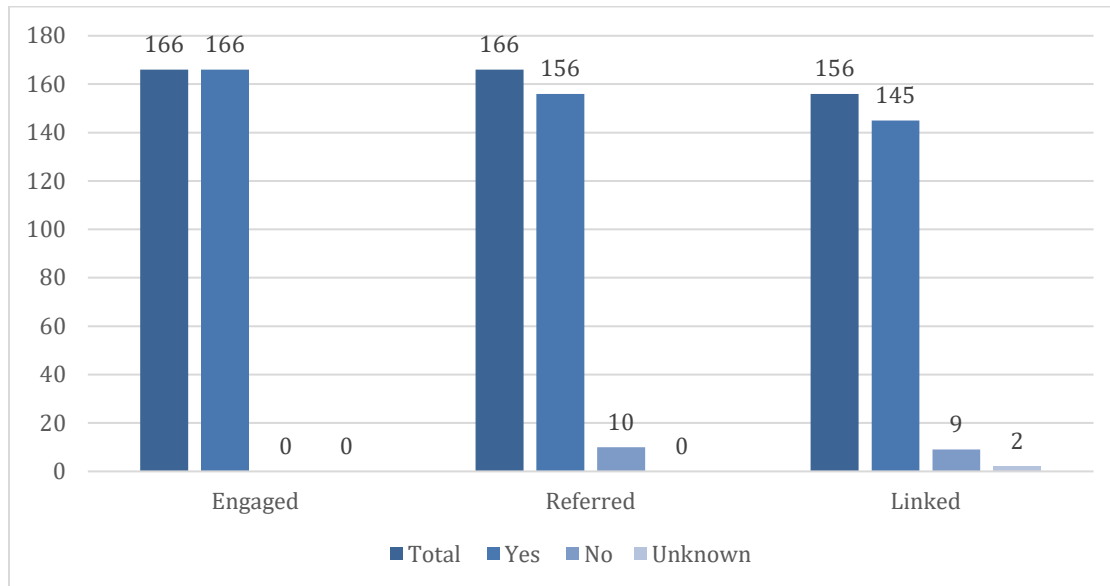
Short-Term and Intermediate Outcomes for Woodrow Peer Recovery Services

Description	Measure Type	Baseline	Target	Y1 Data	Y2 Data	Y3 Data	Outcome Status
Support personnel trained on linkage programs and services	Short-Term	0	↑10%	30	1	0	Achieved
Time spent by PRS with clients	Short-Term	0	↑10%	117 mins (average)	122 mins (average)	110 mins (average)	10% decrease from Year Two
Notifications to PRS of potential clients (Encounter)	Intermediate	0	↑10%	178	158	166	5% increase from Year Two
Clients who agreed to participate in the program (Engage)	Intermediate	0	↑10%	178	157	166	In Year Three, 100% of clients encountered by Woodrow PRS were engaged, compared to 99% in Year Two.
Clients referred to treatment services by PRS (Refer)	Intermediate	102	192	174	152	156	In Year Three, 94% of the clients encountered were referred by Woodrow PRS for services compared to 96% in Year Two.
Clients linked with treatment (Link)	Long Term	0	↑10%	150	138	145	In Year Three, 87% of the clients encountered were linked with treatment services, the same as in Year Two

Encounter/Engagement in Program Services. During this last year Woodrow encountered a total of 166 individuals who presented at the ED (Figure 17), compared to 158 in Year Two. Data are only available for those individuals for whom Woodrow received notice of a willingness to speak with them. It is unknown at this time whether there were other individuals who experienced an overdose and came to the ED, but for whom Woodrow peer recovery supporters were unable to track due to a lack of client willingness to engage. This additional data would allow more insight into people who may be overlooked for treatment intervention. *Since September 2021, 166 out of 166 (100%) clients agreed to participate in peer support services, a 1% increase from Year Two and similar to the 100% in Year One.*

Figure 17

Individuals Woodrow Engaged/Referred/Linked from September 2021 to August 2022



Referral to Treatment Services. Since September 2021, 97% (n=156) of Woodrow’s clients who agreed to participate were referred for treatment services (Figure 17), 94% of all clients encountered by Woodrow compared to 96% in Year Two and 98% in Year One. From September 2021 to January 2022, there was a range of 86% to 100% of Woodrow clients referred each month. There was a slight decrease in June 2022, however, referrals improved in July 2022 to nearly 96%.

Of those individuals who agreed to peer recovery services, approximately 37% (n=58) were referred to more than one treatment service. Of the total referrals made for the clients, detoxification was the most commonly referred service (n=145, 93%), followed by inpatient treatment (n= 60, 38%), and outpatient treatment (n=8, 5%) (Table 26).

Woodrow reported “the emergency departments do not test for synthetic opiates. Because of this, there are some treatment providers who will not accept patients who have negative drug screens.” However, by building rapport and trust with treatment providers Woodrow's peer supporters were able to help enroll patients in treatment programs despite negative drug screening test results.

Table 26*Type of Treatment Referral by Woodrow from September 2021 to August 2022*

Types of Treatment ^a	No. of Clients Referred (n=156)		No. of Clients Linked (n=145)	
	N	Percent	N	Percent
Detoxification	145	93%	135	93%
Inpatient	60	38%	56	39%
Outpatient	8	5%	8	6%
Medication Asst. Treatment	1	1%	0	0%

^aClients could be referred and linked to more than one treatment service.

Linkage to Treatment. Of those clients referred to treatment (n=156), the majority were linked with treatment services, an overall success rate of 87% (n=145) of those encountered. This was the same rate as Year Two for all clients encountered by Woodrow. ***The most common services clients were linked with were detox (n=135, 93%), and inpatient services (n=56, 39%).*** Reasons why clients did not link with treatment services varied. The majority of clients left the ED before Woodrow staff could link them with or transport them to treatment services (n=5) or they were uncooperative (n=5). Other reasons are summarized in Table 27.

Table 27*Reasons Woodrow Clients were not Linked to Treatment from September 2021 to August 2022*

Client Reasons for not Linking to Treatment ^a	N
Client left before getting transported to treatment	5
Client was uncooperative/aggressive	5
Beds unavailable	3
Client and her husband couldn't get admitted to the same facility	2
Client was uninsured	2
Client had some medical/mental health issues	2
Client didn't return calls	2
Client refused the available treatment referral	1
Client tested COVID positive	1
Client only spoke Spanish	1

^aClients could give more than one response.

Transportation to Treatment. Woodrow offers transportation to treatment for all individuals who are not already transported by the hospital service. As of August 31, 2022, Woodrow transported 26 clients to treatment.

Family Services. For all clients encountered, family members of the clients were present or were contacted by the PRS in 21% (n=34) of the cases. 62 clients had children under 18 involved (37%), and resources were provided for children of 12 of those clients.

Drug Use in past 30 days. Woodrow collects information from clients on their past drug use. In the past 30 days, all of the 166 clients admitted to using alcohol and/or drugs (either prescription or non-prescription). Street opioids were the most commonly used drugs (56%), followed by prescription opioids (54%) (Table 28). Common misused prescription opioids were fentanyl (n=50,30%), oxycodone (n=34,20%), hydrocodone (n=5, 3%) and buprenorphine (n=3, 2%).

Table 28

Woodrow Clients - Drug Type Use in Past 30 days (n=166)

Self-Reported Substance Type (Last 30 days) ^a	N	Percent of clients
Street Opioids	93	56%
Prescription Opioids	89	54%
Cocaine	70	42%
Alcohol	54	33%
Cannabis	38	23%
Methamphetamine	28	17%
Sedatives, depressants or sleeping pills	12	7%
Hallucinogens	3	2%
Prescription Stimulants	2	1%

^aClients could give more than one response.

Of the 166 clients encountered, 50% (n=83) reported never experiencing an overdose, and 56% (n=93) never visited ED to treat an overdose (Tables 29 & 30). In addition to approaching clients who have experienced an overdose, Woodrow also reaches out to individuals with suspected OUD.

Table 29

Number of Overdoses Experienced by Woodrow Clients (n=166)

Number of times client reported overdosing	N	Percent
Never	83	50%
Once	19	11%
Twice	16	10%
Three Times	9	5%
Four of More	39	24%
Refused	0	0%
Unknown/NA	0	0%
Total	166	100%

Table 30*Woodrow Clients Who Went to the ED Due to Overdose*

Number of times client visited the ED or hospital because of an OD	N	Percent
Never	93	56%
Once	26	16%
Twice	14	8%
Three Times	2	1%
Four or More	31	19%
Refused	0	0%
Unknown/NA	0	0%
Total	166	100%

The most common location clients reported experiencing an overdose were someone else's house or a public place (Table 31). Over half (54%, n=90) did not receive naloxone for their overdose (Table 32). Most common self-reported substances used by the clients at their most recent overdose were heroin (n= 63, 38%), cocaine (n= 35, 21%), alcohol (n=28, 17%), and fentanyl (n=21, 13%). EMS transported 58 clients (35%) to the ED after overdose, and 4% clients (n=7) were transported by friends.

Table 31*Woodrow Clients Reported Place of Last Overdose (n=166)*

Last place of OD	N	Percent
In your home	20	12%
Someone else's home	29	18%
Hotel/motel	5	3%
Public place	25	15%
Car	2	1%
Hospital	1	<1%
Work	1	<1%
Refused	1	<1%
Unknown/NA	82	49%
Total	166	100%

Table 32*Number of Times Naloxone was Administered to Woodrow Clients Because of an Overdose*

Naloxone Administration Because of an OD	N	Percent
Never	90	54%
Once	22	13%
Twice	14	8%
Three Times	6	4%
Four of More	34	20%
Total	166	100%

Woodrow clients follow up. As part of an additional evaluation component, starting in Year Two, Woodrow also contacts clients who engaged with a Woodrow peer recovery supporter in the hospital ED 30-days, 90-days, six-months and one year after release. The follow up data reported is cumulative, from CCOD2A Years Two & Three. Clients were asked questions about their living conditions, treatment, services received, previous overdoses, and concerns about drug use and treatment. Woodrow reached out to 295 clients for their 30-day follow up, and received responses from 86 clients, a response rate of 29%. For their 90-day follow up, 36 out of 253 clients completed the survey, a response rate of 14%. At six months, Woodrow was able to connect with 50 out of 232 clients (22%) and at one year, 27 out of 198 clients (14%). Table 33 summarizes data collected for clients regarding treatment and living conditions.

Table 33*Woodrow Client Follow-Up*

	30-Day (n=86)		90-Day (n=36)		6 Months (n=50)		1 Year (n=27)	
	N	Percent	N	Percent	N	Percent	N	Percent
Currently Engaged in Treatment	47	55%	15	42%	20	40%	10	37%
Type of Treatment^a								
Inpatient	7	15%	1	7%	2	10%	0	0%
Detox	19	40%	3	20%	6	30%	1	10%
Outpatient	13	28%	3	20%	4	20%	3	30%
Residential/Sober House	13	28%	4	27%	4	20%	1	10%
MAT	2	4%	2	13%	0	0%	2	20%
Meetings and Sponsor	1	2%	2	13%	1	5%	0	0%
Aftercare	0	0%	0	0%	1	5%	3	30%
Other	0	0%	0	0%	1	5%	1	0%
Homeless	24	28%	5	14%	13	26%	1	4%
Working on Recovery	79	95%	32	89%	46	94%	25	96%

^aClients can indicate more than one type of treatment.

Clients were asked to identify factors keeping them in recovery (Table 34). *Wanting a better life* was the most common reason at each point in time.

Table 34

Reasons that Keep Woodrow Clients in Recovery

What keeps you in recovery? ^a	30-Day (n=86)		90-Day (n=36)		6 Months (n=50)		1 Year (n=27)	
	N	Percent	N	Percent	N	Percent	N	Percent
Meetings/ sponsor	18	16%	8	16%	6	7%	3	6%
IOP/ treatment	22	20%	9	18%	5	6%	5	11%
Family/Support from others	21	19%	10	20%	17	21%	10	21%
Tired of old life/ want better life	35	32%	16	33%	33	41%	19	40%
Work and hobbies	6	5%	4	8%	2	2%	1	2%
Aftercare	1	1%	1	2%	0	0%	0	0%
Fear of dying/OD	2	2%	0	0%	3	4%	0	0%
Sober Living House	0	0%	0	0%	4	5%	1	2%
Self-respect/Staying Clean	0	0%	0	0%	0	0%	7	15%
Previous OD/Death of friend	0	0%	0	0%	4	5%	0	0%
Pregnant	0	0%	0	0%	0	0%	1	2%
Court Order	0	0%	0	0%	1	1%	0	0%
God	0	0%	0	0%	2	2%	0	0%
Unknown	6	5%	1	2%	4	5%	0	0%
Total Responses	111	100%	49	100%	81	100%	47	100%

^aClients can indicate more than one response

Clients also provided reasons for relapse. *Associating with old friends or being in the wrong company were the most common reasons cited (Table 35).*

Table 35

Reasons that Could Make Woodrow Clients Go Back to Misusing Drugs Again

What could make you misuse drugs again? ^a	30-Day (n=86)		90-Day (n=36)		6 Months (n=50)		1 Year (n=27)	
	N	Percent	N	Percent	N	Percent	N	Percent
Old friends/ wrong company	28	31%	9	24%	15	33%	9	31%
Mental health issue/stress	16	18%	1	3%	6	13%	2	7%
Own mind/ thinking	15	16%	4	11%	4	9%	4	14%
No support	2	2%	1	3%	0	0%	0	0%
Boredom	8	9%	4	11%	1	2%	0	0%
Fear including fear of losing or something happening to family/baby	4	4%	2	5%	2	4%	1	3%
Pain	1	1%	4	11%	3	7%	1	3%
Stopping treatment	4	4%	1	3%	1	2%	1	3%
Can't say no	0	0%	1	3%	0	0%	0	0%
Nothing can make me go back	12	13%	9	24%	4	9%	7	24%
Homeless/living situation	0	0%	1	3%	2	4%	1	3%
Grief/loss/loneliness	0	0%	0	0%	2	4%	1	3%
Bad relationship with family	0	0%	0	0%	4	9%	2	7%
Other/ unknown	1	1%	1	3%	1	2%	0	0%
Total responses	91	100%	38	100%	45	100%	29	100%

^aClients can indicate more than one response

A majority of the clients at 30-day (94%), 90-day (89%), six-month (98%), and one-year (100%) follow up did not express any concerns about engaging in treatment. COVID-19 infection, using drugs again, embarrassment to family and friends, stigma, work and pain medication issues were some of the concerns noted by the clients. Similarly, a majority of the clients did not report any barriers related to engaging in treatment (92% at 30 days, 83% at 90 days, 88% at 6-month, and 96%). Reluctance to talk about personal life, lack of insurance, COVID-19 infection, transportation issues, and work-related issues were reported as barriers. Types of social services clients were receiving were also examined (Table 36). Many of the clients were receiving Medicaid/Medicare.

Table 36

Social services received by Woodrow Clients

Social Services Received ^a	30-Day (n=86)		90-Day (n=36)		6 Months (n=50)		1 Year (n=27)	
	N	Percent	N	Percent	N	Percent	N	Percent
Medicare/Medicaid	67	52%	23	44%	36	47%	26	57%
ADC/TENF/food pantry/food stamp	29	22%	17	33%	21	27%	15	33%
SSI/SSD	13	10%	5	10%	9	12%	3	7%
No services	12	9%	6	12%	9	12%	2	4%
Child support/childcare	2	2%	0	0%	1	1%	0	0%
Housing	2	2%	0	0%	0	0%	0	0%
Identification	1	1%	0	0%	0	0%	0	0%
Employment/education	0	0%	0	0%	1	1%	0	0%
Other	3	2%	1	2%	0	0%	0	0%
Total responses	129	100%	52	100%	77	100%	46	100%

^aClients can indicate more than one response

Summary. Woodrow PRS continued to work out of Cleveland Clinic Lakewood and Cleveland Clinic Lutheran Hospital EDs, and managed to link 87% of the clients encountered in Year Three into treatment services. Linkage to treatment remained high with over 80% of the clients encountered linking with treatment services across all three years. Woodrow clients were predominantly non-Hispanic white males, with an average age of 39 years. Detoxification and inpatient treatment remained the most commonly linked treatment services. Transportation was provided to 17% of those referred to treatment. In the last two years, Woodrow contacted their clients for 30-day, 90-day, six-month, and one-year follow ups, and averaged 14%-29% with respect to response rates. The most common reason for the clients to remain in recovery was wanting a better life, and associating with wrong company was the most common reason for relapse.

Incorporate SBIRT Training and Practice into Existing Primary Care Operations - St. Vincent Charity Medical Center

St. Vincent Charity Medical Center (SVCMC) is utilizing the Screening, Brief Intervention, and Referral to Treatment (SBIRT) tool in two of their medical-surgical units and their outpatient health center to increase the identification of patients with SUD needing treatment services⁶.

⁶ In the Year One report, it was incorrectly noted that SVCMC was providing SBIRT to patients in its Health Care Center (HCC) (primary and specialty care clinic) and to all inpatients of its Medical Center.

SBIRT is an effective way to integrate SUD management into primary care and general medicine. An evaluation of a cross-site SBIRT program funded by SAMHSA found that greater intervention intensity was associated with larger decreases in substance use. Both brief intervention and brief treatment had an impact on reducing the frequency of alcohol and illicit drug use (Babor et al, 2017). Other studies concluded that SBIRT helped create awareness and recognition of patients with SUD and facilitated their treatment (Moberg & Paltzer, 2021), and reduce the number of subsequent hospital visits for SUD for patients receiving SBIRT (Cooper et al, 2022). The evaluation question for this activity is *how does the use of SBIRT in EDs increase the identification of patients with SUD in need of treatment services?*

Table 37

Short-Term and Intermediate Outcomes for SBIRT Program

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Support personnel trained on linkage programs and services	Data not previously collected	↑10%	55	2	0	57 support personnel trained
Facilities adopting the SBIRT as a means to link patients with treatment services	Data not previously collected	↑10%	2	1	0	Three facilities adopting SBIRT
Patients who are given initial SBIRT screening	Data not previously collected	2,175/yr.	362	3,973	3,989	Achieved in Years Two & Three
Patients with drug use disorder (DUD) approached for a secondary screen (Encounter)	Data not previously collected	↑10%	50 ^a	302	232	All patients identified for secondary screen for drug use disorder are approached.
Patients with DUD who are given the secondary SBIRT Screening (Engage)	Data not previously collected	↑10%	50 ^a	301	232	In Year Three, 100% of the patients encountered agreed to the screen, similar to previous years ^c
Patients referred for treatment services after SBIRT screening (Referred)	Data not previously collected	↑50%	23 ^a	291 ^b	229	In Year Three, 99% of the patients encountered were referred for services ^c , a 4% increase from Year Two ^b
Patients with drug use disorder (DUD) linked with treatment (Link)	Data not previously collected	↑10%	16 ^a	40	44	In Year Three, 19% of patients encountered were linked ^c with treatment compared to 13% in Year Two ^b , and 32% in Year One ^a

^aThe SVCMC Year One Data was updated to only reflect patients who had screened positive for DUD.

^bSVCMC Year One Data was only for four months. ^cThe data includes returning patients.

The SBIRT screens patients for substance use disorder (Drug Use Disorder and Alcohol Use Disorder), Anxiety, Depression, and Trauma. SVCMC began using the SBIRT Screening instrument for patients in one medical-surgical unit in April 2020 and was able to expand to a second by the end of Year One. Year Two was the first full year for SBIRT program implementation in SVCMC. There were some significant changes to note between Year Two and Year Three reporting. Year Three started to track new patients encounters as well as returning patient encounters.

Encounter/Engagement in Program Services. During Year Three, the SVCMC SBIRT Team screened a total of 3,989 patients using the SBIRT primary screen, with 232 patients (new and returning) screening positive for DUD. *All of the 232 patients with drug use disorder encountered (100%) agreed to the secondary screen.* For those patients agreeing to the secondary screen (DAST), 99% (n= 229) agreed to speak with a social worker.

In Year Three, additional analysis focusing on the drug types and drug combinations reported by patients with Drug Use Disorder (DUD) were conducted. After completing their primary SBIRT, patients who completed the secondary screening for DUD were prompted to report the drug types they used. The list includes cannabis, opioids, sedatives, stimulants, amphetamines, cocaine, other drug types/unspecified drug types, hallucinogens, and inhalants (Table 38). This additional reporting highlights trends of polysubstance misuse (the use of two or more drugs) among patients encountered in clinical settings. In Year One, approximately 26% of the patients with SUD reported polysubstance misuse (13 out of the 50 patients). In Year Two, 52 of the 301 patients reported misuse of more than two drugs (17%). In Year Three, 44 of the 232 patients reported polysubstance use (19%).

Table 38*SVCMC SBIRT Total Patients Encountered Drug/Drug Combinations Reports*

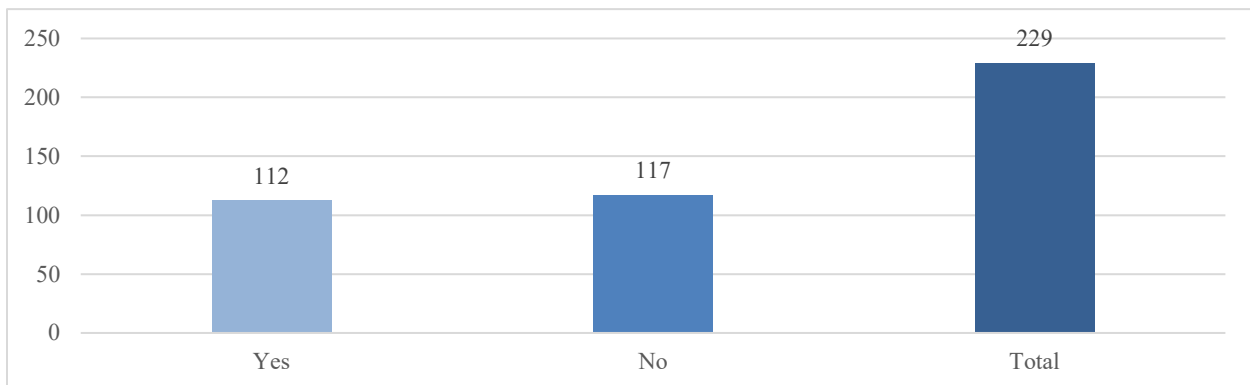
Self-reported Drug Use	Total Number	Percent
Cannabis only	130	56%
Opioid only	16	7%
Cocaine only	40	17%
Hallucinogen only	1	<1%
Amphetamine only	1	<1%
Cannabis and Cocaine	20	9%
Cocaine and Hallucinogen	2	1%
Opioid and Cocaine	9	4%
Cannabis and Opioid	2	1%
Cannabis and Hallucinogen	3	<1%
Opioid and Amphetamine	1	<1%
Cannabis, Cocaine, Hallucinogen	1	<1%
Cannabis, Opioid and Cocaine	4	2%
Cannabis, Opioid, Sedative	1	<1%
Unknown	1	<1%
Total	232	100%

Referral to Treatment Services. Of the 229 patients referred, 147 were new patients and 82 were patients who previously had received a secondary screen and spoke with a social worker. All patients were referred for general treatment services.

Patients who Agreed to Treatment Referrals from SBIRT Team. In addition to tracking the number of patients referred for treatment services, SVCMC also tracks the number of patients who accepted the referral for treatment. Of the 229 patients who were referred for treatment by the SBIRT Team, 49% agreed to the referral (n=112) (Figure 18).

Figure 18

SVCMC SBIRT Patient Encounters That Agreed to a Referral for Treatment from September 2021 to August 2022



The reason provided by many patients encountered, who did not accept the referral, was a lack of interest in treatment (92%, n=108) (Table 39).

Table 39

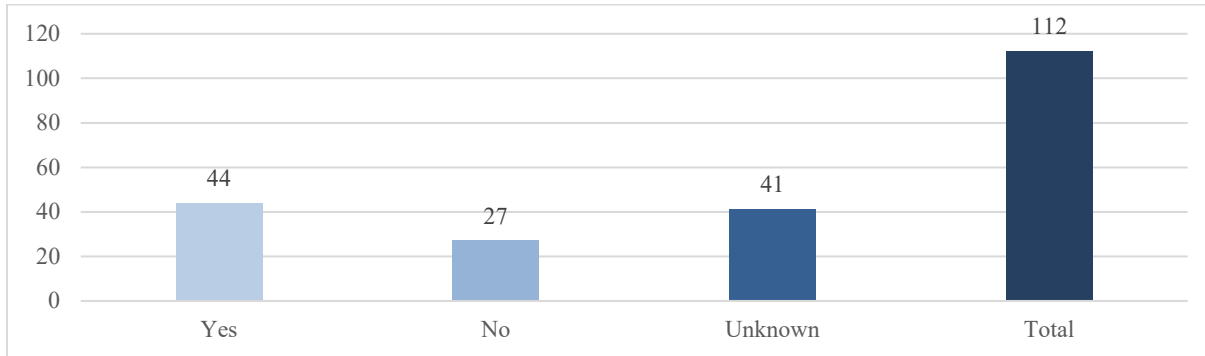
SVCMC SBIRT Patients' Reasons for Not Accepting a Referral for Treatment from September 2021 to August 2022

Reasons for Refusal	N	%
Not interested in treatment	108	92%
No time	3	3%
Health Issues	2	2%
Homelessness	1	1%
Maintaining sobriety independently	1	1%
Tentative interest	1	1%
Isolated event	1	1%

Linkage to Treatment. For those patients with SUD who agreed to a referral for treatment, 39% (n=44) were linked to treatment services (Figure 19). SVCMC is limited in its ability to follow-up with patients to determine whether they linked with services. For many clients (n=41) it was unknown whether the patient linked with treatment services, therefore it is possible the number of linkages is higher.

Figure 19

SVCMC SBIRT Patients with SUD Linked to Treatment Services from September 2020 to August 2021



Patients were linked with various forms of treatment whether they were new patients or returning patients. For new patients (n=31), the most common form of treatment was Outpatient (32%), followed by Crisis/Inpatient treatment (16%), and Medication Assisted Services (MAT) (10%). For returning patients (n=13), the most common treatment was Crisis/Inpatient (23%) and Outpatient (15%) (Table 40).

Table 40

SVCMC SBIRT Treatment Linkage Types from September 2021 to August 2022

Types of Treatment ^{ab}	No. of Clients Referred (n=229)		No. of Clients Linked (n=44)	
	N	%	N	%
Crisis/Inpatient	23	10%	9	20%
Outpatient Counseling/Therapy	140	61%	17	39%
Detoxification	0	0%	0	0%
Nonprofessional Services (AA, etc.)	1	0%	1	2%
Intensive Mental Health Treatment (INC. IOP)	54	24%	8	18%
Medication Services (MAT)	22	10%	11	25%
Case Management	10	4%	2	5%
Rehab^c	0	0%	1	2%
Community based Services	4	2%	3	7%
SUD Treatment	1	0%	1	2%
Skilled Nursing Facility^c	1	0%	2	5%
Group Home	1	0%	0	0%
Psychiatry	1	0%	0	0%
Recovery Resources	1	0%	0	0%

^aPatients could be referred and linked to more than one treatment service.

^bPatients represent both new and returning clients.

^cTwo clients linked with services they were not referred to

Transportation to Treatment. All SBIRT patients are offered transportation to treatment. During the third year, only one patient accepted transportation compared to 11 patients in Year Two.

Summary. This past year the SBIRT program at SVCMC screened 3,989 patients coming to its medical-surgical unit and outpatient health center for Substance Use Disorder, Anxiety, Depression and Trauma, a ten-fold increase from Year One. Almost all of the patients, predominantly non-Hispanic, Black males, who screened positive for Drug Use Disorder (DUD), were referred to treatment services. Only half of those clients accepted their treatment referrals as rest of them were not interested in getting treatment for their DUD at that time. Of the patients who agreed to a referral, 39% were known to have linked to the treatment service, and linkage status of 37% remained unknown. Outpatient Counseling/Therapy and Intensive Mental Health Treatment were the most commonly referred services. Over last three years, the total number of DUD patients getting linked with treatment increased, however, the number of patients refusing the treatment referral remained high.

Increase Warm Handoff to MAT for At-Risk Populations (ExAM Program) - MetroHealth

Rates of opioid use in criminal justice populations are disproportionately high relative to the general population. The survey of Inmates in State and Federal Correctional Facilities found that 23% of state prisoners and 18% of federal prisoners report lifetime use of heroin and other opioids (Mumola & Karberg, 2007). There is support for the use of methadone as well as other forms of MAT for currently incarcerated populations (Byrne, 2020) and many studies report that MAT provided during incarceration helped to increase community-based treatment engagement (Chamberlain et al., 2019; Gordon et al., 2014 ; Larney et al., 2014).

Creating an environment conducive for recovery during community reentry is essential for treatment continuation. One study found that inmates who express ambivalence about long-term treatment may subsequently decide to continue treatment if they derive benefit from it (Larney et al., 2014). A positive experience starting MAT in jail could lead to changes in returning citizen's recovery trajectory. Pooled effects from a meta-analysis suggest that inmates who received methadone during incarceration were more than eight times as likely to engage in community-based substance use treatment compared to those who did not receive methadone during incarceration, and there was consistent support for engagement in treatment across observational studies. There was also strong support for the effectiveness of methadone in reducing illicit opioid and injection drug use following release from incarceration, with rates reduced by 78% and 74% respectively (Moore et al., 2019). ***The purpose of MetroHealth's ExAM program is to increase warm handoffs to Medication Assisted Treatment (MAT) for at-risk populations.*** The program provides MAT to persons incarcerated in the Cuyahoga County Corrections Center. Warm handoffs to community-based MAT will occur upon the inmates' release from the jail.

Table 41

Short-Term and Intermediate Outcomes for MetroHealth ExAM Program

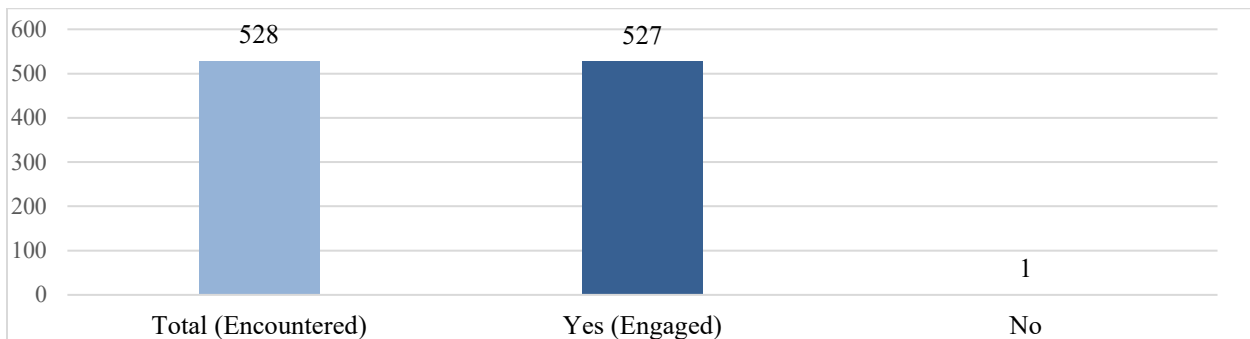
Description	Baseline	Target	YR 1 ^a Data	YR 2 ^a Data	YR 3 Data	Outcome Status
Inmates identified for ExAM Program (Encounter)	414	↑10%	517	583	528	Achieved
Inmates who participate in the ExAM program (Engage)	414	↑10%	489	580	527	Achieved
Warm-handoffs to community-based MAT (Refer)	63	↑10%	209	87	72	Achieved
Clients linked with treatment (Link)	Data not previously collected	↑10%	206	81	65	Decrease from previous years

^aYear One and Year Two ExAM data was updated to remove duplicate entries.

Encounter/Client Participation in Program Services. During Year Three 528 inmates at the Cuyahoga County Corrections Center were assessed and approached for participation in the MetroHealth ExAM program and **99% (n=527) agreed to participate** (Figure 20).

Figure 20

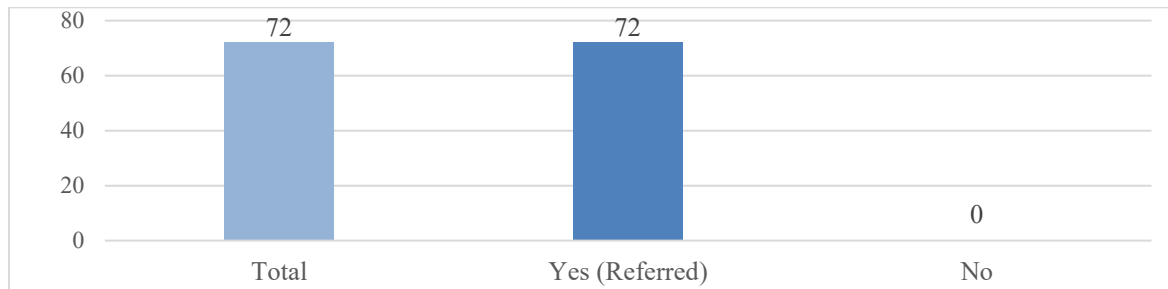
Cuyahoga County Corrections Center Inmates Who Agreed to Participate in MetroHealth ExAM Program from September 2021 to August 2022



Referral to Treatment Services. Once released from incarceration, inmates will be referred to community-based MAT treatment services. The MetroHealth ExAM program is designed to refer all clients who participate in the program for community treatment services. During Year Three, 72 inmates were released from jail and of those, 72 were referred to community-based MAT) (Figure 21).

Figure 21

MetroHealth ExAM Clients Referred to Community Treatment Services from September 2021 to August 2022



Of the 72 clients for whom referral information is available, 70% of referrals for community-based MAT were for outpatient treatment ($n=54$), and 14% ($n=11$) were for inpatient treatment services (Table 42). Clients may be referred to more than one service. All MetroHealth ExAM clients were provided with vouchers for transportation for community treatment services.

Table 42

MetroHealth ExAM Clients Referred for Community Treatment Upon Release from Corrections Center from September 2021 through August 2022

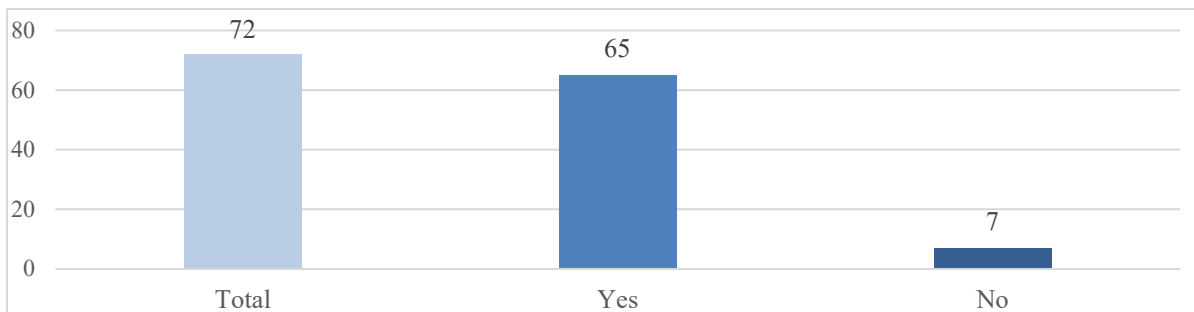
Treatment Referral ^a	N	Percent
Intensive Outpatient	54	70%
Inpatient/Residential	11	14%
Threshold Bridge Clinic	6	8%
Other	5	6%
Total	77	100%

^aClients could be referred to more than one service

Linkage to Treatment. In the last year, nearly all of the 72 clients who were referred for community-based MAT treatment services were linked (90%, $n=65$).

Figure 22

MetroHealth ExAM Clients Linkage to Community Treatment Services



Summary. During the last three years, MetroHealth’s ExAM program has been able to enroll an average of 542 inmates each year, an increase by 138 from baseline. Once released, many of these individuals are referred to community-based MAT. However, without direct notification of an individual’s release, the program struggled with finding referrals. On average 123 individuals each year have been referred to community-based treatments. More than 95% of the individuals referred (an average of 117) linked to community MAT programs evidencing the program’s ability to increase warm handoffs for these at-risk populations.

Enhance *drughelp.care* Resource Linkage Tool – Cleveland State University

Cleveland State University (CSU) is working to enhance the *drughelp.care* resource linkage tool. ***The evaluation question for this activity is in what ways is web-based technology effective in reaching and linking clients to treatment services.*** Despite losing a key staff member, the *drughelp.care* team at CSU continued to see increased usage of the web app, regular updates from registered agencies, and enhancements to increase the usability of the website and linkage to services. Services that utilize evidence-based practices (EBPs) are also recorded each year as one of the long-term measures for the CCOD2A Initiative.

At the start of OD2A Initiative there were 46 agencies and 293 treatment services registered. By the end of Year Three, 107 agencies and 545 treatment service are registered. Search results can now be displayed as a map view and info about harm reduction resources were added from the Healing Communities Study.

Table 43*Short-Term and Intermediate Outcomes for drughelp.care*

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
New agencies registered on the web app	46	96	31	21 ^a	9	Achieved: total agencies = 107
Agencies inputting information on web-app	25	↑10%	31 (avg./month)	41 (avg./month)	37 (avg./month)	Achieved: 48% average increase from baseline
Clients using the web-based app	2,265	↑20%	4,332	12,273	17,690	Achieved: over 100% increase in number clients using the web-based app from baseline
New treatment services included on the web-app	293	↑5%	99	106 ^b	47 ^b	86% increase in number of new treatment services included on web-app from baseline
Provision of EBPs for OUD	1280	↑10%	1,280	2,208	2,839	Over 100% increase from Year One

^aThree agencies closed permanently^b26 treatment services were closed permanently

Design and Usefulness of the Web App. For the past three years, the *drughelp.care* team at CSU has made improvements to the website. In Year Three, the following enhancements were made:

- A new MAT filter was added so users can search for Sublocade injections.
- Information added about harm reduction resources from the Healing Communities Study (HCS).
- Search results can now be displayed as a map view (Appendix 1).
- Updated “Treatment Types” educational video and added an “About” video.
- A Quick Search feature was added.
- A Crisis Hotline page was added with a link on the homepage to allow for quick and easy access (Appendix 2).

To test enhancements and locate gaps in services or features on the web app, *drughelp.care* staff conducted focus groups and interviews to obtain feedback from the community. In Year Three, one interview was conducted, however, a total of 11 focus groups and interviews were completed since the start of the grant, exceeding the target of five over a three-year period. In February 2022 the *drughelp.care* team interviewed an Addiction Specialist (M.D.) who supplied the following feedback:

- Remove the question about method of use, the participant stated it would have little impact in most situations on the care plan.

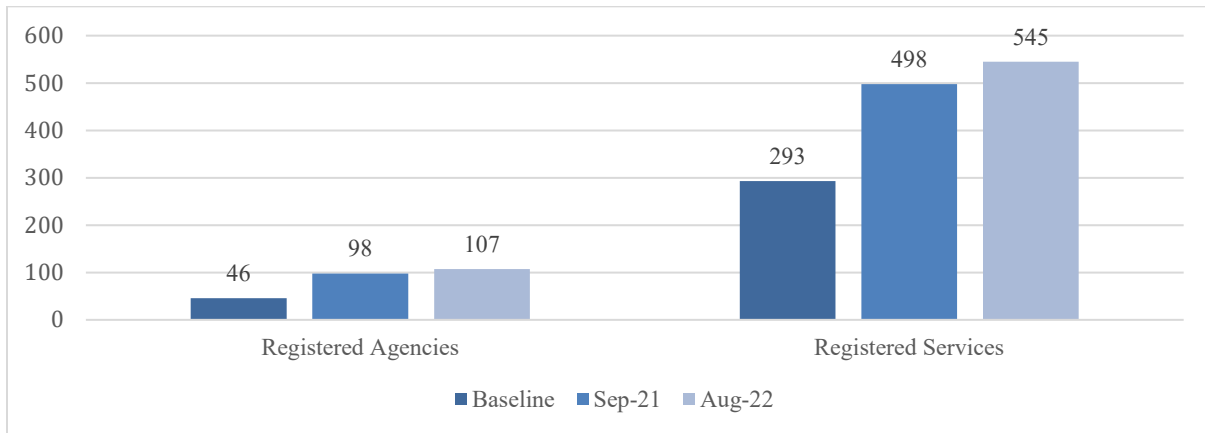
- Make changes to the algorithm based on levels of care and simplify mental health categories by combining them together.
- Add a question about transportation needs and display results based on the user’s location.

Additionally, trainings are held to introduce service providers, first responders, criminal justice staff, and others to the app. In Year Three, 224 persons received training, including 11 staff from the Cuyahoga County Diversion Center. The remaining participants were faculty, staff, and students (graduate and undergraduate) from CSU’s social work, health, and criminal justice programs.

Agency and Service Registration. At the start of the CCOD2A Initiative, there were 46 agencies and 293 treatment services registered on *drughelp.care*. By the end of Year Three, there are 107 agencies and 545 treatment services registered (Figure 23). Despite some services closing, many due to the COVID-19 pandemic, the web app has seen an 86% increase since baseline. Assessment, outpatient, intensive outpatient, partial hospitalization, residential, and sober living/recovery housing were among the service types added in Year Three.

Figure 23

drughelp.care Registered Agencies and Services



One unique feature of *drughelp.care* is to provide agencies and clients with close to “real-time” information regarding treatment availability by number of open slots, treatment type, and location. Year Three continued to see a decline in the overall percentage of agencies making updates (Figure 24). According to *drughelp.care* staff, the same core group of agencies make updates regularly, however, as new agencies are added, the percentage decreases. During focus groups with CSU, staff noted:

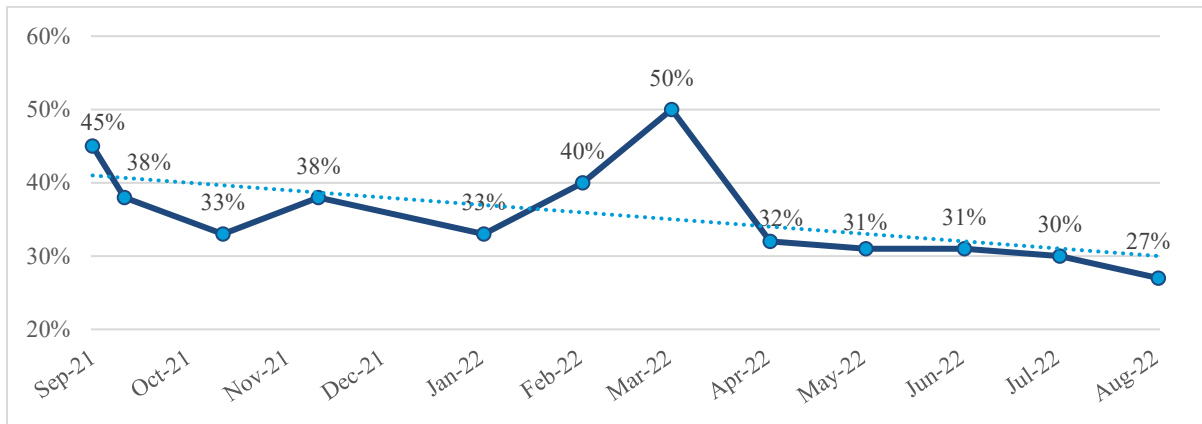
So, what we do with all the agencies registered is to make sure that the information they registered is up to date in a way. When we did this, during the call there, we found that there are a lot of changes. So, in a way, the website is beautiful because we can, you

know, adapt to those changes, and right away because we can change our website quickly with the new information. However, if the agency doesn't respond to our email, we don't know what happened. We did notice a lot of changes, especially surrounding MAT and this new kind of treatment type. It's really great.

It hovers around 30% that update on a weekly basis. I know last month I want to say it was 28 or 29%. But we saw a peak when we set out the yearly follow-up, that's when we saw a peak that we got close to like I want to say around 45-ish percent, but then it's kind of just tapered off again.

Figure 24

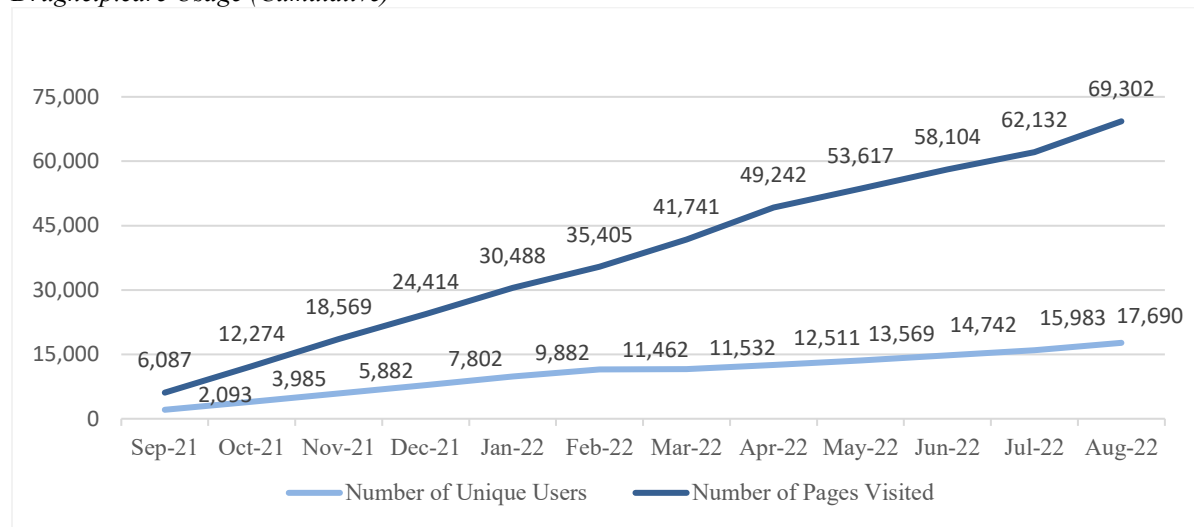
Agencies Making Updates on drughelp.care



drughelp.care Usage. The number of unique users accessing the *drughelp.care* website is measured using the Internet Protocol (IP) address. In Year Three, the CCOD2A team made the decision to collect cumulative data from month to month to avoid possible duplication. The number of pages visited is also being collected cumulatively. The number of unique users as measured by IP address was 17,690 and the number of page visits was 69,302, cumulative across year three (Figure 25). Tracking the number of end-users accessing the web app through the QR code began in May, a total of 11 unique users accessed the website through the QR code, each of them visiting the site on multiple occasions. Although there was a media campaign that ran in May and August promoting the web app, there was no increase in new users during those months. On average the web app saw an increase between 1,000 and 2,000 new users in Year Three.

Figure 25

Drughelp.care Usage (Cumulative)



Summary. The effectiveness of web-based technology is helpful in connecting clients with available services, in real-time. Over the past three years, CSU has created, made enhancements and continually registered service providers throughout the county so that information regarding available services is up-to-date for those looking for resources. During this time and in combination with media campaigns to advertise their application, usage of their site steadily increased.

Enhance Awareness and Outreach Efforts of Syringe Service Program – The Centers Syringe Service Programs (The Centers)

The Centers is working to enhance awareness and outreach efforts of its Syringe Service Program (SSP). The Centers provides integrated health and wellness, workforce development, and early learning and family support for community members across Cuyahoga County. Their five brick-and-mortar locations and two mobile locations offer a range of services for those in need. The SSP operates at four of these locations, aligning with regions identified as high burden overdose areas. Two of these four locations are serviced by a mobile van unit, designed to remove barriers to harm reduction by eliminating the need to walk into a health clinic and expediting the exchange. While SSPs are a demonstrated effective harm reduction method in the prevention of HIV and Hepatitis, little is known about the ability of SSPs to refer and link clients with substance use disorder (SUD) or opioid use disorder (OUD) to drug treatment. Care Coordinators work with SSP program participants to provide referrals for treatment and linkages for basic needs. The evaluation question for this activity seeks to examine *whether the enhancement of care coordinators involved with SSP in Cuyahoga County increases the county’s ability to engage individuals misusing opioids into treatment*. To enhance their outreach efforts, the Centers equipped a van for SSP, launching the service in February 2020. However, the mobile services were paused in August of 2021 and resumed at a new location in

Slavic Village in February 2022. Both the closure and site change likely impacted the number of individuals utilizing SSP services.

Table 44

Short-Term and Intermediate Outcomes for SSP Care Coordination

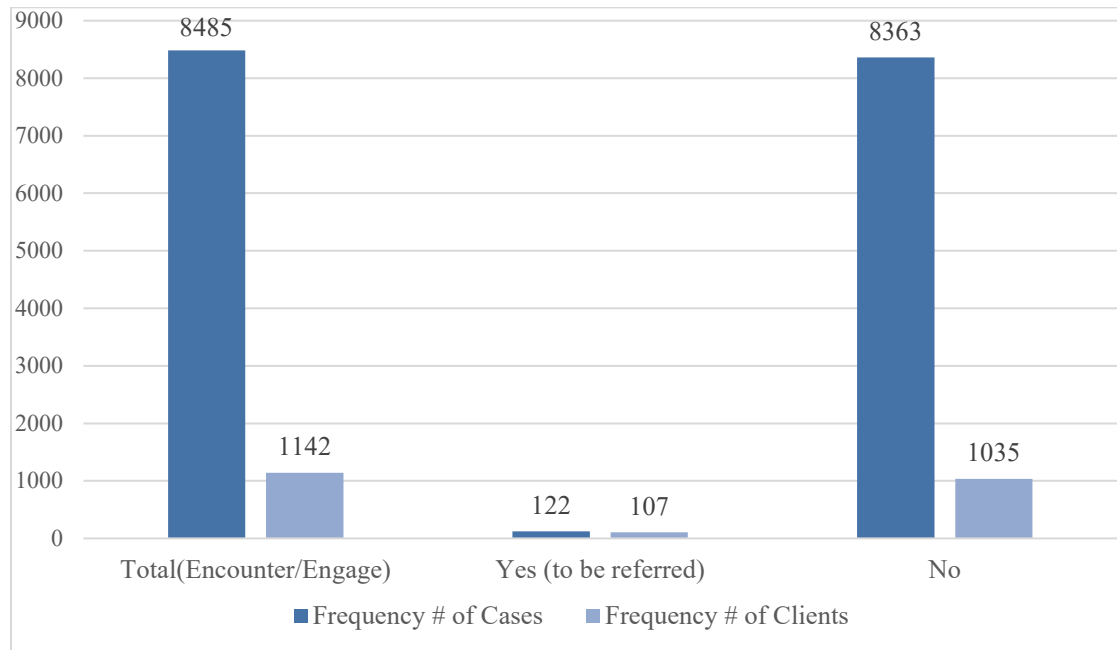
Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Clients referred to clients to SSP^a	Data not previously collected	N/A	Data currently not available	Data currently not available	113	Data collection began in YR3
Clients approached about SSP Care Coordination (Encounter)	Data not previously collected	↑10%	2,057	2,332	1,142	51% decrease from YR2
Clients who engage with the SSP Care Coordinator (Engage)	707	↑10%	2057	2,332	1,142	Although a 51% decrease from YR 2, a 60% increase from baseline
Clients referred to treatment services by SSP Care Coordinator (Referred)	707	↑30%	1,166	998	107	85% decrease from baseline
Clients linked with MAT treatment (Link)	Data not previously collected	↑10%	28	57	47	Achieved: but 18% decrease from YR 2

^aOutcome measure was changed in Year Three to track number of clients referred to the SSP from other agencies and programs as it was difficult to identify from clients which agencies referred them.

Encounter/Engagement in Program Services and Referrals to Treatment. During Year Three, the SSP had 8,485 encounters with individuals at the SSP, 1,142 unique individuals. The SSP care coordinators engage individuals about treatment services on several occasions as a person could come to the van more than once and discuss treatment options. Individuals who are agreeable are then referred for treatment services (n=107), 9% of all clients (Figure 26).

Figure 26

Engagement of Clients out of Encounters from September 2021 to August 2022



The number of referrals for treatment each month averages 1.4%. Of those clients who were referred to care, 63.3% (n=76) were referred to more than one type of treatment service, 17.5% (n=21) to MAT and 8.3% (n=10) for medical services (Table 45).

Table 45

The Centers Client Referrals by Treatment Type from September 2021 to August 2022

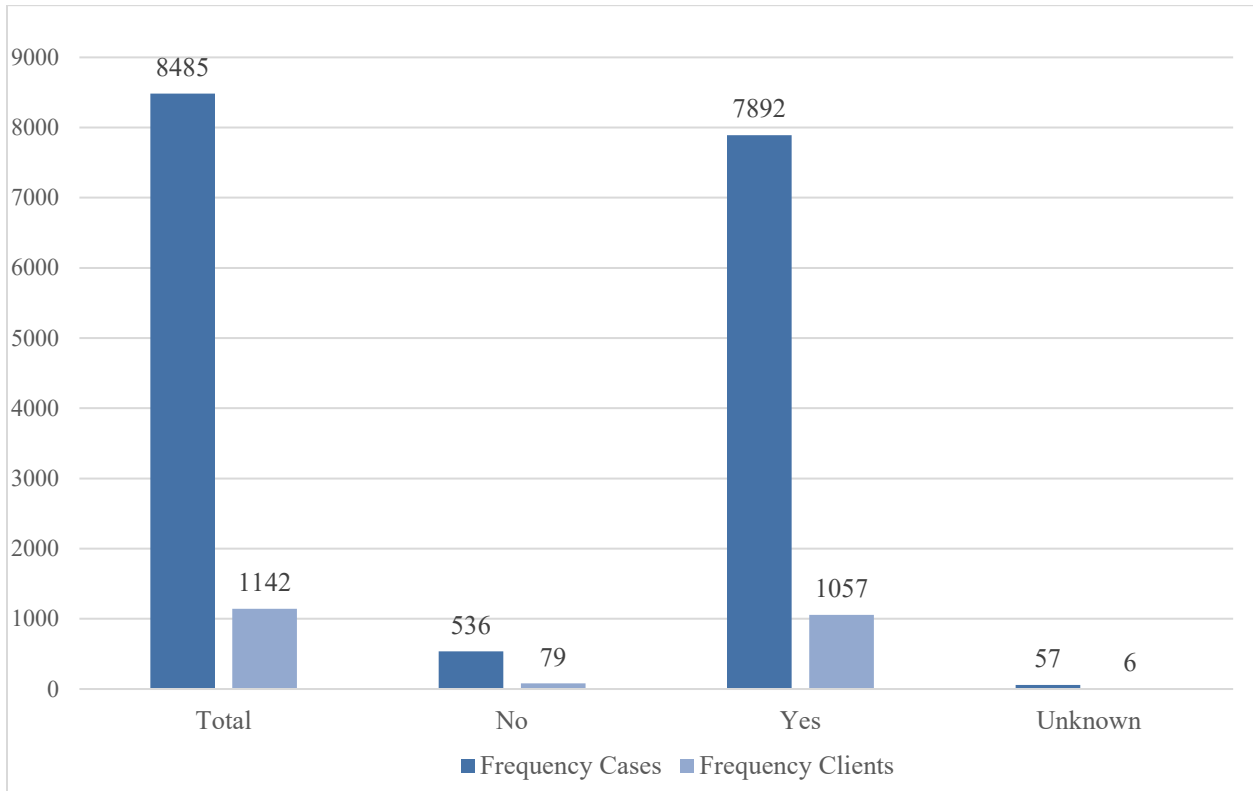
Types of Referrals for Treatment	Count Per Client		Multiple Cases by Client ^a	
	Single- N	Percent	Multiple- Ns	Percent
Multiple Referrals	76	63.3%		
PreP	4	3.3%	5	2.2%
In-patient Treatment	1	0.8%	11	4.8%
Detox	3	2.5%	28	12.3%
MAT	21	17.5%	53	23.3%
Medical	10	8.3%	51	22.5%
Dental	4	3.3%	17	7.5%
Behavioral Health	1	.8%	24	10.6%
Total	107	100.0%	145	100.0%

^aClients could be referred to more than one service.

Project DAWN Kits. This past year 7,892 individuals reported having a Project DAWN kit at time of encounter at the SSP. Clients could have counted more than once as the number includes each reported case. There were 1,057 unique clients (93% of all unduplicated clients) who reported having a Project DAWN kit (Figure 27).

Figure 27

The Centers Clients who Possessed a DAWN Kit at Time of Encounter from September 1, 2021 to August 31, 2022

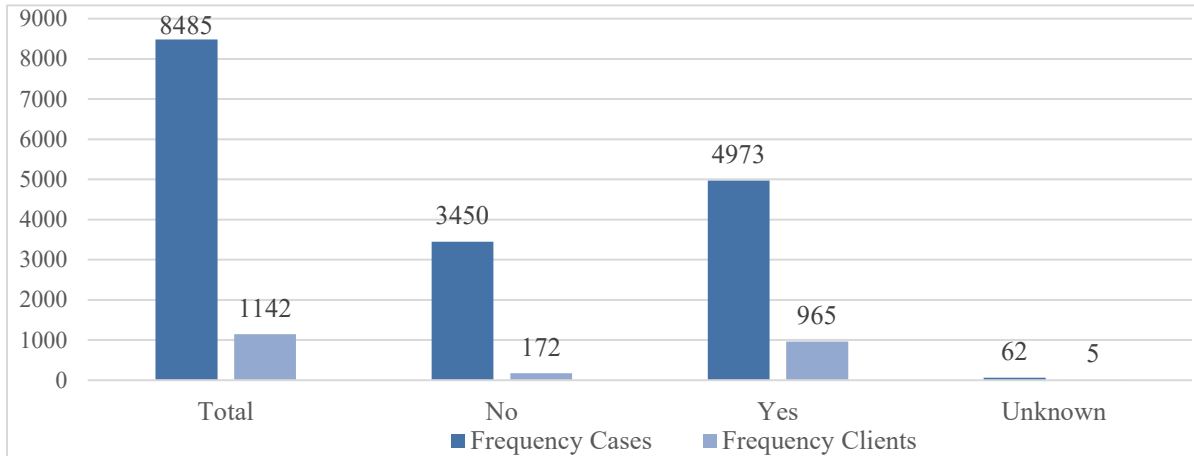


The Centers and MetroHealth collaborate twice a week to provide naloxone to clients on days MetroHealth is not present at The Centers locations. Collaboration with MetroHealth not only ensures the continuation of services but also a wide range of services at a central location for “syringe exchange clients who typically do not have reliable transportation or access to such services in their respective cities.

Naloxone Prior Use. During Year Three, 4,973 individuals reported using naloxone to reverse an overdose. Clients could have counted more than once as the number includes each reported case. For unduplicated clients, 85% (n=965) reported using naloxone to reverse an overdose. (Figure 28).

Figure 28

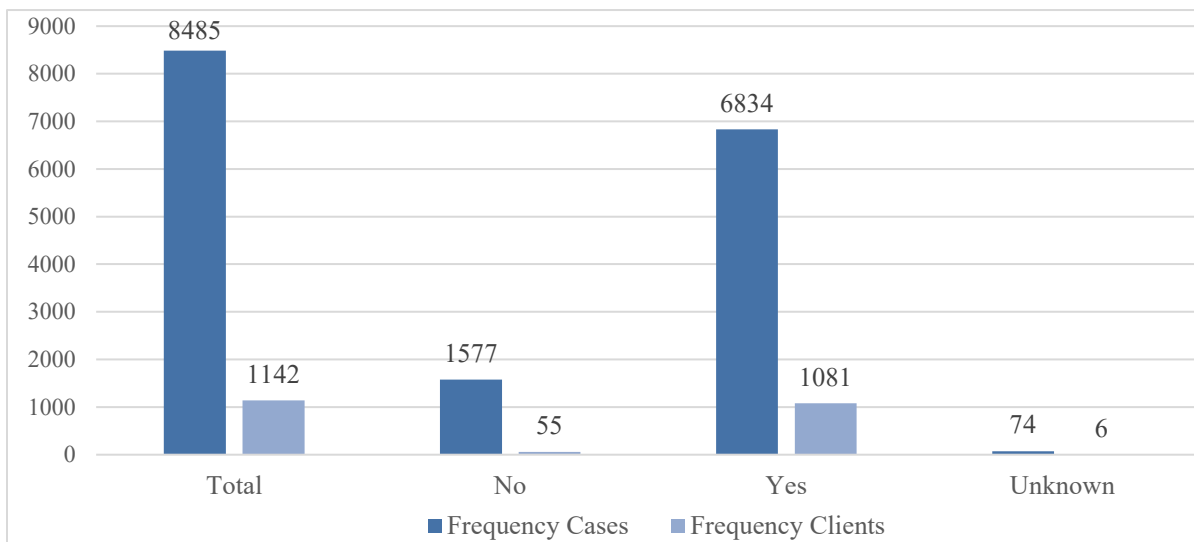
The Centers Clients' Naloxone Use from September 1, 2021 to August 31, 2022



Referrals to Project DAWN. Approximately 81% of the individuals participating in SSP received a referral to Project DAWN (n=6,834) (Figure 29). Project DAWN provides prevention and educational information to clients as well as naloxone. Clients could have been counted more than one referral as the number includes each reported case. For unduplicated clients, 95% (n=1,081) were referred at least once.

Figure 29

The Centers Project DAWN Referrals from September 1, 2021 to August 31, 2022



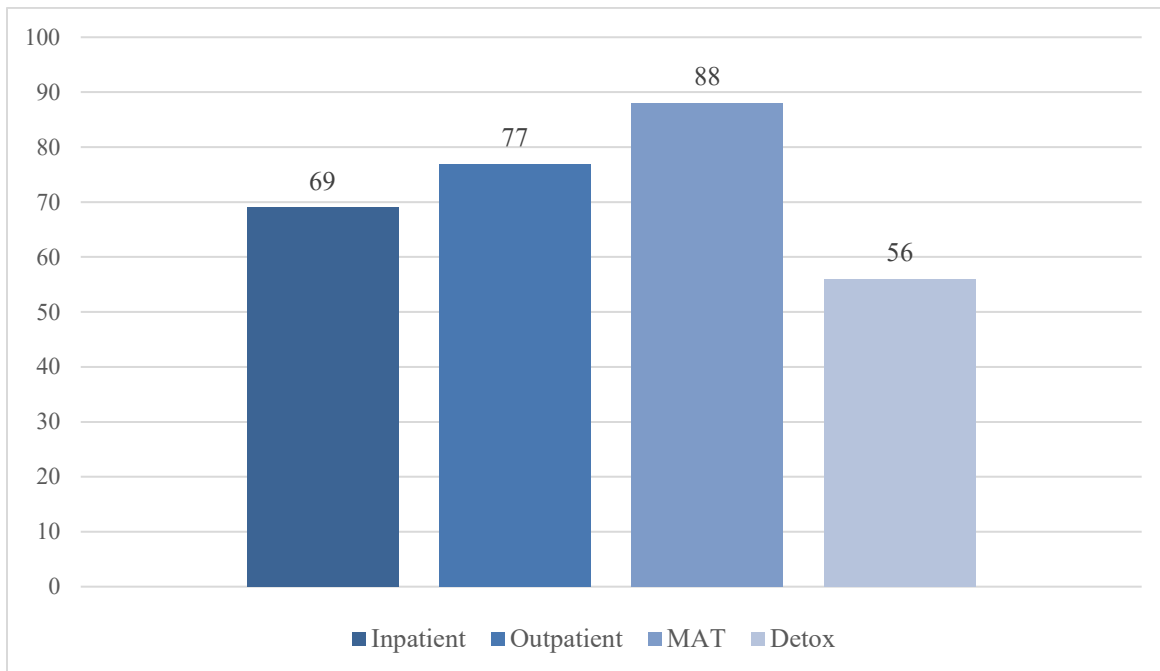
SSP Client Survey. In addition to the information captured by the Care Coordinators working at the SSP, an anonymous survey was administered on-site to SSP clients from October 2020 through March 2022, a total of 662 completed surveys. The survey gathered information about client readiness, motivation for change, and barriers to entering treatment. Clients who completed the survey must have visited the SSP at least twice and could only take the survey once. Those who completed the survey received a gift card incentive and the survey continued until all gift cards had been distributed. Both English and Spanish language surveys were available and two surveys were completed in Spanish.

Client Demographics. Due to the survey being anonymous, participants were not asked for demographic or any other identifying information. However, demographics were obtained for SSP clients at this time where it was indicated that the client had taken the survey. The known demographic makeup of survey respondents is representative of SSP clients as a whole for the same period of time. The majority of the clients are non-Hispanic (74%), white (77%), male (65%), with an average age of 39 years.

Overdose and Treatment History. Clients were asked about their drug treatment and overdose history. Client treatment history is reported in Figure 30. Clients could select more than one option.

Figure 30

SSP Survey Client Treatment History in the Past Year by Type



Clients were also asked where their last overdose occurred and could select more than one response; 49% (n=315) indicated they had never overdosed. For those who had overdosed, the majority said the overdose occurred at home (24%) and 12% said it occurred at a friend’s house (Table 46). Other responses included a men’s shelter and the home of other relatives.

Table 46

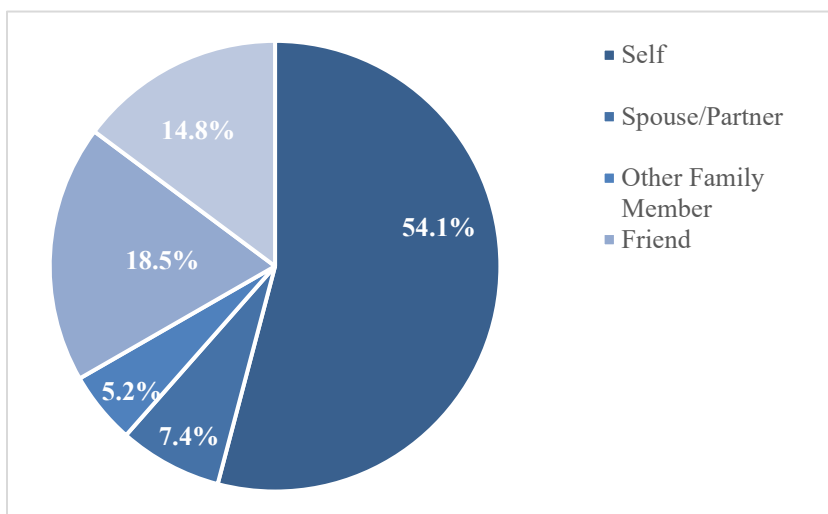
SSP Survey Client Location of Most Recent Overdose

Location	Percent	N
I have not overdosed	49%	315
At home	24%	158
Friend's House	12%	79
Car/driving	5%	30
Public business	3%	16
Vacant area/street	2%	13
Hotel	2%	13
Other	2%	10
Parent's house	1%	9
Missing	<1%	5

In addition to exchanging needles, the SSP also provides Narcan to those in need through Project DAWN. Surveyed clients were asked if they had received a Project DAWN kit when they completed the survey. Clients were also asked who the Narcan was for. A majority (74%) reported not receiving Narcan. Of those who did receive a kit (54%) most said the kit was for themselves (Figure 31).

Figure 31

SSP Survey Client Report of Recipient for Naloxone Kit



Motivation for Change. Client motivation for change was also examined. Questions were modeled after the Circumstances, Motivation, and Readiness Scales for Substance Abuse Treatment⁷ and addressed clients' motivation for change using a six-point Likert Scale (strongly disagree, disagree, neither agree or disagree, agree, strongly agree, not applicable). The non-applicable option was filtered out and the remaining responses analyzed by item.

For the first statement, *people without a history of substance use could never really understand me*, 59% of the respondents (n=378) agreed or strongly agreed. Approximately 80% of the respondents (n=513) agreed or strongly agreed that *drug use is a very serious problem in my life*. Additionally, 74% agreed or strongly agreed with the statement, *lately, I feel if I do not change, my life will keep getting worse* (n=475). Over 75% of the respondents (n=496) agreed or strongly agreed that *they feel bad that my drug use and the way I have been living has hurt a lot of people*; and they acknowledged they *often do not like myself because of my drug use* (agree/strongly agree = 74%, n=409). Finally, 71% of the respondents (n=460) agreed or strongly agreed that *it is more important to me than anything else that I stop using drugs*.

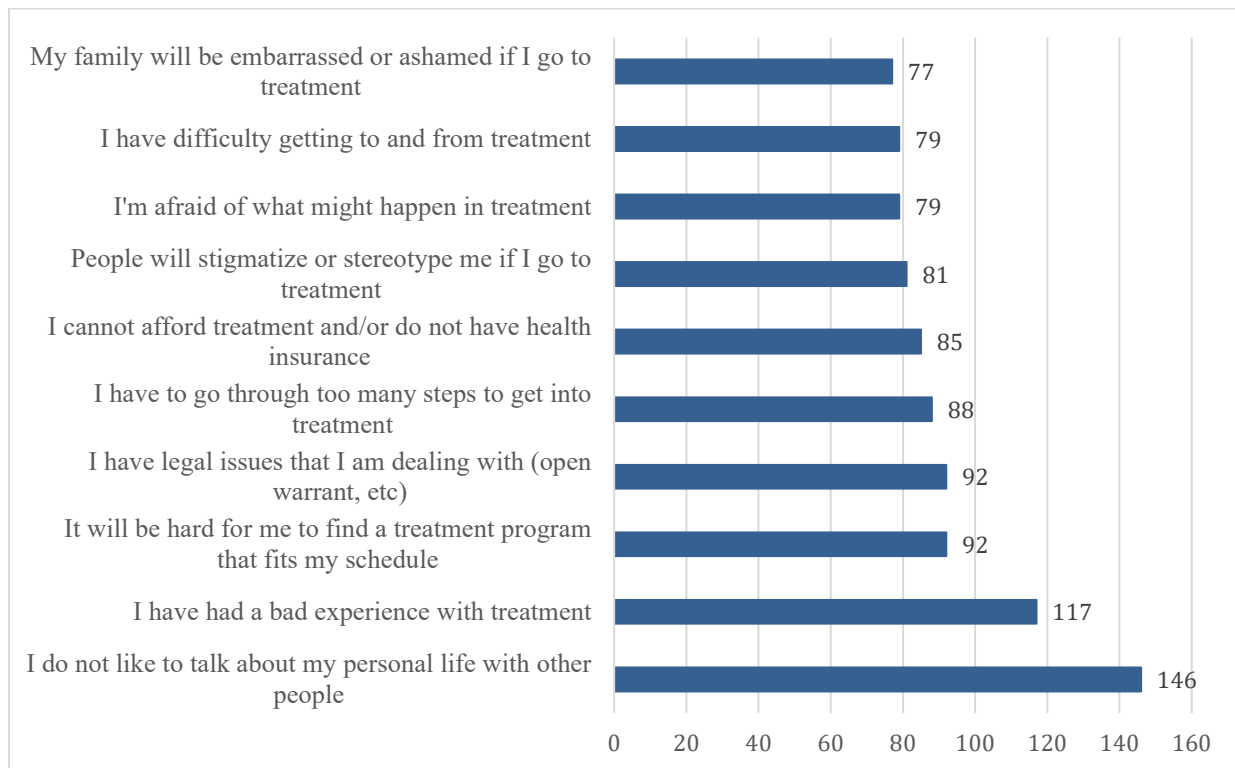
In addition to questions gauging a respondent's motivation for change, clients were also asked if they were *currently in treatment or engaged with treatment services within the past year*. Of the 27 responses, 33% (n=9) indicated they were either in treatment or had sought treatment services within the past year. Logistic regression was conducted to examine if motivational characteristics have influence on enrolling or seeking out treatment. The questions gauging motivation for change were highly correlated ($p < .05$), so a summed score for each respondent was created. The results of the logistic regression showed that the odds ratio for treatment/engagement last year indicates that for every one unit of change in motivation score, individuals who were treated or engaged with treatment last year are 3% greater than those who were not treated/engaged ($p < 0.0269$, OR 1.03).

Treatment, Concerns, & Barriers. To determine clients' reasons for not entering treatment, the survey asked what concerns clients have about engaging in treatment and what barriers they are facing related to treatment. Survey respondents could select multiple options for both questions. A total of 648 responses were received. Most clients (70%) said they were not experiencing any barriers to treatment. More than half (53%) indicated they did not have concerns about treatment. Of those who *did* have concerns, the most common concern was "I have had a bad experience with treatment." The most common barrier to engaging with treatment was "I don't like to talk about my personal life with others." The most frequently selected responses are summarized in Figure 32.

⁷De Leon, G. (1993). Circumstances, motivation, and readiness scales for substance abuse treatment (CMR Factor Scales – Intake Version). Center for Therapeutic Community Research, NYC.

Figure 32

SSP Survey Client Concerns & Barriers to Engaging in Treatment



Clients were also given the opportunity to identify other reasons for not engaging with treatment. Several responses (n=28) indicated that respondents were either not ready for treatment, worried that treatment will not be effective, or have tried treatment multiple times and relapsed. Others (n=13) expressed concerns about going through detox. One client noted “absolutely unbearable pain and usually 7-10 days with no sleep,” while another said “I get so sick on detox I can’t stand it.” Of those who provided other reasons for not engaging with treatment, the most common response (n=22) was financial concerns while in treatment, specifically losing their jobs, home, and not being able to pay bills. One client reported, “I will lose my job and apartment, I live alone and there is no one to hold things down for me.”

Summary. The SSP is providing much needed harm reduction services in Cuyahoga County and through the CCOD2A Initiative the program is also engaging and referring clients for treatment services. In the last three years, the average number of encounters with clients is 1,844. Although this number includes clients who have visited the SSP more than once it demonstrates the ability of the program to engage clients into treatment discussions at various times. The majority of these clients are also receiving referrals for Project DAWN kits, providing much needed Naloxone. Unfortunately, this past year very few clients were interested in a referral for treatment. Due to HIPAA and other confidentiality restrictions, The Centers is limited in its ability to determine whether clients link with treatment services.

Expand Project SOAR with a Patient Navigator to assist with activities that promote recovery and independence (Woodrow)

In Year Three of the CCOD2A Initiative, Woodrow hired a patient navigator to assist their residential clients with services that would promote recovery and independence. The evaluation question examines *how the addition of a Patient Navigator assists in the recovery and linkage to support services for clients who have experienced a nonfatal overdose?* The Patient Navigator identifies the needs of clients at the time of encounter, links them to appropriate services, and then completes a follow-up survey at 90 days to report on the status of clients' engagement with the Patient Navigator and progress in meeting the needs/services identified by the client. A client could be linked to more than one service.

Table 47

Short-Term and Intermediate Outcomes for Woodrow Patient Navigator

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Clients served by patient navigator	Data not previously collected	N/A	Data not previously collected	Data not previously collected	28	In progress
Identify client needs to facilitate linkage to supportive services	Data not previously collected	N/A	Data not previously collected	Data not previously collected	Most common needs were transportation, employment, and housing	In progress
Identify barriers that prevent or delay clients' participation in supportive services	Data not previously collected	N/A	Data not previously collected	Data not previously collected	In progress	In progress
Interactions between Patient Navigator and clients	Data not previously collected	2 per/wk	Data not previously collected	Data not previously collected	In progress	In progress
Percentage of clients' needs addressed through assistance of Patient Navigator	Data not previously collected	40%	Data not previously collected	Data not previously collected	76%	In progress

From April 2022 to August 2022, the Patient Navigator encountered 28 clients and spent an average of 37 minutes (SD=10.82 minutes) with each client. All of the clients were female with a mean age of 39 years old (SD=13.51 years). The Patient Navigator interacts with individuals participating in Woodrow’s recovery housing. The majority of the clients self-identified as non-Hispanic (n=25, 89%) and white (n=22, 79%). The remaining clients self-identified as Black (n=4, 14%) or other race (n=2, 7%) (Tables 48 & 49). Homelessness was reported by 3 clients (11%) at the time of the encounter.

Table 48

Race of Woodrow Patient Navigator Clients (April 2022 thru August 2022)

Race ^a	N	Percent
Alaska Native	1	4%
American Indian	0	0%
Asian	0	0%
Black or African American	4	14%
Native Hawaiian/Pacific Islander	0	0%
White or Caucasian	22	79%
Race Other (Hispanic/Puerto Rican)	1	4%
Total	28	100%

^aClients can indicate more than one response

Table 49

Ethnicity of Woodrow Patient Navigator Clients (April 2022 thru August 2022)

Ethnicity	N	Percent
Hispanic	2	7%
Non-Hispanic	25	89%
Refused	1	4%
Total	28	100%

A total of 360 service linkages were made for the 28 clients (Table 50). The most commonly identified needs were transportation, employment, and housing.

Table 50*Identified Needs/Services Woodrow Patient Navigator Clients (April 2022 thru August 2022)*

Client Needs ^a		N	Percent of clients (N=28)
Essential Documents	Social Security Card	7	25%
	Birth Certificate	7	25%
	Driver's License	10	36%
	State ID	5	18%
Food/Clothing	Appropriate Clothing	7	25%
	Appropriate Shoes	11	39%
	Meals	7	25%
	EBT Card	3	11%
Housing/Shelter	Housing-short-term	3	11%
	Housing-long term	21	75%
Transportation	Transport	20	72%
	Bus Route	8	29%
	Transport for appointment	24	86%
Education	GED	4	14%
	Vocational Training	13	46%
	College Application	9	32%
Employment	Resume	15	54%
	Job Application	9	32%
	Job Interview	7	25%
	Job Reference	9	32%
	Employment	13	46%
Legal Assistance	Driver License Suspension	3	11%
	Warrant	1	4%
	SSI/SSD	3	11%
	Credit Counseling	7	25%
	Divorce	2	7%
	Court Cases	3	11%
Child Care/Parenting	Children Services	1	4%
	Parenting Classes	5	18%
	Family Support	2	7%
Medical Information	Child Custody	3	11%
	Medical Appointment	5	18%
	Prescription Assistance	2	7%
	Medicare/Medicaid appointment	3	11%
	Transport for Medical appointment	18	64%

	Eye Exam	1	4%
	Find a New facility for Medication	1	4%
	Medical Assistance at home	1	4%
Mental Health/ AOD Counseling Treatment	Mental Health Treatment	4	14%
	Mental Health Treatment Referral/Appointments	2	7%
	Virtual IOP	1	4%
	Grief Counseling	7	25%
	Transport for Mental Health Appointment	12	43%
	Mental Health Prescription Assistance	2	7%
Peer Support Information	Alcoholics Anonymous	2	7%
	Narcotics Anonymous	4	14%
	Cocaine Anonymous	2	7%
	Heroin Anonymous	2	7%
	Sobriety Coach	5	18%
	Mentor Program	1	4%
	Worship	4	14%
	Recovery Group	4	14%
	Volunteer Opportunities	17	61%
Other Needs	Furniture/Other Housing Needs	2	7%
	In need of a Phone	2	7%
	Car Insurance	2	7%
	Transportation for Child Visitation	1	4%
	Assistance with STNA license	1	4%

*Clients could have more than one need

At the end of Year Three, 17 clients completed the 90-day survey, and seven (41%) were engaged with the Patient Navigator. A total of 176 identified needs/ services were completed, 31 were in process of completion, and 23 could not be completed during this period. The main reason for clients not engaging with the Patient Navigator (n=10) at the 90-day follow-up was moving out to their family or own residence (n=6, 60%). Other reasons were the inability to maintain sobriety (n=2, 20%), and the need for a high level of care (n=1, 10%). One client no longer needed services.

Development of Workforce Program to Support and Encourage Individuals to Become Peer Recovery Supporters (Thrive)

In the 1990’s, Peer Recovery Support Services (PRSS) emerged from fields both in and out of addiction. In recent years, this engagement centered type of treatment has become increasingly important to addiction professionals (Eddie et al, 2019). The state of Ohio Department of Mental Health and Addiction Services recognizes the important role of a PRS model and has created a certification program to train individuals to become a PRS. Individuals in recovery walk beside individuals starting their own recovery journey, using their lived experience to help engage, connect, and facilitate linkage to both treatment and social services resources. Benefits of this type of treatment show that a PRSS can provide structured services while emotionally meeting and supporting an individual’s needs; addressing a gap that historically was void in previous types of treatment models. Studies show that PRSS are valuable to both the recipient and to the individual providing the services, under the “helper-therapy principle”; however, those benefits are seemingly less studied (Salzer et al, 2013). In Year Three, Thrive initiated a new program to encourage individuals to become peer recovery supporters. The evaluation examines *in what ways can workforce development and outreach increase the number of certified Peer Recovery Supporters?*

Table 51

Short-Term and Intermediate Outcomes for Thrive Workforce Development Program

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Enroll individuals in the Internship program	Data not previously collected	25	Data not previously collected	Data not previously collected	5	20% Achieved
Individuals who complete the 16-hour e-based training	Data not previously collected	23	Data not previously collected	Data not previously collected	4	17% Achieved
Individuals who complete the 40-hour OMHAS Training	Data not previously collected	21	Data not previously collected	Data not previously collected	4	19% Achieved
Individuals who pass the Ohio PRS Certification Exam	Data not previously collected	21	Data not previously collected	Data not previously collected	1	5% Achieved
Individuals who complete the 11-week Thrive Internship	Data not previously collected	16	Data not previously collected	Data not previously collected	In progress	In progress
Internship Graduates who receive a job placement	Data not previously collected	12	Data not previously collected	Data not previously collected	In progress	In progress

In Year Three, Thrive enrolled 5 candidates into its internship program, out of which 4 completed the 16-hour e-based and Ohio Mental Health and Addiction Services (OMHAS) training, and one of these candidates completed the Ohio Peer Recovery Supporter Certification exam. One candidate who did not complete the training cited transportation issues as a barrier to completing the training.

Provide Community-Based Peer Recovery Services for Uninsured Individuals (Thrive)

In Year Three Thrive received funding for a program to provide community-based PRS to uninsured clients. One of the objectives of this program is to assist these clients to become insured. Thrive identifies clients who would benefit from community-based PRS and PRS specialists create and track the clients’ assessment and treatment completion plans and work towards getting their clients insured. The evaluation question examines *to what extent does Peer Recovery Supporters help to increase linkage to care for uninsured individuals in need of treatment services?*

Table 52

Short-Term and Intermediate Outcomes for Thrive’s Community-Based PRS for Uninsured Clients

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Uninsured individuals served by community-based PRS	Data not previously collected	353	Data not previously collected	Data not previously collected	102	29% Achieved
Uninsured individuals becoming insured	Data not previously collected	30	Data not previously collected	Data not previously collected	1	3% Achieved
Clients who complete assessments for community-based peer support	Data not previously collected	54	Data not previously collected	Data not previously collected	19	35% Achieved
Clients who achieve 75% of their treatment plan	Data not previously collected	41	Data not previously collected	Data not previously collected	In progress	In progress

From January 2022 to August 2022, Thrive PRS encountered 102 uninsured clients. The average age of the clients is 47 years old (SD=14.94 years). The majority are non-Hispanic (n=92, 90%), white (n=57, 56%), males (n=67, 66%) (Table 53). Homelessness was reported by 3% of the clients at the time of encounter. The most common referral sources for this program were MetroHealth Medical Center Emergency Department (n=23, 22%) and Rosary Hall, Saint Vincent Charity Medical Center (n=13, 13%). Hospital EDs, county organizations, and behavioral health centers were other referral sources. There were 11 self-referrals (11%) (Table 54).

Table 53*Demographics of Uninsured Clients Encountered by Thrive Community-Based PRS (January 2022 to August 2022)*

		N (total = 102)	Percent
Gender	Female	33	32%
	Male	67	66%
	Non-Binary	2	2%
Race	Asian	1	1%
	Black or African American	36	35%
	Native Hawaiian or Other Pacific Islander	1	1%
	Unknown	7	7%
Ethnicity	White	57	56%
	Hispanic or Latino	6	6%
	Not Hispanic or Latino	92	91%
	Unknown	4	4%

Table 54*Referral Sources for Uninsured Clients Encountered by Thrive Community-Based PRS*

Referral Source	N (Total=102)	Percent
Action Recovery	1	1%
CCF	5	5%
Cleveland Rape Crisis Center	1	1%
Cuyahoga County Probation	2	2%
DCFS	1	1%
Ethan's Crossing	1	1%
Hopewell	2	2%
Metro Health - ER	23	22%
MetroHealth Inpatient	9	9%
MetroHealth Parma - Behavioral Health ONLY	1	1%
On-Site	3	3%
Other	4	4%
Rosary Hall	13	13%
Self/No Referral	11	11%
SVCH -ER	6	6%
UH Ahuja ED	3	3%
UH Bedford ED	2	2%
UH Cleveland Medical Center ED	8	8%
UH Parma ED	2	2%
UH St. John ED	4	4%

Out of 102 clients encountered by the PRS, 19 (19%) completed the assessment. For these 19 clients, the mean number of encounters with their PRS was eight (SD=9.44), and the mean time spent with their community PRS specialists 15 hours per client (SD=19.82). The mean length of service each client in the program received was 77 days (SD=56.23). At the end of Year Three, the status of one out of these 19 clients (5%) was changed from uninsured to insured status. Table 55 shows the percentage of treatment plans achieved by these clients during this period.

Table 55

Thrive Community-Based PRS Clients Treatment Plan Achieved (January 2022 to August 2022)

Percentage of treatment plan achieved	N (total =19)	Overall Percent
0%	9	47%
50%	5	26%
67%	1	5%
Data Not Available	4	21%

Outreach to Service Entities Providing Immediate Services and Harm Reduction Services (Sisters of Charities)

The Sisters of Charity (SoC) is developing a program to deliver crisis response and recovery continuum of care to individuals suffering from SUD or co-occurring disorders in Cuyahoga County. Through CCOD2A, SoC will provide outreach to service entities providing critical-time services and harm reduction services. They will develop a pilot team of trained professionals (e.g., social worker, PRS, and other specialties) that will conduct outreach and education, and expand linkage to care using on-site, community-based, and virtual visits. All clients encountered will be screened for SUD and co-occurring disorders and then linked to appropriate evidence-based care. The evaluation will examine *to what extent does enhanced community outreach to critical service entities increase linkage to care for individuals at risk of SUD or co-occurring disorders*. SoC will start seeing clients in Year Four. The evaluation metrics (number of clients screened for SUD/MH, number of organizations referring their clients to SoC, socio-demographics of clients, service linkages provided to the clients, etc.) will be maintained and reported in Year Four. Outcomes will also assess the conditions where clients live, learn and work that could affect treatment outcomes, including social determinants of health.

Strategy Seven – Providers and Health Systems Support Systems

Strategy Seven focuses on support systems for providers and health systems. Activities associated with this strategy are:

- Develop an Academic Detailing (AD) program for opioid safety and overdose reduction;
- Develop a toolkit to expand the use of AD and other educational resources to additional hospital and nontraditional settings;
- Expand Medication Assisted Treatment (MAT) capacity in Emergency Departments (EDs);
- Identify educational needs for hospitals and treatment centers for OUD, SUD and polysubstance use; and
- Adopt Vanderbilt University’s Center for Advanced Mobile Healthcare Learning QuizTime platform as an educational resource tool for clinicians

Agencies

Center for Health Affairs (CHA)

Cuyahoga County Board of Health (CCBH)

MetroHealth Medical Center (MetroHealth)

Develop an AD Program for Opioid Safety and Overdose Reduction and Develop a toolkit to expand use of AD and other educational resources to additional hospitals and nontraditional settings – MetroHealth & CHA

As part of Strategy Seven, MetroHealth and CHA collaborated to develop: (1) an AD program for opioid safety and overdose reduction; and (2) a toolkit to expand the use of AD to additional hospitals and nontraditional settings. These two activities are presented together as there is significant overlap in both the process measures and the short-term and intermediate outcomes. According to Kang, Basu, & Alexander (2019), Ohio has been experiencing some of the highest number of overdose deaths since 1999. One of the many ways MetroHealth and CHA are addressing the current opioid crisis in Ohio is through provider education, or AD (AD). While the adoption of educational programs is relatively new, there is promising data to suggest that provider education effectively reduces the number of opioids prescribed (Kulbokas, Hanson, Smart, et al., 2021). For example, Dieujuste N, Johnson-Koenke R, Christopher M, et al. (2020) found that over a 21-month period, acute prescribing rates (physicians working in the emergency department) decreased by 47% as a result of provider education. Safforee, Pickard, Crawford et al. (2020) similarly found that both the average number of opioids prescribed and the number of opioid prescriptions per clinician each month decreased as a result of AD. The evaluation question for these activities examines how ***AD increases opioid safety in prescriber practices (i.e., reduces the number of opioid prescriptions and increases referrals for alternative pain management)***. During this past year MetroHealth continued to refine and develop its AD program. CHA continued to provide web-based access to a range of opioid training materials and resource guides via various outlets, including the Northeast Ohio Hospital Opioid Consortium. The agencies also explored innovative ways to promote training content as well as spread information regarding AD programs.

During the past year, MetroHealth's academic detailer has continued to meet with providers individually focusing on opioid stewardship for all providers in primary care and the emergency department. The detailer started meeting with providers in the emergency department to educate on the induction of buprenorphine and follow up with an outpatient program based out of the Office of Opioid Safety for the treatment of Opioid Use Disorder. In addition, in collaboration with the controlled substance peer review team, a provider education team has been formed to identify and meet with top 15 prescribers of opioids as well as the top 15 prescribers of opioids in primary care. The purpose is to review prescribing metrics, discuss laws/policies/guidelines and recommendations and educate on the tools available in the EHR for risk mitigation.

Table 56

Short-Term and Intermediate Outcomes for AD Program

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR3 Data	Outcome Status
Providers receiving training related to AD	Data not previously collected	30	31	10	1	Achieved
Providers receiving AD	Data not previously collected	30	0	102	197	Achieved
High-risk prescribing behaviors for medical providers who received AD	Data not previously collected	↓10%	0	In Progress	Decreased number of opioid pills prescribed, opioid prescriptions and benzodiazepine/opioid prescriptions written. No change in number of opioid prescriptions where OARRS checked.	
Hospitals and nontraditional systems downloading the AD toolkit	Data not previously collected	4	0	6	24	Achieved
Hospitals implementing AD programs	Data not previously collected	2	0	0	0	Unable to track on website
Providers receiving training on alternative pain management	Data not previously collected	↑10%	12	5	71	Achieved
Referrals for non-opioid medications and non-pharmacological treatments for pain management	100	↑10%	36	26	68	Achieved
Clinicians enrolled in the CHA Prescriber’s Course	Data not previously collected	N/A	N/A	N/A	31	In Progress
Understanding efforts to provide education and skill-building among collaborating healthcare partners	Data not previously collected	N/A	Data not previously collected	Data not previously collected	2	Two providers completed a survey and indicated likelihood of their organization implementing AD
Prescriber knowledge of best practices for alternative pain management	Data not previously collected	N/A	Data not previously collected	Data not previously collected	23	75% of the providers completed a survey and the majority believed the information presented was relevant to their work

Create a toolkit to replicate an AD program and other educational resources for other hospital systems. In Year Two, CHA developed and uploaded the toolkit to its website for use by other hospitals with the Opioid Management Toolkit website going live on March 30, 2021 (<https://opioidconsortium-education.org>). During Year Three, CHA collected de-identified AD notes from MetroHealth for qualitative analysis to assess facilitators and barriers to one-to-one education via AD. CHA also continued analysis of AD notes to help MetroHealth refine and identify providers in need of additional education and resources about opioid prescribing.

Increase providers receiving training related to academic training. Prior to MetroHealth's AD program, MetroHealth also provided training to providers relating to subject matter commonly associated with AD. These trainings are provided in addition to involvement in MetroHealth's AD program. The need for such training has declined due to the implementation of MetroHealth's AD program. In Year Three only one provider received such training. MetroHealth is currently collaborating with CHA to expand the AD program in Federally Qualified Health Centers.

Increase providers receiving AD. MetroHealth's AD program is an educational program for high prescribing providers that provides tools for helping these providers reduce the number of opioids prescribed on a monthly basis. The detailer provides educational materials to the provider explaining the dangers of high prescribing habits. The detailer also reviews and reinforces hospital protocols with the provider to ensure they are carrying out these procedures correctly.

MetroHealth's process for referring a provider to AD begins at peer review. Peer review is a chart review of all providers who have chronic opioid prescriptions greater than 90 days. All providers at MetroHealth can be considered for peer review except for those providers with acute prescriptions, such as providers in the emergency department. The academic detailer met with all ED providers to review best practice guidelines for treating pain, laws for acute prescribing in Ohio, alternatives to opioids, risk mitigation for opioid and benzodiazepine co-prescribing, pain diagnoses, and lost/early fills. MetroHealth's peer review process was fully explained in Strategy Four. Each provider who is selected for review will have 10 charts pulled for examination. If there are deficiencies, the provider will be reviewed by the Provider Education Team. The top 15 providers will be submitted for AD in addition to any other providers the team determines necessary. If a provider did not show improvement in the months following AD, the provider will go before the Peer Review Committee which meets quarterly.

There were 196 providers who were detailed in Year Three. There were 31 providers detailed in the first quarter, 29 in the second quarter, 43 in the third quarter, and 93 in the fourth quarter.

High-risk prescribing behaviors for medical providers who received AD. Initially the impact of AD for providers was designed to measure providers' level of knowledge regarding opioid prescribing practices and habits. However, due to low response rates of surveys to providers participating in the program, the outcome was changed to examine prescribing behaviors of providers. To determine the effectiveness of AD, the analysis examined provider prescribing

behavior six months prior to AD compared to six months after AD. Though 196 providers were detailed, there were only 83 providers who had enough time elapsed to be included in the analysis (six months prior to AD, the month of AD, and six months after AD). The four key outcomes include: (1) ratio of OARRS checks to the prescriptions written, (2) the number of opioid pills prescribed, (3) the number of opioid prescriptions written, and (4) the number of benzodiazepine/opioid prescriptions prescribed (Table 57).

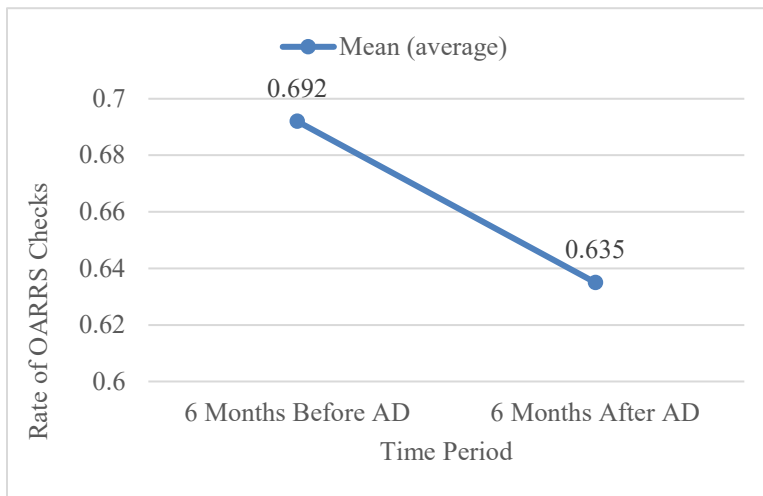
Table 57

Descriptive Data for Cumulative Six Months Prior to and after MetroHealth's AD

	Six Months Prior to AD				Six Months After AD				P-value
	N	Mean	Median	SD	N	Mean	Median	SD	
Ratio of OARRS Checks by Prescriptions Written		0.69	0.69	0.37	0.67	0.84	0.38	0.67	.046
Opioid Pills Prescribed	360,866	733.5	240	1278.66	289,572	588.56	202.5	1047.4	<.0001
Opioid Prescriptions Written	5299	10.77	4	19.41	4247	8.63	3	15.5	<.0001
Opioid / Benzodiazepines Prescriptions Written	611	1.25	0	3.37	419	0.85	1.21	2.2	<.0001

Figure 33

MetroHealth Provider Checks of OARRS Six Months Prior to and After AD

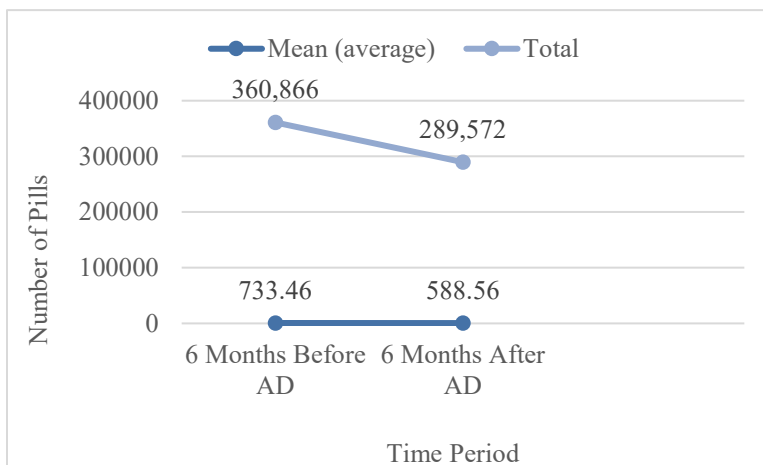


The first key outcome analyzed was rate of OARRS checks by opioid prescriptions written six months prior to AD and six months after AD. Prior to AD, the rate of OARRS checks was approximately 0.69 (SD=0.37) (Figure 33). This means that, on average, prescribers checked OARRS about one time for every two opioid prescriptions written. Paired samples t-tests were then used to determine if the observed mean for OARRS checks six months prior to AD was statistically different from the

observed mean for OARRS checks six months after AD. The paired t-test showed that when compared, the average rate of OARRS checks prior to AD to the average rate of OARRS checks after AD, found no significant difference. The data also was examined to look only at the sixth month prior to AD and the sixth month after AD rather than the cumulative six months. Similarly, there was no significant change after AD. Because of this result and changes in the law pertaining to checking and documentation of OARRS, a new process was implemented system wide which will hopefully show improvements.

Figure 34

MetroHealth AD Provider Opioid Pills Prescribed Six Months Prior to and After AD

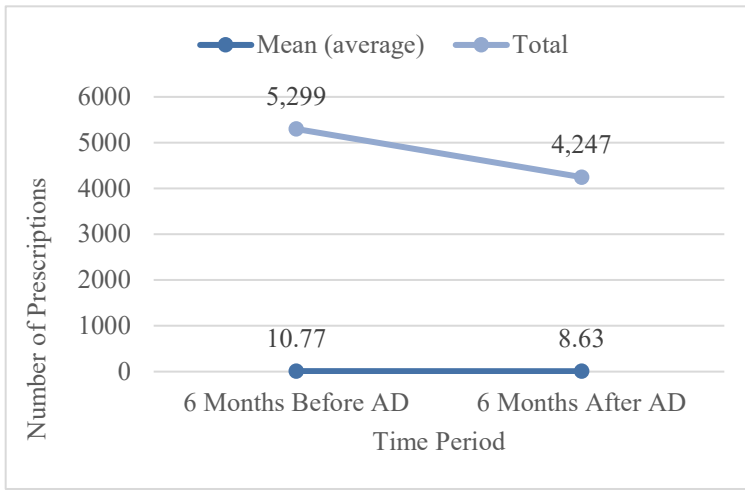


The second key outcome analyzed was the number of opioid pills prescribed six months prior to AD and six months after AD. Prior to AD, the average number of pills prescribed was approximately 733.5 (SD=1278.66). Six months after AD, the average number of opioid pills prescribed was 588.56 (SD=202.5) (Figure 34). Paired samples t-tests again were used to determine if the observed mean for opioid pills prescribed six months prior to AD was statistically

different from the observed mean for opioid pills prescribed six months after AD. The analysis indicated that the average number of pills significantly decreased after AD.

Figure 35

MetroHealth AD Provider Opioid Prescriptions Six Months Prior to and After AD

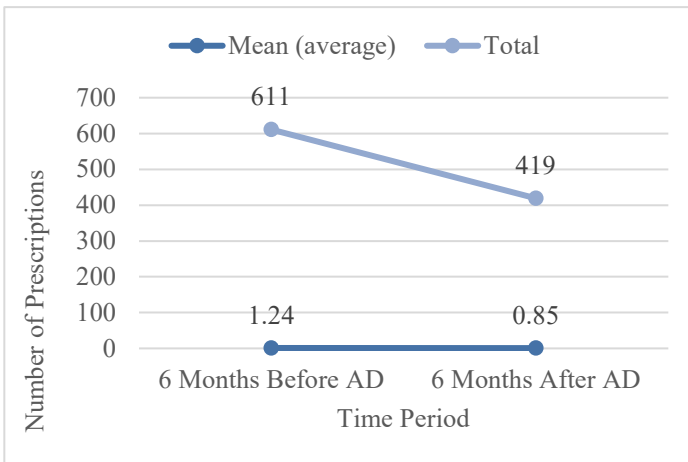


The third key outcome analyzed was the number of opioid prescriptions written six months prior to AD and six months after AD. Prior to academic detailing, the average number of opioid prescriptions written was approximately 10.77 (SD=240). Six months after AD, the average number of opioid prescriptions written was 8.63 (SD=3) (Figure 35). Paired samples t-tests again were used to determine if the observed mean for opioid prescriptions written six months

prior to AD was statistically different from the observed mean for opioid prescriptions written six months after AD. The analysis indicated that the average number of prescriptions written significantly decreased after AD.

Figure 36

MetroHealth AD Provider Benzodiazepine/Opioid Prescriptions Six Months Prior to and After AD



The fourth key outcome analyzed was the number of opioid/benzodiazepines prescriptions written six months prior to AD and six months after AD. Prior to AD, the average number of opioid prescriptions written was approximately 1.24 (SD=3.37). Six months after AD, the average number of opioid/benzodiazepines prescriptions written was 0.85 (SD=2.21) (Figure 36). Paired samples t-tests were used to determine if the observed mean for opioid/benzodiazepines prescriptions written six months prior to AD was

statistically different from the observed mean for opioid/benzodiazepines prescriptions written six months after AD. The analysis indicated that the average number of opioid/benzodiazepines prescriptions written significantly decreased after AD.

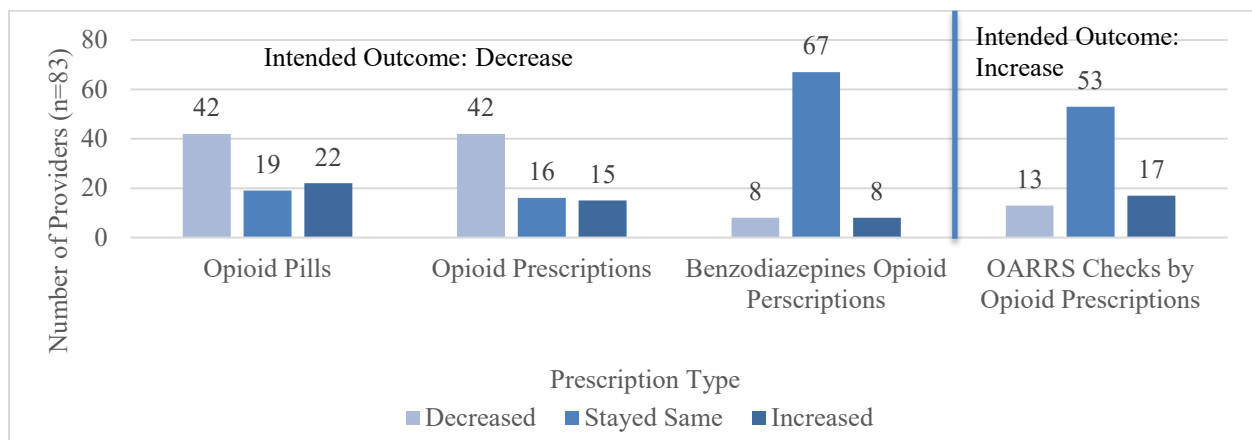
In summary, when measured six months prior to training provided in Academic Detailing and six months after, the average number of opioid pills, the average number of opioid prescriptions written, and the average number of opioid/benzodiazepine prescriptions written, all decreased statistically significantly. However, the number of times providers checked OARRS when writing an opioid prescription did not decrease. MetroHealth is in the process of addressing this measure.

Individual-level prescribing behaviors also were analyzed. Baseline information was gathered for each of the 83 providers across the four key variables, beginning with the first month of Year Three. For each subsequent month, data was tracked to see if problematic prescribing habits changed from the prior month. Over the course of the twelve-month grant cycle, each provider was assigned to one of three categories: *decreased*, *stayed the same*, or *increased*. ***Overall, providers decreased for most key measures associated with problematic prescribing habits, including number of opioid pills, opioid prescriptions and benzodiazepine/opioid prescriptions.*** With respect to OARRS checks, where the intended outcome is an increase, it was observed that the number of OARRS checks by opioid prescriptions remained the same or slightly increased over the course of the year (Figure 37).

Chi-square analysis was used to test if the level (*increased, decreased, or stayed the same*) of their prescribing habits for the four key variables changed from the six months prior to receiving AD to the six months after receiving AD. Results of the Chi-square analysis indicated that for opioid prescriptions written, where the intended outcome is a decrease, providers who belonged to the *increased* category prior to academic detailing were likely to be in the *decreased or stayed the same* after receiving academic detailing ($\chi^2= 11.511, p < .021$). For the other three key variables, (OARRS checks, opioid pills prescribed, and benzodiazepines/opioid prescriptions), Chi-square analysis was not significant, meaning, the level in which providers belonged to prior to AD did not change after receiving AD.

Figure 37

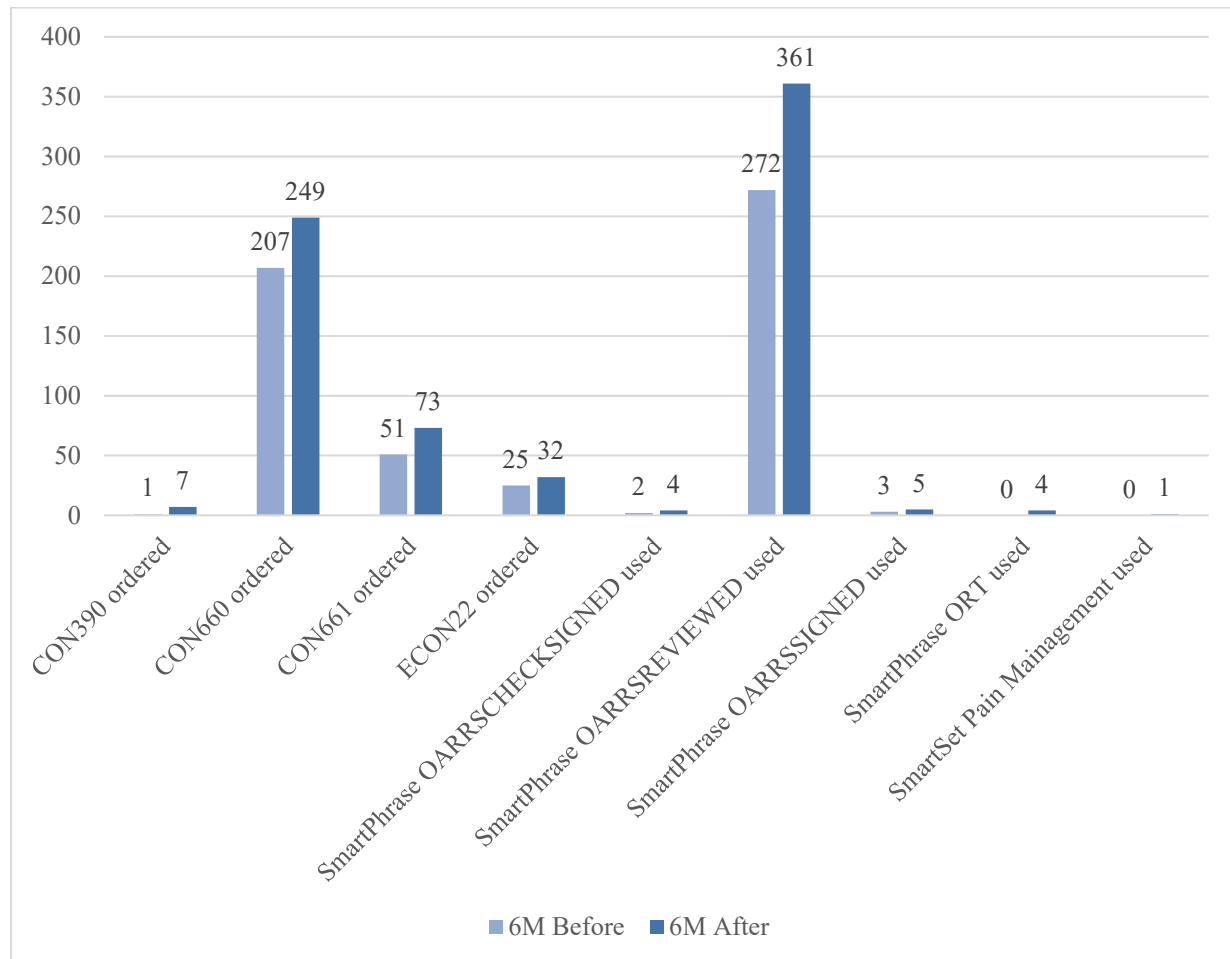
MetroHealth AD Provider Individual Prescribing Habits During Year Three



As part of the AD process, MetroHealth collects data on the types of consults used by providers. Consults to other services such as alternative pain management can help the patient find other ways of dealing with chronic pain and other issues associated with high use of opioids. Consults included in the analysis are CON390 (a referral to pain pharmacist for recommendations), CON660 (referral to physical medicine and rehabilitation), CON661 (primary care opioid management) and ECON22 (referral to pharmacist to address specific medication-related questionnaire) and dot phrases which shorten the order process. Figure 38 shows the results of the number and types of consults ordered prior to and after AD. There was a general increase in the number of consults used, but chi-square analysis indicates that these findings were not statistically significant. In other words, the observed differences in the number of consults ordered prior to and after AD were not related.

Figure 38

Types and Frequency of MetroHealth AD Provider Consults Six Months Before and After AD



Supplemental Academic Detailing Analysis. Although the benefits of AD are promising, there is the possibility that the decrease in prescribing habits of concern found among prescribers who completed academic detailing would have occurred without the academic detailing program, as MetroHealth has provided general best practice education to all providers.

To test this hypothesis, supplementary analyses were conducted with prescribers who did not go through the academic detailing process in Year Three. First, each of these prescribers were assigned a dummy date at random between 01/10/2022 through 08/31/2022 to represent a date in which they possibly could have been detailed. This date range matches the range of dates of providers who completed AD. Once dates were randomly assigned, each provider who had thirteen months of data (6 months prior, the month of, and 6 months after) were included in the analysis comparing prescribing habits six months prior to and six months after the dummy AD date. In total, there were 110 prescribers who had complete information. It is important to note that the analysis of Opioid/Benzodiazepine analysis could not be completed, as there were only 57 Opioid/Benzodiazepine prescriptions were written over the course of the thirteen-month period.

Paired Wilcoxon Rank signed test was used to test if there was a significant difference between the two time periods, six months before and six months after. Results of this supplemental analysis showed that there was no significant change in opioid prescribing habits between the six months prior to the dummy date and the six months after the dummy date for those prescribers who did not receive AD (Opioid Prescriptions $V=13367$, $p=0.8418$; Opioid Pills, $V=5056$, $p=0.918$; Opioid/Benzodiazepine Prescriptions, $V=213$, $p=0.929$) (Table 58). This suggests *that individuals who were not detailed had relatively stable prescribing habits over the course of the thirteen-month period. Thus, the key takeaway of this finding is that it reinforces the finding that the AD process is effective in reducing problematic prescribing habits.*

Table 58

Descriptive Data for MetroHealth Providers in Year Three Who Did Not Receive AD (n=110)

	Six Months Prior to AD				Six Months After AD				p-value
	N	Mean	Median	SD	N	Mean	Median	SD	
Rate of OARRS Checks by Prescriptions Written		0.4086	0.3167	0.421		0.5045	.5000	0.4477	0.1053
Opioid Pills Prescribed	41,012	205.1	68	438.59	41,642	215.8	60	513.21	0.918
Opioid Prescriptions Written	1,389	2.1	0	5.96	1,440	2.2	0	6.6	0.842
Opioid / Benzodiazepines Prescriptions Written	28	0.1436	0	0.482	29	0.1429	0	0.506	NA

Hospitals and Nontraditional Systems Downloading the AD Toolkit and Hospitals Implementing AD Programs. During Year Three, CHA recorded twenty-four (24) downloads of the AD program implementation guide by hospitals/agencies from their website. Attempts to capture detailed end-user information for those who downloaded CHA Toolkit resources have been unsuccessful. Placement of resources behind a sign-up page to engage users did not result in collection of contact information, and therefore that process was discontinued at the end of Year Three. CHA website analytics have been successful in collecting general information regarding traffic on their pages and levels of engagement across their resources.

CHA also had meetings with representatives from the Ohio Dentists Association (ODA) regarding nontraditional provider education, specifically expanded opioid education for dental students in Ohio. However, barriers exist for moving forward on this activity. The current term of the ODA president expires in September 2022, so the timeframe for developing an initiative is short. The dental school dean at CWRU also is not receptive to expanding opioid education.

Increase use of non-opioid medications and non-pharmacological treatments for pain management. Through this project, MetroHealth seeks to identify alternative treatments to opioid prescribing in the ED. Two possible treatments that emerged in Year One were Nitrous Oxide and non-narcotic pain blockers for acute procedures in the ED. A total of 71 ED physicians attended training on alternative pain management in Year Three, for a total 88 providers during this Initiative. *In Year Three, 68 ED clients also were referred for alternative pain management, an increase of 89% from Year One.*

Physicians at MetroHealth have the ability to request a consultation of a patient chart to other departments or specialties. One of the consults that a physician can recommend is CON309, which requests that the patient be seen by a pain management specialist, so that alternative pain management options can be explored in lieu of opioid therapy. *In year three of the CCOD2A grant, there were 60 CON390 ordered by physicians.*

Understanding among collaborating healthcare partners of existing efforts to provide education and skill-building for clinicians. During Year Three, MetroHealth and CHA partnered to develop and deliver a presentation covering all aspects of the AD program as implemented by MetroHealth. In addition, the presentation reviewed the availability of training and technical assistance through CHA and MetroHealth to assist organizations in developing and implementing AD in their agencies. Twenty-five (25) clinicians viewed the presentation, also referred to as “BrightTALK” and two clinicians completed a follow-up survey, an 8% response rate. When asked how likely they were to implement an AD program in their organization, they responded “Likely” and “Very Likely”.

Prescriber knowledge of best practices for alternative pain management. During Year Three, CHA developed and launched a Prescribing Clinicians Course as part of their educational portal. The course consists of four modules. Thirty-one clinicians took the course and 23 completed the associated survey, a response rate of 74%. Ninety-one percent (91%) of the respondents either agreed or strongly agreed that the information presented in that course was relevant to their work.

Summary. The Academic Detailing program at MetroHealth was developed to assist in reducing the frequency of prescriptions containing opioids by prescribers who were identified as chronic prescribers. To examine the effectiveness of academic detailing, thirteen months of PDMP data were analyzed for prescribers who completed academic detailing. The four key variables that were analyzed were 1) the rate of OARRS checks by prescriptions written, 2) the number of opioid pills prescribed, 3) the number of opioid prescriptions written, and 4) the number of opioid/benzodiazepine prescriptions written. ***Preliminary outcomes for AD suggest it is having an impact for MetroHealth providers. There were significant decreases across three key outcomes: the number of opioid pills prescribed, the number of opioid prescriptions written, and the number of benzodiazepine/opioid prescriptions prescribed.*** An increase in the number of times a provider checked OARRS before issuing a prescription was not found. This finding is similar to overall provider behavior with respect to OARRS checks in that providers in general are not increasing their checking of OARRS. A more detailed analysis of why this is occurring among providers will be examined in Year Four.

Expand MAT capacity in ED – MetroHealth

Through education and training, MetroHealth is working to increase the number of medical providers in the ED with a Drug Enforcement Administration (DEA) waiver. In Year Three of the project, a provider must have received training on MAT to be eligible for a DEA Waiver. Recently federal law changed this requirement, and this outcome will be revised in Year Four. Providers can refer individuals in need of treatment services to MAT. During Year two, MetroHealth developed and distributed an ED MAT guide for provider education/reference, as well as a Teams site with ED MAT resources for providers. MetroHealth also incorporated treatment for opioid, alcohol and nicotine addiction into its MAT ED protocol.

Table 59

Short-Term and Intermediate Outcomes for ED MAT Referrals

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Providers receiving training on MAT	6	↑10%	25	67	77	Achieved
Providers with a DEA waiver	70	↑10%	25	0	0	Assessing whether a DEA waiver is necessary for ED providers
Clients linked to MAT	90	↑10%	89	72	60	Achieved

Increase the number of providers receiving training on MAT and a DEA waiver. In Year Three, 77 providers received training on MAT. Although providers are participating in the training, ED providers are not following through with obtaining a DEA waiver. Since prescriptions issued in the ED are often for a period of less than 30 days, a DEA waiver may not be required which could explain why ED providers are not taking steps to secure a DEA waiver.

Increase the number of clients linked to MAT. MetroHealth is continuing to refer clients to MAT from the ED. In Year Three, 60 clients were linked to MAT, for a total of 221 clients which exceeds the target of 99.

Summary. In Year Two, MetroHealth developed a guide for ED providers to access resources and guidance for obtaining a DEA waiver with the ultimate goal of increasing the number of providers in the ED who have been waived. In Year Three there were 77 ED providers who completed training, but unfortunately taking the necessary steps to receive their waiver was not achieved. It should be noted that a change in the law made it unnecessary for all to pursue completing the process. Nevertheless, the ED is demonstrating an increase in clients linked to MAT, 221 clients have been linked in the last three years, exceeding the target goal of 99.

Identify Educational Needs for Hospitals and Treatment Centers relating to Treatment for OUD, SUD and Polysubstance Use - CHA

The mission of the Center for Health Affairs (CHA) includes focusing efforts on areas that benefit from a regional approach. As the convener of the Northeast Ohio Hospital Opioid Consortium, CHA works to create educational programs and resources for nurses and frontline staff, and high-level providers such as physicians, advanced practice nurses and physician assistants.

CHA is focused on a qualitative data collection and analysis approach based on key informant stakeholders from throughout their member community to identify training needs and gaps.

As part of CCOD2A Strategy Three, CHA partnered with MetroHealth to use data to identify education and training needs for medical providers. In Year Three, CHA initiated a qualitative data collection focus to identify what resources and educational materials would assist hospitals and treatment centers in improving treatment for individuals with OUD and SUD.

Table 60

Short-Term and Intermediate Outcomes for Hospital and Treatment Center Educational Needs

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR3 Data	Outcome Status
Focus Groups/Key Informant Interviews	N/A	N/A	Data not previously collected	Data not previously collected	24	Achieved
Organizations Participating in Focus Groups/Key Informant	N/A	16	Data not previously collected	Data not previously collected	15	94% achieved
Identify organizational needs to enhance treatment services for individuals with OUD/SUD	N/A	N/A	Data not previously collected	Data not previously collected	In progress	In progress
Needs met for organizations to enhance treatment services for individuals with OUD/SUD.	N/A	N/A	Data not previously collected	Data not previously collected	In progress	In progress

CHA created a brief survey for hospitals regarding current education and perceived future education needs. CHA conducted focus groups with nurse leaders from two county hospitals. Based on the initial focus group information, CHA initiated a needs assessment that included developing survey questions for area hospitals, identifying organizations to participate in the focus groups, and hiring a facilitator from Neighborhood Family Practice. After these initial focus groups, CHA determined that conducting structured qualitative data collection with key informants in member hospital systems and local treatment providers would be more effective and efficient. Twenty-four key informant interviews were completed that aided in identifying gaps in opioid and polysubstance education for clinicians, social workers, and addiction treatment managers. Once the interviews are analyzed, additional resource development will be determined which will be conducted in Year Four.

Vanderbilt University Center for Advanced Mobile Healthcare Learning QuizTime Platform as an Educational Resource Tool – CHA

During Year Three, CHA implemented QuizTime as an innovative framework to engage clinicians. Built by the Vanderbilt University Center for Advanced Mobile Healthcare Learning (CAMHL), QuizTime is an online learning system consisting of highly relevant and practical content delivered on a regular schedule (for example, one question a day, or per week, etc.) using a web-app quizzing platform. The Tennessee Department of Health/ONE Tennessee, using the CAMHL

CHA proactively identified the QuizTime platform pioneered by Vanderbilt University, Center for Advanced Mobile Health Learning as an innovative method to engage clinicians.

platform has developed several opioid education modules that were adapted for the CHA educational portal, “NEO Opioid Overdose Prevention Education” module and it was launched May of 2022 (Figure 39).

Figure 39

CHA QuizTime Module

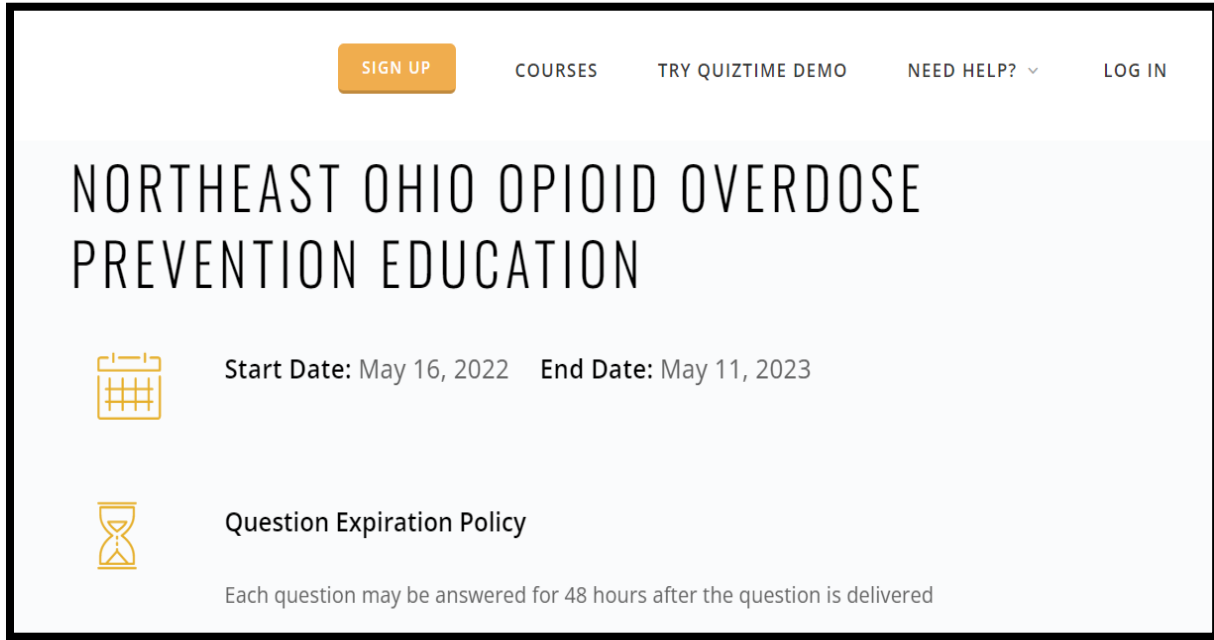


Table 61

Short-Term and Intermediate Outcomes for QuizTime

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR3 Data	Outcome Status
Clinicians Participating in QuizTime	N/A	300	Data not previously collected	Data not previously collected	17	6% achieved
Clinicians Completing at least 80% of QuizTime Model	N/A	250	Data not previously collected	Data not previously collected	17	7% achieved
Clinicians Who Successfully Complete QuizTime	N/A	200	Data not previously collected	Data not previously collected	12	6% achieved

The QuizTime program was not implemented until May of 2022. During the latter part of Year Three, 17 clinicians engaged the CHA QuizTime application, all completed at least 80% of the module and 12 completed the course. As QuizTime allows users to set their own pace for receiving questions, some users were still in the process of completing the module at the end of

Year Three. General course information can be found at:

<https://quiztimehealth.com/content/northeast-ohio-opioid-overdose-prevention-education>.

Summary. During the three years of the grant, CHA has worked closely with MetroHealth to develop and refine materials associated with AD and Peer Review processes to be used as resources for other hospital systems in Northeast Ohio. While website traffic has demonstrated an interest in these materials, there have been barriers to identifying the level of implementation of these programs outside of MetroHealth. CHA has initiated key informant interviews with representatives of several hospitals to identify barriers and facilitators regarding implementation of these programs and the results of those interviews will be included in the Year Four report. CHA has expanded their efforts in raising awareness and education by deploying the QuizTime application and BrightTalk sessions.

Strategy Eight – Partnerships with Public Safety and First Responders

Strategy Eight focuses on developing and enhancing partnerships across public safety and first responders who respond to calls for service associated with opioid overdoses. The activities within this strategy are:

- Enhance nonfatal overdose incident data collection, utilization, and dissemination;
- Expand the Cleveland Division of Police (CDP) Computer Aided Dispatch (CAD) System to improve observation and recording of nonfatal data by crime analyst/case information;
- Implement outreach to nonfatal overdose victims;
- Expand Police-Assisted Referral (PAR) card - now referred to as “Link2Care Card” - used in Heroin Involved Death Investigation (HIDI) detectives and others;
- Enhance “compassion fatigue” awareness and training for HIDI detectives/law enforcement (LE)/first responders and secondary responders;
- Cross-training to public safety forces to raise awareness of new partnerships, programs and challenges (including Adverse Childhood Experiences (ACES) related risk factors) regarding the local opioid epidemic; and
- Peer Support services to first responders and frontline workers.

Agencies

Alcohol Drug Addictions and Mental Health Services Board (ADAMHSB)

The Begun Center for Violence Prevention Research & Education (Begun Center)

Cleveland Division of Police (CDP)

Cuyahoga County Board of Health (CCBH)

Thrive Behavioral Health Center (Thrive)

Enhance Nonfatal Overdose Incident Data Collection, Utilization, and Dissemination & Expand CDP CAD System to improve observation and recording of NF data

The evaluation question tied to this activity is *how can law enforcement improve the tracking and notification of nonfatal opioid-related overdose incidents*. Law enforcement data regarding nonfatal overdoses provides a wealth of information, including identification of where overdoses are occurring in Cleveland.

Table 62

Short-Term and Intermediate Outcomes for Overdose Incident Data Collection and Recording

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Improve coordination of Public Health and Public Safety Efforts with organizations for sharing and integration of nonfatal overdose	0	2	0	2	2	Data received from CCMEO, CDP, and CEMS
Improve use of shared data to inform collaborative public health/public safety prevention and response activities through number of data systems being shared and input of nonfatal overdose into CAD	0	2	0	CDP CEMS CCMEO	CDP CEMS CCMEO	In Progress
Increase data reports of nonfatal overdose data available from LE	0	↑10%	0	1	593	In Progress

Enhancing Nonfatal Overdose Incident Data Information. The Cleveland Division of Police (CDP) hired an analyst position for placement in the Northeast Ohio Regional Fusion Center (NEORFC) to enhance and facilitate the synthesis of various data sources focused on nonfatal opioid overdose incidents.

The analyst serves as a critical linkage between overdose incident data identified by the Cuyahoga County Prosecutor’s Office (CCPO) Crime Strategies Unit (CSU) analysts and the MetroHealth QRT.

From March 2022 through August 2022 the CDP Analyst assessed information from multiple sources to identify 593 incidents that appeared to be nonfatal opioid/polysubstance overdose related in the City of Cleveland

The analyst was hired in Year Three of the grant and began working full-time in February 2022. The information included in this Year Three report covers the analyst’s efforts for the time period from March 2022 through August 2022. The CDP Analyst served as the primary conduit assessing multiple sources of overdose-related information, including disseminating information to the MetroHealth’s Quick Response Team (QRT) for further assessment and action. The CDP Analyst reviewed information provided by the CCPO CSU querying additional CDP data sources and reached out to additional stakeholders who also potentially collect data on opioid-related incidents.

The CDP Analyst gained direct access to the CDP Dispatch program “Intergraph” allowing for full access to calls entered by dispatch. Most often initial incident calls are categorized as ‘sudden illness’ in the CDP CAD system. Having direct access to this information is critical to facilitating assessment of the initial calls to identify those that are opioid and/or polysubstance-related.

The CDP Analyst also established a new ODMAP account specifically for the NEORFC which facilitates the establishment of MOUs with surrounding cities to obtain access to their ODMAP data and allows the CDP Analyst a higher level of permission and access to ODMAP information.

Cleveland EMS began providing information to the CDP Analyst including a weekly report of patients to whom they administered Naloxone. The information in the initial reports only contained the minimum information as outlined in the Ohio Revised Code. However, the CDP Analyst was working with Cleveland EMS to obtain more detailed reports.

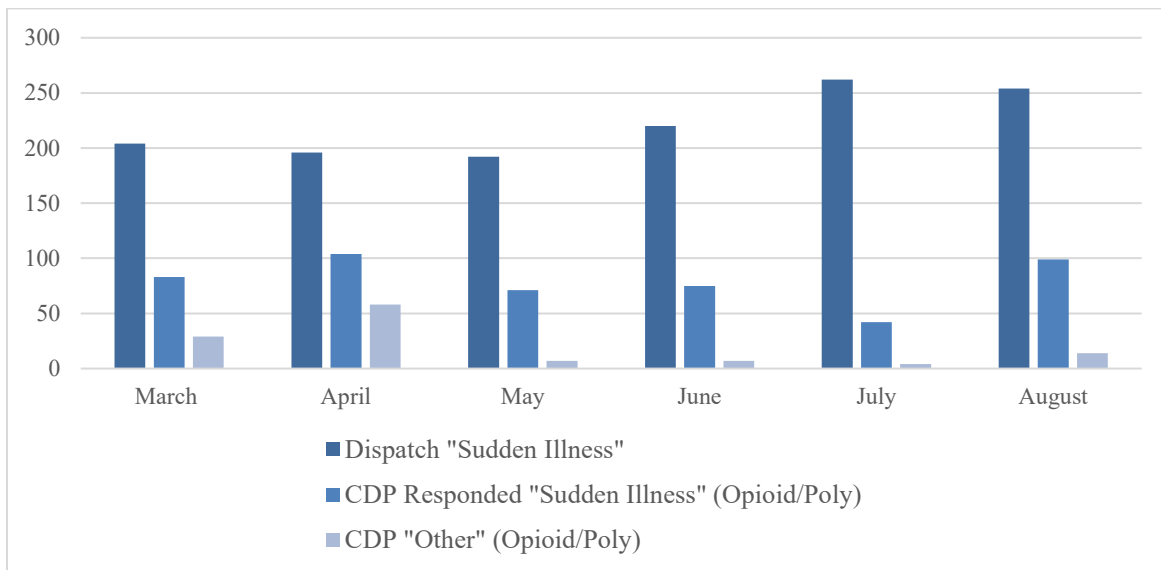
Ohio EMS also was identified as a potential source of information for opioid-related incidents. Information can be requested quarterly or bi-annually to support overall trend analysis for overdose incidents across the county. The CDP Analyst did not begin receiving this information until late in Year Three and noted that the information will take time to format and analyze. Ohio EMS also facilitated some initial discussions with the CDC Foundation’s Overdose Response Strategy, however, by the end of Year Three these discussions and assessment of available data were still in the early stages.

Improve observation and recording of Nonfatal data by Crime Analyst/Case Information.

From March through August 2022, the CDP dispatch system examined 1,328 calls for service that were initially categorized as “sudden illness.” Typically, this incident category is used to capture suspected drug overdose calls. During that same time period, the CDP Analyst identified 593 nonfatal opioid or polysubstance incidents, of which 119 (20%) were not initially identified as “sudden illness” incidents in the CAD system (Figure 40).

Figure 40

Nonfatal Opioid and Polysubstance Incidents 2022



The CDP Analyst included reviews of incidents classified as: Crisis Intervention (CIT), Violation of State Drug Laws (VSDL), Injury to Person, Operating a Vehicle Impaired (OVI), and Drug Activity. It was during these additional reviews that the CDP Analyst identified incidents for further review to determine if there was an indication of a nonfatal opioid or polysubstance element to the incident. The information associated with all these incidents was then provided to the MetroHealth QRT on a weekly basis to support their outreach efforts.

Summary. During the last three years of this grant, the Begun Center worked closely with CCBH, CDP, and CCPO to identify incident level data sources to inform a wide range of surveillance products regarding nonfatal overdose incidents as well as support MetroHealth QRT outreach. The Begun Center and CCBH also engaged CEMS to identify sharing and dissemination of their nonfatal response data. Significant strides have been made across these agencies in combining and sharing data to better inform surveillance and response to nonfatal overdoses. These efforts culminated in the hiring of CDP analyst dedicated to working across data sets and agencies to facilitate analysis and dissemination. For example, by combining information from multiple data sources (CDP, CEMS, and CCPO), the CDP analyst was able to identify 593 nonfatal opioid or polysubstance incidents from March 2022 to August 2022 out of 1,328 calls for services that were initially categorized as “sudden illness”. This analytical ability to identify in a timely manner and focus on those incidents most likely to be nonfatal overdose related has been crucial to supporting a wide range of responses by partner agencies.

Implement Outreach to Victims of Nonfatal Overdose – Begun, CDP and MetroHealth

The evaluation question tied to this activity is *how can Cuyahoga County improve and enhance partnerships with public safety and first responders to reduce opioid overdose-related deaths and nonfatal incidents*. Survivors of opioid overdoses have a high-risk of future fatal and nonfatal overdoses (Olfson, M., Wall, M., Wang, S., Crystal, S., & Blanco, C., 2018). Post-overdose intervention programs, such as Quick Response Teams (QRT), aim to reduce future risk through education and linkage to care (e.g., hospitals, addiction counseling, peer support, etc.) (Vivolo-Kantor et al. 2017). One of the challenges that post-intervention programs experience is willingness to participate. QRT data also shows a large challenge of tracking down individuals after release. Opioid users often cite shame, stigma, lack of interest, and lack of resources, as reasons for not participating in intervention programs. For those individuals who show willingness to participate, peer support is one of the most favored interventions as it allows the survivor to share with individuals who have shared experiences (Bardwell, Kerr, & McNeil, 2018).

Table 63

Short-Term and Intermediate Outcomes for Outreach to Victims of Nonfatal Overdose

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Improve our understanding of the processes to link nonfatal overdose victims to care by first responders/case workers	0	2	0	5	N/A	<ol style="list-style-type: none"> 1. Collaboration between CCSO and CDP are important for data collection. 2. Follow up with clients at 90 days. 3. Contact at incident location in addition to residential address. 4. Outreach to family and friends is an additional way to connect with clients. 5. Reduce time from overdose incident to notification to QRT.
Clients, family members or others who were contacted by MetroHealth QRT (Encounter)	0	↑10%	0	225	252	11% increase From Year Two
Clients who agreed to talk with MetroHealth QRT (Engage)	0	↑10%	0	60	68	13% increase from Year Two
Clients referred for treatment by MetroHealth QRT (Referred)	0	300	0	46	45	30% of target reached.
Clients linked with treatment after QRT referral	0	↑10%	0	7	14	50% increase from Year Two

MetroHealth serves as the agency to provide QRT services under this activity. The QRT receives guidance from an advisory board. The MetroHealth QRT Advisory Board includes representatives from MetroHealth, DEA, Begun Center, Cuyahoga County Sheriff Department (CCSD), Northeast Ohio Regional Fusion Center (NEORFC), and CCBH.

Improve our understanding of processes to link nonfatal overdose victims to care.

The QRT activities are conducted in an operating environment significantly different from the other partner agencies involved in linking overdose victims to care. The QRT team approaches overdose victims in their residential environment and outside of a clinical or medical setting. QRT outreach is determined from data identified by the CCPO Crime Strategies Unit (CSU) Crime Analysts. This review by CCPO is the first part of a three-step process that results in QRT’s contact with overdose victims. First, the CCPO Analysts conduct daily weekday queries of incidents identified by the CDP as ‘sudden illness’ incidents (the Monday query includes the prior weekend’s reports). ‘Sudden illness’ reports from CDP include a broad range of incident characteristics beyond opioid-related incidents. CCPO uses that reporting category as an initial

screening mechanism to identify potentially relevant reports. The CCPO Analysts collect relevant data from each incident. Second, that information is passed to the CCSD Crime Analyst located at the NEORFC, who then conducts additional address checks as well as checking with a CCSD Sergeant to ensure that there are no active criminal investigations occurring for any incidents that will be forwarded to MetroHealth QRT. Third, MetroHealth QRT reviews the information provided by the CCSD Analyst to identify and prioritize opioid-related incidents and then attempts to proactively engage those overdose victims in their residential setting. MetroHealth noted that they are also in the process of finalizing an agreement with CEMS to receive identified data from opioid overdose incidents and that this would be added to the current data received.

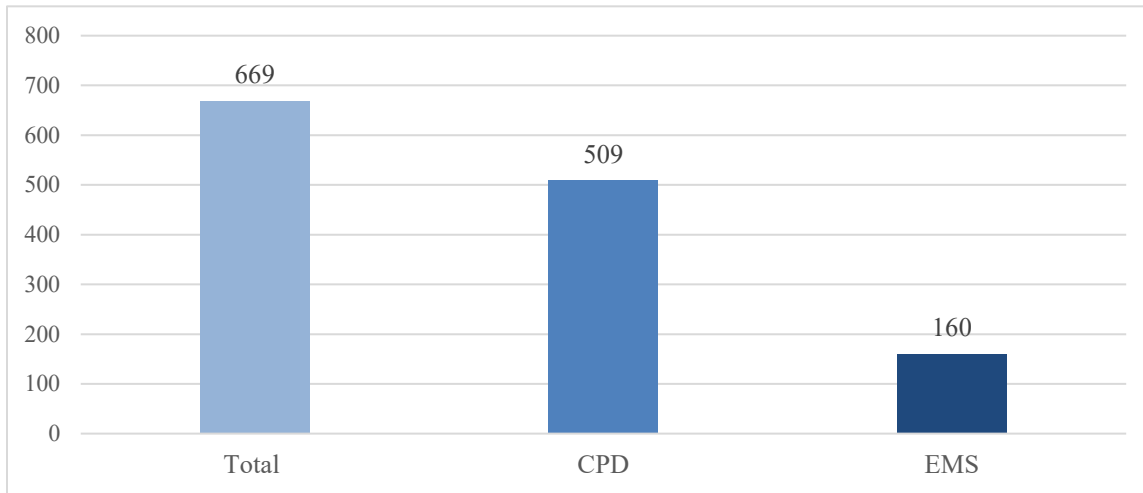
Follow-up with clients was not initially part of the QRT procedures. However, as a result of interactions with the families and the clients, it became apparent that identifying individuals/locations for 90-day follow-up would be an important element to add to the operating procedures. MetroHealth staff also noted that they are seeing people on the QRT overdose list who are also showing up in the ExAM program from the jail. MetroHealth QRT is working to coordinate their data with the ExAM program for individuals that appear in both efforts.

MetroHealth staff believe that the most effective aspect of the QRT program is the provision of resources to the families of the overdose victims. Family members of the overdose victim are receptive to discussion and receiving resource information and they appear motivated to work with getting the overdose victim linked to care, but they often lack the knowledge of available resources.

Encounter/Engagement in Program Services. QRT encounters include the number of clients, family members, partners, and roommates with whom QRT members interact with based on the reports received from law enforcement or EMS (Figure 41). From September 2021 through August 2022, 669 outreach attempts were made. The average age of the client is 43 years (SD=14.0). The majority of clients are male (54%). Race is predominately white (48%), 26% are Black, and race was unknown for 16% of the clients.

Figure 41

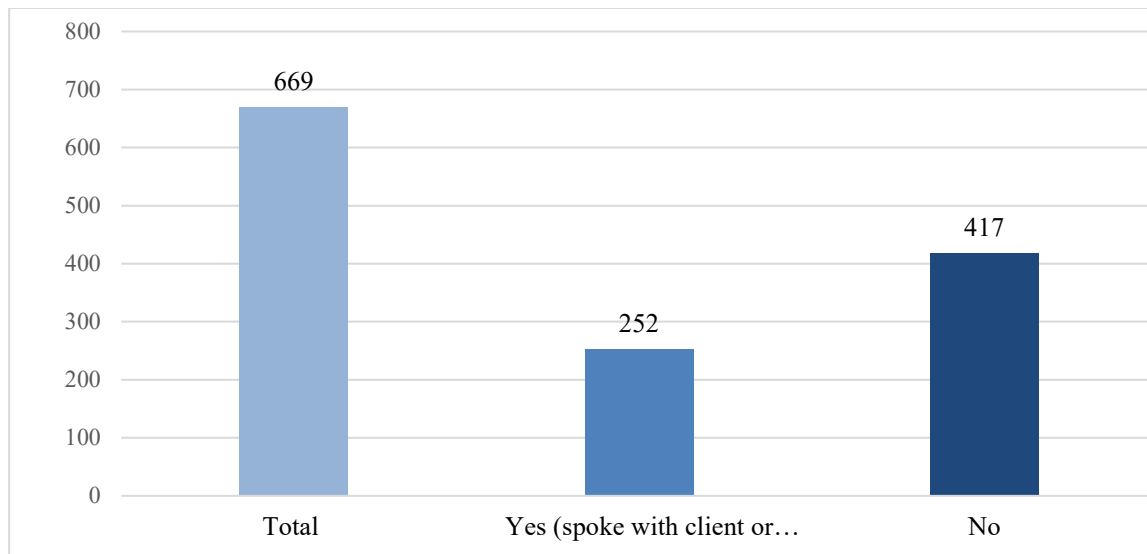
Source of Contacts for QRT by Agency



Of the 669 attempted outreaches, the QRT was able to connect with 252 clients or their family members or friends (38%), of which 68 involved the client (27%) and the remaining 184 were family members, partners, or roommates of the overdose victim (73%) (Figure 42). Reasons for not reaching the client were usually due to no one answering the door (58%), wrong address (30%), the client refused to engage with the QRT (6%), no access to the house or apartment (3%) or other reason (3%).

Figure 42

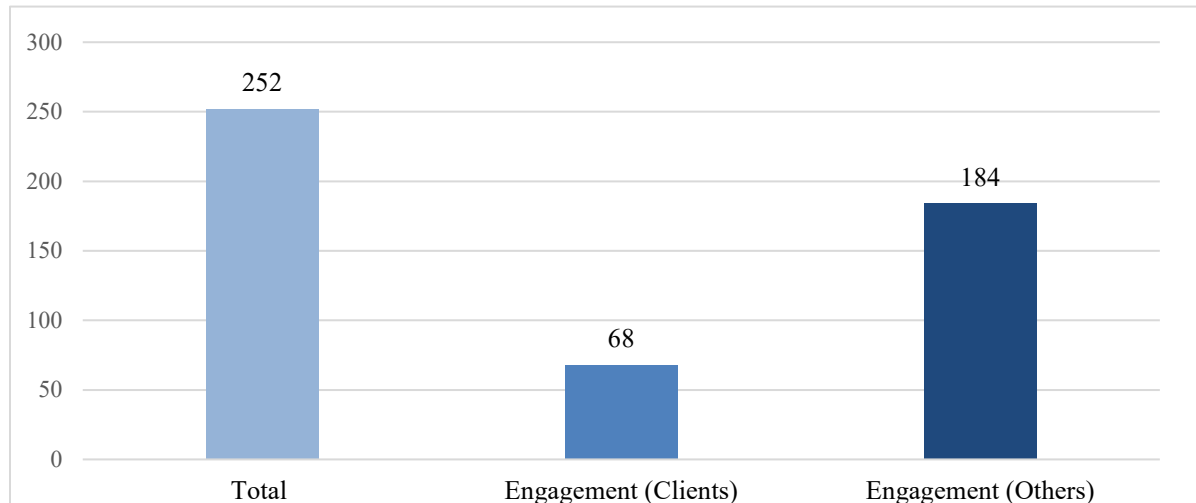
MetroHealth QRT Encounters from September 2021 to August 2022



The definition of engagement includes all clients who met with the QRT (n=68). Although initially the focus was to capture client specific data, as the QRT began operating it became clear that engagement with individuals closely associated with the client would also be an important aspect of the work (Figure 43). This information is tracked as linkage to treatment could occur due to QRT contact with family or friends.

Figure 43

MetroHealth QRT Engagement from September 2021 to August 2022



Referral to Treatment Services. Client referral includes QRT left materials with the individuals with whom they engaged (66% of clients, n=45) and with the family members, partners, or roommates of the clients (46% of others, n=85) (Table 64). These materials include business cards, a folder of resources, and/or pamphlets containing information regarding available resources and contacts.

Table 64

MetroHealth QRT Referral for Treatment by Type of Contact from September 2021 to August 2022

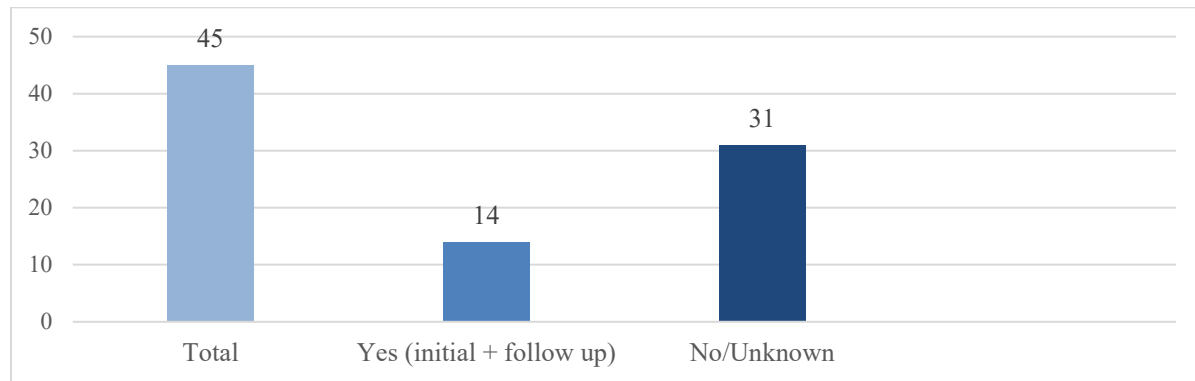
Received Referral Materials	Clients	Roommate/ Friends	Spouse/ Significant other	Other family	Other
Yes	45	14	17	22	32
No	23	10	5	67	17
Total	68	24	22	89	49

Linkage to Treatment. Of the 45 clients who accepted referral materials from MetroHealth QRT 31% (n=14) reported linkage to care (Figure 44). For MetroHealth QRT, linkage to care is

defined as the number of clients who made an appointment for community treatment and continue receiving treatment. The MetroHealth QRT process also included 90-day follow up with clients who had received materials, and it was during that 90-day follow-up activity that MetroHealth QRT learned of five of the total clients, who had been linked to care.

Figure 44

MetroHealth QRT Linkage to Community Treatment After Follow-up from September 2021 to August 2022



Narcan Administration for Individuals Outreached by QRT. Data provided by CPD for MetroHealth QRT includes whether the client received Narcan at the time of overdose. For the 669 individuals MetroHealth attempted contact, 87% had Narcan administered (n=585) and 57% of these individuals were transported to the hospital (n=384).

Summary. Each year MetroHealth’s QRT increases their efforts to contact individuals, who have experienced a nonfatal overdose, or their family and friends, 225 in Year Two and 252 in Year Three. Difficulties in finding these individuals persist as many of the addresses listed on police reports are incorrect or no one is at home when staff reach out. The QRT has been able to engage an average of 64 clients each year and refer more than half of them for treatment services. Out of the clients referred, the average number of clients who link with services is around 23%. In addition to clients, the QRT has also been able to engage family and friends of individuals, who have experienced a nonfatal overdose, and provide resource and referral information in the hopes that this too may be an additional means to link people with treatment.

Expand PAR Card, Enhance Self Care (Compassion Fatigue) Awareness and Training, Cross Train Public Safety Forces to Raise Awareness of New Partnerships, Programs, and Challenges Regarding the Local Opioid Epidemic

Several activities are associated with the evaluation question which examines *how Cuyahoga County can improve and enhance partnerships with public safety and first responders to reduce opioid overdose-related deaths and nonfatal incidents*. The Begun Center continued partnering with the Ohio Department of Public Safety (DPS) Office of First Responder Wellness to deliver two-hour live online training sessions focused on self-care (also referred to as compassion fatigue) training. The training focuses on increasing first responder awareness of the importance of self-care to identify potential impacts of job-related stress on an individual’s physical, emotional, mental, spiritual, and behavioral health. The ADAMHS Board and the County Board of Health provides training to public safety officers to raise awareness of new partnerships, programs, and challenges (including Adverse Childhood Experiences (ACES) related risk factors) and information regarding the local opioid epidemic.

Forty-five individuals attended “Self-Care” Sessions and 19 completed surveys rating the sessions an average of 9.42 out of 10 when asked if they would recommend these sessions to others in their field.

Table 65

Short-Term and Intermediate Outcomes on Enhancing Partnerships with Public Safety and First Responders

Description	Baseline	Target	YR 1 Data	YR 2 Data	YR 3 Data	Outcome Status
Link2Care cards distributed to agencies	0	400	Link2Care Card Developed	6500	5800	Achieved
Trainings on “self-care (compassion fatigue)” awareness & on local opioid related efforts.	0	8	3	17	37	Achieved
Enhance efforts to address needs of first and secondary responders through self-care/compassion fatigue training	0	50/yr.	0	12	45	Discontinued in Year Four
Increase jurisdictional awareness of opioid overdose epidemic and evidence-based approaches (including ACEs related risk factors) by public safety and first responder partners	0	50/yr.	43	427	425	Achieved

Expand Par Card Use to HIDI Detectives and Others. In Year One, a “PAR card” was developed, and is now referred to as a “Link2Care Card.” Link2Care cards are distributed by CCBH to several different agencies. *In Year Three CCBH distributed 5,800 cards to agencies.* Agencies included the ADAMHS Board, Project DAWN, St. Vincent Charity Hospital, Thrive, Project Noelle, Stella Maris, Hispanic UMADAOP, CWRU Preventive Medicine Residents, Ohio Restaurant Association and Lutheran Metropolitan Ministry Men’s Shelter. Cards were also distributed during the City Managers/Mayors meeting in Cuyahoga County.

Enhance Compassion Fatigue Awareness Training for First and Secondary Responders. Steven Click, First Responder Liaison with the Ohio Department of Public Safety, was identified to conduct the training. Begun Center staff expanded the definition and scope of potential recipients of this training to include community agency staff and peer support personnel who engage on a regular basis with opioid overdose victims, referred to as “secondary first responders.”

The Begun Center and Mr. Click conducted ten virtual trainings in Year Three with 108 individuals registering for the sessions. Only 11 (10%) individuals who signed up identified as law enforcement and/or affiliated with a ‘traditional’ first responder role such as police, fire or emergency medical services. The remaining registrants were “secondary first responders” such as peer support specialists, clinical educational specialists, and counselors.

A total of 45 (42%) individuals attended the two-hour training blocks. Of those who participated in the training, 19 (42%) completed a brief survey asking how likely they would be to recommend this training to others in their field (10=very likely, 1=unlikely). Fourteen of the 19 survey takers responded with a “10” and all of those survey takers were identified with positions as “secondary first responders.” The average score across all surveys was 9.42. Due to the low number of individuals participating the training will be discontinued in Year Four.

Cross Training of Public Safety Forces to Raise Awareness of New Partnerships, Programs, and Challenges Regarding the Local Opioid Epidemic. The ADAMHS Board and the County Board of Health are tasked with linking law enforcement, EMS, and emergency department staff with training to raise awareness of new partnerships, programs, and challenges (including Adverse Childhood Experiences (ACES) related risk factors) and information regarding the local opioid epidemic.

In Year Three, the ADAMHS Board continued offering OUD awareness and ACES information as part of the Crisis Intervention Team (CIT) training, resulting in the agency far exceeding its outcomes for number of trainings and members of law enforcement trained. This training covers both OUD and ACES factors, as well as the impact of COVID-19, recognizing an overdose, treatment options (such as MAT, peer support, residential, etc.), trauma-informed care, and the lasting effects of adverse childhood experiences.

The ADAMHS Board utilized the Simulated Scenario Village at the Cuyahoga County Community College to enhance its CIT training. The simulated training provides first responder trainees with real-time experience engaging people in overdose crisis scenarios.

The sessions are held two to three times per month, there were 27 CIT trainings in Year Three with 425 law enforcement employees participating. Those trained were from 45 different agencies and their ranks varied widely. The majority of those trained were patrolpersons (n=106), the ranks of two participants are unknown. Tables 66 and 67 show the ten most frequently occurring agencies and ranks of participants.

Table 66

Law Enforcement Agencies Attending OUD Training (10 Most Frequent)

Rank	Frequency	Percent
Cuyahoga County Sheriff	120	28%
North Royalton PD	36	9%
Cleveland Height PD	24	6%
Lyndhurst PD	20	5%
Cleveland Division of Police	17	4%
Brecksville PD	14	3%
Greater Cleveland RTA PD	14	3%
Adult Parole Authority	13	3%
Beachwood PD	13	3%
Cleveland Metroparks PD	11	3%
Cuyahoga County Community College PD	11	3%

Table 67*Rank of Law Enforcement/First Responders Attending OUD Training (10 Most Frequent)*

Rank	Frequency	Percent
Patrolperson	106	25%
Patrol Officer	55	13%
Sergeant	45	11%
Deputy	35	8%
Officer	34	8%
Corporal	33	7%
Detective	32	7%
Corrections Officer	19	5%
Parole Officer	12	3%
Lieutenant	10	2%

Summary. In the past three years of this grant, collaboration between agencies throughout Cuyahoga County has been beneficial to first and secondary responders, enhancing their awareness and training regarding the local opioid epidemic. By bringing agencies together to partner and cross-train their staff, additional knowledge was gained as evidenced by the number of PAR cards distributed and trainings provided, meeting and exceeding targets. Expanding the knowledge base of those responding first to an overdose is another way partnerships fostered through this grant-money have been beneficial to the region.

Provide Peer Support Services to First Responders and Frontline Workers (Thrive)

In Year Three Thrive initiated a new program to provide peer support services to first responders and frontline workers such as EMS, firefighters, law enforcement, etc. Thrive will recruit frontline workers who want to provide peer support to other frontline workers, and link them with the Mental Health First Aid training. The trained frontline workers will support their colleagues in need. While this program is intended to be for first responders, peer supporters who reach out for themselves, will not be turned away. This program will be evaluated once the data collection starts in the upcoming year. The evaluation question tied to this activity is *how can Peer Recovery Workers support first responders and frontline workers?* Evaluation outcomes will examine the type of assistance and/or referrals first responders and frontline workers need, as well as coping mechanisms and tools used to help alleviate signs and symptoms of stress, vicarious trauma and PTSD. The evaluation will also identify ways the warmline is beneficial for first responders and frontline workers and how it can be improved.

CCOD2A Project Performance Assessment

Introduction

This programmatic evaluation provides a third-party assessment of CCOD2A's implementation progress as reflected in the key themes and sub-themes discerned from analysis of the *qualitative* data collected from participating agencies between September 1, 2021, and August 31, 2022. The programmatic survey was administrated midyear by The Begun Center to the CCOD2A participating agencies to facilitate identification of challenges and facilitators impacting CCOD2A success. Data from the survey are presented to document how challenges changed over time or were addressed. Survey questions inquire about program successes and challenges, dissemination of knowledge gained from program activities, unexpected outcomes, and innovative ideas that developed out of project activities. Focus groups and individual interviews also were held at the end of the year with staff from the participating agencies and one community stakeholder to gather more insight into the day-to-day activities surrounding the CCOD2A Initiative.

The qualitative data collected provided opportunities to explore descriptions of agency staff members' and a community stakeholder's experiences, perceptions, and opinions of planning and implementation that were offered in their own words and were outside The Begun Center evaluators' knowledge. In addition to the Cuyahoga County Board of Health (CCBH), the other CCOD2A agencies that participated included: The Alcohol, Drug Addiction and Mental Health Services Board of Cuyahoga County (ADAMHSB); Center for Health Affairs (CHA); The Centers for Families and Children (The Centers); Cleveland State University (CSU); Cuyahoga County Medical Examiner's Office (CCMEO); MetroHealth Medical Center (MetroHealth); St. Vincent Charity Medical Center (SVCMC); Thrive; and The Woodrow Project (Woodrow).

CCOD2A Programmatic Report

The qualitative data via a survey comprised of 11 open-ended questions and covered the period of September 1, 2021 thru February 28, 2022. Upon survey submission, the qualitative data were analyzed and re-analyzed by two of the evaluators using Systematic Text Condensation (see Malterud, 2012, DOI: 10.1177/1403494812465030). The evaluators read and re-read the data, pulling preliminary and subsequently emerging themes from the broader context of the individual participating agencies' survey results and grouping them together into discrete meaning units related to CCOD2A planning and implementation. The evaluators who analyzed this data further assessed and revised iteratively these discrete meaning units to create consistent statements about participating agencies experiences, perceptions and opinions as they related to seven key themes.

Table 68

Key Themes from CCOD2A Programmatic Report

Themes	Details
Developing Organizational Capabilities to Further Quality Implementation	Agencies defined outcomes in alignment with their program strategies and identified potential resources for improving the quality of the program.
Improvements	Agencies identified improvement in their activities and/or outcomes.
Leveraging Resources	Agencies recognized and/or leveraged resources.
Identifying Challenges	Agencies identified challenges to program implementation and explored possible ways to overcome them.
Exploring Innovative Ideas	Agencies explored innovative ideas to overcome challenges and build their programs.
Harm Reduction Activities	Agencies planned activities to reduce harm by preventing overdose, infectious diseases, and other negative effects related to drug misuse.
Dissemination and Data Sharing Strategies	Agencies developed strategies for sharing knowledge gained and lessons learned through education, conference attendance, and meetings/interviews with collaborating partners.

Theme 1. Developing Organizational Capabilities to Further Quality Implementation.

Efforts to develop organizational capabilities to further quality implementation included two agencies undergoing operational and staffing changes. CHA hired an interim IT staff person to address emergent and critical needs related to the launch of The Prescribing Clinician (Module 1) course, formerly called The Provider course. Circle Health Services/The Centers expanded their services to a new mobile location in Slavic Village and hired two additional outreach workers to serve the site.

Theme 2. Improvements. Community agencies continue to strive to collaborate and create an inclusive environment to promote harm reduction. Nine agencies reported programming improvement in this reporting period:

CCBH partnered with The HEALing Community Study to add harm reduction mapping on *drughelp.care*.

ADAMHS Board expanded the scope of topics reported in the OFR to include findings from the NOK interviews that now are presented regularly in the OFR case review presentations. NOK interviews provide important information about decedents’ life experiences and help identify community-specific prevention and intervention strategies.

CDP's newly hired Fusion Center analyst gained direct access to CDP incident reports, which were not readily accessible in the past. Direct access to these reports enables the Fusion Center analyst to capture more data regarding different types of overdose incidents in a more timely and comprehensive manner.

CHA and MetroHealth developed, tested, and launched the *Prescribing Clinician (Module 1) course*. In collaboration with CWRU, a survey was created and attached to the end of this course to help assess participants' experiences. CHA also created and fielded a brief hospital survey in mid-March 2022 to learn current education opportunities and future education needs.

Circle Health/The Centers reported 734 unduplicated client referrals to Project Dawn, seven unduplicated client referrals to medical appointments, one client referral to dental services, two unduplicated client referrals to behavioral health services, and provided an estimated 6,178 free fentanyl test strips.

CSU trained a total of 223 trainees on the use of *drughelp.care*. CSU also has registered three new agencies and 39 treatment services. To aid clients in their efforts to choose the best MAT option for them, CSU added *Sublocade injection* as a MAT filter.

MetroHealth reported 548 referrals, 32 warm hand-offs, 126 AD sessions completed, and 307 QRT outreach visits during this reporting period.

Thrive estimated a 73% overall linkage to care based on 188 peers successfully making an appointment with their treatment referral. Similarly, **Woodrow** reported an 86% success rate over the past six months for linking clients from the ED to chosen pathway of treatment.

Theme 3. Leveraging Resources. None of the CCOD2A agencies reported leveraging resources during this reporting period.

Theme 4. Identifying Challenges. Agencies reported encountering a wide range of barriers. Due to the persistence of the COVID-19 pandemic, some barriers remain the same as those experienced in the last reporting period. For example, due to the retirement of a principal investigator and the residual staffing shortage and hiring delays associated with the COVID-19 pandemic, the CCBH CCOD2A team was left shorthanded. Similarly, Circle Health Services/The Centers experienced understaffing issues that negatively impacted the availability of services and outreach efforts at both the Rocky River Drive and Uptown locations, the latter of which is one of the main locations for the SEP and other services. Circle Health Services/The Centers also was forced to close their West 25th Street location, undermining their ability to serve the West 25th Street community's clientele. However, with the help of multiple stakeholders and additional funding, Circle Health Services/The Centers secured a new location in Slavic Village.

ADAMHS Board also described encountering ongoing police department administrative barriers to increasing the number of officers with CIT training due to police department competing priorities and existing demands of mandated state officer training. Police departments also are

witnessing increasing crime rates and resignations of police officers. These circumstances leave little time for officers to attend voluntary CIT training.

CCMEO continues to strive to achieve representation on the OFR board from all major county hospital systems. CCMEO also continues its efforts to establish data-sharing channels with institutions that may require additional data privacy measures by developing and implementing DUAs, but this is often time-consuming.

Barriers due to the COVID-19 pandemic and COVID-19 testing mandates continue to challenge agencies in their efforts to connect patients with treatment services. SVCMC's SBIRT team continues to serve the inpatient medical unit and the outpatient primary care clinic at SVCMC. However, the COVID-19 pandemic led to low patient census through SVCMC, which in turn yielded low referral and even lower linkage to care rates. Thrive also reported that,

The pandemic has lengthened the amount of time it is taking to get peers placed and to their treatment destination because peers now have to wait until they receive their COVID-19 test results and wait even longer for rideshares because of the decrease in those services.

Similarly, Woodrow reported that COVID-19 tests are problematic when referring peers to treatment because "very few treatment providers accept a person who has a positive COVID-19 test." Woodrow also reported, "the emergency departments do not test for synthetic opiates. Because of this, there are some treatment providers who will not accept patients who have negative drug screens." However, by building rapport and trust with treatment providers Woodrow's peer supporters were able to help enroll patients in treatment programs despite negative drug screening test results.

CHA and partnering agencies also reported barriers to their AD programs. For example, CHA and MetroHealth AD leads reached out to pharmacy directors at Southwest, Mercy Lorain, Ashtabula, and Grace hospitals/health centers to offer training/information regarding AD. However, these efforts were unsuccessful. Both agencies continue to explore other agencies who may be interested in AD. Similarly, CHA program manager and CCBH program officers reached out again (Fall 2021 and Jan/Feb 2022) to SVCMC about expanding the peer review model and AD into SVCMC. Currently SVCMC cannot undertake either program.

Theme 5. Exploring Innovative Ideas. Agencies explored innovative ideas to overcome challenges and build their programs. Several agencies explored innovative methods to deliver educational and training content to providers and first responders to better address the needs and outcomes of individuals with SUD. For example, CCBH identified QuizTime as a new provider for online instructor-led or on-demand courses. QuizTime allows clients to choose from current courses or request the design of new courses. CHA will collaborate with ONE Tennessee to request the design of a QuizTime course regarding polysubstance abuse. Another innovative idea by CHA relates to plans to host and assist in the development of a MAT education conference aimed at developing APRN and other prescribing clinician MAT knowledge. More specifically, CHA partnered with Ursuline College this reporting period to host an in-person MAT

educational conference to deliver Ursuline College’s pilot curriculum. The curriculum educates APRN and other prescribing clinicians on obtaining DEA X-waivers and on safe prescribing of medications for opioid use disorder and MAT for OUD patients. Another novel approach to training was undertaken by the ADAMHS Board that utilized the Simulated Scenario Village at the Cuyahoga County Community College to enhance its CIT training. The simulated training provides first responder trainees with real-time experience engaging people in *overdose crisis scenarios*.

Other agencies reported exploring new harm reduction programs. CDP is currently exploring the EMS naloxone Leave Behind program by speaking to and gathering information from other state and county agencies that have successfully implemented such programs. CDP also plans to deliver naloxone Leave Behind information to EMS/Fire Departments in Cuyahoga County and develop a stigma awareness training for Fire/EMS to educate first on SUD and naloxone Leave Behind programs.

To meet client/patient demands, several agencies initiated administrative and operational changes. For instance, MetroHealth opened a new MEC to support the overflow of patients/clients in need of additional services. MEC provides patients with OUD access to low threshold care such as MAT, level of care assessments, case management services, group/individual counseling, peer support services, and care coordination. While Thrive made new intra-agency operational changes to aid with workflow and triage overdose-related ED admissions, they also made inter-agency changes. For instance, in collaboration with SVCMC and Rosary Hall, Thrive changed workflows to triage peers at the time of admission so that

Peers are now assessed at presentation and if applicable will go directly to Rosary Hall if detox was the main reason for presentation at the emergency department. This new workflow frees up space in the emergency department for peers who have emergent medical needs and want resources/referrals for their SUD.

Theme 6. Harm Reduction Activities. Several agencies identified activities that contributed specifically to their harm reduction efforts. CCBH developed a harm reduction overview document in collaboration with MetroHealth’s Project DAWN and Circle Health Services/The Centers. The purpose was to bring awareness to harm reduction and describe the value of harm reduction in local communities ADAMHS Board is utilizing data from NOK interviews to suggest prevention initiatives pre-, post- and during OFR meetings to raise awareness of the importance of NOK interview findings for harm reduction and prevention.

Several agencies took a holistic approach to harm reduction by treating patients for physical and behavioral conditions related and unrelated to their SUD. Circle Health Services/The Centers offer a variety of wraparound services aimed at harm reduction. For example, they attempt to tackle “*the HIV epidemic by offering free walk-in testing to the syringe exchange clients, [and] Hepatitis C testing and Hepatitis A vaccines.*” Clients also are given safe injection kits and “*three or more fentanyl test strips with each visit,*” as well as are “*encouraged to test their drugs*

regardless of whom they are purchased from and provided education on the latest overdose data.” Clients are asked about their desire to begin MAT services at every visit. Circle Health Services/The Centers and MetroHealth collaborate twice a week to provide naloxone to clients on days MetroHealth is not present at the Circle Health Services/The Centers locations. Collaboration with MetroHealth not only ensures the continuation of services when a partnering agency is not present but ensures the provision of a wide range of services at a central location for *“syringe exchange clients who typically do not have reliable transportation or access to such services in their respective cities.”* Similarly, SVCMC’s program contributes to harm reduction by assessing patients for behavioral health care and providing patients with information and referrals for substance use treatment that correspond with their readiness and desire for treatment. Patients also are approached about *“receiving treatment for their substance use needs”* a week after receiving treatment through mailed letters with information about intensive outpatient care and the SBIRT team.

Theme 7. Dissemination and Data Sharing Strategies. Many agencies disseminated knowledge gained and lessons learned via internal opioid-related updates to staff and external reports to, among others, collaborating agencies, the CCBH-led Cuyahoga County Opiate Task Force, the U.S. Attorney’s Office of the Northern District of Ohio Heroin and Opioid Task Force (HOTF) meetings, HOTF Data Subcommittee meetings, other opioid-related meetings in the community, and to the public via social media.

Agencies reported various forms of dissemination efforts within and outside of their agencies. Knowledge disseminated includes but is not limited to lessons learned about harm reduction and data sharing efforts, analysis results from collected data, and outreach services successes. With the assistance of the CCBH Health Commissioner, CCBH presented an overview of their harm reduction efforts to over 50 Cuyahoga County city managers and mayors. The overview document was then disseminated to the public through the CCBH data dashboard website. Moreover, a CCBH program manager also is helping train and guide new OFRs in Ohio as the co-chair of the state Ohio Prevention Network OFR workgroup.

Several agencies also presented at national and local conferences. CCBH presented CCOD2A and harm reduction activities at the AIDS Funding Collaborative Conference. CHA presented at the National Resource Center for Academic Detailing (NaRCAD) Annual International Conference regarding their efforts to support AD in northeastern Ohio. To reach a wider audience, CHA program manager and MetroHealth AD lead also created and recorded a training presentation with specific information about PDMP/OARRS on CHA’s BrightTALK webinar platform.

Other agencies focused their dissemination efforts on topics related to their SUD treatment and linkage to care efforts and innovative ideas. Circle Health Services/The Centers raised awareness about their SEP/MAT services during invited virtual presentations at CWRU and CCMEQ. Circle Health Service/The Centers public health outreach workers also shared their efforts and experiences as part of a Harm Reduction and Outreach Services (Module 2) team at Kent State University. Circle Health Services/The Centers and MetroHealth Mobile RV success in

promoting harm reduction were featured on Channel News 5 Cleveland. Woodrow Project leads presented to referral agencies and Ohio Citizen Addiction Advocates for Recovery about knowledge gained from Project SOAR. Additionally, the Woodrow program director also shared information at various meetings such as the ADAMHS Board Diversity and Inclusion workgroup meetings, Ohio Mental Health and Addiction Services quarterly peer support meetings, and quarterly statewide QRT meetings.

CCOD2A Year Three Focus Group Findings

Focus groups and individual interviews were held at the end of Year Three with staff from the participating agencies to gather more insight into the day-to-day activities surrounding the CCOD2A Initiative. Eight focus groups and six interviews were conducted during August and September of 2022. Participants totaled 39 persons, with a total of approximately 75 years of involvement in the CCOD2A initiative. Focus group/interview questions explored five themes: (1) lessons learned, (2) data sharing and utilization, (3) cross-agency collaboration, (4) service gaps and barriers, and (5) other points of discussion.

The qualitative data collected provided the CCOD2A Begun Center evaluators with important insight into agency staff members' and community stakeholders' experiences, challenges/barriers, and current and future needs to better serve the community. In addition to the Cuyahoga County Board of Health (CCBH), the other CCOD2A agencies that participated included: The Alcohol, Drug Addiction and Mental Health Services Board of Cuyahoga County (ADAMHS Board); Center for Health Affairs (CHA); The Centers; Cleveland State University (CSU); Cuyahoga County Medical Examiner's Office (CCMEO); MetroHealth Medical Center; St. Vincent Charity Medical Center (SVCMC); Thrive; The Woodrow Project; and the Northeast Ohio Regional Fusion Center. Data analysis revealed six key themes.

Table 69

Key Themes from CCOD2A Focus Groups

Themes	Details
Adapting activities and services to meet the evolving needs of the opioid epidemic	Agencies reported that some of the activities proposed when the CCOD2A grant was originally written are now outdated. In response, several agencies adapted their activities and strategies to the emerging needs of the community.
Adding new services and conducting targeted promotion of new services	Due to the increased demand and need for a wide breadth of services, agencies added new services and conducted targeted promotion of these services.
Identifying referral to treatment challenges and gaps	Agencies identified gaps and challenges encountered during referrals to treatment. Several agencies implemented changes to increase the support and resources available to patients/clients as they undergo treatment. Agencies also strived to incorporate patient/client voices, preferences, treatment history, and personal barriers when making treatment referrals.
Identifying new education needs	Agencies offered new and revised training and education opportunities to address emerging needs and knowledge gaps.
Data sharing success and improvement in data collection efforts	Agencies highlighted various successes in cross-agency data sharing. Agencies also described new types of data they are collecting, accessing, and analyzing.
Successful collaboration between local and state agencies	Agencies shared the initiation of new collaborations and the maturation of previous collaborations with local and state partners to overcome the opioid epidemic.

Adapting activities and services to meet the evolving needs of the opioid epidemic. Several CCOD2A agencies recognized that some of the activities proposed when the CCOD2A grant was originally written are now outdated. As one focus group participant explained, to avoid "using an older lens to define a newer problem," several agencies revised their interventions, activities, and strategies. For instance, a CHA staff member observed that when the CCOD2A initiative first launched, many of the strategies focused on the PDMP and overprescribing, doctor shopping, and opioid stewardship. However, more recently, the CHA staff member observed that there is a greater need for harm reduction efforts and the provision of MAT. Similarly, an ADAMHS Board staff member reported a pressing need to target communities that are currently most impacted by the opioid epidemic through "grassroots" efforts. A Centers Syringe Exchange Program (SEP) staff member also emphasized changes in the approaches to substance use treatments. As a result, The Centers SEP staff continue to educate themselves on the changing field of SUD treatment to help make optimal referrals for their clients.

Adding new services and conducting targeted promotion of these services. Due to the increased demand and need for a wide breadth of services, several agencies added new services and conducted targeted promotion to reach the most affected and underserved individuals. For example, according to staff, The Centers SEP provides wound care services in two ways. First, if clients express interest in receiving a referral to see a nurse, the goal is to "have a nurse available

at all of their sites at least once a week" to ensure that interested SEP clients receive the needed wound care. Second, if clients refuse the referral, SEP staff have "made more of an active effort to have wound care supplies readily available by packaging them into kits." In addition to increasing the services provided, The Center's SEP also has changed and expanded the scope of its harm reduction efforts to normalize the "harm reduction impact of not just HIV, Hep C, but substance use in the community" in an effort to "not silo ... [harm reduction] as an issue just for folks that use drugs." Similarly, an ADAMHS Board participant also emphasized the importance of "updating or expanding outreach" efforts to involve grassroots organizations and community members.

Thrive participants also described the addition of two new programs. The First Responder Warmline "is an anonymous warmline dedicated to providing support over the phone for fellow first responders" responding to situations where combined substance use and mental health concerns are present. Additionally, the Workforce Development Program aims to expand the peer support workforce across Cuyahoga County and Ohio. As a Thrive staff member explained, the "goal with this program is to certify 25 individuals in peer support and provide an 11-week internship" to augment their preparation for the workforce.

Identifying referral to treatment challenges and gaps. Participants representing several agencies made changes to their treatment referral process in response to service challenges and gaps they observed among their patients and the community. For example, Woodrow and Thrive made additional efforts to follow up with peers who were referred to different treatment services. Woodrow, as described by a participant, "added a Patient Navigator to provide some support for people who have gone through the emergency department, after they either go to detox or residential [treatment]." Thrive also added Linkage Peer Supporters to provide support to the peers referred to treatment services. A Thrive participant shared:

That Linkage Peer Supporter can still be in constant contact with the treatment agency. Because of that ROI [Release of Information], that linkage person can receive updates like, 'Oh, we're doing a change of plan,' or 'This person decided to discharge early,' or 'This person AMA-ed [discharge against medical advice].' It's kind of that extra communication. We just don't want anybody falling through the gaps. And if they don't want to continue our services, that's one thing, but we want to make sure it's not because they couldn't connect with us.

Staff from other agencies also reported making changes to their treatment referral processes to incorporate patient voices and accommodate patient barriers such as language, housing status, perspectives on certain treatments, and physical and mental health status. A Woodrow participant shared that certain patient populations have special needs which they are striving to accommodate. For instance, "homeless people are interested in treatment beyond detox. So, [Woodrow Peer Supporters] do [their] best to line them up with a detox facility that has treatment included or somewhere that we know does a really good job of referral to treatment beyond detox."

Woodrow peer supporters also considered other challenges when making referrals, such as individuals' co-occurring physical and/or mental health conditions and whether there is a good fit with treatment agencies' admission requirements and range of services. Other barriers Woodrow peer supporters reported encountering related to language proficiency. They shared, "if somebody is Spanish-speaking only, that can also be a challenge or an additional barrier" to a successful referral to treatment.

SVCMC SBIRT participants also emphasized taking a deeper look at possible patient characteristics to identify potential barriers to successful referrals to treatment. One SVCMC SBIRT participant shared the importance of considering access to transportation:

Sometimes if someone went to an outpatient appointment, they just generally have more access to transportation and are kind of better at going to appointments. Whereas if they're just in the hospital, they might not have transportation, and they might not be willing to go to outpatient appointments. So, I think there's definitely a bit of a difference there.

The Centers SEP participant also shared that clients' treatment histories can be a significant barrier when making referrals to treatment. The participant elaborated that they often hear clients express interest in undergoing treatment; however, a barrier they often encounter is the "history of what happens when they do go [to treatment]." This is especially true for clients who have a negative perspective and/or had a poor experience with Medically Assisted Treatment (MAT). According to the participant, SEP clients often express concerns about additional supports available during MAT:

Folks anecdotally are talking about when they start Suboxone and just how hard that withdrawal is. So that is one. They're saying anecdotally that the withdrawal from Suboxone was far worse than the substances they were using. [A client] was telling me about how he got connected to a methadone clinic and the incremental increase of methadone he was feeling was not enough.

Finally, an important factor in referral success is the timely initiation of the referral process so that clients can begin treatment immediately. The Centers SEP participant shared, "I think same-day start. I think folks are wanting same-day start or wanting to come in and be able to connect [to treatment services] right away." To complicate things further, "the time of the day the person comes in at [matters]. So, during the day, there are more [treatment] options than overnight or late evening." Unfortunately, as the participant noted, some treatment facilities do not accept referrals during certain hours of the day.

Identifying new education needs. While several of the CCOD2A participating agencies have made tremendous strides in providing evidence-based prevention education and training to various Cuyahoga County stakeholders, this qualitative data also revealed that some education gaps persist and new ones have emerged. To address these needs, several of the CCOD2A agencies made changes to their education and training efforts.

A CHA participant explained that CHA launched a new, innovative prescribers education tool powered by QuizTime in May 2022. This participant said, "There really wasn't an appetite for that kind of traditional module-based learning ... [and] we're really having a hard time getting traction on that," thus the introduction of QuizTime. CHA's QuizTime model offers various free courses on topics related to opioid overdose prevention. The CHA participant recognized that the crucial challenge "isn't the development of the education. It's getting people to interact with the education that seems to be the bigger challenge." Given this situation, QuizTime was described by the participant as better engaging providers by delivering daily questions to subscribers' phones or emails that can be completed in just a few minutes.

The CHA participant also recognized that providers need education beyond mono-substance dependency. The CHA participant shared, "Polysubstance abuse, of course, is a huge piece of the lessons learned this year. A lot of clinicians don't necessarily just want education related to opioids. They want education related to polysubstance abuse." The CHA participant also shared that clinicians' stigma training and education should extend beyond "this is stigma, and this is what it means" but encompass training to "help clinicians get past their biases associated with managing patients who have substance use disorder."

A CCMEO participant also shared the need to provide additional training and education opportunities to help educate first-responders. The participant shared that there is

a lot of misinformation about touching fentanyl and possibly overdosing. I feel like we need to revisit that idea again and talk about like, 'You can't overdose if you touch fentanyl. Maybe you touch it and then pick your nose. But you're not going to dermally absorb fentanyl. It's mainly through ingestion or injection.' And I just worry because I think if people get scared to touch fentanyl, then they may be scared to administer Naloxone to someone who's overdosing.

An ADAMHS Board participant shared that education and training efforts should extend beyond law enforcement. According to the participant, the ADAMHS Board Education and Training Department provides a variety of free training and education opportunities to law enforcement across Cuyahoga County. However, the ADAMHS Board participant shared that

the education needs to be more broadly based in the community. What I'm saying is that they [police] are just one voice in the community. Everybody says they're the 'first responders.' First of all, they're not always the first responders. Visiting nurses and community health workers [can be first responders]. There's this fixation around that they're the [only] ones that did this

Data sharing success and improvement in data collections efforts. Throughout the last three years, many CCOD2A Initiative participating agencies have continued to collect and disseminate opioid-related data. During this year, several participating agencies reported gaining access to new data, improving data collection, and revising data coding to improve understanding of the opioid crisis and better inform future CCOD2A activities.

For example, The Centers SEP participant highlighted that the SEP offers for free syringes, fentanyl testing strips, rapid HIV screening, Hepatitis C screening, and Naloxone/Narcan kits and training. The SEP participant shared that they have been collecting data on the number of SEP clients who report an "overdose in the past six months and how many are actually making it to the emergency room because a lot of them are not going to the emergency room or were able to get Narcaned" at the overdose site. The participant shared that The Center SEP plans to utilize this data to contribute to the understanding of nonfatal overdoses in Cuyahoga County.

In Year Three, CDP hired an Intelligence Analyst housed in the Northeast Ohio Regional Fusion Center. The analyst shared that with the help of various stakeholders, such as some at CCBH, the analyst gained access to unutilized real-time overdose incident data, gathered the new data, and disseminated it. In addition, the analyst has been utilizing near-real-time and batch data, such as CDP reports, and real-time data, such as CAD system data (dispatcher system), to develop geospatial maps overlaying different types of data, including those for calls for service, nonfatal and fatal overdose incidents, and others to provide a more accurate profile of overdose incidents in Cuyahoga County. The analyst also suggested refining the data reporting through the dispatch system by including a "checkbox that says, 'drug involvement, yes or no,' and then maybe [the analyst] could filter through those."

Similarly, a CCMEO participant also made suggestions to improve the coding of drug-related overdose fatality data. Currently, the CCMEO codes fentanyl, cocaine, and methamphetamine as causes of death; the CCMEO participant suggests that "gabapentin, and some combinations like cocaine and fentanyl or methamphetamine and fentanyl" might be coded. The participant explained that refining drug-related overdose fatality data coding will improve our understanding of fatal overdose incidents in relation to toxicology and our understanding of polysubstance use.

Collaboration between local and state agencies and partners. Several CCOD2A agency participants shared successes in collaborating with other agencies and community stakeholders. The Overdose Fatality Review (OFR) is one such success. The OFR is coordinated between the CCMEO and CCBH, with twelve different agencies comprising the Cuyahoga County OFR (CCOFR), including law enforcement, local hospitals, mental health agencies, and public health. According to a CCMEO participant, over the last three years, the OFR "has solidified who's at our meeting, the types of data we look at, and I think we've also solidified some of how we organize our data. So, I think OFR has definitely matured a lot." The CCMEO participant also shared that the OFR meetings have established

a good rhythm with the Next of Kin (NOK) interviews [...] from the ADAMHS Board. We've been regularly getting next of kin interviewed for the OFR cases that we review and that has been helpful for us. And in terms of surveillance, we have improved the way that we share data with our OD2A surveillance team. We're sharing coded versions of our cause-of-death drugs, so that can help to improve the [CCBH] Dashboard and make sure our numbers align with the CCBH dashboard. And we're all on the same page.

According to the CCMEO staff member, OFR data sharing also improved in Year Three. The CCMEO participant described that the CCOFR has established a new database to help share, organize, and analyze their data

We've now added an OFR database that we use to hold all of our data, we're sort of going back and adding that detail, but we're hoping that will help to organize and analyze all of our data. And in terms of surveillance, we have improved the way that we share data with our OD2A surveillance team.

In Year Two, an OUD Specialist at the ADAMHS Board began conducting interviews with the decedent's next-of-kin (NOK). NOK interviews are a tool OFRs utilize to improve their understanding of the life experiences of a decedent. NOK interviews are supplemental to other data presented by OFR members and inform prevention and intervention strategies. During OFR meetings, the ADAMHS Board OUD Specialist shares these common patterns and risk factors with the CCOD2A surveillance team and other OFR committee members. Moreover, during Year Three, the OUD Specialist shared several collaborations with local and state agencies who were interested in incorporating NOK interviews in their OFRs

So, I've met with several counties around Ohio that are looking to start doing next-of-kin interviews to talk about the process and who should be hired and that kind of stuff. And then just for the start in your OFR, you know, if they need any sort of guidance, I'm available to them at any point. So, I've done that for, I think that Union, Lucas, Montgomery, and Hamilton so I think at least four.

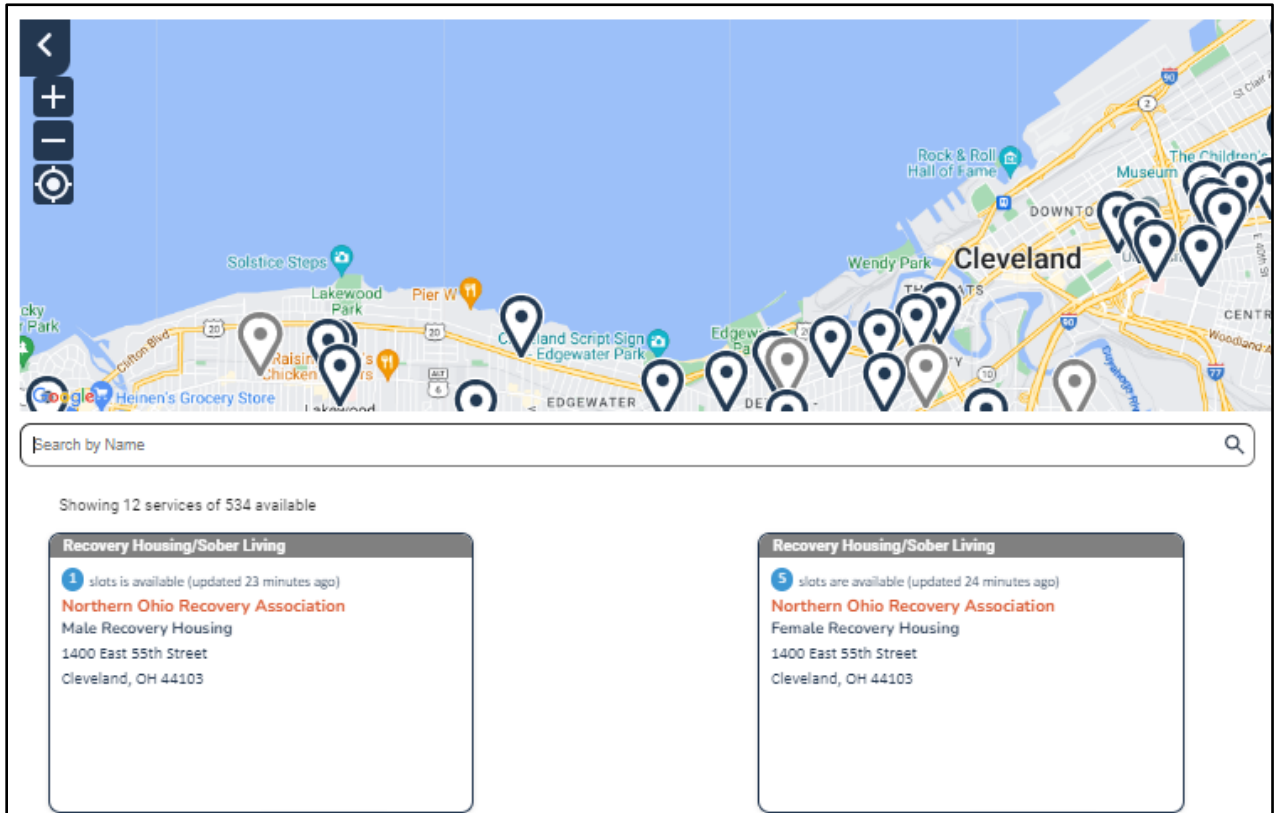
Conclusion

The Cuyahoga County CCOD2A Initiative has made notable progress towards meeting its objectives within each strategy during Year Three. Evaluation efforts in the past year have helped to better shape the understanding of barriers and strengths that exist in the community while also simultaneously strengthening partnerships among agencies. Drug related deaths remain high throughout Cuyahoga County however, through the CCOD2A Initiative there has been an increase in education, awareness, and distribution of naloxone. Additionally, the number of evidence-based programs available county-wide has increased. This evaluation report accents the hard work partner agencies have put forth to address the opioid epidemic in Cuyahoga County. The breath of the problem is better understood due to the efforts of those involved in this grant. Despite the notable progress, much work remains given the complexities of addiction and the depth of the opioid epidemic in this region.

Appendixes























1. Interactive Map
2. Crisis Hotlines

Appendix 1: Interactive Map from drughelp.care (Strategy Four)



Appendix 2: Crisis Hotlines from drughelp.care (Strategy Four)

Crisis Hotlines

<p style="text-align: center;">Suicide & Self-Harm</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Support and resources for those considering harming themselves</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Substance Use</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Drug, alcohol and substance abuse</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Domestic & Sexual Violence</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Physical and sexual abuse in relationships and marriages</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="color: #c00000;">Frequently Used</p> <p>National Treatment Referral Hotline</p> <ul style="list-style-type: none">  1-800-662-4357  1-800-662-4357  24/7 <p>National Suicide Prevention Hotline</p> <ul style="list-style-type: none">  988  1-888-628-9454  24/7 <p>ANAD Helpline</p> <ul style="list-style-type: none">  888-375-7767  Limited hours <p>National Drug Helpline</p> <ul style="list-style-type: none">  1-844-289-0879  24/7 <p>2-1-1 Summit County</p> <ul style="list-style-type: none">  2-1-1  330-376-6660  24/7
<p style="text-align: center;">Mental Health</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Support and resources for those struggling with mental health</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Sexual Health & Pregnancy</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Sexual Wellness, STI/STD, and pregnancy information</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Homelessness</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Support for those without a safe place to live</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	
<p style="text-align: center;">Parenting & Family</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Child runaways, parental stress, missing children and child behavior</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Trauma & Grief</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Support for those dealing with loss and trauma</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	<p style="text-align: center;">Youth Focus</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-size: small;">Support for struggling youth and runaway children</p> <p style="text-align: center; background-color: #007bff; color: white; padding: 5px; margin-top: 10px;">FIND HELP</p>	

References

- Babor TF, Del Boca F, Bray JW. Screening, Brief Intervention and Referral to Treatment: implications of SAMHSA's SBIRT initiative for substance abuse policy and practice. *Addiction*. 2017 Feb;112 Suppl 2:110-117. doi: 10.1111/add.13675. PMID: 28074569.
- Bardwell, G., Kerr, T., Boyd, J., & McNeil, R. (2018). Characterizing peer roles in an overdose crisis: Preferences for peer workers in overdose response programs in emergency shelters. *Drug and alcohol dependence*, 190, 6-8.
- Bassuk, E., Hanson, J., Greene, R.N., Richard, M., Laudet, A., (2016). Peer-Delivered Recovery Support Services for Addictions in the United States: A Systematic Review. *Journal of Substance Abuse Treatment*, 63, 1-9. <https://doi.org/10.1016/j.jsat.2016.01.003>
- Brandeis University Prescription Drug Monitoring Program (PDMP) Training and Technical Assistance Center (TTAC)
http://www.pdmpassist.org/pdf/Mandatory_Query_Conditions_20171114.pdf. access 12/26/2022
- Byrne, J. M. (2020). The effectiveness of prison programming: A review of the research literature examining the impact of federal, state, and local inmate programming on post-release recidivism. *Fed. Probation*, 84, 3.
- Christianson, H., Driscoll, E., & Hull, A. (2018). Alaska nurse practitioners' barriers to use of prescription drug monitoring programs. *Journal of the American Association of Nurse Practitioners*, 30(1), 35-42.
- Cooper, L., Donald, B., Osborne, K., Roffman, M., Chiu, S., Ortu Kowalski, M., & Zaubler, T. The effect of inpatient addiction screening and intervention on readmissions. *Applied Nursing Research*. 2022 Jun; 65. <https://doi.org/10.1016/j.apnr.2022.151573>.
- Dieujuste, N., Johnson-Koenke, R., Christopher, M., Gunzburger, E. C., Emmendorfer, T., Kessler, C., ... & Sasson, C. (2020). Feasibility Study of a Quasi-experimental Regional Opioid Safety Prescribing Program in Veterans Health Administration Emergency Departments. *Academic Emergency Medicine*, 27(8), 734-741.
- Eddie, D., Hoffman, L., Vilsaint, C., Abry, A., Bergman, B., Hoepfner, B., Weinstein, C., & Kelly, J. F. (2019). Lived Experience in New Models of Care for Substance Use Disorder: A Systematic Review of Peer Recovery Support Services and Recovery Coaching. *Frontiers in Psychology*, 10, 1052. <https://doi.org/10.3389/fpsyg.2019.01052>
- Elder, J. W., DePalma, G., & Pines, J. M. (2018). Optimal implementation of prescription drug monitoring programs in the emergency department. *Western Journal of Emergency Medicine*, 19(2), 387.

Gordon, M. S., Kinlock, T. W., Schwartz, R. P., & O'Grady, K. E. (2008). A randomized clinical trial of methadone maintenance for prisoners: findings at 6 months post-release. *Addiction, 103*(8), 1333-1342.

Holmgren, A. J., & Apathy, N. C. (2020). Evaluation of prescription drug monitoring program integration with hospital electronic health records by US county-level opioid prescribing rates. *JAMA network open, 3*(6), e209085-e209085.

Kulbokas, V., Hanson, K. A., Smart, M. H., Mandava, M. R., Lee, T. A., & Pickard, A. S. (2021). Academic detailing interventions for opioid-related outcomes: a scoping review. *Drugs in Context, 10*.

Kiang, M. V., Basu, S., Chen, J., & Alexander, M. J. (2019). Assessment of changes in the geographical distribution of opioid-related mortality across the United States by opioid type, 1999-2016. *JAMA network open, 2*(2), e190040-e190040.

Larney, S., Gisev, N., Farrell, M., Dobbins, T., Burns, L., Gibson, A., ... & Degenhardt, L. (2014). Opioid substitution therapy as a strategy to reduce deaths in prison: retrospective cohort study. *BMJ open, 4*(4), e004666.

McGuire AB, Powell KG, Treitler PC, Wagner KD, Smith KP, Cooperman N, Robinson L, Carter J, Ray B, Watson DP. Emergency department-based peer support for opioid use disorder: Emergent functions and forms. *J Subst Abuse Treat.* 2020 Jan;108:82-87. doi: 10.1016/j.jsat.2019.06.013. Epub 2019 Jun 19. PMID: 31280928; PMCID: PMC7393771.

Moberg DP, Paltzer J. Clinical Recognition of Substance Use Disorders in Medicaid Primary Care Associated With Universal Screening, Brief Intervention and Referral to Treatment (SBIRT). *J Stud Alcohol Drugs.* 2021 Nov;82(6):700-709. doi: 10.15288/jsad.2021.82.700. PMID: 34762029; PMCID: PMC8819617.

Moore, K. E., Roberts, W., Reid, H. H., Smith, K. M., Oberleitner, L. M., & McKee, S. A. (2019). Effectiveness of medication assisted treatment for opioid use in prison and jail settings: A meta-analysis and systematic review. *Journal of substance abuse treatment, 99*, 32-43.

Mumola, C. J., & Karberg, J. C. (2007). *Drug use and dependence, state and federal prisoners, 2004*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Ohio Automated Rx Reporting System (OARRS) <https://www.ohiopmp.gov/About> . access 12/27/2022

Olfson, M., Wall, M., Wang, S., Crystal, S., & Blanco, C. (2018). Risks of fatal opioid overdose during the first year following nonfatal overdose. *Drug and alcohol dependence, 190*, 112-119.

Powell, K. G., Treitler, P., Peterson, N. A., Borys, S., & Hallcom, D. (2019). Promoting opioid overdose prevention and recovery: An exploratory study of an innovative intervention model to address opioid abuse. *The International Journal on Drug Policy*, 64, 21–29. <https://doi.org/10.1016/j.drugpo.2018.12.004>

Radomski, T. R., Bixler, F. R., Zickmund, S. L., Roman, K. M., Thorpe, C. T., Hale, J. A., ... & Gellad, W. F. (2018). Physicians' perspectives regarding prescription drug monitoring program use within the Department of Veterans Affairs: A multi-state qualitative study. *Journal of general internal medicine*, 33(8), 1253-1259.

Reif, S., Braude, L., Lyman, D.R., Dougherty, R., Dainels, A., Ghose, S., Salim, O., Delphin-Rittmon, M., (2014). Peer Recovery Support for Individuals With Substance Use Disorders: Assessing the Evidence. *Psychiatric Services*, 65(7), 853-861). <https://ps.psychiatryonline.org/doi/pdf/10.1176/appi.ps.201400047>

Saffore, C. D., Pickard, A. S., Crawford, S. Y., Fischer, M. A., Sharp, L. K., & Lee, T. A. (2020). Practice change intentions after academic detailing align with subsequent opioid prescribing. *Journal of the American Pharmacists Association*, 60(6), 1001-1008.

Salzer, M. S., Darr, N., Calhoun, G., Boyer, W., Loss, R. E., Goessel, J., Schwenk, E., & Brusilovskiy, E. (2013). Benefits of working as a certified peer specialist: Results from a statewide survey. *Psychiatric Rehabilitation Journal*, 36(3), p. 219–221. <https://doi.org/10.1037/prj0000016>

Shev, A. B., Wintemute, G. J., Cerdá, M., Crawford, A., Stewart, S. L., & Henry, S. G. (2018). Prescription drug monitoring program: Registration and use by prescribers and pharmacists before and after legal mandatory registration, California, 2010–2017. *American journal of public health*, 108(12), 1669-1674.

Strickler, G. K., Zhang, K., Halpin, J. F., Bohnert, A. S., Baldwin, G. T., & Kreiner, P. W. (2019). Effects of mandatory prescription drug monitoring program (PDMP) use laws on prescriber registration and use and on risky prescribing. *Drug and alcohol dependence*, 199, 1-9.

Vivolo-Kantor, A. M., Seth, P., Gladden, R. M., Mattson, C. L., Baldwin, G. T., Kite-Powell, A., & Coletta, M. A. (2018). Vital signs: trends in emergency department visits for suspected opioid overdoses—United States, July 2016–September 2017. *Morbidity and Mortality Weekly Report*, 67(9), 279.

Wagner KD, Mittal ML, Harding RW, Smith KP, Dawkins AD, Wei X, Woodard S, Roget NA, Oman RF. Findings From Focus Group Research to Investigate What People Who Use Opioids Want From Peer-Based Postoverdose Interventions in the Emergency Department. *Ann Emerg Med*. 2020 Dec;76(6):717-727. doi: 10.1016/j.annemergmed.2020.06.003. Epub 2020 Aug 1. PMID: 32747080

Waye, K. M., Goyer, J., Dettor, D., Mahoney, L., Samuels, E. A., Yedinak, J. L., & Marshall, B. D. L. (2019). Implementing peer recovery services for overdose prevention in Rhode Island: An examination of two outreach-based approaches. *Addictive Behaviors*, 89, 85–91. <https://doi.org/10.1016/j.addbeh.2018.09.027>

Welch AE, Jeffers A, Allen B, Paone D, Kunins HV. Relay: A Peer-Delivered Emergency Department-Based Response to Nonfatal Opioid Overdose. *Am J Public Health*. 2019 Oct;109(10):1392-1395. doi: 10.2105/AJPH.2019.305202. Epub 2019 Aug 15. PMID: 31415200; PMCID: PMC6727316.