

Naloxone Plus, Plus Some: Examining Ohio's Quick Response Teams Through the Lens of Deflection

Kelly Firesheets, PsyD; Sophia Juarez, MA; Albert Kopak, PhD; Jon Ross, PhD; Kimberly Sperber, PhD; Jessica Reichert, MS

ABSTRACT

There were nearly 50 000 opioid-related deaths in 2019 in the United States.* The dramatic frequency of opioid overdoses and fatalities has led to strained community resources, especially among hospitals and first responders (law enforcement, fire, and emergency medical services). In response to rising overdose rates, many first responders have implemented programs that align public health and public safety responses to overdoses. Often called "Quick Response Teams" (QRTs), these programs leverage a collaborative team to respond to those at risk of overdose, or who have survived an overdose. The initial QRT was implemented in Colerain Township, Ohio, in 2015.[†] Today, QRTs are a widely accepted "model" overdose response program.[‡] Despite the popularity of QRTs, research on the model is limited. In this article, the authors use existing qualitative and quantitative data from QRTs across the state of Ohio to examine QRTs. Using the lens of the Police, Treatment and Community Collaborative's 5 deflection pathways, the authors answer four key questions: (1) What is the scale of QRTs in Ohio, and how are QRTs in our sample structured? (2) Whom are the QRTs serving? (3) How many pathways of deflection are reflected in Ohio's QRTs? (4) What can these data teach us about the context of the QRT work and (more generally) collaborative overdose response? After examining the QRTs and their data, the authors provide suggestions to help researchers, practitioners, and funders better understand QRTs and similar public health/public safety partnerships.

KEY WORDS: deflection, overdose response, Quick Response Teams

The Naloxone Plus Pathway: Overdose Response as Deflection

Overdoses have killed more than 900 000 Americans since 1999,¹ with roughly two-thirds of these associ-

Author Affiliations: Police Treatment and Community Collaborative (PTACC) Research Committee, Pennsylvania (Drs Firesheets, Kopak, Ross, and Sperber and Ms Juarez); and Illinois Criminal Justice Information Authority (ICJIA), Center for Justice Research and Evaluation, Chicago, Illinois (Ms Reichert).

The authors give special thanks to their PTACC colleagues Jac Charlier and Dan Meloy, who provided context and content guidance for this article. The authors also acknowledge leadership in Ohio (including the Department of Public Safety, Ohio Mental Health and Addiction Services, and Recovery Ohio) for their financial and intellectual investments in Quick Response Teams and their willingness to encourage data collection and analysis.

Funding for Ohio's Quick Response Team data collection was provided collaboratively by Interact for Health, Ohio Mental Health and Addiction Services (FY2019 MAT-PDOA), and the Ohio Office of Criminal Justice Services' FY2020 COSSAP Award (BJA-2020-17023).

Kelly Firesheets is employed by and part owner of Cordata Healthcare Innovations, the technology vendor for Ohio's QRTs.

Written work prepared by employees of the Federal Government as part of their official duties is, under the U.S. Copyright Act, a "work of the United States Government" for which copyright protection under Title 17 of the United States Code is not available. As such, copyright does not extend to the contributions of employees of the Federal Government.

Correspondence: Kelly Firesheets, PsyD, Mission, Impact and Innovation, Cordata Healthcare Innovations, LLC, 8150 Corporate Park Dr, Ste 210, Cincinnati, OH 45242 (kelly.firesheets@cordatahealth.com).

DOI: 10.1097/PHH.0000000000001570

ated with opioids² (>100 000 individuals died from a drug overdose from April 2020 to April 2021 alone).³ The opioid epidemic has worsened in recent years, as synthetic opioids such as fentanyl were introduced to the drug supply. In response to rising overdose rates, many first responders have implemented programs that combine public health and public safety in an attempt to save lives, facilitate access to treatment and supportive services, and help individuals avoid engagement with the criminal justice system.

Deflection is a practice "by which law enforcement or other first responders (ie, fire and emergency medical services) connect individuals to community-based treatment and/or services when arrest would not have been necessary or permitted, or in lieu of

*US Centers for Disease Control: <https://www.cdc.gov/drugoverdose/deaths/index.html>.

†Quick Response Teams (QRTs) [Transcript]. Podcast Series. Bureau of Justice Assistance (BJA) Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP). October 22, 2018.

‡Legislative Analysis and Public Policy Association (LAPPA), Police, Treatment, and Community Collaborative (PTACC). Model Law Enforcement and Other First Responder Deflection Act. <http://legislativeanalysis.org/wp-content/uploads/2022/03/Model-Law-Enforcement-and-Other-First-Responder-Deflection-Act-FINAL.pdf>. Published September 2021. Accessed March 11, 2022.

taking no action when issues of addiction, mental health, and/or other needs are present.”⁴ Deflection initiatives often focus on individuals with substance use disorders (SUD) and aim to “deflect” those individuals away from jails or emergency rooms (and the justice system altogether) by connecting them to more appropriate health care or community-based services. Deflection differs from diversion in that it is based in the community, while diversion “diverts” individuals to treatment/services from the justice system to the community.

There are 5 approaches to deflection, also known as “pathways.” Each pathway provides a different method to connect individuals to treatment. These pathways include self-referral, active outreach, naloxone plus, officer/first responder prevention, and officer intervention.^{5,6} The naloxone plus pathway is unique. It is the only deflection pathway that focuses on a specific population—individuals who received naloxone following an opioid overdose. In the naloxone plus pathway, law enforcement and first responders respond to an opioid overdose by administering naloxone, then expediting (ideally within 24-48 hours) a follow-up visit where they offer access to supportive services. Naloxone plus programs are person-centered, so they offer support based on individual needs and readiness for change. Naloxone plus programs may offer treatment, medications for opioid use disorder, harm reduction activities, recovery support, housing, or other components.⁷ The enhanced overdose response in naloxone plus—the “plus”—typically includes what is known as “a warm handoff” from the overdose response team to harm reduction, treatment, and other service providers.

Ohio’s naloxone plus programs

Ohio has been at the center of the opioid epidemic since 2007, when drug overdoses became the leading cause of accidental death in the state.⁸ That number peaked in 2017 when more than 5000 individuals died from an unintentional overdose.⁹ It then spiked again in 2020, when more than 5000 Ohioans died from overdoses. More than 80% of these deaths were attributed to fentanyl and fentanyl derivatives, often in combination with other drugs.¹⁰ Since 2014, multiple state departments have provided funding to start and support naloxone plus programs across the state.⁵ By the end of 2021, there were naloxone plus programs in most of Ohio’s 88 counties. Ohio’s naloxone

plus programs vary in structure and name, within the state. In Ohio, most people refer to naloxone plus programs as “Quick Response Teams,” or “QRTs,” a nod to the Colerain Township program, which has been widely replicated within Ohio and across the Midwest. For the purposes of this article, the authors will use “Quick Response Team” and “QRT” to describe Ohio’s naloxone plus programs.

The QRT model

Colerain Township is located in Hamilton County, Ohio, just north of Cincinnati. Colerain implemented the first QRT in 2015. The QRT is a multidisciplinary outreach team that includes a police officer, a firefighter/paramedic, and a peer recovery coach or treatment professional. The team approach allows the QRT to respond to overdoses and to provide support to help people with SUD access and connect to recovery resources.¹¹ Today, the Colerain Township QRT serves as one of the US Department of Justice’s BJA peer mentor sites; according to its 2019 application to that program, the Colerain QRT conducted more than 400 overdose follow-ups between 2015 and 2019. Of these individuals, nearly 80% completed the triage/assessment process and engaged in treatment.¹² The Colerain QRT (along with its collaborative partner, the Hamilton County QRT) is often cited as a model naloxone plus program.¹³ In fact, in March 2022, The Office of National Drug Control Policy (ONDCP) specifically highlighted the Colerain QRT as an example as it announced the Model Law Enforcement and Other First Responder Deflection Act. For more specific information about the QRT model, the authors refer readers to Manchak, Gosney, Haberman & Firesheets’ work on the Hamilton County QRT, which is also included in this supplement.¹⁴

Using data to understand Ohio QRTs

Ohio has strategically invested in technology, data collection, evaluation, and technical assistance to support its QRTs, understand their impact, and drive communities toward best practice. In 2018, Ohio contracted with Cordata, an Ohio-based company, to provide an online workflow platform to QRTs. The Cordata platform allows QRTs to customize their workflow while also providing a core set of process indicators that allow the state to understand the growth and scale of QRTs across the state. The platform is Health Insurance Portability and Accountability Act (HIPAA)-compliant and can accommodate information subject to 42 CFR part 2 so that QRTs can collaborate and coordinate care while adequately

⁵These include the Ohio Attorney General’s Office, Ohio Department of Mental Health and Addiction Services, the Ohio Department of Health, and the Ohio Department of Public Safety.

protecting client information. Since 2018, Ohio has expanded the use of the platform, which is now available to all QRTs in the state; as such, Cordata serves as the “system of record” for Ohio’s QRTs. The QRT members document individual client demographics, referrals, and interactions as part of their day-to-day work, providing a framework to help QRTs monitor individuals’ progress. Each client record is associated with a specific QRT so that the teams can combine records and run reports to understand overall program performance. Data from multiple QRTs can be combined to understand the effectiveness of QRTs across the state or to support multisite evaluation.¹⁵

Ohio’s QRTs offer a unique opportunity to begin to examine the implementation of naloxone plus programs at a state or multisite level. The goal of the current article is to examine Ohio’s QRTs through the lens of deflection, using existing qualitative and quantitative data from Ohio to begin to more clearly define and operationalize QRT: (1) What is the scale of QRTs in Ohio, and how are QRTs in our sample structured? (2) Whom are the QRTs serving? (3) How many pathways of deflection are reflected in Ohio’s QRTs? (4) What can these data teach us about the context of the QRT work and (more generally) collaborative overdose response?

Methodology

Quantitative data

To facilitate the analysis for this article, the authors created 2 deidentified data sets from Ohio’s Cordata system. The original data set included information from QRTs in 25 Ohio counties, entered by QRT members from July 2017 to December 2021. The deidentified data sets include client-level data related to interactions with the QRTs (“Interactions”). This set includes a team identifier, client status, date, and referral source for every interaction the QRT had with a participant. The second data set (“Demographics”) includes characteristics of the individuals who were served by the QRT, including age, race, ethnicity, sex, case status, and referral data. Clients’ data in both sets are coded with a unique master identifier, allowing researchers to match cases across teams and to identify repeat episodes of care. Cordata uses identification codes to maintain confidentiality of program participants; in this sample, QRTs with 10 or fewer clients were eliminated from the data to ensure anonymity, yielding a final sample size of 22 QRTs. Data were analyzed with STATA 16.1 using *t* tests to assess differences in the number of QRT contacts with individuals who experienced overdose compared with

those who did not have similar overdose experiences. Similar analyses were conducted to assess differences in follow-up periods between individuals who experienced overdose compared with those who did not.

The authors note that there are some limitations to these data. Although the Ohio QRT data are comprehensive and include tens of thousands of interactions, QRT participation in the Cordata system is voluntary; therefore, Cordata does not include data from all Ohio QRTs. To illustrate, in January 2022, staff from Recovery Ohio (an initiative of the Ohio Governor’s Office) sent an email indicating that it estimated that QRTs were operational in at least 80 of Ohio’s 88 counties. As of January 2022, Cordata had contacted QRTs in 79 counties (some counties have more than 1 team). At that time, 35 QRTs from 25 counties were actively entering data into the system, and 30 QRTs were in the orienting/onboarding phase; the remaining counties in the state declined to participate. Although the data set does not contain all Ohio QRTs, the data represent teams from urban communities (N = 7), rural areas (N = 7), and suburban/partially rural communities (N = 8), as designated by the Ohio Department of Health. The data include at least 1 QRT from each of Ohio’s 8 hospital regions, although Southwest Ohio (region 6) is disproportionately represented. This is likely because QRT and Cordata both originated in Hamilton County located in region 6. A second limitation is that these data were created from an active QRT data system—in which team members directly document their activities and interactions in the field. Although they provide valuable insight into the operations of QRTs, the Ohio QRT data come with many of the limitations we see in other working data systems used for managing field operations rather than research and evaluation, such as incomplete data entry and typos.

Qualitative data

In 2020, the Ohio Office of Criminal Justice Services granted a Justice Assistance Grant (JAG) subaward to the Center for Health & Human Services Research (CHHSR) at Talbert House to support a mixed-methods study of the state’s QRTs. The goal of the study was to improve the state’s understanding of (1) team heterogeneity in terms of composition and operations; (2) community contextual factors; (3) perceived barriers/facilitators of QRT success; and (4) the scope of QRTs and how they may have changed over time. To identify a pool of potential respondents for the CHHSR study, the CHHSR team constructed a master list of contacts across the state drawing

from publicly available lists of known QRT members, county Sheriff's Departments, county Public Health Departments, and county Alcohol, Drug Abuse, and Mental Health Boards. Outreach was conducted via email and phone to all individuals on the list. Fifty individuals, representing 35 counties, agreed to participate in the study. Study participants were asked to complete an online survey and a semistructured telephone interview. The interview contained questions related to staffing and operations, funding, stakeholder support, pathways to QRT access, community resources, barriers to team success, facilitators of team success, and client experiences. Audiotaped interviews were conducted from December 20, 2020, through April 6, 2021. Upon completion, interview audio files were uploaded into NVivo Transcription and transcribed verbatim. Research staff then manually edited the transcripts for accuracy before uploading the final transcripts into NVivo 12 for coding and analysis. Researchers used a general inductive approach to develop codes from the raw text. Similar to the Cordata data sets, the primary limitation of the CHHSR data is that the study respondents represent less than half of all known QRTs in Ohio.

Results

Question 1: How are QRTs structured?

The CHHSR survey data revealed some variations in the structure of QRTs across the state. Most teams include law enforcement (only 4% of teams reported that they have no law enforcement engagement); however, teams varied in their composition. Slightly more than a quarter of teams (27%) reported having all the recommended QRT partners: law enforcement, fire/emergency medical services, and treatment partners. A quarter of QRTs (25%) reported that their team consists of a partnership between law enforcement and treatment, and 10% reported that their QRT consists of law enforcement only. Only a small number of teams reported that they are currently operating full time; most of the QRTs reported that the team conducts outreach visits on a limited basis (ie, 1 or 2 days a week).

Question 2: Whom do QRTs serve?

We analyzed data on 11 856 clients who interacted with 22 Ohio QRTs during the study period. The majority (57.9%) of clients were contacted more than once. Client demographics are shown in Table 1 and most of these factors closely resemble recent national overdose death statistics.¹⁶ Almost two-thirds of the participants were males (62.1%, N = 7359) and most were between the ages of 25 and 44 years (57.0%,

N = 6758). Just less than half of the QRT participants were White (49.8%, N = 5903); however, a significant percentage of client records were either missing data on race/ethnicity or coded as "unknown" (40.8%, N = 4831) (Table 2).

Question 3: How many pathways of deflection are reflected in Ohio's QRTs?

Traditionally, Ohio's QRTs have described their activities as "overdose response," and most QRTs started as single-pathway naloxone plus programs. Qualitative interviews revealed that many QRTs no longer limit their services to only those people who are addicted to opioids or who have experienced an opioid overdose, suggesting that they often include multiple pathways of deflection. In interviews, many of Ohio's QRTs reported that they have added outreach activities so that their services now target individuals who use drugs other than opioids, most notably methamphetamines, and that allows them to reach people prior to overdose. Many QRTs also reported that they have added a self-referral pathway, which provides a mechanism to expedite access to services when people are actively seeking help.

To explore this, the authors looked at patterns in engagement with the QRT by referral sources, as well as reason for referral. Patterns emerged regarding the proportion of contacts initiated by an overdose event versus those initiated through self-referral or outreach. These results are shown in Table 3. Slightly fewer than half (49.2%) of all clients were initially contacted following an overdose incident, while more than three-quarters (77.1%) of initial contacts were referred by criminal justice personnel (ie, law enforcement or 911) following an overdose. Self-referrals represent the smallest proportion of initial contacts related to overdose incidents (11.7%).

The analysis of repeat contacts also revealed that the proportions of contacts due to overdose fluctuated as the number of contacts increased. For instance, the proportion of individuals who were referred following an overdose event rose as the number of repeat contacts also increased. A similar upward pattern was observed among all referral sources, including self-referrals. However, it is the most striking among criminal justice referrals. Among individuals referred to QRTs by the criminal justice system, 77.1% of initial contacts were overdose response; by the fifth contact, that proportion rose to 86.1%.

Table 4 expands on this, revealing that clients who were contacted by a QRT following an overdose had more contacts with the QRTs on average, compared with those whose first contact was not due to an overdose. The one exception to this pattern was observed

TABLE 1
Five Deflection Pathways^a

Pathway	Definition	Collaborators Include	Program Examples
Self-referral	An individual voluntarily initiates contact with a first responder agency for a referral to treatment and services. If contact is initiated with a law enforcement agency, the individual makes contact without fear of arrest.	<ul style="list-style-type: none"> • Law enforcement • Fire/emergency medical services • Peer recovery support • Social service agencies 	<ul style="list-style-type: none"> • Angel • A Way Out • Safe Stations • Safe Passage
Active outreach	A first responder intentionally identifies or seeks out an individual in need of substance use or mental health treatment to refer them or engage them in treatment and services; outreach is often done by a team that includes a behavioral health professional and/or a peer with lived experience.	<ul style="list-style-type: none"> • Law enforcement • Fire/emergency medical services • Peer recovery Support • Faith-based leaders 	<ul style="list-style-type: none"> • Arlington (Massachusetts) Outreach Initiative • Homeless Outreach Team (HOT)
Naloxone plus	A first responder and program partner (often a behavioral health professional or peer with lived experience) conduct outreach specifically to individuals who recently experienced an opioid overdose to engage them in and provide linkage to treatment and services.	<ul style="list-style-type: none"> • Law enforcement • Fire/emergency medical services • Social worker • Peer recovery specialist • Faith-based leader 	<ul style="list-style-type: none"> • Quick Response Team (QRT) • Overdose Response Team (ORT) • Drug Action Response Team (DART) • Substance use disorder (SUD) cosponder models
First responder/officer referral	As a preventative approach, during routine activities, a first responder engages individuals and provides a referral to treatment, services, or to a case manager. (Note: If Law Enforcement is the first responder, no charges are filed or arrests made.)	<ul style="list-style-type: none"> • Law enforcement • Fire/emergency medical services • Social worker • Peer recovery specialist 	<ul style="list-style-type: none"> • Stop, Triage, Engage, Educate and Rehabilitate (STEER) • Law Enforcement Assisted Diversion (LEAD) • Co-Responder Team (CRT)
Officer intervention (law enforcement required, also can be done in a cosponder approach)	During routine activities such as patrol or response to a service call during which charges otherwise would be filed, law enforcement provides a referral to treatment, services, and case management, or issues a noncriminal citation to report to a program. Charges are held in abeyance until treatment and/or a social service plan is successfully completed.	<ul style="list-style-type: none"> • Law enforcement • Embedded social workers/case management 	<ul style="list-style-type: none"> • Civil Citation Network (CCN) • LEAD • Crisis Intervention Team (CIT) • Co-Responder Team (CRT)

^a Reproduced with permission from Charlier and Reichert.⁴

TABLE 2
Demographics of Participants in Ohio Quick Response Teams

	n	%
Total participants	11 856	100.0
Gender		
Female	4481	37.8
Male	7359	62.1
Other	16	0.1
Race		
White	5903	49.8
Black	1105	9.3
Asian	15	0.1
American Indian or Alaska Native	2	<0.1
Unknown	4831	40.8
Age, y		
0-17	101	0.9
18-20	96	0.8
21-24	471	4.0
25-44	6758	57.0
45-64	2967	25.0
>65	989	8.3
Unknown	474	4.0

among clients who were referred to QRTs from other QRTs. Among those individuals, those who had overdosed experienced fewer ($t_{545} = -3.29$; $P = .001$) repeat contacts compared with those who had not overdosed.

Question 4: What can these data teach us about the context of the QRT work and (more generally) collaborative overdose response?

In qualitative interviews, many QRTs reported that their response is not always “quick.” Many of the

QRTs interviewed noted a desire to respond to overdoses in a 72-hour window; however, few were able to accomplish this goal. There are a small number of QRTs in Ohio that have access to real-time overdose data; however, most experience lags in reporting that makes it difficult for them to respond quickly to overdoses. Limited staff capacity (ie, a part-time program) can also limit the ability to respond.

The authors examined the length of time between interactions for clients who were contacted on several occasions and these results are shown in Table 5. An average of 6 weeks ($M = 6.3$, $SD = 10.1$) lapsed between interactions for clients who were contacted for the first time in the absence of an overdose, while almost 8 weeks ($M = 7.8$, $SD = 11.8$) lapsed between interactions for clients who were contacted because of overdose, and this difference was significant ($t_{5890} = 5.18$; $P < .001$). There were significant differences in the amount of time between interactions by referral sources as well, with contacts due to overdose experiencing a longer amount of time between interactions. There was one exception to this trend; when QRTs received referrals from other QRTs following an overdose, there was a significantly shorter ($t_{311} = 2.64$; $P = .01$) amount of time between interactions relative to responses to referrals from other QRTs that were not precipitated by an overdose.

Discussion and Conclusion

These results include some unexpected findings that are worth consideration. The common perception of QRT programs is that they primarily function as naloxone plus programs. However, the results from this analysis indicate that about half of Ohio QRTs' interactions are in response to overdose incidents, while the other half represents other deflection pathways (active outreach or self-referrals). Traditionally, QRTs have been described as overdose response programs, but in practice, the model is more

TABLE 3
Proportion of Responses Due to Overdose by Referral Source

Referral Source	Initial Contact		Second Contact		Third Contact		Fourth Contact		Fifth Contact	
	n	%	n	%	n	%	n	%	n	%
Total	11 856	49.2	6903	54.3	4443	56.8	2784	57.4	1981	59.9
Criminal Justice system	2880	77.1	2162	77.1	1516	79.2	1063	83.6	832	86.1
Health provider	6306	47.5	3175	50.2	1900	52.3	1052	49.0	651	46.9
Self-referral	1343	11.7	882	15.2	601	19.9	433	21.7	326	26.3
First responder/social services	776	28.4	339	49.3	203	47.8	113	38.9	82	46.3
QRT	551	43.4	345	53.0	235	55.2	123	44.7	90	46.6

Abbreviation: QRT, Quick Response Team.

TABLE 4
Mean Number of Contacts by Referral Source and Overdose Status

Referral Source	n	Nonoverdose Related (M, SD)	Overdose Response (M, SD)	t	P
Criminal justice system	2834	3.0 (2.1)	3.7 (2.9)	5.89	<.001
Health provider	6283	2.2 (2.0)	2.3 (1.8)	1.92	.06
Self-referral	1321	3.0 (2.5)	5.3 (3.4)	9.93	<.001
First responder/social services	770	1.8 (1.8)	3.0 (2.5)	7.24	<.001
QRT	547	2.4 (2.1)	1.7 (1.0)	−3.29	.001
Total	11 755	2.4 (2.1)	3.0 (2.5)	12.86	<.001

Abbreviation: QRT, Quick Response Team.

comprehensive and often includes proactive or preventive outreach activities. This begs the question: Are QRTs overdose response programs? Although most would argue that adding “upstream” interventions to overdose is desirable and ultimately benefits public health, the field can benefit from more precision in defining these interventions so that we can more accurately measure their impact. The deflection pathways can provide a common language to help researchers and practitioners identify and articulate the specific interventions that QRTs offer. This is critical for the sustainability of QRTs and for the development of the field.

It was beyond the scope of this analysis to explore the impact of Ohio’s QRTs. More work is needed to document the existing variations in Ohio’s QRTs before attempting to operationalize impact or outcomes. Building on the field of implementation science, structured or developmental assessments may provide a glimpse into program operations and practices, and how they evolve over time. This is especially important in innovative or multidisciplinary programs such as QRT, where programs, the environment, and the goals are evolving and a matter

of perspective. For example, outcome measures focused on overdose reduction may be less relevant for a QRT that primarily serves people with methamphetamine use disorder. Similarly, outcome measures that prioritize connections to addiction treatment are not appropriate from a harm reduction or person-centered approach. Identifying the right outcomes for a QRT will require understanding of the program and its context. Comprehensive evaluation designs that incorporate contextual measures will be better able to identify optimal conditions for effectiveness and sustainability and may produce actionable findings that remove barriers for new and existing QRTs.

Although Ohio’s QRTs describe their programs’ evolution as a response to community needs, it is interesting to note that the self-referral and outreach pathways may also be a better use of resources. Ohio’s data indicate that the proportion of clients who are contacted in response to an overdose tends to increase in tandem as the number of contacts rises. It is also noteworthy that there tends to be a longer amount of time between contacts among clients whose first interaction is due to an overdose compared with those

TABLE 5
Time Lapsed (in Weeks) Between Contacts by Referral Source and Overdose Status

Referral Source	n	Nonoverdose Related (M, SD)	Overdose Response (M, SD)	t	P
Criminal justice system	1818	7.5 (9.8)	8.9 (12.4)	2.04	.04
Health provider	2740	4.7 (8.2)	6.5 (10.8)	4.95	<.001
Self-referral	754	7.9 (12.1)	13.2 (15.2)	4.03	<.001
First responder/social services	267	7.6 (12.6)	6.0 (12.0)	1.05	.29
QRT	313	9.9 (12.4)	6.6 (9.7)	2.64	.01
Total	5892	6.3 (10.1)	7.8 (11.8)	5.18	<.001

Abbreviation: QRT, Quick Response Team.

who did not experience an overdose. These data suggest that it may take more time and resources to support people who have survived an overdose than to support those who engage through other deflection pathways (self-referral or active outreach). In many communities, overdose is an easily identifiable point of intervention; however, there are real challenges in working with overdose survivors who are often in an advanced stage of their addiction. Relying solely on overdose as a point of intervention may also limit a QRT's ability to identify and support people whose primary substance use is not opioid-related (including those using amphetamines and alcohol), creating disparities in services. In fact, Ohio QRTs report that they are creating processes that allow them to effectively respond to the needs of all people with SUD.

Limitations

First, this analysis was completed with ongoing data collection efforts from Ohio QRTs. As with all data, the QRT data are imperfect and incomplete. As of the date of this article, there are more than 80 QRTs in Ohio; however, only 22 QRTs are included in the quantitative analysis; similarly, the qualitative study of QRTs included representatives from 35 counties. Reliance on nonrandom samples such as these may limit the generalizability of the findings reported here. For example, QRTs that have the motivation and resources to maintain accurate data may be overrepresented in the Ohio data set. Second, our analysis uses the working data system of QRTs that relies on numerous individuals in the field for data input, which may result in errors and/or incomplete or missing information. This is often the case in archival data; however, in a data set this large, it is difficult to find and correct all these errors prior to analysis. Most importantly, the authors note that this analysis was largely descriptive in nature, and it does not shed light on the impact or effectiveness of QRTs. Answering those questions will require a more robust design that cross-references QRT data with other client information (including treatment, criminal justice, and health care information), which was beyond the scope of this project. We also note that this analysis did not include assessments of important variables such as stigma, social connectedness, or the experiences of QRT recipients themselves. The authors recommend that future researchers consider assessing these factors, while recognizing that these variables may require some creativity on the part of teams and researchers.

Even with these limitations, the authors (as members of PTACC) hope that our colleagues in public

Implications for Policy & Practice

- The QRT framework provides a model of public health/law enforcement partnerships that can be implemented across many different communities, including urban and rural areas.
- QRTs are generally understood to be overdose response programs; however, many are providing more proactive services, including outreach and harm reduction that are well aligned with public health goals and activities.
- The deflection pathways language may help QRTs, researchers, and policy makers describe the specific activities and services QRTs provide, particularly as they expand beyond overdose response; additional research is needed to better understand the process by which QRTs expand from single-pathway, naloxone plus programs to multipathway initiatives.
- When conducting site evaluation, researchers should consider using a combination of qualitative and quantitative approaches to identify and define the key factors associated with successful QRT implementation (ie, community context, program structure, team composition), as well as impact or outcome evaluation.

health see value in this analysis of Ohio's QRT data. Since 2017, QRTs have touched the lives of nearly 12 000 Ohioans. Beyond Ohio, the entire field of deflection is growing rapidly, in part due to the expansion of QRTs. The QRT model has spread rapidly and organically across Ohio and provides a potential lifeline to many people. Variations between and among QRTs make it challenging to explain or assess widespread impact of the work. However, this presents a unique opportunity to leverage public health/public safety partnerships and contribute to a rapidly changing conversation about how to improve our communities' response to addiction and overdose. By investing in evaluation of programs such as QRT, and sharing the results, funders, communities, and researchers can advance the field and the knowledge base, ensuring that communities have the best possible resources to support people with SUD.

References

1. Centers for Disease Control and Prevention. Death Rate Maps & Graphs. <https://www.cdc.gov/drugoverdose/deaths/index.html>. Updated June 2, 2022. Accessed August 5, 2022.
2. Hedegaard H, Minino A, Warner M. Drug overdose deaths in the United States, 1999-2018. <https://www.cdc.gov/nchs/data/databriefs/db356-h.pdf>. Published January 2020. Accessed December 9, 2021.
3. Centers for Disease Control and Prevention. Drug overdose deaths in the U.S. top 100,000 annually. https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2021/20211117.htm. Published November 17, 2021. Accessed December 7, 2021.

4. Charlier JA, Reichert J. Introduction: deflection—police-led responses to behavioral health challenges. *J Adva Justice*. 2020;3: 1-13.
5. NORC, Center for Health & Justice (CHJ), Bureau of Justice Assistance (BJA) Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP). Report of the national survey to assess first responder deflection programs in response to the opioid crisis: final report. https://www.cossapresources.org/Content/Documents/Articles/CHJTASC_Nation_Survey_Report.pdf. Published May 13, 2021. Accessed December 7, 2021.
6. Police, Treatment, and Community Collaborative (PTACC). Pre-arrest diversion: pathways to community: police, treatment, and community collaborative. https://ptaccollaborative.org/wp-content/uploads/2018/07/PTACC_visual.pdf. Published 2017. Accessed December 10, 2021.
7. Bureau of Justice Assistance (BJA) Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP). Law enforcement and first responder diversion pathways to diversion case studies series. https://www.cossapresources.org/Content/Documents/Articles/Pathways_to_Diversion_Case_Studies_Series_Naloxone_Plus.pdf. Published July 21, 2020. Accessed December 7, 2021.
8. Violence and Injury Prevention Program, Ohio Department of Health. Epidemic of Prescription Drug Overdose in Ohio. https://odh.ohio.gov/wps/wcm/connect/gov/5a0bbf8a-8d88-49e5-bd6c-56ca28c2104c/Epidemic_of_Prescription_Drug_Overdose_Ohio_Report.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-5a0bbf8a-8d88-49e5-bd6c-56ca28c2104c-miUpbk3. Accessed January 19, 2022.
9. Ohio Department of Health. 2019 Ohio drug overdose data: general findings. https://odh.ohio.gov/wps/wcm/connect/gov/0a7bdcd9-b8d5-4193-a1afe711be4ef541/2019_OhioDrugOverdoseReport_Final_11.06.20.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-0a7bdcd9-b8d5-4193-a1af-e711be4ef541-nmv3qS. Published November 6, 2020. Accessed January 19, 2022.
10. Ohio Department of Health. 2020 Ohio drug overdose data: general findings. https://odh.ohio.gov/wps/wcm/connect/gov/aa1eb9be-9681-4853-aefd-9208110635dc/2020+Unintentional+Drug+Overdose+Annual+Report.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-aa1eb9be-9681-4853-aefd-9208110635dc-nU7cXBm. Published December 2021. Accessed January 19, 2022.
11. Quick Response Teams (QRTs) [Transcript]. Podcast series. Bureau of Justice Assistance (BJA) Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP). <https://www.cossapresources.org/content/documents/Events/COAP%20podcast%20QRT%20transcript.pdf>. Published October 22, 2018. Accessed January 19, 2022.
12. Bureau of Justice Assistance (BJA) Comprehensive Opioid, Stimulant, and Substance Abuse Program (COSSAP). Law enforcement/first responder diversion and referral program mentor sites. <https://www.cossapresources.org/Learning/PeerToPeer/Diversion/Sites>. No date of publication. Accessed January 31, 2022.
13. Legislative Analysis and Public Policy Association (LAPPA), Police, Treatment, and Community Collaborative (PTACC). Model Law Enforcement and Other First Responder Deflection Act. [https://legislativeanalysis.org/model-law-enforcement-and-other-first-responder-deflection-act/#:~:text=Specifically%2C%20the%20model%20act%20\(1,medication%20for%20addiction%20treatment%2C%20whole](https://legislativeanalysis.org/model-law-enforcement-and-other-first-responder-deflection-act/#:~:text=Specifically%2C%20the%20model%20act%20(1,medication%20for%20addiction%20treatment%2C%20whole). Published September 2021. Accessed March 11, 2022.
14. Manchak SM, Gosney ME, Haberman C, Firesheets K. A data-driven response to the addiction crisis in Hamilton County, Ohio. *J Public Health Manag Pract*. 2022;28(Suppl 6):S320-S325.
15. Cordata Deflection. Deflection platform for the addiction crisis—Cordata Deflection Web site. <https://www.cordatahealth.com/deflection/>. Published January 2021. Accessed March 11, 2022.
16. National Center for Health Statistics (NCHS), National Vital Statistics System. Percent of drug overdose deaths by quarter and demographic characteristics 2019 to 2020. https://www.cdc.gov/nchs/data/health_policy/Provisional-Drug-Overdose-Deaths-by-Quarter-and-Demographic-Characteristics-2019-to-2020.pdf. Published 2020. Accessed January 26, 2022.