The Role of Community Coordinated Efforts in Combating the Opioid Overdose Crisis

The Pennsylvania Opioid Overdose Reduction Technical Assistance Center

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The Pennsylvania Opioid Overdose Reduction Technical Assistance Center (TAC) was developed by the University of Pittsburgh, School of Pharmacy, Program Evaluation and Research Unit (PERU) and funded by the Pennsylvania Commission on Crime and Delinquency (PCCD) in response to the need for local coordination and supported efforts to address the growing number of opioid overdoses in Pennsylvania. This article outlines the TAC's initiatives to address this crisis in 42 counties across the Commonwealth of Pennsylvania, stressing the importance of communication and collaboration both within and between communities, such as public health, public safety, first responders, physicians, the criminal justice system, and families. The TAC uses the Implementation Framework (IF) developed by Dr. Janice Pringle to achieve accurate data assessment and the effective implementation, evaluation, and sustainability of programs.

The increasing number of deaths each year due to opioid drug overdose represents an urgent crisis in this country, and more specifically, in Pennsylvania. According to the Centers for Disease Control and

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Prevention (CDC), "In 2014, Pennsylvania had the third-highest number of opioid deaths in the country (2,732), behind only California (4,521) and Ohio (2,744)" (Centers for Disease Control and Prevention 2016). The Commonwealth of Pennsylvania is the sixth largest state by size and population, with a diverse range of citizens in urban, suburban, and rural areas. In 2015, Pennsylvania had the sixth highest overdose death rate in the United States, and experienced a 37% increase in overdose deaths from 2015 to 2016 (DEA Philadelphia Division 2017). Eighty-five percent of overdose fatality toxicology reports included an opioid in 2016, and the average profile of a person who has died of an overdose is a white male between 25 and 34 years of age (DEA Philadelphia Division 2017).

The Pennsylvania Opioid Overdose Reduction Technical Assistance Center (TAC) was developed by the University of Pittsburgh, School of Pharmacy, Program Evaluation and Research Unit and funded by the Pennsylvania Commission on Crime and Delinquency (PCCD) in response to the need for local coordination and support to address the growing number of opioid overdoses in Pennsylvania. Currently engaged with 42 counties, support ranges from technical assistance on an as-needed, information-sharing basis to comprehensive technical assistance involving local agency coordination, as well as data and evidence-based strategies to drive strategic planning, implementation, and evaluation (Figure 1).

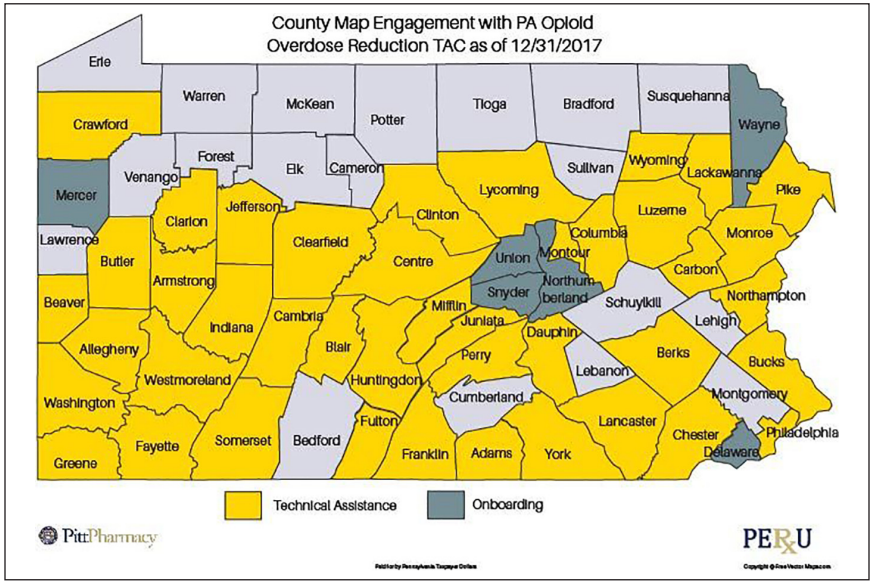

Figure 1. County Map of Engagement with PA Opioid Overdose Reduction Technical Assistance Center (TAC) as of December 31, 2017. (*Pennsylvania Opioid Overdose Reduction Technical Assistance Center [TAC], Program Evaluation Research Unit [PERU], University of Pittsburgh School of Pharmacy, 2017.*)

Since May 2017, the TAC has conducted 316 county meetings to unify stakeholders around a unified process. The TAC created a model for opioid supply reduction, demand reduction, and overdose reduction at the county level using active participation from a coalition of county partners.

The Pennsylvania Opioid Overdose Reduction Technical Assistance Center (TAC) strives to serve as a model of and a guide for empowering communities to address this major public health issue. In looking at other successful models, such as Project Lazarus, a community-based overdose prevention program in western North Carolina, we learn that "[a]t the center of Project Lazarus is the understanding that communities are ultimately responsible for their own health and that active participation from a coalition of community partners is required for a successful public health campaign" (Albert et al. 2011, S78).

To be effective, this empowerment must occur as a process of open communication and collaboration both *within* communities and *between* communities. To facilitate collaboration *within* communities, stakeholders must begin with an accurate assessment of the problem. The *Analysis of Overdose Deaths in Pennsylvania, 2016* was compiled to gather accurate data and statistics on overdose deaths, and to "ensure [that] the Commonwealth's stakeholders and citizens receive a professional and accurate analysis generated by experts in the law enforcement and public health fields" (Drug Enforcement Administration 2017, 3). Communities must work to bridge the traditional gap between public health and public safety officials by building effective partnerships. One such initiative is Pennsylvania's Single County Authorities (SCAs), which "were established to plan and evaluate community drug and alcohol prevention, intervention, and treatment services. The SCAs determine a person's eligibility for service funding, assess the need for treatment or other services, and make referrals to appropriate programs to match treatment and/or service needs" (Miller et al. 2016, 61). In the spirit of collaboration, "SCAs are working with law enforcement to implement the community-based recommendations put forth in the 2015 National Heroin Task Force Report" (Miller et al. 2016, 61).

Physicians and first responders must not only be educated on best practices to assist patients with substance use disorders, but also be engaged to become an active part of the solution. One encouraging example of this is the DAWN (Drug Abuse Warning Network) program, sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services (DHHS). DAWN is "a public health surveillance system that monitors national and local trends in drug-related emergency department visits and drug-related deaths investigated by

medical examiners and coroners. DAWN tells us where new drug problems are emerging, how old drug problems are changing, where public health resources might be needed, and which drugs and drug combinations are associated with the most severe health consequences" (DAWN 2004).

In a similar vein, the criminal justice system must continue to address gaps in services, and work to instill additional treatment programs and effective education in its facilities. According to a recent draft report of *The President's Commission on Combating Drug Addiction and the Opioid Crisis*, "One study found that nearly 60% of jail personnel surveyed strongly disagreed with the statement that their tax dollars should support methadone treatment" (2017, 74). Clearly, further progress remains to be made in educating correctional administrators and practitioners on the benefits of medication-assisted treatment (MAT) for individuals at increased risk for overdose following release from jail or prison.

To encourage collaboration *between* communities, leaders in this field are advised to encourage clear communication among stakeholders at the federal, state, and local levels, and continue to provide county input to policymakers. A recent publication outlines a road map to guide stakeholders at the state level to find solutions to the current crisis, and can be used to help facilitate collaboration between other levels of government as well (Murphy et al. 2016). Families and communities must be continuously educated and made aware of the magnitude of this crisis, and programs must remain sustainable to survive beyond initial implementation. According to *Principles of Community Engagement*, "Community engagement can only be sustained by identifying and mobilizing community assets and strengths and by developing the community's capacity and resources to make decisions and take action" (CTSAC 2011, 51).

Organization of Local Efforts

The TAC uses an Implementation Framework (IF) developed by Dr. Janice Pringle to engage with counties (Figure 2).

The IF is designed to organize counties to reduce overdoses through assessing the local impact of overdose, building capacity, strategic planning, developing and implementing interventions with quality and fidelity, and evaluating and sustaining efforts. Counties begin with assessment, which consists of gathering data to better understand the local impact of overdoses. Data is an integral component to local efforts, and the TAC assists counties in the collection and analysis of data for later use in planning as well as

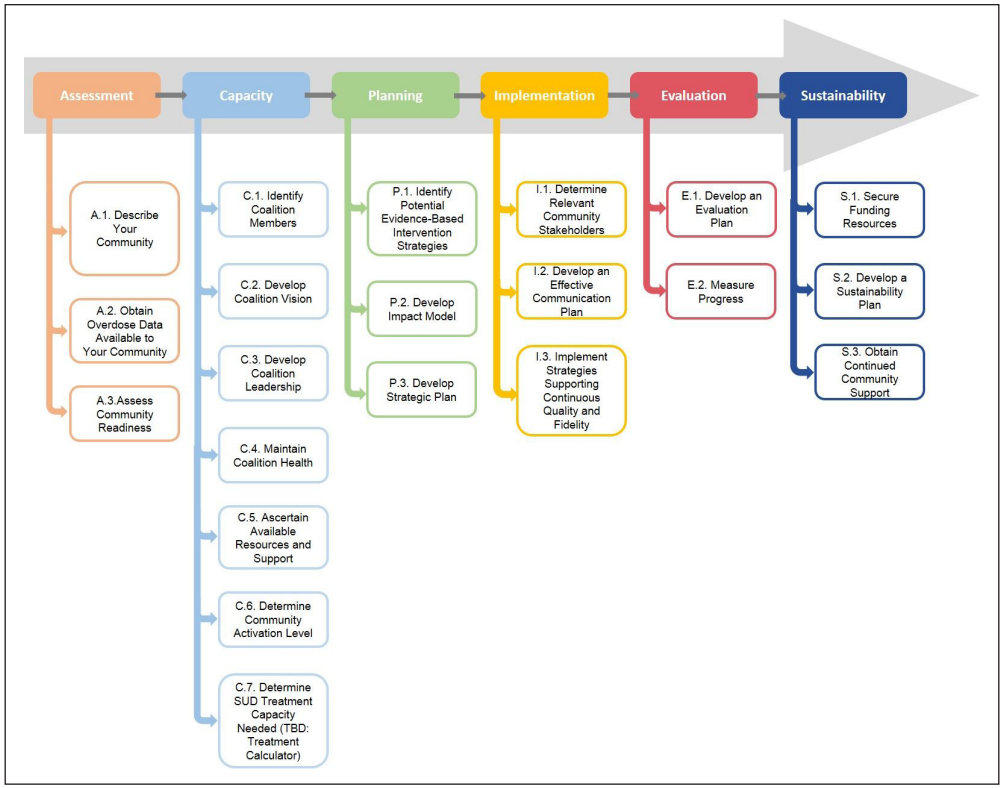

Figure 2. Implementation Framework (IF**)** Developed by Dr. Janice Pringle. (*Pennsylvania Opioid Overdose Reduction Technical Assistance Center [TAC], Program Evaluation Research Unit [PERU], University of Pittsburgh School of Pharmacy, 2017.*)

intervention performance and outcome measures. The TAC has held 10 data seminars since May 2017. The TAC maintains a comprehensive list of data needed as well as strategies to obtain data for sustained collection and monitoring (Table 1).

The TAC offers analysis services to present counties with a comprehensive, objective data report that is actionable.

Next, the TAC may help the county to develop an overdose reduction coalition or bring additional stakeholders into an existing coalition (Table 2).

The TAC emphasizes the importance of developing coalitions that work to bridge public health and public safety. As these sectors have not traditionally needed to collaborate with each other, technical assistance is often needed to address coordination of efforts between public safety and public health. The TAC provides technical assistance to 22 county recipients of PCCD funding.

Table 1. TAC List of Data

Data Collection Fields
Public Safety
Overdose Death
Emergency Medical Services (EMS)
Emergency Department (ED)
911 Call
Trojan Horse
Naloxone Reversal
Prescription Drug Monitoring Program (PDMP)
National Forensic Laboratory Information System (NFLIS)
DEA Assessment
Education
Pharmacy
Treatment
High Intensity Drug Trafficking Area (HIDTA)

Source: Pennsylvania Opioid Overdose Reduction Technical Assistance Center (TAC), Program Evaluation Research Unit (PERU), University of Pittsburgh School of Pharmacy, 2017.

Table 2. County Stakeholders Required for Effective Collaboration

Effective Collaboration
I. Health Professionals
a) Single County Authority (SCA)
b) Hospital Professionals
c) Treatment Providers
d) Recovery Support
e) Center of Excellence (COE)
f) Physicians
g) Criminal Justice
II. Public Safety
a) Criminal Justice Advisory Board (CJAB)
b) Coroner or Medical Examiner
c) District Attorney
d) Probation/Parole
e) Jail
f) Courts
III. Community
a) Schools
b) Religious Leaders
c) Persons in Recovery
d) Family Members
e) Political Figures
f) Children Youth Services
IV. First Responders
a) Fire
b) Emergency Medical Services (EMS)
c) Local/State Police

Source: Pennsylvania Opioid Overdose Reduction Technical Assistance Center (TAC), Program Evaluation Research Unit (PERU), University of Pittsburgh School of Pharmacy, 2017.

First, county coalitions are encouraged to have leaders that represent both sectors (e.g., single county authority (SCA) and district attorney (DA)), improving buy-in and ensuring that coalition work addresses the scope of opioid overdose. Second, barriers in terminology, variability in department goals, and differences in values and beliefs amongst different stakeholders are addressed through an ideal vision and learning component of each coalition meeting. Third, data is discussed openly between public safety and public health to eliminate confusion and identify opportunities for coordination. Interventions that bridge the gap between public safety and public health are encouraged and shared amongst the TAC counties. For example, law enforcement can share nonfatal overdose information with the county drug and alcohol treatment authority for follow-up.

Once a county has data to assess overdose and sufficient capacity to get work done, the TAC will assist coalitions in the development of an evidence-based, data-driven strategic plan used to guide counties in their overdose elimination efforts, ensuring interventions are developed and implemented to have the highest impact. In 2017, the TAC developed 20 strategic plans. Opioid supply, demand, and overdose reduction efforts are proposed by coalition members and implemented by responsible parties through their professional responsibilities or volunteers. Because of heightened awareness around drug overdose, many organizations and coalitions are responding at the local, state, and federal levels. The TAC teaches county entities how to coordinate efforts, minimize duplication, and identify and take advantage of outside resources. The *OverdoseFree PA* website, for example, includes content contributions from 25 counties and offers a wide range of resources for state and county-level entities. This site averages 15,000 page views per month.

Effective implementation and evaluation is accomplished through teaching best practices using an Implementation Guide and connecting counties with local evaluators. The Implementation Guide provides structure to the county coalitions with respect to how they can implement an activity efficiently and effectively. Second, it provides counties with the information necessary to efficiently obtain additional funds from foundations and state and federal sources. Information includes a program summary, initiative champion, vision, evaluation goals and objectives, literature review, impact model, patient pathway diagram, implementation protocol, and evaluation scheme. In 2017, TAC aided 11 county applications for federal funding. Given the complex relationships and stakeholders that impact opioid overdoses, it is not feasible to determine the individual impact of each intervention in isolation.

Sustainability is pivotal to maintaining interventions beyond an initial phase. PCCD recently funded 10 counties to assist with the implementation

of strategic planning initiatives, with funding totaling over $800,000, and released an additional RFP in 2017 for the same purpose. Furthermore, the TAC informs counties when additional funding from federal and local sources becomes available and can assist counties with proposal writing and review. (The TAC cannot assist with proposals for PCCD funding.)

Interventions

It is beyond the scope of this article to provide details of each intervention underway in 42 counties; however, a handful are highlighted below. In total, 100 programs are currently being implemented by TAC, with an average of 4.3 new programs being implemented per county.

Supply Reduction

Overdose Investigation Coordination

In partnership with the Drug Enforcement Administration (DEA), local police departments are investigating drug-delivery-resulting-in-death cases. The DEA provides analytical resources to counties, assisting with over 900 state and local investigations (communication with Laura Hendrick, DEA). In addition, all nonfatal overdoses reported to the DEA are subsequently provided to the county authority on drug and alcohol, or a local Center of Excellence.

Prescriber Education

County coalitions have expanded training and educational opportunities to include health care professionals (e.g., physicians, pharmacists, nurses) and first responders. One such program is unique in that physicians are educated on opioid prescribing guidelines, the prescription drug monitoring program, and alternative strategies to pain management, with emphasis on follow-up peer-to-peer interactions. Physician education often lacks an engagement piece, especially from other physicians, which decreases the chances of changing behavior. Peer mentors work with high-prescribing physicians to plan strategies of how to effectively change practice and implement guidelines.

Medication Disposal

Safe medication disposal practices can reduce the supply of opioids available to a community, and protocols are being developed and implemented to limit the potential diversion of opioids from homes of persons who have died, nursing homes, real estate agencies, and assisted living facilities (Urie 2017). In addition, prescription take-back events sponsored by sheriff and police

departments with support from the DEA occur at least twice a year. Most counties also have fixed medicine disposal sites at law enforcement offices, with a locator map found on the Pennsylvania Department of Drug and Alcohol Programs website. For rural areas, where transportation to a fixed site may be problematic, drug deactivation and disposal bags are available (Chandler, Fletcher, and Volkow 2009).

Demand Reduction

Increasing Access to Treatment through Criminal Justice Programs

The criminal justice system is a crucial intercept point for individuals who have an opioid use disorder. Discharged inmates overdose and die at a much higher rate than the general population, and this group is more likely to recidivate and commit new crimes (Friedmann et al. 2012; Gordon, Kinlock, and Miller 2011; Ludwig and Peters 2014; Timko and DeBenedetti 2007; and Welsh et al. 2016). Through the collaboration of county coalitions, county SCAs and criminal justice personnel (e.g., wardens, adult probation officers, and district attorneys) have begun to address the gaps in services, including establishing or expanding treatment programs in jails or prisons. This initiative includes increasing educational opportunities for inmates regarding overdose prevention, which could include the provision of naloxone upon release, and establishing or expanding drug treatment courts. Treatment interventions provided to jail and correctional facilities anticipate a comprehensive, medically-assisted opioid treatment program for incarcerated inmates through the implementation of several evidence-based practices. Cognitive behavior therapy and other treatment modalities are employed while the inmate is still incarcerated in a secure, drug-free, controlled environment. Prior to release, continued treatment appointments are arranged, and the program participant may be induced to start MAT.

Engaging Overdose Survivors with Treatment and Resources

First responders across the Commonwealth have reported experiencing burnout related to repeat naloxone administrations to the same individuals and knowing that these individuals are not being engaged in treatment. In response to these frustrations, county SCA offices have been collaborating with local EMS and law enforcement to establish follow-up programs that aim to encourage an overdose survivor to enter treatment. Interventions train first responders on using naloxone for overdose reversal and training patients and families on how to use "leave-behind" naloxone kits (Centers for Disease Control and Prevention 2016); using motivational interviewing to conduct

referrals and "warm handoffs" to help patients access substance use disorder and/or mental health (SUD/MH) evaluation and treatment (DEA Philadelphia Division 2017); and/or implementing community-based paramedicine and harm reduction follow-up procedures with patients who do not wish to pursue treatment (Albert et al. 2011).

For example, one intervention aims to provide follow-up care and treatment to overdose survivors, through EMS and ED providers working in collaboration with the Center of Excellence (COE) and the Single County Authority (SCA) to ensure access to drug and alcohol services (Merrick et al. 2007). This program is designed to expand emergency response duties of first responders, resulting in more efficient and ongoing care for the patient and to promote collaboration, rather than completion. Upon treatment by emergency responders, overdose survivors are informed of the opportunity to speak with a care navigator provided by the Center of Excellence. When a survivor is interested in pursuing treatment, the care navigator will assist in the entrance and completion of an appropriate treatment program. If an overdose survivor initially refuses treatment and is transported to a hospital, the EMS providers will follow up with the individual the next day to further encourage treatment.

Similar engagement and connection to treatment interventions are underway in emergency departments, often referred to as "warm handoffs." Persons in the emergency departments are screened and identified as needing additional follow-up treatment for a substance use disorder. A care navigator, patient coordinator, certified recovery specialist, or someone in a similar role will engage with the individual and help identify and connect the person to treatment.

Workplace Education

Through workplace education interventions, presentations are conducted with a goal to provide educational materials to individuals while promoting drug-free work environments (Hartwell et al. 1996; Stoner, Mikko, and Carpenter 2014). Drug-free work environments include: written drug-free workplace policy, employee education, supervisor training, employee assistance program, and drug testing. Resources such as those from PAStop provide a worksite toolkit to provide further education regarding the risk of prescription painkillers and heroin use, the relationship between painkillers and heroin, and how to assist an individual who may need assistance.

Screening, Brief Intervention, and Referral to Treatment

SBIRT (Screening, Brief Intervention, and Referral for Treatment) is an evidence-based practice used to identify, reduce, and prevent problematic use,

abuse, and dependence on alcohol and illicit drugs (Agerwala and McCance-Katz 2012; Babor et al. 2007). The SBIRT program will consist of three major components: (1) screening—a health care professional in any setting will use standardized screening tools to assess and identify patients with risky substance abuse patterns; (2) brief intervention—a health care professional will engage a patient with risky substance use behaviors in a short conversation about their use, providing feedback and advice; and (3) referral for treatment—a health care professional will provide a referral to brief therapy or additional treatment to patients who screen in need of additional services. An outcome from implementation of SBIRT programs is to increase the number of overdose survivors who enter treatment and sustain treatment, and to intervene prior to the overdose. Because of this proactive manner, a decrease in the number of overdoses in the emergency department can be expected. The combination of early intervention by drug and alcohol staff and timely assistance for the patient in obtaining treatment will increase the likelihood of a successful discharge from treatment and decrease the likelihood of overdose and further substance abuse.

Overdose Reduction

Increasing Access to Naloxone in Pharmacies

The TAC launched a Citizen Science Naloxone Reporting Project, which encourages pharmacy customers to engage their local pharmacists in discussion about naloxone. Individuals can access an online form on *OverdoseFree PA* that guides them through conversations with their pharmacist regarding compliance with the standing order, stocking naloxone for same-day purchase, and questions about insurance billing. Individuals can fill out the form online and submit it to the website where, once verified, it will be added to the Naloxone Finder Map. The Naloxone Finder Map is a tool that individuals can use to locate pharmacies in their area that stock naloxone. The map also provides information on the formulation that is carried and the insurance the pharmacy accepts. Educational materials can be provided to pharmacies and pharmacists that do not currently honor the standing order and/or stock naloxone.

Increasing Access to Naloxone for Persons at Risk of Overdose

Naloxone priority groups have been identified through data and previously published reports. Persons at elevated risk for overdose leaving a county jail, treatment facility, or emergency room are offered naloxone with a brief training on overdose reduction strategies.

On a broader level, educational interventions are developed for the community audience that typically include naloxone and addiction education, information about treatment resources, and safe disposal of medications, including drug take-back days. Educational materials on how to access and use naloxone are delivered using a town hall format, through public awareness campaigns, using local newspapers and television stations, by developing prevention magazines, through social media, and at the workplace.

Coordination of Efforts Across County Lines

The TAC has assisted multiple agencies in the development and implementation of various workshops across the Commonwealth of Pennsylvania, resulting in over 600 individuals participating with a 99% satisfaction rate. The workshops intend to bring together stakeholders from public safety and public health to discuss trends regarding overdose deaths, various strategies to combat the opioid epidemic, and potential solutions. Subjects may include the following: substance use disorder in different populations, evidence-based treatment, overdose prevention and harm reduction, bridging public health and public safety, prescribing practices and the prescription drug monitoring program, addictions 101, and coordinating data between systems. Throughout the planning and development stages of each workshop, the TAC meets with leadership from each requesting agency multiple times prior to the workshops to ensure that content is relevant to the needs of the audience. Components of each workshop include educational lectures, hands-on motivational interviewing skills, keynote speakers, and facilitation of panel discussions.

In addition, the TAC is coordinating efforts among federal, state, and local stakeholders by communicating programs and initiatives from federal and state agencies to county-level entities. Thus far, the TAC has assisted in building a multitude of partnerships between counties, while providing county input to policymakers.

Summary and Future Directions

The TAC strives to improve effectiveness and outcomes through self-assessment and is collecting outcome data for programs listed above. County meeting evaluations are disseminated and collected following all coalition meetings to understand if progress is being made. As a result, the TAC can improve using a constant feedback loop with each county, provided by lessons learned from weekly meetings. To improve outcomes of county efforts, the

TAC conducts annual key informant interviews with each county. For county interventions, detailed evaluation plans that collect process and outcome measurements are standard practice for counties working with the TAC. It is anticipated that this data will be shared in 2018. Looking to the near future, according to a recent report of the TAC, "several counties are projected to stabilize their overdose death rates in 2017."

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