Title: Pennsylvania Overdose Information Network (ODIN)

Category: Data Management, Analytics & Visualization

State: Commonwealth of Pennsylvania

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<u>Executive Summary</u>

The opioid crisis is devastating families and communities across the United States. The effects are especially acute in Pennsylvania, which had the third highest rate of drug overdose deaths in 2017, according to the Centers for Disease Control and Prevention (CDC).

Access to data is essential in order for policymakers, first responders, treatment providers and law enforcement to make decisions, effectively direct resources to areas of the state with the greatest need and monitor the effectiveness of efforts to prevent overdoses and assist individuals with treatment for their addictions.

With over 1,100 municipal police departments in Pennsylvania, gathering relevant information from law enforcement can be a daunting challenge. In response, the Pennsylvania State Police (PSP), in partnership with the Liberty Mid-Atlantic High Intensity Drug Trafficking Area (HIDTA), developed the Overdose Information Network (ODIN). The goal of the application is to provide criminal justice agencies with real-time information to aid in drug and overdose investigations and to give leadership and policymakers reliable, comprehensive data to make informed decisions when combating drug issues that could compromise public safety and health. ODIN is a centralized database that enables law enforcement agencies to quickly record, analyze and share information concerning fatal and non-fatal drug overdoses, naloxone administrations and identifying markings found on drug packaging.

ODIN captures over 80 data elements, including geocoding, for each recorded overdose incident. This information is then easily accessible through two searchable dashboards and 28 pre-configured reports within the system.

Since being deployed in March 2018, 8,254 users from over 1,300 agencies, including state and local police, federal law enforcement, sheriffs, and probation and parole, have accessed or entered information into ODIN. The application has recorded 8,084 overdose incidents. A subset of the information collected in ODIN is available for public use through the Pennsylvania Opioid Data Dashboard and the Pennsylvania Open Data portal.

The data collected through ODIN has led to partnerships with several universities to improve policing and correctional strategies, including the TRIAD policing initiative by PSP and the Naloxone Reentry Tracking Project by the PA Department of Corrections. Pennsylvania is currently working on a second phase to ODIN that will add business intelligence and incident reporting services to the system.

Pennsylvania's multi-faceted, collaborative and data-driven approach to address the opioid epidemic has been hailed as a national model. Preliminary data from the Centers for Disease Control for 2018 indicates a decrease in opioid overdose deaths in some parts of the state. While no individual organization, program or strategy can be credited entirely with this potential decline, the data and insights provided through ODIN are a critical tool in Pennsylvania's overall response to the opioid crisis.

Project Narrative

Concept

The opioid crisis remains a leading public health and public policy challenge for government leaders at all levels.

Efforts to combat the opioid epidemic in Pennsylvania have been underway for several years. Beginning in 2013, the Pennsylvania Overdose Task Force was convened in response to a sudden increase in the number of heroin and fentanyl related overdoses. The task force includes representatives from local, state and federal agencies who are responsible for health and public safety.

In 2014, legislation was enacted to make naloxone readily available to law enforcement and first responders, as well as family, friends and anyone in a position to potentially assist in an opioid overdose. However, the law contained no mandate for reporting the administration of naloxone, resulting in an information gap. Without reporting and tracking naloxone administrations to overdose victims, there was no way to track the success or limitations of naloxone usage by first responders. The lack of real-time information sharing also limited the ability to respond to spikes in overdoses.

In 2016, PSP and HIDTA, with input from the Overdose Task Force, began to research and analyze the development of a centralized, state-wide law enforcement database to be used for the capturing and sharing of information regarding law enforcement administration of naloxone and the occurrence of identifiable drug package markings. In 2017, with assistance from the Governor's Office of Administration Office for Information Technology (OA/OIT), Liberty Mid-Atlantic HIDTA, Pennsylvania Justice Network (JNET), Pennsylvania District Attorney's Association (PADA), Pennsylvania Chiefs of Police Association (PCPA), Pennsylvania Department of Health (DOH), Pennsylvania Department of Drug and Alcohol Programs (DDAP), Pennsylvania Commission on Crime and Delinquency (PCCD), Pennsylvania Office of Attorney General (OAG) and the United States Drug Enforcement Administration (US-DEA), the State Police initiated a project to develop ODIN.

In January 2018, Pennsylvania Governor Tom Wolf took the unprecedented step of declaring a first-of-its-kind public health emergency. The declaration includes 13 specific initiatives to combat the opioid epidemic including "enhancing coordination and data collection to bolster state and local responses." It also established the Opioid Operational Command Center, a collective of 16 state agencies and various advocate and stakeholder groups working together to battle this crisis.

The ODIN application was deployed in March 2018. The goal of the application is to provide criminal justice agencies with real-time information to aid in drug and overdose investigations and to give leadership and policy makers reliable, comprehensive information in order to make informed decisions when combating drug issues that could compromise public safety and health. ODIN is a centralized database that enables law enforcement agencies to quickly record, analyze, and share information concerning fatal and non-fatal drug overdoses, naloxone

administrations and identifying markings found on drug packaging. ODIN also provides law enforcement personnel with information to aid in drug and overdose investigations, assist in detecting clusters of drug overdoses and naloxone administrations and facilitate the development of effective enforcement strategies.

When ODIN was publicly unveiled, Governor Tom Wolf described it as "…providing crucial data about overdoses, heroin seizures, locations of opioid-related incidents and other critical information to aid in the apprehension of offenders who bring illegal drugs into our communities. This technology allows law enforcement to streamline real-time data sharing so actionable information does not slip through the cracks."

Significance

The application is a testament to successful collaboration. While championed and maintained by the State Police, the information within the system is accessed and entered by over 8,000 local, state and federal law enforcement and public safety officials from across the state. With the application hosted on JNET, a secure portal for criminal justice and public safety data, authorized users can safely and securely access the ODIN application from any work station or mobile device with internet access.

Furthermore, ODIN represents Pennsylvania's first instance of sharing criminal justice data analytics capabilities across multiple agencies and jurisdictions.

The application captures over 80 data elements, including geocoding, for each recorded overdose incident related to 16 different drugs, including fentanyl, synthetic cathinones, alcohol, cocaine and synthetic cannaboids, to name a few. This information is then easily accessible through two searchable dashboards and 28 pre-configured reports within the system. Samples of ODIN's extremely robust reporting capabilities include, but are not limited to:

- The number of overdoses and naloxone administrations by gender, race and ethnicity
- The percentage of victims who did and did not receive naloxone and survival numbers of each
- The percentages of which agencies (criminal justice, EMS, fire departments) are responding to the overdoses and which agencies are administering naloxone
- The counts and percentages of the fatal and non-fatal outcomes related to naloxone administration
- Overdose statistics by age group and suspected drugs causing those overdoses
- Maps by state, county and ZIP codes to identify hot spots and where overdoses and administrations are occurring
- Statistics on victim outcomes (i.e. hospitalization, arrest, referred to treatment) post naloxone administration
- Averages of naloxone dosage per victim and/or suspected drug

- Hours of the day or specific shifts when naloxone is being administered
- High-level summaries and totals for the state, county, municipality and reporting agencies.

It is important to understand that ODIN reporting does not include personably identifiable information in order protect the privacy of overdose victims. The information reported is limited to the specific overdose event (e.g. time, date and location of an overdose incident) or drug packaging related to an incident.

ODIN's impact is not limited to the law enforcement and public safety arenas. A subset of the information collected in ODIN is made available through the state's open-data portal for use by stakeholders and practitioners from other disciplines. According to Ray Barishansky, deputy secretary for planning and assessment with the Department of Health and incident commander for the Opioid Operational Command Center, "When it comes to addressing a multi-faceted public health crisis like the opioid crisis, the availability of accurate and updated information is critical. ODIN is an important step forward toward a new level of collaboration among health and public safety professionals."

Clearly ODIN answers the Governor's call in his 2018 disaster declaration to improve the collection and sharing of information in response to the opioid crisis. ODIN also directly supports and complements critical strategic initiatives for numerous state agencies:

Pennsylvania State Police (PSP)

- To promote justice and preserve peace through the detection, investigation and prosecution of criminal activity in Pennsylvania
- Continue to provide extraordinary police service with professionalism into the future through community and professional partnerships…procurement of cutting-edge equipment and technologies and the implementation of innovative business practices.

Pennsylvania Justice Network (JNET)

- To provide highly-available, secure and accurate data and integration services to Pennsylvania's criminal justice and public safety communities
- Transform government
- Enable innovation through integration
- Empower users

Commonwealth of PA IT Strategic Plan

- Foster collaboration, communication and governance
- Transform government

NASCIO State CIO Top 10 Priorities

- Data Management and Analytics

Impact

To fully appreciate the impact of ODIN, it is important to understand that there are over 1,100 separate municipal police departments, in addition to the Pennsylvania State Police, providing law enforcement and public safety services to communities. The sheer number of agencies makes data sharing a significant challenge. When coupled with the fact that many agencies are small, part-time departments covering large rural areas, collecting any information consistently can be a significant challenge.

The fact that in its relatively brief existence (having gone live in March 2018), that ODIN has been widely adopted within the Commonwealth is a major accomplishment. With strong support from both the Governor and the State Police, coupled with ease of access through JNET, have encouraged and enabled law enforcement and public safety practitioners to quickly embrace the use of ODIN. This adoption has allowed local law enforcement to take ownership in both the quantity and quality of information being shared statewide to fight the opioid epidemic.

To date, 8,254 users from over 1,300 agencies have accessed or entered information into the system. The application has recorded 8,084 overdose incidents since inception. This success can be directly attributed to the quality of the data and analytical tools readily available to ODIN users. ODIN's intuitive user interface makes mapping tools and information easily accessible to even to the least technically savvy user.

PSP Commissioner Lieutenant Colonel Evanchick pointed to York County as an example of ODIN's success. Law enforcement in York County has recorded 610 overdoses and 488 naloxone administrations since the system's inception. "The effects of the opioid epidemic reach far beyond the boundaries of any one police department, agency, or county," said York County District Attorney David Sunday. "ODIN has proven to be a useful tool to standardize the way we collect and share crucial information."

The success and availability of the ODIN system are leading to other innovative approaches to combat the opioid crisis. PSP is partnering with the Pennsylvania State University in the implementation of the TRIAD program. TRIAD is a problem-oriented policing program using information from ODIN to assist with its four objectives: (1) to reduce opioid-related deaths; (2) to identify and address opioid distribution markets and evolving drug-related crime trends using data and analysis-driven approaches; (3) to enhance existing data collection and analysis methods; and (4) to enhance partnerships with local agencies and community organizations.

In a separate initiative, the Pennsylvania State Police will also share information from ODIN with the University of Pittsburgh Pennsylvania Opioid Overdose Reduction Technical Assistance Center to develop data-driven and evidence-based strategies to curb opioid use.

Additionally, the Pennsylvania Department of Corrections is now partnering with New York University to study the impacts of sending naloxone home with reentrants as they are released

into the community. The Naloxone Reentry Tracking Project will potentially fund changes to the ODIN system to better obtain insights related to the use and availability of naloxone among the population served by the Department of Corrections.

None of these worthy projects would have been possible without the enthusiastic adoption of the ODIN system.

Finally, extracts of ODIN data are made available to the public through the Pennsylvania Opioid Data Dashboard and the Pennsylvania Open Data portal. It is anticipated that by making this information public, other institutions and disciplines can use it to potentially develop new ideas, strategies or innovations to combat the opioid crisis.

With ODIN data proving so valuable to so many organizations, PSP has recently initiated an ODIN phase 2 effort to further enhance the system's reporting capabilities and enable the automated submission of incidents. Through automation, it is anticipated that any gaps in reporting incidents will be addressed, resulting in an even richer and more complete data set.

Pennsylvania's multi-faceted, collaborative and data-driven approach to address the opioid epidemic has been hailed as a national model. Preliminary data from the Centers for Disease Control indicate a decrease in opioid overdose deaths in some parts of the state from 2017 to 2018. While no individual organization, program or strategy can be credited entirely with this potential decline, the rich data and insights provided through ODIN are a critical tool in Pennsylvania's overall response to the opioid crisis.