Overdose Data to Action (OD2A): Innovative Surveillance Community of Practice

Key Findings from the Monitoring Illicit Drug Supply (MIDS) Workgroup

In 2019, the CDC National Center for Injury Prevention and Control (NCIPC) expanded support for overdose surveillance and prevention activities by launching the Overdose Data to Action (OD2A) cooperative agreement. Funds awarded as part of this agreement support state, territorial, county, and city health departments in obtaining more comprehensive and timelier data on overdose morbidity and mortality, implementing innovative surveillance projects, and using these data to inform prevention and response efforts.

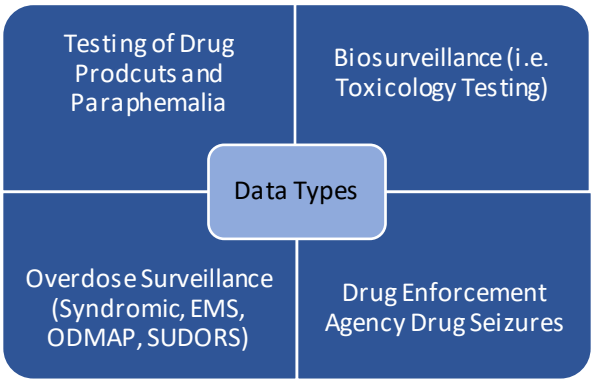
In partnership with the CDC, the Council of State and Territorial Epidemiologists (CSTE) established the Innovative Surveillance Community of Practice (CoP) to support jurisdictions implementing innovative surveillance strategies. The CoP consists of three distinct workgroups: 1) Linkage to Care (LTC) surveillance; 2) Local Outbreak Detection (LOD); and 3) Monitoring Illicit Drug Supply (MIDS). This executive summary contains key findings specifically related to the MIDS workgroup.

The authors participated in all CoP workgroup meetings held between January and June of 2021, facilitated discussions with workgroup members, and reviewed materials that pertain to workgroup meetings held during the second half of 2020. Key findings from the MIDS workgroup include the following:

- The purpose of monitoring the illicit drug supply activity is to examine the composition of the illicit drug supply in a jurisdiction with a focus on detecting drugs or changes in the overall drug supply that pose an increased risk for overdose or other harmful health outcomes. Two types of surveillance are used to meet this goal: 1) biosurveillance using clinical toxicological testing that examines drugs present in biological specimens; and 2) drug product testing that examines the drugs present in drug products or drug paraphernalia before or after the drugs are consumed.

  Some workgroup participants are implementing biosurveillance or drug product testing for the first time through O2DA, while others are tapping into existing testing efforts that predate OD2A. Although workgroup participants indicated conducting both biosurveillance and drug product testing, participants indicated that biosurveillance is more common. The majority of MIDS workgroup discussions on biosurveillance and drug product testing were focused on detection of fentanyl, which is consistent with one of the goals of OD2A surveillance funding to improve detection of fentanyl and

fentanyl analogs. Data from both types of testing are used to detect fentanyl in individual samples and monitor the presence of fentanyl in the drug supply.



- Workgroup participants listed a multitude of partners involved in conducting biosurveillance and drug product testing, including medical examiner or coroners, toxicology offices, forensic and crime labs, state and local law enforcement, public health labs, departments of public safety, hospitals, harm reduction and community outreach organizations, departments of corrections, intelligence/fusions centers, fire departments, emergency medical services (EMS), and health departments.

- Labs are the primary data source for biosurveillance and drug product testing; labs use tools and methods to detect a specific chemical or groups of chemicals from biological or drug samples. Within biosurveillance and drug product testing, workgroup members reported tracking the number of samples tested and percent of tested drug products containing fentanyl, any fentanyl analogs, any opioids, and other drug types.
- Jurisdictions use toxicologic testing for three primary purposes: detect introduction of new drugs (e.g., carfentanil) into their drug supply, track the incidence of more lethal drugs (e.g., percent of overdoses with fentanyl detected) in their drug supply and/or overdoses, and link increases in nonfatal or fatal overdoses with changes in the drug supply.
- MIDS workgroup participants noted a number of challenges related to MIDS, including the following:
    a) Latency of testing data: Many labs use a batch testing process to minimize cost which can result in substantial delays in testing some samples, especially for less common chemicals. Testing can also be delayed by specimen transport.
    b) Inability to determine how a drug is used: For drug product testing, it is not possible to tell if the drug product was consumed and how much was consumed. This makes it difficult to directly tie a drug sample test to an overdose unless testing is done on drugs found at the scene of an overdose.
    c) Inability to determine which drug(s) caused the overdose: Biosurveillance usually only detects the drugs present in an overdose patient and cannot determine which drugs were involved in the overdose.
    d) Testing logistics (e.g., timing, cost): Obtaining samples from a variety of sources and shipping samples to a lab for testing is time intensive and costly. In addition, legal challenges when asking staff to pick up drug product samples and transport to the lab posed a barrier to testing logistics.
    e) Data limitations: Samples only include the date the substance was submitted and tested at the lab and not the date the sample was obtained. In addition, toxicology results cannot determine whether the drugs present in an individual's system were taken at the same time.
    f) Hospital participation: Recruitment of hospitals to participate in biosurveillance and retention of hospitals once onboarded is challenging in addition to the substantial burden on hospitals placed by extraction of data from medical requests.

g) Disruptions caused by the COVID pandemic: Many healthcare providers who were participating in MIDS-related work paused or stopped collecting samples. Health department staff with skills in ESSENCE were also in high-demand for COVID-19 tracking.
h) Partnerships (e.g., challenges in building trust): History of mistrust exists between law enforcement, public health, community partners, and especially between harm-reduction community partners and law enforcement.
i) Use of surveillance data: Historically, surveillance data on illicit drugs has not been routinely provided back to the community although MIDS programs are beginning to use this information to alert people who use drugs and law enforcement of adulterants in the drug supply.

- Opportunities and promising practices were also identified by MIDS workgroup participants to strengthen activities related to MIDS. These included the following:

a) Team-based models or multisectoral approach: Some formed partnership teams to overcome barriers that have historically prevented public health from working with public safety and vice versa to set up testing programs. Two national examples include the Overdose Response Strategy-State Teams or the multi-disciplinary Opioids Biosurveillance Task Force (OBTF).

b) Collaboration with HIDTA drug intelligence officers: A drug intelligence officer (DIO) is responsible for establishing points of contact with key federal, state, and local drug law enforcement representatives to promote awareness and utilization of HIDTA DIO Network as well as priority illicit drug supply intelligence requirements.

c) Building new partnerships (i.e. hospitals or law enforcement): Recipients recommend offering public health data to demonstrate the public health interest and investment in overdose prevention or contributing financially to the cost burden of testing, when possible, to purchase equipment or software.

d) Providing clarity around biosurveillance: The objective of MIDS biosurveillance is to identify the drugs consumed by individuals and determine which substances are contributing to fatal and non-fatal overdoses, pinpoint clusters of overdoses related to a specific drug, detect atypical overdose presentations, and detect the presence of unexpected chemicals in the local drug supply. Most workgroup participants discussed biosurveillance based on biological specimens received through ED from individuals experiencing an overdose. Based on discussions that occurred across CoP workgroups, there could be some misperceptions about biosurveillance, often referred to by workgroup members as toxicology testing.

Based on information gathered from all CoP workgroup discussions and presentations, CSTE identified recommendations for additional guidance and technical assistance to OD2A recipients on building capacity for data governance to facilitate data sharing and continuing to support collaborative learning across OD2A-funded jurisdictions. The insights gained from the conversations with subject matter experts and proposed recommendations will be used by CSTE to inform efforts to support public health jurisdictions implementing innovative surveillance strategies related to surveillance of monitoring the illicit drug supply.