



Using Biosurveillance Data for Action: Insights from Rhode Island

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CSTE Monitoring Illicit Drug Supply Workgroup

Presentation Overview



- Non-fatal Overdose Data in Rhode Island
- How Biosurveillance Can Provide Data For Action
- How We Can Share Biosurveillance Data
- Future Directions
- Key Takeaways

Non-Fatal Overdose Data in Rhode Island



Emergency Medical Services (EMS) Runs

- Provides counts of non-fatal opioid overdose EMS runs (people receiving EMS care for a suspected opioid overdose) and patient demographic information.

Emergency Department (ED) Visits

- Provides counts of non-fatal opioid overdose ED visits (patients receiving ED care for a suspected opioid overdose) and patient demographic information.

Biosurveillance (Toxicology)

- Provides information on substances found in urine or blood samples from patients who have experienced a suspected drug overdose and patient demographic information.

Non-Fatal Overdose Data in Rhode Island



How Can Biosurveillance Data be of Value to Rhode Island's Response?



Biosurveillance data provide the following information on non-fatal overdoses:

- Identifies and tracks the prevalence of substances within a specific time period.
- Provides a bigger picture of Rhode Island's drug supply as well as emerging drug trends.
- Provides information on stimulants and benzodiazepines, in addition to opioids and fentanyl (as of October 2021).

Value: Demographic Information



Provides **demographic data** for individuals who experienced a non-fatal overdose.

- Includes information such as sex, age group, and the number of overdoses over a certain time period.



Value: Data to Action



Allows the Rhode Island Department of Health (RIDOH) to:

- More accurately discern drug use trends.
- Identify novel drugs appearing in Rhode Island including fentanyl analogs.

Allows community partners to:

- Inform public education and municipal and statewide outreach efforts.
- Evaluate effectiveness of interventions.

How Does RIDOH Share Biosurveillance Data?



Rhode Island Department of Health: Drug Overdose Surveillance Data Hub



RIDOH's Drug Overdose Surveillance Data Hub

Rhode Island Department of Health (RIDOH)'s Drug Overdose Surveillance Data Hub provides several sources of non-fatal and fatal overdose data with a special focus on municipal, county, and statewide trends.

RIDOH's Overdose Surveillance Data Hub features the following:



Biosurveillance



Emergency
Department Visits



Emergency Medical
Service Runs



Integrated
Surveillance System



Overdose Fatalities



Prescription Drug
Monitoring
Program

The Data Hub adheres to a [Small Numbers Reporting Policy](#) to ensure the confidentiality of individual identities. Data are suppressed when counts are fewer than five. The time period of analyses may vary depending on the data source, data availability, and counts. Some data sources are updated more frequently than others.

health.ri.gov/od-datahub

Data Hub Creation Process



- Began with a format from other data hub pages, and then edited to fit our data needs.
- Drafted language for an overview and graphs.
- Focused on what made sense to share with the audience (data for action).
- Worked with communications staff to ensure language was suitable for a wide audience while balancing the need to express data-driven messaging.
- Launched on April 29, 2022.

Biosurveillance Data Hub Overview



Non-Fatal Overdose Biosurveillance Data

Overview:

RIDOH's State Health Laboratory (SHL) and Drug Overdose Surveillance Program use non-fatal overdose biosurveillance data to identify and monitor emerging drug usage trends in the state that lead to overdoses.

Biosurveillance involves testing that detects the presence of drugs in a person's body. Test results can tell us which substance(s) were present in individuals at the time of the overdose. This testing detects "parent" drugs or metabolites^{1,2} which can tell us the substance(s) ingested at the time of the overdose.

Starting in July 2019, RIDOH required all hospitals to submit urine specimens collected from patients who were admitted to emergency departments (EDs) for a suspected opioid overdose. Testing for opioids, opiates, and fentanyl analogs was done for urine specimens. These results cannot be used directly for indicating the specific substance(s) which caused the overdose. The presence of several substances in urine reflects the ingestion of substances up to several days prior to an overdose.

In October 2021, biosurveillance laboratory testing transitioned to the collection and analysis of blood specimens, which can provide clearer information on the substance(s) likely responsible for an overdose. Laboratory testing was expanded to identify stimulants and benzodiazepines in addition to opiates, opioids, and fentanyl analogs.

Analyses:

RIDOH uses two methods to analyze these data:

1. Overall data analyses identify and track the prevalence of substances within a specific time period (e.g., July 1, 2019 to June 30, 2021). Overall analyses provide a bigger picture of Rhode Island's drug usage as well as emerging drug trends.
2. Individual data tell us information about individuals who experienced a non-fatal overdose. Some of these data include sex, age group, number of substances in each sample, and the number of overdoses over time.

Data Limitations:

- For all patients receiving ED care for a suspected opioid overdose, specimens may not have been collected.
- Some urine or blood specimens might not be submitted to the SHL for testing.
- Information on the overdose location, patient residence, and race/ethnicity cannot be determined.

¹ A metabolite is a product created in a person's body when a substance or substances are broken down or metabolized.

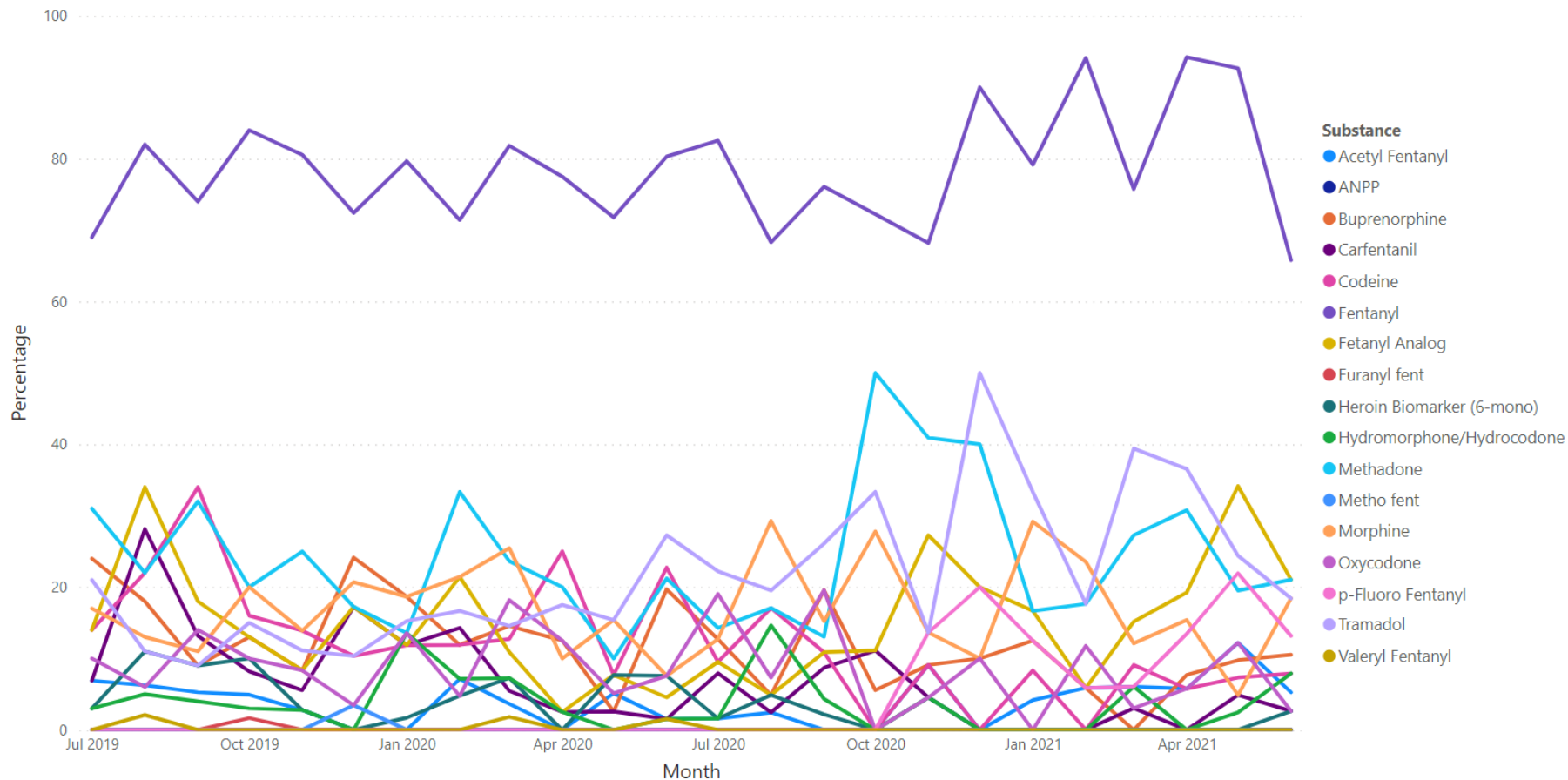
² For example, the presence of metabolite, O-desmethyl Tramadol, is due to the "parent" drug, Tramadol, being broken down in a person's body.

Biosurveillance Substance Data



Substance

All



Biosurveillance Data Dashboard



Location

☒ Rhode Island

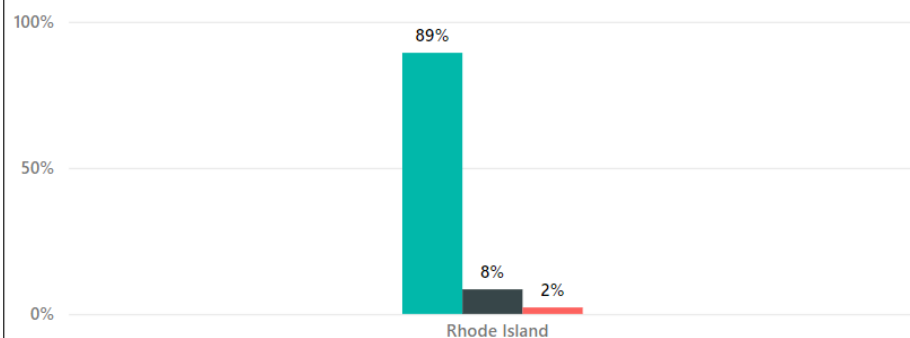
Timeframe

☒ July 2019-June 2021



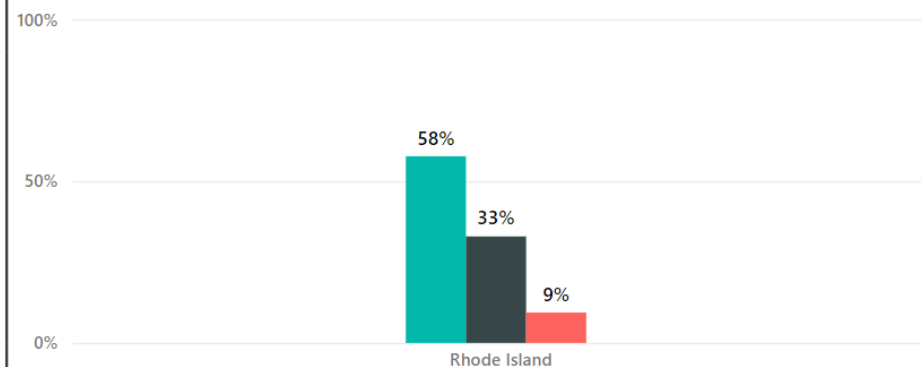
Percentage of Non-Fatal Drug Overdoses by Number of Overdoses and Location, July 2019-June 2021

1 Overdose 2 Overdoses 3+ Overdoses



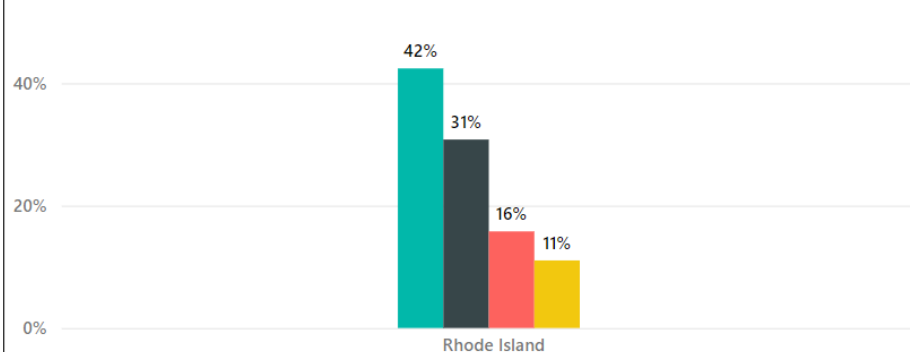
Percentage of Non-Fatal Drug Overdoses by Sex and Location, July 2019-June 2021

Male Female Unknown



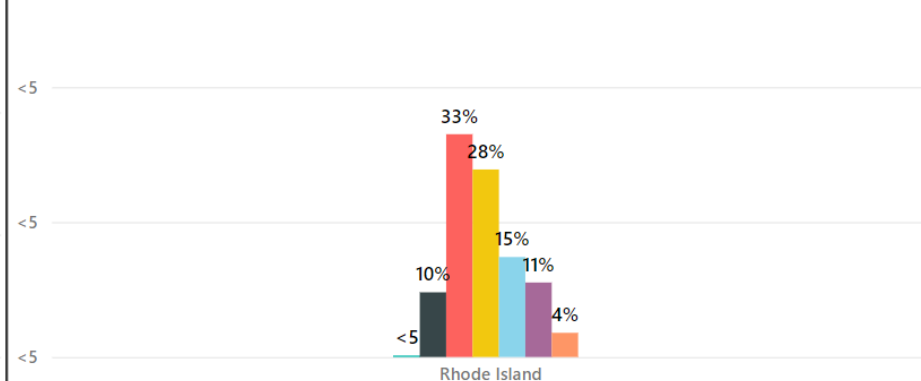
Percentage of Non-Fatal Drug Overdoses by Number of Substances Present and Location, July 2019-June 2021

1 Substance 2 Substances 3 Substances 4+ Substances



Percentage of Non-Fatal Drug Overdoses by Age and Location, July 2019-June 2021

Less than 18 18-24 25-34 35-44 45-54 55-64 65 or Older



Future Directions



- Update Biosurveillance webpage content and data, as needed.
- Increase frequency of data sharing with key partners.
- Explore adding information to our drug overdose health advisory alerts.
- Explore linkages to other data sources to obtain additional information (e.g., EMS and ED data).

Key Takeaways



Challenges

- Process for testing and analyzing data should be in place prior to sharing information with partners.
- Time to develop a webpage that will be useable for partners, including outreach and researchers.
- **Public health data informs action**
- **Constantly evolving dataset**
 - Will update and add new information to webpage, as needed.

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