What is Emergency Medical Services Data?

The Georgia Department of Public Health (DPH) uses a variety of data sources to track drug overdose trends across Georgia. Along with Emergency Department (ED) data, our most timely data source is Emergency Medical Services (EMS) data. Using EMS data, we can monitor overdose-related incidents to identify any potential overdose increases and clusters in near real-time. This rapid detection is essential for a timely and effective public health response. EMS data is particularly important because it detects overdoses that may not present to the emergency department. EMS data allow DPH surveillance systems to quickly detect overdose spikes and potential clusters, which could help prevent overdoses and lead to a better understanding of patient outcomes. **However, due to the nature of EMS treatment and documentation practices, overdose-related EMS trips are considered SUSPECT overdoses and are not meant to characterize the true burden of overdoses in Georgia.**

Because most EMS overdose cases are identified based on the narrative field, primary impression and secondary impression, it does not always reflect the patients' final diagnosis. For example, it may initially appear that a patient has overdosed, but the patient may receive a different diagnosis upon further medical examination. For this reason, overdoses identified by EMS are only **SUSPECT** overdoses. Additionally, variability in data documentation across EMS agencies can make it difficult to interpret the reason for a patient visit. For more information on the EMS drug overdose case definition, see here.

Emergency Medical Services Data Use

By searching the responses in eSituation.11, eSituation.12, eInjury.01, eMedications.03, and eNarrative for ICD-10 codes and text indicative of a drug overdose, these data can be used as an early detection method for a rise in overdoses, potential drug overdose clusters and to alert DPH and partners of events that require immediate public health action. DPH monitors EMS data weekly for unusual overdose activity.

Data Reliability and Representation

In Georgia, each EMS trip is required to be documented and reported to DPH within 24 hours. Because multiple EMS providers may report to a scene, EMS data may contain duplicate reports for a single incident. Additionally, the actual number of EMS systems reporting to GEMSIS can vary from day to day and from week to week, therefore the data quality can also have variance over time. There are also seasonal variations in EMS data caused by increases and decreases in the total number of trips due to occurrences like holidays and seasonal population changes (e.g. school, vacation) that could affect data quality. These duplications and data changes cause fluctuations in visit numbers and are important to consider when interpreting EMS data. Finally,

EMS data reflect the number of trips rather than the number of cases; patients with repeat overdoses are potentially counted multiple times.

Because these data only represent **SUSPECT** overdoses, EMS data are not meant to characterize the true burden of overdoses in Georgia. Due to the above limitations, EMS data are often reported in rates and percent change, rather than visit counts. We can better account for these limitations by putting these data in the context of population size and/or showing trends.