

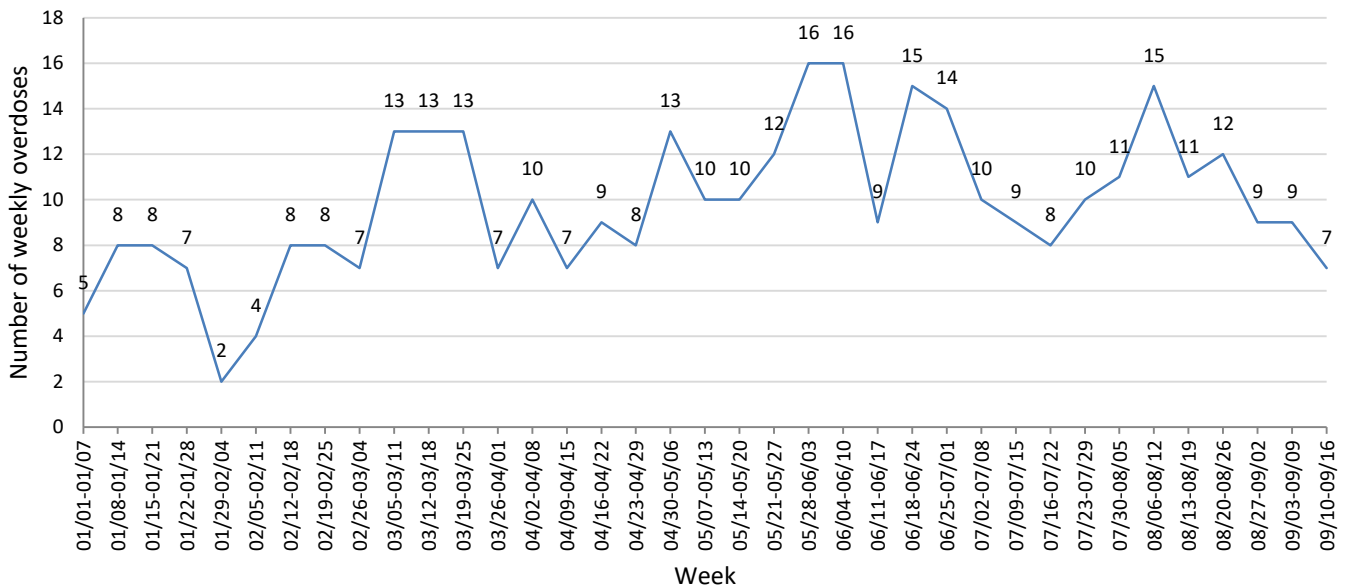
## 9-1-1 Overdose Response: September 18, 2017

Between, January 1 - September, 16 2017, emergency responses for opioid overdoses ranged from 2-16 overdoses, with the mean of 10 overdoses per week.

### Background

One way to track the number of non-fatal overdoses is to review ambulance responses related to overdose, usually distinguishable by documentation of naloxone administration. Naloxone is a synthetic antagonist of narcotic drugs that is typically administered to reverse the effects of opioids—especially in the emergency treatment of opioid overdose. In July of 2013, Oregon passed legislation to allow laypersons to administer naloxone, and in 2015, many law enforcement agencies began carrying naloxone. In 2015, Oregon expanded its Good Samaritan Law, which protects overdose bystanders from being prosecuted for drug-related crimes in the event that they call 9-1-1 for medical assistance.

**Number of Weekly Confirmed Opioid Overdose Cases from American Medical Response, Clackamas and Multnomah Counties, and Metro West, Washington County January 1, 2017-September 16, 2017**



## 9-1-1 Overdose Response

### Methods

Multnomah and Clackamas counties both use American Medical Response (AMR) as the transport agency for 9-1-1 emergencies, while Washington County uses Metro West. The case definition used for identifying non-fatal overdoses includes 9-1-1 overdose calls when naloxone was administered and the patient became more alert and responsive after administration (increase of Glasgow Coma Scale (GCS)  $\geq 3$ .)

We reviewed 5% (n=88) of all cases who were administered naloxone from January 1, 2016-August 22, 2017. The positive predictive value (true positive cases) was high, 92.0%, but the negative predictive value was low at 52.4%.

Poisson distribution was used to determine if the weekly opioid overdoses were in the expected limits.

### Limitations

This methodology may not reflect the actual number of overdoses for multiple reasons. First, if the patient was unconscious or in a state of cardiac arrest, and the paramedics were not able to determine whether the patient's condition was the result of an opioid overdose (and naloxone was not administered), then the event would not be coded as an overdose. Second, 9-1-1 is not always called for overdoses. Third, the algorithms used to capture naloxone administration may miss cases. The negative predictive value suggests that we are missing roughly 50% of the opioid overdose cases based on our current case definition.

Cases that aren't captured in the EMS system include instances where Portland Fire and Rescue arrived on the scene before EMS and therefore naloxone administration is not documented (i.e., false negatives). In addition, if naloxone was administered by a bystander instead of EMS, those cases are likely not captured. Changes in state law that occurred in 2013 increased the availability of naloxone to laypersons. In other words, using only EMS data most likely undercounts the number of overdoses.

