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June 21, 2017

Dear Governor Rauner and Members of the General Assembly:

The Illinois Department of Public Health (IDPH) is pleased to share with you the 2017 Opioid Overdose Semiannual Report. This report provides details on opioid overdoses in the State of Illinois for 2016 and also contains provisional data for 2017. Overdose data are also provided from previous years to allow for comparisons. The Opioid Overdose Semiannual Report consolidates the overdose reporting requirements under the Hospital Licensing Act (210 ILCS 85/6.14g) and The Counties Code (55 ILCS 5/3-3013).

This report includes information on overdose deaths, including heroin and opioid analgesics, by county, sex, age, race, and ethnicity. Additionally, it includes non-fatal overdose information reported by hospitals to IDPH pursuant to the Hospital Licensing Act (210 ILCS 85/6.14g(b)).

Two key findings of our evaluation should be highlighted:

1. The data show an increase in deaths due to all drugs, heroin, and opioid analgesics.
2. Inpatient hospitalization and emergency department visit data show an increase in visits due to opioid overdose.

Continuing reporting and updates may be found on the IDPH website, specifically at <http://www.dph.illinois.gov/topics-services/prevention-wellness/prescription-opioids-and-heroin>, <http://www.dph.illinois.gov/topics-services/prevention-wellness/prescription-opioids-and-heroin/idph-data> and <http://www.dph.illinois.gov/data-statistics/vital-statistics/death-statistics/more-statistics>.

I hope you find this report informative and useful as we work together to address the opioid crisis facing the State of Illinois. Any questions or requests for technical assistance should be directed to Heidi Trenholm at Heidi.Trenholm@illinois.gov.

Very truly yours,

Nirav D. Shah, M.D., J.D.
Director, Illinois Department of Public Health

I. Opioid Overdose Deaths

A. Background

The Counties Code (55 ILCS 5/3-3013) requires opioid overdose deaths be reported to IDPH through the submission of death certificates from coroners, medical examiners, or attending physicians. Following their submission to IDPH, the death certificates are submitted to the National Center for Health Statistics (NCHS) to assign *International Classification of Disease, Tenth Revision* (ICD-10) codes using its automated SuperMICAR software.

In reporting opioid overdose deaths, IDPH searches the death records of Illinois residents for deaths in which drug overdose was reported as the underlying cause of death (ICD-10 codes X40-X44, X60-X64, X85, Y10-Y14). Opioid overdose deaths are considered a subset of drug overdose deaths in which any opioid drug was reported as a contributing cause of death (ICD-10 codes T40.0, T40.1, T40.2, T40.3, T40.4, and T40.6). IDPH classifies opioid overdose deaths into three categories: any opioid, heroin, and opioid analgesics. The opioid analgesic category includes drug overdose deaths in which any opioid analgesic was reported as a contributing cause of death (ICD-10 codes T40.2, T40.3, and T40.4). Opioid analgesics include natural (e.g., morphine and codeine) and semi-synthetic opioid analgesics (e.g., oxycodone, hydrocodone, hydromorphone, oxymorphone), methadone, and synthetic opioid analgesics other than methadone (e.g., fentanyl and tramadol). IDPH does not collect data related to the legality of manufacturing or obtaining the opioids used in any given opioid analgesic overdose death.

B. Status Of Reporting

IDPH began posting monthly drug overdose reports in January 2016. These reports can be found on the Vital Statistics section of the IDPH website (<http://www.dph.illinois.gov/data-statistics/vital-statistics/death-statistics/more-statistics>).

The monthly report's format on the IDPH website is evolving in an effort to provide the most accurate and useful information for various stakeholders, including law enforcement, local health departments, and the general public. The report now breaks down overdose deaths from all drugs, opioids, heroin, and opioid analgesics.

There have been challenges in the creation of this report. Overdose deaths are a subset of deaths classified as injuries, which also includes suicides, homicides, and accidental deaths. Due to the nature of these death investigations, including the determination of intent and the cause of death, reporting can be delayed. Reliable data are not available until a cause of death has been determined by the coroner or medical examiner, and the finalized death certificate is coded by the National Center for Health Statistics, which may take months. While real-time data would be ideal, the submission of complete and accurate death data necessarily takes time.

Another challenge in reporting opioid overdose deaths is the limitation in testing for specific drugs. Some tests, such as the test for heroin (6-MAM), are only effective for a short period of time after death. Often, when an individual has died of a heroin overdose, the toxicology tests come back positive for morphine rather than heroin. This may result in some heroin deaths being misclassified as morphine deaths.

IDPH has recently completed a survey of coroners across the state designed to inform IDPH about their methods for conducting overdose death investigations and reporting their findings. Thirty-seven coroners' offices responded to the survey. IDPH will be analyzing these responses and working with coroners to identify issues and opportunities for improving overdose death reporting.

C. Overall Trends

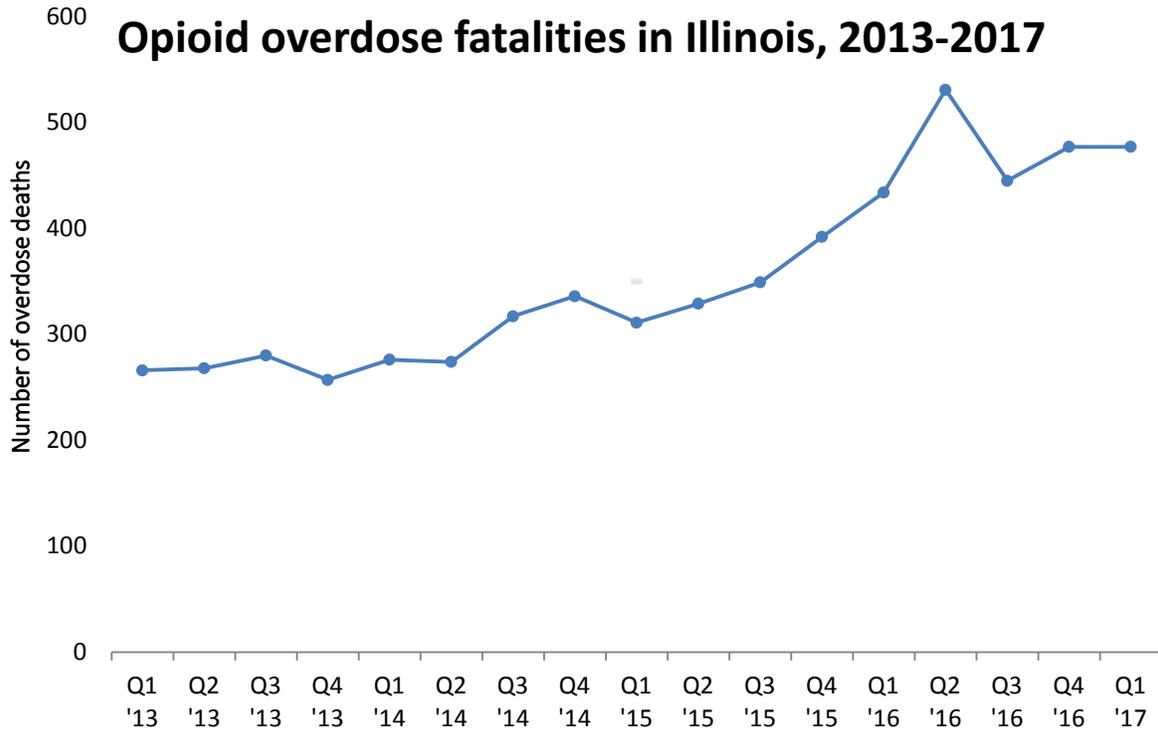
Opioid overdose deaths have been rising dramatically in recent years. According to the 2016 provisional data (as of June 1, 2017), there were 1,888 opioid deaths in the State of Illinois, including heroin and opioid analgesics, a substantial increase over 1,203 in 2014 and 1,382 in 2015.

Much of this increase is from deaths from opioid analgesics, which include prescription drugs such as oxycodone and hydrocodone, as well as drugs that may be prescribed but are often produced illegally, such as fentanyl.

The City of Chicago has been impacted significantly by these overdoses. In 2015, there were 111 deaths due to overdose on opioid analgesics in Chicago. In 2016, there were 403 deaths from the same cause, an increase of 263%. Suburban Cook County and all of the Collar Counties also experienced substantial increases in opioid overdoses through 2016. Rural areas have experienced increases in death rates, but Chicago and the surrounding areas account for the greatest total number of overdose deaths.

Table 1 illustrates the growing epidemic of opioid overdoses in Illinois. While 2016 and 2017 data are not yet finalized, the pattern is clear: the number of opioid overdose deaths is continuing to increase significantly.

Table 1: Illinois opioid overdose deaths by quarter, 2013-2017



II. Opioid Overdose Hospitalizations And Emergency Department Visits

A. Background

Under the Hospital Licensing Act (210 ILCS 85/6.14g(b)), emergency departments (EDs) are required to report cases to IDPH within 48 hours of providing treatment for a drug overdose or after a drug overdose is confirmed. There are two sources for these data: (1) syndromic surveillance, which is real-time data based on national standards for Meaningful Use and (2) the hospital discharge dataset, which is submitted on a quarterly basis and has a five-month reporting delay due to ICD-10 coding and additional review procedures.

IDPH has established an automated, real-time syndromic surveillance system with all acute care hospitals in Illinois with an ED. This dataset includes free text of the diagnosis, chief complaint, and details of the reason for visit from the patient's self-report and the provider's notes. These data are available to local and state health departments to track daily trends, review spatial distribution to the county or ZIP code, and for comparisons with national and Health and Human Service regional data. Dashboards are available for hospital and health department staff to view real-time analysis, including detection alerts when cases exceed baseline levels. In collaboration with the Illinois Health and Hospital Association, IDPH began piloting a process in November 2016 to utilize syndromic surveillance to fulfill the 48-hour reporting requirement in the Hospital Licensing Act. The law requires that IDPH promulgate administrative rules to effectuate this reporting.

The hospital discharge dataset was used for the analysis in this report because historical data are available to analyze trends.

B. Overall Trends

ED visits and inpatient hospitalizations related to opioid overdose have continued to increase each year. The most recent full-year data show a 15.9% increase in inpatient hospitalizations and a 23.9% increase in ED visits related to opioid overdose from 2014 to 2015. Furthermore, there was a 77% increase in ED visits and a 33% increase in hospitalizations related to opioid overdose in the first three quarters of 2016 compared to the same period in 2015.

Tables 2 and 3 show a stable increase of 25-40% in Hospitalizations and 25-56% in ED visits each quarter of 2016 compared to the same period in 2015.

Table 2. ED Visits related to opioid overdose by quarter, 2014-2016

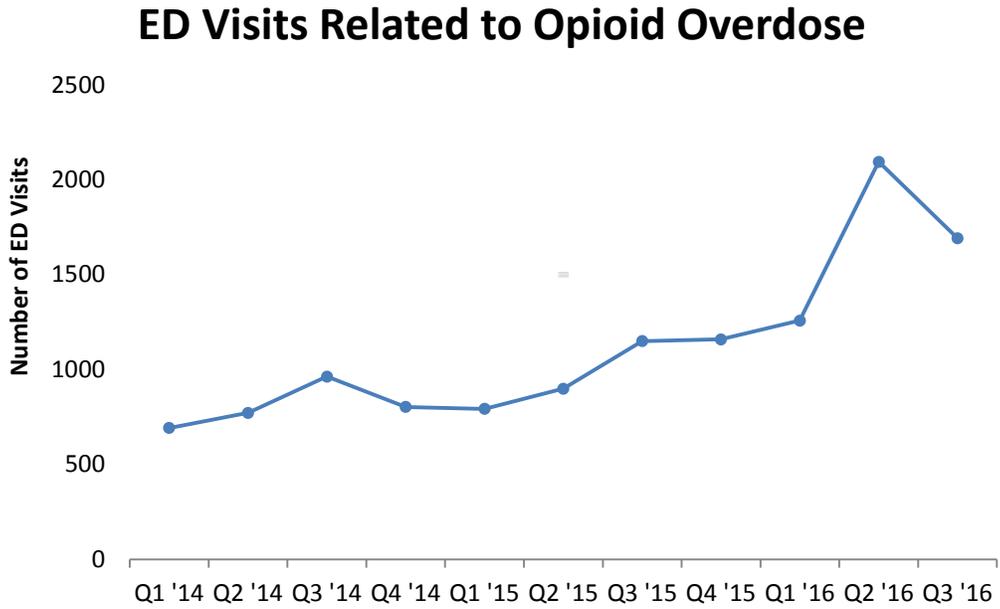


Table 3. Inpatient hospitalizations due to opioid overdose by quarter, 2014-2016

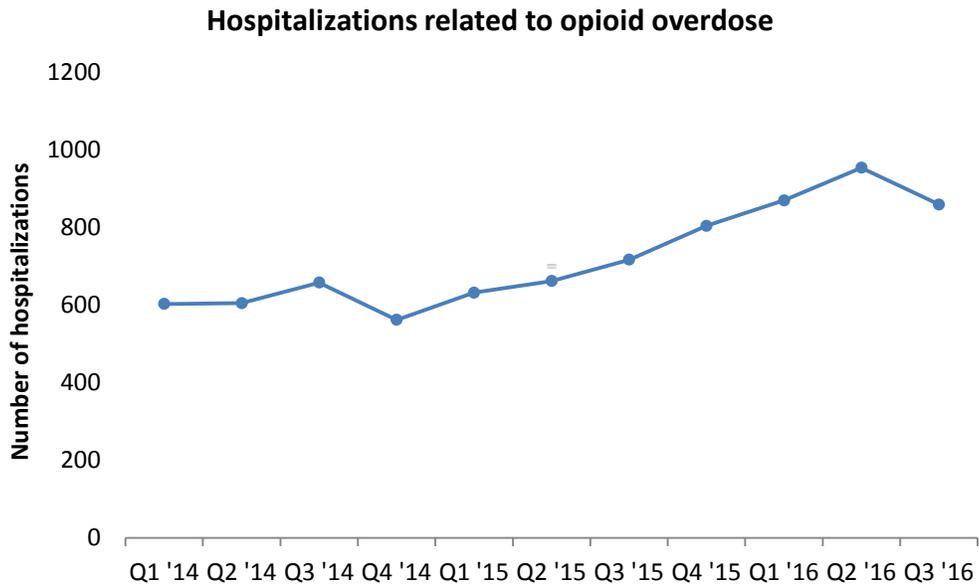


Table 4. ED visits related to opioid overdose, excluding heroin by quarter, 2014-2016

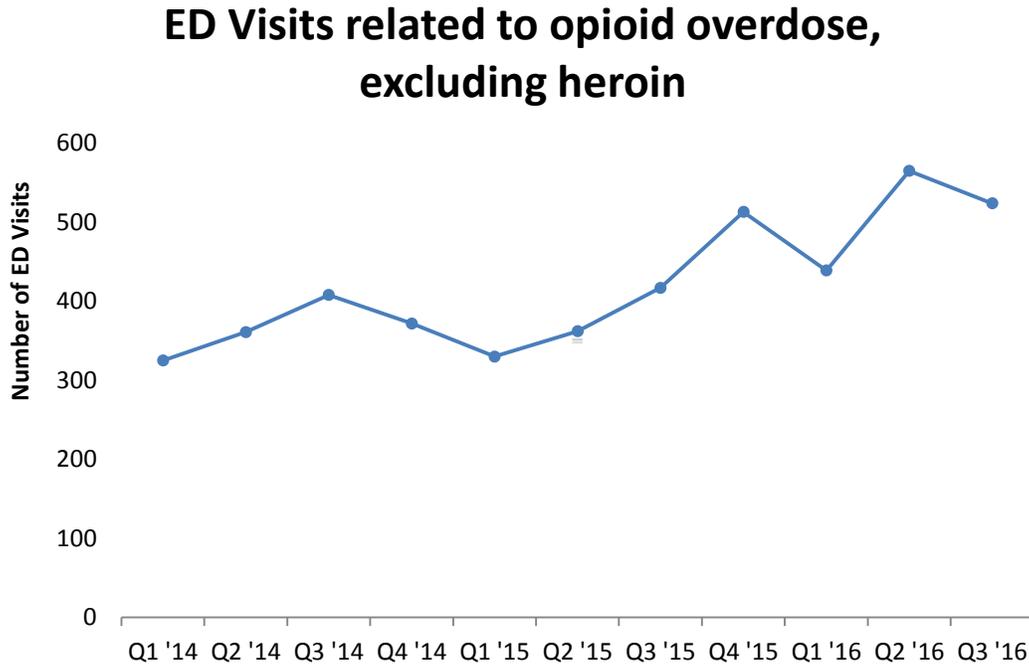
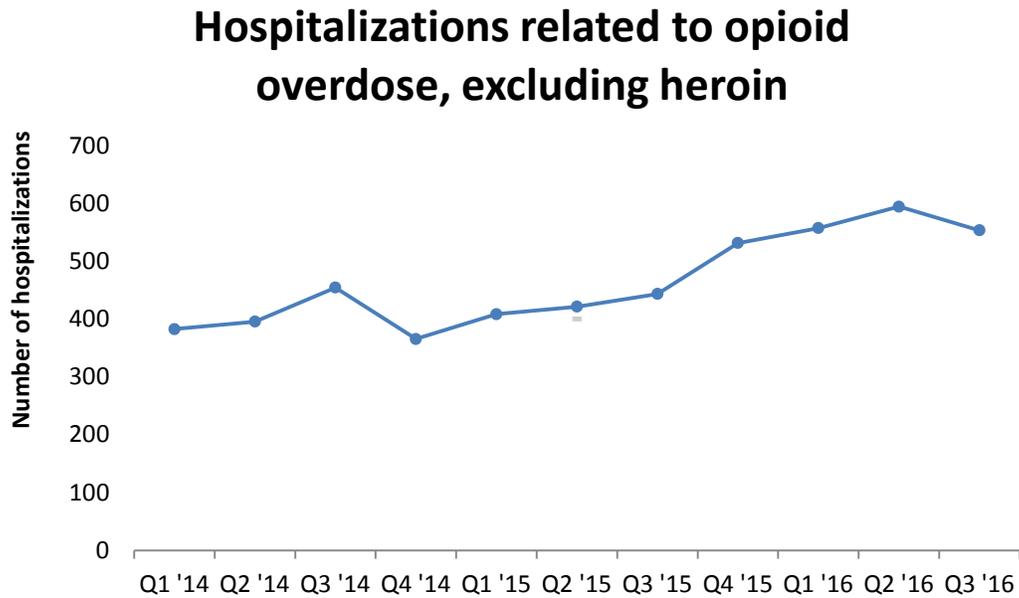


Table 5. Inpatient hospitalizations due to opioid overdose, excluding heroin by quarter, 2014-2016



The largest increase in opioid overdose-related ED visits and hospitalizations is from heroin overdoses (Table 6 and Table 7). Heroin overdoses increased 76% in Q1, 280% in Q2, and 64% in Q3 compared to the same quarters of 2015.

Table 6. ED visits related to heroin overdose by quarter, 2014-2016.

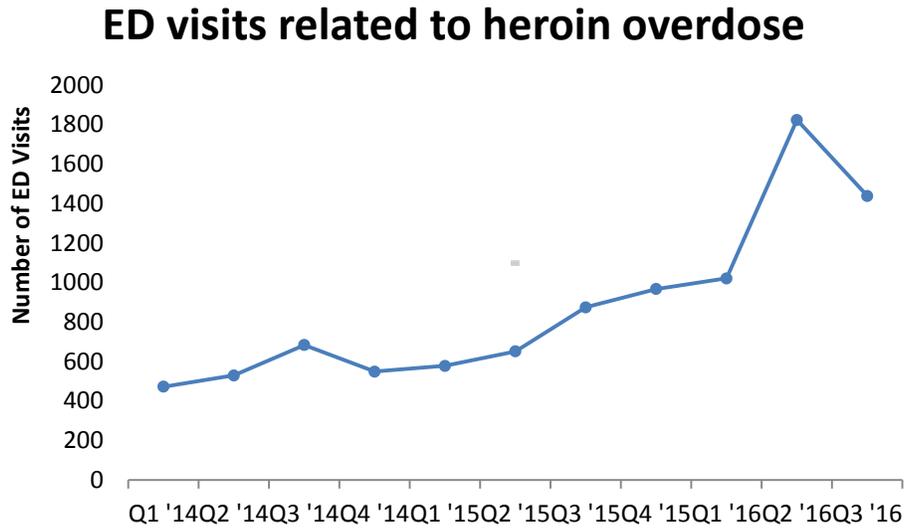


Table 7. Hospitalizations related to heroin overdose by quarter, 2014-2016

