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To the Honorable JB Pritzker, Governor
and Members of the General Assembly:

This report provides details on opioid overdoses in the State of Illinois for the year 2019 and the first two quarters of 2020. Overdose data are also provided from the previous years to allow for comparisons. The Opioid Overdose Semiannual Report consolidates the overdose reporting requirements under the Hospital Licensing Act (210 ILCD 85/6.14g) and the Counties Code (55 ILCS 5/3-3013).

The report includes information on overdose deaths, including heroin and opioid analgesics. The 2019 and 2020 fatal overdose data are provisional, and numbers may change as cases are reviewed. Additionally, it includes non-fatal overdose information reported by hospitals to the Illinois Department of Public Health (IDPH) as required in the Hospital Licensing Act (210 ILCS 85/6.14g(b)). This semiannual report updates the 2019 semiannual report, adding more recent data and trends.

In 2019, opioid overdose deaths among Illinois residents increased 3% from 2,167 deaths in 2018 to 2,233 deaths in 2019. Hospital emergency department visits and emergency medical services (EMS) encounters for opioid-related incidents also increased; although, hospital admissions for opioid-related incidents decreased.

Since the data on fatal opioid overdoses are still provisional, the report does not contain demographic data of the opioid overdose deaths. However, the hospital and EMS data indicate a continuation of the previously reported racial disparities, with Non-Hispanic Black or African-American populations continuing to be disproportionately affected by opioids.

Continuing reporting, updates, and information may be found on the IDPH website, at <http://dph.illinois.gov/opioids/home> and <https://idph.illinois.gov/OpioidDataDashboard/>. Among the many resources on the IDPH website are the Illinois Opioid Action Plan and the Illinois Action Plan Implementation Report, which are located under “Data and Reporting” and “Publications.”

I hope you find this report informative and useful as we continue working together to address the opioid crisis facing the State of Illinois.

Sincerely,

Ngozi Ezike, MD
Director
Illinois Department of Public Health

Statewide Semiannual Opioid Report
Illinois Department of Public Health
September 2020



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Opioid Overdose Deaths

Background

Opioid overdose deaths are reported to the Illinois Department of Public Health (IDPH) through the submission of death certificates from coroners, medical examiners, or attending physicians. After the death certificates are received by IDPH, they are submitted to the National Center for Health Statistics (NCHS) to assign *International Classification of Disease, Tenth Revision* (ICD-10) codes using NCHS's SuperMICAR software.

In reporting opioid overdose deaths, IDPH identifies those death records of Illinois residents where 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 reports opioid overdose deaths in 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.

Status of reporting

IDPH began posting monthly drug overdose reports in January 2016 and 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>).

IDPH continues to refine the monthly report to provide the most accurate and useful information for various stakeholders, including law enforcement, local health departments, and the general public. The report 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 include 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 can 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 of testing for specific drugs. Some tests, such as the test for heroin (6-MAM), are only effective for a short period. 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.

Recent Trends

For 2019, the number of opioid deaths has increased 3% from 2,167 deaths in 2018 to 2,233 deaths in 2019. * Furthermore, overdose deaths are currently trending upward at this point in 2020, * rising 36.5% from 197 deaths in January to 269 deaths in May (Fig. 2). For comparison, overdose deaths

during the same time (January – May) in 2019 also showed an increase of 58% from 143 in January 2019 to 220 in May 2019 (Fig. 2).

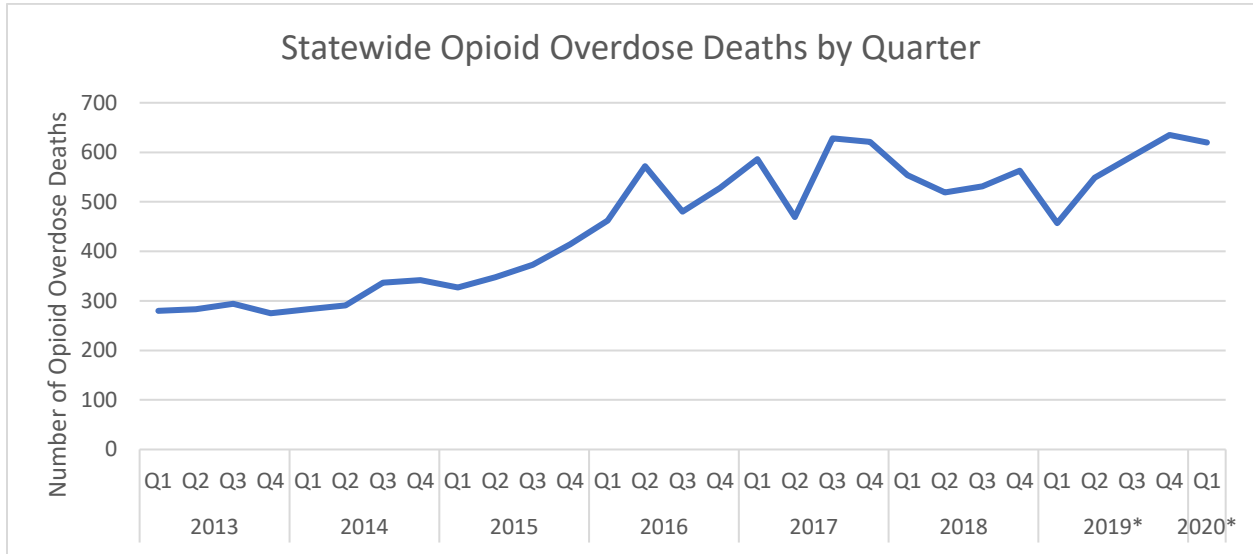


Figure 1. Statewide opioid overdose deaths by quarter as reported by Illinois Vital Records System. The numbers of opioid overdose deaths in 2019* and 2020* are provisional, and numbers may change as cases are reviewed.

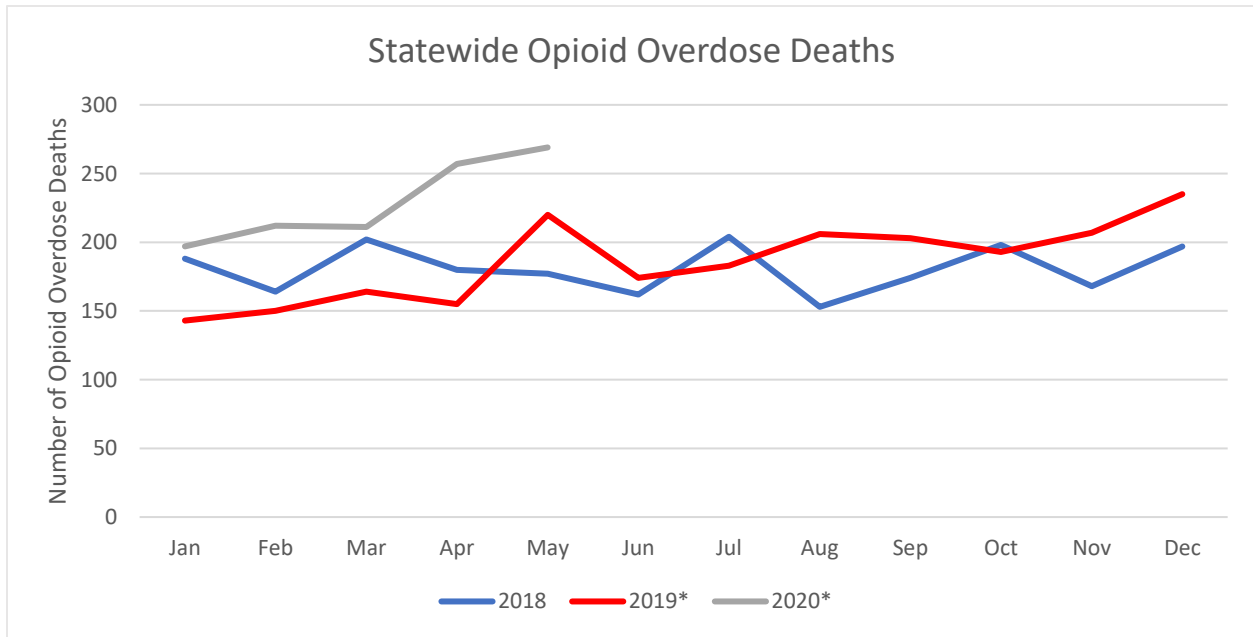


Figure 2. The number of statewide overdose deaths in 2018, 2019* and 2020* as reported by Illinois Vital Records System. *Data are provisional, and numbers may change as cases are reviewed.

Opioid Overdose Hospitalizations and Emergency Department Visits

Background

IDPH captures opioid overdose morbidity data from two sources: 1) syndromic surveillance, near real-time data based on national standards for Meaningful Use and 2) 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.

Under the Hospital Licensing Act (210 ILCS 85/6.14g(b)), emergency departments (ED) are required to report cases to IDPH within 48 hours of providing treatment for a drug overdose or after a drug overdose is confirmed. IDPH has established an automated, near real-time syndromic surveillance system with acute care hospitals in Illinois with an ED. This dataset includes free text (unstructured text fields) of the diagnosis, chief complaint, and details of the reason for visit from patient self-report and provider 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 U.S. Department of Health and Human Service (HHS) 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 Hospital Association, IDPH piloted a process in November 2016 to utilize syndromic surveillance to fulfill the 48-hour reporting requirement in the Hospital Licensing Act. Administrative rules to effectuate this reporting became effective May 24, 2018; the rules were published in the Illinois Register June 8, 2018 {77 IAC 250.1520 (g)}. As of December 12, 2019, 117 EDs were compliant in submitting both opioid overdose and naloxone information to IDPH and registering on the IDPH-designated portal to validate their reported data. Reporting of opioid overdose data alone is much higher, with 185 EDs submitting this information. A list of compliant and non-compliant hospitals can be found on the IDPH opioid website (<http://www.dph.illinois.gov/opioids/48hr-hospitalod-report/compliant-facilities>).

Opioid Overdose Emergency Department Visits

Opioid overdose ED visits are reported by hospitals through the National Syndromic Surveillance Program to fulfill their required reporting to IDPH. It should be noted that the dataset is complete only from 2016 forward since not all hospitals were reporting opioid overdoses from 2013 to 2015. The ED visits do not include patients admitted to the hospital.

The number of ED visits related to opioid overdose have continued to rise since 2013. From 2017 to 2018, the number of ED visits increased 2.3% from 11,354 in 2017 to 11,613 in 2018. However, from 2018 to 2019, the number of ED visits dramatically increased by 21.9% to 14,158 in 2019 (Fig. 3). ED visits for opioid overdose continued to increase in the first two quarters (Q) of 2020.

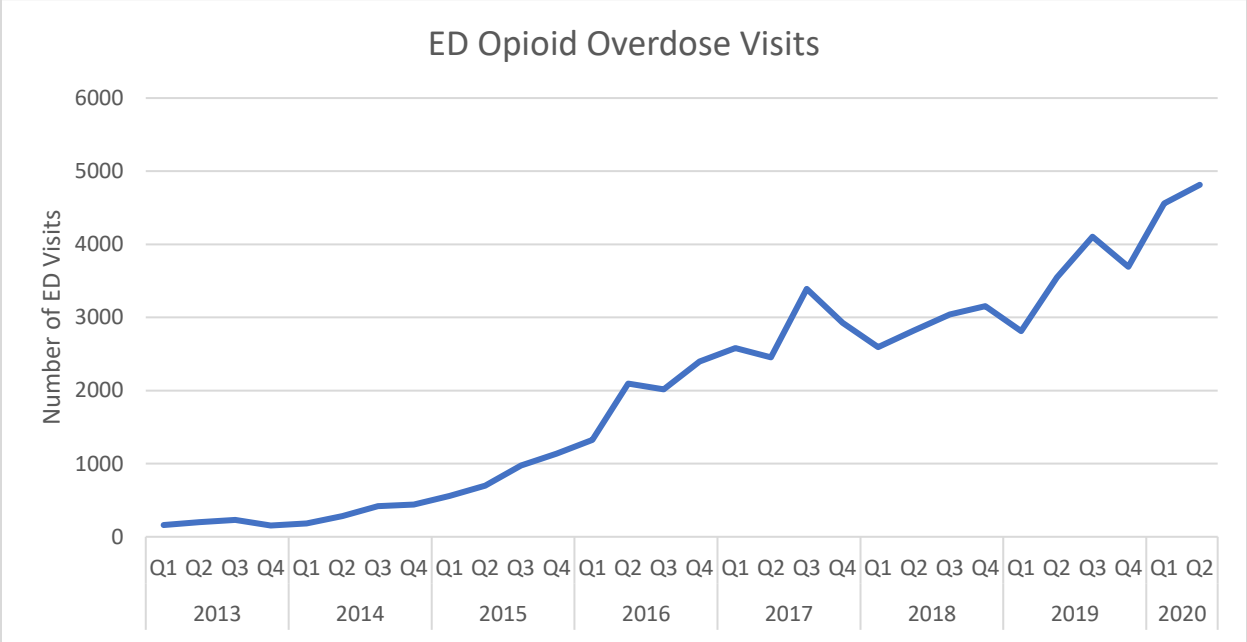


Figure 3. The number of ED visits for opioid overdose, quarterly (Q) since 2013, as reported by the National Syndromic Surveillance Program. ED visits that lead to admission to the hospital were not included.

There is a striking racial disparity in the number of ED visits per 100,000 capita for opioid overdose in 2019 and 2020 with Black or African-American/Not-Hispanic populations visiting the ED on average 5.5 times more often than White/ Not Hispanic populations and on average 6 times more often than Hispanic populations (Fig. 4). It should be noted that on average, Other/Not Hispanic and Unknown/Not Hispanic were 8% and 0.2% of the ED opioid overdose visits, respectively.

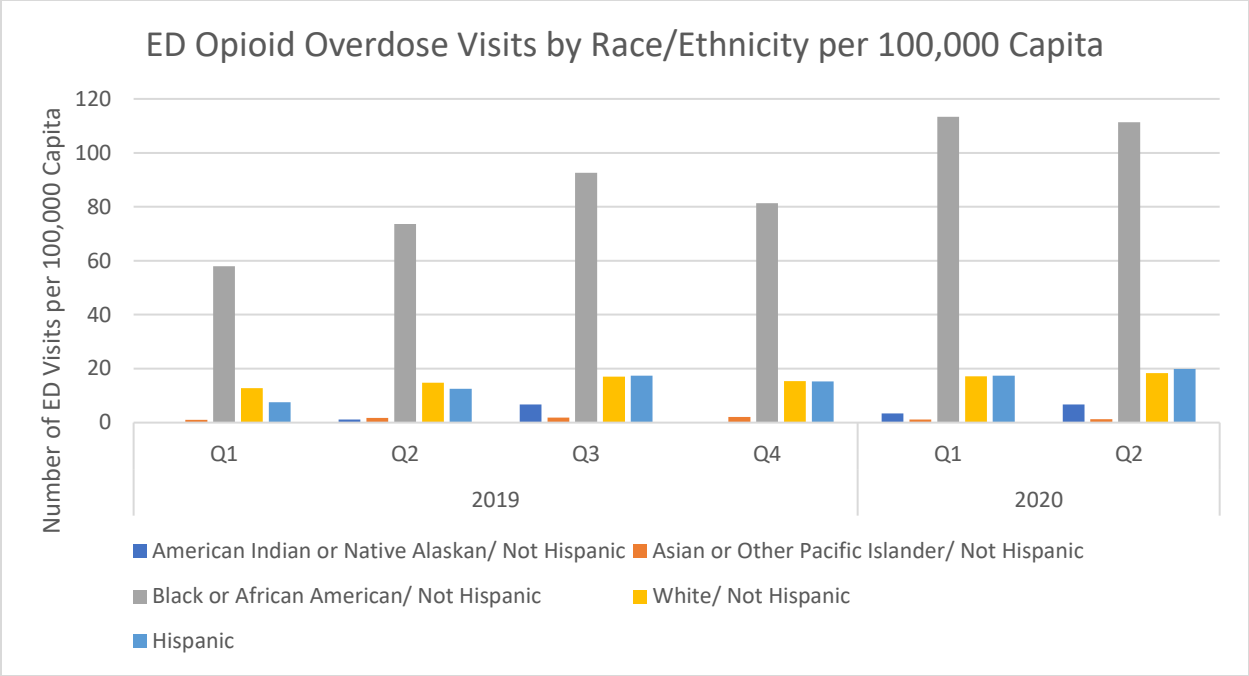


Figure 4. The number of ED visits for opioid overdose by race/ethnicity, quarterly for 2019 and 2020, as reported by the National Syndromic Surveillance Program. ED visits that lead to admission to the hospital were not included.

On average, from 2019-2020, males comprised 72.4% of all opioid overdose ED visits (Fig. 5). Additionally, the 50-59 age group accounted for 27.3% of all 2019-2020 ED opioid overdose visits (Fig. 6). The next highest group was the 30-39 age group, which accounted for 18.8%, followed by the 40-49 and 60-69 age groups, which accounted for 17.3% and 17.1%, respectively (Fig. 6).

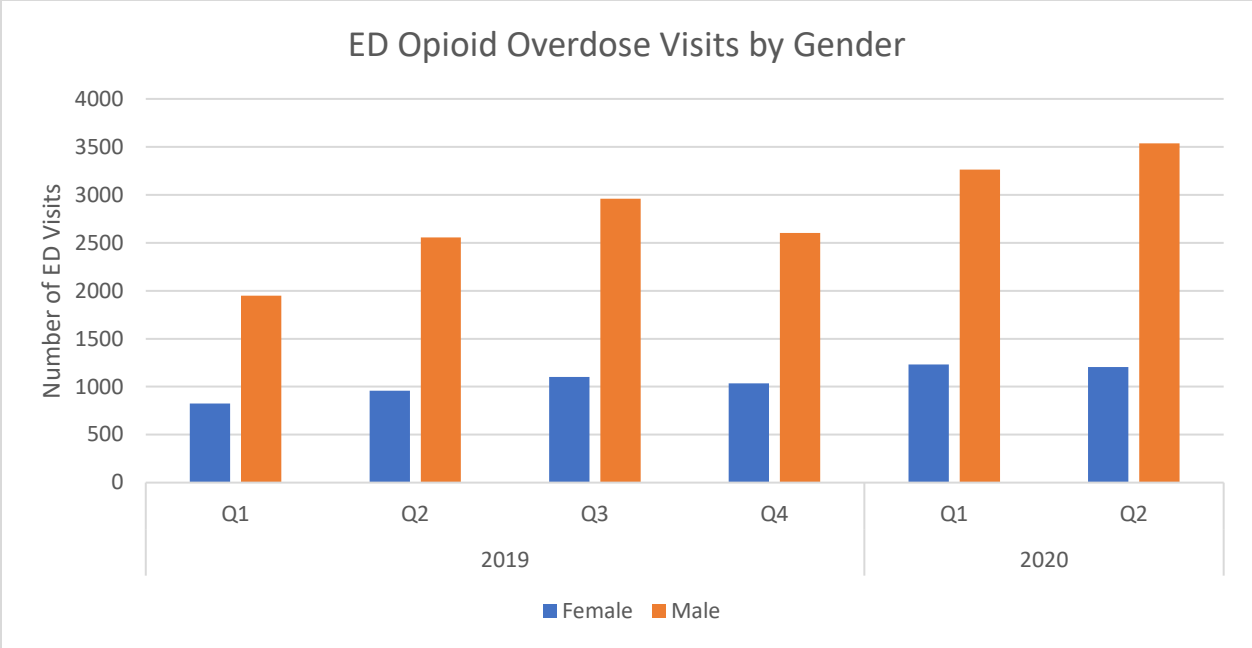


Figure 5. The number of ED visits for opioid overdose by gender, quarterly for 2019 and 2020, as reported by the National Syndromic Surveillance Program. ED visits that lead to admission to the hospital were not included.

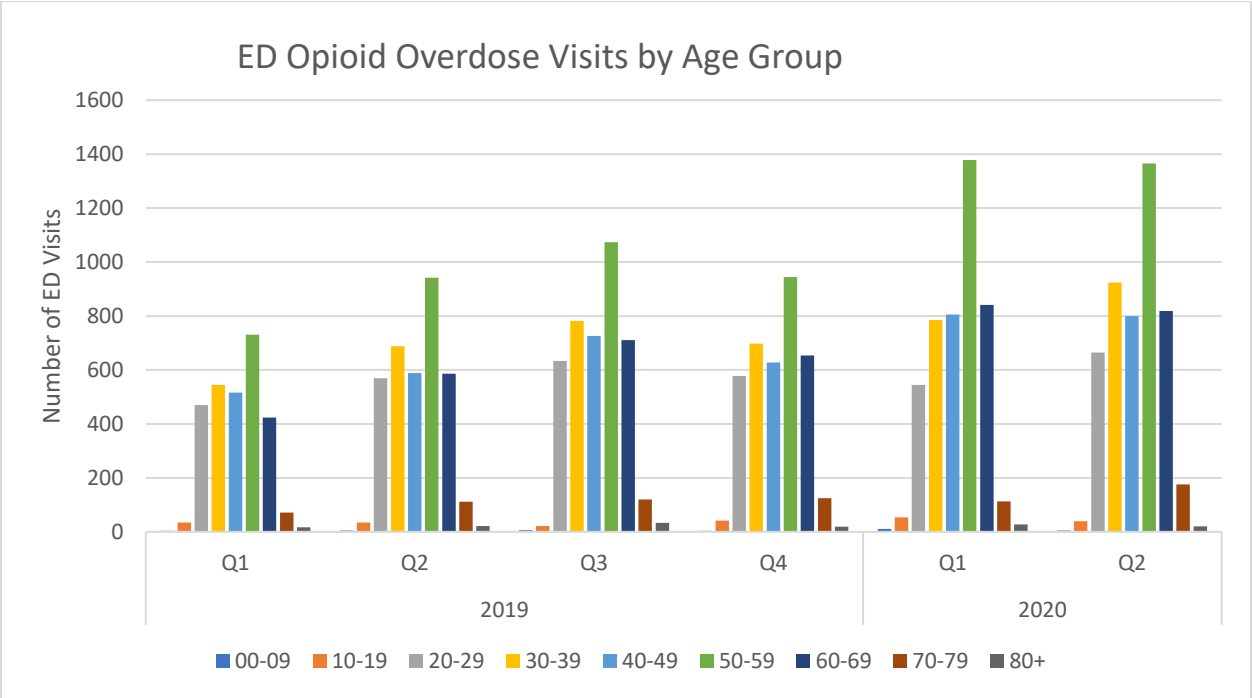


Figure 6. The number of ED visits for opioid overdose by age group, quarterly for 2019 and 2020, as reported by the National Syndromic Surveillance Program. ED visits that lead to admission to the hospital were not included.

Opioid Overdose-Related Hospitalizations

The Hospital Discharge Dataset has a reporting delay to allow for ICD-10 coding and review procedures. Data is summarized here through Q4 of 2019.

The number of hospitalizations related to opioid overdose have declined for the second year in a row. From 2017 to 2018, the number of hospitalizations decreased 6% from 3,434 hospitalizations in 2017 to 3,226 hospitalizations in 2018. There were 3,115 hospitalizations in 2019 representing a 3.4% decrease from 2018 (Fig. 7). The decrease in hospitalizations seems contrary to the continuously increasing number of ED visits for opioid-related issues. However, opioid overdoses that are quickly reversed do not usually require hospitalization; therefore, one would not necessarily expect the numbers of hospitalizations to rise in tandem with the ED visits.

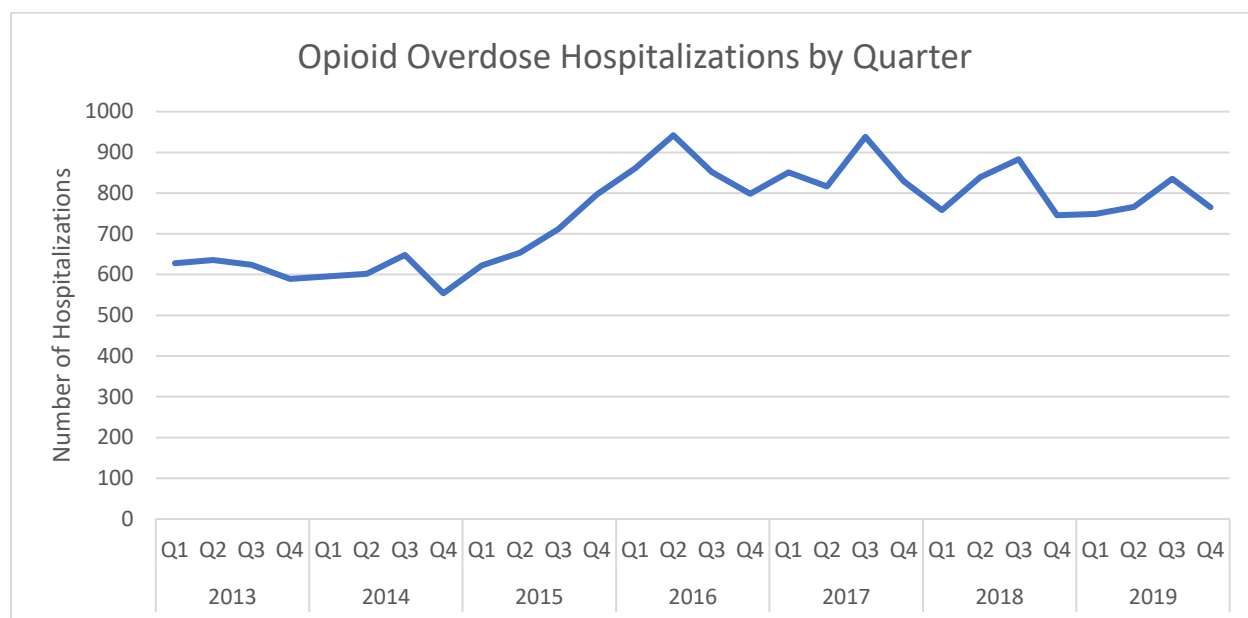


Figure 7. The number of hospitalizations for opioid overdose quarterly from 2013-2019, as reported in the Hospital Discharge Dataset.

The racial disparity continued in the number of hospitalizations per 100,000 capita for opioid overdose as was observed in ED visits. In 2018 and 2019, Black or African-American/Not-Hispanic populations were hospitalized on average 7.9 times more often than Hispanic populations and on average 2.8 times more often than White/Not-Hispanic populations (Fig. 8). It should be noted that on average, Other/Not-Hispanic made up 7.5% of the hospitalizations in both years.

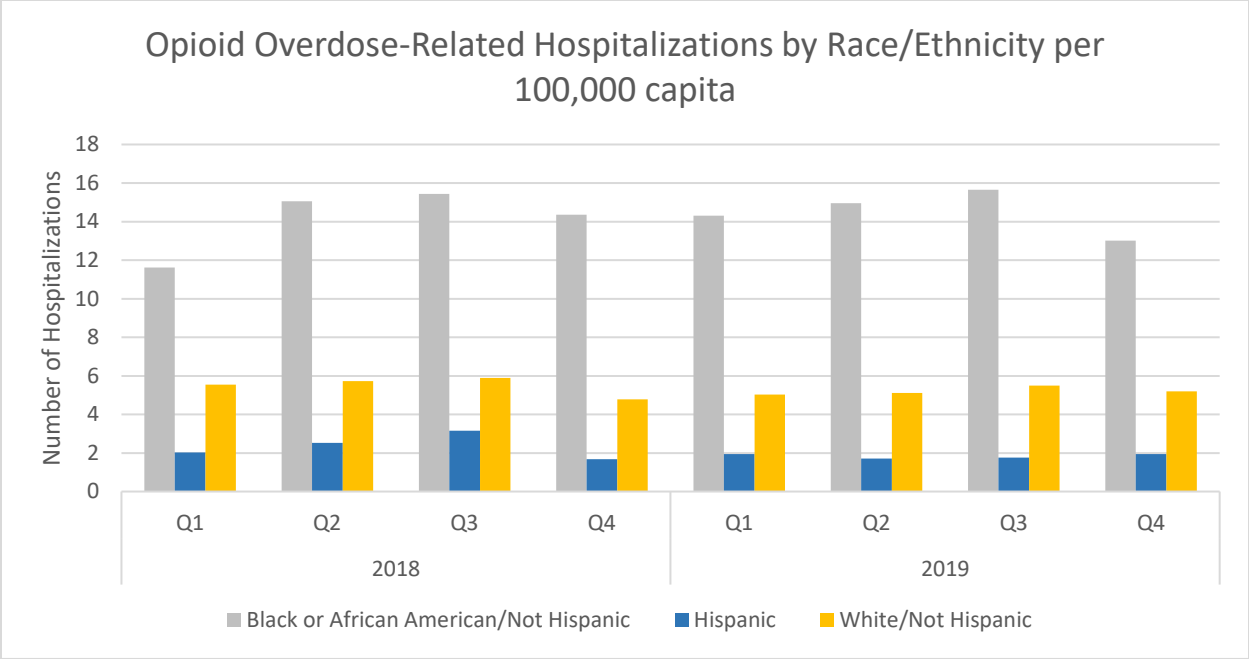


Figure 8. The number of hospitalizations for opioid overdose by race/ethnicity, quarterly for 2018 and 2019, as reported in the Hospital Discharge Dataset.

The disparity between genders for opioid overdose-related hospitalizations is less marked than is found in ED visits and EMS suspected overdose cases. For 2018 and 2019, males comprised 56% and 57% of opioid overdose-related hospitalizations, respectively (Fig. 9).

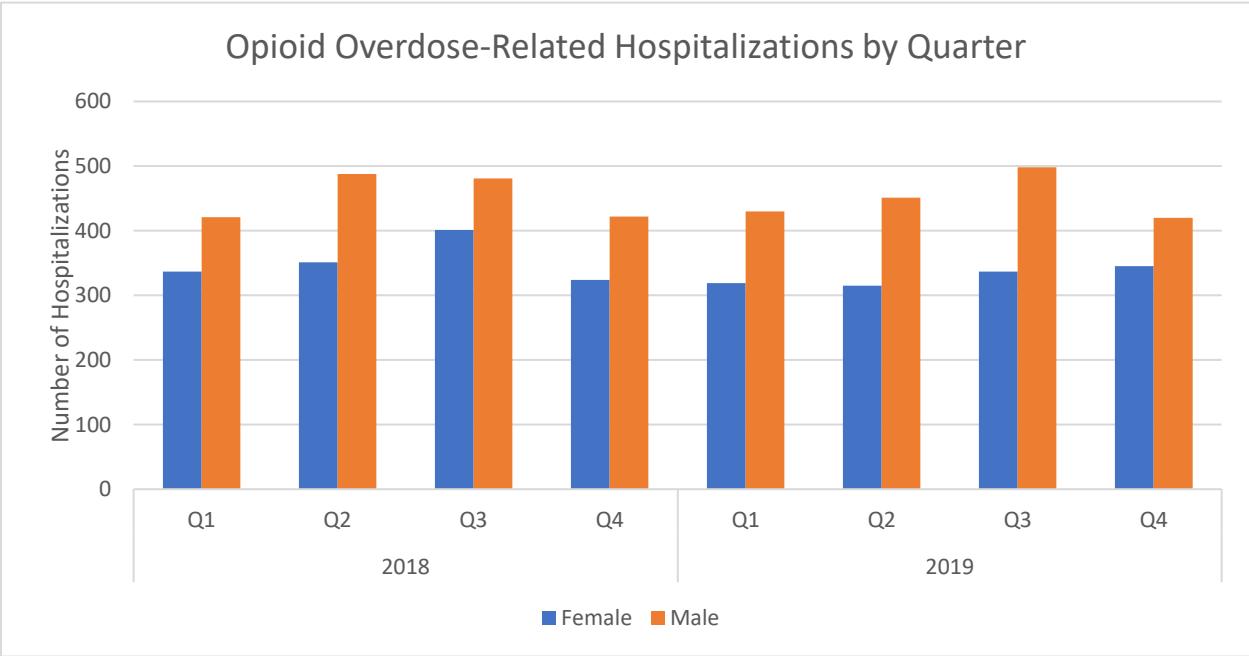


Figure 9. The number of hospitalizations for opioid overdose by gender, quarterly for 2018 and 2019, as reported in the Hospital Discharge Dataset.

The highest number of opioid-overdose related hospitalizations was in the 55-64 age group (24-28%) followed by the 45-54 age group (18-23%), which is similar to the ED opioid overdose visits that had the highest number of visits in the 50-59 age group (Fig. 10).

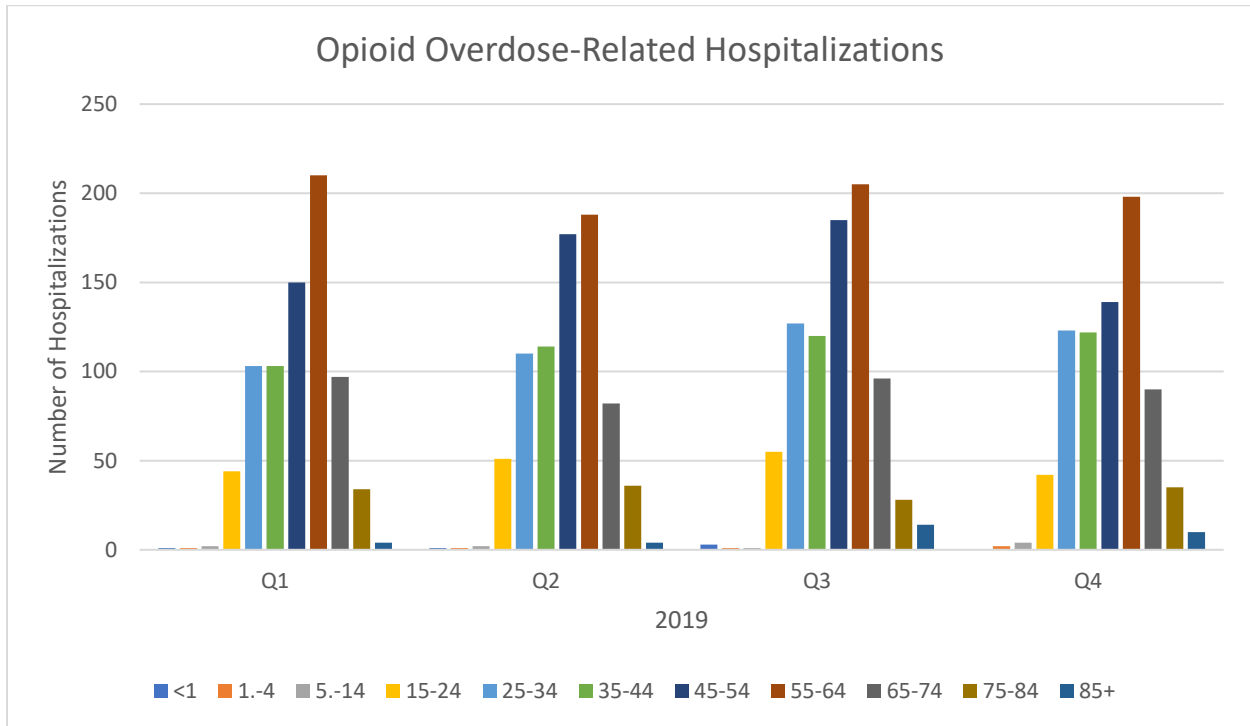


Figure 10. The number of hospitalizations for opioid overdose by age group, quarterly for 2019, as reported in the Hospital Discharge Dataset.

Emergency Medical Services Encounters and Naloxone Administrations

The Illinois Emergency Medical Services (EMS) dataset conforms to the current version of the national standard for EMS data, National Emergency Medical Services Information System Version 3.4 (NEMSIS). Naloxone administration is an indication, not a confirmation, of opioid overdose; however, administration of naloxone is required to be categorized as a “suspected overdose case” in NEMSIS.

Since 2013, there has been a generally increasing trend of non-fatal suspected overdose cases (Fig. 11). Reporting of opioid encounters by EMS was not ubiquitous until 2018; therefore, data collected prior to 2018 is reported as a rate of patients receiving naloxone per 1,000 EMS encounters to give an accurate account.

Across 2019, the number of suspected overdose cases increased 77% from the month with the lowest number of cases (930 in January 2019) to the month with the highest number of cases (1,652 in August 2019; Fig. 12). In 2020, the year started with a high number of non-fatal suspected overdose cases (1,633 in January), which is 75% higher than the same month in 2019. The number of non-fatal suspected overdose cases have continued to increase in 2020 except for April, which showed a temporary decrease in cases (Fig. 12). It is notable that the decrease in April is concurrent with Executive Order 2020-10 mandating individuals to stay at home and non-essential businesses to shutdown due to the COVID-19 pandemic. Unfortunately, the decrease in non-fatal suspected overdose cases reported by NEMSIS in April also corresponds with an increase in the number of fatal overdose cases as reported by the Illinois Vital Records System (Fig. 2).

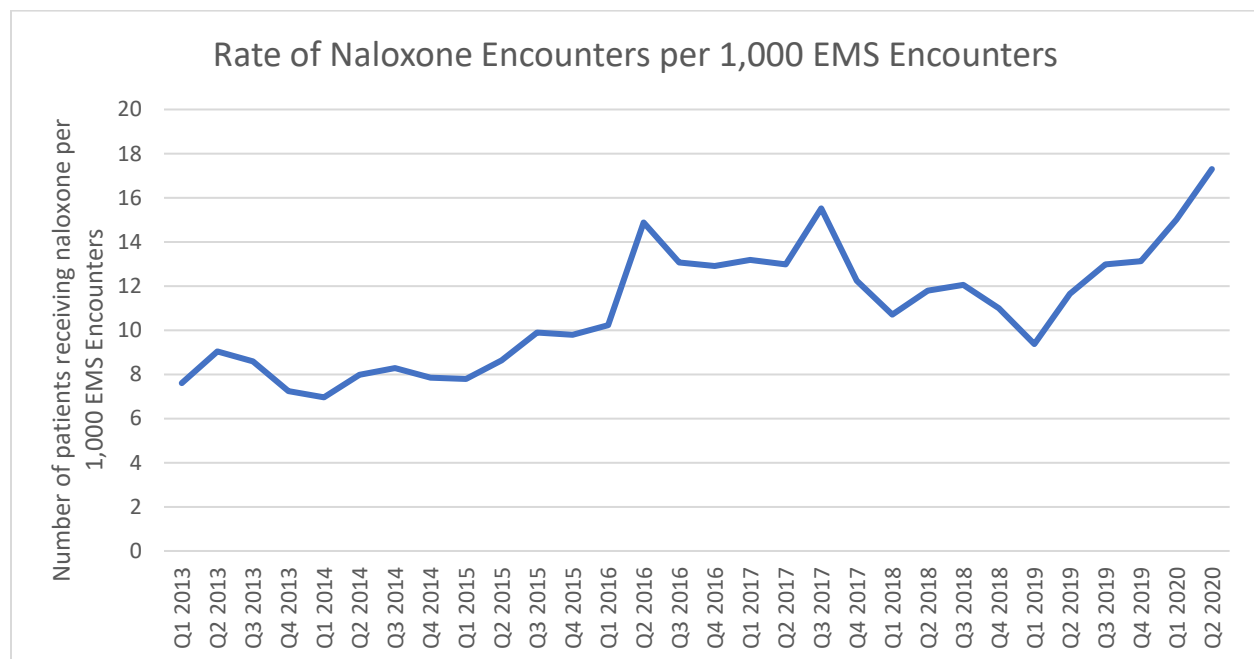


Figure 11. Statewide rate of naloxone encounters per 1,000 EMS encounters by quarter since 2013 as reported by NEMSIS.

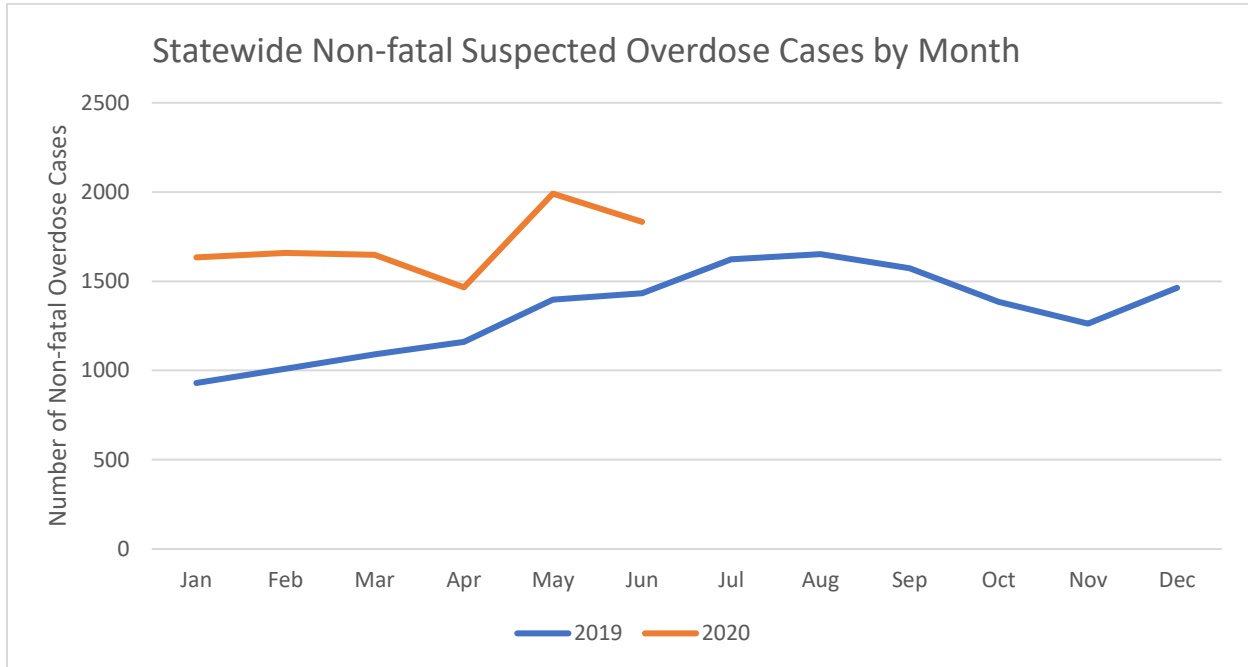


Figure 12. Statewide suspected overdose cases by month as reported by NEMSIS in 2019 and 2020.

Black or African-American populations had 6.6 times more non-fatal suspected overdose cases per 100,000 capita than White populations and 6.2 times more than Hispanic/Latino populations in 2019. In the first two quarters of 2020, Black or African-American populations had 7.9 times more non-fatal suspected overdose cases per 100,000 capita than White populations and 6.3 times more than Hispanic/Latino populations. Patients classified as “Unknown” accounted for 6.2% and 5.4% of the non-fatal suspected opioid overdose cases in 2019 and 2020, respectively. The remaining non-fatal suspected overdose cases occur in Asian, Native American, Pacific Islander or other populations, which were <10 cases per quarter, and therefore, suppressed for medical privacy (Fig. 13).

Mirroring the ED opioid overdose visit data, the highest number of non-fatal suspected overdose cases are in males (Fig. 14) and ages 50-59 (Fig. 15). Males made up the 71.9% of non-fatal suspected overdose cases in 2019 and 74% in the first two quarters of 2020. (Fig. 14). The 50-59-year age group comprises 25% of the non-fatal suspected overdose cases in 2019 and 28% in 2020 (Fig. 15); followed by the 30-39-year age group which comprises 20% of the non-fatal suspected overdose cases in 2019 and 19% in 2020 (Fig. 15).

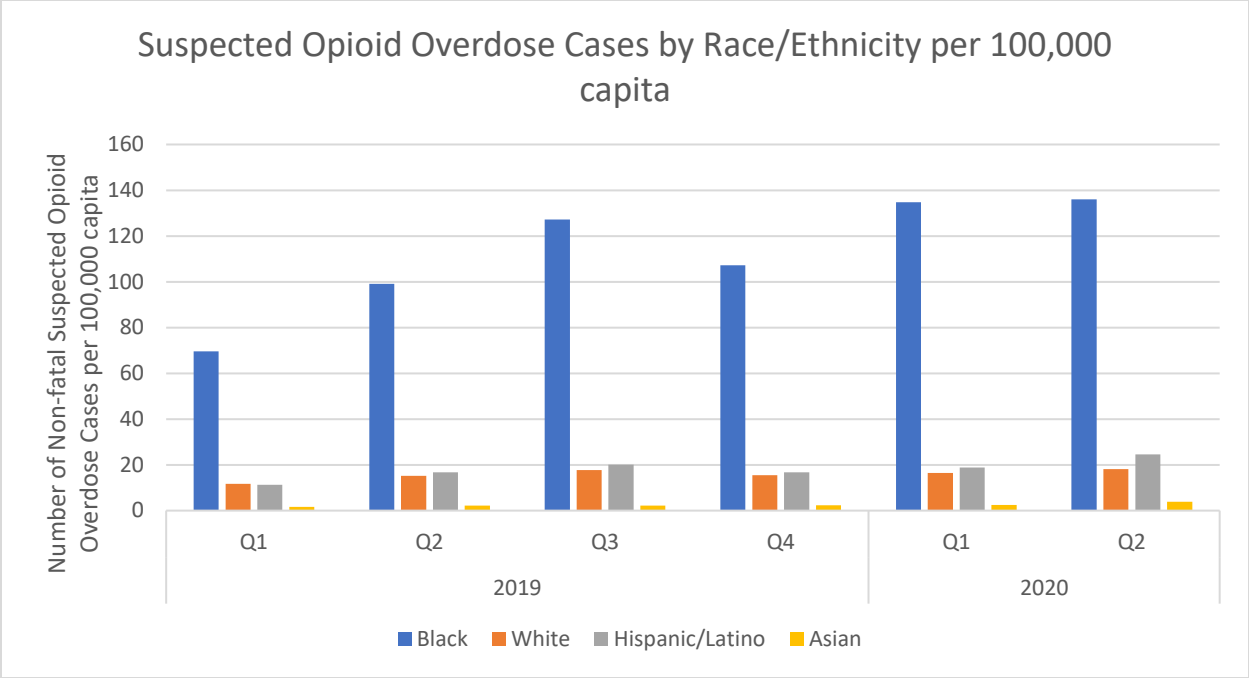


Figure 13. The distribution of race/ethnicity of non-fatal suspected overdose cases in 2019 and 2020 as reported by NEMSIS.

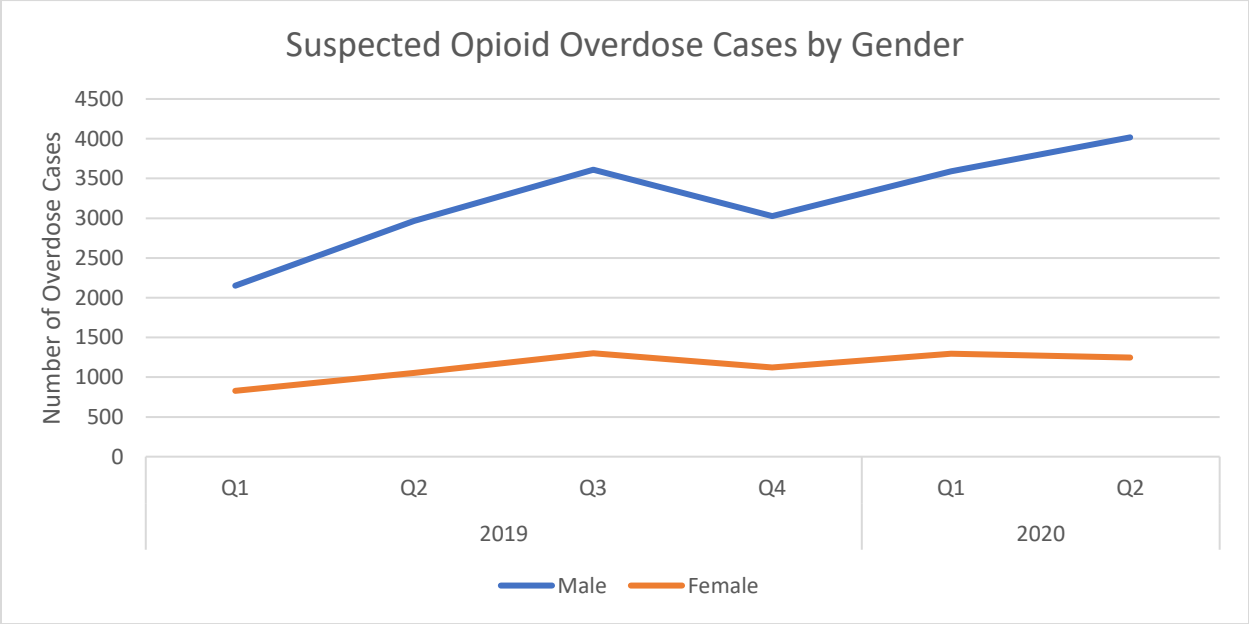


Figure 14. The distribution of gender for non-fatal suspected overdose cases in 2019 and 2020 as reported by NEMSIS.

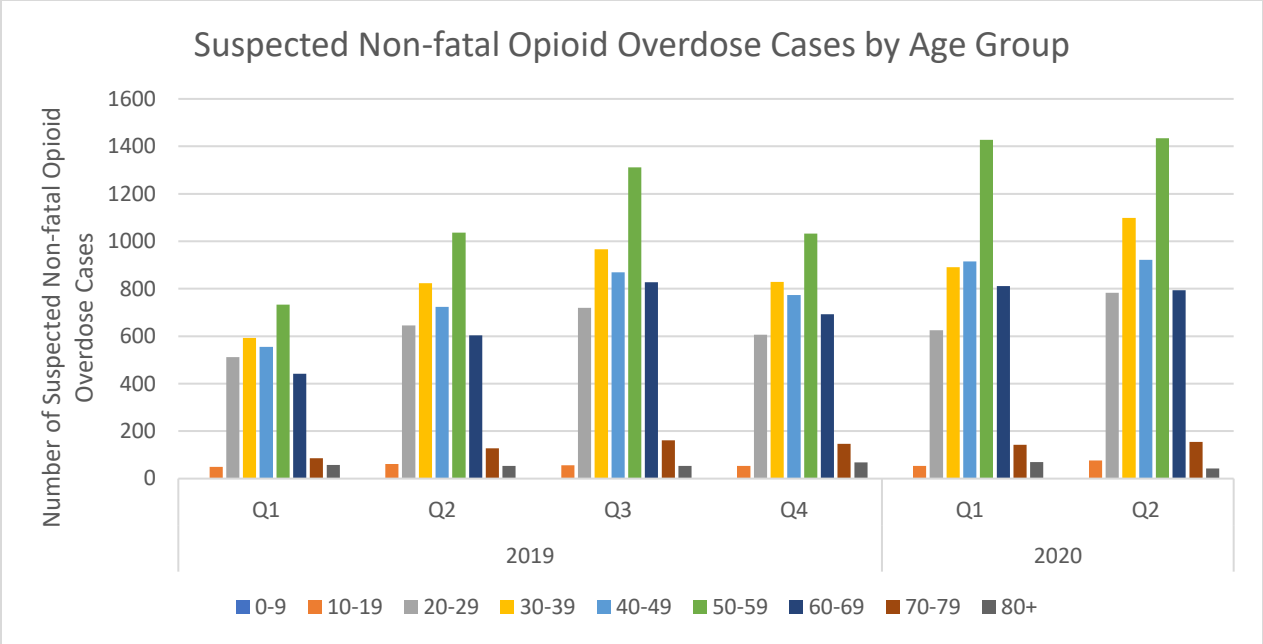


Figure 15. The distribution of age for non-fatal suspected overdose cases in 2019 and 2020 as reported by NEMSIS.

Summary

In 2019, IDPH reports a 3% increase in the number of opioid overdose fatalities. While there was a reduction in the number of hospitalizations (3.4% decrease from 2018), there is a concerning trend of increasing ED visits (21.9% increase from 2018). The current trend in the first two quarters of 2020 is towards an increase in fatalities, opioid overdose ED visits, and EMS naloxone administrations.

According to the ED, hospitalization, and EMS data sets, the groups with the highest suspected opioid overdoses cases are Black or African-American populations, males, and the 50-59 age group. The most recent surveillance report published by the Centers of Disease Control and Prevention (CDC; 2019) states the highest rates of opioid overdose fatalities across the nation are occurring in the 25-34-year-old non-Hispanic White population. As illustrated through this report, the populations at risk for opioid overdose in Illinois differ from the national trends and will require unique and targeted interventions.

In February of 2020, Governor Pritzker signed Executive Order (EO) 2020-02, “Strengthening the State’s Commitment to Ending the Opioid Epidemic.”¹ This EO both builds on established initiatives and identified new strategies with a more direct focus on social equity and harm reduction. Illinois state agencies responded by creating programs to address the opioid epidemic in communities at highest risk of overdose. IDPH has implemented mandated reporting laws and surveillance programs to identify locations and populations of need as well as established the Syringe Service Program Registry. The Illinois Department of Human Services (DHS) implemented multiple state and community-level programs, including rapid deployment of naloxone via Rapid Deployment Outreach Teams that target specific communities based upon near real-time EMS and ED information. As Illinois continues to experience a rise in the number of opioid overdoses, both fatal and non-fatal, further action is imperative to address the opioid epidemic afflicting the state.

¹ https://www2.illinois.gov/ISNews/21086-Executive_Order_2020-02.pdf

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