MA Acute Opioid-Related ED Incidents 2019 Quarter 1-3

Massachusetts Department of Public Health | POSTED: NOVEMBER 2019

MDPH Syndromic Surveillance Program (MA SyS)

The Massachusetts Department of Public Health's (MDPH) Syndromic Surveillance program (MA SyS) collects a subset of information on patient visits to all hospital emergency departments (ED) across the Commonwealth. The reported data allow the Department to monitor trends for certain types of ED visits. This report provides information about ED visits that include codes and terms indicative of acute incidents related to opioids (including heroin) and heroin alone. These definitions are utilized by the Centers for Disease Control and Prevention (CDC) for monitoring drug-related ED visits nationally.

Results

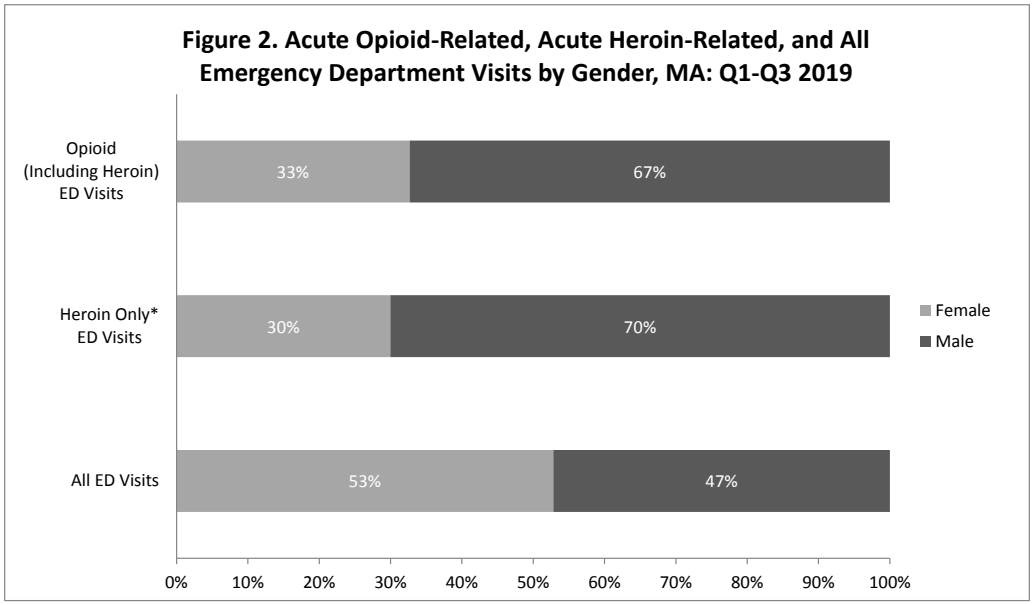
Between January and September 2019, the rate of acute opioid-related ED visits was 379.2 per 100,000 ED visits, while the rate of acute heroin-related ED visits was 126.4 per 100,000 (Figure 1).

Figure 1. Rate of Acute Opioid-Related Emergency Department Visits, MA: Q1-Q3 2019

Source: Office of Integrated Surveillance and Informatics, Bureau of Infectious Disease and Laboratory Sciences, MDPH; n = 2,391,367 total ED visits; data current as of 10/18/2019

* ED records may only indicate heroin even though the incident involved a mixture of heroin and illicitly-made fentanyl. See Technical Notes for more information about the difficulties of accurately distinguishing heroin from fentanyl in the ED setting.

The percentages of men and women visiting the ED (for all visits) were similar (Female: 53%, Male: 47%). However, the percentages of male acute opioid and heroin-related ED visits were more than twice the corresponding female percentages (Female Opioid: 33%, Male Opioid: 67%; Female Heroin: 30%, Male Heroin: 70%) (Figure 2). This pattern is similar to the gender breakdown for confirmed opioid-related overdose deaths (see Demographic Data Highlights, Deaths by Gender). The rates of acute opioid and heroin-related ED visits were also higher among men (Opioid: 540.0 per 100,000; Heroin: 187.3 per 100,000) when compared to women (Opioid: 234.0 per 100,000; Heroin: 71.6 per 100,000) (Figure 3).



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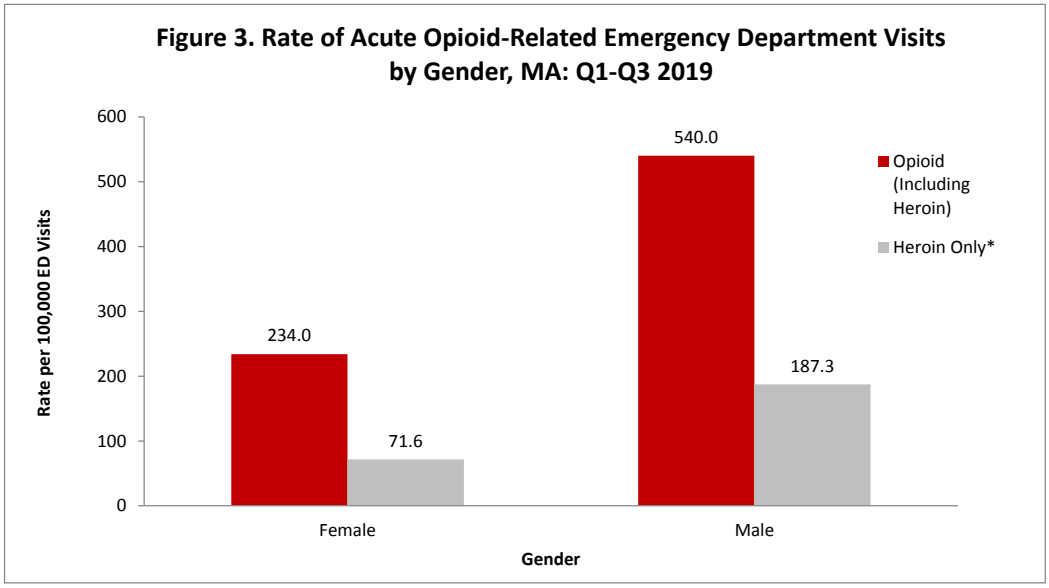

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The largest percentages of acute opioid and heroin-related ED visits were among 25-44 year olds. In contrast, the age breakdown for all ED visits was almost evenly distributed across the age spectrum (Figure 4). This pattern resembles the age distribution of confirmed opioid-related overdose deaths (see Demographic Data Highlights, Deaths by Age). The acute opioid-related ED visit rate was also highest among 25-44 year olds (841.3 per 100,000) and declined with increasing age (Figure 5).

Figure 4. Acute Opioid-Related, Acute Heroin-Related, and All Emergency Department Visits by Age, MA: Q1-Q3 2019

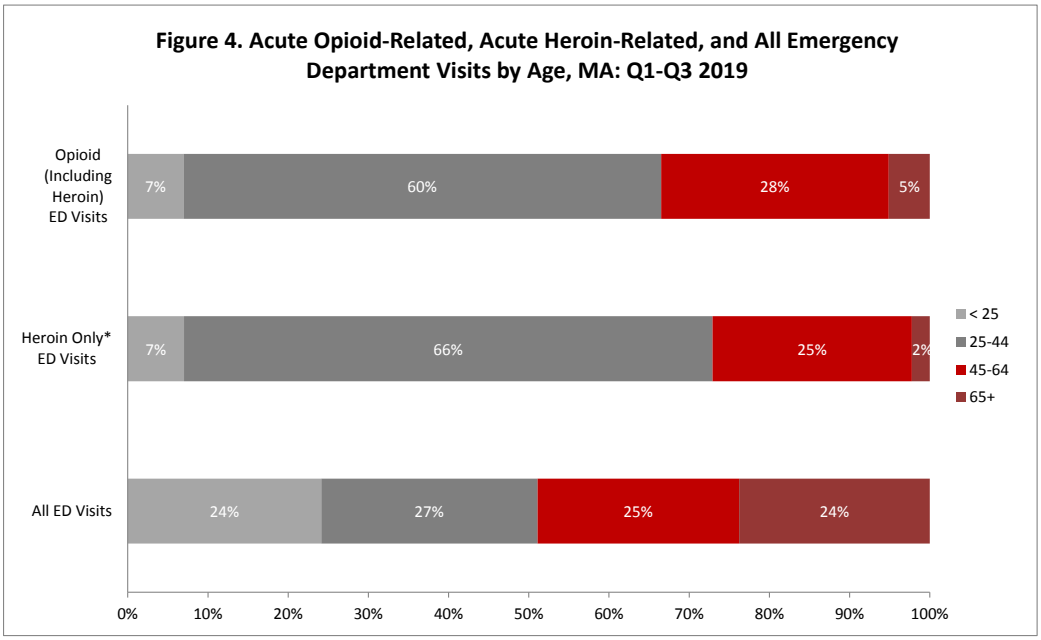

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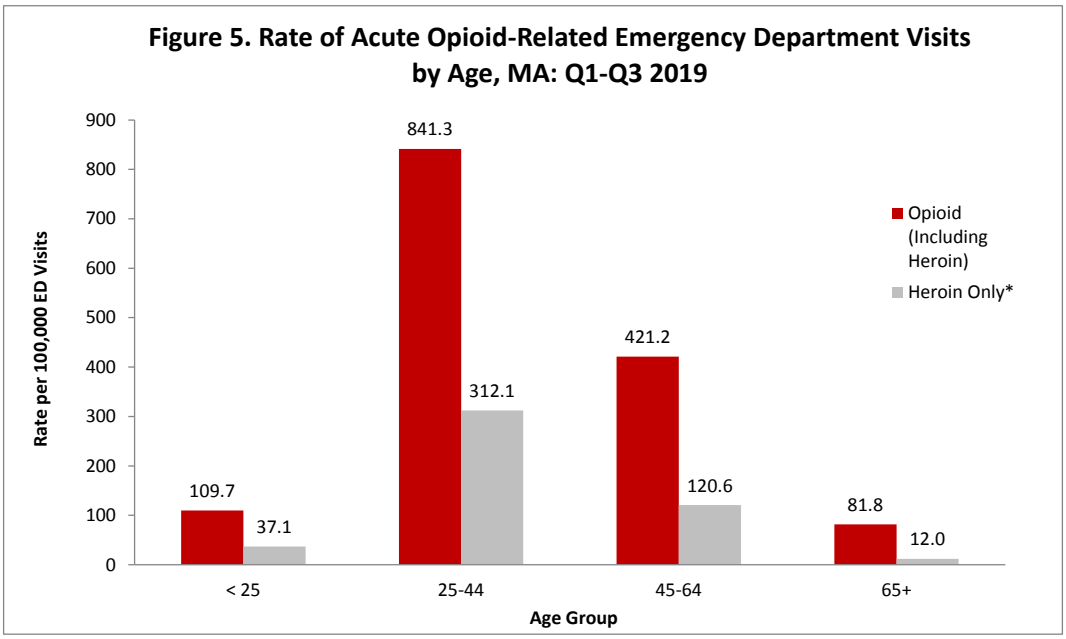
Figure 5. Rate of Acute Opioid-Related Emergency Department Visits by Age, MA: Q1-Q3 2019



Source: Office of Integrated Surveillance and Informatics, Bureau of Infectious Disease and Laboratory Sciences, MDPH; n = 2,391,367 total ED visits; data current as of 10/18/2019

* ED records may only indicate heroin even though the incident involved a mixture of heroin and illicitly-made fentanyl. See Technical Notes for more information about the difficulties of accurately distinguishing heroin from fentanyl in the ED setting.

Technical Notes

- Data current as of 10/18/2019 and subject to change.
- The MA SyS acute opioid-related case definition identifies ED visits related to illicit or prescription opioids. Visits are classified as acute opioid-related incidents when the syndromic surveillance record contains diagnosis codes related to opioid abuse, dependence, or use with intoxication; or naloxone related terms. Visits with a syndromic surveillance record containing drug terms or drug-related terms, including poisoning, ingestion, or symptoms indicative of drug use AND opioid drug terms or diagnosis codes related to opioid abuse, dependence, or use without intoxication are also classified as acute opioid-related incidents. Specific ICD codes and search terms used in the acute opioid-related case definition can be provided upon request. CDC publications may refer to acute opioid-related ED visits captured by MA SyS as opioid *overdose*-related ED visits; despite the slight difference in name those data are based upon the same data presented here.
- The MA SyS acute heroin-related case definition identifies ED visits related specifically to heroin. Visits are classified as acute heroin-related incidents when the syndromic surveillance record contains diagnosis codes related to acute heroin poisoning. Visits with a syndromic surveillance record containing naloxone terms, drug terms or drug-related terms, including poisoning, ingestion, or symptoms indicative of drug use AND heroin drug terms or diagnosis codes related to heroin abuse, dependence, or use without intoxication are also classified as acute heroin-related incidents. Specific ICD codes and search terms used in the acute heroin-related case definition can be provided upon request. CDC publications may refer to acute heroin-related ED visits captured by MA SyS as heroin *overdose*-related ED visits; despite the slight difference in name those data are based upon the same data presented here.
    - Incidents related to illicitly-made fentanyl may be listed as heroin-related in the chief complaint and even diagnosis codes. A large increase in heroin-related ED visits may be attributable to increased supply and use of illicitly-made fentanyl by heroin users. This occurs because illicitly-made fentanyl is commonly mixed with heroin and injected by people who historically use heroin. Because fentanyl is commonly not included in ED toxicology tests, an ED toxicology test may only detect heroin even though the incident involved a mixture of heroin and illicitly-made fentanyl.
- Syndromic surveillance data may be a good indicator of overall trends. However, when interpreting syndromic surveillance data, consider the following limitations:
    - Data are collected at the visit level, not patient level: a patient may have multiple visits and seek care at multiple facilities.
    - Text and coded ED visit data are extracted from the facility electronic health record. There is variability in the terms and codes used for ED visits between and within facilities.
    - There may be daily fluctuations in the capture and quality of data submitted to MDPH due to technical complications at the sending facility or jurisdictional level.
    - The number of diagnostic codes assigned to each visit varies by facility. Because of this variability, use caution for interpretations based on small numbers of visits or unusual presentations.
    - MA SyS data should be utilized in conjunction with other data sources and it is not appropriate for individual case counting.
- Because not everyone experiencing an acute drug-related incident will be seen in an ED, these data do not show all patients who may have had an acute drug-related incident in Massachusetts.

Source

Office of Integrated Surveillance and Informatics, Bureau of Infectious Disease and Laboratory Sciences, MDPH