



Data Snapshot:

Opioid Poisoning Deaths among Illinois Women of Reproductive Age

**Illinois Department of Public Health
Office of Women's Health and Family Services
March 2019**

Background

- Opioid poisonings (i.e., “overdoses”) are on the rise nationally and in Illinois
- Neonatal abstinence syndrome, a collection of withdrawal symptoms experienced by infants exposed to opioids *in utero*, is also increasing
- Opioid use among a woman of reproductive age therefore carries double weight, as it impacts her own health, and also the health of her children and any future pregnancies
- This analysis examines trends and demographic patterns in opioid poisoning deaths among:
 - Illinois women of reproductive age (*ages 15-44 years old*)
 - Illinois women with a pregnancy during the last year (*pregnancy-associated deaths*)

Methods

- **Data Source:** Illinois death certificates
- **Time Period:** 2008 – 2017 (*all years are “final” data*)
- **“Drug poisoning death”** = underlying cause of death ICD-10 codes X40-X44, X60-X64, X85, or Y10-Y14
- **Among drug poisoning deaths**, opioid poisonings were identified by multiple-cause mortality codes:
 - T40.0 = opium
 - T40.1 = heroin
 - T40.2 = natural and semi-synthetic (“prescription”)
 - T40.3 = methadone
 - T40.4 = synthetic (including fentanyl)
 - T40.6 = other and unknown type

Methods

- *Among all Illinois women of reproductive age:*

$$\text{Mortality Rate} = \frac{\# \text{ opioid poisoning deaths}}{\# \text{ women ages 15–44 in population}} * 100,000$$

- Population estimates derived from U.S. Census Bureau intercensal estimates (2008-2009) and postcensal estimates (2010-2017)

- *Among women with a pregnancy during the last year:*

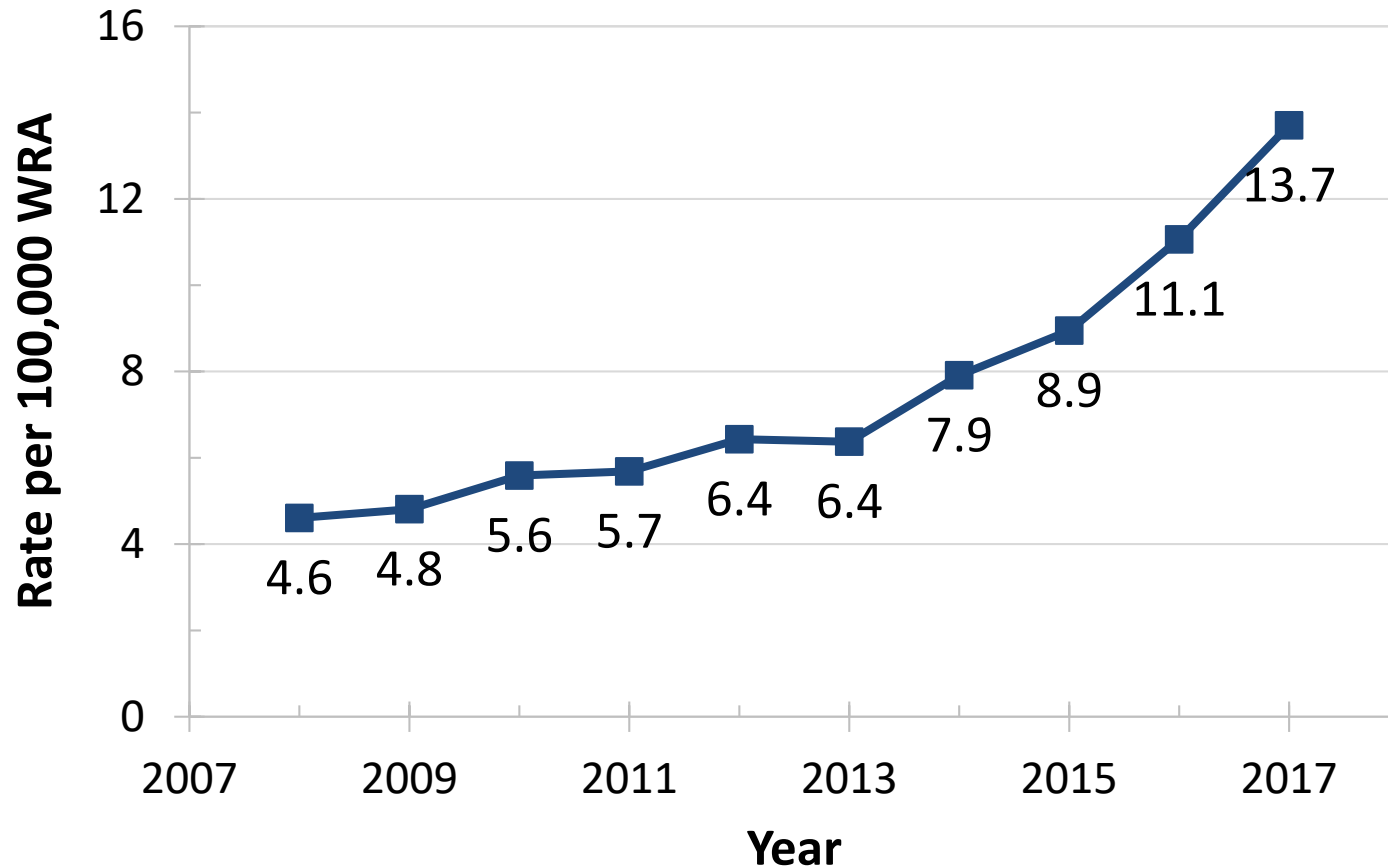
$$\text{Pregnancy-Associated Mortality Ratio} = \frac{\# \text{ opioid poisoning deaths}}{\# \text{ live births}} * 100,000$$

- Live birth counts derived from Illinois birth certificates

DEATHS TO WOMEN OF REPRODUCTIVE AGE

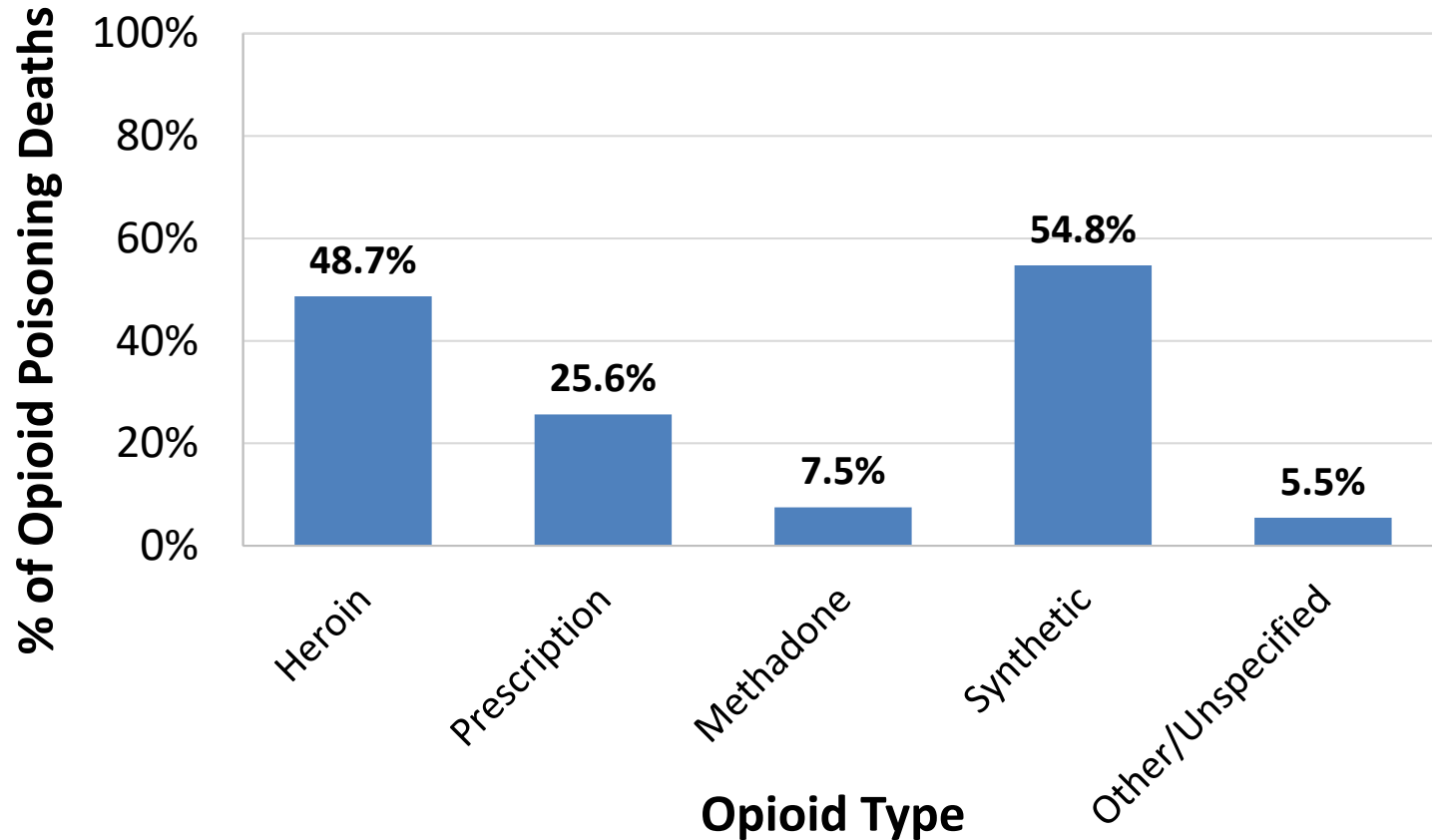
(WOMEN AGES 15-44)

Opioid-Related Poisoning Death Rate among Illinois Women of Reproductive Age (WRA)



- The rate of opioid-related poisoning deaths for WRA **tripled** from 2008 to 2017
- 347 WRA died from opioid poisoning during 2017
- Nearly 2,000 total WRA have died from opioid poisoning since 2008

Types of Opioids Involved in Opioid-Related Poisoning Deaths among Illinois Women of Reproductive Age (WRA), 2017

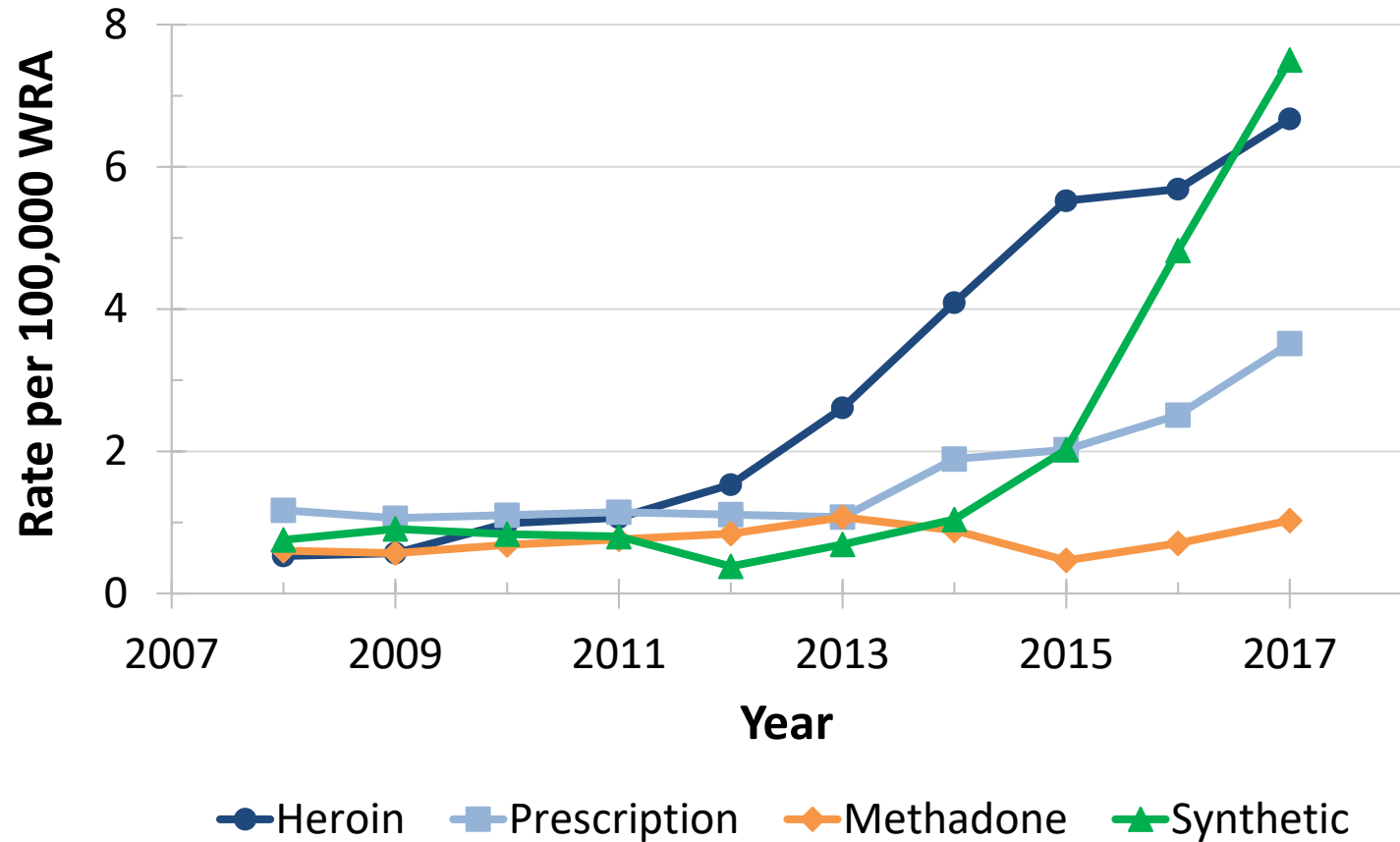


- Heroin was involved in nearly half of opioid poisoning deaths among Illinois WRA in 2017
- Synthetic opioids (*e.g.*, *fentanyl*) were involved in 55% of opioid poisoning deaths for WRA in 2017

Bars do not add up to 100% because more than one opioid may have been listed on the death certificate

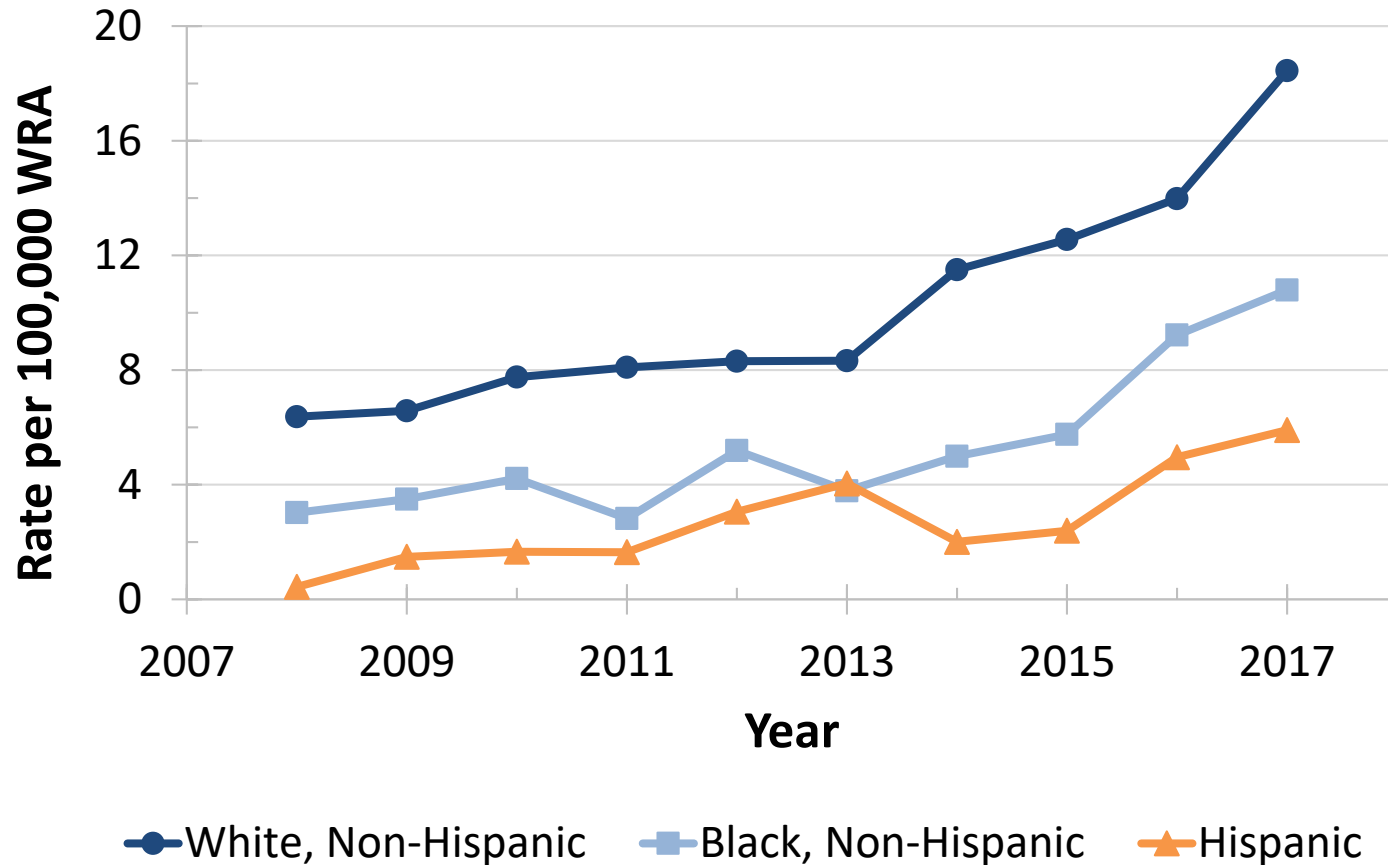
Data Source: Illinois death certificates, 2017

Opioid-Related Poisoning Death Rate among Illinois Women of Reproductive Age (WRA), By Opioid Type



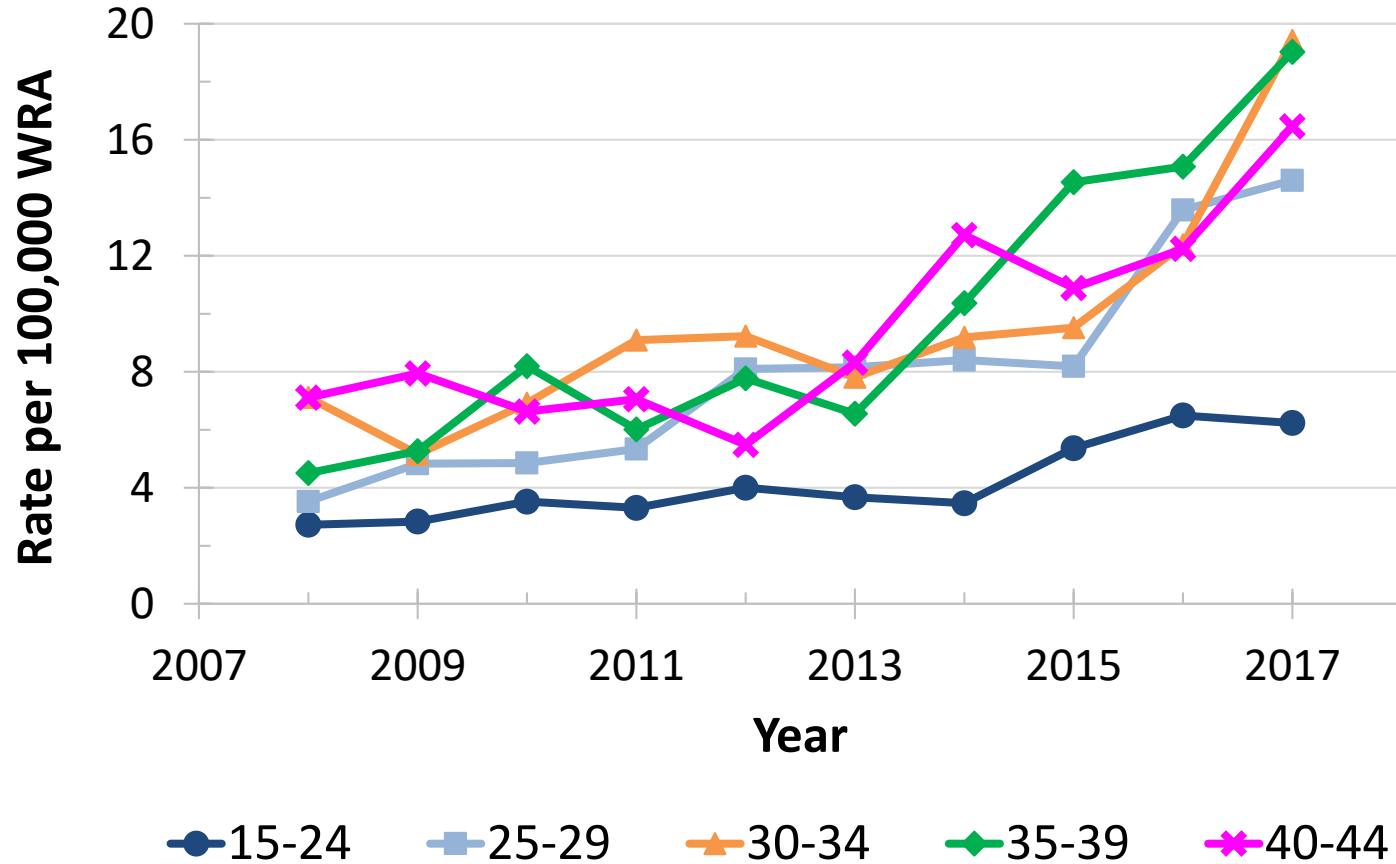
- The rate of heroin-related deaths for WRA **increased 11-fold** in nine years
- The rate of synthetic-opioid-related deaths for WRA **increased 9-fold** in four years

Opioid-Related Poisoning Death Rate among Illinois Women of Reproductive Age (WRA), By Race/Ethnicity



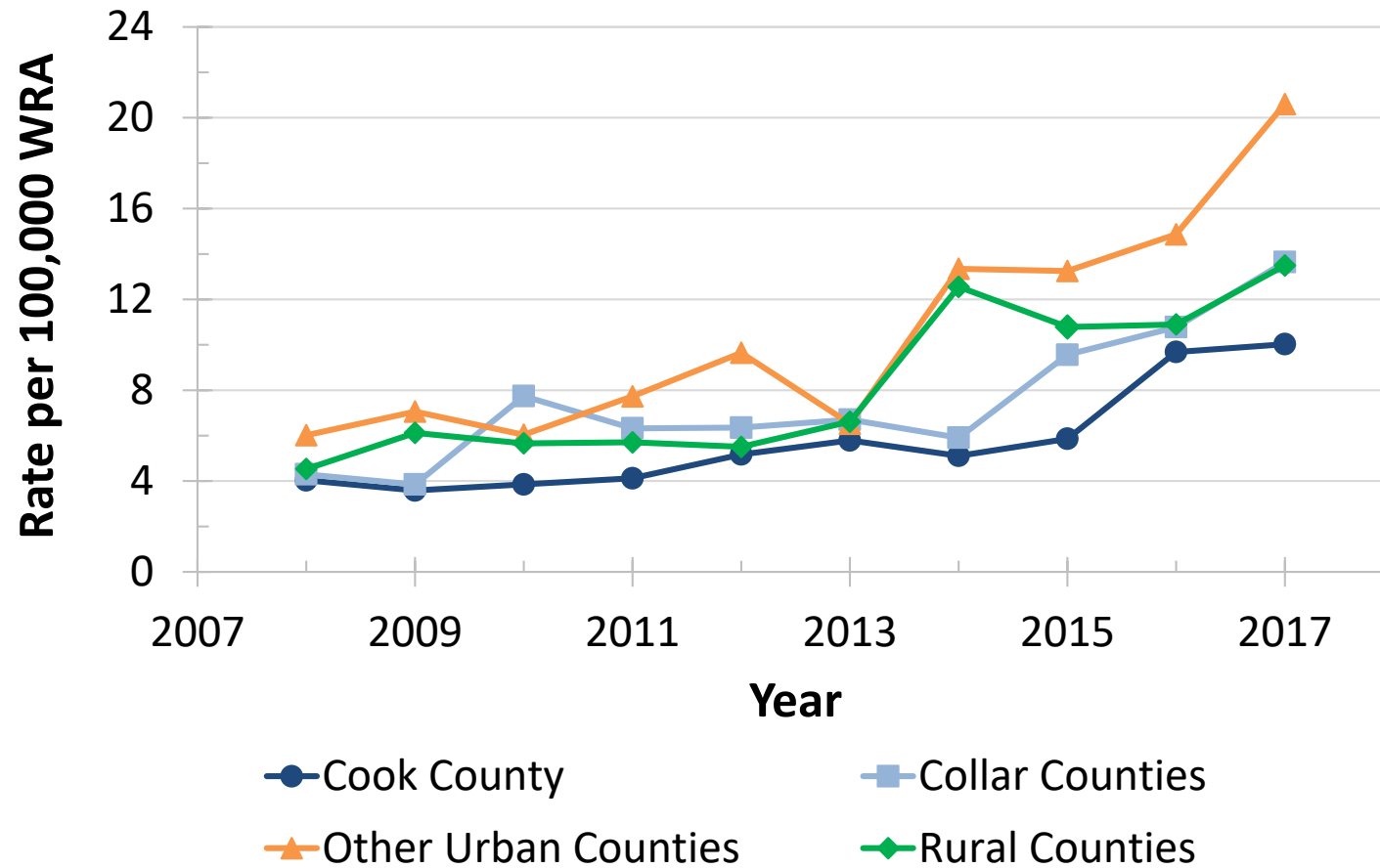
- The opioid poisoning death rate is **highest among non-Hispanic White WRA**
- But White, Black, and Hispanic WRA all have experienced increases in opioid-related deaths over the last decade

Opioid-Related Poisoning Death Rate among Illinois Women of Reproductive Age (WRA), By Age Group



- The rate of opioid-related deaths is highest among women 30 and older
- All groups have seen an increase in opioid-related deaths, but the relative increase was smallest among women ages 15-24

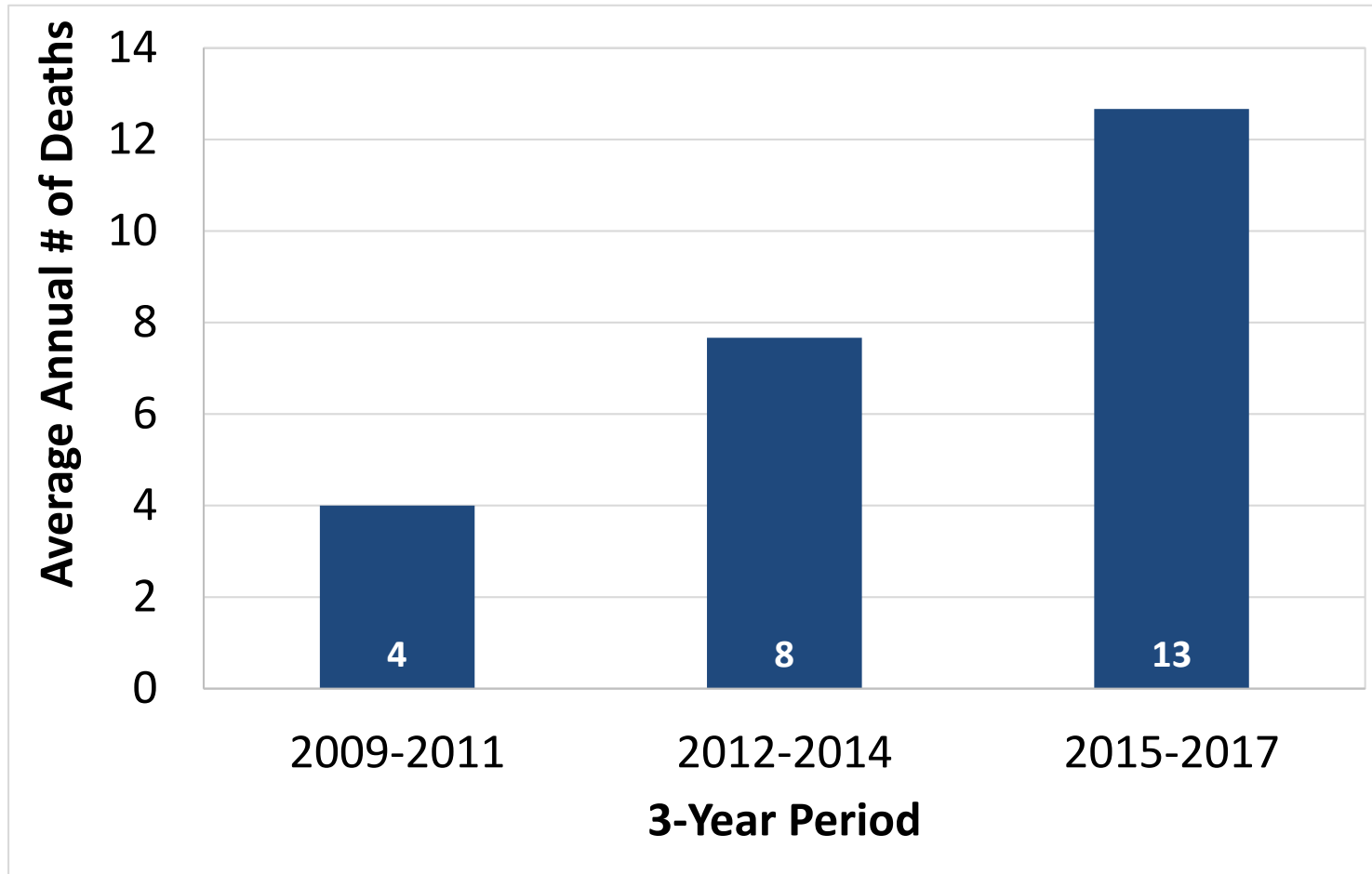
Opioid-Related Poisoning Death Rate among Illinois Women of Reproductive Age, By County of Residence



- The rate of opioid-related deaths is highest among WRA living in urban counties outside the Chicago area
- All areas have experienced an increase in opioid-related deaths for WRA over the last decade

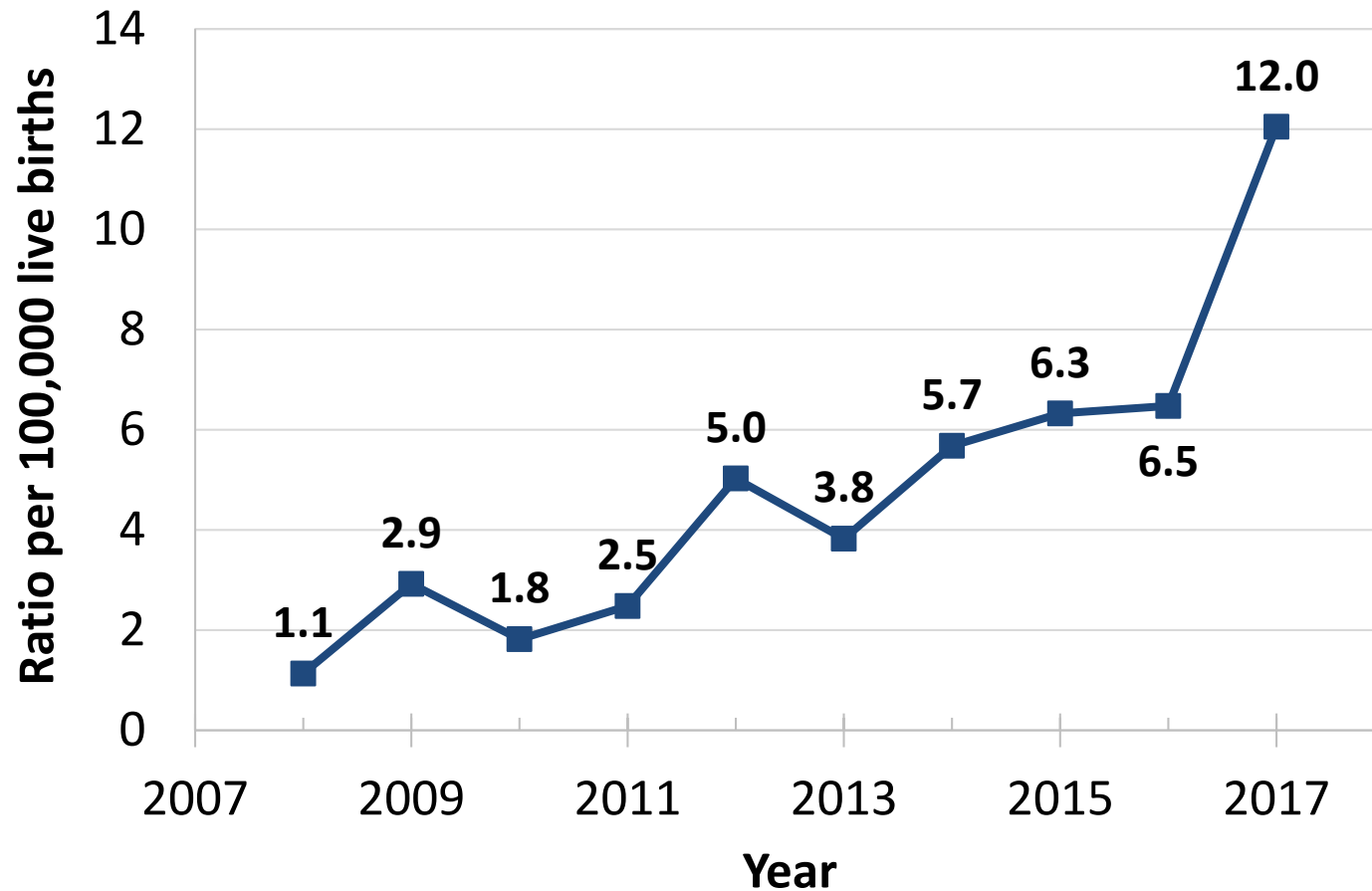
PREGNANCY-ASSOCIATED DEATHS
(DEATHS WITHIN ONE YEAR OF PREGNANCY)

Average Annual Number of Pregnancy-Associated Deaths Due to Opioid Poisoning, Illinois Residents, 2009-2017



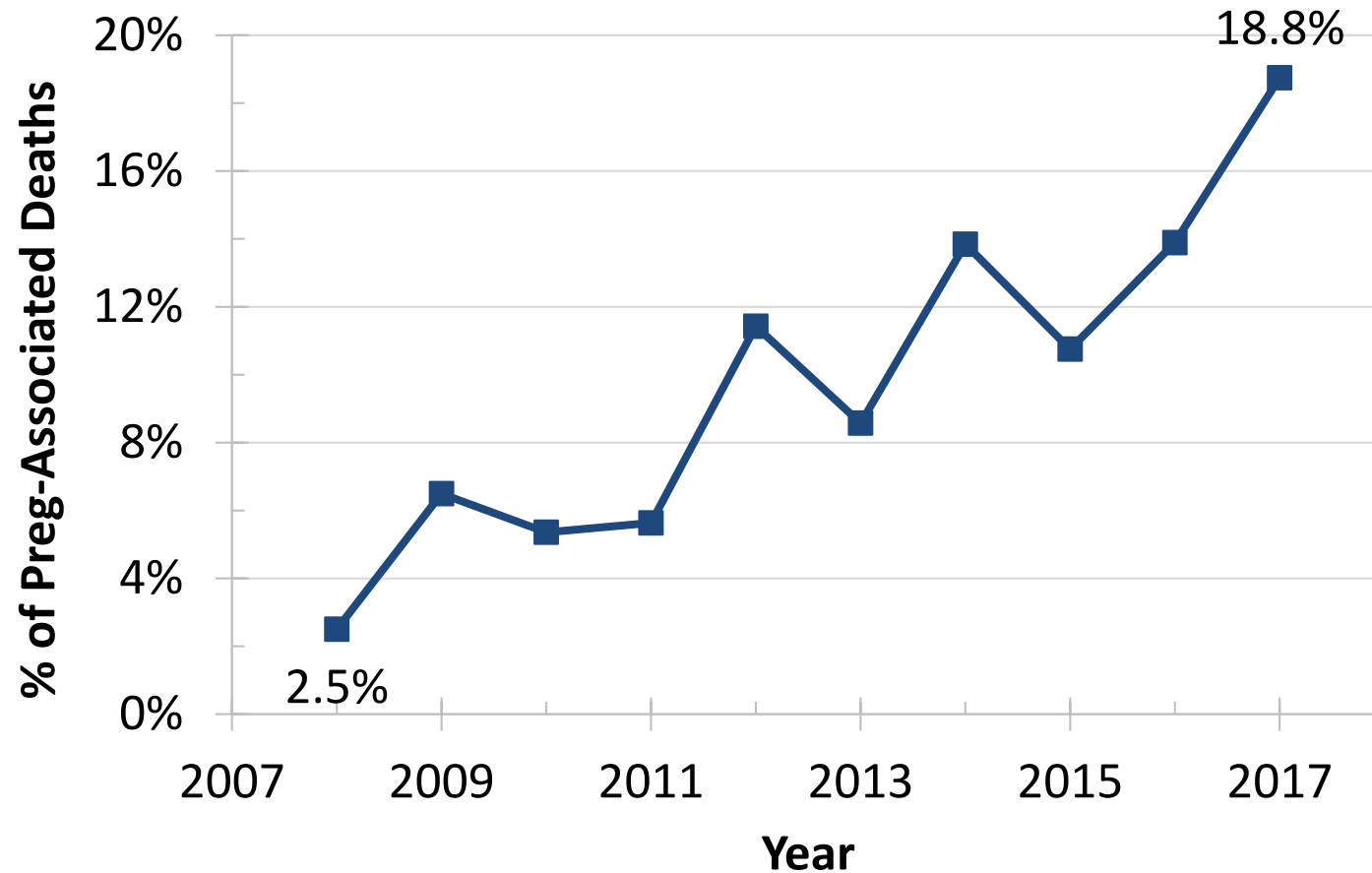
- The number of pregnant/postpartum women dying from an opioid-related poisoning increased over time
- In 2017 alone, there were 18 pregnancy-associated deaths related to opioid poisoning

Pregnancy-Associated Mortality Ratio for Opioid-Related Poisoning Deaths, Illinois Residents, 2008-2017



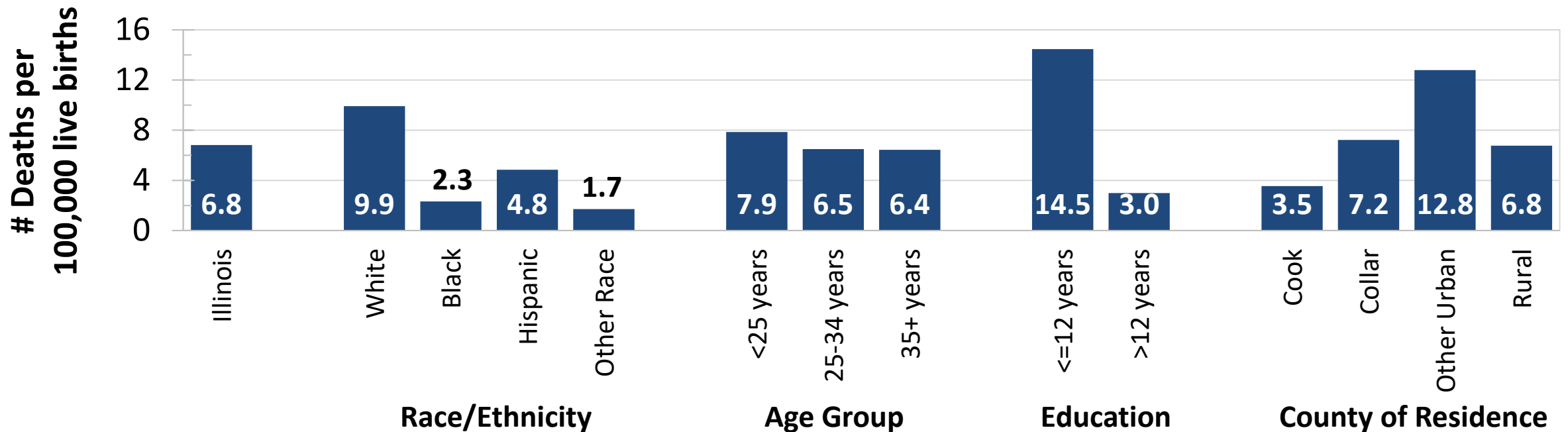
- Pregnancy-associated deaths related to opioid poisoning **increased 10-fold over a 9-year period**
- The pregnancy-associated mortality ratio related to opioid poisonings nearly **doubled in just one year from 2016 to 2017**

Proportion of Pregnancy-Associated Deaths that were due to Opioid Poisoning, Illinois Residents, 2008-2017



- Opioid-related poisonings have also become a leading cause of pregnancy-associated death
- **In 2017, opioid poisoning was the most common cause of pregnancy-associated death**
- In 2017, nearly 1 in 5 deaths of pregnant or postpartum women were due to opioid poisoning

Pregnancy-Associated Mortality Ratio for Opioid Poisoning Deaths, Illinois 2013-2017 combined



- Pregnancy-associated deaths caused by opioid poisonings were most common among white women, women with a high school education or less, and women residing in small/medium urban counties outside the Chicago area



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*This analysis was supported by the
Illinois Maternal and Child Health (Title V) Block Grant Program*