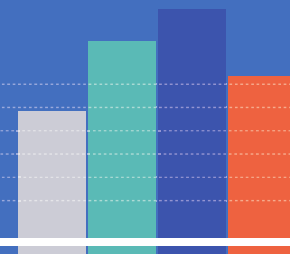




Thomas Farley, MD, MPH  
Commissioner

# CHART



## Reported Incidence of Neonatal Abstinence Syndrome in Philadelphia, 2019

### KEY TAKEAWAYS

Neonatal Abstinence Syndrome (NAS) is a clinical diagnosis used to describe a collection of signs that occur when a newborn withdraws from certain drugs to which he/she was exposed in the womb. These include hyperirritability, restlessness, myoclonic jerks, diarrhea, fever, apnea, irritability, seizures, sweating and tremors. To treat NAS, newborns can be administered medications, including medications for opioid use disorder, along with nonpharmacological treatment.

In September 2018, the Philadelphia Board of Health added NAS to the list of conditions that must be reported to PDPH by hospitals and birthing facilities. Receipt of this information allows PDPH to link infants to home visiting programs and early intervention services, as well as intervene with mothers by offering harm reduction services, naloxone training, and linkage to treatment.

This issue of CHART summarizes results from the Philadelphia Department of Public Health's first year of mandated Neonatal Abstinence Syndrome (NAS) reporting, 2019.

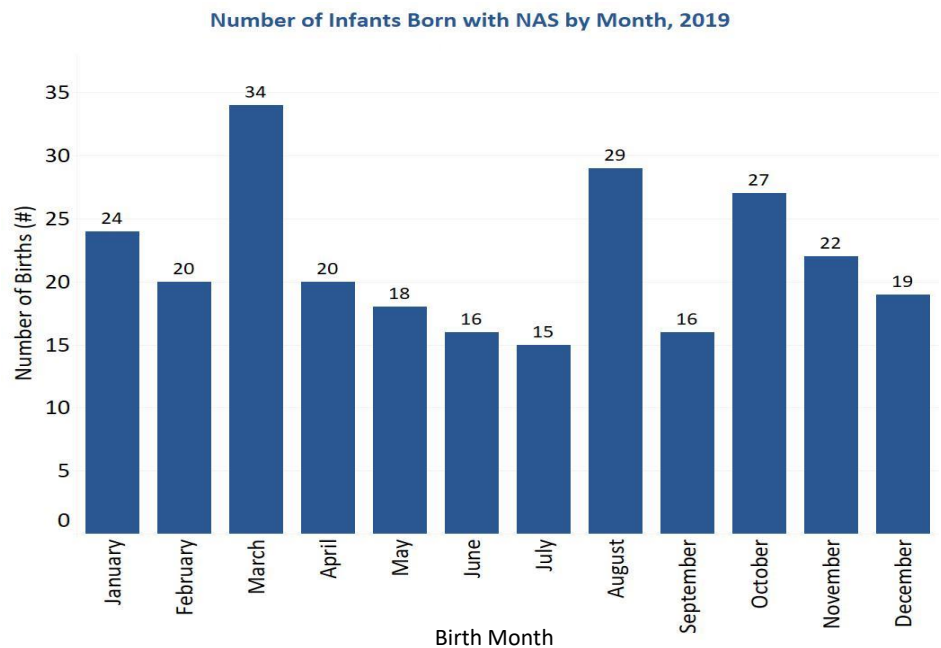
In 2019, there were 260 cases of diagnosed NAS reported in Philadelphia

86% of the reported NAS cases were exposed to opioids in utero

Drugs associated with Medication Assisted Treatment (MAT) were found in 64% of mother/infant pairs

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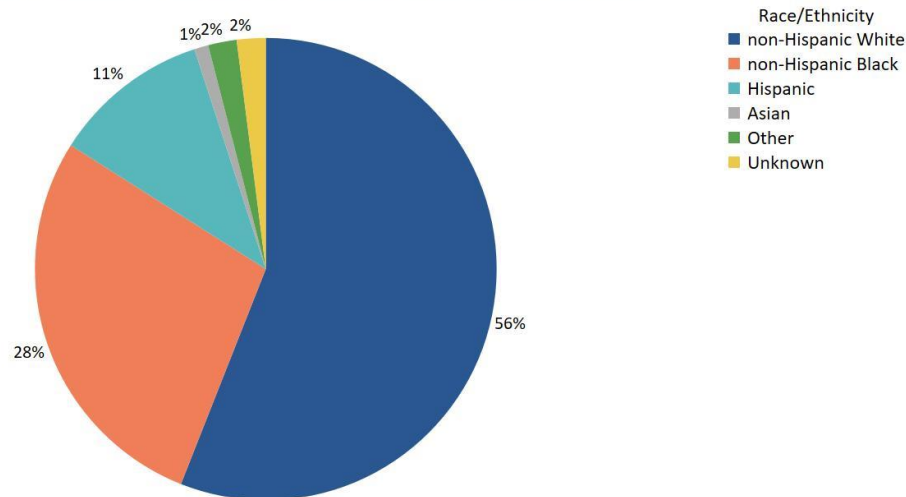
An average of 22 infants with NAS were reported per month in 2019



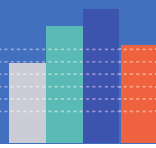
- 260 infants born with NAS were reported to the Philadelphia Department of Public Health (PDPH) in 2019.
- All required facilities reported cases during this period.

The majority of mothers of infants diagnosed with NAS were identified as non-Hispanic White

Race/Ethnicity Percentage of the Mothers of Infants Diagnosed with NAS, 2019

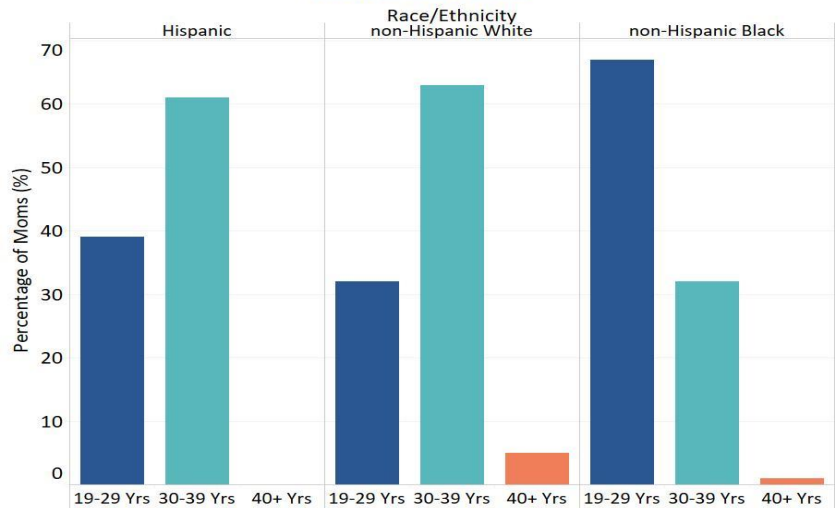


- More than half (56%; N=145) of mothers of infants diagnosed with NAS were identified as non-Hispanic White, 28% were identified as non-Hispanic Black and 11% were identified as Hispanic.
- The race/ethnic distribution of mothers of infants diagnosed with NAS is similar to that of women who are receiving treatment for opioid use disorder and women who have experienced an opioid-related overdose (data not shown).



Non-Hispanic Black mothers of infants born with NAS were younger than non-Hispanic White and Hispanic mothers

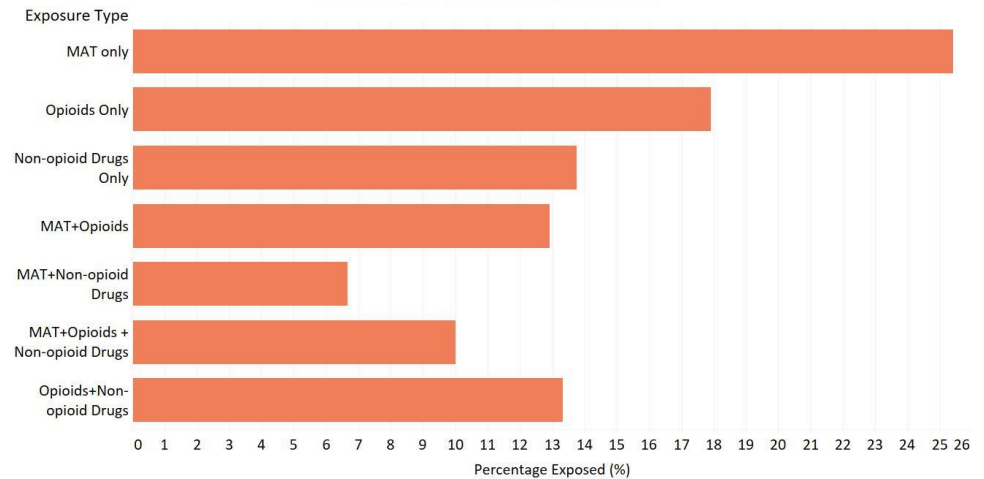
Age Category of the Mothers of Infants Diagnosed with NAS by Race/Ethnicity, 2019



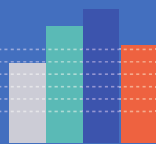
- 54% of mothers of infants diagnosed with NAS were 30-39 years of age. In comparison, 48% of all mothers of live births in Philadelphia in 2019 were 19-29 years of age.
- While the majority (67%) of non-Hispanic Black mothers of infants diagnosed with NAS were 19-29 years of age, most non-Hispanic White (63%) and Hispanic mothers (61%) were 30-39 years of age.

86% of infants diagnosed with NAS were exposed to opioids in utero

Infant In-Utero Substance Exposure, 2019



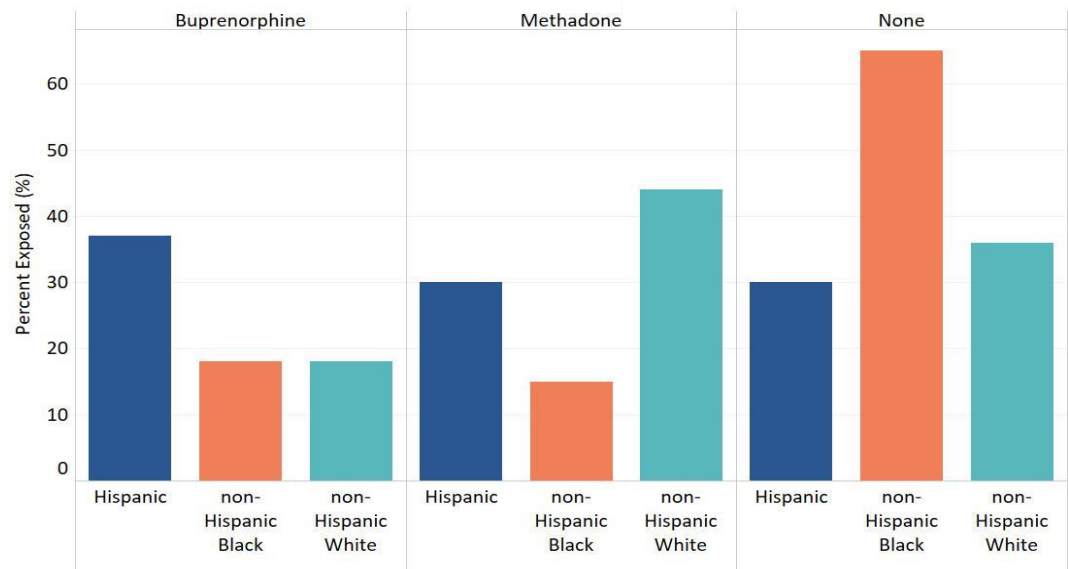
\* **Opioids** include heroin, fentanyl, tramadol, oxycodone and oxymorphone  
**Non-opioid Drugs** include alcohol, marijuana, PCP, methamphetamines, barbiturates, cocaine and benzodiazepines  
**MAT (Medication Assistant Treatment for opioid use disorder)** includes methadone and buprenorphine



- The majority (86%) of infants with NAS were exposed to opioids in utero. Of these 55% had evidence of exposure to buprenorphine or methadone, drugs used for medication assisted treatment (MAT). Medical chart abstraction confirmed substance use treatment for over half of the MAT exposures.
- Use of two or more illicit substances was indicated in 64% of mother/infant pairs with drug data available.

Most Non-Hispanic Black mothers of infants with NAS showed no evidence of exposure to medication assisted treatment

**MAT Exposure by Race/Ethnicity and MAT Type, 2019**



- >60% of non-Hispanic White and Hispanic mothers had evidence of exposure to MAT for opioid use disorder, while <35% of non-Hispanic Black mothers had evidence of MAT.
- Evidence of buprenorphine treatment was highest among Hispanic mothers (37%) while evidence of methadone treatment was highest among non-Hispanic White mothers (44%).
- 29% of mothers 40+ years and older showed evidence of exposure to buprenorphine while 31% of mothers aged 19-29 years and 36% of mothers aged 30-39 years showed evidence of exposure to methadone (data not shown).



## WHAT CAN BE DONE

### The Health Department is:

- Working to ensure timely identification of infants diagnosed with NAS by:
  - developing an effective and straightforward online reporting system.
  - providing hospitals and birthing facilities with guidance on the reporting criteria and use of the reporting system.
  - maintaining regular communication with each reporting agency.
- Providing the following to families of infants diagnosed with NAS:
  - Linkage to drug treatment and social services. To date, the NAS program has connected 12 families to services.
  - Infant supplies such as formula, diapers, clothing and car seats.
- Offering harm reduction training to families of infants diagnosed with NAS by:
  - providing naloxone and educational resources.
  - providing training on how to prevent overdose and transmission of infectious diseases such as HIV and viral hepatitis.

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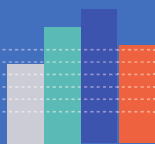
### Health care providers should:

- Report diagnosed cases of NAS to the Philadelphia Department of Public Health using the following online survey: <https://redcap.phila.gov/surveys/?s=N9RDF8RJP9>.
- Educate pregnant patients affected by substance use on the risk of NAS in their infants.
- Help patients who are dependent on opioids to access drug treatment. This can be done through referral to a substance use treatment provider or by prescribing buprenorphine. For a list of providers offering MAT in the Philadelphia region please refer below.
- Incorporate training on substance use during pregnancy in continuing education.
- Create a stigma free environment for patients that encourages honest and open discussion about addiction, its consequences, and treatment options. Please refer to the Pregnancy and Substance Use harm reduction toolkit link in the Resources section below for further guidance.

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### People can:

- Avoid taking opioids that are not prescribed for them, and question medical providers who prescribe opioids for pain about alternative, safer forms of pain control.
- Avoid using illicit drugs such as heroin, fentanyl and cocaine, which are extremely dangerous.
- Seek medication-assisted treatment if dependent on opioids.
- Find a provider willing to openly discuss options for both prenatal care and substance use.
- Obtain and get trained on how to use naloxone to prevent opioid overdose fatalities. Naloxone is available at pharmacies in Pennsylvania without a prescription under a “standing order” signed by the Pennsylvania Secretary of Health.
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## RESOURCES:

For help on how to obtain and use naloxone or to attend a virtual training:

[phillynaloxone.com](http://phillynaloxone.com)

For more information on Philadelphia's response to the opioid crisis:

<https://www.phila.gov/programs/combating-the-opioid-epidemic/>

For information on how to access treatment:

<https://dbhids.org/addiction-services/>

For a list of MAT providers in the Philadelphia area:

[https://dbhids.org/wp-content/uploads/2020/04/How-to-Access-Treatment-and-MAT-List\\_Spring-2020\\_4.9.2020.pdf](https://dbhids.org/wp-content/uploads/2020/04/How-to-Access-Treatment-and-MAT-List_Spring-2020_4.9.2020.pdf)

For harm reduction resources including syringe exchange:

<https://ppponline.org/>

For a toolkit on how to reduce harm in pregnant patients affected by substance use:

[https://issuu.com/harmreduction/docs/pregnancy\\_and\\_substance\\_use-\\_a\\_harm\\_2fa242e7fb6684](https://issuu.com/harmreduction/docs/pregnancy_and_substance_use-_a_harm_2fa242e7fb6684)

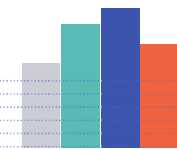
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