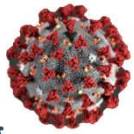

2023 NNEPQIN Winter Meeting

COVID-19 Impact on Pregnant People and Infants

February 9, 2023

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Surveillance for Emerging Threats to Mothers and Babies Network (SET-NET)

- CDC funded effort that builds upon the US Zika and Pregnancy Infant Registry
  - At this point, NH is funded solely for COVID-19 surveillance
- Surveillance includes:
  - All persons who test positive by RT-PCR for COVID-19 during pregnancy or at the time of delivery
  - Any infant diagnosed with COVID-19 in the first 14 days after birth
  - Any infant born to someone who tests positive for COVID-19 during pregnancy or at the time of delivery (these infants are followed at birth, 2mo, 4mo, and 6mo of age)

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Surveillance for Emerging Threats to Mothers and Babies Network (SET-NET)

- Two methods used to identify cases of COVID-19 among pregnant individuals:

  1. Data linkages using NH COVID-19 data and birth record data.

  2. Positive reports of COVID-19 from providers that indicate pregnancy

- Data collection methods include active surveillance (DPHS staff contact OBGYNs and birthing centers for pre-natal and labor and delivery medical records); passive surveillance (electronic records received by DPHS); and vital record abstractions.
- De-identified data are entered into a secure data entry tool which is uploaded quarterly to a secure CDC database.

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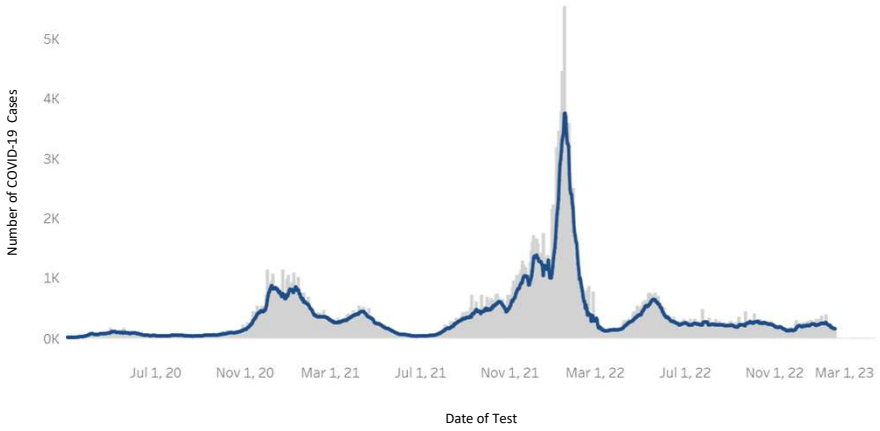
Daily Total Case Counts and 7-Day Average for COVID-19 Cases by Report Date, March 1, 2020 – January 23, 2023, New Hampshire



Data are current as of 1/25/2023
Source: https://www.covid19.nh.gov/dashboard/trends

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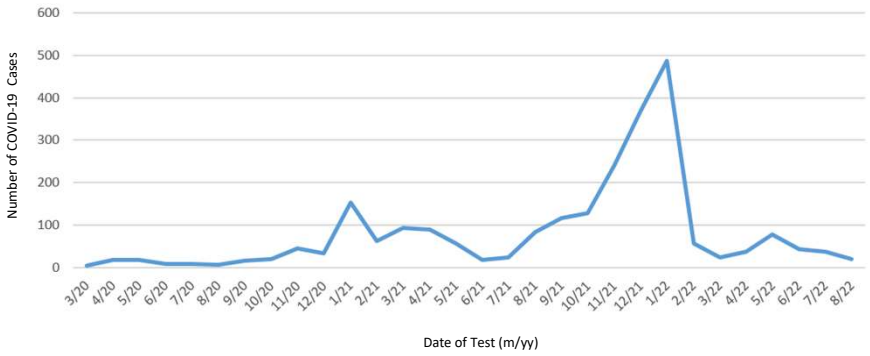
Number of Pregnant People Meeting Surveillance Criteria for COVID-19 Case* by Month and Year of Positive COVID-19 Test Result
March 2020 – August 2022, New Hampshire (n=2,394)



*Includes pregnant people who tested positive for COVID-19 during pregnancy or at the time of delivery.
Data are current as of 1/20/2023

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What do we now know?*

Key Findings from SET-NET Data¥

*Data collection in ongoing. As additional data are collected and analyzed, findings may change.
¥Unless mentioned otherwise, data presented in following slides represent data submitted by the 26 jurisdictions participating in SET-NET COVID-19 surveillance activities.

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Illness Severity Risk Factors Among Pregnant People[1]

- Age: ≥ 25yo
- Occupation: Healthcare workers
- Underlying medical conditions (n=7950)
  - Pre-pregnancy obesity (BMI ≥ 30) (reported in 28.2% of cases)
    - Total Number of NH cases with pre-pregnancy BMI ≥ 30: 759 (n=2255)
  - Chronic lung disease (reported in 6.3% of cases)
  - Gestational diabetes (reported in 10.6% of cases)
    - Total number of NH cases with gestational diabetes: 190 (n=2394)
      - Gestational diabetes status was not reported for 186 NH cases
  - Gestational hypertension reported (reported in 10.8% of cases)

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Risk for Preterm Birth[2]

- Trimester of COVID-19 infection and illness severity
  - Increased risk of preterm birth amongst pregnant people with critical COVID-19 in second or third trimester
    - Secondary contributing factors: maternal systemic inflammatory response and placental inflammation, both associated with COVID-19 infections
  - Obstetric intervention
    - Increased risk for emergent cesarean deliveries and labor inductions amongst those with critical COVID-19
      - Association between severe COVID-19 and higher rates of preeclampsia

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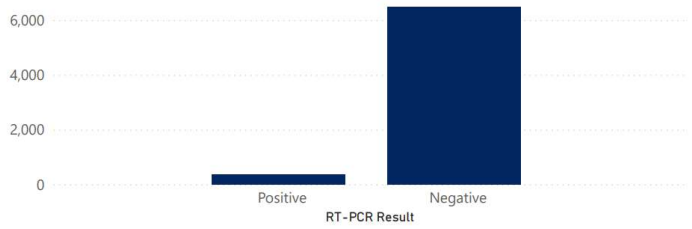
Laboratory Testing Results for SARS-CoV-2 among Infants Born to People with COVID-19 Who Were Tested at the Birth Hospitalization*

Laboratory testing information was available for 6,879 (6.8%)** infants.



RT-PCR Result	Number of Births
Negative	6479
Positive	372
Indeterminate	28
Total	6879

*Within the first three days of life or at the birth hospitalization and less than 14 days after birth.
**All positive SARS-CoV-2 results are reported, but negative results may not be reported or monitored in all jurisdictions.

Source: CDC (https://stacks.cdc.gov/view/cdc/122064)

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Additional Infant Outcomes[3]

- Breastmilk feeding
  - Lower breastmilk feeding initiation (77.6%) amongst infants whose birth parent tested positive ≤ 14 days before delivery compared to those who tested positive > 14 days (88.3%)
- All-cause mortality
  - Higher incidence (1.0%) amongst infants whose birth parent tested positive ≤ 14 days before delivery
- All-cause hospitalization
  - Timing of maternal infection did not impact the incidence (4.1%) of all-cause hospitalization amongst infants
- Higher proportion (5.6%) of infants with jaundice requiring phototherapy
  - Reasons are still unknown and will require additional study

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Prevention

- Those who are planning to become pregnant, who are currently pregnant, or recently pregnant should take additional steps to protect themselves from becoming infected with COVID-19.
  - Get vaccinated and stay up-to-date with vaccines.
  - Limit in-person interactions with people who may have been exposed to COVID-19 or who recently tested positive.
  - Wash hands often using soap and warm water. Hand sanitizer can be used when soap are water are not available.
  - Cover coughs and sneezes.

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3. Gosdin L., Wallace B., Lanzieri TM, et al. Six-Month Outcomes of Infants Born to People With SARS-CoV-2 in Pregnancy. *Pediatrics* December 2022; 150 (6): e2022059009. 10.1542/peds.2022-059009

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  - *Maternal and Child Health Program Staff*
- Centers for Disease Control and Prevention
  - *Division of Birth Defects and Infant Disorders*

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Thank you!

Additional COVID-19 Information:
https://www.covid19.nh.gov/

BIDC Contact: NHBIDC@dhhs.nh.gov
(603)271-4496

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