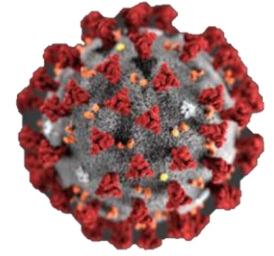


# New Hampshire Coronavirus Disease 2019 Weekly Call for Healthcare Providers and Public Health Partners



February 4, 2021

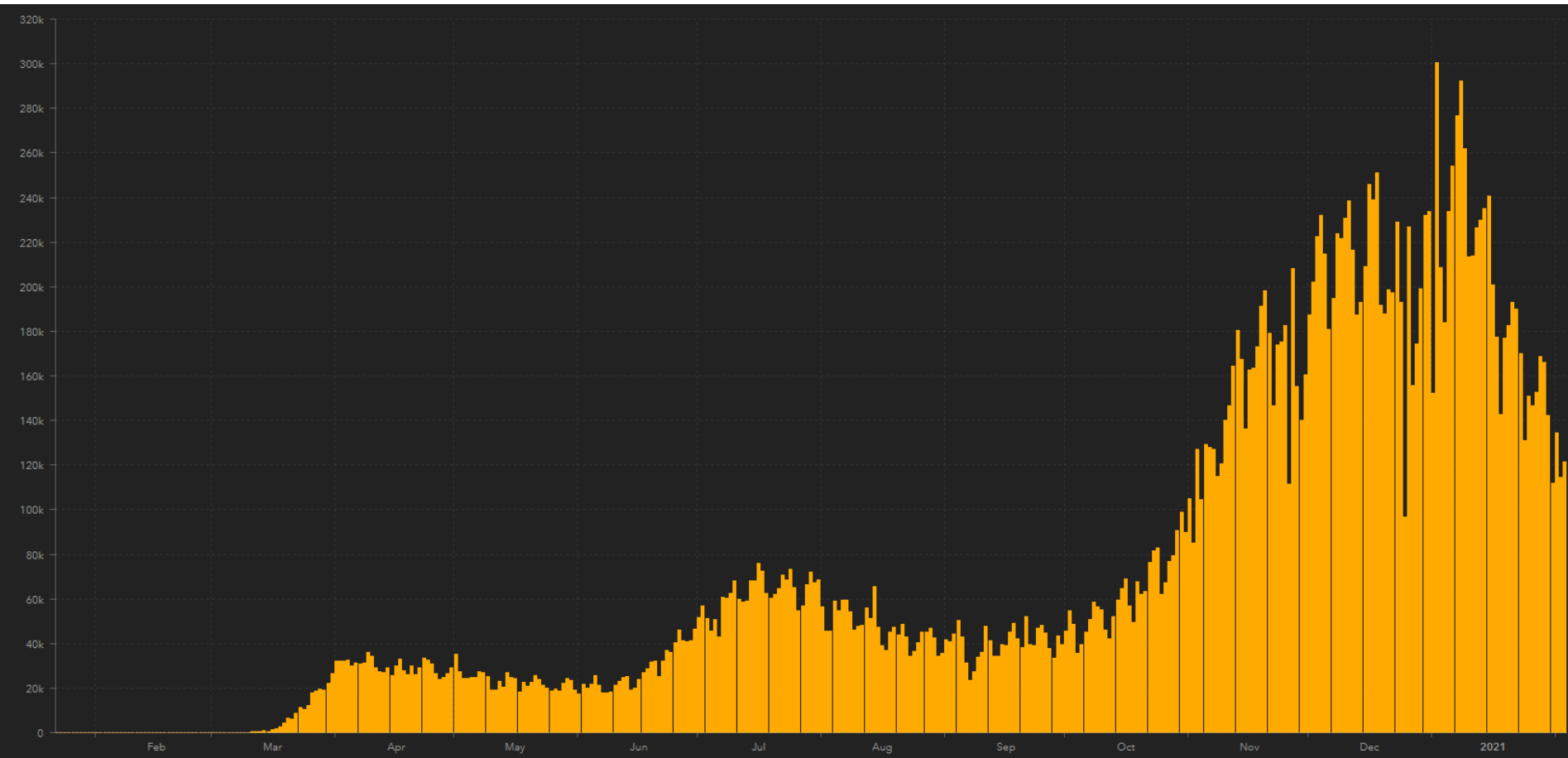
*Ben Chan  
Elizabeth Talbot  
Beth Daly  
Lindsay Pierce*

Thursday noon-time partner calls will focus on science, medical, and vaccine updates geared towards our healthcare partners

# Agenda

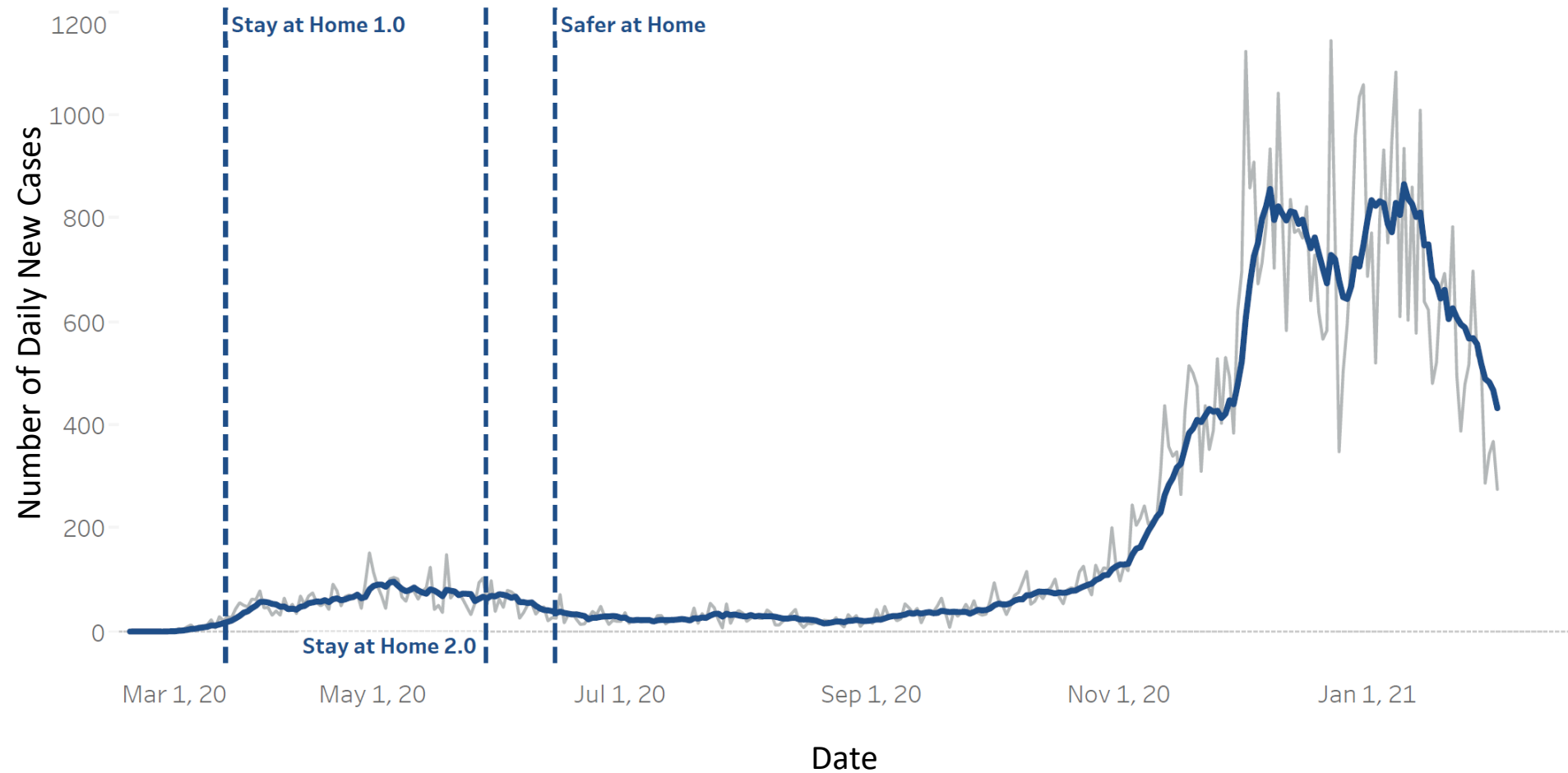
- Epidemiology Update
- Johnson & Johnson COVID-19 Vaccine Update
- SARS-CoV-2 Variants of Concern (VOC)
- Testing for COVID-19 In Symptomatic Persons Previously Infected or Vaccinated
- Questions & Answers (Q&A)

# National Daily Incidence of COVID-19



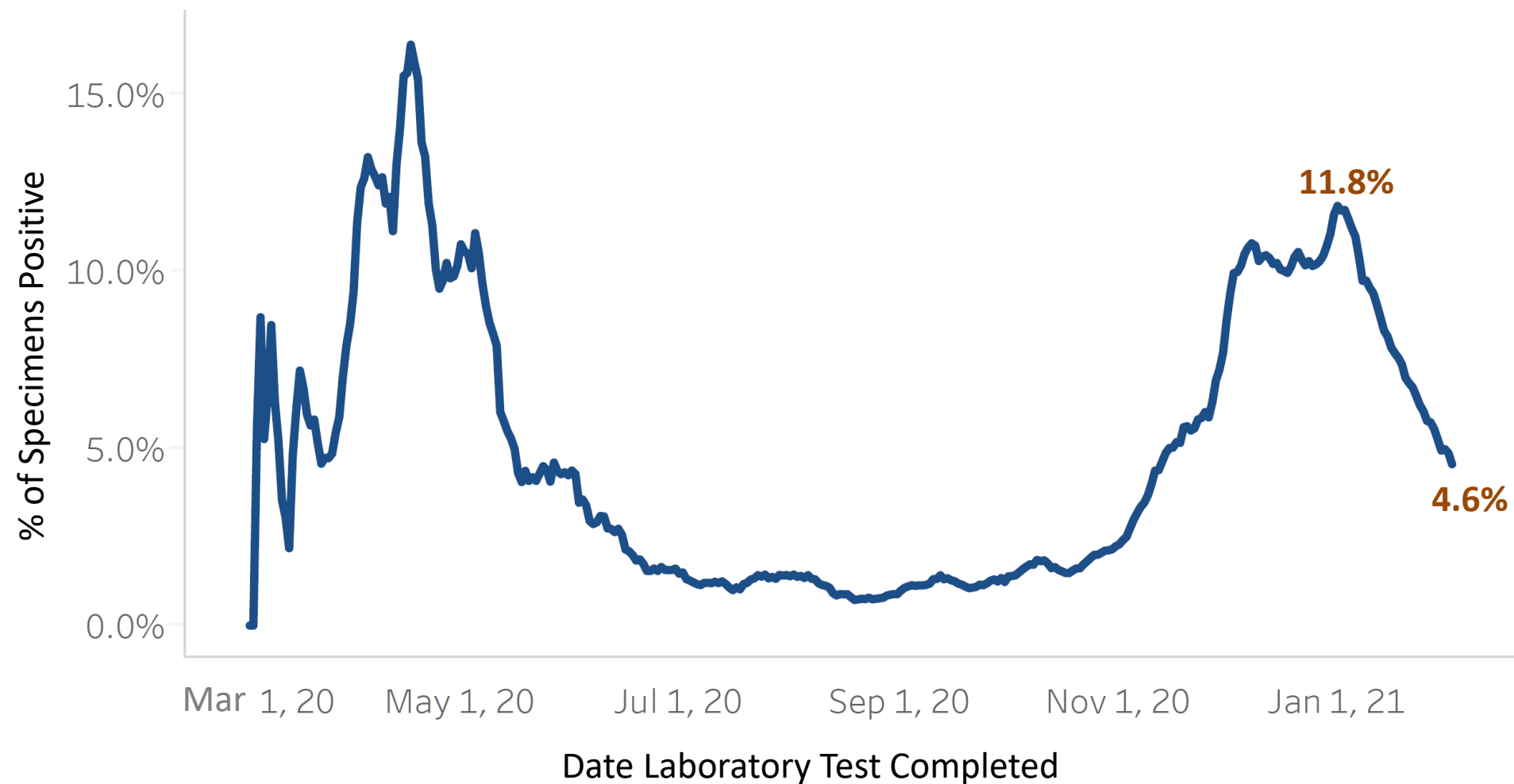
- More than 26.5 million cumulative cases in the U.S. (25% of all global infections)
- More than 450,000 deaths in the U.S. from COVID-19 (20% of all global deaths)

# Number of New COVID-19 Cases per Day in NH

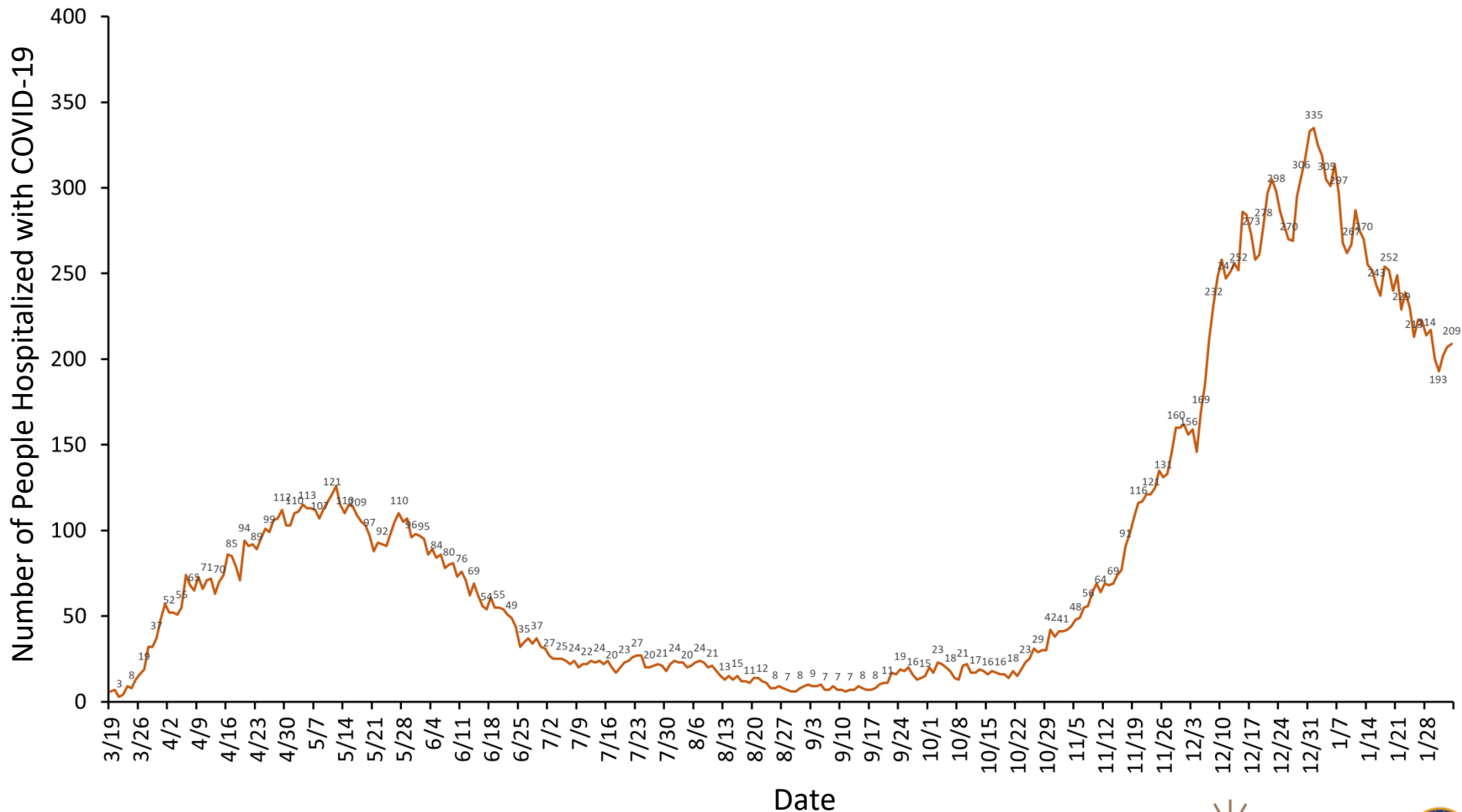


<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

# % of Tests (Antigen and PCR) Positive for COVID-19 (7-Day Average)



# Number of People Hospitalized with COVID-19 Each Day in NH (Hospital Census)

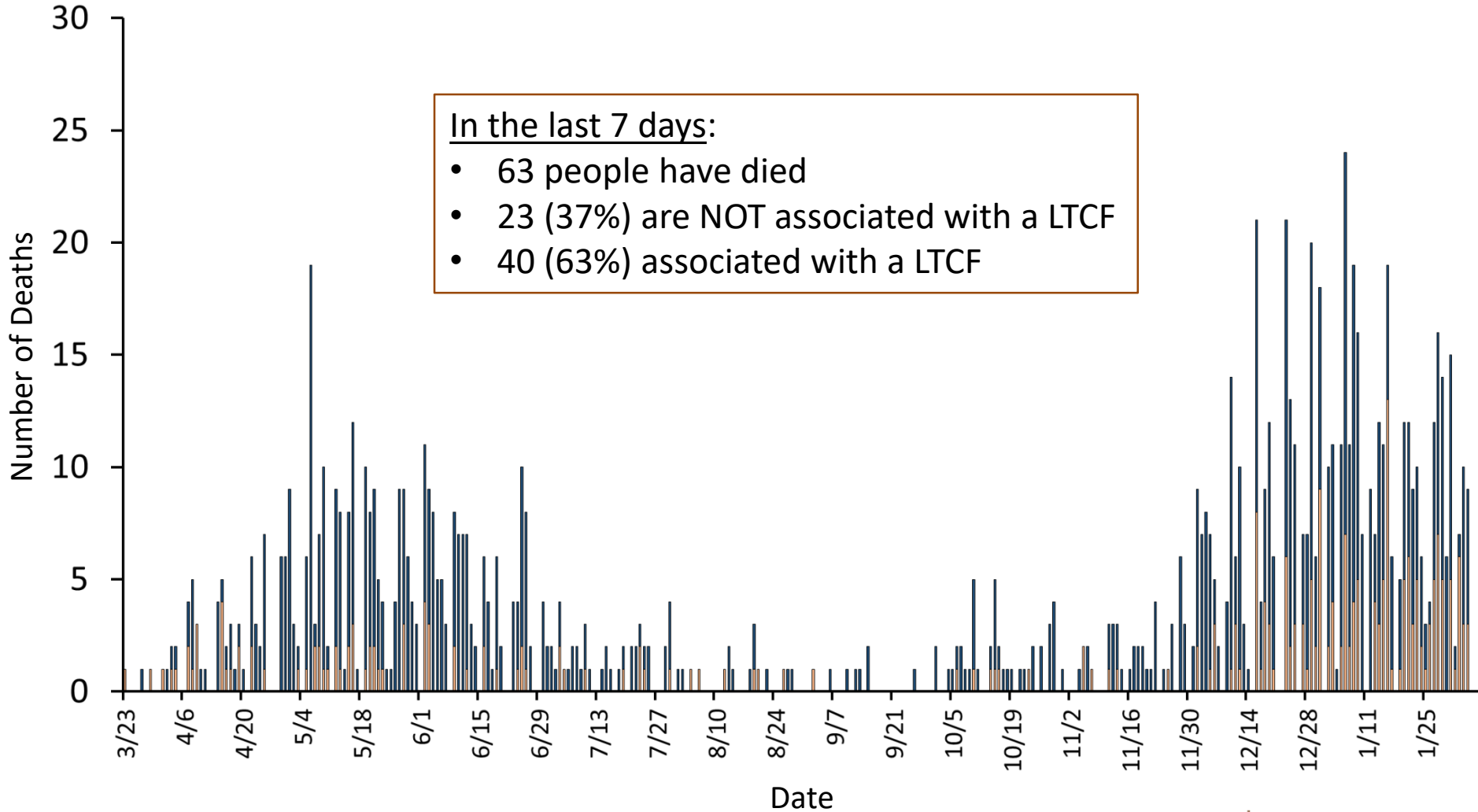


# Number of COVID-19 Deaths in NH by Report Date

■ Non-LTCF Associated    ■ LTCF Associated

In the last 7 days:




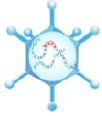





- 63 people have died
- 23 (37%) are NOT associated with a LTCF
- 40 (63%) associated with a LTCF



# Johnson & Johnson COVID-19 Vaccine Update



# Selected COVID-19 Vaccines

Platform	Developer	Status
 <b>Nucleic Acid (mRNA)</b>		<ul style="list-style-type: none"> <li>▪ 94% efficacy → EUA</li> </ul>
		<ul style="list-style-type: none"> <li>▪ 95% efficacy → EUA</li> </ul>
 <b>Adenovirus Vector</b>		<ul style="list-style-type: none"> <li>▪ Phase 3 results → likely Feb. 2021</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Phase 3 results → likely Mar. 2021</li> </ul>
 <b>Recombinant Protein and Adjuvant</b>		<ul style="list-style-type: none"> <li>▪ Phase 2 starts → Feb. 2021</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Phase 3 results → likely Mar. 2021</li> </ul>

# Johnson & Johnson's Ad26.COVS Vaccine

- Adenovirus serotype 26 (Ad26) vector – recombinant, replication-incompetent adenovirus vector encoding the SARS-CoV-2 spike protein
- Same platform used in the Ebola vaccine: Ad26-based vaccines have been shown to be safe and highly immunogenic
- 1 dose, Refrigerated (not frozen)
- July 22<sup>nd</sup>: Started phase 1/2 trials (safety and immunogenicity)
- September 23<sup>rd</sup>: Phase 3 trial launched (adults 18 years and older)
  - November 15<sup>th</sup>: Initiated a 2-dose regimen phase 3 trial (ENSEMBLE 2 study) in parallel – two doses scheduled 8 weeks apart
- December 17<sup>th</sup>: Fully enrolled phase 3 trial with ~45,000 participants (ENSEMBLE study)
- January 29<sup>th</sup> (2021): Johnson & Johnson [announced](#) single-shot COVID-19 vaccine met primary endpoints in interim analysis of study data
- Pending submission to FDA for Emergency Use Authorization (EUA)

# Preliminary Findings From Johnson & Johnson's Vaccine Study Analysis

- Single-dose of the Janssen Pharmaceutical COVID-19 vaccine
- Overall vaccine efficacy: 66% effective in preventing moderate to severe COVID-19 (28 days after vaccination)
  - 72% effective in the U.S.
  - 66% effective in Latin America
  - 57% effective in South Africa (95% of cases were due to B.1.351 variant)
- 85% effective at preventing severe disease across all regions (28 days after vaccination)
- Complete protection against COVID-related hospitalization and death (28 days post-vaccination)

<https://www.jnj.com/johnson-johnson-announces-single-shot-janssen-covid-19-vaccine-candidate-met-primary-endpoints-in-interim-analysis-of-its-phase-3-ensemble-trial>

# Variants of Concern (VOC)

# Issues with New VOCs

- Increased transmissibility/infectiousness
- Possible new variants might cause more severe disease; but more cases will translate to more hospitalizations and death even if no increased risk of severe disease
- Decreased immunity from previous infection
- Decreased immunity from COVID-19 vaccines

Lineage	Countries Reporting	Characteristics
<p><b>B.1.1.7</b></p>	<p><b>United Kingdom</b> 80 Countries (see <a href="#">WHO Sit Reps</a>)</p> <p>541 cases in 33 U.S. states (see <a href="#">CDC map</a>)</p>	<ul style="list-style-type: none"> <li>Estimated in <a href="#">modeling study</a> to be 50%+ more transmissible</li> <li><a href="#">Public Health England report</a> found no increased disease severity, but new <a href="#">NERVTAG report</a> estimates possible increased risk of death (“realistic possibility” of increased risk)</li> <li>Possible small reduction in immunity from vaccination: <ul style="list-style-type: none"> <li>Limited evaluation of sera from people vaccinated with Pfizer-BioNTech vaccine (<a href="#">bioRxiv study</a>) &amp; Moderna vaccine (See <a href="#">announcement</a> and <a href="#">bioRxiv study</a>) found retained neutralizing activity against variant</li> <li><a href="#">bioRxiv study</a> found B.1.1.7 variant mutations resulted in small decrease in neutralizing ability of plasma from mRNA vaccine recipients</li> <li>Novavax (protein/adjuvant-based vaccine) <a href="#">reported</a> vaccine efficacy of 89% in the UK in preventing symptomatic COVID-19 where B.1.1.7 variant was detected in over 50% of cases – efficacy by strain estimated to be 95.6% against original strain and 85.6% against B.1.1.7 strain</li> </ul> </li> </ul>
<p><b>B.1.351</b></p>	<p><b>South Africa</b> 41 Countries (see <a href="#">WHO Sit Reps</a>)</p> <p>3 cases in 2 U.S. states (see <a href="#">CDC map</a>)</p>	<ul style="list-style-type: none"> <li>Likely Increased transmissibility given epidemiology and findings of B.1.1.7 variant</li> <li>Still studying if new variant causes more severe disease</li> <li>More substantial decrease in immunity from previous infection or vaccination: <ul style="list-style-type: none"> <li><a href="#">bioRxiv study</a> showed that mutations to the receptor binding domain (RBD) of the SARS-CoV-2 spike protein (particularly E484) can substantially reduce convalescent serum antibody binding and neutralization</li> <li><a href="#">bioRxiv study</a> showed that mutations in B.1.351 variant resulted in decrease neutralizing ability of plasma from mRNA vaccine recipients</li> <li><a href="#">bioRxiv study</a> found monoclonal antibodies were ineffective at neutralizing new variant; and 48% of convalescent plasma/sera samples (from people previously infected) had no detectable neutralization activity against variant (non-neutralizing antibodies showed better activity)</li> <li>About 1/3 of Novavax vaccine study participants had prior COVID-19 infection, and infection rate in placebo group was “not impacted by baseline anti-spike serostatus” (see <a href="#">webcast</a>)</li> <li>Novavax (protein/adjuvant-based COVID-19 vaccine) <a href="#">reported</a> vaccine efficacy of 60% in South Africa (60% in HIV-negative, 49% overall efficacy) in preventing symptomatic COVID-19 (B.1.351 variant detected in over 92% of cases), compared to 89% efficacy in UK</li> <li>Moderna <a href="#">reported</a> a “six-fold reduction in neutralizing titers” observed with B.1.351 variant, but titers were “above levels that are expected to be protective” (see also <a href="#">bioRxiv study</a>). Moderna is developing a “booster candidate” against the B.1.351 variant</li> <li>Johnson &amp; Johnson <a href="#">reported</a> that Phase 3 clinical trial (ENSEMBLE study) showed Janssen’s COVID-19 vaccine (28 days post-vaccination) was 57% effective at preventing moderate-severe COVID-19 in South Africa (95% of cases due to variant) compared to 72% effective in the U.S.</li> </ul> </li> </ul>
<p><b>P.1</b></p>	<p><b>Brazil</b> 10 Countries (see <a href="#">WHO Sit Reps</a>)</p> <p>2 case in 1 U.S. state (see <a href="#">CDC map</a>)</p>	<ul style="list-style-type: none"> <li>Likely increased transmissibility given epidemiology and findings of B.1.1.7 variant</li> <li>Still studying if new variant causes more severe disease</li> <li>Likely decreased immunity from prior infection: <ul style="list-style-type: none"> <li><a href="#">Lancet study</a> found resurgence in Manaus Brazil after identification of P.1 variant in region, despite estimated 76% of population with previous infection.</li> </ul> </li> <li>Vaccine-induced immunity likely diminished based on vaccine studies of B.1.351 variant (which has similar spike protein mutations)</li> </ul>

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**B.1.351**

**South Africa**

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(see [WHO Sit Repts](#))

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(see [CDC map](#))

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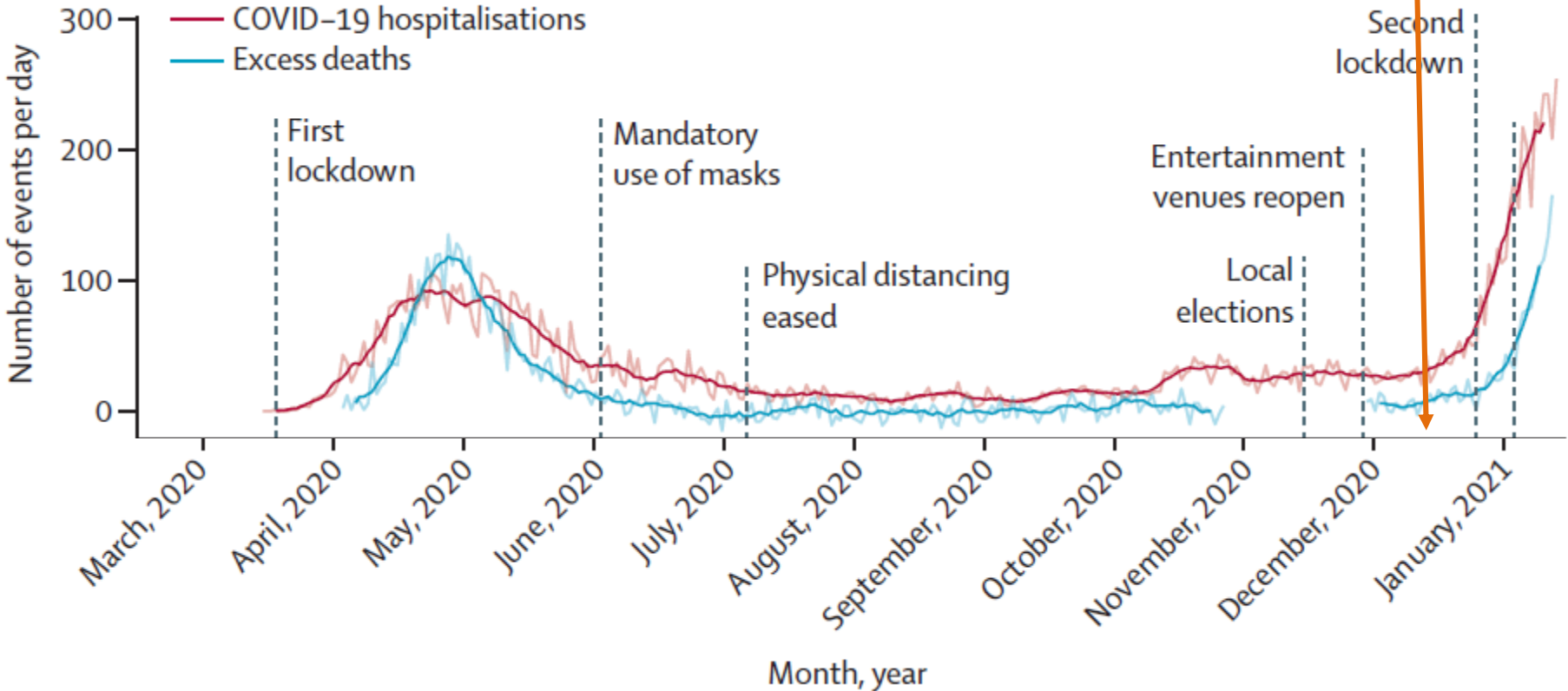
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# Resurgence of COVID-19 in Manaus, Brazil, despite high seroprevalence



Earliest Detection of P.1 Lineage of SARS-CoV-2 Virus

# Testing for COVID-19 in Symptomatic Persons Who Are Previously Infected or Vaccinated

# THIS IS AN OFFICIAL NH DHHS HEALTH ALERT

Distributed by the NH Health Alert Network  
[Health.Alert@nh.gov](mailto:Health.Alert@nh.gov)  
January 11, 2021 Time 1200 (12:00 PM EDT)  
NH-HAN 20210111



## Coronavirus Disease 2019 (COVID-19) Outbreak, Update # 33

*COVID-19 Vaccination Allocation Plan Update*  
*Quarantine Guidance Update*

### Key Points and Recommendations:

- Regardless of prior infection or vaccination status, any person with new or unexplained [symptoms of COVID-19](#) still needs to isolate ([Isolation Guide](#)), and be evaluated for COVID-19 testing.

# Healthcare Provider Letter

To Whom It May Concern:

The above named patient was tested positive for COVID 19 on \_\_\_\_\_. He is immune to COVID 19 for 90 days from this date and should not be tested until after \_\_\_\_\_. If he develops any COVID symptoms during this time please know that it is not COVID 19 and treat accordingly.  
If you have any questions please feel free to contact this office.

# Problems and Inaccuracies

- Not a true statement: *“He is immune to COVID-19 for 90 days from this date...”*
  - Person has immunity, but is not “immune” (i.e., risk is low but not zero)
- Not a true statement: *“He... should not be tested until after xx/xx/21”*
  - Person should be tested, even within 90 days of prior infection or if person was previously vaccinated, if there is increased concern for COVID-19 (clinical judgement applies)
- Not a true statement: *“If he develops any COVID symptoms during this time please know that it is not COVID-19”*
  - People can be re-infected with SARS-CoV-2, even within 90 days of a prior infection. The only way to know if symptoms are due to COVID-19 is to test

# Ask of Providers

- Use clinical judgement - assess a person with symptoms, even if previously infected or fully vaccinated (assess symptoms, risk factors, time since prior diagnosis or vaccination, etc.)
- Test if someone has an increased risk for reinfection or exposure:
  - Immunosuppressed
  - Known exposure to someone with COVID-19
  - Recent travel (especially on public transportation or international travel)
- Test if someone has symptoms that might be more concerning for COVID-19 (e.g., fever, loss of taste/smell, worsening symptoms)
- If someone has no exposures or risk factors, mild singular or non-specific symptoms, they may not need testing
- Clinicians must balance pre-test probability of disease with risk of false-positives (antigen testing) or identification of prolonged viral shedding (PCR testing) with repeat testing

# Conclusion

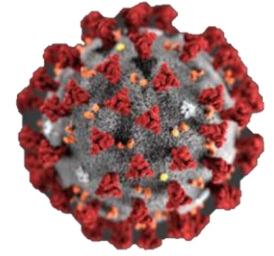
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- End result may be appropriate – i.e., the clinical assessment might indicate no need for testing due to very recent infection, no risk factors/exposures, and only mild symptoms (e.g., runny nose)
  - So person can return to school/work when afebrile and symptoms improving (per normal protocol)
- But the rationale in the letter is incorrect



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