

# New Hampshire Coronavirus Disease 2019 Weekly Partner Call

July 8, 2021

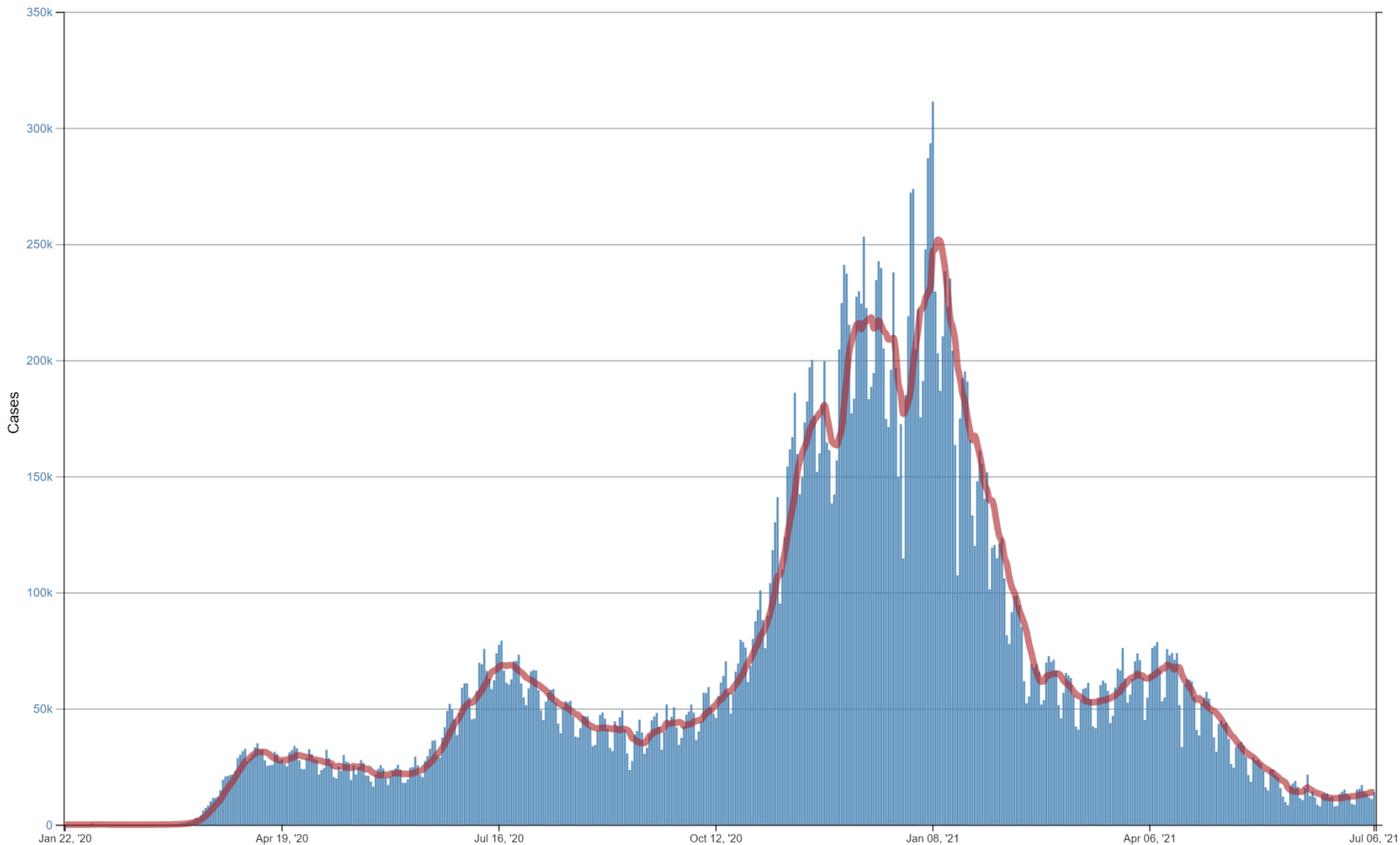
*Ben Chan  
Elizabeth Talbot  
Beth Daly  
Lindsay Pierce*

Thursday noon-time partner call will focus on science, medical, and vaccine updates with time for Q&A

# Agenda

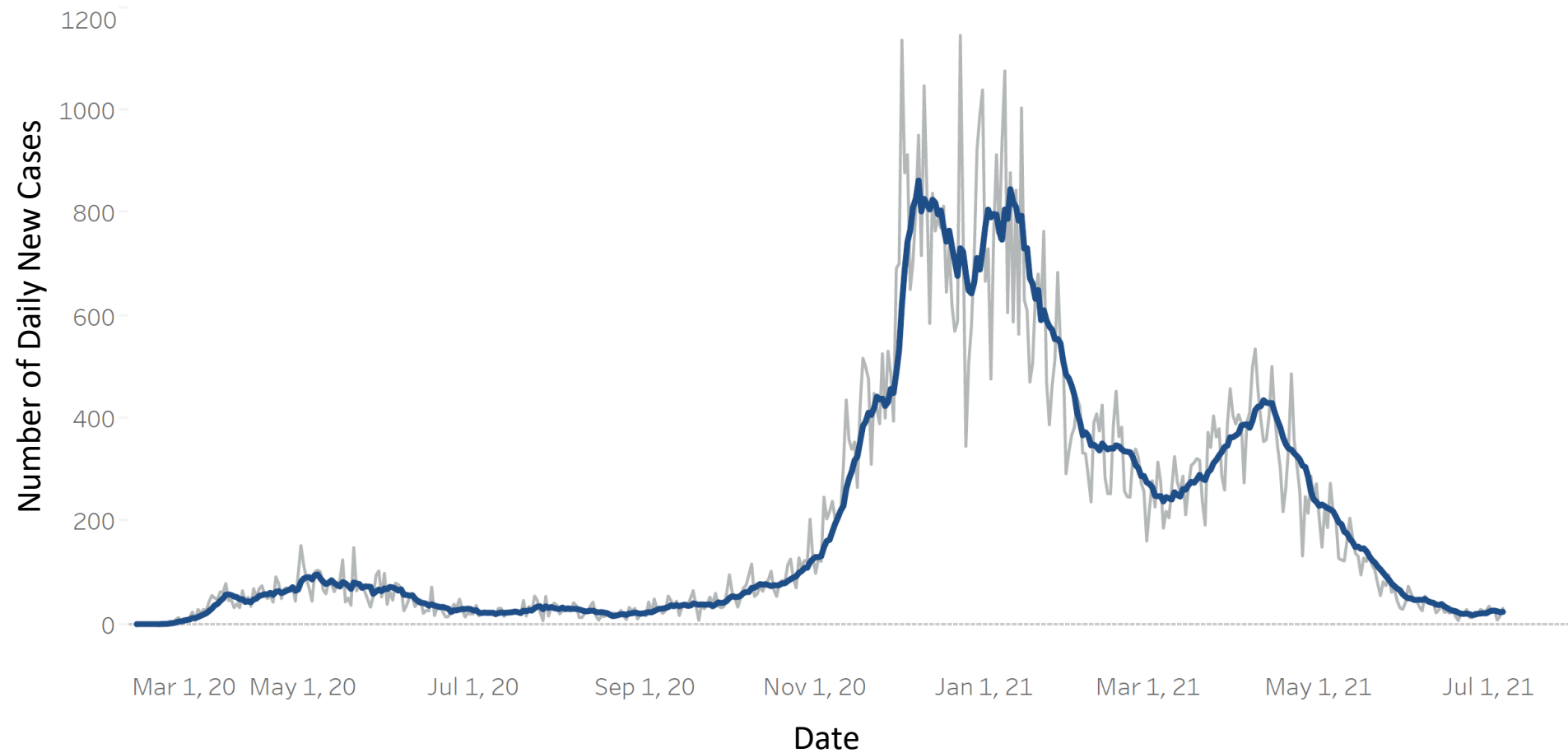
- Epidemiology update
- [MMWR Publication](#): Use of mRNA COVID-19 vaccines after reports of myocarditis among vaccine recipients (update from the ACIP)
- [NEJM Publication](#): Prevention and attenuation of COVID-19 with Pfizer-BioNTech and Moderna Vaccines
- Questions & Answers (Q&A)

# U.S. National Daily Incidence of COVID-19



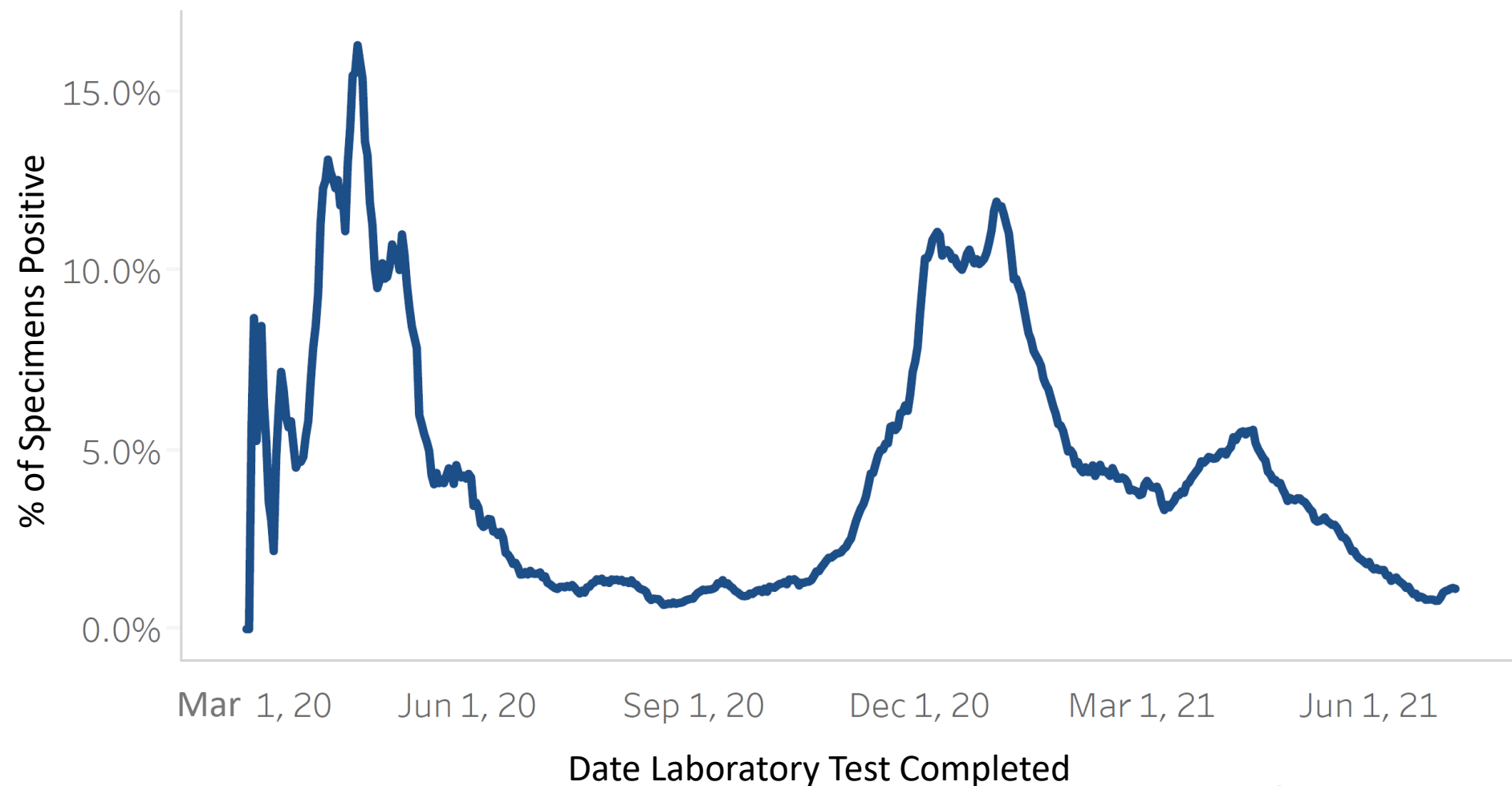
[https://covid.cdc.gov/covid-data-tracker/#trends\\_dailytrendscases](https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases)

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



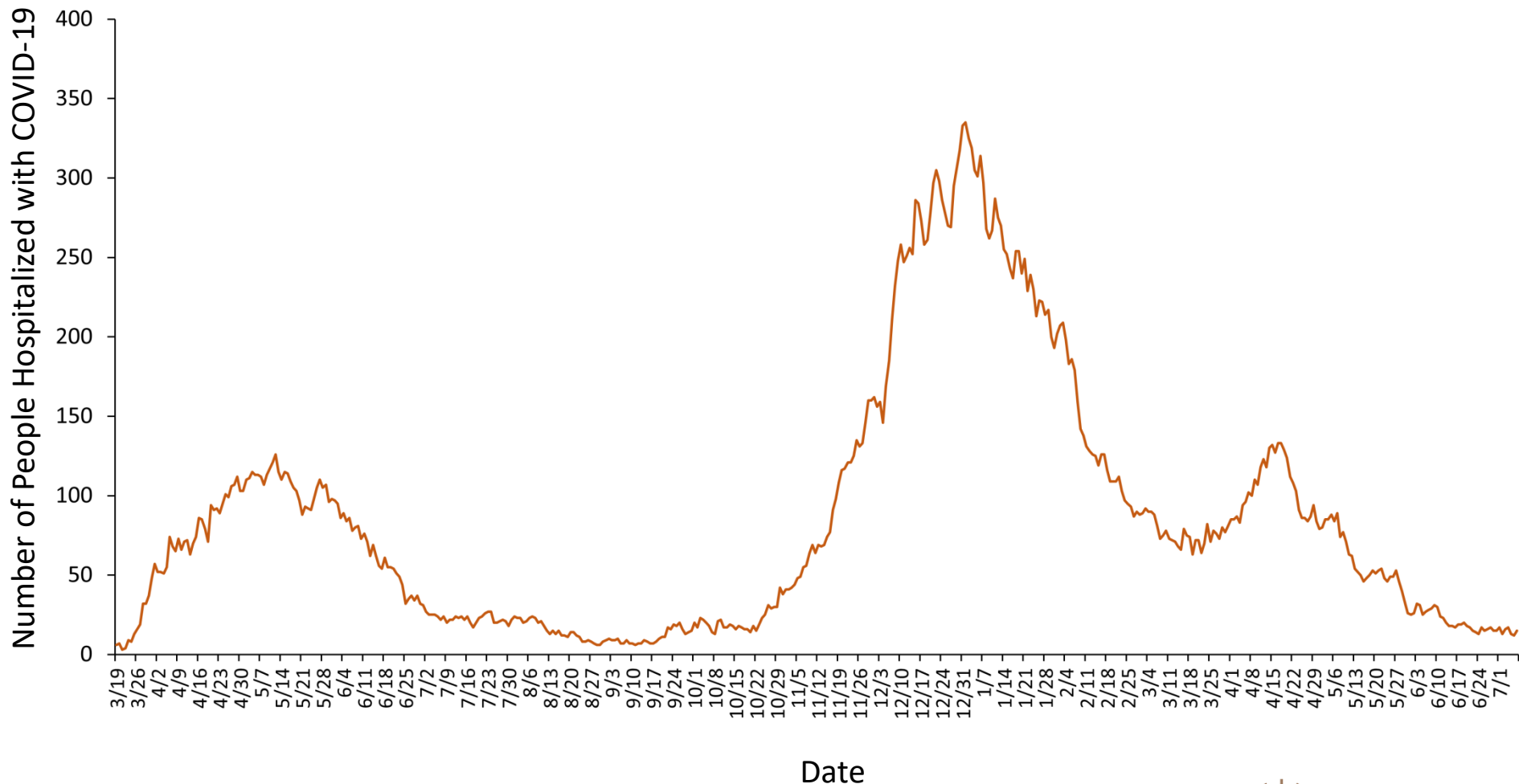
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

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



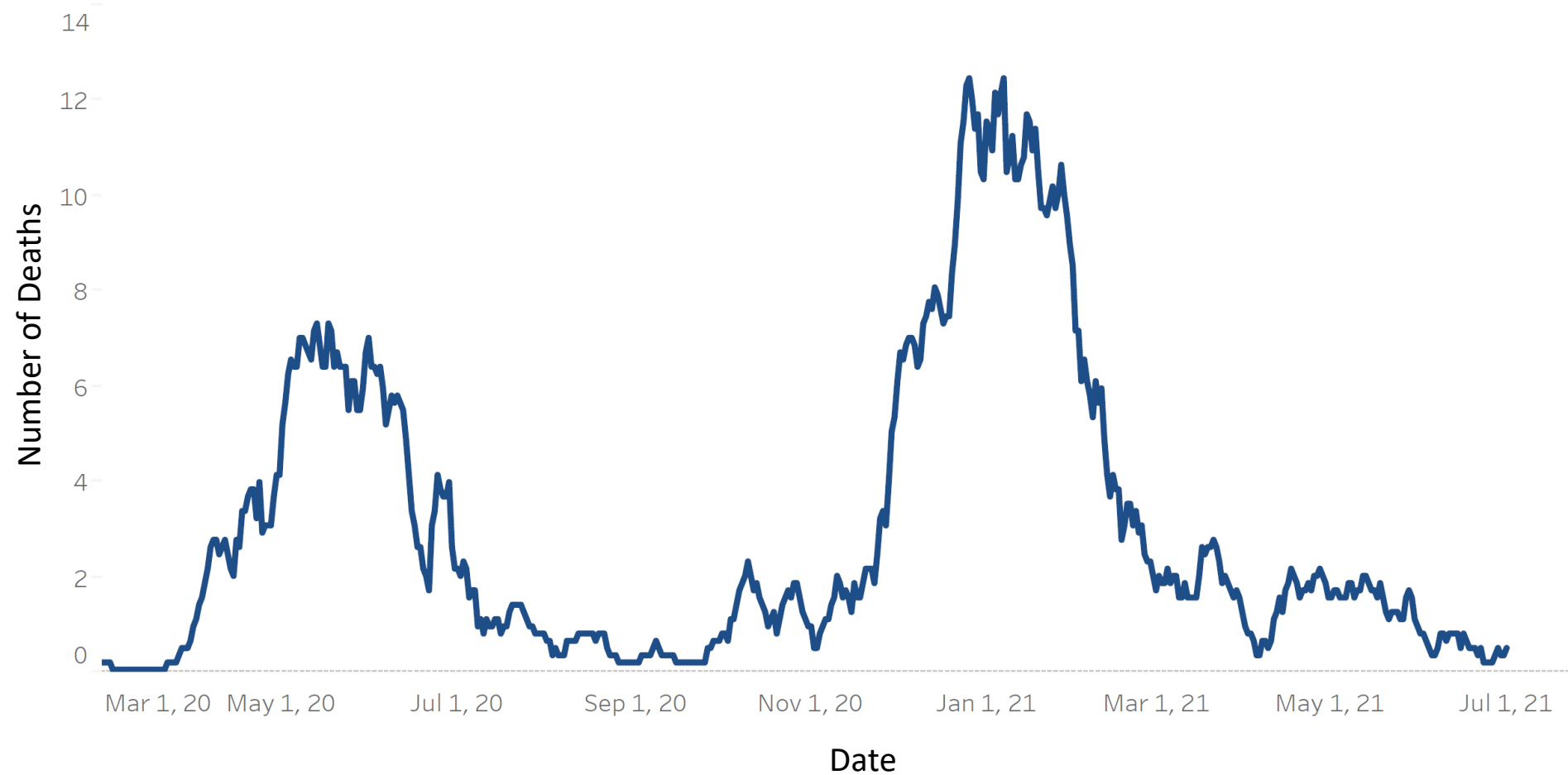
<https://www.nh.gov/covid19/dashboard/overview.htm#dash>

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



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

# Average Number of COVID-19 Deaths per Day in NH (Based on Date of Death)



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

# Level of Community Transmission

Statewide  
Level of  
Transmission

**Minimal**

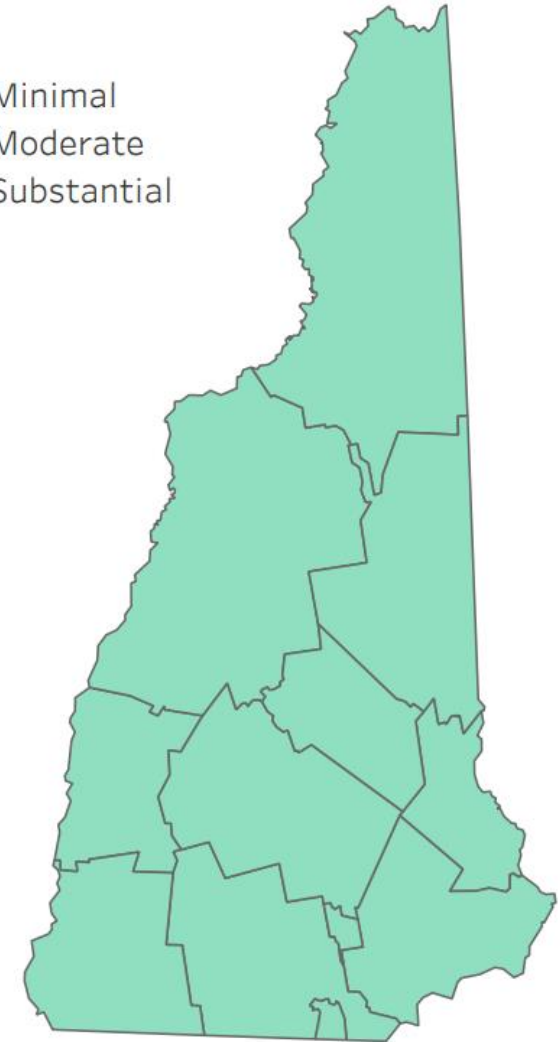
New Cases per 100k  
over 14 days

**23.5**

7-Day Total Test  
Positivity Rate

**1.1%**

- Minimal
- Moderate
- Substantial





# Variant Proportions in the U.S.

Use the controls to focus on a specific region and/or 2-week interval

HHS Region

USA

Nowcast On

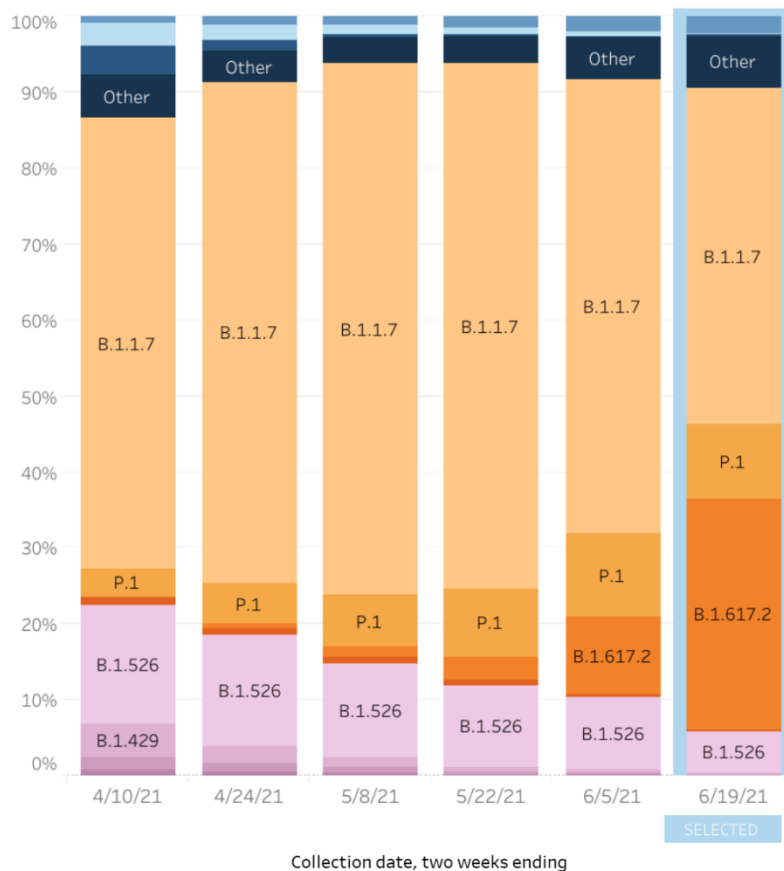
Nowcast Off

Two weeks ending

6/19/2021

United States: 3/28/2021 – 6/19/2021

United States: 6/6/2021 – 6/19/2021



USA

	Lineage	Type	%Total	95%CI
<b>Most common lineages #</b>	B.1.1.7	Alpha	VOC	44.2% 39.8-48.8%
	B.1.617.2	Delta	VOC	30.4% 24.1-37.7%
	P.1	Gamma	VOC	9.9% 7.6-13.0%
	B.1.526	Iota	VOI	5.5% 4.3-6.9%
	B.1			2.2% 1.4-3.5%
	B.1.1.519			0.2% 0.1-0.4%
<b>Additional VOI/VOC lineages #</b>	B.1.2		†	0.0% 0.0-0.1%
	B.1.351	Beta	VOC	0.2% 0.1-0.5%
	B.1.429	Epsilon	VOI	0.1% 0.0-0.4%
	B.1.525	Eta	† VOI	0.1% 0.0-0.4%
	B.1.427	Epsilon	VOI	0.1% 0.0-0.3%
	B.1.617.1	Kappa	† VOI	0.0% 0.0-0.1%
	B.1.617.3		† VOI	0.0% NA
<b>Other*</b>	P.2	Zeta	† VOI	0.0% NA
	Other			6.9% 5.3-8.9%

\* Other represents >200 additional lineages, which are each circulating at <1% of viruses

† Fewer than 10 observations of this variant during the selected time/location context

# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion. AY.1 and AY.2 are aggregated with B.1.617.2.

# Variant Proportions in the U.S.

Use the controls to focus on a specific region and/or 2-week interval

HHS Region

USA

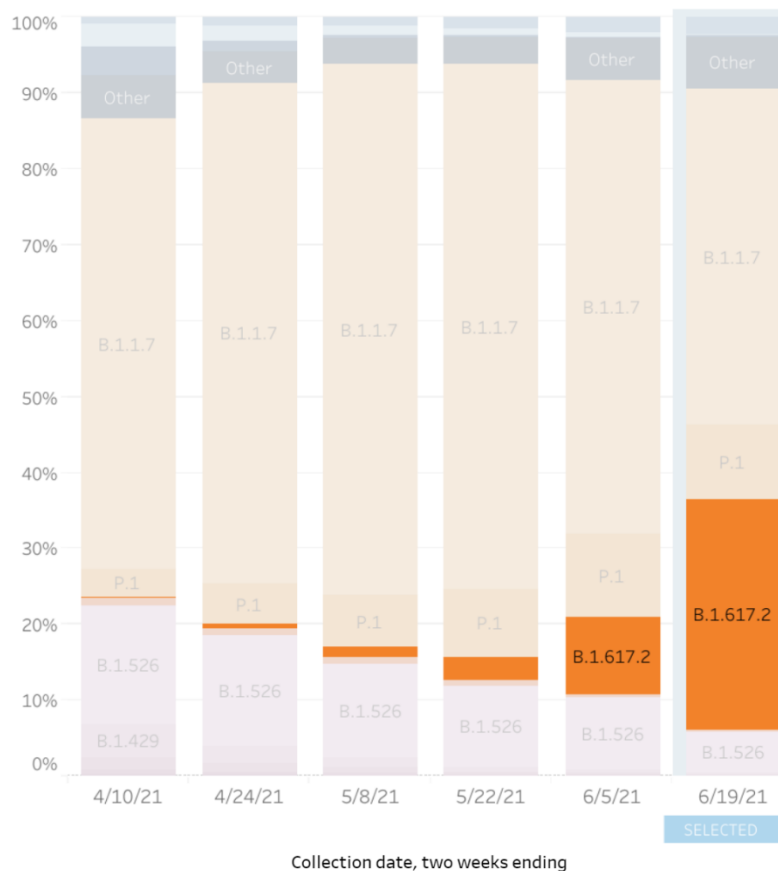
Nowcast On  
 Nowcast Off

Two weeks ending

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	B.1.525	Eta	† VOI	0.1% 0.0-0.4%
	B.1.427	Epsilon	VOI	0.1% 0.0-0.3%
	B.1.617.1	Kappa	† VOI	0.0% 0.0-0.1%
	B.1.617.3		† VOI	0.0% NA
P.2	Zeta	† VOI	0.0% NA	
<b>Other*</b>	Other		6.9%	5.3-8.9%

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● Nowcast On

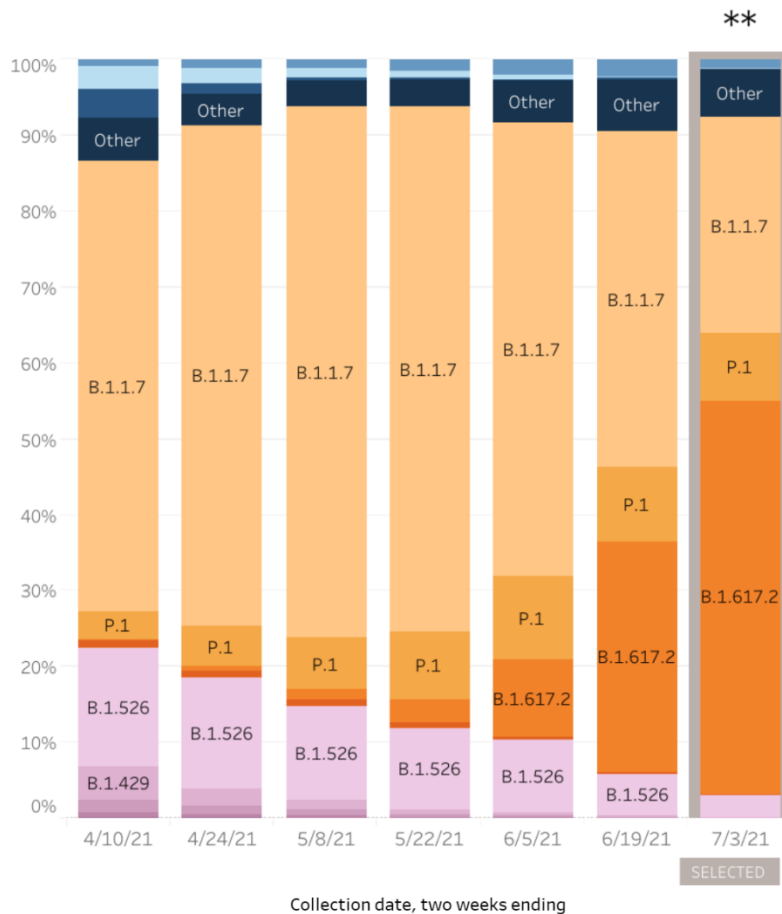
○ Nowcast Off

Two weeks ending

7/3/2021

United States: 3/28/2021 – 7/3/2021

United States: 6/20/2021 – 7/3/2021 NOWCAST



USA

	Lineage	Type	%Total	95%PI
<b>Most common lineages #</b>	B.1.617.2	Delta	VOC	51.7% 46.3-57.0%
	B.1.1.7	Alpha	VOC	28.7% 24.1-33.4%
	P.1	Gamma	VOC	8.9% 6.1-11.9%
	B.1.526	Iota	VOI	3.0% 1.5-4.8%
	B.1			1.1% 0.3-2.3%
<b>Additional VOI/VOC lineages #</b>	B.1.1.519			0.1% 0.0-0.5%
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	B.1.427	Epsilon	VOI	0.0% 0.0-0.3%
	Other			6.4% 3.5-9.6%

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\*\* These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion. AY.1 and AY.2 are aggregated with B.1.617.2.

## Use of mRNA COVID-19 Vaccine After Reports of Myocarditis Among Vaccine Recipients: Update from the Advisory Committee on Immunization Practices — United States, June 2021

- As of June 11, 2021, there have been ~296 million doses of an mRNA COVID-19 vaccine administered in the U.S.
- 1,226 reports of myocarditis/pericarditis (“myocarditis”) after mRNA vaccination from 12/29/20 – 6/11/21 reported into VAERS
  - Median age: 26 years
  - 58% under the age of 30
  - 77% male
  - Median of 3 days onset after vaccination
  - 76% occurred after receipt of dose 2 of an mRNA vaccine

# Subgroup Analysis of Persons Aged <30 Years

- CDC reviewed medical records on 484 patients with myocarditis reported from May 1<sup>st</sup> – June 11<sup>th</sup>
- 323 met CDC's case definition for myocarditis, pericarditis, or myopericarditis
  - Median age: 19 years
  - 90% male
  - Median of 2 days onset after vaccination
  - 92% of patients experienced onset of symptoms within 7 days of vaccination
  - 96% were hospitalized, but “acute clinical courses were generally mild”
  - 95% with a known outcome were discharged by the time of review
  - No deaths
  - Treatment data is preliminary and incomplete, but “many patients have experienced resolution of symptoms with conservative treatment”

# Estimated Benefits/Harms per Million 2<sup>nd</sup> mRNA Vaccine Doses Administered, by Sex and Age Group

Sex/Benefits and harms from mRNA vaccination	No. per million vaccine doses administered in each age group (yrs) <sup>†</sup>				
	12–29	12–17	18–24	25–29	≥30
<b>Male</b>					
<b>Benefit</b>					
COVID-19 cases prevented <sup>§</sup>	11,000	5,700	12,100	15,200	15,300
Hospitalizations prevented	560	215	530	936	4,598
ICU admissions prevented	138	71	127	215	1,242
Deaths prevented	6	2	3	13	700
<b>Harms</b>					
Myocarditis cases expected <sup>¶</sup>	39–47	56–69	45–56	15–18	3–4
<b>Female</b>					
<b>Benefit</b>					
COVID-19 cases prevented <sup>§</sup>	12,500	8,500	14,300	14,700	14,900
Hospitalizations prevented	922	183	1,127	1,459	3,484
ICU admissions prevented	73	38	93	87	707
Deaths prevented	6	1	13	4	347
<b>Harm</b>					
Myocarditis cases expected <sup>¶</sup>	4–5	8–10	4–5	2	1

**Abbreviations:** ICU = intensive care unit; VAERS = Vaccine Adverse Event Reporting System.

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# ACIP Conclusion and Recommendations

- The benefits of COVID-19 vaccination “clearly outweigh” the risks in ALL populations for which vaccination has been recommended (note: assessment did NOT include potential benefit of preventing long-COVID and MIS-C)
- COVID-19 vaccination continues to be recommended for all persons aged 12+ years
- Continue to monitor outcomes of myocarditis/pericarditis after COVID-19 vaccination
- Providers and the public should be informed about the rare occurrence of myocarditis/pericarditis after receipt of mRNA COVID-19 vaccination

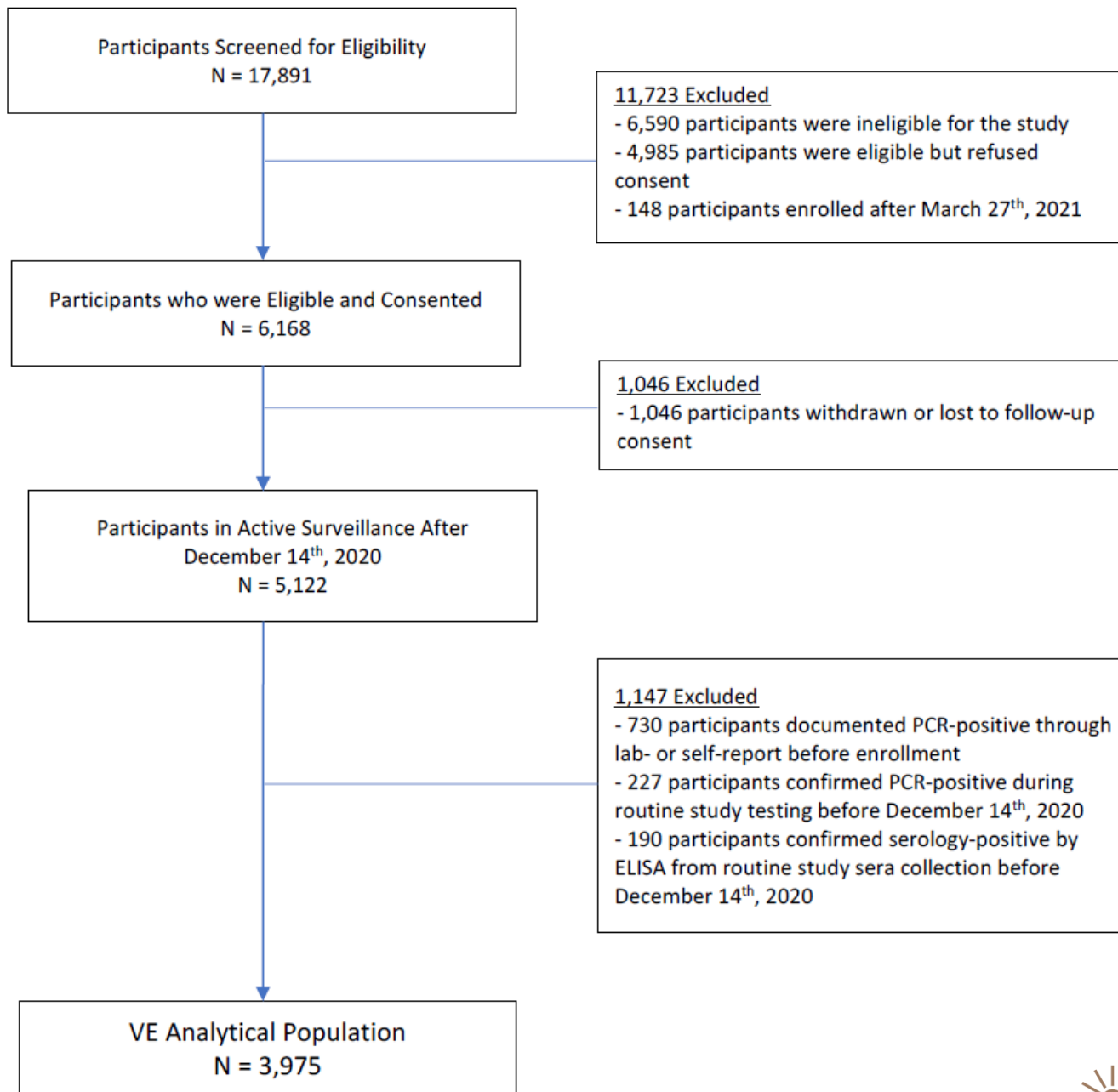
# Healthcare Provider Actions

- FDA Fact Sheets for Pfizer-BioNTech and Moderna vaccines have been updated (see [FDA website](#)) – providers should use these updated Fact Sheets
- Review CDC’s updated “Clinical Considerations for Use of COVID-19 Vaccines” (new section about [people with a history of myocarditis or pericarditis](#), and changes to the [patient counseling](#) section)
- Continue to strongly recommend COVID-19 vaccination for all persons 12+ years of age

ORIGINAL ARTICLE

## Prevention and Attenuation of Covid-19 with the BNT162b2 and mRNA-1273 Vaccines

- Prospective cohort study (HEROES-RECOVER): includes healthcare personnel, first responders, and other essential and frontline workers from 6 states
- Active symptom surveillance and weekly nasal swabs (everybody)
- Data collected from 12/14/20 – 4/10/21
- 3 aims of this study/analysis:
  - Estimate effectiveness of mRNA vaccines in preventing SARS-CoV-2 infection
  - Compare viral RNA loads in infected participants based on vaccination status
  - Evaluate frequency of febrile symptoms and duration of illness based on vaccination status



**Table 2.** Effectiveness of mRNA Vaccines in Preventing SARS-CoV-2 Infection with Full and Partial Vaccination.\*

Characteristic and Vaccination Status	Contributing Participants†		Person-Days <i>median (IQR)</i>	SARS-CoV-2 Infections <i>no.</i>	Vaccine Effectiveness‡	
	<i>no.</i>	<i>total no.</i>			Unadjusted	Adjusted
					<i>percent (95% CI)</i>	
Overall						
Unvaccinated	3964	127,971	19 (8–41)	156	—	—
Partially vaccinated	3001	81,168	22 (21–28)	11	86 (74–93)	81 (64–90)
Fully vaccinated	2510	161,613	69 (53–81)	5	92 (80–97)	91 (76–97)

**Table 3.** Viral RNA Load, Duration of Viral RNA Detection, Frequency of Febrile Symptoms, and Duration of Illness in Vaccinated and Unvaccinated Participants with SARS-CoV-2 Infection.\*

Variable	Unvaccinated	Partially or Fully Vaccinated	Difference (95% CI)
Viral RNA load			
No. assessed	155	16	—
Mean — log <sub>10</sub> copies/ml†	3.8±1.7	2.3±1.7	40.2 (16.3–57.3)‡
Duration of viral RNA detection			
No. assessed	155	16	—
Mean — days	8.9±10.2	2.7±3.0	6.2 (4.0–8.4)
Detection of viral RNA for >1 week — no./total no. (%)	113/156 (72.4)	4/16 (25.0)	0.34 (0.15–0.81)§
Febrile symptoms — no./total no. (%)¶	94/149 (63.1)	4/16 (25.0)	0.42 (0.18–0.98)∥
Total days of symptoms			
No. assessed	148	16	—
Mean — days	16.7±15.7	10.3±10.3	6.4 (0.4–12.3)
Days spent sick in bed			
No. assessed	147	15	—
Mean — days	3.8±5.9	1.5±2.1	2.3 (0.8–3.7)

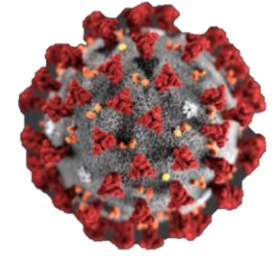
**Table 3.** Viral RNA Load, Duration of Viral RNA Detection, Frequency of Febrile Symptoms, and Duration of Illness in Vaccinated and Unvaccinated Participants with SARS-CoV-2 Infection.\*

Variable	Effect of at least Partial Vaccination	Unvaccinated	Partially or Fully Vaccinated	Difference (95% CI)
Viral RNA load				
No. assessed	<b>40% lower</b>	155	16	—
Mean — log <sub>10</sub> copies/ml <sup>†</sup>		3.8±1.7	2.3±1.7	40.2 (16.3–57.3) <sup>‡</sup>
Duration of viral RNA detection				
No. assessed	<b>6+ fewer days</b>	155	16	—
Mean — days		8.9±10.2	2.7±3.0	6.2 (4.0–8.4)
Detection of viral RNA for >1 week no. (%)	<b>66% lower risk</b>	113/156 (72.4)	4/16 (25.0)	0.34 (0.15–0.81) <sup>§</sup>
Febrile symptoms — no./total no.	<b>58% lower risk</b>	94/149 (63.1)	4/16 (25.0)	0.42 (0.18–0.98) <sup>  </sup>
Total days of symptoms				
No. assessed	<b>6+ fewer days</b>	148	16	—
Mean — days		16.7±15.7	10.3±10.3	6.4 (0.4–12.3)
Days spent sick in bed				
No. assessed	<b>2+ fewer days</b>	147	15	—
Mean — days		3.8±5.9	1.5±2.1	2.3 (0.8–3.7)



# Study Summary and Conclusions

- COVID-19 vaccines prevent both infection (including asymptomatic infection) and disease (i.e., COVID-19)
- Small number of participants with breakthrough infections after vaccination
- mRNA vaccines attenuate infection and disease
- If infected, vaccination leads to:
  - Lower viral loads
  - Shorter duration of viral shedding
  - Lower risk of febrile illness
  - Shorter duration of symptoms/illness
- This will also likely translate into lower risk of transmission



# New Hampshire Coronavirus Disease 2019 Weekly Partner Call

July 8, 2021

*Ben Chan  
Elizabeth Talbot  
Beth Daly  
Lindsay Pierce*

Thursday noon-time partner call will focus on science, medical, and vaccine updates with time for Q&A