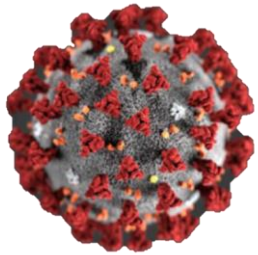


New Hampshire Coronavirus Disease 2019 Weekly Call for Healthcare Providers and Public Health Partners

June 24, 2021

Elizabeth Talbot
Beth Daly

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

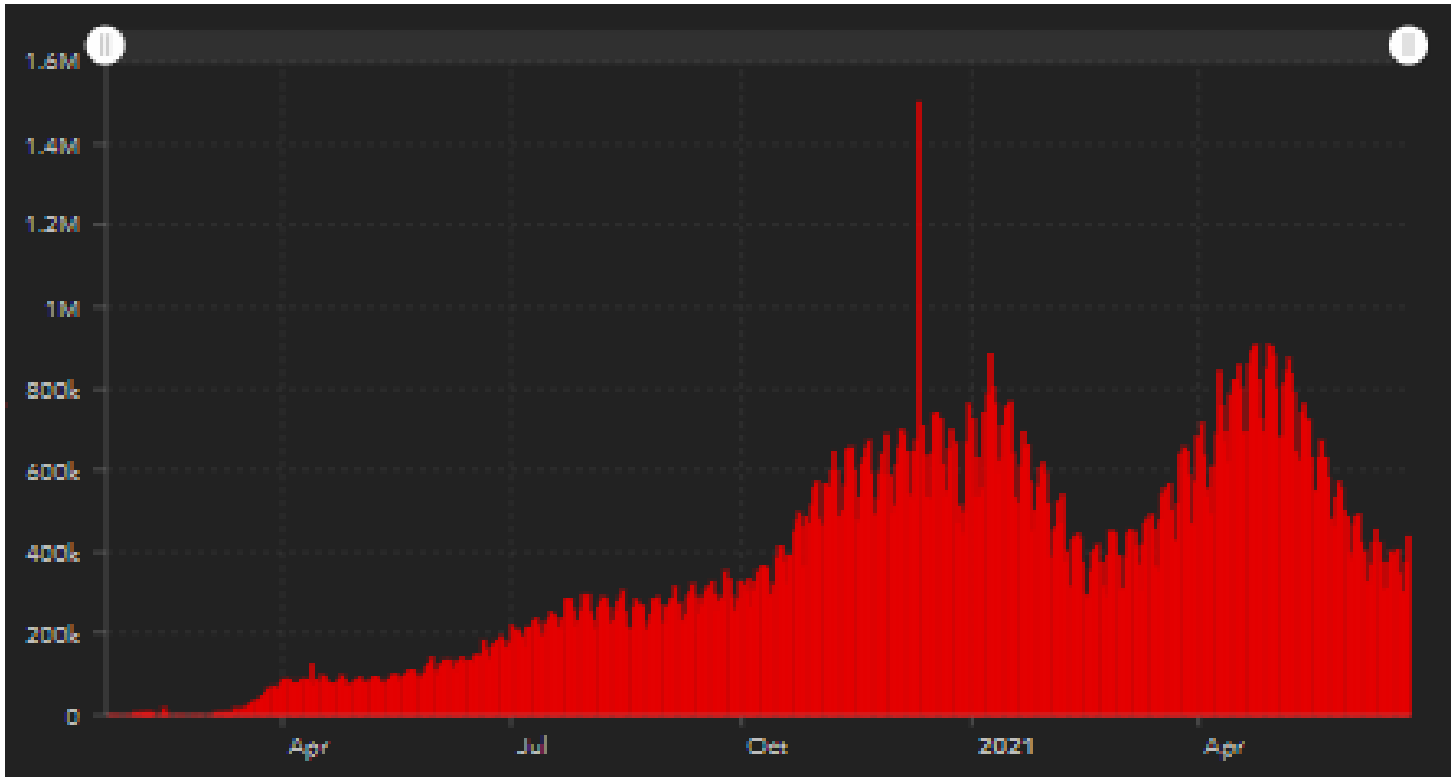
NH DIVISION OF Public Health Services
Department of Health and Human Services

Agenda

- Epidemiology update
- Updated mask & quarantine guidance
- Diagnostics update and other tidbits
- Questions & Answers (Q&A)

Global Epidemic Curve

- *179.7 million cumulative cases*

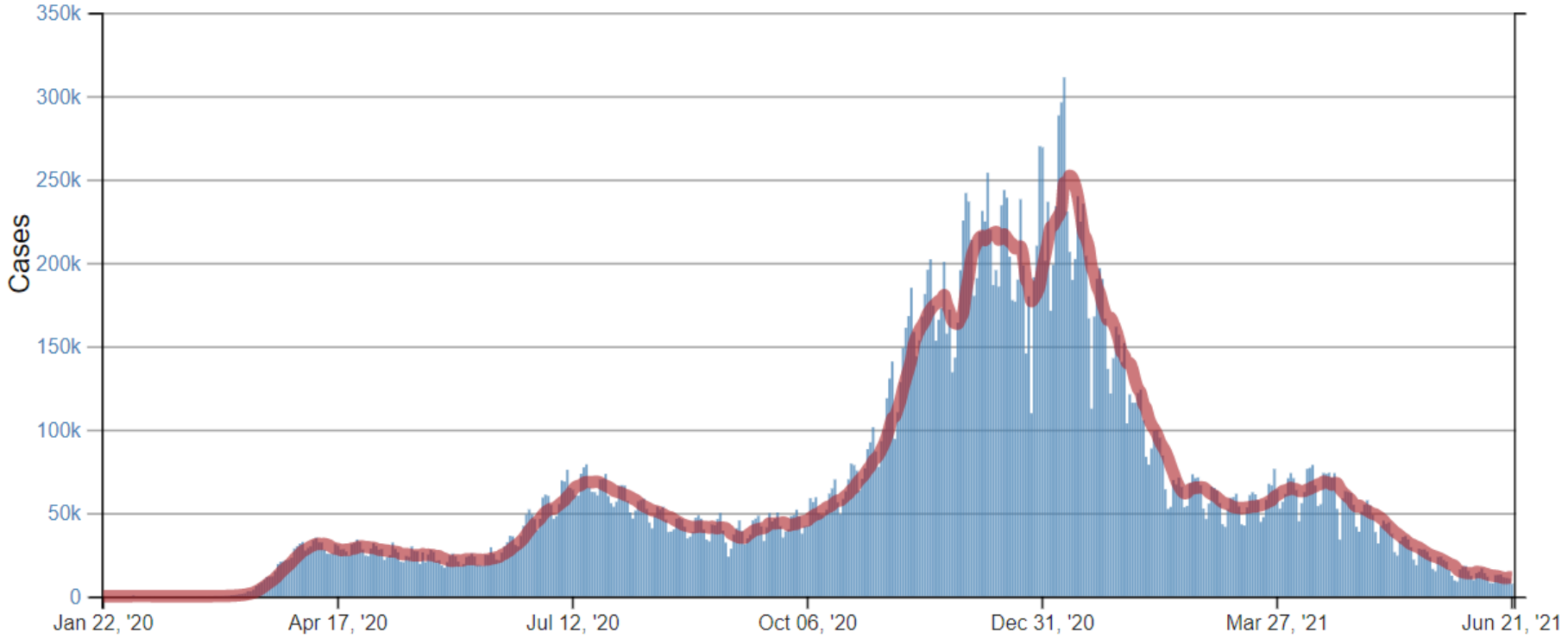


400 – 450K cases per day

U.S. Epidemic Curve

(new cases per day)

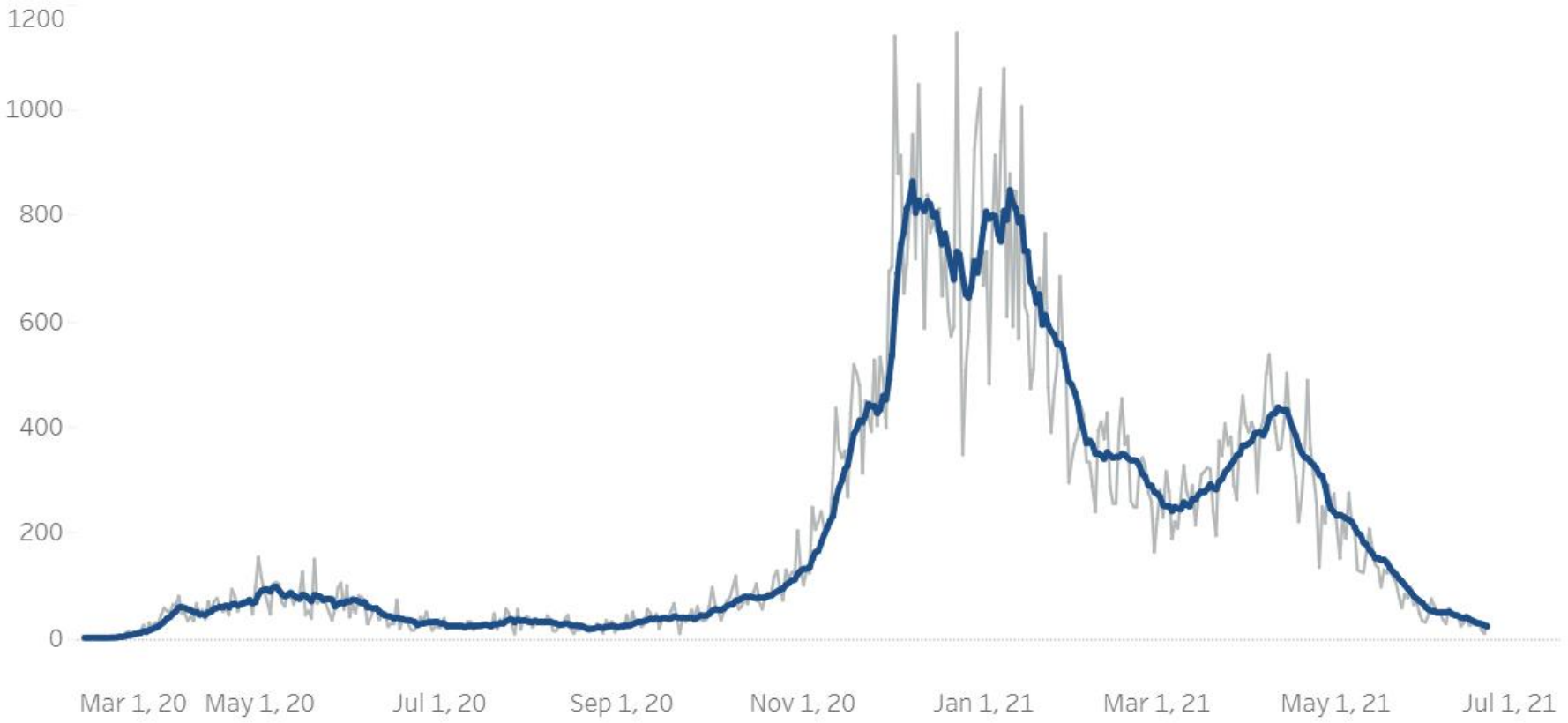
- *33.6 million cumulative cases*



7-day moving average: 11,00 cases per day

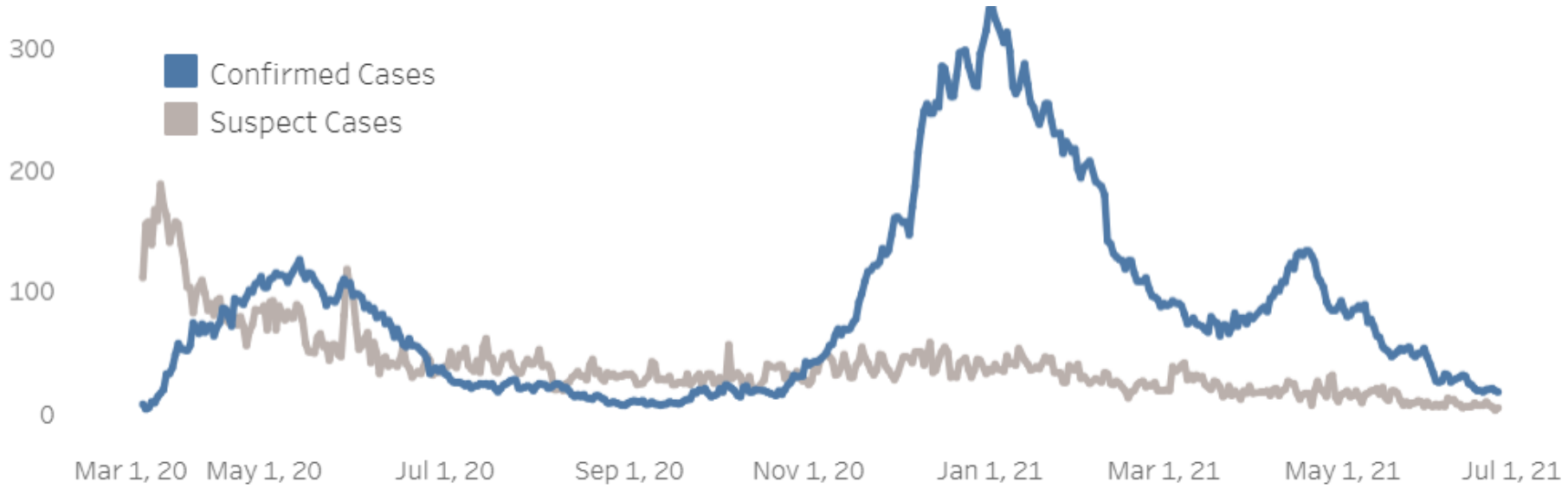
NH New Cases by Day

- *99,366 cumulative cases*

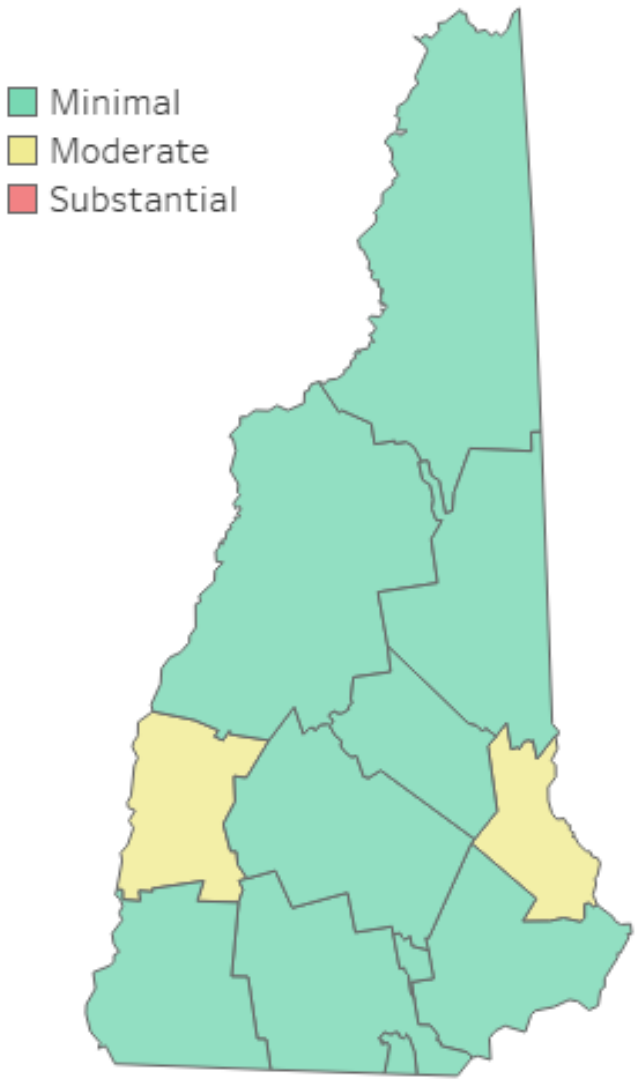


7-day moving average: 22 cases per day

NH Hospitalizations



Current: 14



Community Level Transmission Metrics - Statewide
(Not School Specific)

Level of Transmission	New Cases per 100k over 14 days	7-Day Total Test Positivity Rate
Minimal	28.8	0.9%

Decreasing Community Transmission

NH DIVISION OF Public Health Services
Department of Health and Human Services

Updated Mask Guidance

- Part of continued and phased de-escalation of COVID-19 mitigation measures
- People who are not symptomatic can choose to go without face masks in most locations
- Face masks still generally recommended for people in the following circumstances when in public locations:
  - Anyone who wants maximal protection
  - Immunocompromised persons
  - Persons at increased risk of getting and spreading COVID-19 when in high-risk locations
  - When a business/organization requires it
    - E.g. Public transportation and healthcare settings

Updated Quarantine Guidance

- Quarantine following an exposure to COVID-19 is only required for:
  - Household contacts (notified by DHHS)
  - International and cruise ship travelers
  - Residents in some higher risk settings (notified by setting)

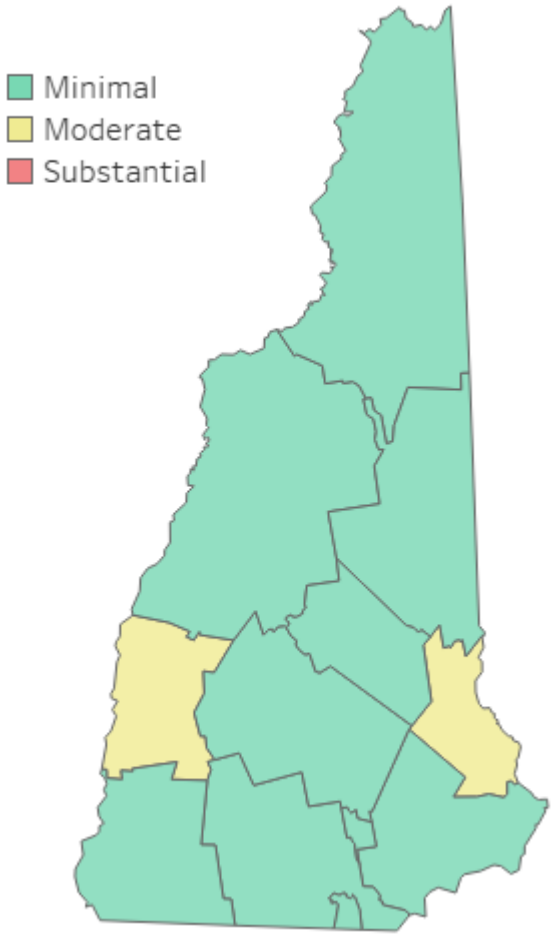
  - Some higher risk settings, such as healthcare workplaces, may still exclude unvaccinated staff members from work following an exposure.

  - Workplaces may exclude unvaccinated staff from work following exposure if the workplace is experiencing an uncontrolled outbreak.

Non-household contacts

- NH DHHS will not notify non-household contacts.
- We encourage people diagnosed with COVID-19 to tell their non-household close contacts that they may have been exposed.
- Non-household contacts should:
  - Monitor themselves for any potential symptoms of COVID-19 and stay home and get tested should any develop
  - Consider keeping a distance of 6 feet from others and wearing a face covering when outside their home to protect others in case they develop symptoms of COVID-19

Why now?



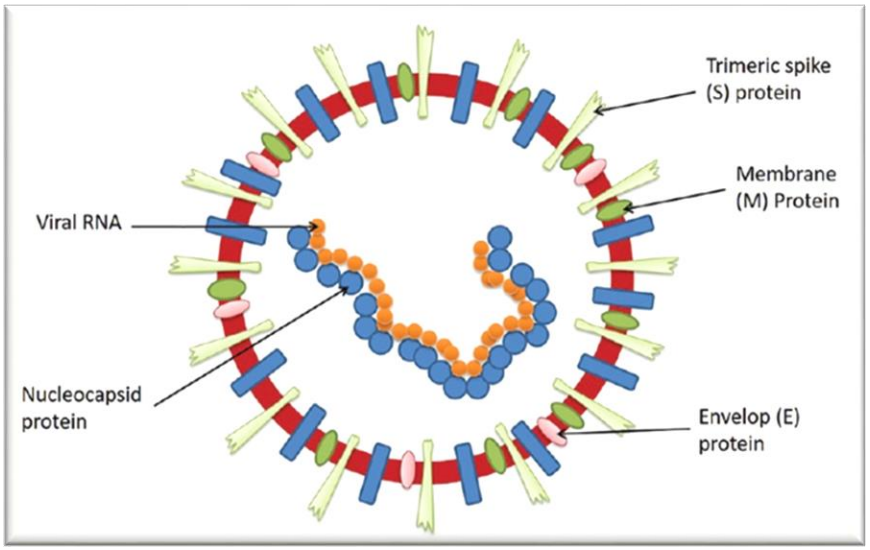
- More than half of the NH population has been fully vaccinated
- Community transmission is low
- COVID-19 is likely here to stay, strategy will be to manage not necessarily contain, like other respiratory viruses
- 95% of close contacts quarantined are not known to test positive following exposure

NH Contact Tracing Data

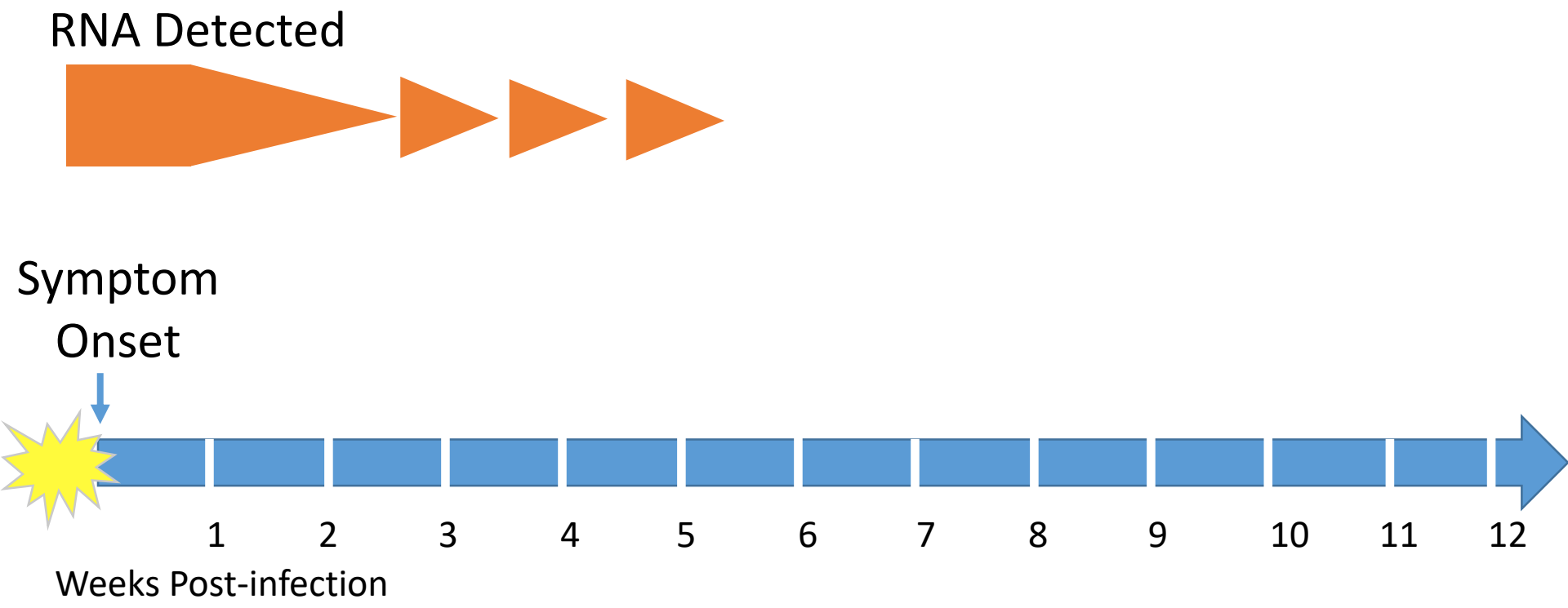
- Out of 88,000 named close contacts, only 4% went on to test positive for COVID-19
  - 3% of non-household contacts
  - 6% of household contacts
- Consistent with data from other jurisdictions, which reported 4% of close contacts tested positive
- When considering whether the close contact was tested, the proportion of that test positive is higher
  - 13% overall
  - 8% non-household contacts
  - 28% household contacts

Targets for Testing

1. Live virus
2. Virus' genetic material
3. Virus' proteins
4. Patient's response to virus



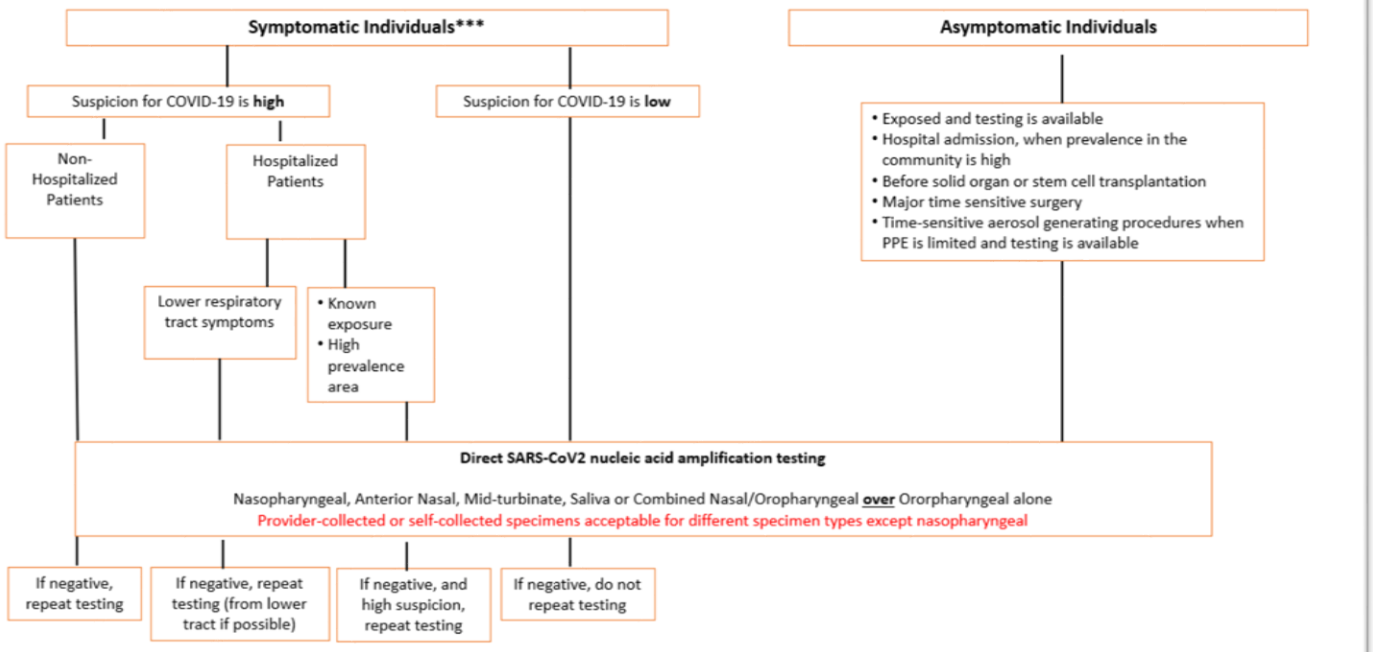
Timing for Utility of PCR



Lab-based PCR Remains GOLD STANDARD

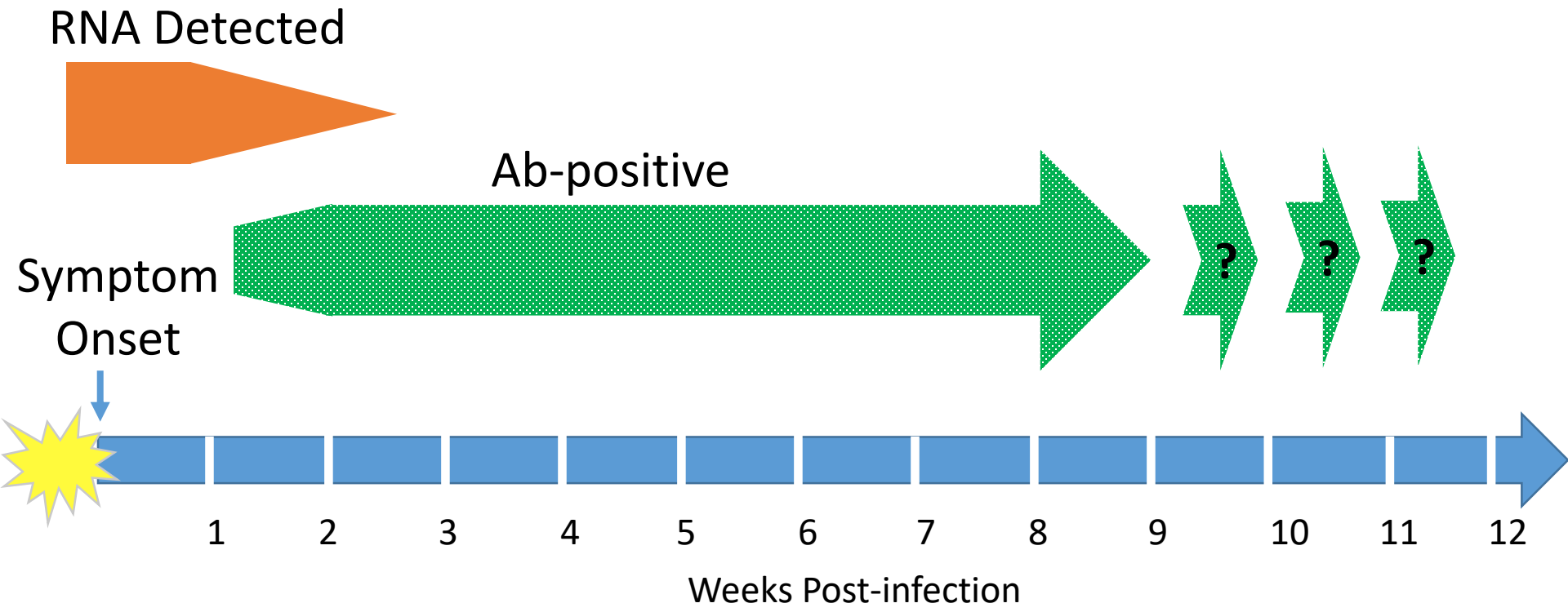
IDSA Molecular Testing Guidelines

Figure 1. IDSA Algorithm for SARS-CoV-2 Nucleic Acid Testing



*** Testing should be prioritized for symptomatic patients first.
When resources are adequate, testing for selected asymptomatic individuals can also be considered

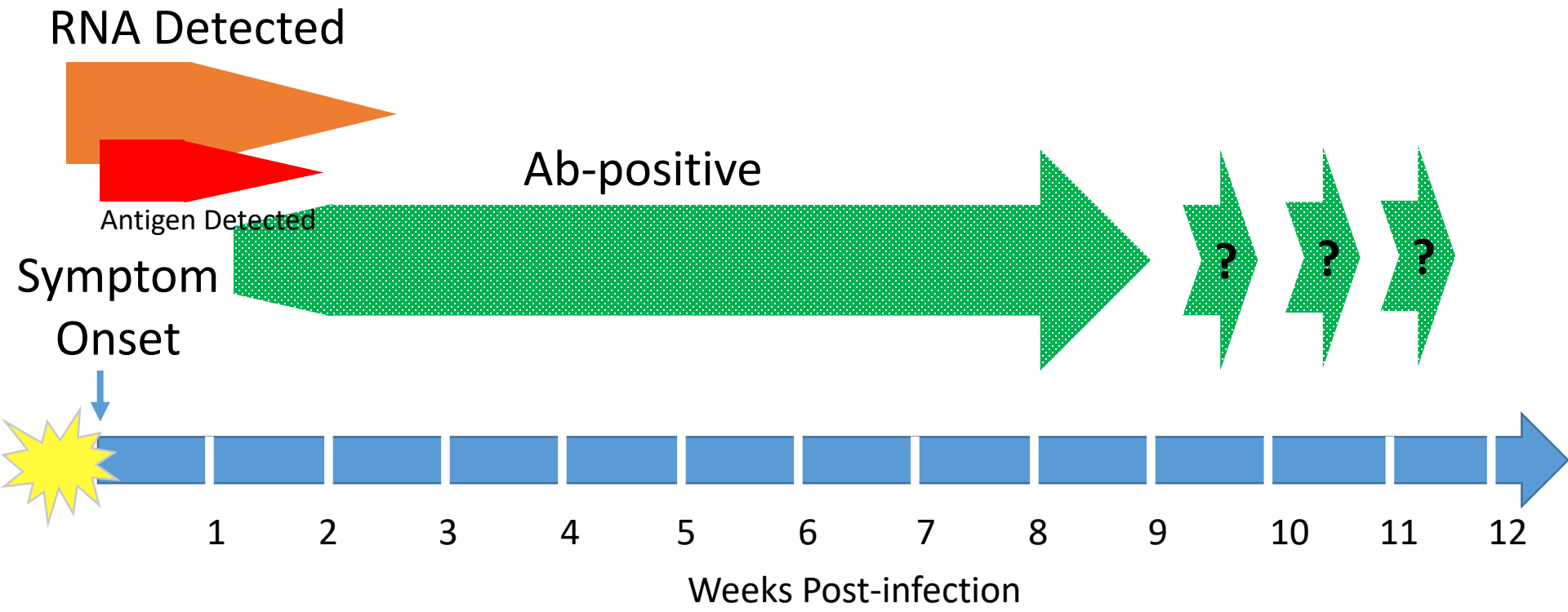
Minimal Role for Antibody Testing



IDSA Serology Guidelines

- **Recommendation 1: The IDSA panel suggests against using serologic testing to diagnose SARS-CoV-2 infection during the first two weeks (14 days) following symptom onset (conditional recommendation, very low certainty of evidence).**
- **Recommendation 2: When SARS-CoV-2 infection requires laboratory confirmation for clinical or epidemiological purposes, the IDSA panel suggests testing for SARS-CoV-2 IgG or total antibody three to four weeks after symptom onset to detect evidence of past SARS-CoV-2 infection (conditional recommendation, very low certainty of evidence).**
  - **Remark –** When serology is being considered as an adjunct to NAAT for diagnosis, testing three to four weeks post-symptom onset maximizes the sensitivity and specificity to detect past infection.
  - **Remark –** Serosurveillance studies should use assays with high specificity (i.e., ≥99.5%), especially when the prevalence of SARS-CoV-2 in the community is expected to be low.
- **Recommendation 3: The IDSA panel makes no recommendation either for or against using IgM antibodies to detect evidence of past SARS-CoV-2 infection (conditional recommendation, very low certainty of evidence).**
- **Recommendation 4: The IDSA panel suggests against using IgA antibodies to detect evidence of past SARS-CoV-2 infection (conditional recommendation, very low certainty of evidence).**
- **Recommendation 5: The IDSA panel suggests against using IgM or IgG antibody combination tests to detect evidence of past SARS-CoV-2 infection (conditional recommendation, very low certainty of evidence).**
  - **Remark –** IgM or IgG combination tests are those where detecting either antibody class is used to define a positive result.
- **Recommendation 6: The IDSA panel suggests using IgG antibody to provide evidence of COVID-19 infection in symptomatic patients with a high clinical suspicion and repeatedly negative NAAT testing (weak recommendation, very low certainty of evidence).**
  - **Remark –** When serology is being considered as an adjunct to NAAT for diagnosis, testing three to four weeks post-symptom onset maximizes the sensitivity and specificity to detect past infection.
- **Recommendation 7: In pediatric patients with multisystem inflammatory syndrome, the IDSA panel suggests using both IgG antibody and NAAT to provide evidence of current or past COVID-19 infection (strong recommendation, very low certainty of evidence).**
- **Recommendation 8: The IDSA panel makes no recommendation for or against using capillary *versus* venous blood for serologic testing to detect SARS-CoV-2 antibodies (knowledge gap).**

Ag: POC, Performance Tradeoff



Complicated Guidelines for Antigen Tests

IDSA Antigen Testing Guidelines

High specificity (>99%)

No need to reflex for a positive antigen test

Variable sensitivity. Pooled:

84% symptomatics within 7d onset

62% after 7d symptom onset

49% asymptomatics

For symptomatic, use NAAT over antigen tests

Single NAAT better than 2 consecutive antigen test strategy

Note 18 min podcast

“Should We Accept Home Tests?”

- DHHS accepts and responds to verbal reports of positive FDA-approved tests, as long as we know:
  - Name
  - DOB
  - Phone
  - Date of test
  - Name of test
- DHHS does not accept negative results

Which are Approved Tests?

Test Name	Mfr	Spec Type	Max Time to Test After Symptom Onset	Pos Agreement c/w RT-PCR	Neg Agreement c/w RT-PCR	EUA	Auto Reporting to DHHS	Rx	Indication
BinaxNOW COVID-19 Ag Card Home Test	Abbott Diagnostics Scarborough, Inc.	Nasal Swab	With Or Without Symptoms	84.6%	98.5%	HCP IFU IFU Home Test	No	Yes	Self-collected observed age ≥15
BinaxNOW COVID-19 Antigen Self-Test	Abbott Diagnostics Scarborough, Inc.	Nasal Swab	With Or Without Symptoms	91.7%	100.0%	HCP Individuals IFU IFU Home Test	No	No	Self-collected age ≥15; Adult collected age ≥2
QuickVue At-Home OTC COVID-19 Test	Quidel Corporation	Nasal Swab	With Or Without Symptoms	83.5%	99.2%	HCP Individuals IFU IFU Home Test	No	No	Self-collected age ≥14; Adult-collected age ≥2
BinaxNOW COVID-19 Ag Card 2 Home Test	Abbott Diagnostics Scarborough, Inc.	Nasal Swab	With Or Without Symptoms	91.7%	100%	HCP Individuals IFU IFU Home Test	No	No	Self-collected observed age ≥15; Adult-collected age ≥2
QuickVue At-Home COVID-19 Test	Quidel Corporation	Nasal Swab	6 days	84.8	99.1%	HCP Patients IFU IFU Home Test	No	Yes	Self-collected age ≥14; Adult-collected age ≥8
Ellume COVID-19 Home Test	Ellume Limited	Nasal Swab	With Or Without Symptoms	95%	97%	HCP IFU IFU Home Test FAQ	Yes	No	Self-collected age ≥16; Adult-collected age ≥2
Lucira COVID-19 All-In-One Test kit	Lucira health, Inc.	Nasal Swab	With Or Without Symptoms	94.1%	98%	HCP Reporting IFU IFU Home Test	No	No	Self-collected age ≥14; Provider-collected any age
Cue COVID-19 Test for Home and Over The Counter (OTC) Use	Cue Health Inc.	Nasal Swab	With Or Without Symptoms	97.4%	99.1%	HCP Patients Individuals IFU IFU Home Test FAQ QRI	Yes	No	Self-collected adults; Adult-collected age ≥2

Drivers of Emergence of COVID-19

- May 2017-Nov 2019 study of live animals in 17 Wuhan wet markets found >47,000 animals from 38 different species, including 31 protected
  - No bats or pangolins
  - Animals were often kept in poor, unhygienic conditions
- Although China banned wildlife, Chinese eating culture known as "jinbu," (進補) means 'to fill the void'
  - More "jinbu" benefits are reaped from eating an animal (especially wild animal) whose blood and energy ran high or killed just before serving
  - Drives exotic offerings in wet markets

Start of US Epidemic

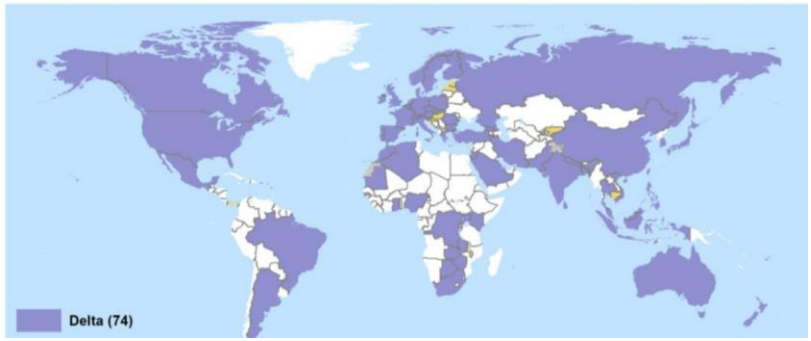
Pooling from a bank of samples collected from patients with respiratory illness, SARS-CoV-2 RNA was identified from specimens collected in NYC as early as Jan 25, 2020, and increased prior to recognized surge

Sporadic SARS-CoV-2 infections occurred month before first documented case and emergence of NYC as epicenter in March 2020

Parallel in other large US cities is a reflection of lack of available diagnostics

May 31 WHO Announced Name Change

[WHO Situation Report 8 June]



WHO label	Pango lineage	GISAID clade	Nextstrain clade	Earliest documented samples
Variants of Concern (VOCs)				
Alpha	B.1.1.7	GRY (formerly GR/501Y.V1)	20I/501Y.V1	United Kingdom, Sep-2020
Beta	B.1.351	GH/501Y.V2	20H/501Y.V2	South Africa, May-2020
Gamma	P.1	GR/501Y.V3	20J/501Y.V3	Brazil, Nov-2020
Delta	B.1.617.2	G/452R.V3	21A/S:478K	India, Oct-2020

Note CDC now classifies Delta as VOC not VOI

Delta Variant Emergence

- >80 countries
- >60% of infections in UK
- As of June 15, >10% of US infections
  - 6% Region 1
  - 14 cases in NH

Focus on Impact of Delta

WHO label	Delta
Transmissibility	Increased transmissibility and secondary attack rate[4,5,]
Disease severity	Not confirmed, possible increased risk of hospitalization[11]
Risk of reinfection	Reduction in neutralizing activity reported[21]
Impacts on diagnostics	None reported to date
Impacts on vaccine efficacy/effectiveness	Protection retained against severe disease; possible reduced protection against disease and infection; limited evidence on only two vaccines • Severe disease: No/minimal loss: PfizerBioNTech-Comirnaty, AstraZeneca-Vaxzevria[31,40] • Symptomatic disease: No/minimal to modest loss: PfizerBioNTech-Comirnaty[41,42]; no/minimal to moderate loss: AstraZeneca-Vaxzevria[41,42] • Infection: No/minimal to moderate loss: AstraZeneca-Vaxzevria, PfizerBioNTech-Comirnaty[42];
Impacts on neutralization (full vaccination) by vaccine	• No/minimal loss: Bharat-Covaxin[71] • No/Minimal to moderate loss: Pfizer BioNTech Comirnaty, Bharat-Covaxin[64,85,86] • Substantial loss: *single dose* of AstraZeneca-Vaxzevria[85]

Emerging Messaging Re: Delta

Summary

- More transmissible
- More severe disease
- Higher risk of hospitalization
- US vaccines show effective

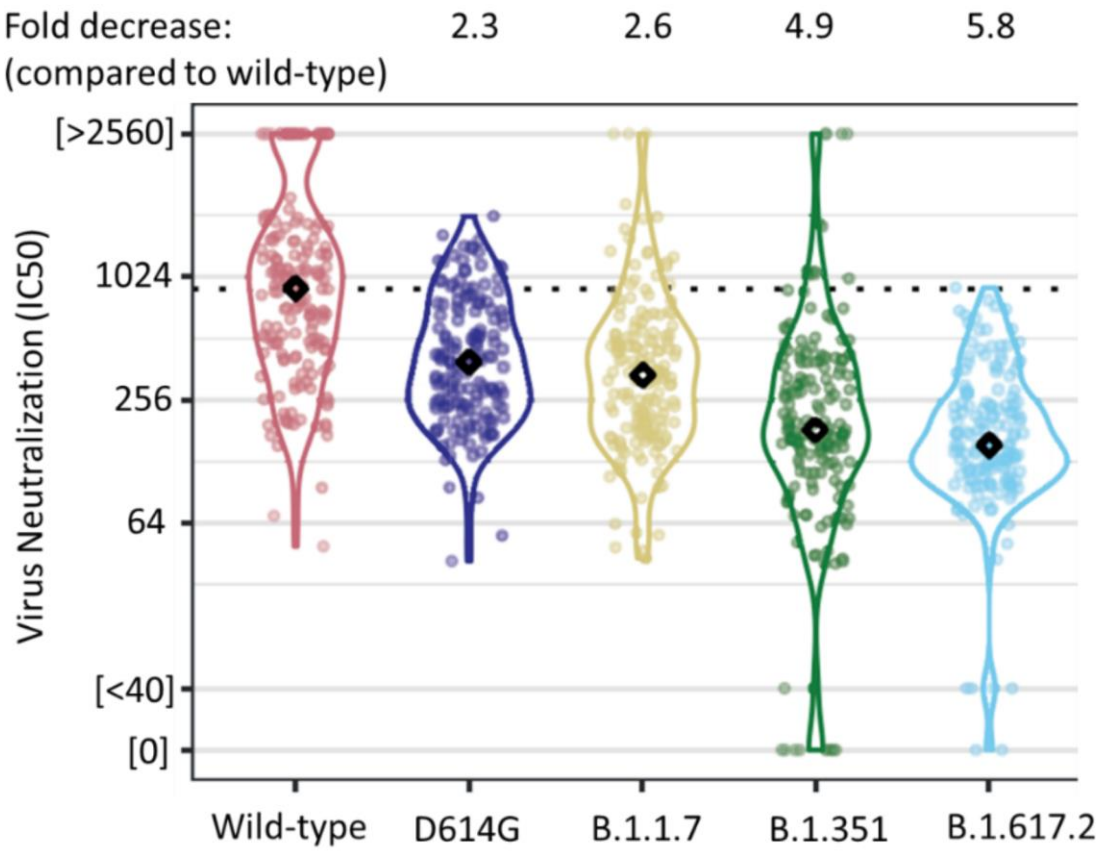
PHE Vaccine Study

- 2 doses of Pfizer 88% effective against symptomatic disease c/w 93% against Alpha
- 1 dose 33% protection
- Higher levels of effectiveness expected against hospitalization and death

Neutralizing Antibody Study

- Serum samples from longitudinal study among UK HCPs (n = 250) in January 2021 tested for neutralization against wild-type and variants
  - Pfizer 1 dose (n = 149) or 2 doses (159)
- 2 doses decreased neutralizing antibody titers against variants compared to wild-type
  - Alpha 2.6-fold (95% CI 2.2-3.1)
  - Beta 4.9-fold (95% CI 4.2-5.7)
  - Delta 5.8-fold (95% CI 5.0-6.9)

Worse with single dose:
Below the limit of detection for Beta and Delta



Delta in Scotland

Alpha has been rapidly replaced by Delta

- S gene negative vs S gene positive on TaqPATH RT-PCR

Analyzed national COVID-19 surveillance platform EAVE II including 5.4M (99%) Scotland population from April 1-June 6

19,543 infections, 377 hospitalized

- SGP 39.5% of cases, 35.3% of hospitalizations
- Mainly in younger, more affluent groups

Risk of hospitalization doubled in those with Delta compared to Alpha, especially in those with underlying medical conditions

AstraZeneca vaccine appeared less effective than Pfizer vaccine in preventing SARS-CoV-2 infection in those with Delta

So What?

Higher transmissibility can make social distancing less successful

Higher severity can lead to severe outbreaks in unvaccinated communities

Risk for infection especially high for those who didn't get second mRNA

Delta+lowvax=further mutations: potential for breakthrough infections favors potential of further mutation to evade protection of vaccines, acc US CDC Director Dr. Rochelle Walensky

Myocarditis and Pericarditis Update

FOR IMMEDIATE RELEASE
June 23, 2021

Contact: HHS Press Office
202-690-6343
media@hhs.gov

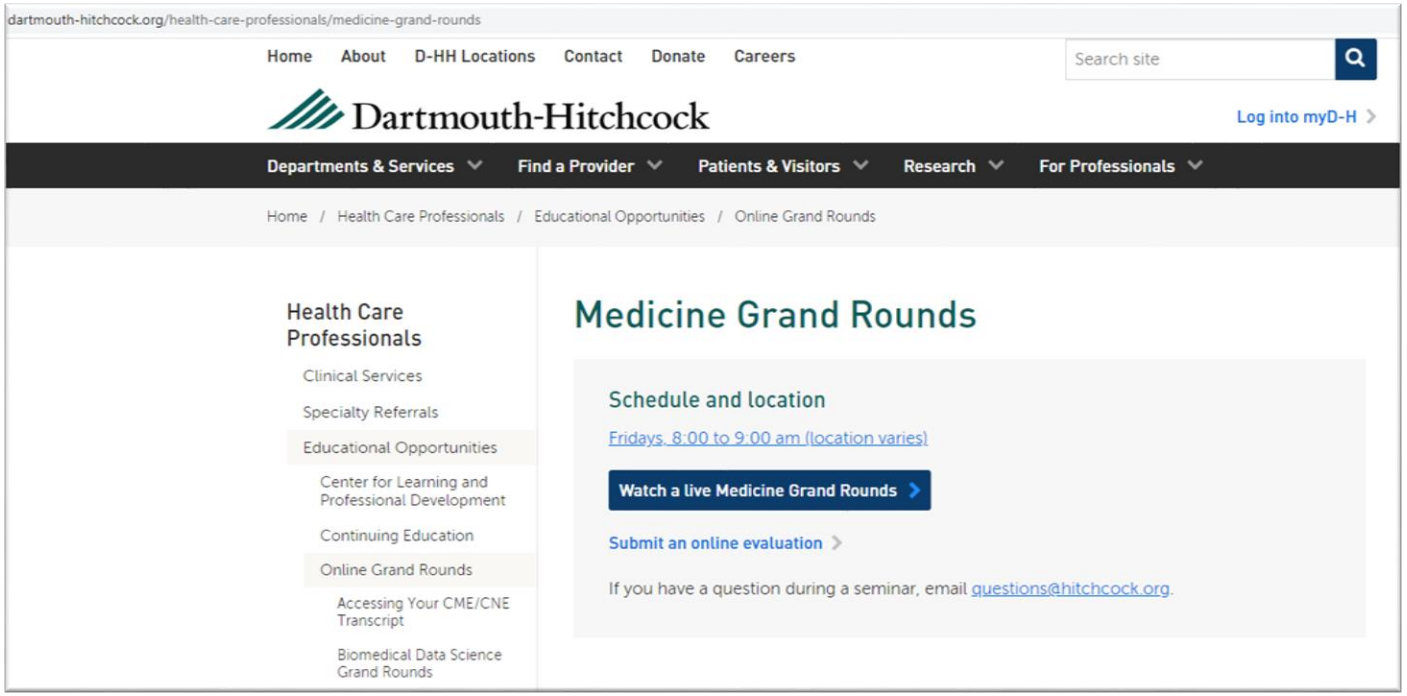
Statement Following CDC ACIP Meeting from Nation's Leading Doctors, Nurses and Public Health Leaders on Benefits of Vaccination

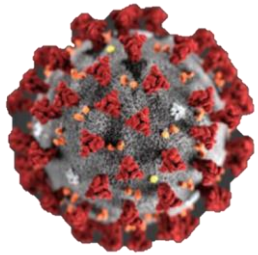
"The facts are clear: this is an extremely rare side effect, and only an exceedingly small number of people will experience it after vaccination. Importantly, for the young people who do, most cases are mild, and individuals recover often on their own or with minimal treatment. In addition, we know that myocarditis and pericarditis are much more common *if you get COVID-19*, and the risks to the heart from COVID-19 infection can be more severe."

"Especially with the troubling Delta variant increasingly circulating, and more readily impacting younger people, the risks of being unvaccinated are far greater than any rare side effects from the vaccines. . ."

July 9 8am DHMC MGR: PACS

- Dr. Jason Maley is a Pulmonary and Critical Care physician, researcher, and faculty at HMS and MIT
- Directs the Beth Israel Deaconess Medical Center Critical Illness and COVID-19 Survivorship Program and conducts important research





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