

# HHP/HPH COVID-19 Community Webinar Series

Thursday, August 26, 2021

12:00pm – 1:00pm

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- The following is intended as information resource only for HHP/HPH providers, clinicians, administrative and clinical leaders.
- Specific areas may not pertain directly to your clinical practice area and/or may not be applicable to your practice based on your existing workflows, infrastructure, software (e.g. EHR), and communications processes.

# Webinar Information

- You have been automatically muted. You cannot unmute yourself.
- You will be able to submit questions via the Q&A section.
  - Due to time constraints, any unanswered questions will be addressed this week and posted on the HHP website
- A recording of the meeting will be available tomorrow on the HHP website and intranet.

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## 1. Step 1: Confirm your attendance

- You should have completed a brief questionnaire before joining today's live webinar.

## 2. Step 2: HPH CME team will email you instructions

- Complete and submit evaluation survey that will be emailed to you within one week of the offering.
- Your CE certificate will be immediately available to you upon completion of your evaluation.
- Questions? Email [hphcontinuingeduc@hawaiiipacifichealth.org](mailto:hphcontinuingeduc@hawaiiipacifichealth.org)

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- Hawai'i Pacific Health designates this webinar activity for a maximum of 1.0 AMA PRA Category 1 Credit (s) <sup>TM</sup> for physicians. This activity is assigned 1.0 contact hour for attendance at the entire CE session.



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# Disclosures

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# COVID-19 Updates

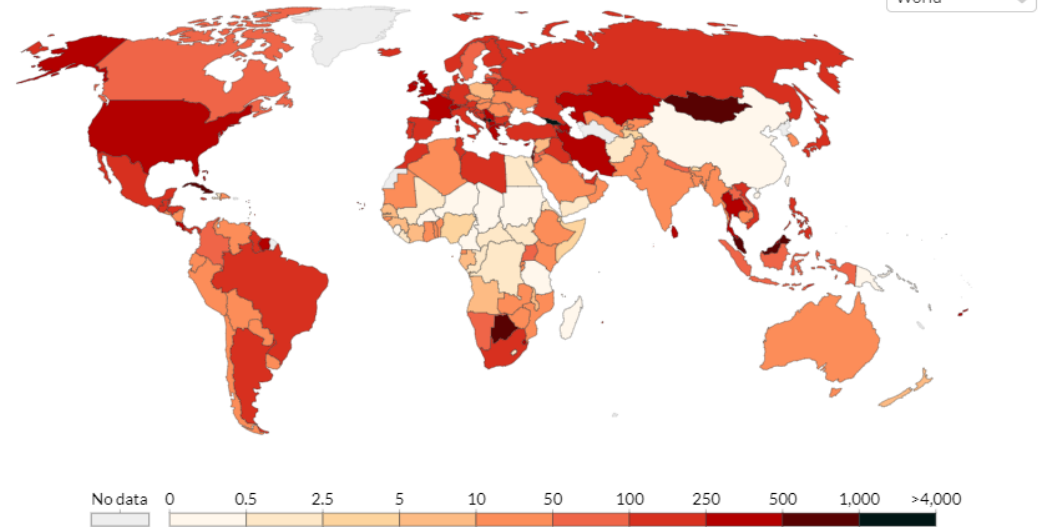
**Gerard Livaudais, MD, MPH**

Executive Vice President, Population  
Health and Provider Networks,  
Hawai'i Pacific Health

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# Worldwide



## New reported cases



These are days with a reporting anomaly. Read more [here](#).

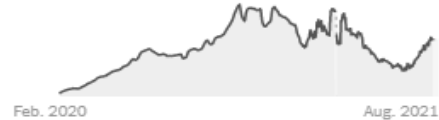
	DAILY AVG. ON AUG. 25	14-DAY CHANGE	TOTAL REPORTED
Cases	658,354	+2%	214,071,676
Deaths	10,112	+4%	4,464,081

# United States

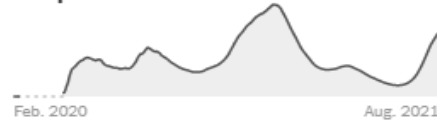
## New reported cases



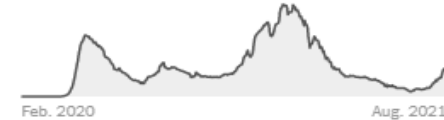
### Tests



### Hospitalized



### Deaths



	DAILY AVG. ON AUG. 25	14-DAY CHANGE	TOTAL REPORTED
Cases	152,341	+23%	38,364,779
Tests	1,152,222	+23%	—
Hospitalized	95,240	+32%	—
Deaths	1,165	+111%	632,522

<https://www.nytimes.com/interactive/2021/us/covid-cases.html>

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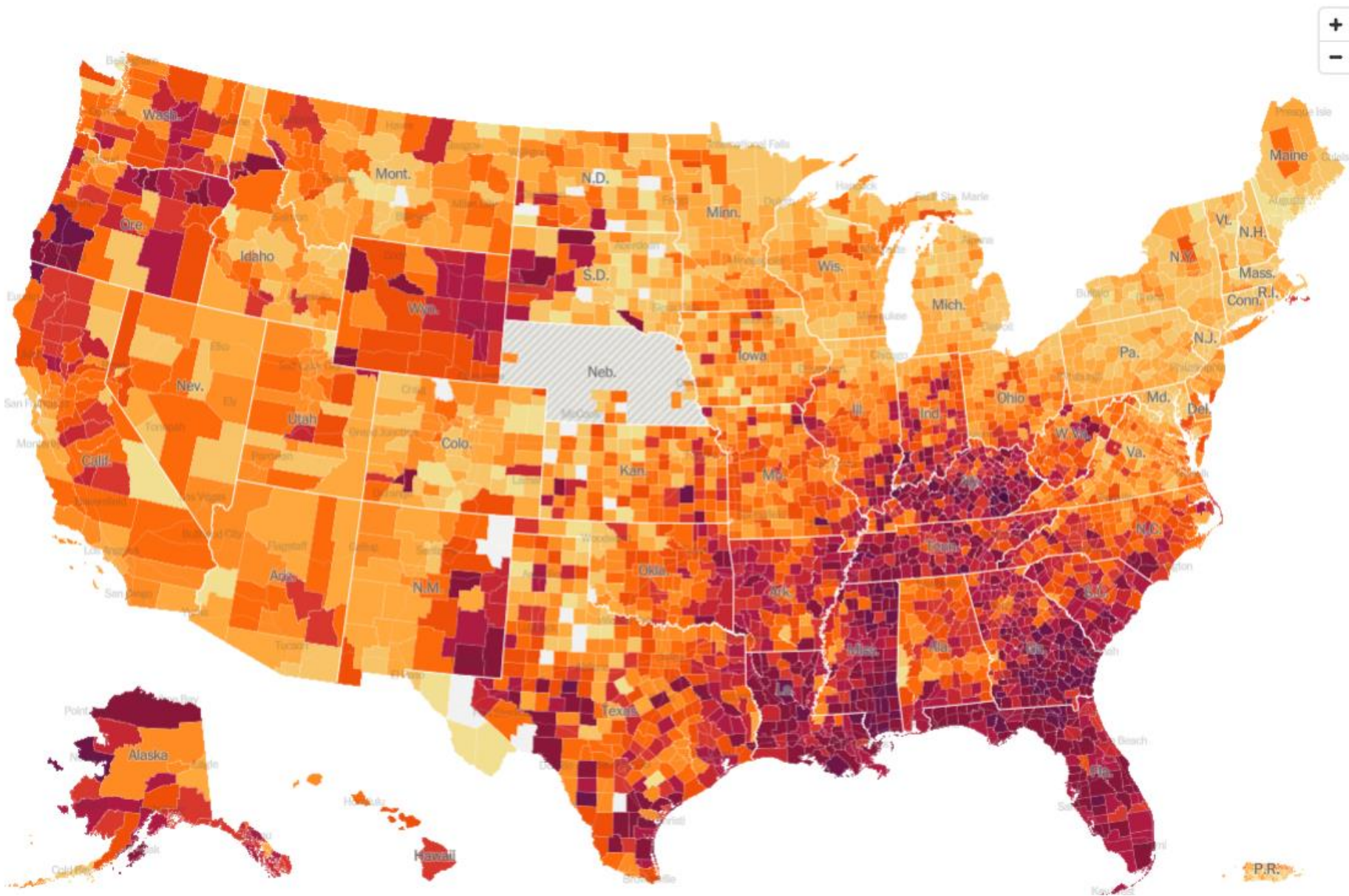
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## Hot spots

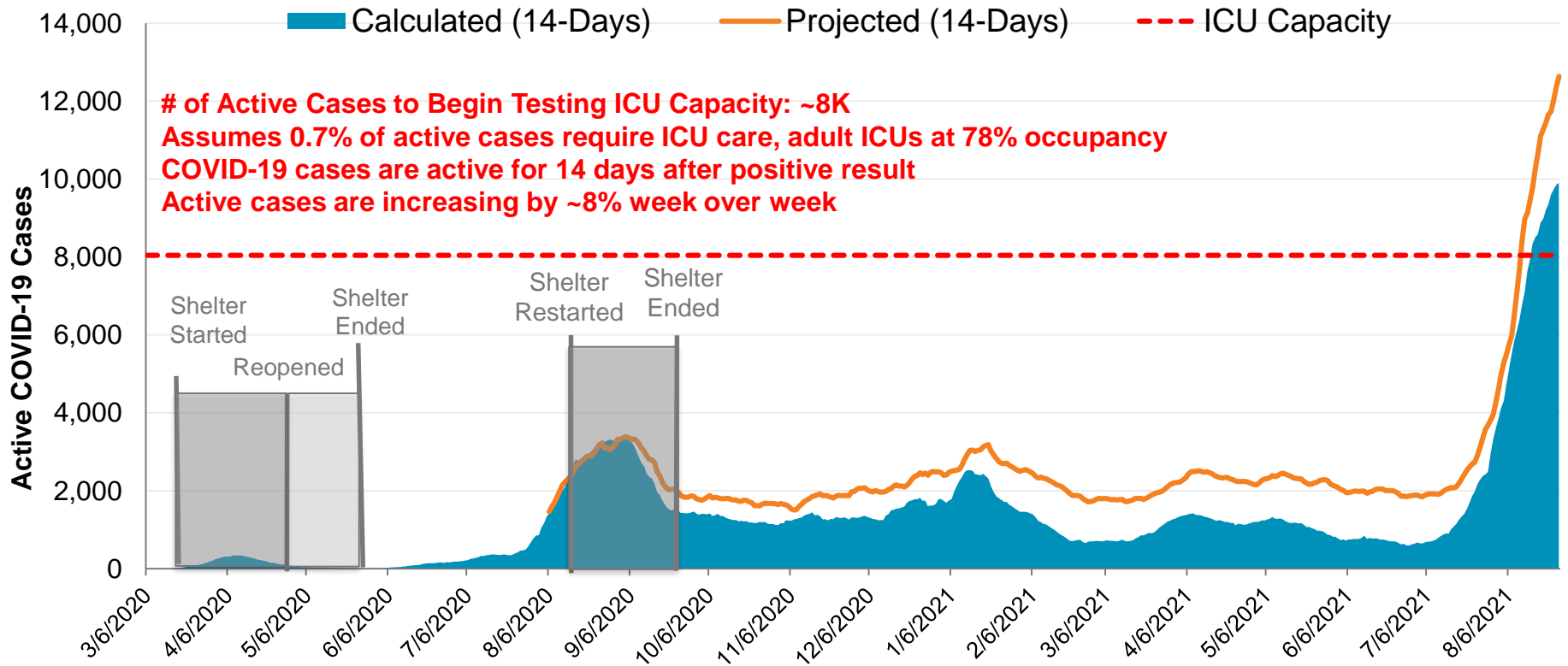
AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK

10 30 50 70 100 250 FEW OR MISSING  
NO CASES DATA



# Projected Active COVID-19 Cases

## Hawaii Actual v. Projected Active COVID-19 Cases Updated 8/25/2021



# COVID Pau Dashboard

## 7-Day Avg of New Cases

Region: State

**688.1**

As of Aug 24



## Clusters Under Investigation (Top 3 In Last 14 Days)

Region: State

Exposure Setting	Total Cases	Clusters
Correctional Facilities	269	4
Restaurants	113	11
Other Occupational Settings	62	9

As of Aug 19

## 7-Day Avg of % Tests Yielding Positive Results

Region: State

**8.3%**

As of Aug 24



## % of Residents Fully Vaccinated

State Value

**62%**

As of Aug 24



## Current COVID Hospitalizations

State Value

**409**

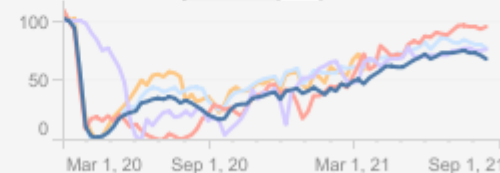
As of Aug 23



## UHERO Economic Pulse Index

State Value

**68**



<https://covidpau.org/>

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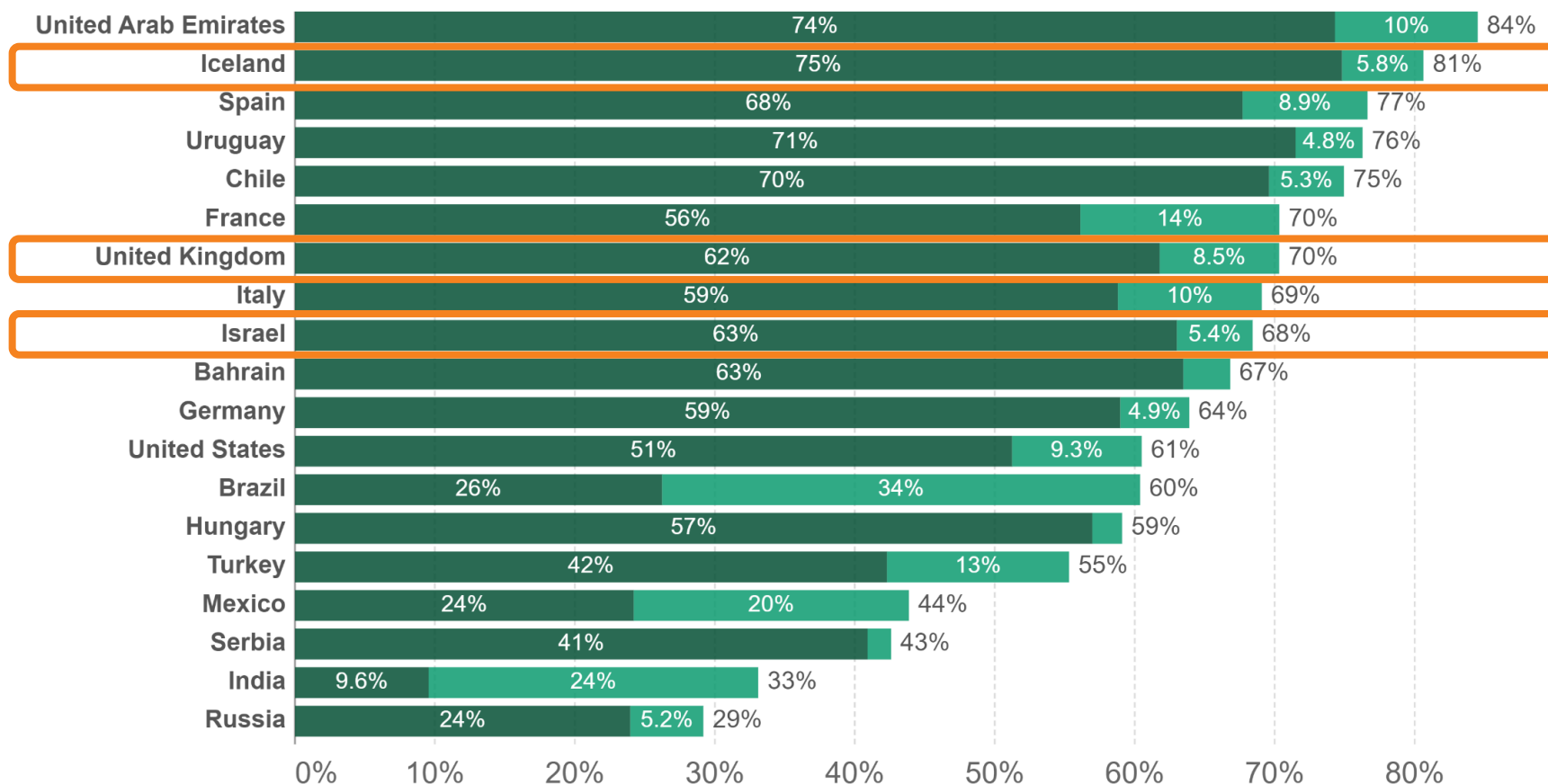
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# Vaccine Experience in Israel, Iceland, UK

Share of people vaccinated against COVID-19, Aug 24, 2021

Our World  
in Data

■ Share of people fully vaccinated against COVID-19 ■ Share of people only partly vaccinated against COVID-19



Source: Official data collated by Our World in Data. This data is only available for countries which report the breakdown of doses administered by first and second doses in absolute numbers.

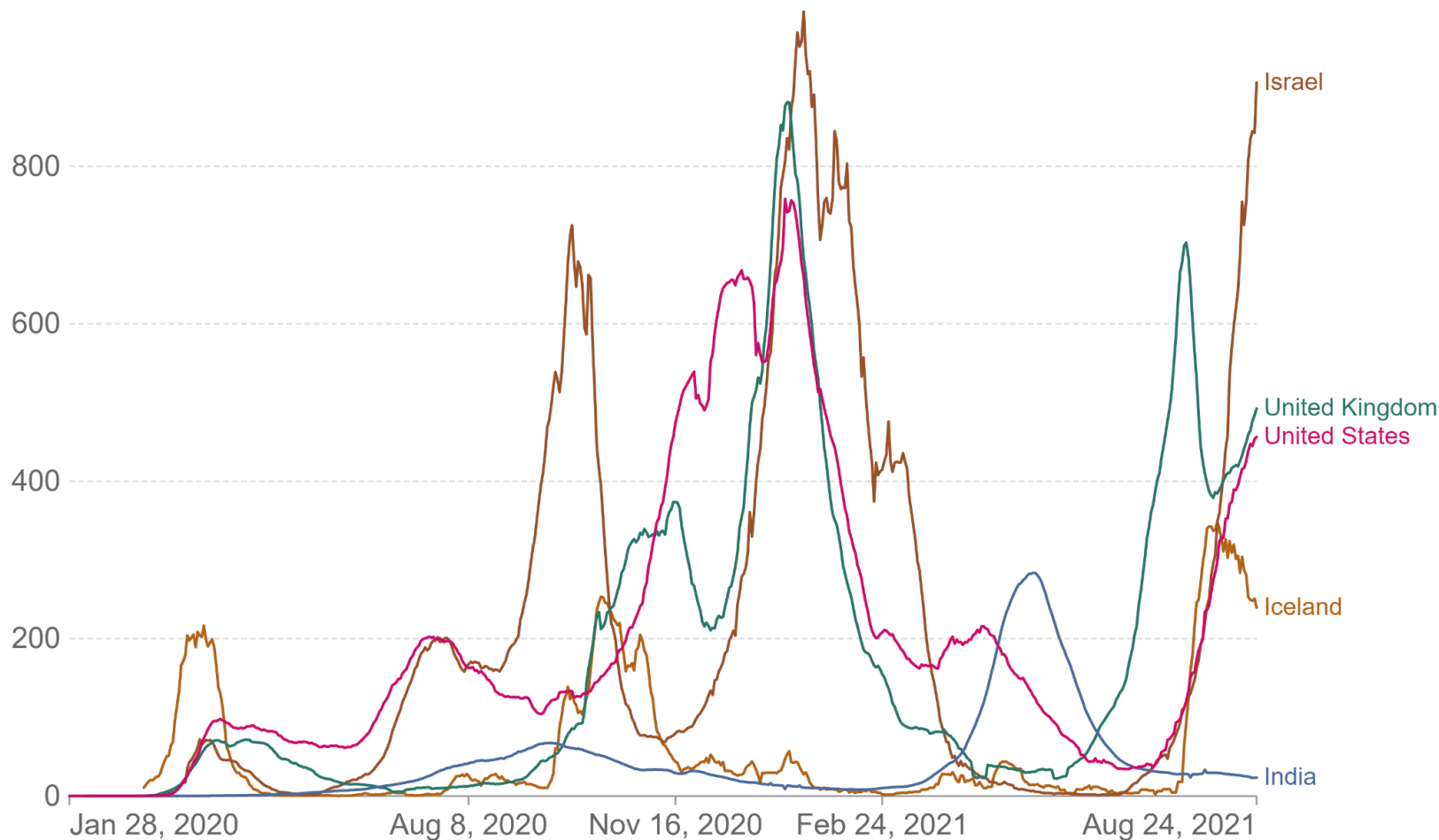
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# Vaccine Experience in Israel, Iceland, UK

## Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

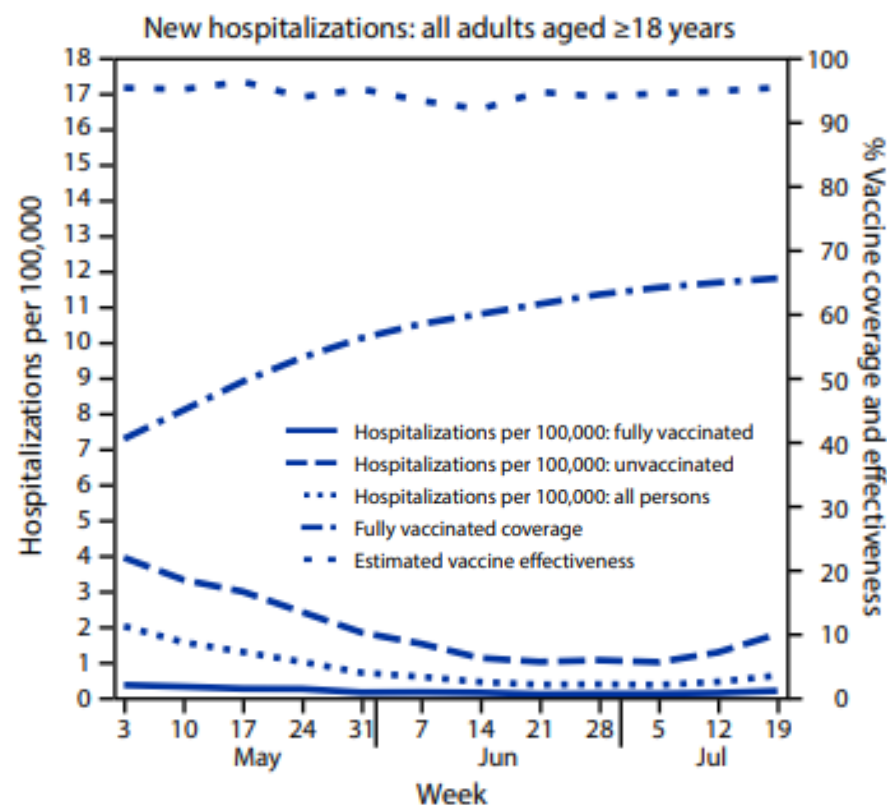
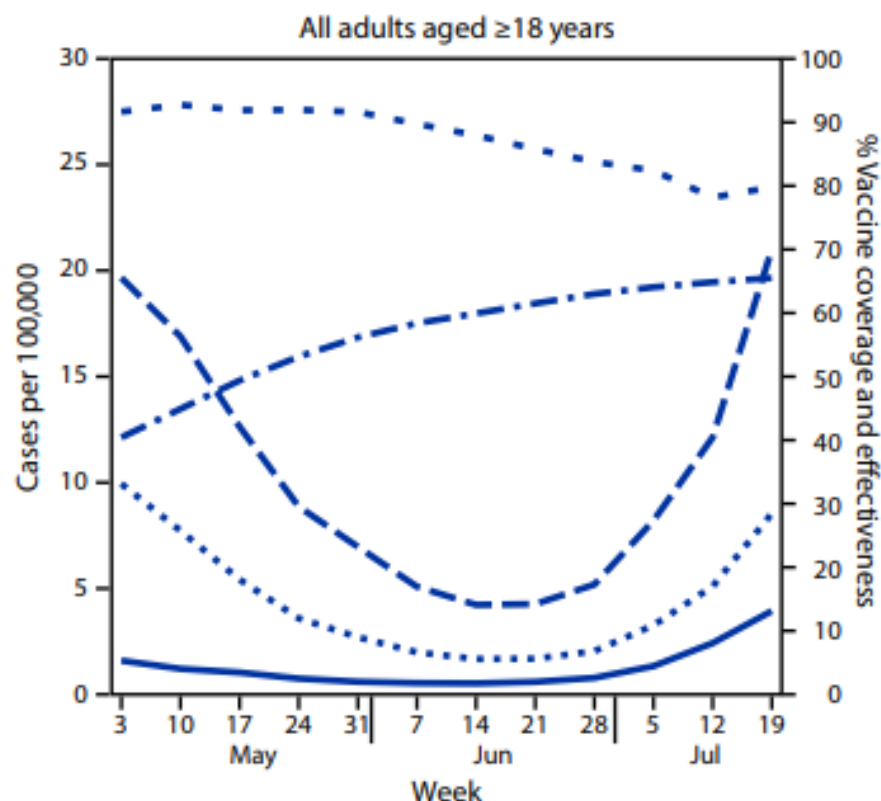
Our World  
in Data



# Vaccine Experience in New York



## New COVID-19 Cases and Hospitalizations Among Adults, by Vaccination Status — New York, May 3–July 25, 2021



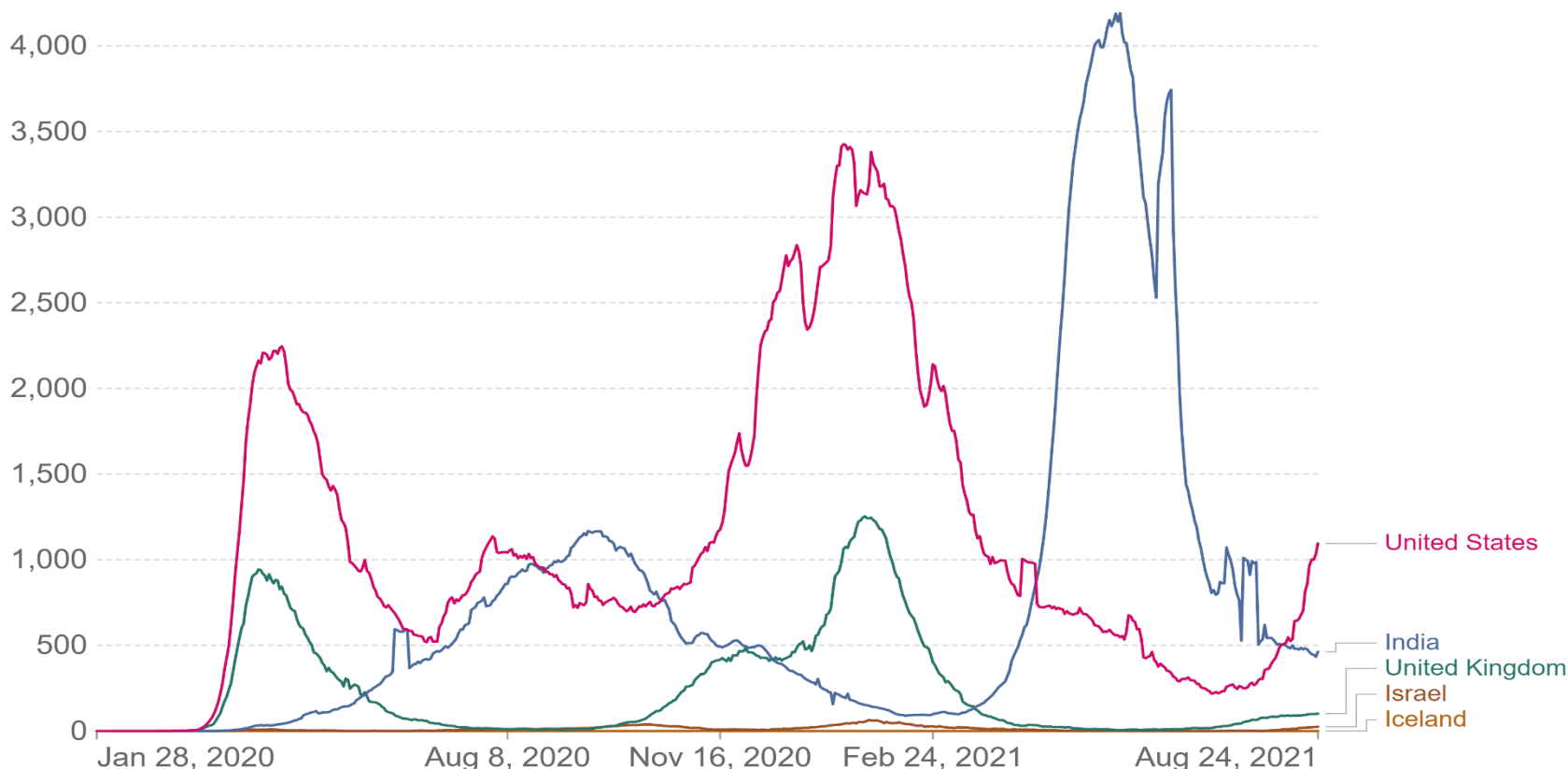
Rosenberg ES, Holtgrave DR, Dorabawila V, et al. New COVID-19 Cases and Hospitalizations Among Adults, by Vaccination Status — New York, May 3–July 25, 2021. MMWR Morb Mortal Wkly Rep. ePub: 18 August 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7034e1external icon>.

# Vaccine Experience in Israel, Iceland, UK

## Daily new confirmed COVID-19 deaths

Shown is the rolling 7-day average. Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

Our World  
in Data



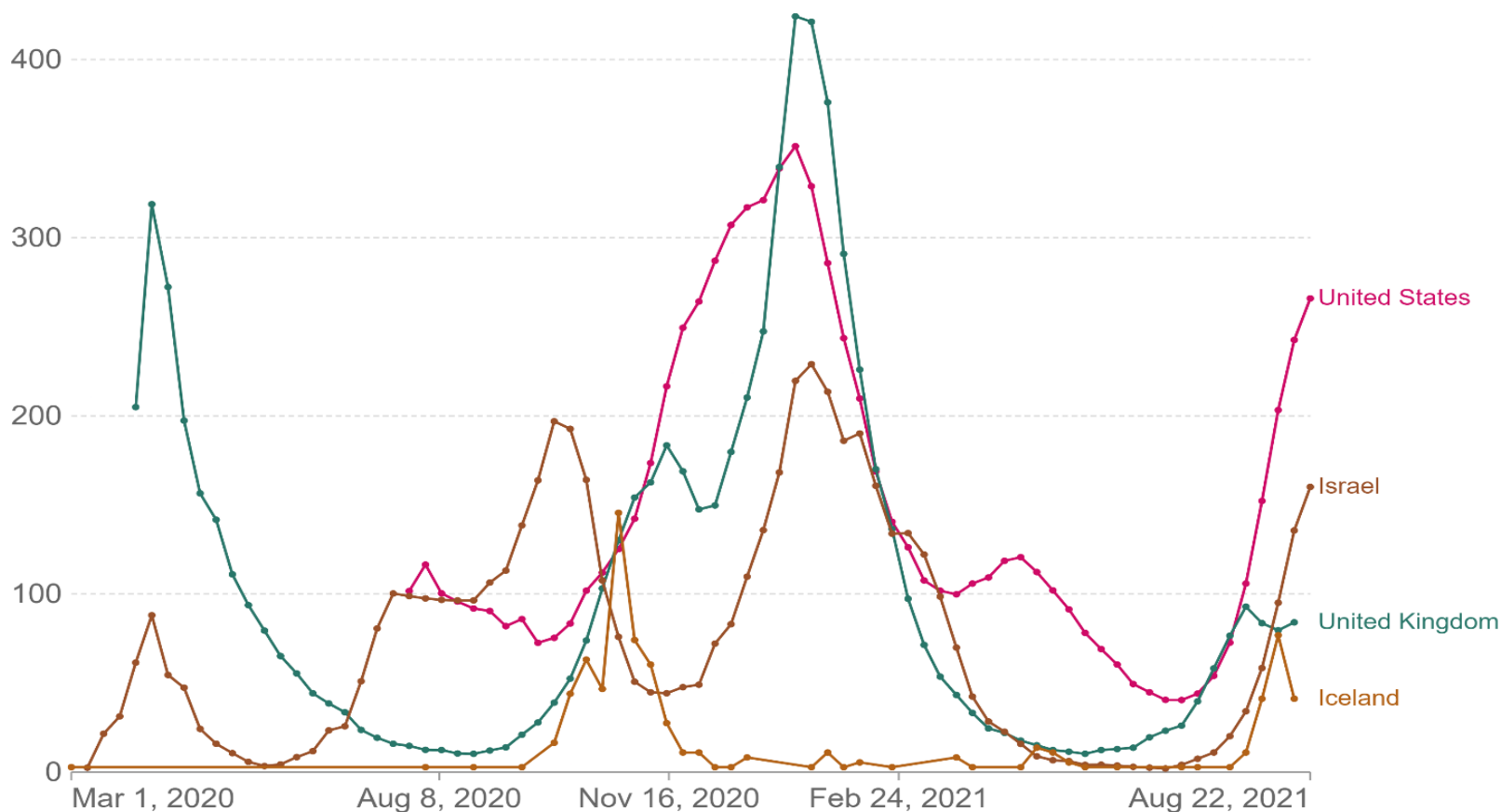
Source: Johns Hopkins University CSSE COVID-19 Data

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# Vaccine Experience in Israel, Iceland, UK

Weekly new hospital admissions for COVID-19 per million people

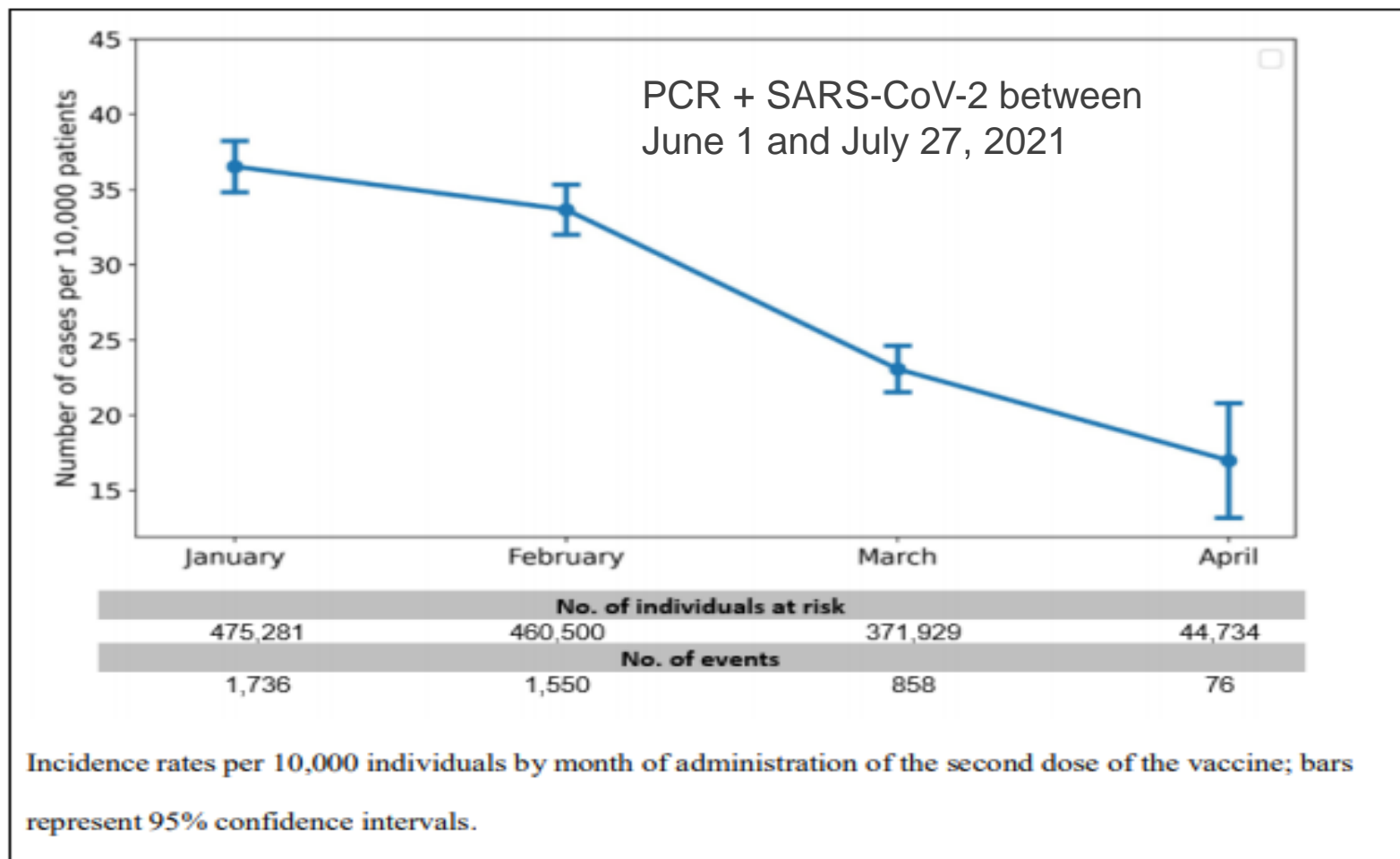
Our World  
in Data



Source: Official data collated by Our World in Data

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# Vaccine Experience in Israel

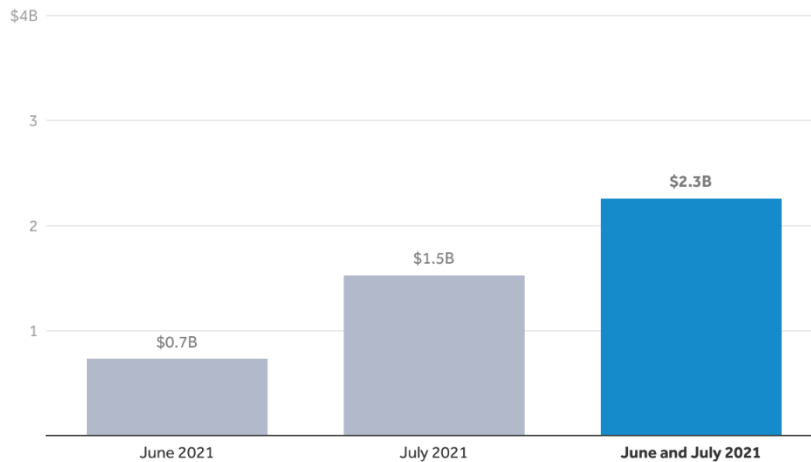


Correlation of SARS-CoV-2 Breakthrough Infections to Time-from-vaccine; Preliminary Study Barak Mizrahi, MSc1 †; Roni Lotan, PhD2\*†; Nir Kalkstein, BSc1 ; Asaf Peretz, MD3 ; Galit Perez MN MA2 ; Amir Ben-Tov, MD2,5; Gabriel Chodick, PhD MHA4,5; Sivan Gazit, MD MA2 ; Tal Patalon, MD2

# Vaccine Hesitant in the United States

- Fear, uncertainty and culture of individualism:
  - “Everyone has a right to choose”
  - Personal Freedom as a right worth dying for?

Estimated cost of COVID-19 hospitalizations among unvaccinated adults in the U.S., June and July 2021



Note: Numbers do not sum due to rounding. See brief for stepwise calculations.

Source: KFF analysis of CDC, CMS, and HHS Protect data

Peterson-KFF  
**Health System Tracker**

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<https://www.nytimes.com/2021/08/21/opinion/arkansas-vaccine-hesitant.html?searchResultPosition=7>

- Individual right versus community wellbeing
  - Has the US agreed that this right it worth paying for?
  - How does this compare with societal view of using motorcycle helmets, DUI, smoking in public, etc.?

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# Navajo Nation surpasses New York state for the highest Covid-19 infection rate in the US

By Hollie Silverman, Konstantin Toropin, Sara Sidner and Leslie Perrot, CNN

🕒 Updated 5:55 PM ET, Mon May 18, 2020



**CORONAVIRUS PANDEMIC**

**NAVAJO NATION HAS HIGHEST INFECTION RATE PER CAPITA IN THE U.S.**



1:54 PM PT

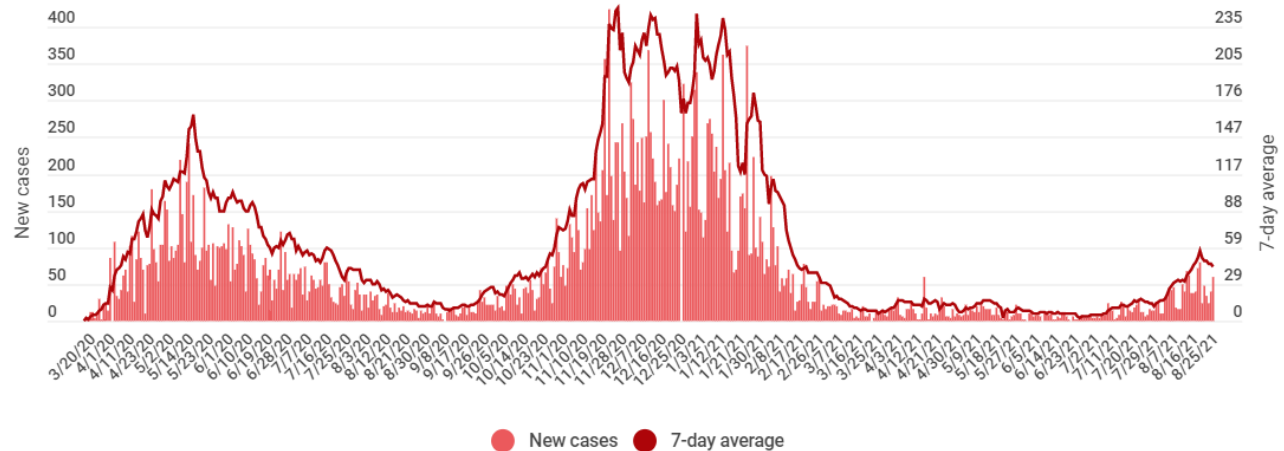
THE LEAD

# American Indians have the highest Covid vaccination rate in the US

According to CDC data, Indigenous people are getting vaccinated quicker than any other group. Here are the successes—and challenges—of getting vaccines to urban Native American communities.

BY SUKEE BENNETT TUESDAY, JULY 6, 2021 NOVA NEXT

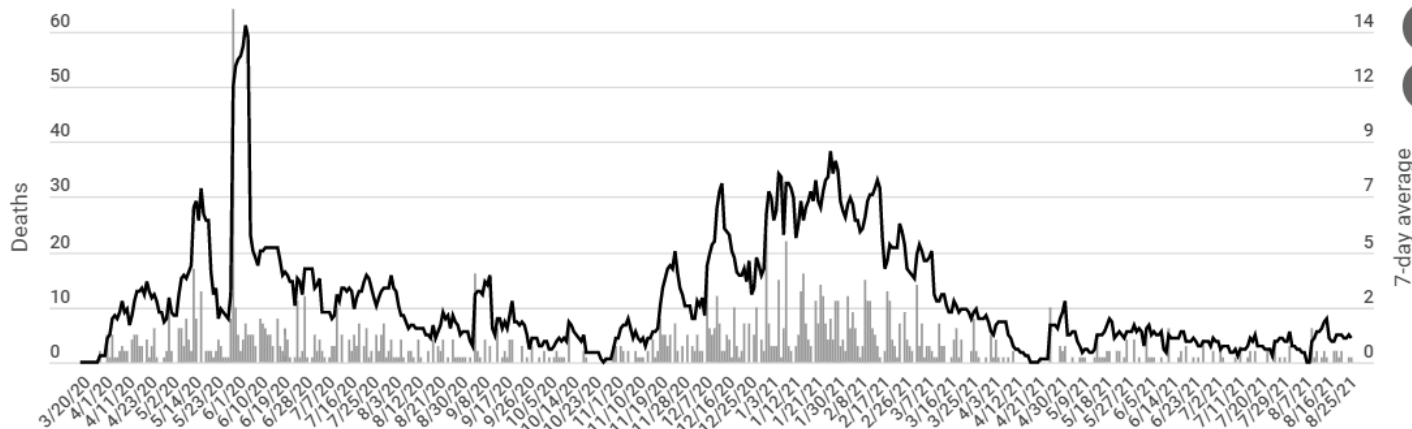
## New reported cases by day on Navajo Nation



Data gathered from Indian Health Service facilities and Navajo Nation Department of Health.

\* Dec. 25 data not reported.

## New reported deaths by day on Navajo Nation





# Laboratory Testing Update: A Comparison of Testing for Acute COVID-19 Infection

**Owen Chan, MD, PhD**

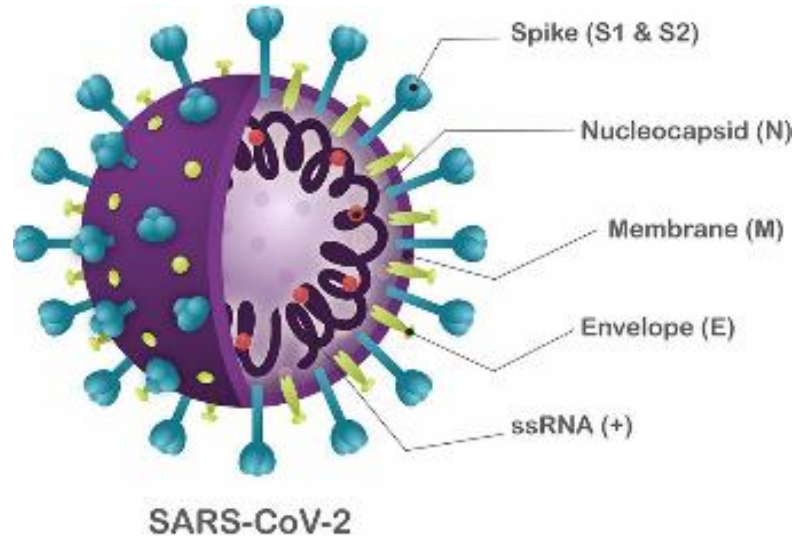
*Medical Director*

Pali Momi Medical Center, Clinical Labs of Hawai'i

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# Testing for COVID-19



## Detects SARS-CoV-2

**Viral nucleic acid**

**Viral antigen**

### Amplification

- RT-PCR
- Isothermal

### Immunoassay

- Lateral flow
  - Fluorescence
  - Chromatographic

## Detects Exposure to SARS-CoV-2

**Anti-viral Antibody**

**Anti-viral T cells**

### Immunoassay

- Chemiluminescence
- Lateral flow

### Next-generation sequencing

## SARS-CoV-2 Reference Panel Comparative Data

- FDA conducted a comparative analysis of the analytic performance of different tests
- Method: FDA provided the same blinded reference material to developers of tests to enable a direct comparison of analytical sensitivities
- Asked to determine **Limit of Detection (LoD)** of the test
  - Lowest number of virus particles that could be detected, measured as “**NAAT detectable units / mL (NDU / mL)**”
  - Lower NDU / mL = greater analytic sensitivity

<https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/sars-cov-2-reference-panel-comparative-data>

# Detection of SARS-CoV-2 at Clinical Labs of Hawaii:

## Nucleic Acid Amplification Tests (NAAT)

### **Hologic Aptima SARS-CoV-2 Assay (Panther System):**

- Technology: Isothermal nucleic acid amplification (transcription mediated amplification)
- FDA NAAT Detectable units / mL = **600**
- Turnaround time: 24 - 48 hours



### **Roche cobas SARS-CoV-2 (cobas system)**

- Technology: Reverse transcriptase polymerase chain reaction (RT-PCR)
- FDA NAAT Detectable units / mL = **1,800**
- Turnaround time: 24 - 48 hours



### **Cepheid Xpert Xpress SARS-CoV-2 (GeneXpert Xpress system)**

- Technology: Reverse transcriptase polymerase chain reaction (RT-PCR)
- FDA NAAT Detectable units / mL = **5,400**
- Turnaround time: 45 min - 1 hour



### **Abbott ID NOW COVID-19**

- Technology: Isothermal nucleic acid amplification
- FDA NAAT Detectable units / mL = **300,000**
- Turnaround time: 20 minutes



**Capacity: 10,000 specimens / day**

<https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/sars-cov-2-reference-panel-comparative-data>

# Detection of SARS-CoV-2:

## Viral Antigen Testing

- Technology: Captures virus with antibodies to viral proteins, and these antibody-virus complexes are detected by the instrument
- Specimen: Nasal, Nasopharynx
- Turnaround time: 15 minutes
- Cost: \$5-50 per test

Examples:

- **Quidel Sofia 2**
- **BD Veritor**
- **Abbott BinaxNOW**



# Detection of SARS-CoV-2:

## Viral Antigen Testing

Intended use: Detects SARS-CoV-2 nucleocapsid antigen from persons ***suspected of having COVID-19*** within the first **five** (Sofia 2, Veritor) to **seven** (BinaxNOW) days of the onset of symptoms

Or

For Sofia 2 and Veritor only: For individuals ***without symptoms*** or other epidemiological reasons to suspect COVID-19 when tested twice over two or three days with at least 24 hours and no more than 36 (Sofia 2) or 48 (Veritor) hours between tests

***Can test asymptomatic persons if done twice over 2-3 days separated by 24 hrs***



# Detection of SARS-CoV-2:

## Viral Antigen Testing

- Analytic Sensitivity: Less than NAAT
- Analytic Specificity: Comparable to NAAT

Findings: antigen tests				
	Evaluations (studies)	Samples (SARS-CoV-2 cases)	Sensitivity (95% CI) [Range]	Specificity (95% CI) [Range]
Symptomatic	37 (27)	15,530 (4410)	72.0 (63.7 to 79.0) [0% to 100%]	99.5 (98.5 to 99.8) [8% to 100%]
Symptomatic (up to 7 days from onset of symptoms) <sup>a</sup>	26 (21)	2320 (2320)	78.3 (71.1 to 84.1) [15% to 95%]	-
Asymptomatic	12 (10)	1581 (295)	58.1 (40.2 to 74.1) [29% to 85%]	98.9 (93.6 to 99.8) [14% to 100%]

Cochrane Database of Systematic Reviews 2021, Issue 3. Art. No.: CD013705. DOI: 10.1002/14651858.CD013705.pub2.

## **Q: What are some factors that might affect test results?**

**A: The diagnostic sensitivity of the assays are likely dependent on different factors: (PRE-ANALYTIC)**

- 1) Ability to obtain an adequate, representative specimen**
  - Inadequate sampling will yield false negative results
- 2) Specimen integrity during transport**
- 3) Anatomic source**

# Detection of SARS-CoV-2: Variation with Anatomic Source

## RESEARCH ARTICLE

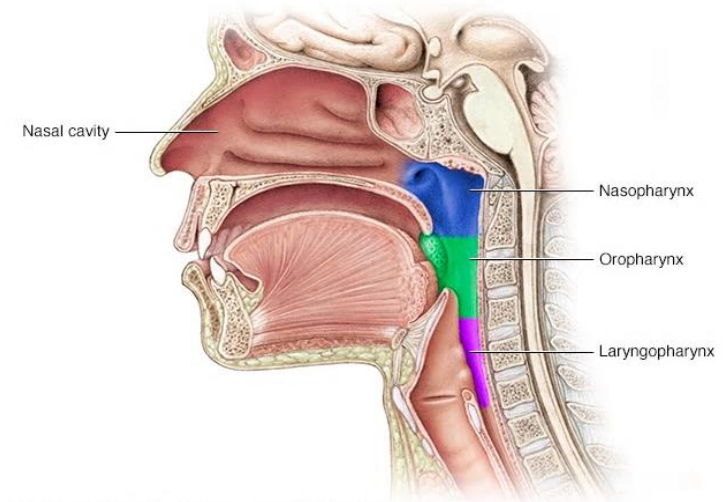
### Relative sensitivity of anterior nares and nasopharyngeal swabs for initial detection of SARS-CoV-2 in ambulatory patients: Rapid review and meta-analysis

Yaolin Zhou<sup>1</sup>, Timothy J. O'Leary<sup>2,3\*</sup>

<sup>1</sup> Department of Pathology & Laboratory Medicine, Brody School of Medicine, East Carolina University, Greenville, North Carolina, United States of America, <sup>2</sup> Office of Research and Development, Veterans Health Administration, Department of Veterans Affairs, Washington, District of Columbia, United States of America, <sup>3</sup> Department of Pathology, University of Maryland School of Medicine, Baltimore, Maryland, United States of America

## Meta-analysis:

11 studies comprising 12 cohorts met inclusion criteria



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- “Assessed against a composite reference standard, **anterior nares** swabs are less sensitive (82% - 88%) than **nasopharyngeal swabs** (98%).”
- “Midturbinate and anterior nares swabs seem to perform similarly.”

PLoS ONE 16(7): e0254559. July 2021

<https://www.mayoclinic.org/parts-of-the-throat-pharynx/img-20005644>

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## **Q: What are some factors that might affect test results?**

**A: The diagnostic sensitivity of the assays are likely dependent on different factors: (PRE-ANALYTIC)**

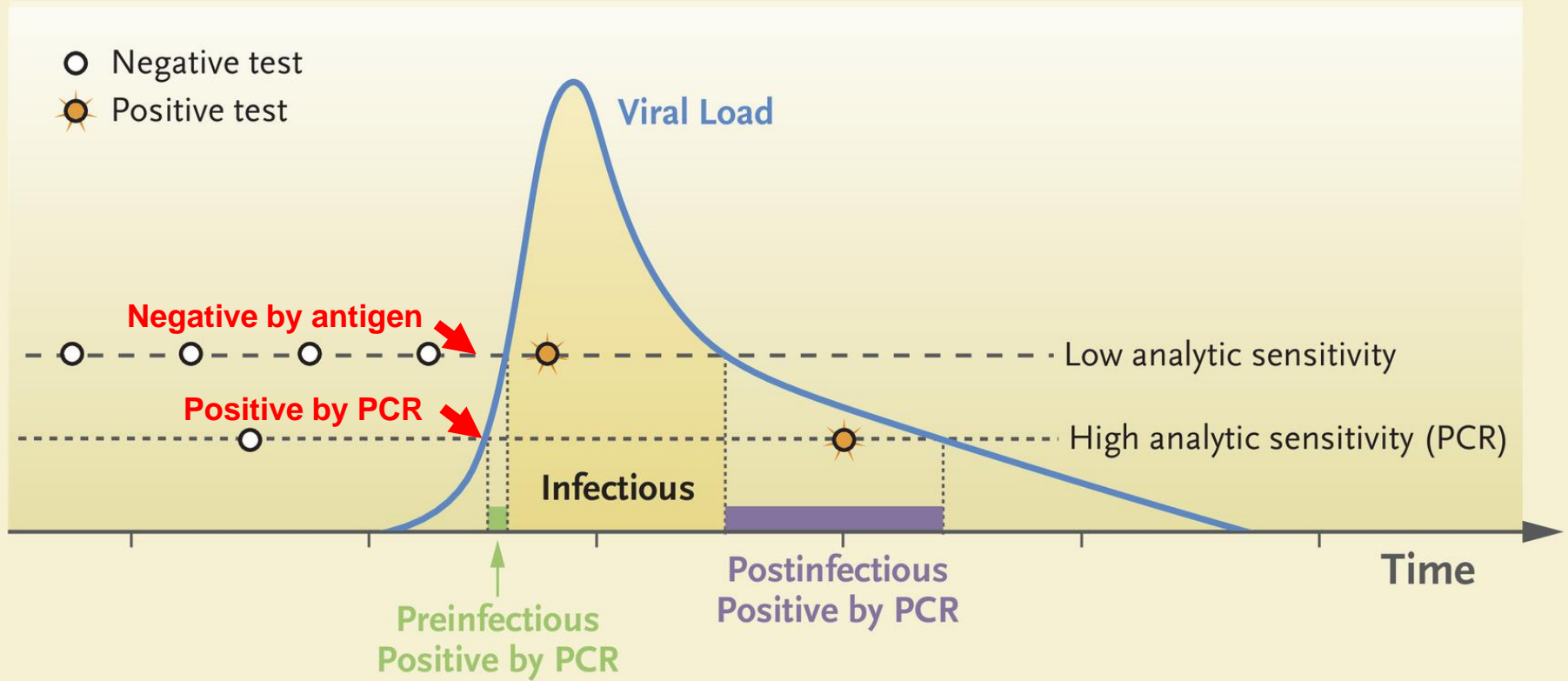
- 1) Ability to obtain an adequate, representative specimen**
  - Inadequate sampling will yield false negative results
- 2) Specimen integrity during transport**
- 3) Anatomic source**
- 4) Timing of sample retrieval during the infection course.**
  - Viral shedding may begin 2 to 3 days before the appearance of the first symptoms.<sup>1</sup> After symptom onset, viral loads decrease with time.<sup>2-3</sup>
  - The greatest detection of the virus appears to be within one week from the onset of symptoms.

1. He X, Lau EHY, Wu P, et al. Temporal dynamics in viral shedding and transmissibility of COVID-19. *Nat Med*. 2020;26(5):672-675.

2. Zou L, Ruan F, Huang M, et al. SARS-CoV-2 Viral Load in Upper Respiratory Specimens of Infected Patients. *N Engl J Med*. 2020;382(12):1177-1179.

3. To KK, Tsang OT, Leung WS, et al. Temporal profiles of viral load in posterior oropharyngeal saliva samples and serum antibody responses during infection by SARS-CoV-2: an observational cohort study. *Lancet Infect Dis*. 2020;20(5):565-574.

# Interplay of Test Sensitivity and Viral Load



***Detection depends on 1) test sensitivity and 2) viral load***

*N Engl J Med.* 2020 Nov 26;383(22):e120.

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/ [Potential for False Positive Results with Antigen Tests for Rapid Detection of SARS-CoV-2 - Letter to Clinical Laboratory Staff and Health Care Providers](#)

## Potential for False Positive Results with Antigen Tests for Rapid Detection of SARS-CoV-2 - Letter to Clinical Laboratory Staff and Health Care Providers

11/3/2020: “The U.S. Food and Drug Administration (FDA) is alerting clinical laboratory staff and health care providers that ***false positive results can occur with antigen tests***, including when users do not follow the instructions for use of antigen tests for the rapid detection of SARS-CoV-2.”

- Reading the test before or after the specified time could result in **false positive** or **false negative results**.

***Testing should be conducted by properly trained persons.***

<https://www.fda.gov/medical-devices/letters-health-care-providers/potential-false-positive-results-antigen-tests-rapid-detection-sars-cov-2-letter-clinical-laboratory>

**CDC** Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

Search COVID-19

**COVID-19**

Home Your Health Vaccines Cases & Data Work & School Healthcare Workers Health Depts Science More

More Resources

CDC in Action +

Global COVID-19 +

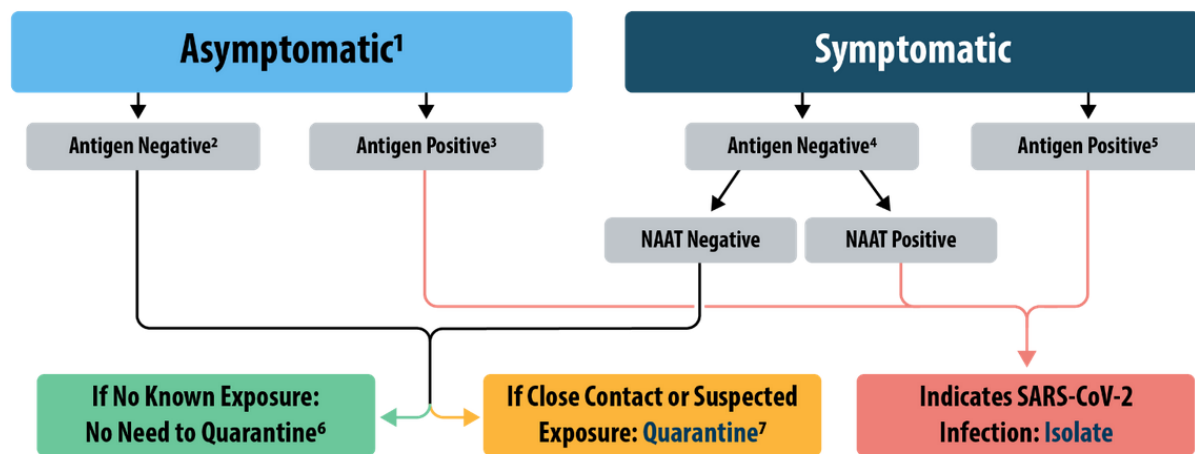
**Interim Guidance for Antigen Testing for SARS-CoV-2**

Updated June 14, 2021 [Print](#)

**Effective utilization of antigen testing depends on the clinical and epidemiological context and in conjunction with NAAT.**

## Using Antigen Tests for SARS-CoV-2 in Community Settings

Figure 2. Antigen Test Algorithm for Community Settings



<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html#table1>

# **SUMMARY**

- ❖ **Tests to detect acute infection: NAAT and antigen**
- ❖ **NAAT has greater analytic sensitivity than antigen testing**
- ❖ **Factors that can affect sensitivity and sensitivity:**
  - **Ability to obtain an adequate, representative specimen**
  - **Specimen integrity during transport**
  - **Anatomic source**
  - **Timing of sample retrieval during the infection course**
  - **Non-intended usage**
- ❖ **Antigen testing can have value if used in the appropriate context**



# COVID-19 Treatment Updates

**Douglas Kwock, MD**

Vice President, Medical Staff Affairs

Hawai'i Pacific Health

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# COVID-19: Vaccines & Immunity

**26 August 2021**

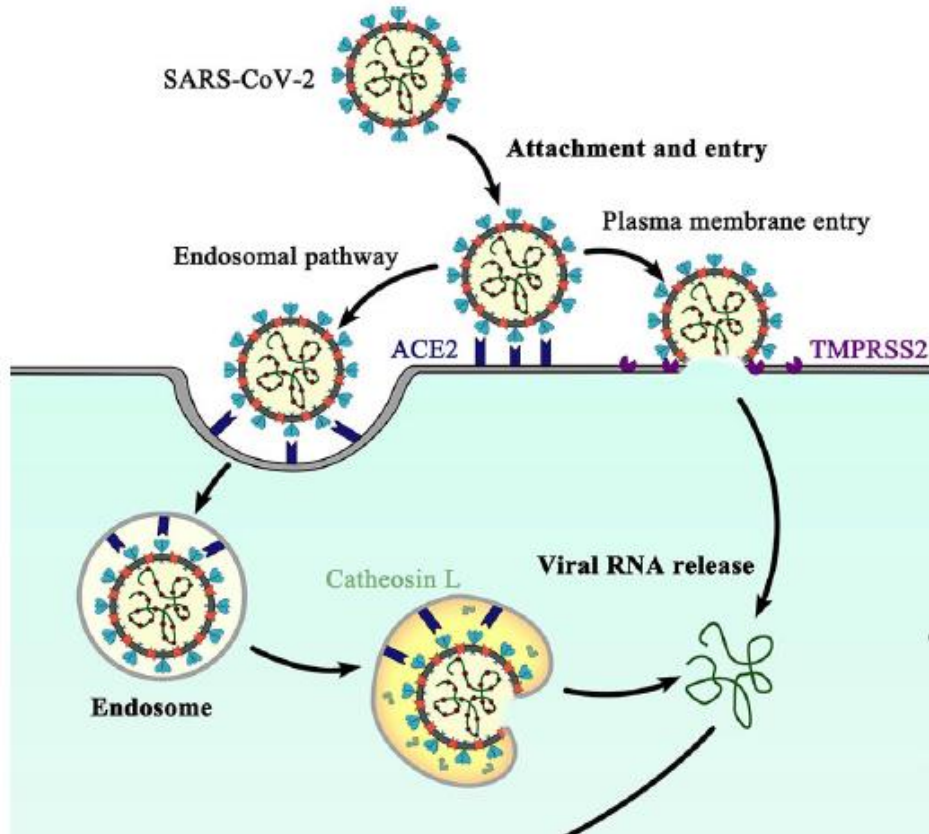
**Dr. rer. nat. Axel T. Lehrer, Associate Professor**

Department of Tropical Medicine, Medical Microbiology and Pharmacology,  
John A. Burns School of Medicine  
University of Hawai'i at Manoa  
Honolulu, Hawaii





# Cell Entry of SARS-CoV-2



Duan L, Zheng Q, Zhang H, Niu Y, Lou Y and Wang H (2020) **The SARS-CoV-2 Spike Glycoprotein Biosynthesis, Structure, Function, and Antigenicity: Implications for the Design of Spike-Based Vaccine Immunogens.** Front. Immunol. 11:576622.doi: 10.3389/fimmu.2020.576622

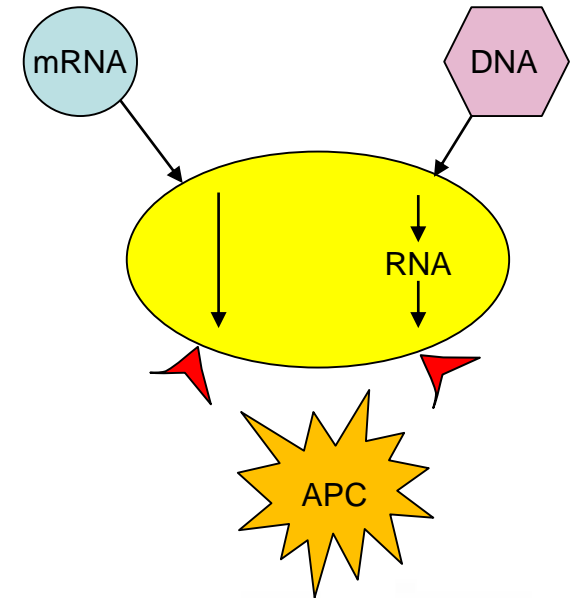
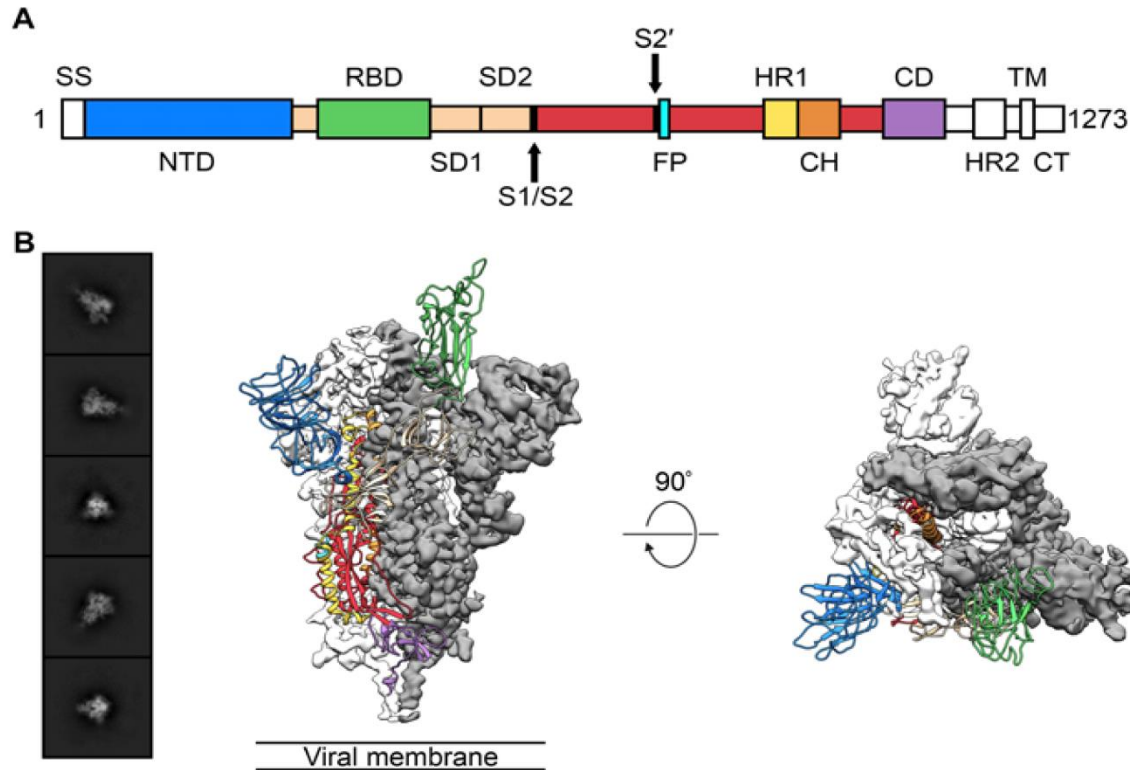




# All Vaccines Use the Spike Protein



## SARS-CoV-2



Wrapp and Wang et al. Science 2020





# What Affects Durability?

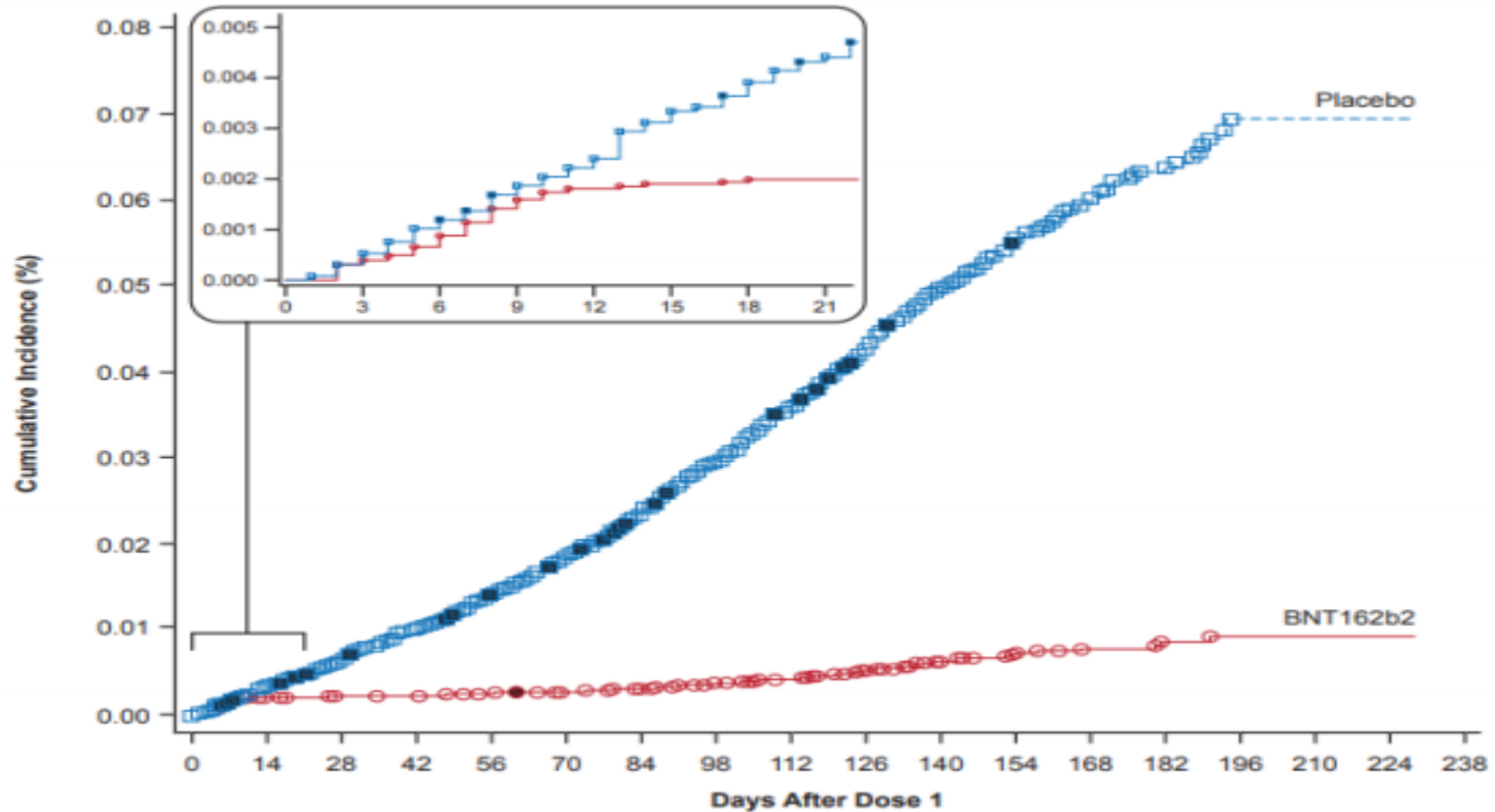


- Antibody responses depend on sufficient long-lived plasmacytoid cells and B-cell memory
- In addition T-cell help maybe required to maintain and drive maturation of immunity
- Essentially both mRNA and Ad-vectored vaccines are “protein only” vaccines and the dose level is dependent on the individual
- **None of these vaccines have a built-in adjuvant to control the level of immune response, dosing (or modifying delivery) is the only way to drive immunity and that is of course affecting vaccine safety**





# Real World Durability – Pfizer/BNT




Thomas et al (2021). medRxiv preprint doi:  
<https://doi.org/10.1101/2021.07.28.21261159>;  
**Six Month Safety and Efficacy of the  
BNT162b2 mRNA COVID-19 Vaccine**  
(July 29 2021)






# Virus Variants?

**SARS-CoV-2 variants** occur with new mutations in the virus genetic code. Some of these can affect virus function. Mutations in the spike protein, used to bind to human cells, can make it easier for the virus to infect a person or spread more quickly.



Labels: Spike protein, SARS-CoV-2 virus, Virus genes, SARS-CoV-2 variant, Human airway cell.


Other mutations may cause a change in the virus, making it more resistant to antibodies that fight SARS-CoV-2.



Labels: Antibody, Antibodies ineffective against variant.

**Current SARS-CoV-2 variants of concern**

<b>Alpha (B.1.1.7)</b>	<b>Beta (B.1.351)</b> <b>Gamma (P.1)</b>	<b>Delta (B.1.617.2)</b>
<ul style="list-style-type: none"><li>• Spreads 50% more quickly than the original virus</li><li>• May cause more severe COVID-19 disease</li><li>• Current antibody treatments are effective</li></ul>	<ul style="list-style-type: none"><li>• Spread less quickly than Alpha variant</li><li>• Current antibody treatments are less effective</li></ul>	<ul style="list-style-type: none"><li>• Spreads 100% more quickly than the original virus</li><li>• Not known if it causes more severe COVID-19 disease</li><li>• Current antibody treatments are slightly less effective</li></ul>

 Vaccination is safe and remains the best way to prevent severe disease and limit spread of SARS-CoV-2.

Lauring and Malani.  
The JAMA Patient Page  
August 13, 2021





# Virus Variants!



- **Variant of Interest (VOI)** – Current VOI in the United States that are being monitored and characterized by federal agencies: **Eta, Iota, Kappa, B.1.617.3**
- **Variant of Concern (VOC)** – Current VOC in the United States that are being closely monitored and characterized by federal agencies: **Alpha, Beta, Gamma, Delta**
- **Variant of High Consequence (VOHC)** – Currently there are no SARS-CoV-2 variants that rise to the level of high consequence

<https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-info.html>





# How to Reduce Risk of Variants



- **Get (fully) vaccinated!**
- Despite potentially lower efficacy against infection with variants, vaccination helps to reduce viral load, duration of infection and prevents progression to severe COVID-19 manifestation
- Lower virus load and shorter duration in case of vaccine break-through reduces the risk of variants to emerge, and more importantly, to spread to others!
- Continuous monitoring of the circulating strains helps preparation of new versions of vaccines - should the need arise
- **GOOD NEWS: so far no variant has emerged in ~ 20 months of the pandemic that escapes vaccines based on the original prototype strain!**





# Immunity After Natural Infection



1 month after infection:

## Article


### Convergent antibody responses to SARS-CoV-2 in convalescent individuals

<https://doi.org/10.1038/s41586-020-2456-9>

Received: 3 May 2020

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 Check for updates

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6 months after infection:

## Article


### Evolution of antibody immunity to SARS-CoV-2

<https://doi.org/10.1038/s41586-021-03207-w>

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 Check for updates

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# Vaccination After Prior Infection



## Reduced Risk of Reinfection with SARS-CoV-2 After COVID-19 Vaccination — Kentucky, May–June 2021

MMWR / August 13, 2021 / 70(32);1081-1083

On August 6, 2021, this report was posted online as an MMWR Early Release.

Alyson M. Cavanaugh, DPT, PhD<sup>1,2</sup>; Kevin B. Spicer, MD, PhD<sup>2,3</sup>; Douglas Thoroughman, PhD<sup>2,4</sup>; Connor Glick, MS<sup>2</sup>; Kathleen Winter, PhD<sup>2,5</sup>

**TABLE 2. Association of SARS-CoV-2 reinfection\* with COVID-19 vaccination status — Kentucky, May–June 2021**

Vaccination status	No. (%)		OR (95% CI) <sup>†</sup>
	Case-patients	Control participants	
Not vaccinated	179 (72.8)	284 (57.7)	2.34 (1.58–3.47)
Partially vaccinated <sup>¶</sup>	17 (6.9)	39 (7.9)	1.56 (0.81–3.01)
Fully vaccinated <sup>§</sup>	50 (20.3)	169 (34.3)	Ref
Total	246 (100)	492 (100)	—



# Vaccination After Prior Infection



- Vaccination after previous infection with SARS-CoV-2 significantly increases antibody titers against SARS-CoV-2 Spike protein and therefore helps to broaden responses against variants
- If passive immunotherapy has been used, vaccine should not be given until 90 days have passed since treatment
- Especially persons with a prior mild infection are at risk of breakthrough infection with variants as virus neutralizing antibody titers are typically low to moderate unless more severe COVID-19 symptoms are observed

*Further reading:*

Abbasi J. **Study Suggests Lasting Immunity After COVID-19, With a Big Boost From Vaccination.** *JAMA*. 2021;326(5):376–377. doi:10.1001/jama.2021.11717



# Experience of Delta Variant Wave in the RECs, UCs, and VUCs



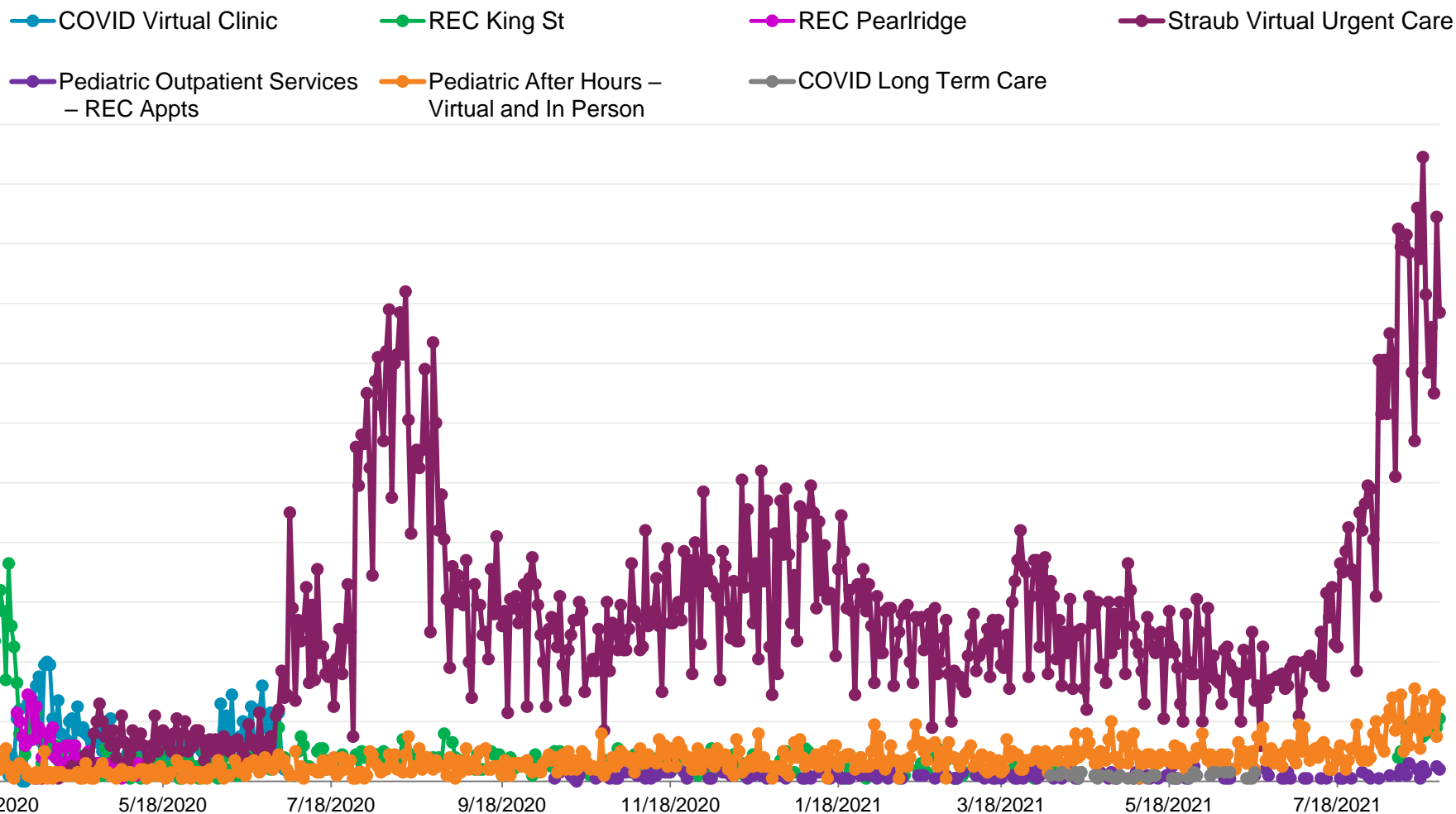
**Monica Price, MD**

Division Chief of Urgent Care,  
Hawai'i Pacific Health Medical Group

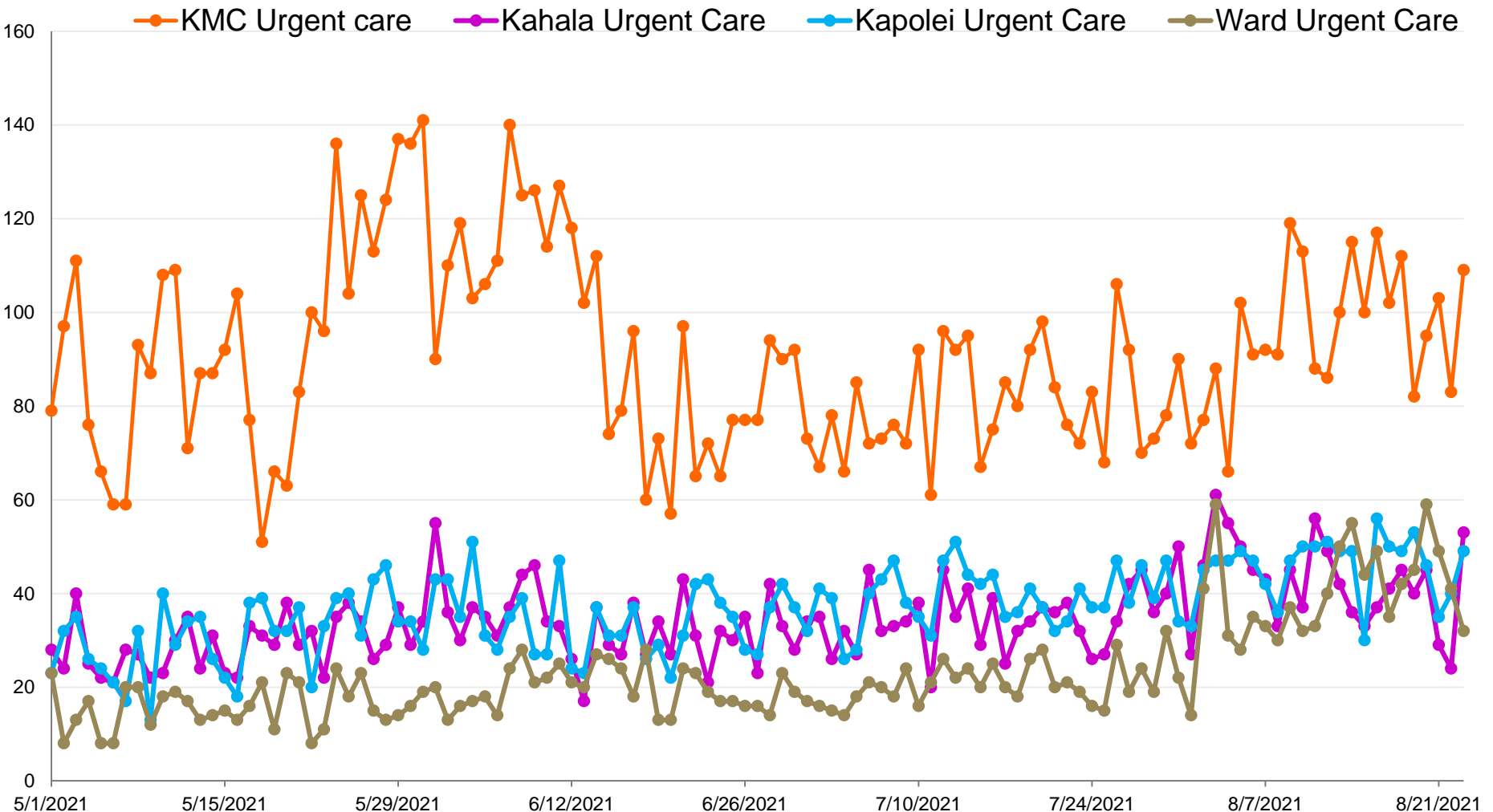
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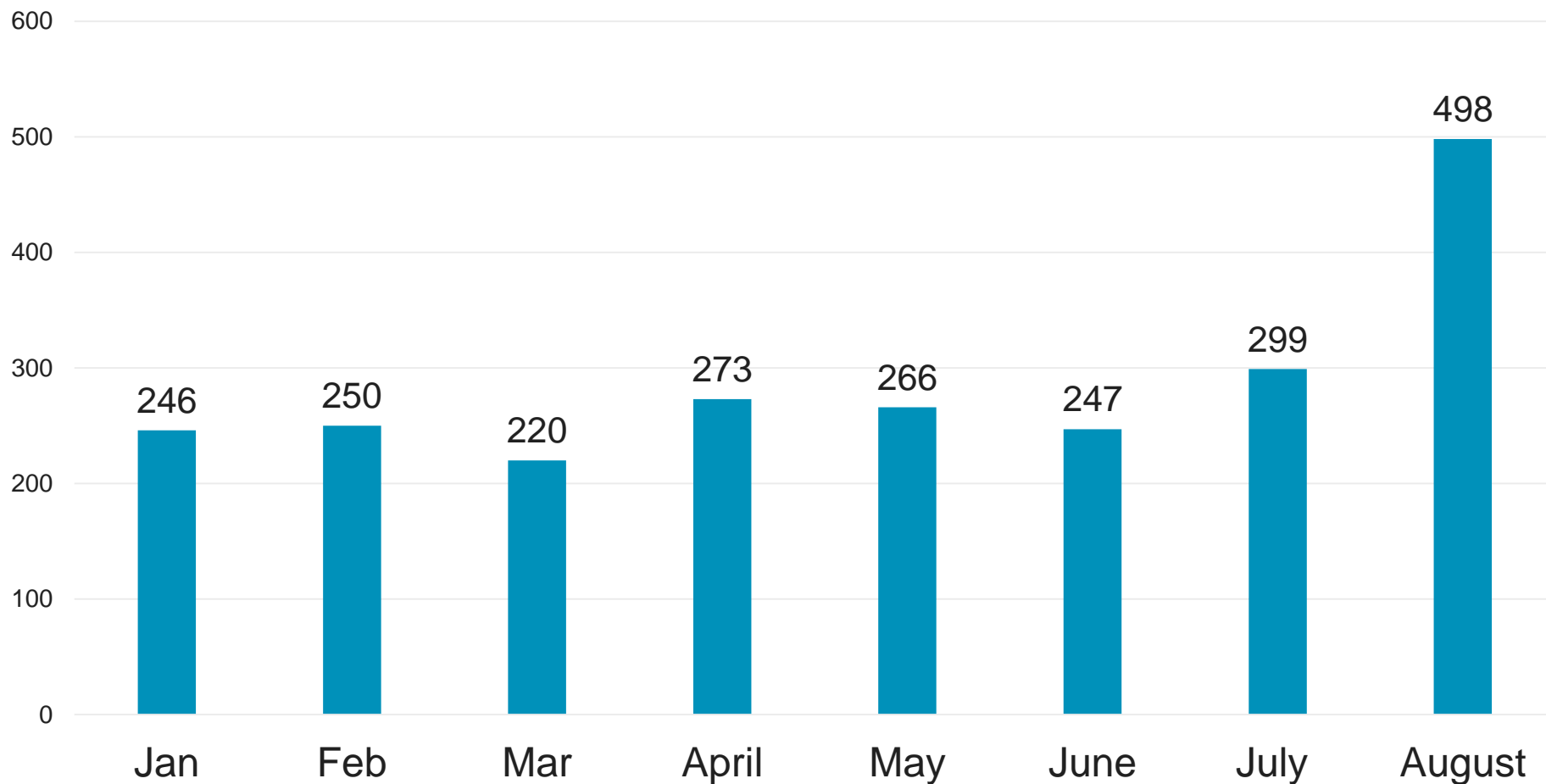
# HPH Respiratory Evaluation Clinics and Telehealth Virtual Clinic Completed Appts / Visits by Day



# Urgent Care Clinics, Completed Appts / Visits per Day



## Pediatric - After Hours Clinic Patient Volumes, by Month 2021



# HPH Policies and Updates



**Melinda Ashton, MD**  
Executive Vice President and  
Chief Quality Officer  
Hawai'i Pacific Health

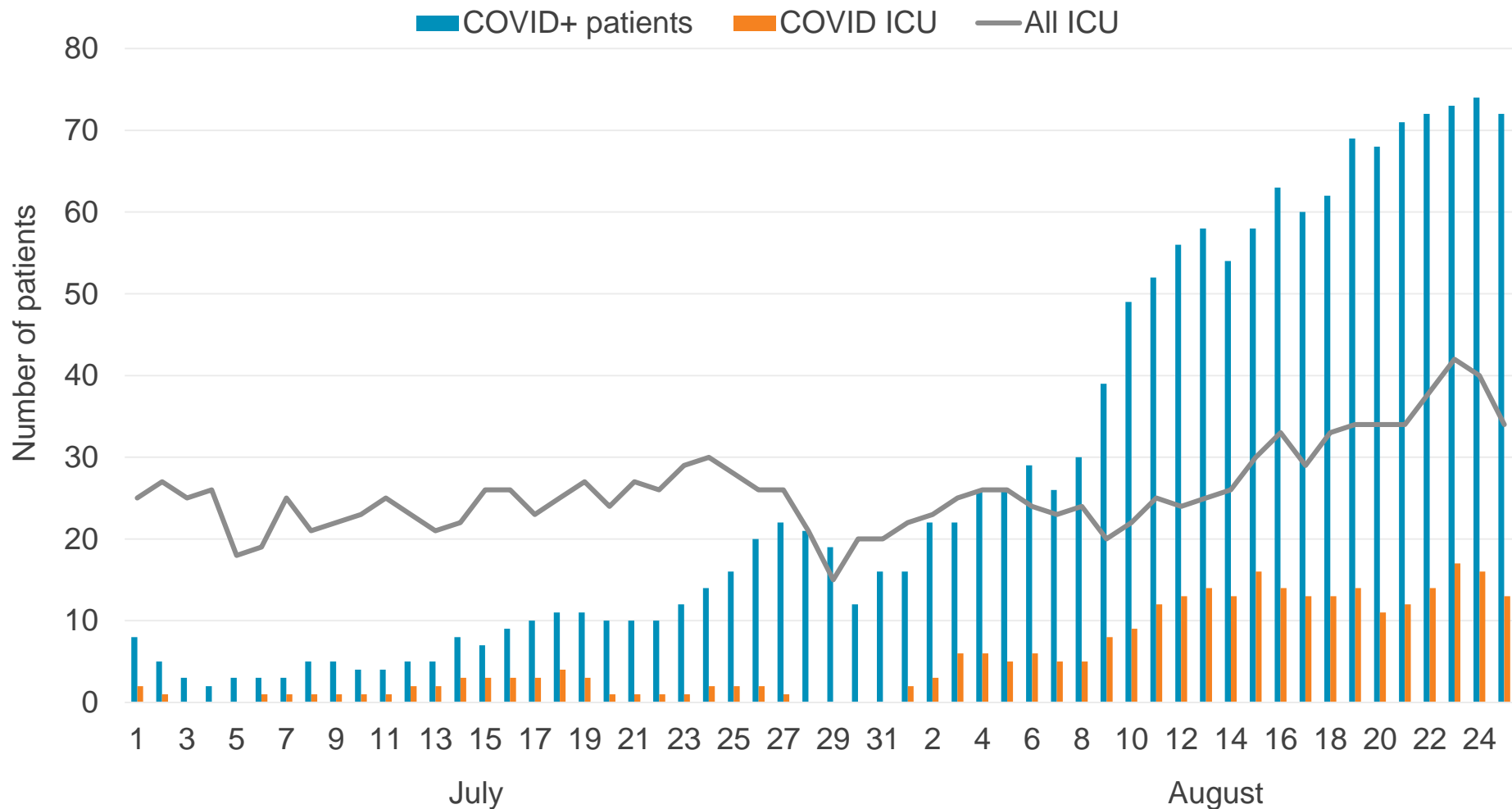


**Shilpa Patel, MD**  
Associate Chief Quality Office  
Hawai'i Pacific Health

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# Inpatient COVID-19 Activity: All HPH



# COVID+ Inpatients at HPH: August 26, 2020

Age	Admitted Inpatients
< 12 years	2
12 – 20 years	2
21-35 years	10
36 – 50 years	13
51 – 65 years	21
66 – 75 years	15
> 75 years	13
Total	76

# HPH Inpatients: August 24, 2021

Confirmed positive patients in our care:

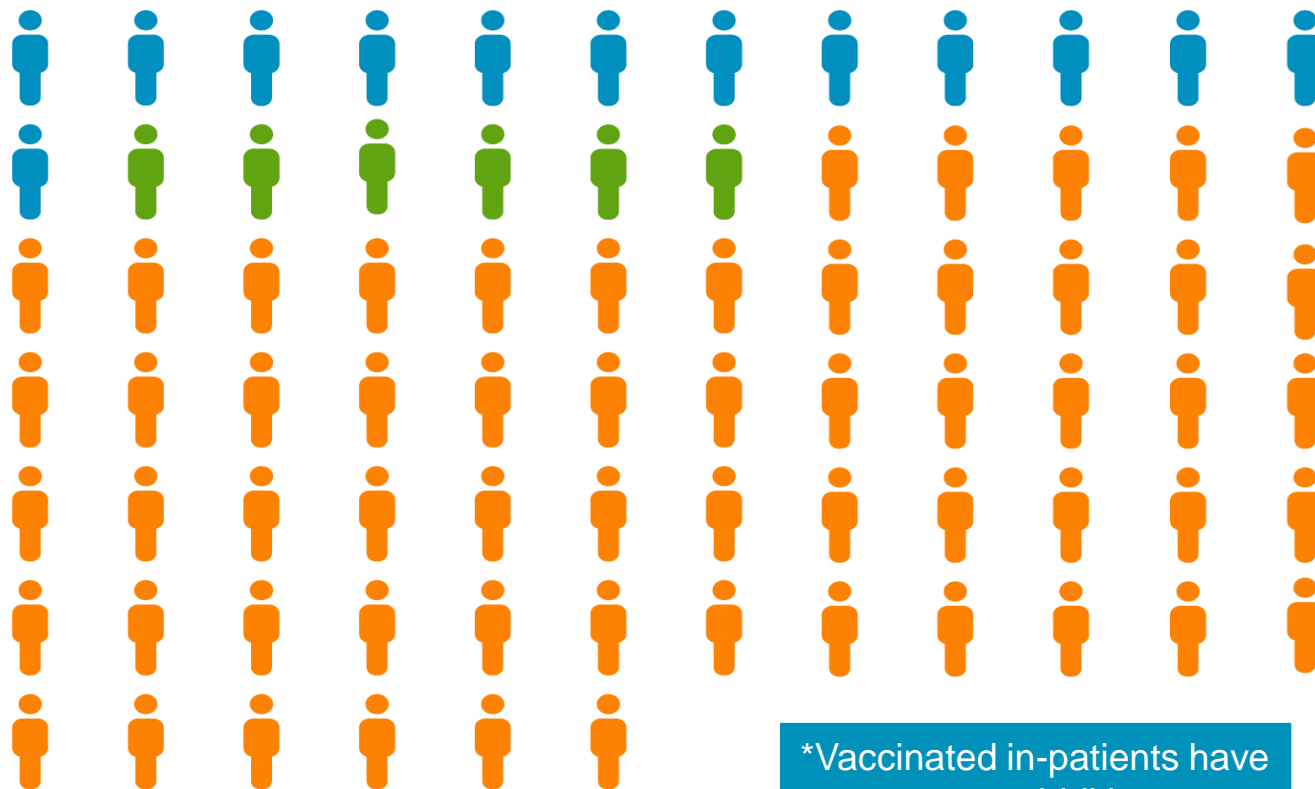
78

Percentage of those positive patients who are not fully vaccinated \*:

76%

Number of patients under the age of 65:

28



\*Vaccinated in-patients have severe co-morbidities



Not vaccinated



Vaccinated



Not fully vaccinated

# Vaccine Updates

- Full FDA approval for Pfizer – now called Comirnaty
- 3<sup>rd</sup> dose versus booster doses:
  - 3<sup>rd</sup> dose: addresses an insufficient immune response to primary vaccine series
  - Booster dose: addresses waning of initial sufficient immune response
  - Approved: 3<sup>rd</sup> doses of mRNA vaccines (Pfizer/Comirnaty, Moderna)
  - Pending approval: booster doses of mRNA vaccines, J&J vaccine
- Vaccination after COVID-19 infection:
  - Do NOT have to wait 90 days\*\*
  - Once cleared from isolation (to protect vaccine clinic staff)
  - Upon discharge from hospitalization for HPH hospitals
- \*\*Wait 90 days if received monoclonal antibodies or convalescent plasma

# Q&A

CREATING A HEALTHIER HAWAI'I

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# Thank you!

- A recording of the meeting will be available afterwards.
- Unanswered question?
  - Contact us at [Covid19Bulletin@hawaiiipacifichealth.org](mailto:Covid19Bulletin@hawaiiipacifichealth.org)