

Experience Rochester

ROCHESTER'S QUEST TO BEAT COVID-19

Thursday, January 28
12–1 p.m. (ET)



UNIVERSITY *of* ROCHESTER

PEDIATRIC COVID-19 VACCINE TRIALS

Mary T. Caserta, MD

Professor, Department of Pediatrics (Infectious Diseases)

University of Rochester Medical Center

COVID-19 AND CHILDREN

COVID-19 TESTING

6.0-18% of total tests done in children
7.2-27.6% of tests in children were positive

HOSPITALIZATIONS

1.3-2.9% of hospitalizations in children
0.2-2.6% of all child COVID-19 cases
resulted in hospitalization

MORTALITY

0.0-0.06% of childhood COVID cases
resulted in death

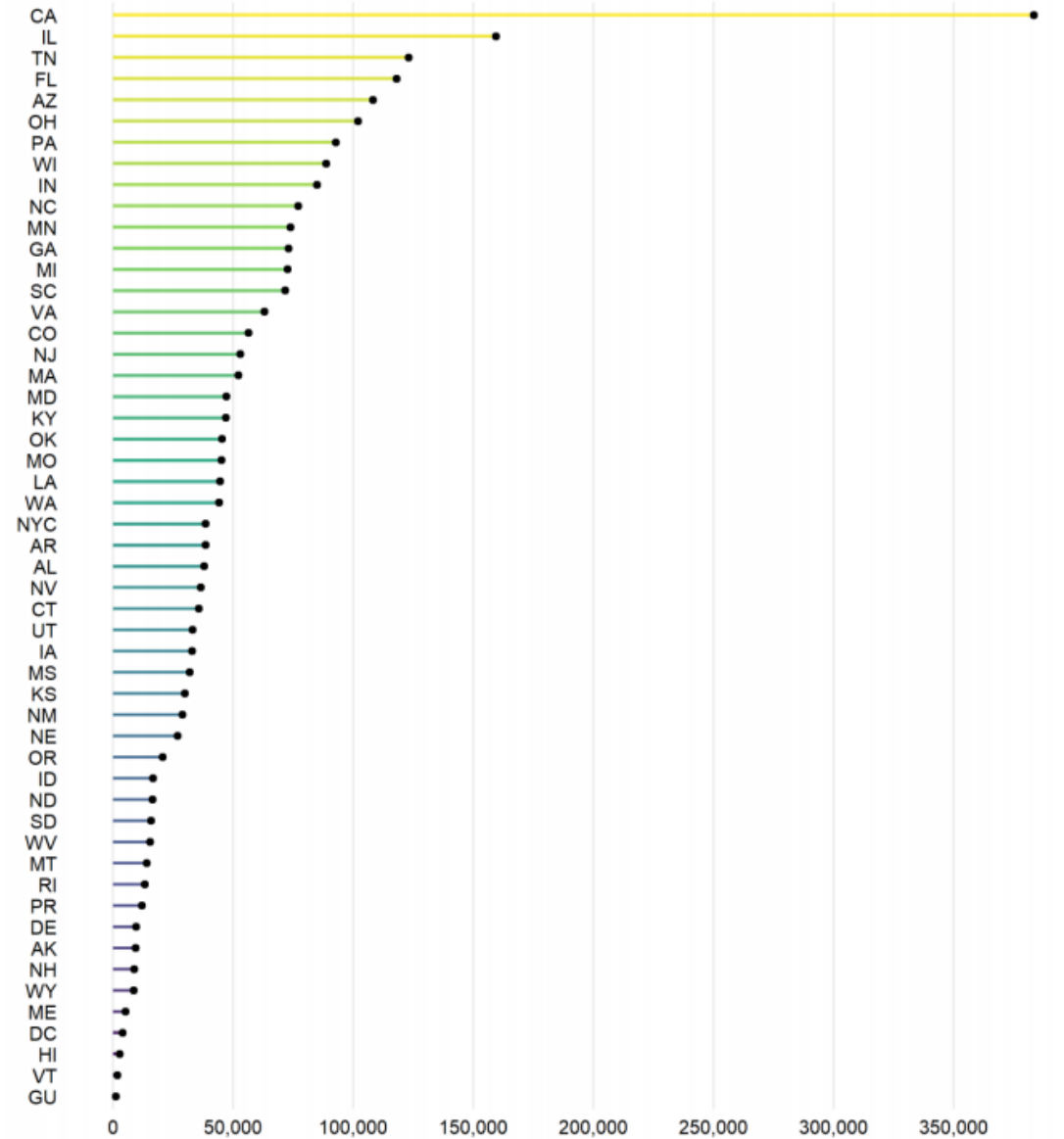
Child Population (2019)	75,266,842
Cumulative Total Cases (All Ages)	21,036,194
Cumulative Child Cases	2,676,612
Cumulative Percent Children of Total Cases	12.7%
Cases Per 100,000 Children	3556.2

AAP and Children Hospital Assoc, Jan 21, 2021



Fig 2. Cumulative Number of Child COVID-19 Cases: 1/21/21

- 2,676,612 total child COVID-19 cases (cumulative)
- Six states reported 100,000+ child cases
- Eight states reported fewer than 10,000 child cases



See detail in Appendix: Data from 48 states, NYC, DC, PR, and GU (TX excluded from figure)
 All data reported by state/local health departments are preliminary and subject to change
 Analysis by American Academy of Pediatrics and Children's Hospital Association



MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C)

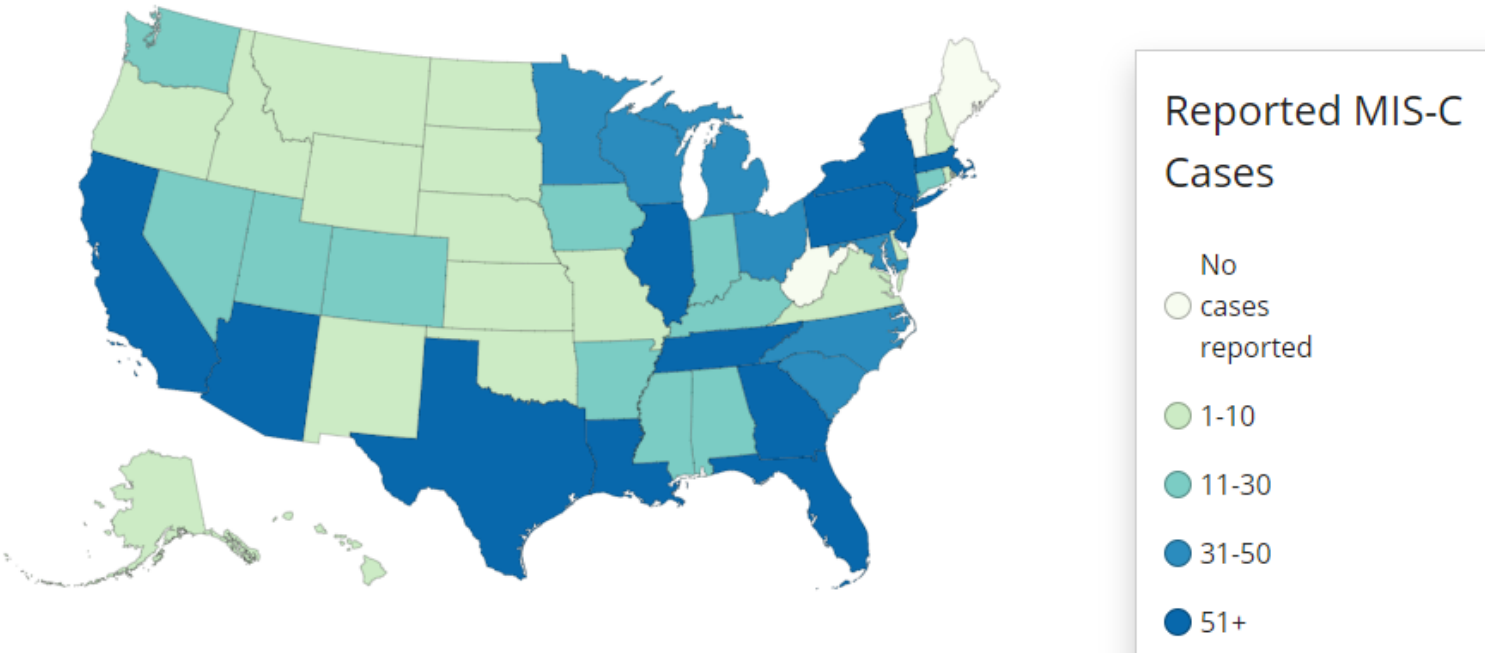
- ✓ A newly described condition where different body parts become inflamed including the heart, lungs, kidneys, brain, skin, eyes or gastrointestinal organs
- ✓ The cause of MIS-C is currently unknown
- ✓ Appears to be related to current or prior COVID-19 infection



MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C)

TOTAL MIS-C CASES MEETING CASE DEFINITION*
1,659

TOTAL MIS-C DEATHS MEETING CASE DEFINITION
26



CDC.gov- accessed Jan 26, 2021



EMERGING SARS-CoV-2 VARIANTS

Data from US Centers for Disease Control

David Topham, PhD

Marie Curran Wilson and Joseph Chamberlain Wilson Professor
Department of Microbiology and Immunology at the Center for Vaccine
Biology and Immunology

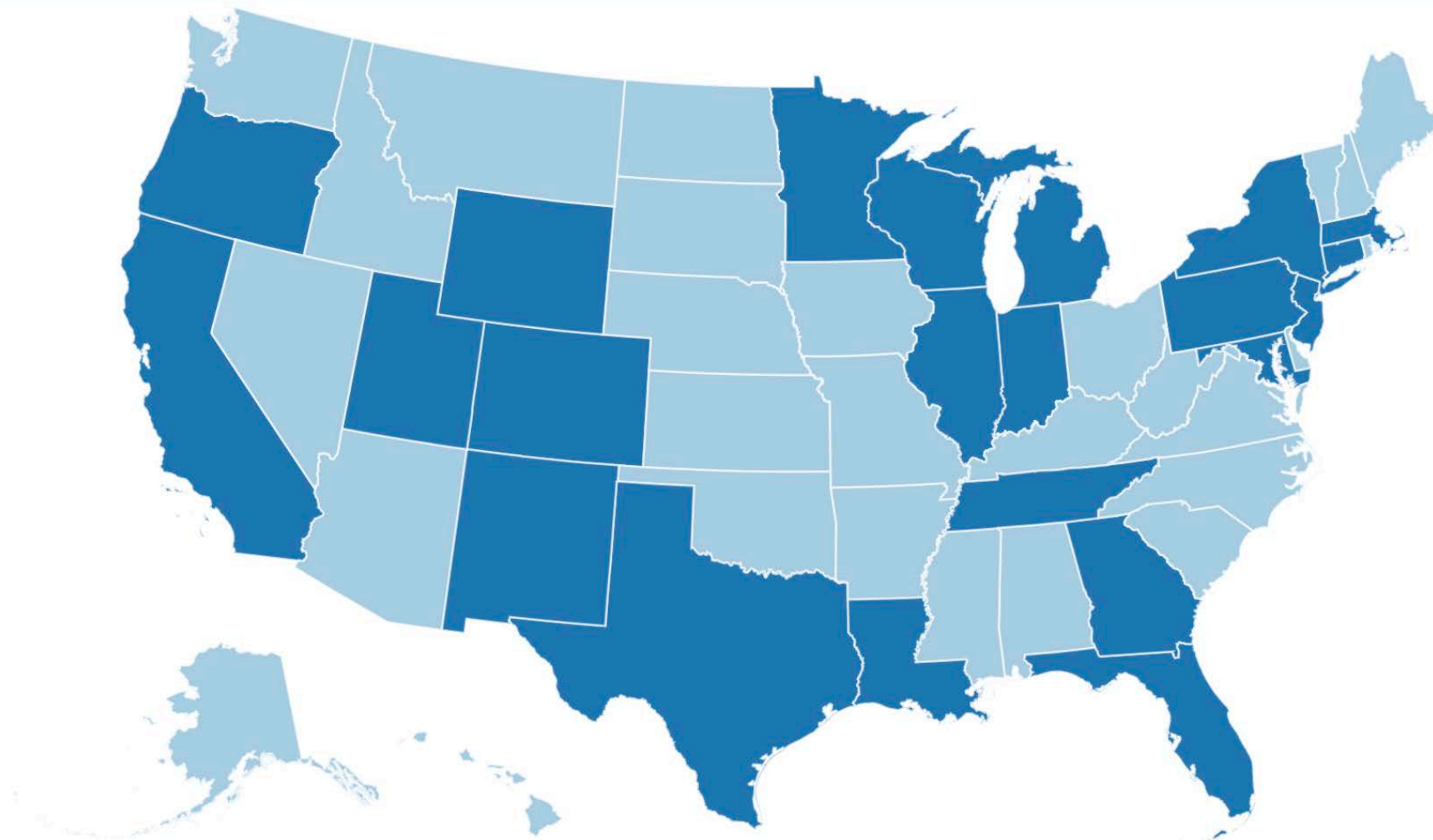
University of Rochester Medical Center

SARS-CoV-2 VARIANTS

Multiple SARS-CoV-2 variants are circulating globally. Several new variants emerged in the fall of 2020, most notably:

- In the **United Kingdom (UK)**, a new variant of SARS-CoV-2 (known as **B.1.1.7**) emerged with an unusually large number of mutations. This variant has since been detected in numerous countries around the world, including the United States (US) and Canada.
- In **South Africa**, another variant of SARS-CoV-2 (known as **B.1.351**) emerged independently of B.1.1.7. This variant shares some mutations with B.1.1.7. Cases attributed to this variant have been detected outside of South Africa.
- In **Brazil**, a variant of SARS-CoV-2 (known as **P.1**) emerged and was identified in four travelers from Brazil, who were tested during routine screening at Haneda airport outside Tokyo, Japan. This variant has 17 unique mutations, including three in the receptor binding domain of the spike protein.

B.1.1.7 Lineage Cases in the United States*† Total Cases: 195



Territories AS GU MH FM MP PW PR VI



NEW VARIANTS IMPACT ON VACCINES

Ann Falsey, MD

Professor in the Department of Medicine (Infectious Diseases)

University of Rochester Medical Center

Phylogeny

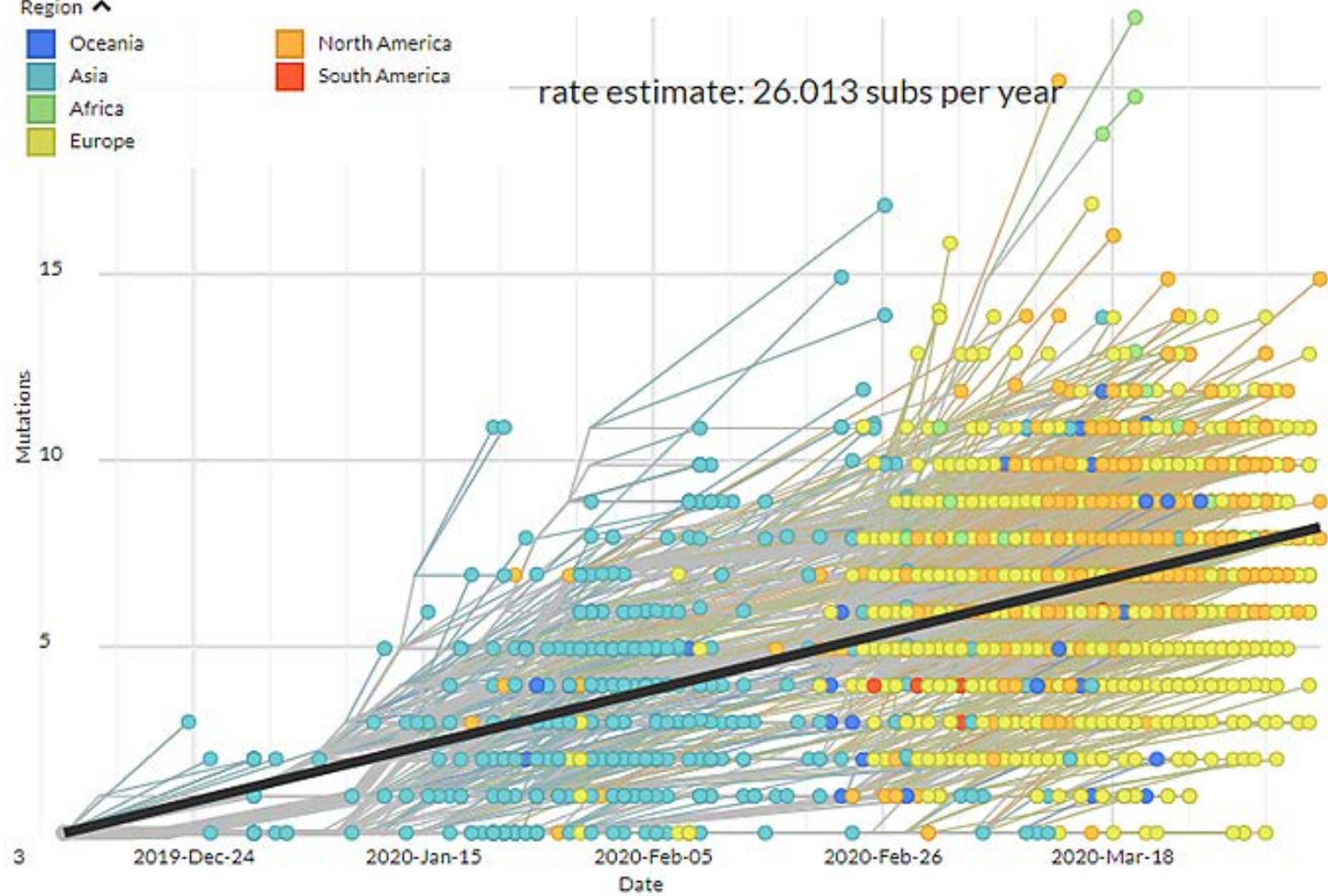
RESET LAYOUT

Region ^

- Oceania
- Asia
- Africa
- Europe

- North America
- South America

rate estimate: 26.013 subs per year



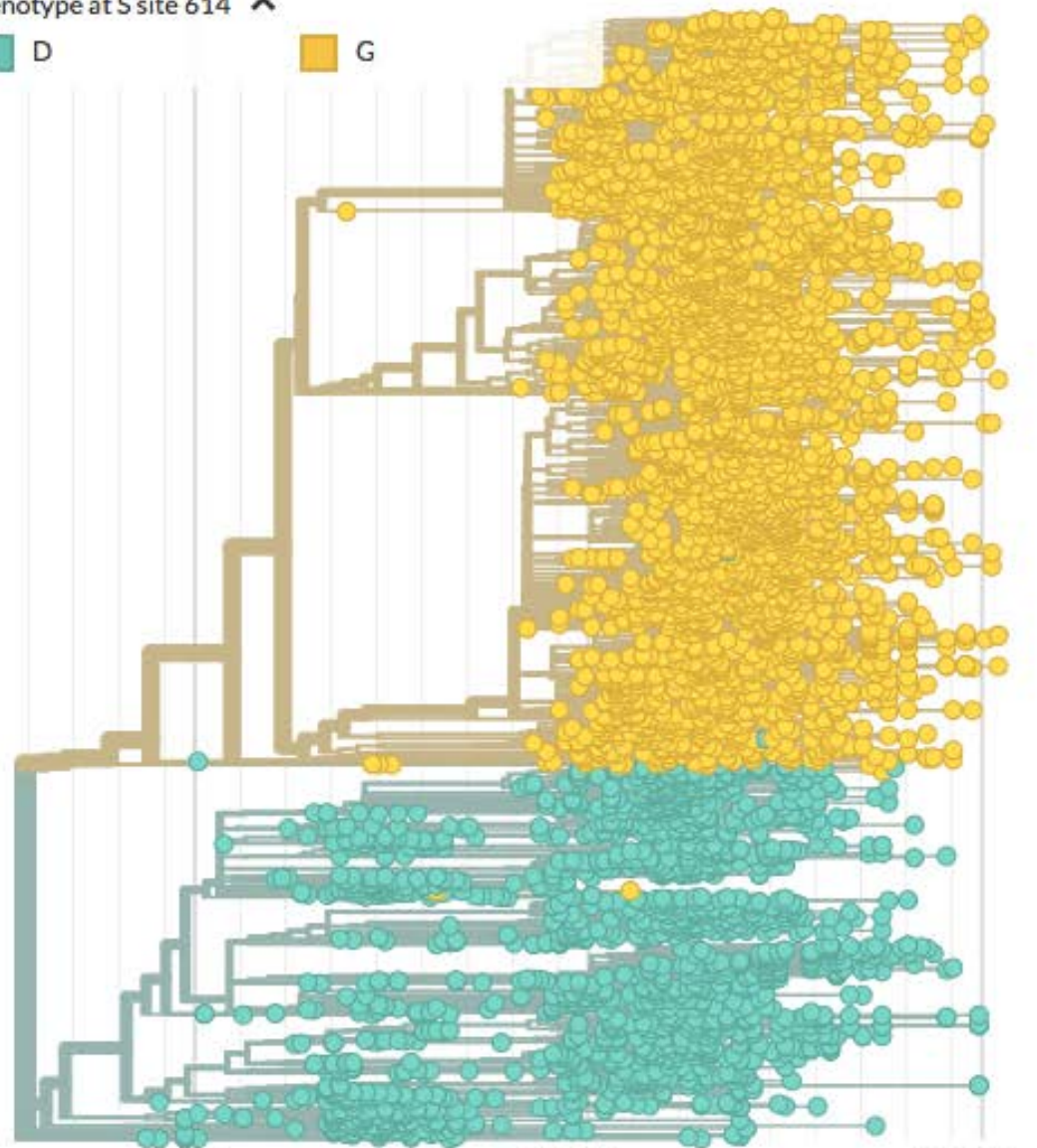
Genotype at S site 614 ^



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2020-Jan

2020-Mar

2020-Mar

Date

Genotype at S site 614 ^



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PRELIMINARY GENOMIC CHARACTERISATION OF AN EMERGENT SARS-CoV-2 LINEAGE IN THE UK DEFINED BY A NOVEL SET OF SPIKE MUTATIONS

Report written by: Andrew Rambaut, Nick Loman, Oliver Pybus, Wendy Barclay, Jeff Barrett, Alesandro Carabelli, Tom Connor, Tom Peacock, David L. Robertson, Erik Volz, on behalf of COVID-19 Genomics Consortium UK (CoG-UK)

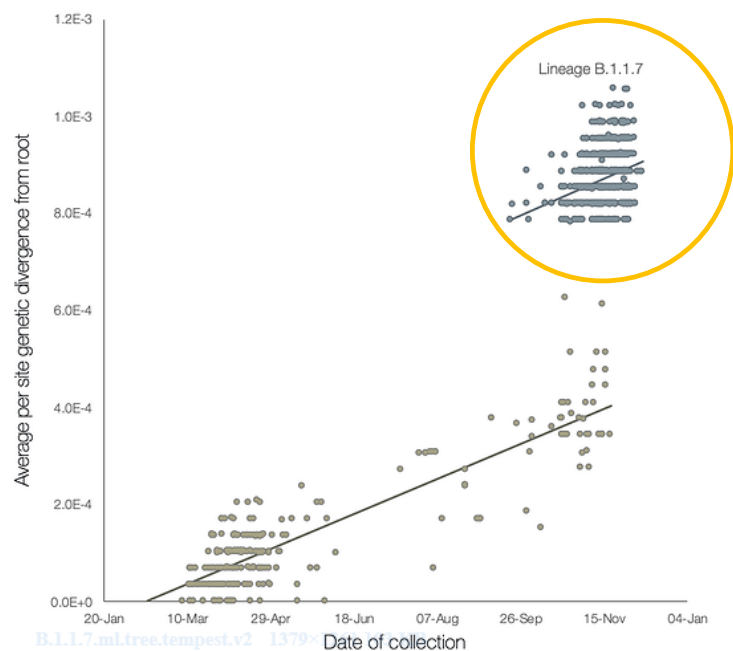
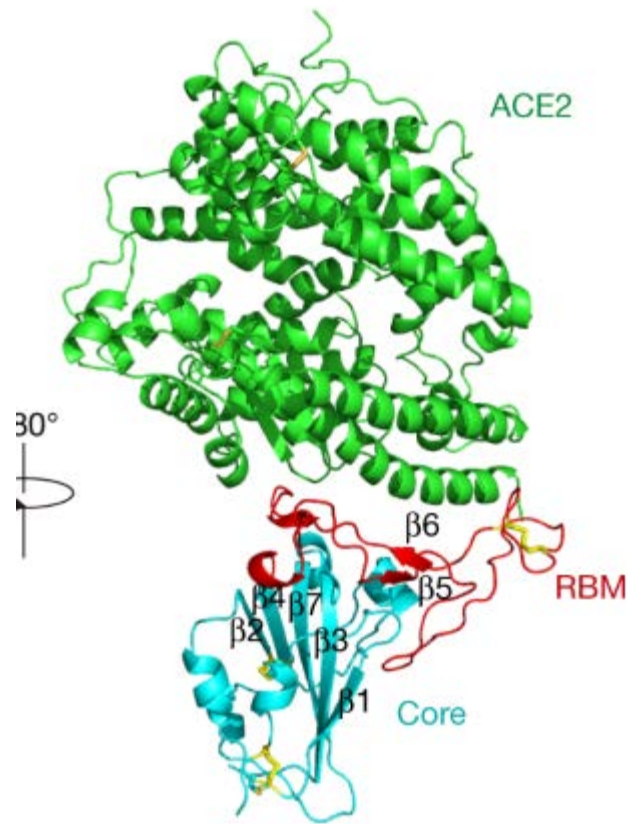


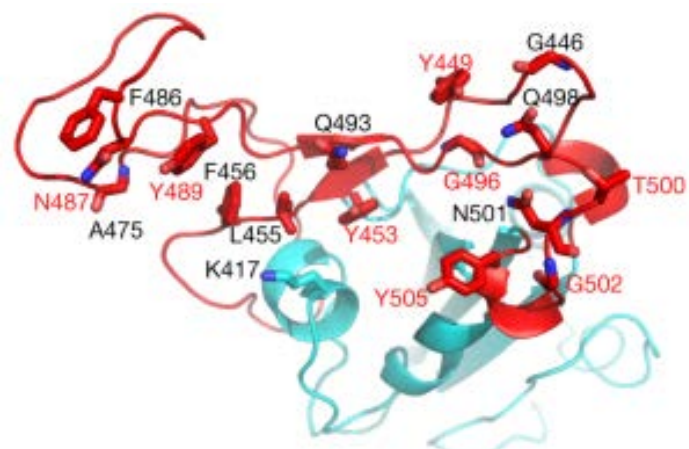
Figure 2 | Regression of root-to-tip genetic distances against sampling dates, for sequences belonging to lineage B.1.1.7 (blue) and those in its immediate outgroup in the global phylogenetic tree (brown). The regression lines are fitted to the two sets independently. The regression gradient is an estimate of the rate of sequence evolution. These rates are $5.6E^{-4}$ and $5.3E^{-4}$ nucleotide changes/site/year for the B.1.1.7 and outgroup data sets, respectively.

Table 1 | Non-synonymous mutations and deletions inferred to occur on the branch leading to lineage B.1.1.7 lineage.

gene	nucleotide	amino acid
ORF1ab	C3267T	T1001I
	C5388A	A1708D
	T6954C	I2230T
	11288-11296 deletion	SGF 3675-3677 deletion
spike	21765-21770 deletion	HV 69-70 deletion
	21991-21993 deletion	Y144 deletion
	A23063T	N501Y ←
	C23271A	A570D
	C23604A	P681H
	C23709T	T716I
	T24506G	S982A
	G24914C	D1118H
Orf8	C27972T	Q27stop
	G28048T	R52I
	A28111G	Y73C
N	28280 GAT->CTA	D3L
	C28977T	S235F

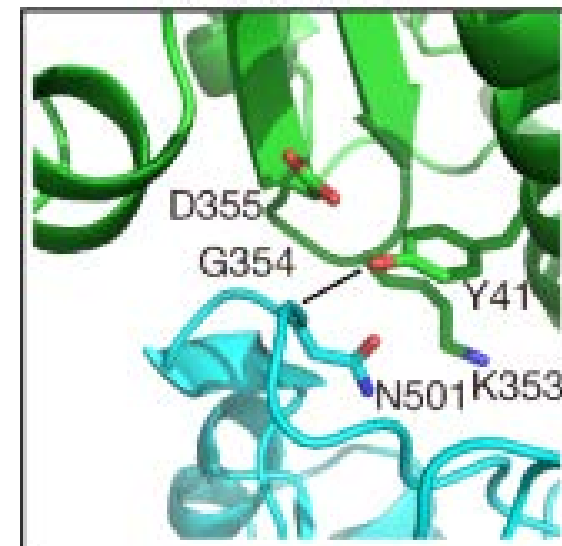


SARS-CoV-2 RBD



SARS-CoV-2 RBD

SARS-CoV-2



MORE DEADLY?

- "If you took...a man in their 60s, the average risk is that for 1,000 people who got infected, roughly 10 would be expected to unfortunately die with the virus. With the new variant, for 1,000 people infected, roughly 13 or 14 people might be expected to die."
 - UK's chief science adviser, **Patrick Vallance**
 - **Michael Osterholm**, epidemiologist and director of the Center for Infectious Disease Research and Policy at the University of Minnesota, said he has reviewed the UK report as well as other data that has not been publicly released, and he is "convinced" that the new variant is deadlier.
- "The data is mounting—and some of it I can't share—that clearly supports that B.1.1.7 is causing more severe illness and increased death."

WILL THE CURRENT VACCINES WORK?

- Serum from 20 people immunized with Pfizer neutralized the B.1.1.7 strain just as well as prior strains
- Convalescent plasma failed to neutralize the N501Y South African variant—
Pre-print BioRx
- Resistance to certain anti-spike Mab have been demonstrated

Vaccination with current vaccines should produce a polyclonal antibody response to the S protein so complete lack of efficacy would be unlikely but reduced efficacy is a concern.

FINGER LAKES COVID-19 VACCINE HUB

Nancy Bennett, MD

Professor of Medicine and Public Health Sciences

University of Rochester Medical Center

FINGER LAKES COVID-19 VACCINE HUB

ROLE

Plan, facilitate, and execute the Finger Lakes Vaccine Administration Plan.

MISSION

Ensure the **equitable, transparent, and efficient** immunization of at least 70% of the adult residents of the Finger Lakes Region.

PURPOSE

Coordinate efforts of all agencies involved in vaccination delivery, ensuring equitable, transparent, and efficient immunization, to protect residents in the Finger Lakes region from transmission, morbidity, and mortality associated with COVID-19 infection.

SCOPE

FINGER LAKES COUNTIES:

Genesee, Livingston, Monroe, Orleans, Ontario, Seneca, Wayne, Wyoming, and Yates



FINGER LAKES VACCINATION NETWORK

FL Vaccination Hub, Regional Planning Implementation of DOH Prioritization, POD Training/Operations, Resource Request Management, Local Coordination of Vaccine Distribution

Community and Faith Based Organizations

- Places of Worship
- Deaf / HOH
- Disability
- Race/Ethnicity
- LGBTQ
- IDD
- Migrant Workers
- Refugee
- Shelters/Housing
- Schools
- Older Adults
- Tribal Leaders

Health Care Providers

- Hospitals
- Community Physicians
- FQHCs
- Free clinics
- LTCFs
- ACOs
- First Responders
- Pharmacies
- Congregate Care
- Allied Health Providers
- Professional Associations

Government Agencies

- Public Health Directors
- County Executives
- Medicaid/Medicare
- Mental Health

Business Community

- Chamber of Commerce
- Grocery Stores
- Outside Markets
- Small Business
- Labor

SITUATIONAL AWARENESS

CURRENT ELIGIBILITY

- **Phase 1A – Still prioritized.**
 - Health care workers – patient-facing
 - Long term care – staff and patients
- **Phase 1B**
 - All 65yo and over
 - First responders (fire and police), public safety, teachers, public transit, grocery store workers

WHO VACCINATES WHO?

VACCINE PROVIDER GENERAL TYPE	ELIGIBLE POPULATION FOCUS
Hospitals/Health Care Systems & Federally Qualified Health Centers	Their own health care workers & patients 65yo and over
Pharmacies	Patients 65yo and over
County Health Departments	First responders, law enforcement, teachers and front-line workers as defined by NYS

Vaccine supply very limited. Eligibility does not equal availability

VACCINE HESITANCY

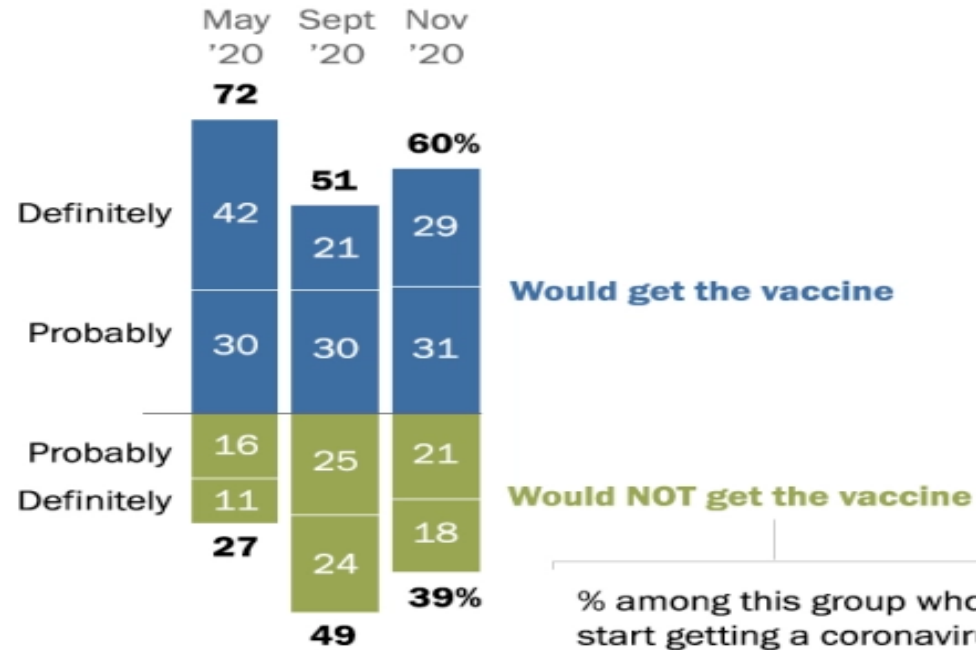
Angela Branche, MD

Assistant professor in the Department of Medicine
(Infectious Diseases)

University of Rochester Medical Center

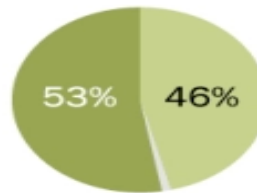
Majority of Americans now say they would get a vaccine for the coronavirus

% of U.S. adults who say if a vaccine to prevent COVID-19 were available today, they ...



% among this group who say once others start getting a coronavirus vaccine and there is more information ...

Pretty certain would not get vaccine

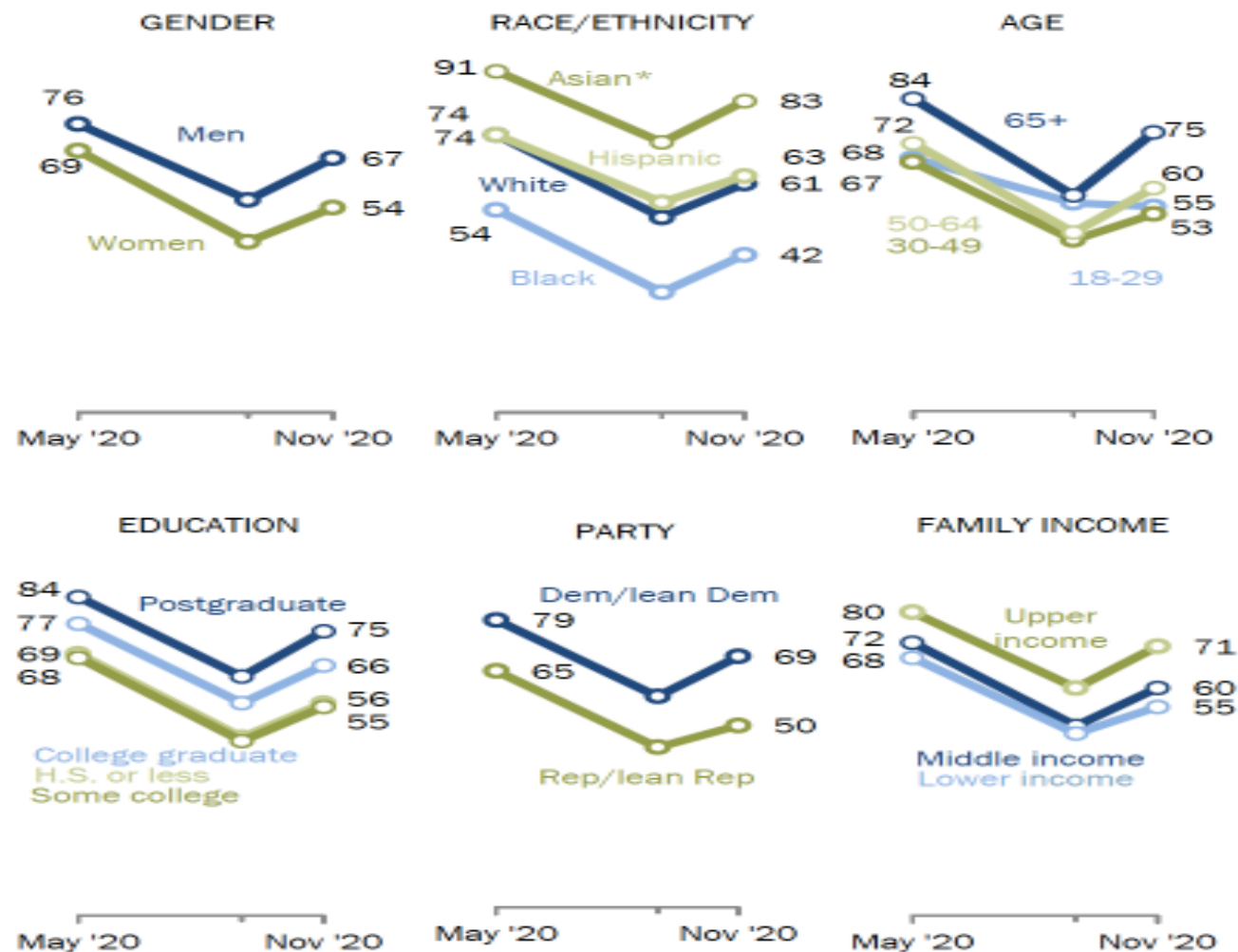


Possible would get vaccine

No answer <1%

Growing share intend to get a COVID-19 vaccine, though fewer than half of Black adults say they would

% of U.S. adults who say they would definitely/probably get a vaccine for COVID-19 if one were available today



COMMUNITY ENGAGEMENT TO ADDRESS VACCINE HESITANCY

1. CCHP COVID-19 Vaccine Advisory Committee
2. Finger Lakes COVID-19 Vaccine Task Force (CCG, Wade Norwood)
3. Researchers Engaged

VIA **zoom**

SHOP TALK
WITH U.P.B.C.A

JOIN VIA ZOOM
CALL IN BY PHONE OR
WATCH LIVESTREAM ON YOUTUBE

TOPIC OF DISCUSSION
What About The Vaccination?

Host: Willie Lightfoot
Guest Speakers:
Dr. Angela Branche, Infectious Disease Physician, UofR
Jackie Dozier Common Ground Health, Program Manager
Shani Wison, PA-C, Internal Medicine Physician Assistant

MEETING ID: 986 1564 3994 OR CALL : 1.929.436.2866

JANUARY 25TH, 2021 6PM
info@upbca.org / www.upbca.org

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WWW.UPBCA.ORG

CLICK: JOIN THE
CONVERSATION

Watch live on
UPBCA ASSOC

**Thank you to all.
We are in this together.**
