TEXASCARES

UTHealth
The University of Texas
Health Science Center at Houston
School of Public Health

KNOW YOUR *ANTIBODY* STATUS

LEARN HOW AT
TEXASCARESPROJECT.ORG

Steven H Kelder, PhD, MPH

Beth Toby Grossman Distinguished Professor

- What do schools need to know
- What is the TX Cares Study?

Harold W,. Kohl, PhD, MPH

Associate Dean, UTSPH Austin Campus

- What have we learned from the TX Cares Study?
- How long do antibodies last?

George P. Delclos, MD, PhD

Professor and Marcus M. Key, M.D. Shell Occupational and Environmental Health Endowed Chair

- Are vaccines safe for children? Adults?
- If I am antibody positive (had COVID-19), should I still take the vaccine?


STAT365

VIRAL TEST

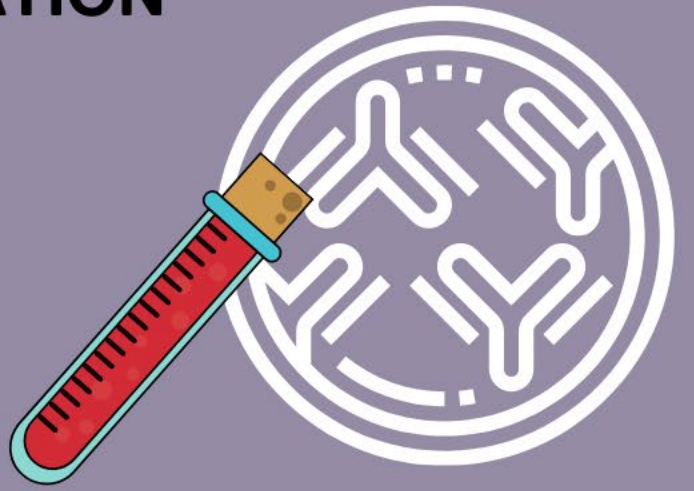
AKA: (PCR) TEST, DIAGNOSTIC TEST, ANTIGEN TEST

- NASAL OR ORAL SWAB
- DETECTS CURRENT INFECTION

ANTIBODY TEST

ANTIBODIES ARE PART OF THE BODY'S DEFENSE SYSTEM.

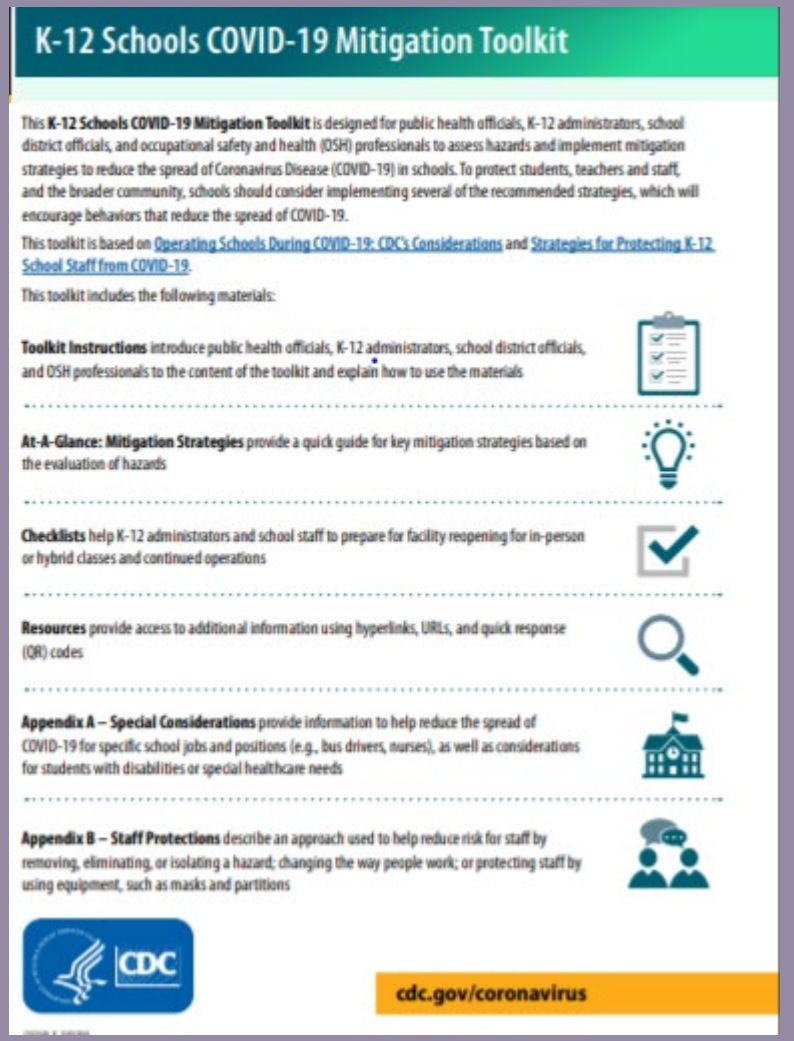
- BLOOD TEST
- DETECTS PREVIOUS INFECTION
- SOME TESTS CAN DETECT ANTIBODIES FROM VACCINATION



K-12 Schools COVID-19 Mitigation Toolkit

This K-12 Schools COVID-19 Mitigation Toolkit is designed for public health officials, K-12 administrators, school district officials, and occupational safety and health (OSH) professionals to assess hazards and implement mitigation strategies to reduce the spread of Coronavirus Disease (COVID-19) in schools. This toolkit includes the following materials:

- **Toolkit Instructions** introduce public health officials, K-12 administrators, school district officials, and OSH professionals to the content of the toolkit and explain how to use the materials
- **At-A-Glance:** Mitigation Strategies provide a quick guide for key mitigation strategies based on the evaluation of hazards
- **Checklists** help K-12 administrators and school staff to prepare for facility reopening for in-person or hybrid classes and continued operations
- **Resources** provide access to additional information using hyperlinks, URLs, and quick response(QR) codes
- **Appendix A –** Special Considerations provide information to help reduce the spread of COVID-19 for specific school jobs and positions (e.g., bus drivers, nurses), as well as considerations for students with disabilities or special healthcare needs
- **Appendix B –** Staff Protections describe an approach used to help reduce risk for staff by removing, eliminating, or isolating a hazard; changing the way people work, or protecting staff by using equipment, such as masks and partitions



When You've Been Fully Vaccinated

Exceptions:

1. **Exposed to COVID**
2. **International travel**
3. **High community background rate**
4. **Healthcare settings, homeless shelters, prisons, and jails, and**
5. **on public transportation.**

Choosing Safer Activities

- If you are fully vaccinated, you can resume activities that you did prior to the pandemic.
- Fully vaccinated people can resume activities without wearing a mask or physically distancing, except where required by federal, state, local, tribal, or territorial laws, rules, and regulations, including local business and workplace guidance.
- If you haven't been vaccinated yet, find a vaccine.

Safer Activities

Cooperation is the only way to completely end the pandemic

CDC and FDA endorse the safety and effectiveness of the Pfizer-BioNTech COVID-19 vaccine for 12- 15-year-old adolescents.

1. Providers may begin vaccinating teens 12 and older right away. Call your pediatrician.
2. COVID-19 vaccines are safe and effective.
3. Once you're fully vaccinated, you can start to do some things that you had stopped doing because of the pandemic.
4. The Texas Department of State Health Services will not require students to get vaccinated against the coronavirus for the upcoming school year.

DON'T FEEL WELL?
STAY HOME WHEN YOU ARE SICK

Tell your mom, dad, or caregiver before you come to school.Tell your teacher or an adult if you become sick at school

cough

Shortness of breath or problem breathing

chills

sore throat

loss of taste or smell

muscle pain

OTHER SYMPTOMS INCLUDE:

fever, runny nose, diarrhea, feeling nauseous or vomiting, feeling tired, headache, and poor appetite

CDC

cdc.gov/coronavirus

Table 1. CDC Indicators and Thresholds for Community Transmission of COVID-19[1]

Indicator	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days[2]	0-9	10-49	50-99	≥100
Percentage of NAATs that are positive during the past 7 days[3]	<5.0%	5.0%-7.9%	8.0%-9.9%	≥10.0%

Prevention Strategies: All Schools

All schools implement 5 key prevention strategies:

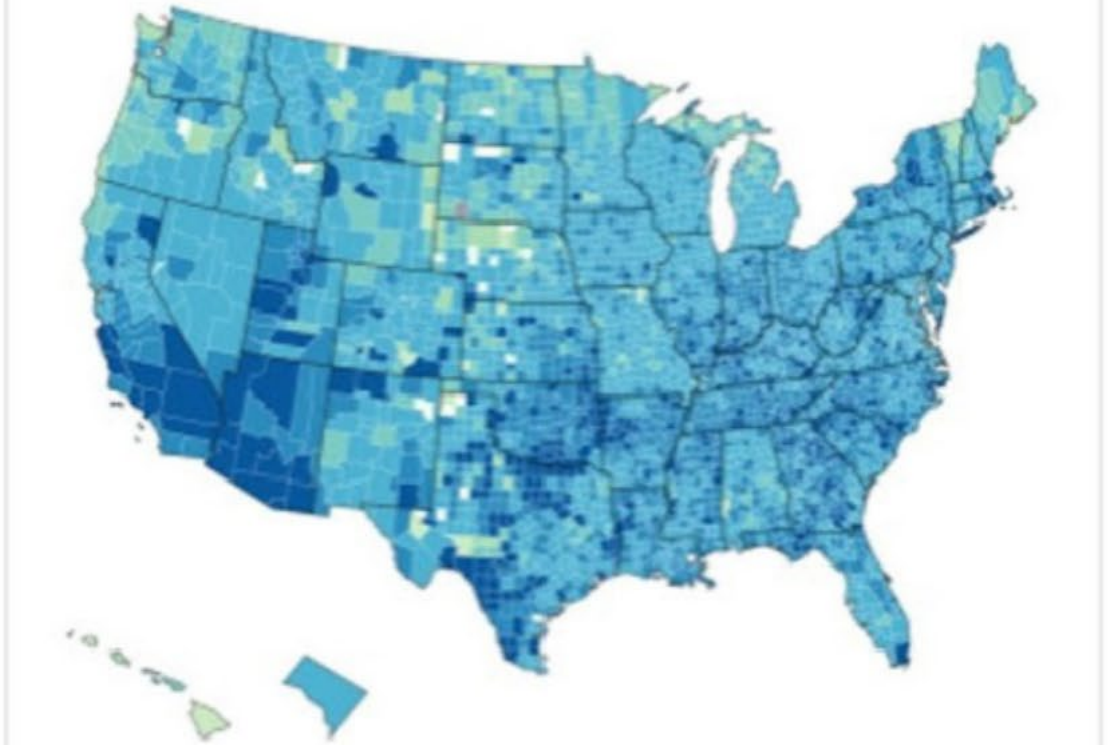
- Universal and correct use of masks required
- Physical distancing
- Handwashing and respiratory etiquette
- Cleaning and maintaining healthy facilities
- Contact tracing in combination with isolation and quarantine

Your Community

Stay up to date on the latest data in your community at the state and county level.

County View

Track cases, deaths, hospitalizations, and more for your community



The University of Texas COVID-19 Modeling Consorti

Select your area in the dropdown menu below

Select Texas Area: Texas

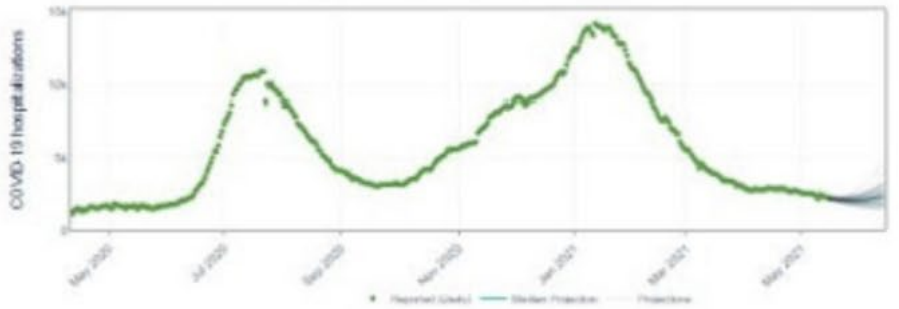
Reproduction number R(t)	Probability epidemic is growing	14 day change
Not Calculated	Not Calculated	13% fewer infections

* Numbers in brackets are 95% credible intervals and indicate the uncertainty in model estimates.

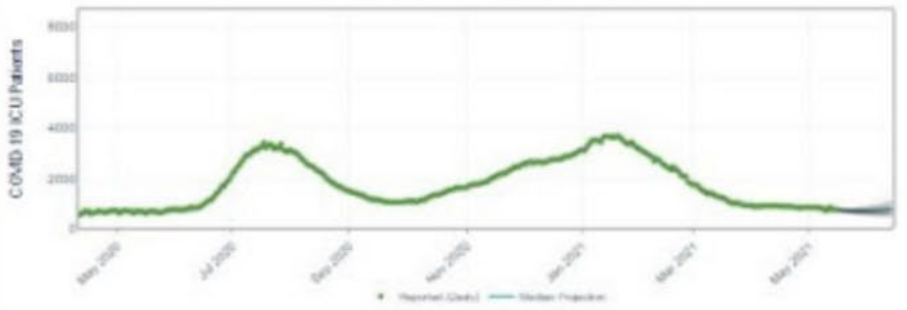
* Value indicate the average reproduction number over the most recent week. Numbers in brackets are 95% credible intervals and indicate the uncertainty in model estimates.

Last Updated: 2021-05-16

Daily COVID-19 Hospitalizations in the Texas



Daily COVID-19 ICU patients in the Texas



Texas CARES 5E Plans for K-12 Educators

- Helping educators teach their students about the pandemic response
- Texas CARES has developed specialized curriculum sets to support educators who want to teach their students about the pandemic response. More detailed information about the curriculum, as well as downloadable lesson plans, are available on the Texas CARES curriculum page which is now live on our website.
- Lesson plans are available for the following groups and are aligned to the Health, Science, and Math TEKS for each respective grade range.
    - Grades K-2
    - Grades 3-5
    - Grades 6-8
    - Grades 9-12

In the classroom

Helping educators teach their students about pandemic response

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- Grades 3-5
- Grades 6-8
- Grades 9-12

TEXAS CARES 5E LESSON PLANS

Curriculum available for grades K-12

Use the tabs on the right to toggle between the different grade-specific plans.

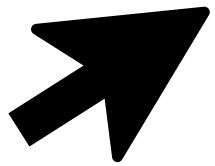
Back to Texas CARES home page.

Lesson plan overview

The Texas Coronavirus Antibody REsponse Survey (Texas CARES) measures the percentage of volunteer participants in Texas, ages 5-80, who have antibodies to SARS-CoV-2 virus. The lesson plans provided are aligned to the survey project and are divided into grade bands:

- K-2
- 3-5
- 6-8
- 9-12

K-12 Lesson Overview
K-2 Lesson Resources
3-5 Lesson Resources
6-8 Lesson Resources
9-12 Lesson Resources



Texas CARES 5E Lesson

Grades 9-12

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Texas Coronavirus Antibody Response Survey

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TEXAS CARES Texas Coronavirus Antibody Response Survey

TABLE OF CONTENTS

TEKS Alignment

Health TEKS	Health I, Grades 9-12: 1.D develop and analyze strategies related to the prevention of communicable and non-communicable diseases 6.A examine the effects of health behaviors on body systems 6.B relate the importance of early detection and warning signs that prompt individuals of all ages to seek health care 12.B research various school and community health services for people of all ages such as vision and hearing screenings and immunization programs 18.A research information about a personal health concern. 18.B demonstrate knowledge about personal and family health concerns; and 18.C develop strategies to evaluate information relating to a variety of critical health issues.
Science TEKS	Biology: 2.E plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology; 2.G analyze, evaluate, make inferences, and predict trends from data; and 2.H communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports 3.A analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student 4.C compare the structures of viruses to cells, describe viral reproduction, and describe the role of viruses in causing diseases such as human immunodeficiency virus (HIV) and influenza 10.A describe the interactions that occur among systems that perform the function nutrient absorption, reproduction, and defense from injury or illness in animals 11.A summarize the role of microorganisms in both maintaining and disrupting the organisms and ecosystems; and Anatomy and Physiology: 3.G analyze, evaluate, make inferences, and predict trends from data; 3.H communicate valid conclusions supported by the data through methods such a labeled drawings, graphic organizers, journals, summaries, oral reports, and techn reports 4.B communicate and apply scientific information extracted from various sources s scientific journals, institutions of higher learning, current events, news reports, pub articles, and marketing materials 10.A identify the effects of environmental factors such as climate, pollution, radioa electromagnetic fields, pathogens, carcinogens, and drugs on body systems 10.B explore measures to minimize harmful environmental factors on body system 11.B evaluate the cause and effect of disease, trauma, and congenital defects on function of cells, tissues, organs, and systems These activities are also aligned with many of the TEKS in Principles of Health Sci Microbiology, World Health Research, and Pathophysiology
Math TEKS	Algebra I: 1.A apply mathematics to problems arising in everyday life, society, and the workp 1.D communicate mathematical ideas, reasoning, and their implications using mul representations, including symbols, diagrams, graphs, and language as appropria 1.E create and use representations to organize, record, and communicate mathem

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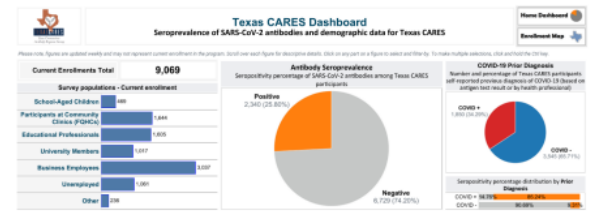
Elaborate Activities | Grades 9-12
Dashboard Scavenger Hunt and Research Extension

Navigate the Texas CARES Interactive Dashboard to find the key items below.
https://sph.uth.edu/projects/texascares/dashboard



1. What percentage of females enrolled in the study are positive for SARS-CoV-2 antibodies? _____
2. What group under "current enrollment" has the greatest number of participants? _____
3. What is the total percentage of seropositive participants? _____
4. What is the number of participants who have had a past diagnosis of Covid-19? _____
5. Which age group has the greatest percentage of seropositive participants? _____
6. What group under "current enrollment" has the greatest number of people? _____
7. Looking at the dashboard, do you think that the current study participants are representative of the actual population of Texas? If not, what groups need better representation?

Now it's your turn to be a researcher!

Brainstorm some scientific questions that researchers could study. *Example: How does the food that people eat affect their health? (You can also explore questions you had about the dashboard data.)*

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TEXAS CARES Texas Coronavirus Antibody Response Survey

Texas CARES offers up to 3 free antibody tests to help us learn about exposure in our community, how long COVID-19 antibodies last, and how much protection they provide.

LEARN MORE
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Texans (ages 5-80) are eligible to participate regardless of vaccination status

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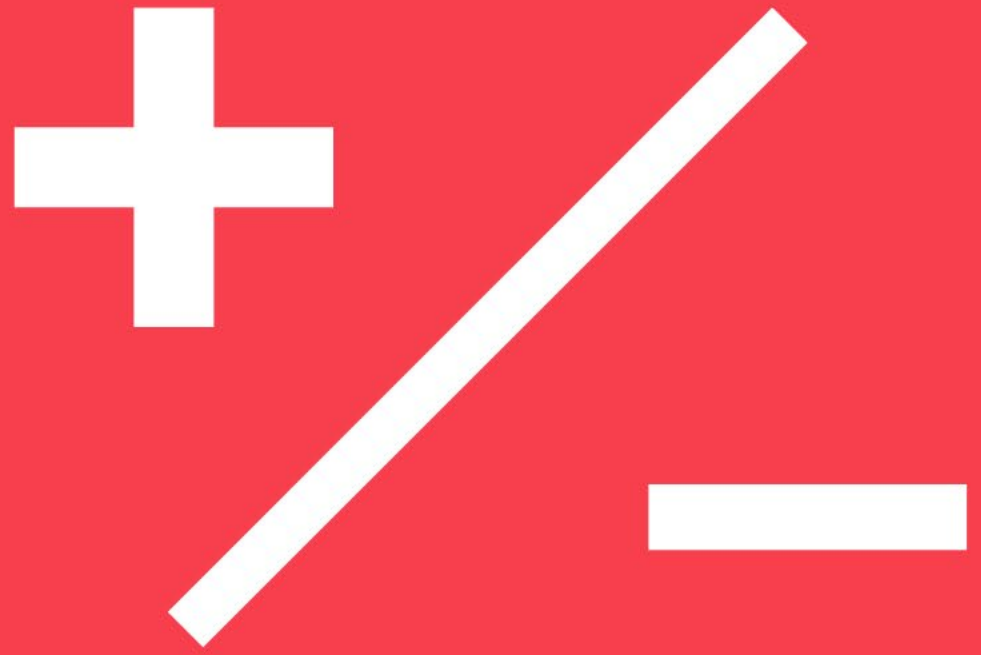
- semi-quantitatively evaluates vaccine-induced immune response
- determines pre-vaccination immune status
- indicates recent or prior COVID-19 infection



TEXASCARES

AA redcap.sph.uth.edu

IRB NUMBER: HSC-SPH-20-0825
IRB APRROVAL DATE:09/18/2020

Please choose an answer here only if you understand the information given to you about the research and you choose to take part in Texas CARES. Make sure that all your questions have been answered. A copy of this consent statement will be given to you for your future reference.

Please select the appropriate response:

- **I give permission to participate in Texas CARES.**
- **I DO NOT give permission to participate in Texas CARES.**

reset

Submit

Complete a brief survey at go.uth.edu/txcares & your order number will be texted to you

STEP 1

Go to
cpllabs.com/locations
to find the nearest
CPL location and hours

No appointment necessary!

CLINICAL PATHOLOGY
LABORATORIES

2-3 Days Later

Get your results by text message so you can #KnowYourAntibodyStatus

STEP 4

You will receive your personalized T2 survey link by text message 3 months after your T1 which will generate your T2 order number.

T3 survey links are sent 3 months after your T2.

#KnowYourAntibodyStatus

OUR PARTICIPANTS SAY...

Q: WHY PARTICIPATE?

"TO HELP OUR COMMUNITY"

"IT WAS EASY. IT WAS FAST."

"IT COSTS NOTHING YOU DON'T LOSE ANYTHING, BUT YOU GAIN A LOT."

"PRETTY PAINLESS + FAST"

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KNOWLEDGE IS A SUPERPOWER

#KNOWYOURANTIBODYSTATUS

LEARN MORE AT
TEXASCARESPROJECT.ORG

PROTECT YOURSELF.
PROTECT YOUR FAMILY.
PROTECT YOUR COMMUNITY.

GET TESTED FOR FREE.

Texas CARES Dashboard

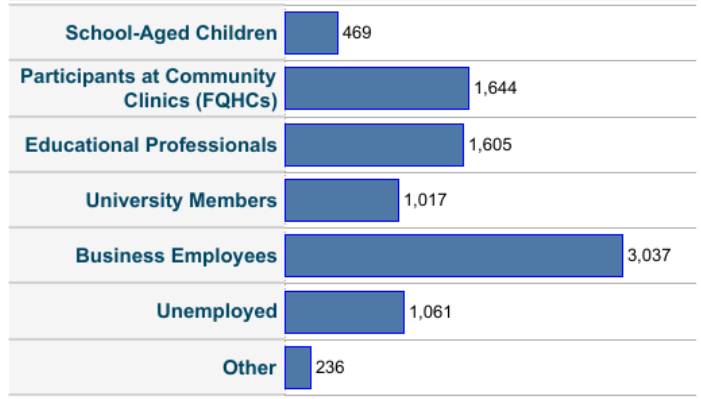
Seroprevalence of SARS-CoV-2 antibodies and demographic data for Texas CARES

Home Dashboard | Enrollment Map

Please note, figures are updated weekly and may not represent current enrollment in the program. Scroll over each figure for descriptive details. Click on any part on a figure to select and filter-by. To make multiple selections, click and hold the Ctrl key.

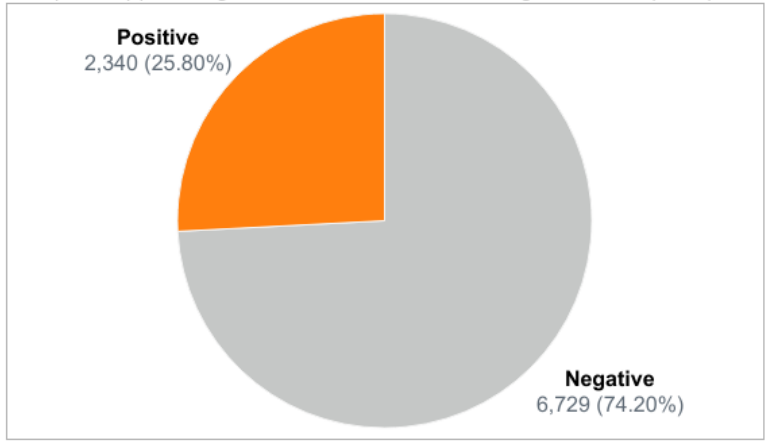
Current Enrollments Total	9,069

Survey populations - Current enrollment



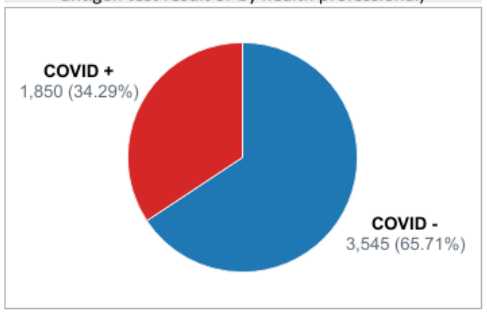
Antibody Seroprevalence

Seropositivity percentage of SARS-CoV-2 antibodies among Texas CARES participants



COVID-19 Prior Diagnosis

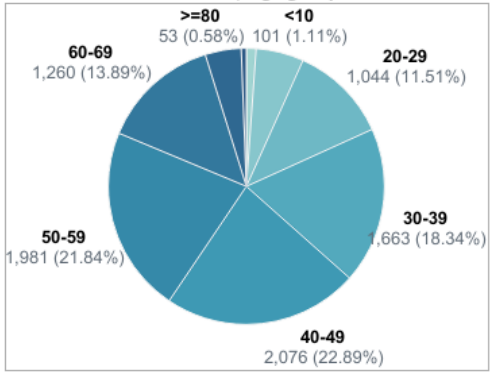
Number and percentage of Texas CARES participants self-reported previous diagnosis of COVID-19 (based on antigen test result or by health professional)



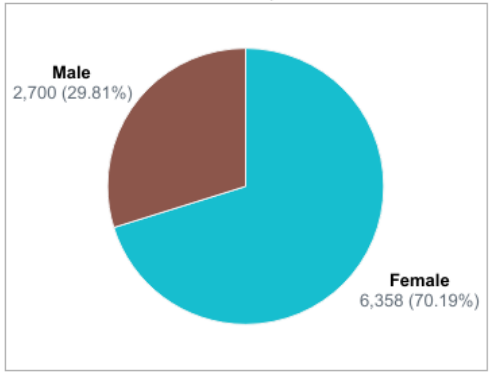
Seropositivity percentage distribution by **Prior Diagnosis**

COVID +	14.76%	85.24%
COVID -	90.69%	9.31%

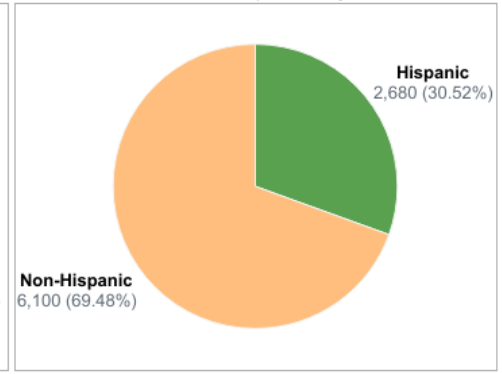
Percentage and number of Texas CARES participants stratified by **Age groups**



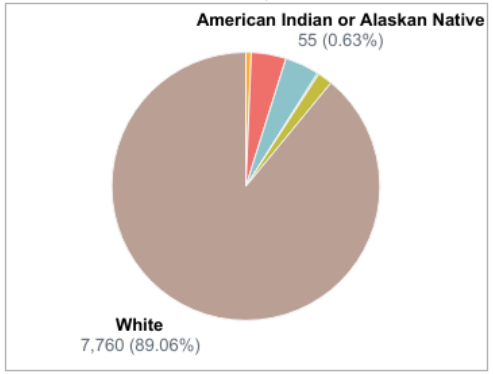
Percentage and number of Texas CARES participants stratified by **Sex**



Percentage and number of Texas CARES participants stratified by **Ethnicity**



Percentage and number of Texas CARES participants stratified by **Race**



Seropositivity percentage distribution by **Age groups**

<10	67.33%	32.67%
10-19	67.52%	32.48%
20-29	72.03%	27.97%
30-39	76.91%	23.09%
40-49	74.04%	25.96%
50-59	73.75%	26.25%
60-69	76.19%	23.81%
70-79	74.41%	25.59%
>=80	83.02%	16.98%

Seropositivity percentage distribution by **Sex**

Female	74.27%	25.73%
Male	74.11%	25.89%

Seropositivity percentage distribution by **Ethnicity**

Hispanic	71.38%	28.62%
Non-Hispanic	75.64%	24.36%

Seropositivity percentage distribution by **Race**

White	73.93%	26.07%
Asian	76.78%	23.22%
Black	75.83%	24.17%
American Indian or Ala..	74.55%	25.45%
Hawaiian or Other Pacif..	94.12%	5.88%
Multi-racial	76.77%	23.23%

TEXAS Health and Human Services | Texas Department of State Health Services

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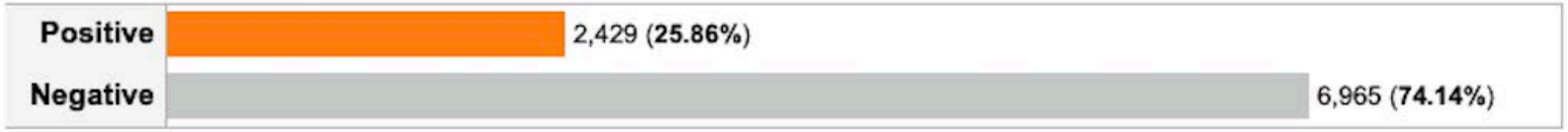
Test # T1

Current Enrollments Total

9,394 (25.86%)

Antibody Seroprevalence

Seropositivity number and percentage of SARS-CoV-2 antibodies among Texas CARES participants



Survey populations

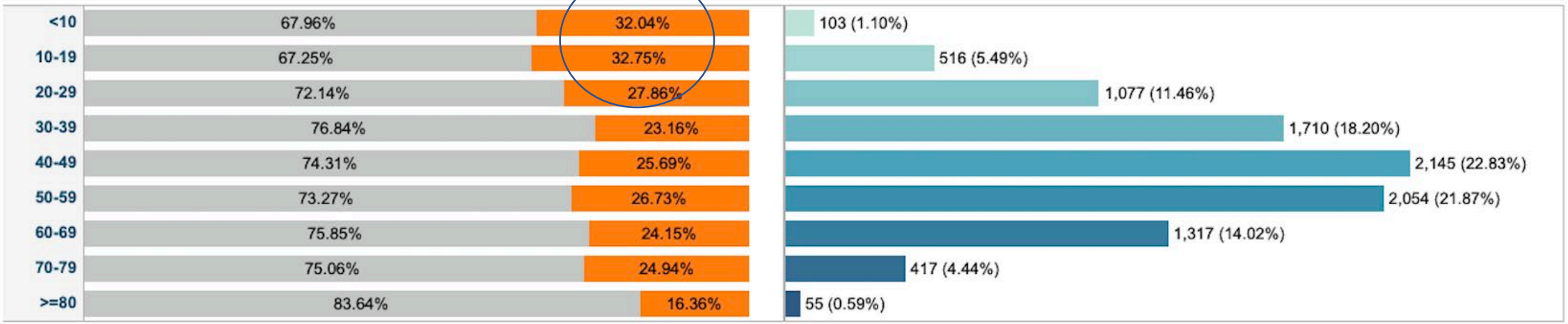
Seropositivity percentage distribution by **survey population** | Number and Percentage of Texas CARES participants stratified by **survey population**

COVID-19 Prior Dx

Seropositivity percentage distribution by **Prior Diagnosis** | Number and percentage of Texas CARES participants self-reported previous diagnosis of COVID-19 (based on antigen test result or by health professional)

Age groups

Seropositivity percentage distribution by **Age groups** | Number and Percentage of Texas CARES enrollees stratified by **Age groups**



Sex

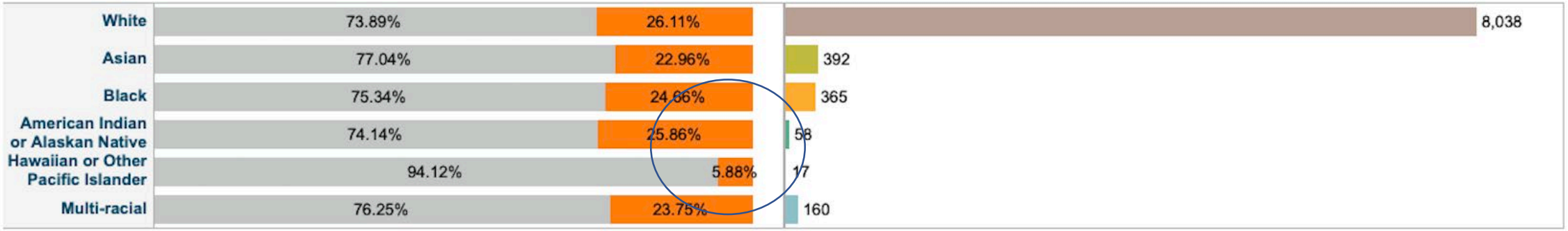
Seropositivity percentage distribution by **Sex** | Number and Percentage of Texas CARES participants stratified by **Sex**

Hispanic Ethnicity

Seropositivity percentage distribution by **Ethnicity** | Number and Percentage of Texas CARES participants stratified by **Ethnicity**

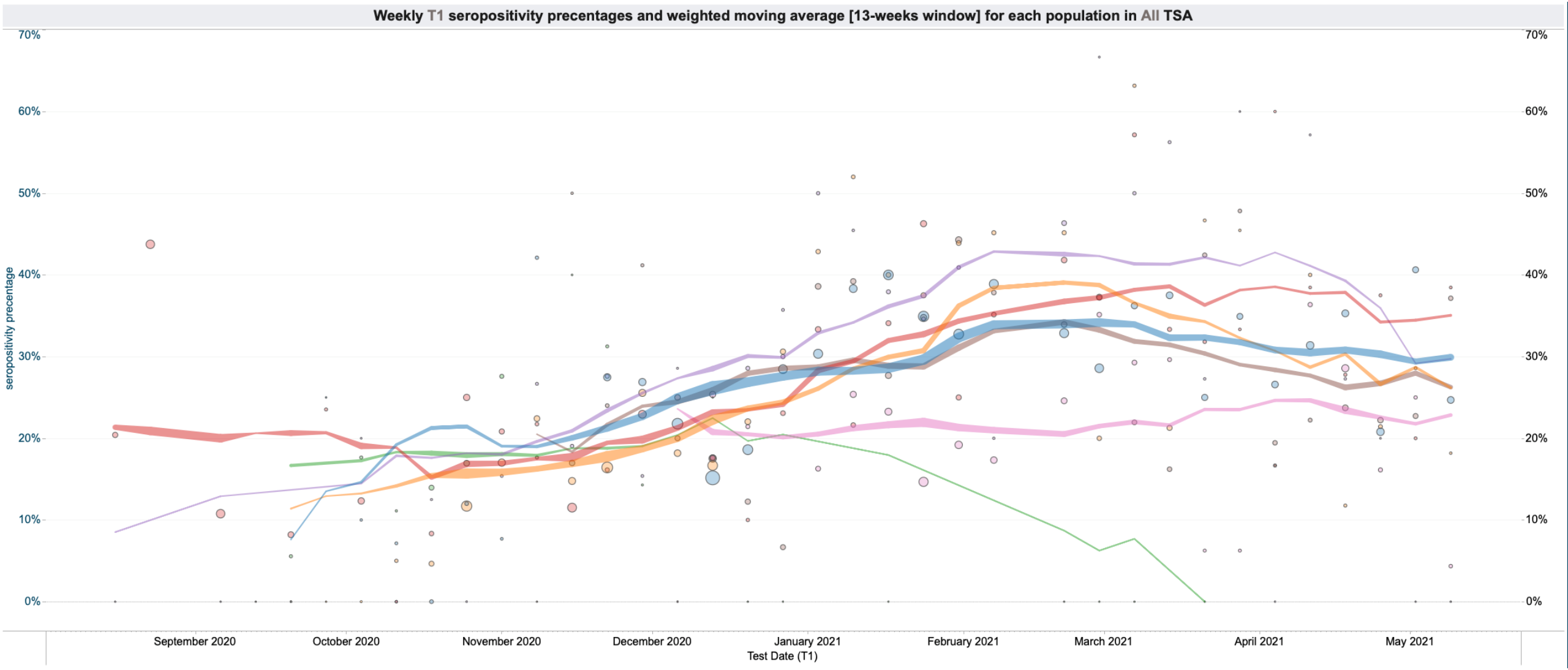
Race

Seropositivity percentage distribution by **Race** | Number and Percentage of Texas CARES participants stratified by **Race**



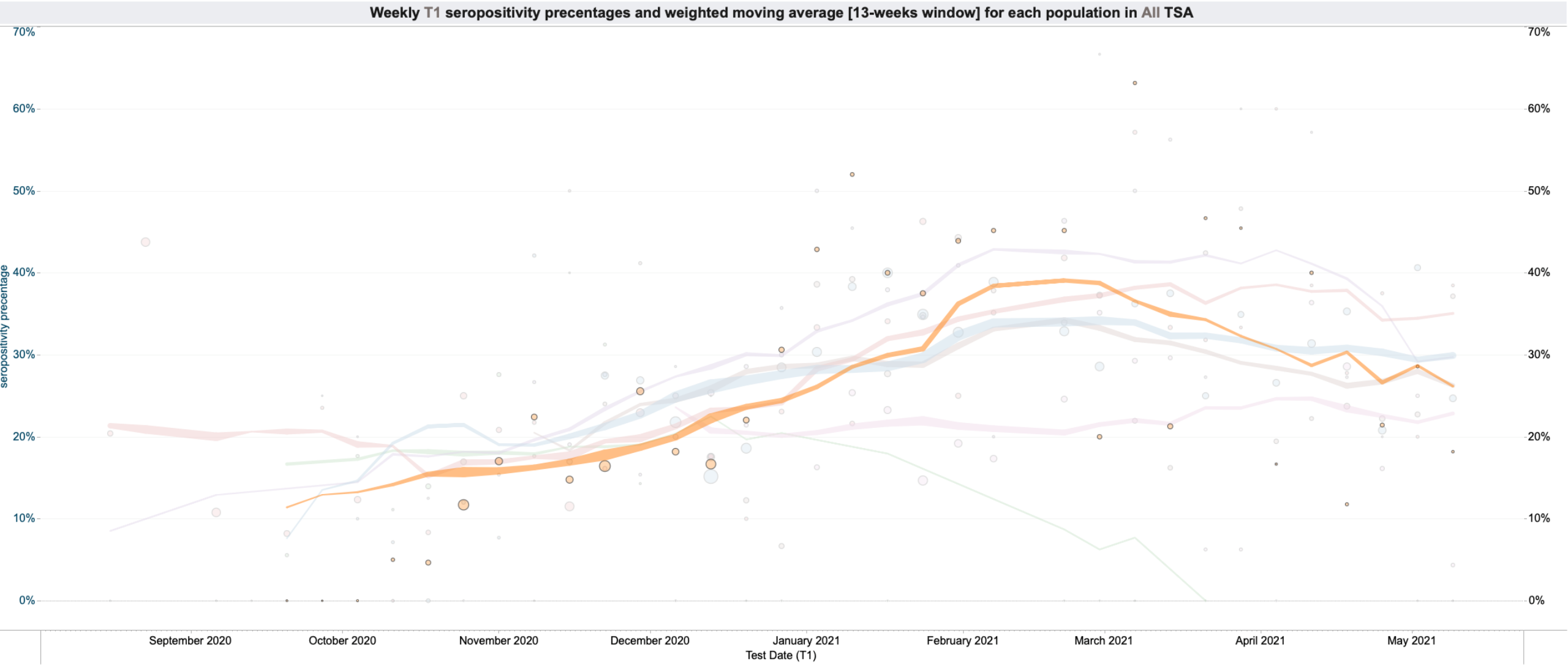
Texas CARES [Core]

Enrollment & Seropositivity over time - each population - per TSA



Texas CARES [Core]

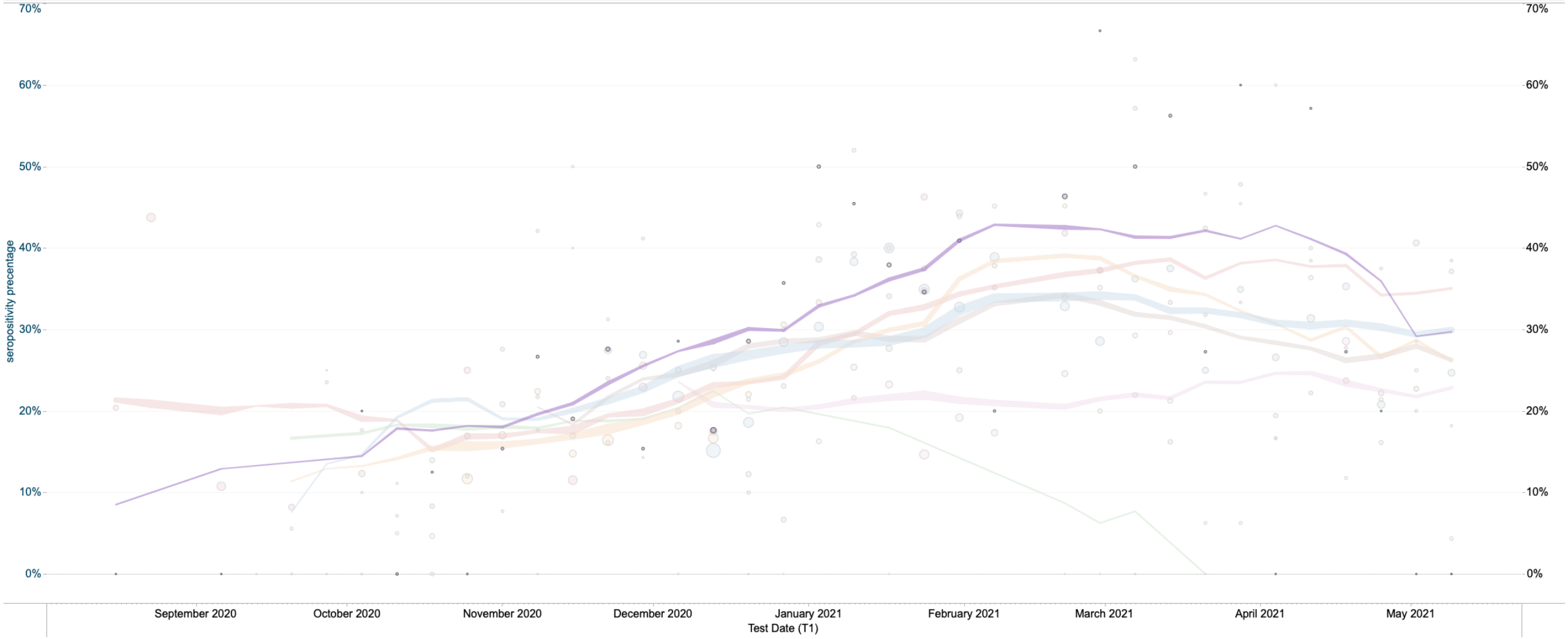
Enrollment & Seropositivity over time - each population - per TSA



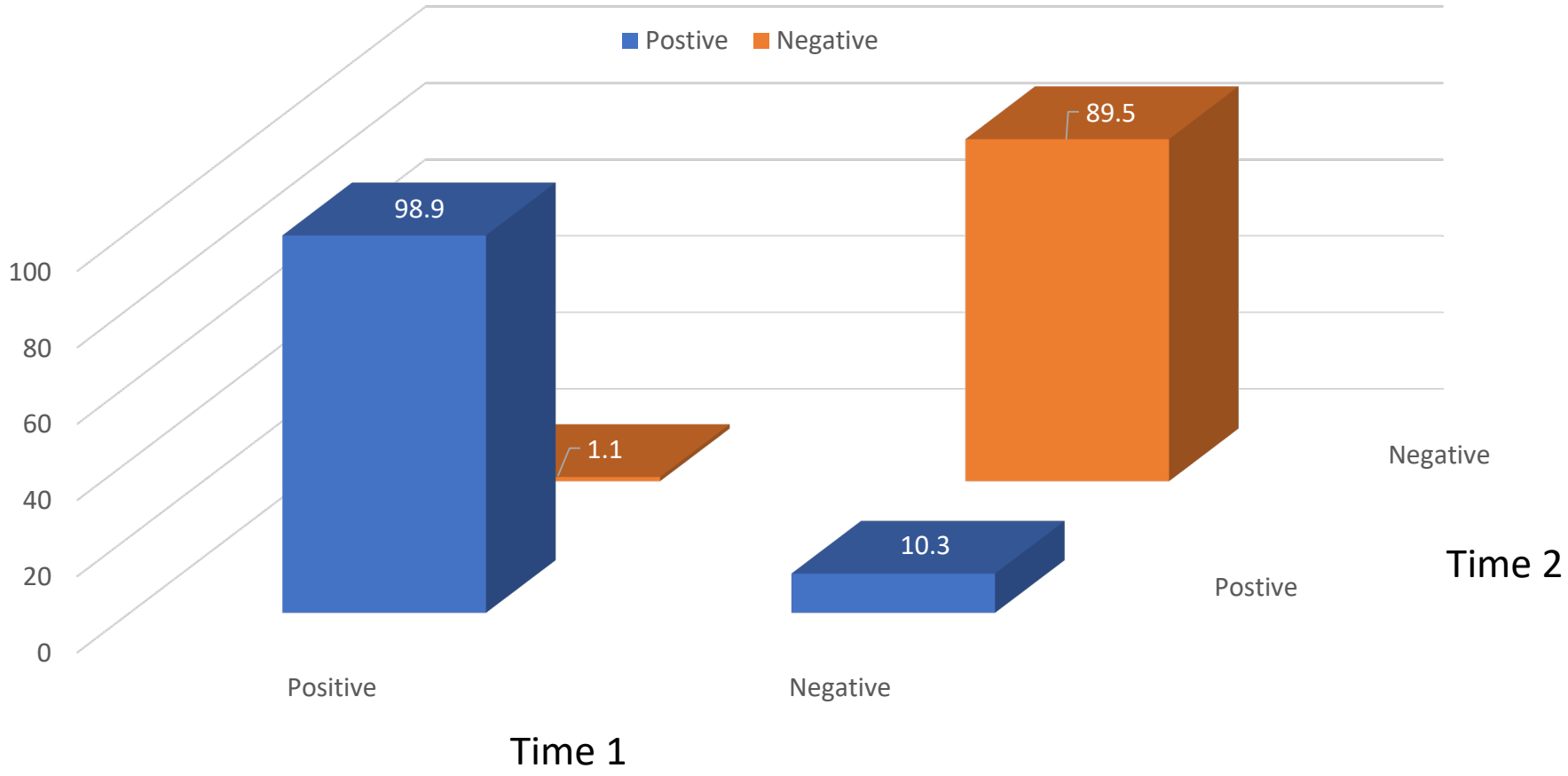
Texas CARES [Core]

Enrollment & Seropositivity over time - each population - per TSA

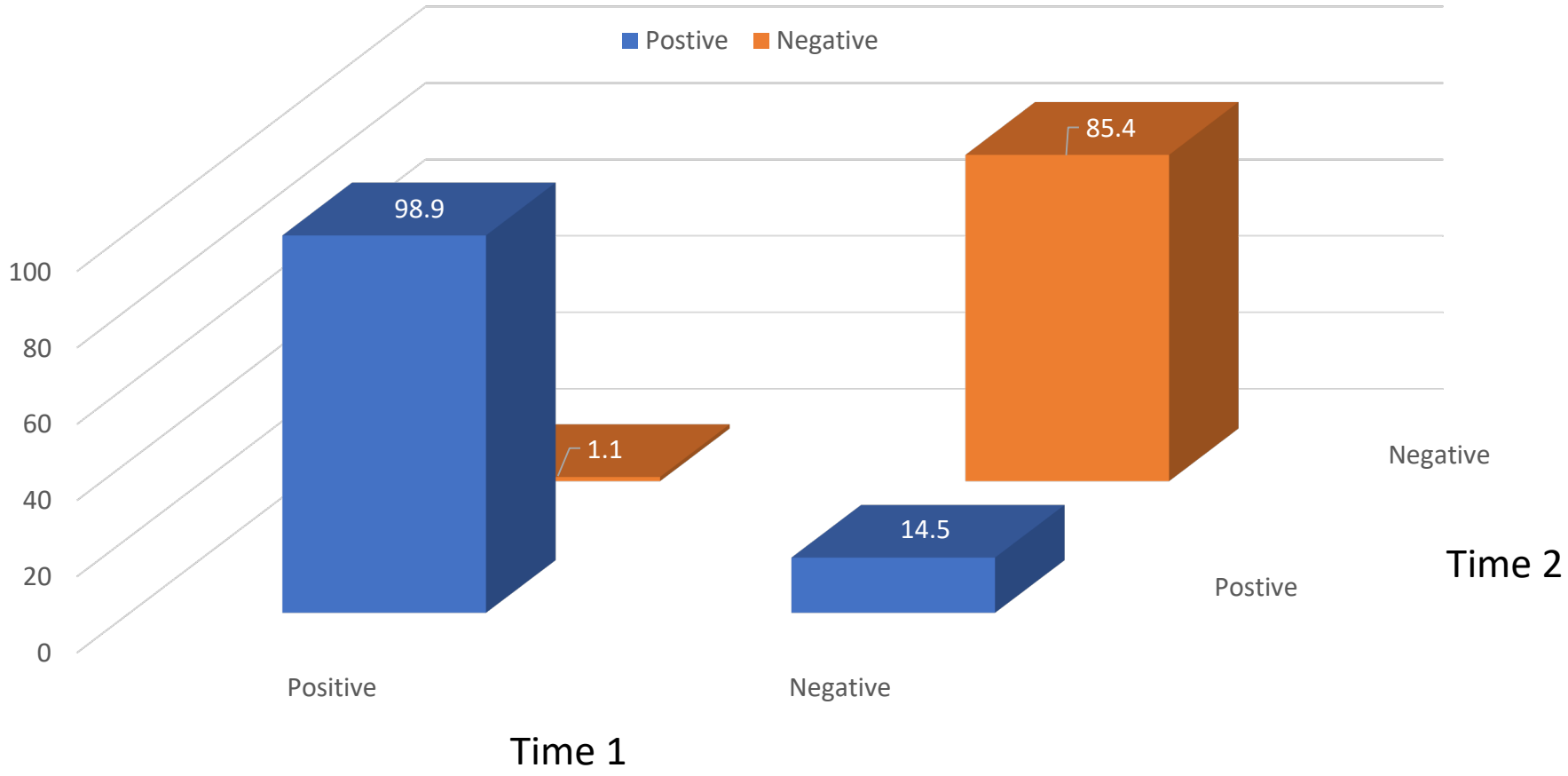
Weekly T1 seropositivity precentages and weighted moving average [13-weeks window] for each population in All TSA



Time 1 – Time 2 Seropositivity – Texas Cares 2020-2021



Time 1 – Time 2 Seropositivity – Texas Cares Education Professionals 2020-2021



COVID-19 Vaccines:

Are they safe for adults and children?

PHASE 2 | PHASE 3 | COMBINED PHASES

APPROVED IN SEVERAL COUNTRIES | EMERGENCY USE IN U.S., ELSEWHERE

Pfizer BIONTECH

VACCINE NAME: Comirnaty (also known as tozinameran or BNT162b2)

EFFICACY: 95%

DOSE: 2 doses, 3 weeks apart

TYPE: Muscle injection

STORAGE: Freezer storage only at −13°F to 5°F (−25°C to −15°C)

PHASE 3

APPROVED IN SWITZERLAND | EMERGENCY USE IN U.S., ELSEWHERE

moderna NIH National Institutes of Health

VACCINE NAME: mRNA-1273

EFFICACY: 94.5%

DOSE: 2 doses, 4 weeks apart

TYPE: Muscle injection

STORAGE: 30 days with refrigeration, 6 months at −4°F (−20°C)

PHASE 3 | EMERGENCY USE IN U.S., ELSEWHERE

Johnson & Johnson Beth Israel Lahey Health Beth Israel Deaconess Medical Center janssen

VACCINE NAME: Ad26.COV2.S

EFFICACY: 72% in United States, 64% in South Africa, 61% in Latin America

DOSE: 1 dose

TYPE: Muscle injection

STORAGE: Up to two years frozen at −4° F (−20° C), and up to three months refrigerated at 36–46° F (2–8° C).

Common side effects/discomfort

Local (arm):

- Pain
- Redness
- Swelling

Generalized (body):

- Fatigue
- Headache
- Muscle ache
- Chills
- Fever
- Nausea

Treatment:

- Apply a cold, humid pack to the arm
- Move your arm
- Acetaminophen

Treatment:

- Drink fluids
- Rest
- Acetaminophen

All of these should resolve in 24-48 hours.

What percentage of people have fever or other responses after receiving the vaccine?

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html

Anaphylaxis

Anaphylaxis reactions have been rarely reported following receipt of COVID-19 vaccines

How to recognize anaphylaxis

Healthcare personnel should consider anaphylaxis when patients present with generalized signs or symptoms such as **hives, serious or life-threatening symptoms** (e.g., hypotension, respiratory distress, or significant swelling of the tongue or lips), or **symptoms that involve more than one body system**.

Respiratory:
- sensation of throat closing
- stridor (high-pitched sound while breathing)
- shortness of breath
- wheeze, cough

Gastrointestinal:
- nausea
- vomiting
- diarrhea
- abdominal pain

Cardiovascular:
- dizziness
- fainting
- tachycardia (abnormally fast heart rate)
- hypotension (abnormally low blood pressure)

Skin/mucosal:
- generalized hives
- itching
- swelling of lips, face, or throat

Neurological:
- agitation
- convulsions
- acute change in mental status
- sense of impending doom (a feeling that something bad is about to happen)

Source: https://www.cdc.gov/vaccines/covid-19/downloads/IntermConsid-Anaphylaxis-COVID19-Vaccines-sites.pdf

Observation period following vaccination

- History of an immediate allergic reaction (any severity) to a vaccine or injectable therapy
- Contraindication to a different type of COVID-19 vaccine
- History of anaphylaxis (due to any cause)

30 minutes

All other persons

15 minutes

Severe Adverse Vaccine Reactions

Severe allergic reactions to vaccine formulation:

- 3-6 per million for mRNA vaccines (Pfizer, Moderna)
- Probably less common in viral vector vaccines (Janssen)
- 1-2 per million for flu and human HPV vaccines

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety.html

Why was the Janssen / J&J Vaccine Paused?

- CDC and FDA recommend that the Janssen / J&J vaccinations be paused for further study – April 13
- Reports of increased risk of an adverse event called Thrombosis with Thrombocytopenia Syndrome (TTS)
  - Thrombosis – blood clots – block venous or arterial vessels
  - Thrombocytopenia – low platelets (<150,000/microliter) – dangerous internal bleeding
- Symptoms started between 6 and 15 days after vaccination

ACIP/CDC Findings:

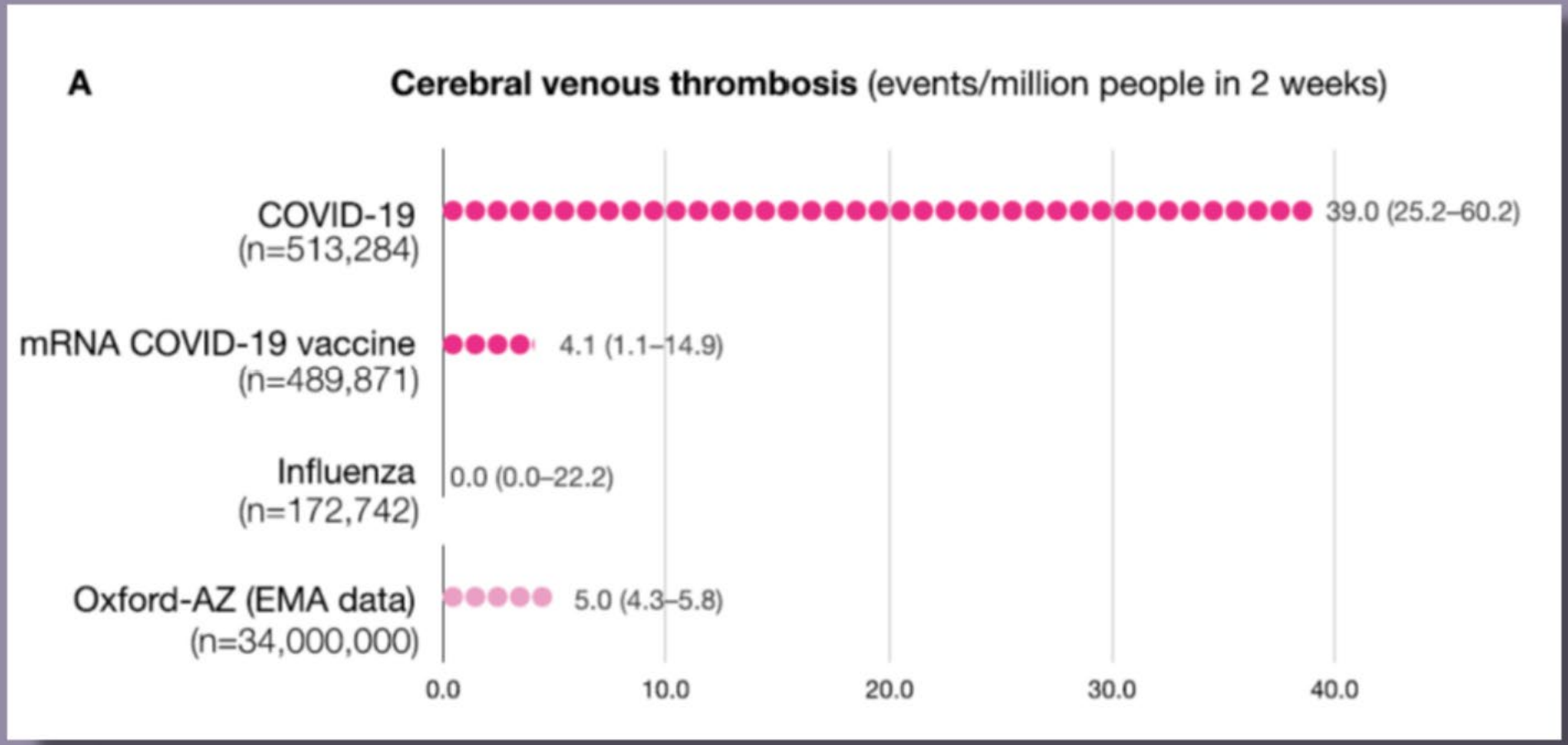
- For all women, it is a “rare event”
- For women $\geq$ 50 and men of all ages, it is even rarer
- The vaccine’s known and potential benefits outweigh its known and potential risks for those recommended to receive it

Therefore…

- The CDC & FDA Resumed the Use of J&J/Janssen Vaccine - April 23
- ACIP Interim Recommendation:
  - "The Janssen COVID-19 vaccine is recommended for persons 18 years of age and older in the U.S. Population under the FDA's Emergency Use Authorization (EUA)"
- The EUA Fact Sheet was Updated to Reflect the Rare Clotting Events
  - Fact Sheet Should Be Provided to All Recipients
- Continue to Report Adverse Reactions to VAERS (Vaccine Adverse Event Reporting System)

Central Venous Sinus Thrombosis:

Comparative Risk Assessment Taquet et al (Oxford), 2021



If I am antibody positive (had COVID-19), should I still take the vaccine?

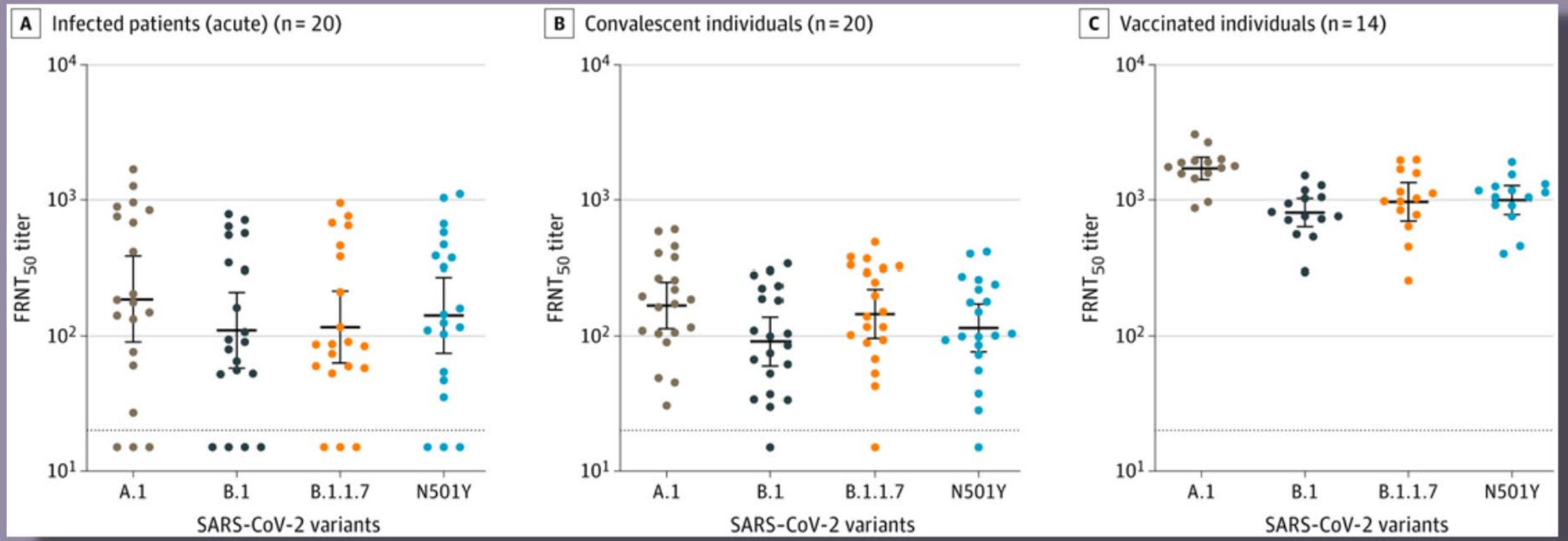
Yes.

Because:

- We do not know how long protection due to natural infection will last
- Reinfection following natural infection, although rare, is possible and may be more severe
- Neutralizing antibody levels generated by the vaccine are much higher than those conferred by natural infection

Neutralizing Antibodies Against SARS-CoV-2 Variants:

Natural Infection vs Vaccination



Viswanadh et al, JAMA, 2021

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PROTECT YOUR FAMILY.
PROTECT YOUR COMMUNITY.

GET TESTED FOR FREE.

PROTÉJASE A SI MISMO.
PROTEJA A SU FAMILIA.
PROTEJA A SU COMUNIDAD.

OBTENGA SU PRUEBA GRATIS HOY.

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