

Texas Coronavirus Antibody Response Survey (TX CARES): Fall 2021 Update

Learn more at:
sph.uth.edu/projects/texascares/

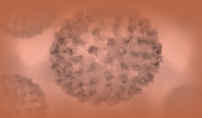


Texas Coronavirus Antibody Response Survey (TX CARES): Fall 2021 Update

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Sarah E. Messiah, Ph.D., MPH



COVID-19: Where are we in Texas?

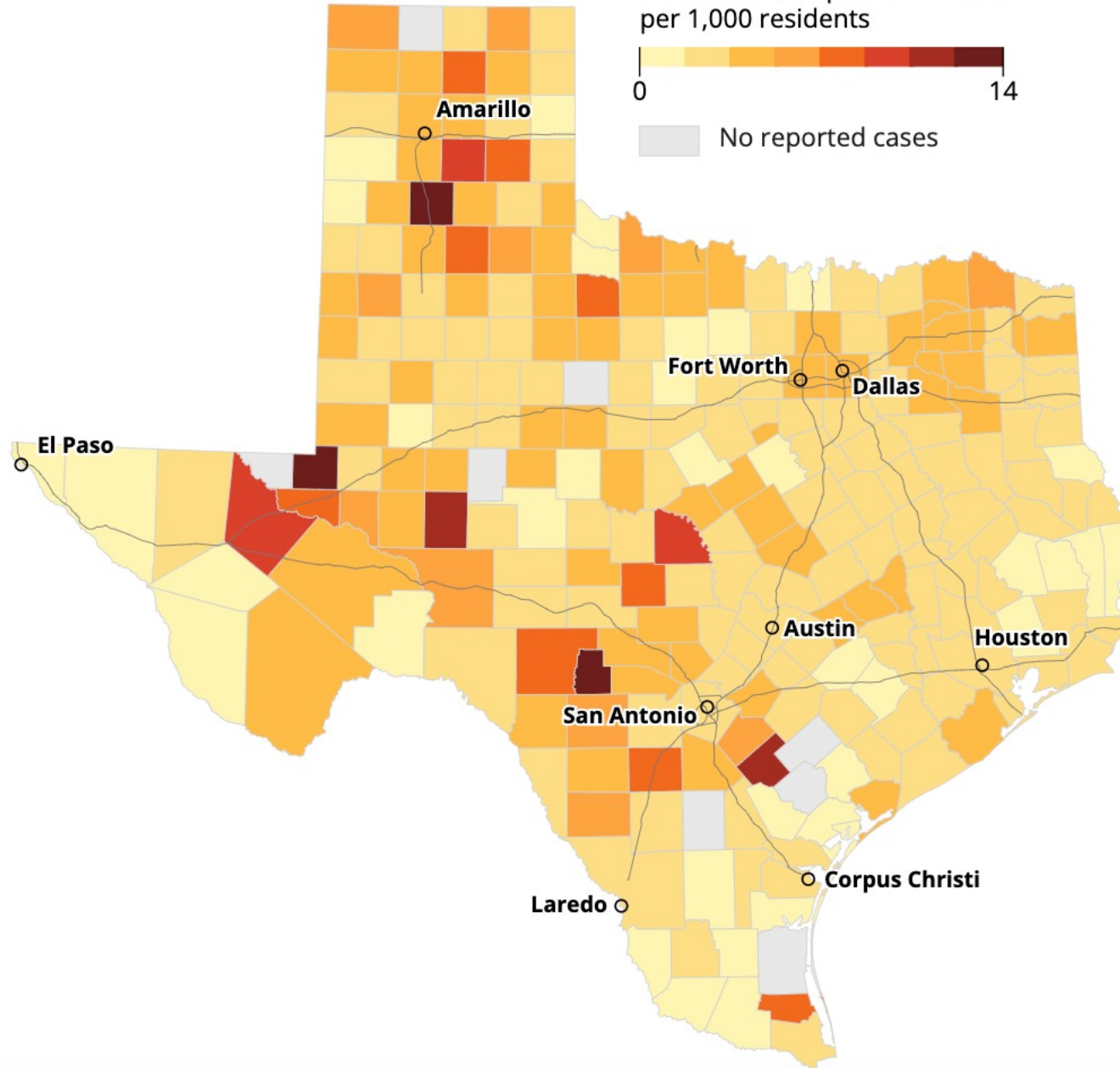


In the last two weeks:

Confirmed and probable cases
per 1,000 residents

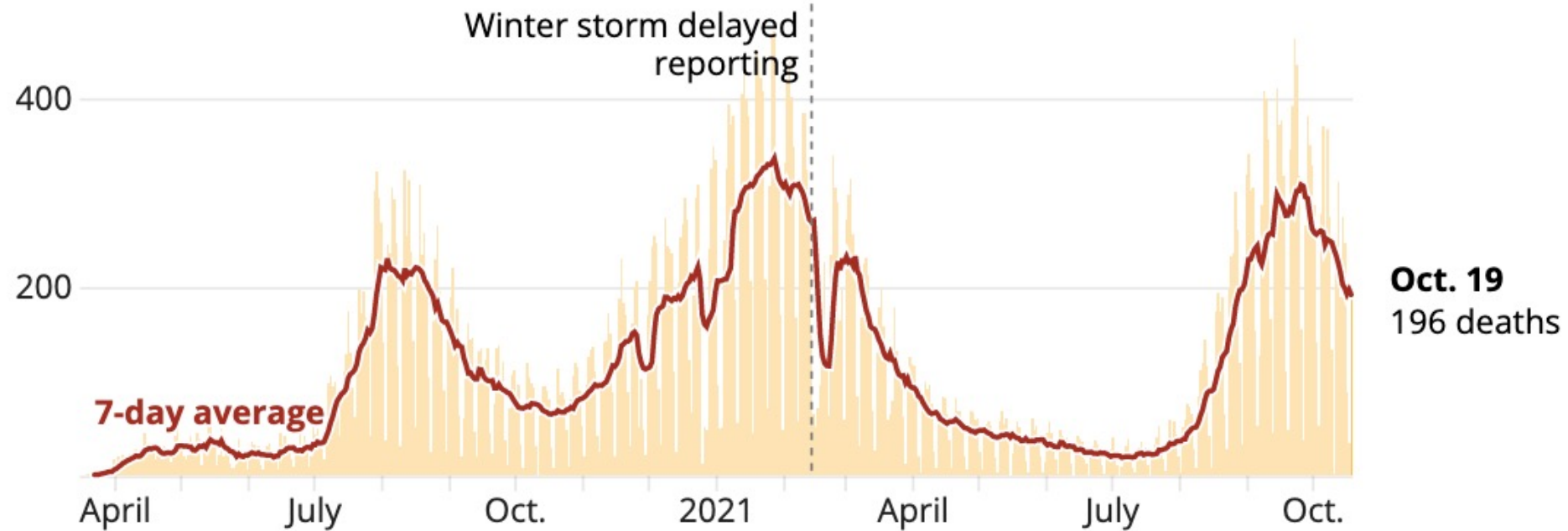


■ No reported cases



New **deaths** from coronavirus reported each day

The average number of deaths reported over the past seven days shows how the situation has changed over time by de-emphasizing daily swings.



Note: On July 27, 2020, the state began reporting deaths based on death certificates that state COVID-19 as the cause of death. On that day, more than 400 previously unreported deaths were added to the total death toll due to the reporting change. [See notes about the data.](#)

Source: Texas Department of State Health Services

Harris

+0
570.9K
confirmed

Houston Area

+0
784.8K
confirmed

Texas

+10
4.2M
confirmed

United States

+1.5K
45.2M
confirmed

AT-A-GLANCE

DAILY

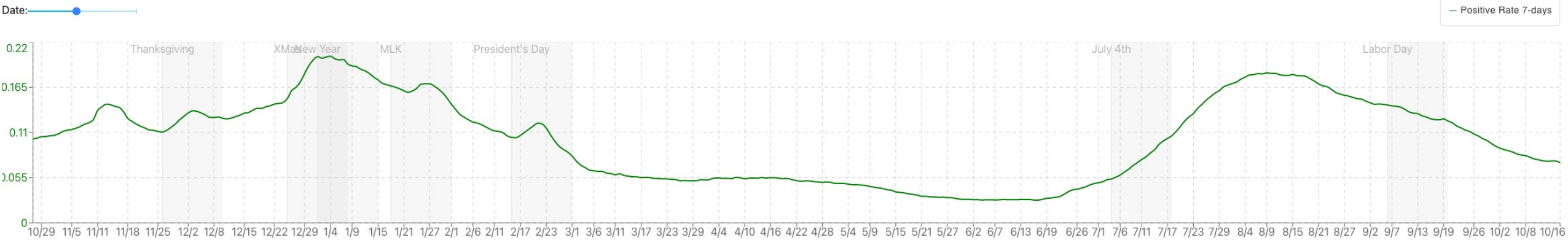
SUB REGIONS

VACCINATION

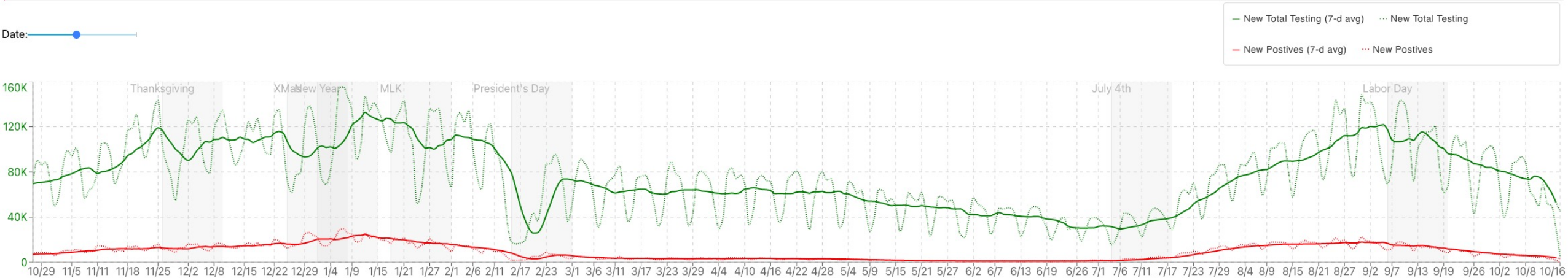
TESTING

HOSPITALIZATION

Texas 7-Day Positivity Rate



Texas Testing Effort



Texas(4188549)

Harris

+0
570.9K
confirmed

Houston Area

+0
784.8K
confirmed

Texas

+10
4.2M
confirmed

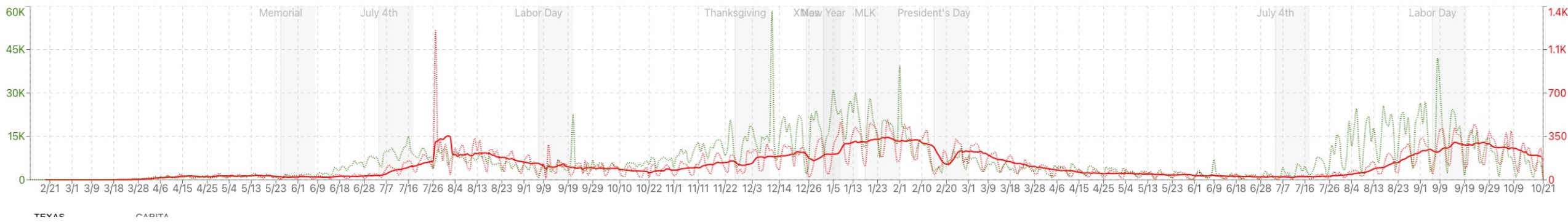
United States

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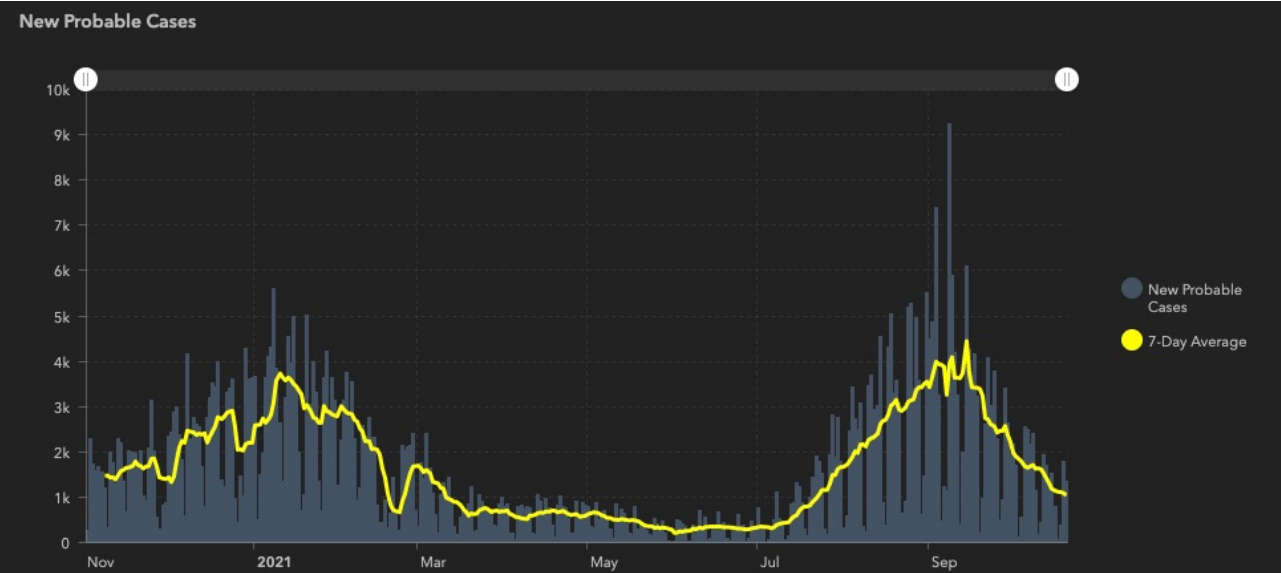
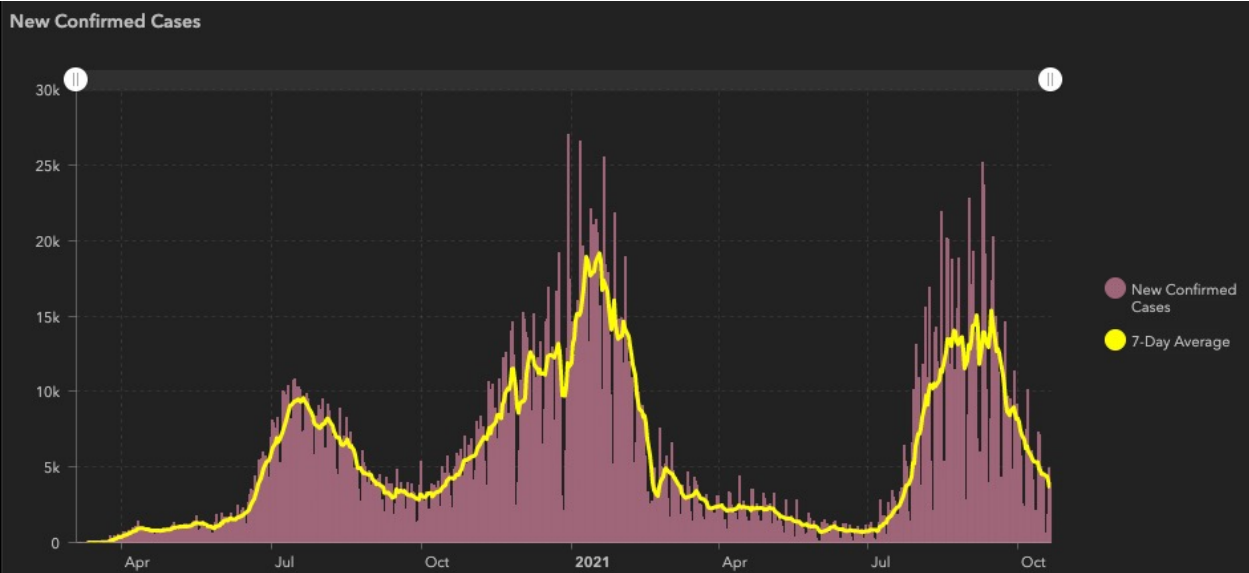
- AT-A-GLANCE
- DAILY**
- SUB REGIONS
- VACCINATION
- TESTING
- HOSPITALIZATION

Date

— Positives (7-d avg) ... Positives - Deaths (7-d avg) ... Deaths



TEXAS CAPITA



New Confirmed Cases

3,987

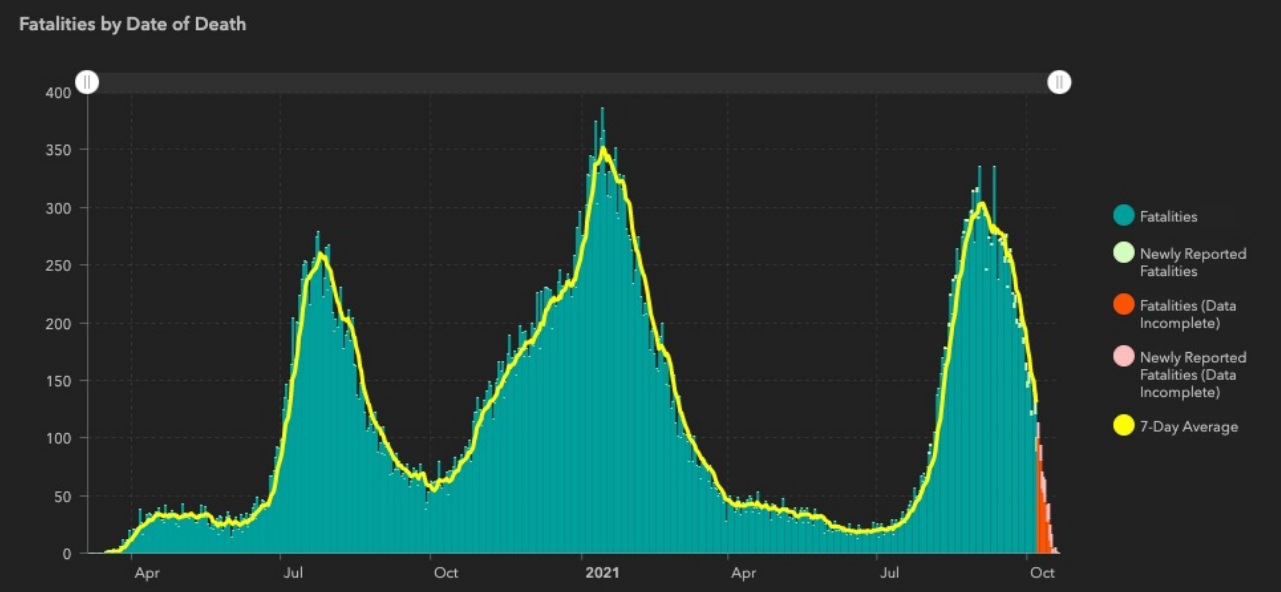
New Probable Cases

1,341

Newly Reported Fatalities

270

TEXAS
 Health and Human Services | Texas Department of State Health Services
 Texas Case Counts
COVID-19
 CORONAVIRUS DISEASE 2019





TEXAS
Health and Human
Services

Texas Department of State
Health Services

COVID-19

CORONAVIRUS DISEASE 2019

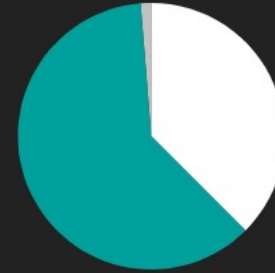
Confirmed Cases

99,989
as of 10/15/2021

This page will be updated every Friday.
Case demographics are based on completed case investigations.
Completed case investigations represent approximately 3.2% of all confirmed cases in the state of Texas.
Case demographics should not be compared to fatality demographics.

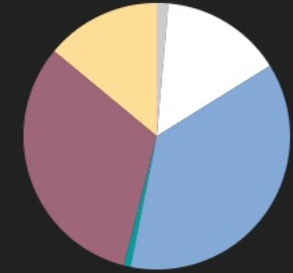
July 16: DSHS is migrating all completed COVID-19 case investigations into a single database that will provide complete demographic data. The case demographics table will not be updated.

Sex



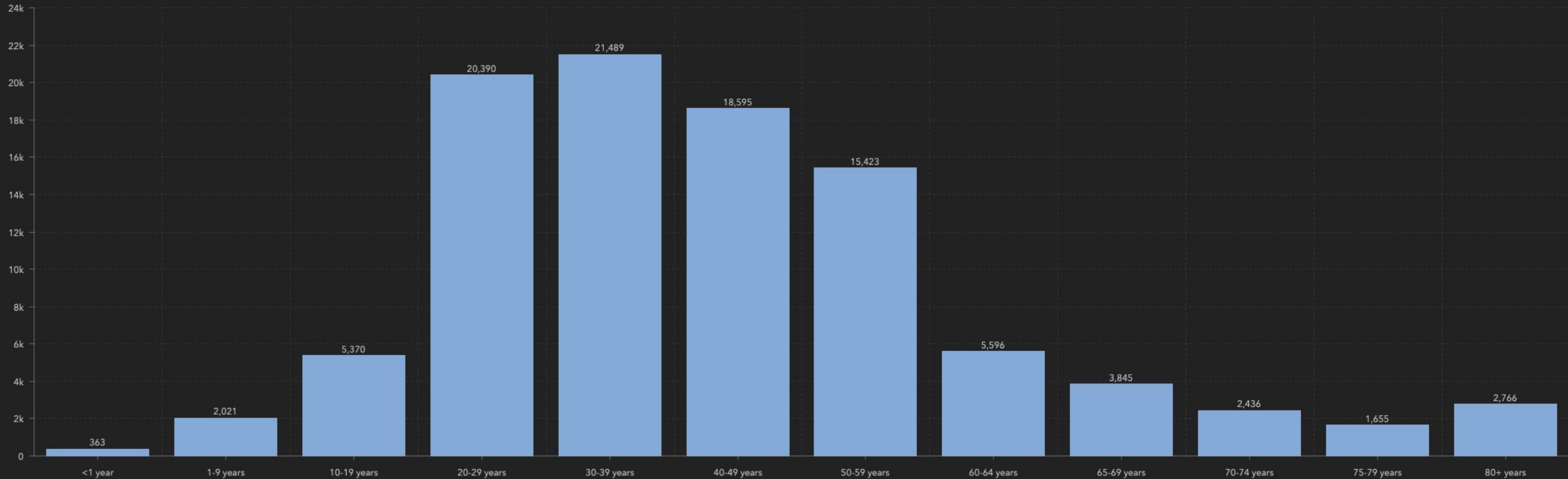
- Female 37.5%
- Male 61.2%
- Unknown 1.3%

Race/Ethnicity



- Asian 1.4%
- Black 14.8%
- Hispanic 37%
- Other 0.8%
- White 32.1%
- Unknown 14%

Age Groupings





COVID-19

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

Community, Work, & School

Health Equity – Promoting Fair Access to Health +

Cleaning, Disinfecting, & Ventilation +

Workplaces & Businesses +

Schools & Child Care -

K-12 Schools

Testing for COVID-19 in Schools +

Responding to COVID-19 Cases in Schools +

Early Childhood Education & Child

UPDATE

Given new evidence on the B.1.617.2 (Delta) variant, CDC has updated the [guidance for fully vaccinated people](#). CDC recommends universal indoor masking for all teachers, staff, students, and visitors to K-12 schools, regardless of vaccination status. Children should return to full-time in-person learning in the fall with layered prevention strategies in place.

Schools and Child Care Programs

Updated Oct. 18, 2021 Languages Print

K-12 Schools and Child Care Guidance

Strategies to reduce the spread of COVID-19 and maintain safe operations in schools in child care programs.

[K-12 Guidance](#)



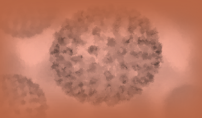
CDC Guidance for COVID-19 Prevention in K-12 Schools

- Students benefit from in-person learning, and safely returning to in-person instruction in the fall 2021 is a priority.
- Vaccination is the leading public health prevention strategy to end the COVID-19 pandemic. Promoting vaccination can help schools safely return to in-person learning as well as extracurricular activities and sports.
- Due to the circulating and highly contagious Delta variant, CDC recommends universal indoor masking by all students (age 2 and older), staff, teachers, and visitors to K-12 schools, regardless of vaccination status.
- In addition to universal indoor masking, CDC recommends schools maintain at least 3 feet of physical distance between students within classrooms to reduce transmission risk. When it is not possible to maintain a physical distance of at least 3 feet, such as when schools cannot fully re-open while maintaining these distances, it is especially important to layer multiple other prevention strategies, such as screening testing.

CDC Guidance for COVID-19 Prevention in K-12 Schools

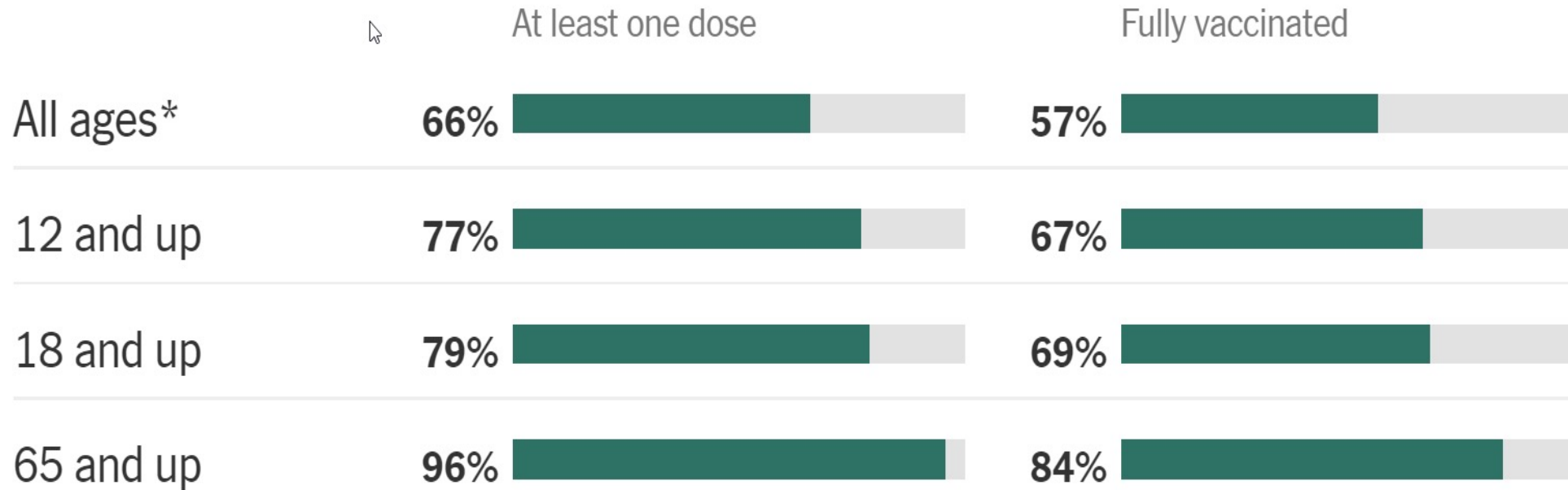
- Screening testing, ventilation, handwashing and respiratory etiquette, staying home when sick and getting tested, contact tracing in combination with quarantine and isolation, and cleaning and disinfection are also important layers of prevention to keep schools safe.
- Students, teachers, and staff should stay home when they have signs of any infectious illness and be referred to their healthcare provider for testing and care.
- Many schools serve children under the age of 12 who are not eligible for vaccination at this time. Therefore, this guidance emphasizes implementing layered prevention strategies (e.g., using multiple prevention strategies together consistently) to protect students, teachers, staff, visitors, and other members of their households and support in-person learning.
- Localities should monitor community transmission, vaccination coverage, screening testing, and occurrence of outbreaks to guide decisions on the level of layered prevention strategies (e.g., physical distancing, screening testing).

COVID-19: What's the vaccine situation?



COVID-19: What's the vaccine situation?

United States vaccinations



*Includes those not yet eligible for the vaccine.

Sources: Centers for Disease Control and Prevention, U.S. Census Bureau | Note: Figures include the U.S. territories and three countries with [special agreements](#).

PHASE 2 PHASE 3 COMBINED PHASES

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



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



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



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).



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EFFICACY: 95%

DOSE: 2 doses, 3 weeks apart

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

- **EUA: ages 12 and up**
- **Fully approved August 2021 (ages 16 and up)**
- **Third dose approved August 2021:**
 - Persons with underlying immunocompromise/organ transplant
- **Booster approved September 2021 (FDA/CDC):**
 - Ages 65 and older
 - Ages 18 to 64 at high risk of severe COVID-19
 - Occupations at risk
- **Ages 5 to 11: pending review by FDA**

PHASE 3

APPROVED IN SWITZERLAND

EMERGENCY USE IN U.S., ELSEWHERE

moderna



National Institutes of Health
Turning Discovery Into Health

VACCINE NAME: mRNA-1273

EFFICACY: 94.5%

DOSE: 2 doses, 4 weeks apart





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- EUA: ages 18 and up
- Pending full approval
- Third dose authorized August 2021:
 - Persons with underlying immunocompromise/organ transplant
- Booster authorized by FDA October 2021 (CDC recommendation pending):
 - Ages 65 and older
 - Ages 18 to 64 at high risk of severe COVID-19
 - Occupations at risk

- EUA: ages 18 and up
- Booster authorized by FDA October 2021 (CDC recommendation pending):
 - Ages 18 and older
- Can we mix and match vaccines?.....FDA says "yes".

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COVID-19 Vaccine for *Ages 5 -11 years*

1. The U.S. Food and Drug Administration (FDA)'s Vaccines and Related Biological Products advisory committee is scheduled to meet on Tuesday, October 26, 2021, to discuss the Pfizer COVID-19 vaccine 5-11 years of age.
2. The FDA will need to issue a formal authorization following this meeting. **Date unknown.**
3. The CDC's Advisory Committee on Immunization Practices (ACIP) will meet to discuss the clinical recommendations.
 - ACIP is currently scheduled to meet on November 2nd & 3rd. However, this can occur earlier depending on step 2.
4. Administration can only begin once ACIP has issued the clinical recommendations which has been signed by the CDC Director.
5. **Lastly, DSHS will issue a communication when providers can begin vaccine administration.**

Common side effects/discomfort from COVID-19 vaccines

- **Local (arm):**

- Pain
- Redness
- Swelling

- **Generalized (body):**

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

- **Treatment:**

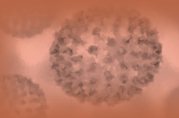
- Apply cold, humid pack to the arm
- Move your arm
- Acetaminophen

- **Treatment:**

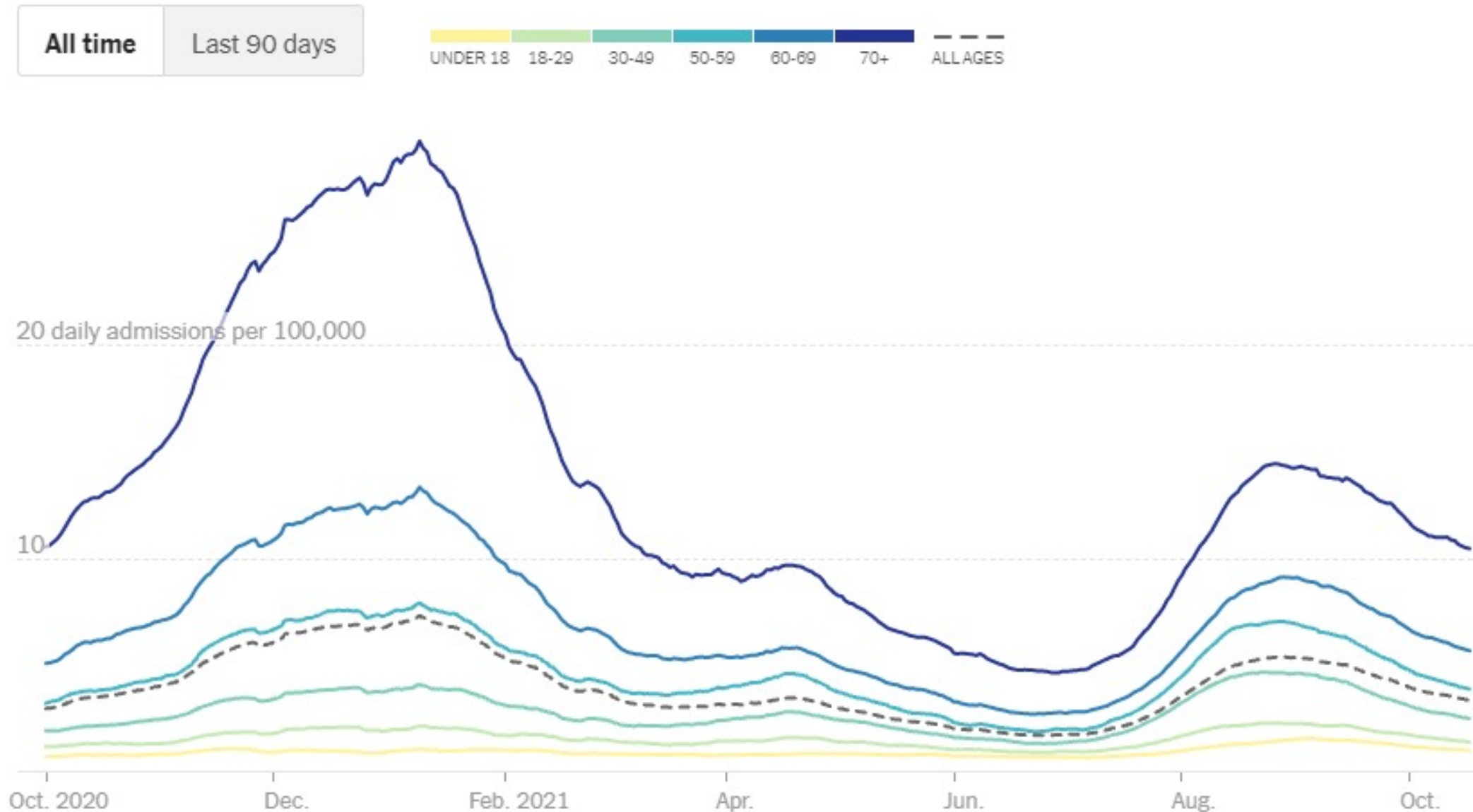
- Drink fluids
- Rest
- Acetaminophen

All of these should resolve in 24-48 hours

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



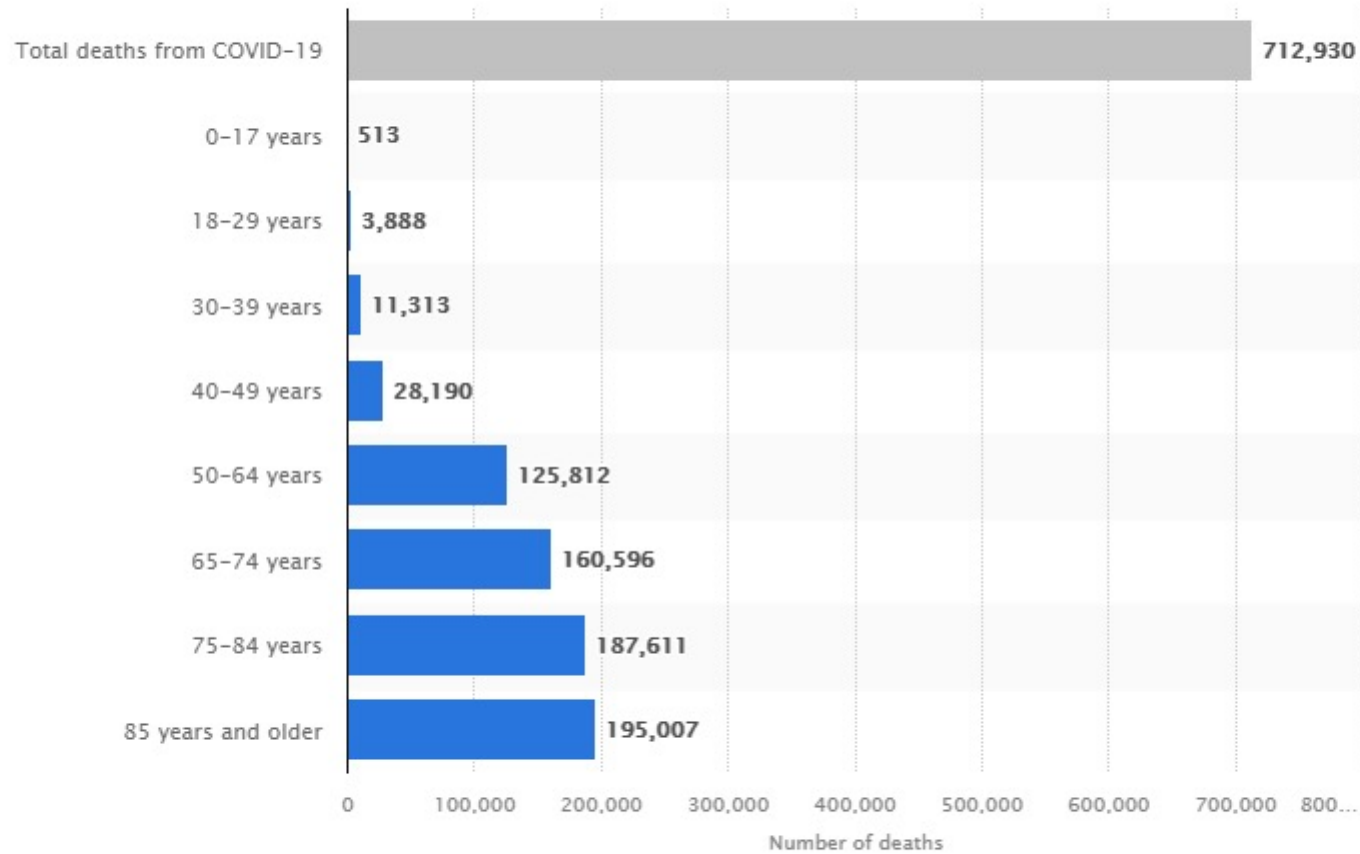
COVID-19 hospitalizations by age group



[About this data](#)

NY Times, 10/18/21

Number of coronavirus disease 2019 (COVID-19) deaths in the U.S. as of October 13, 2021, by age*



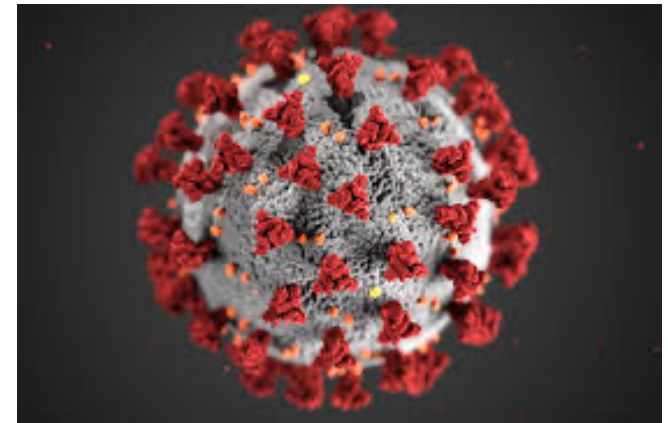
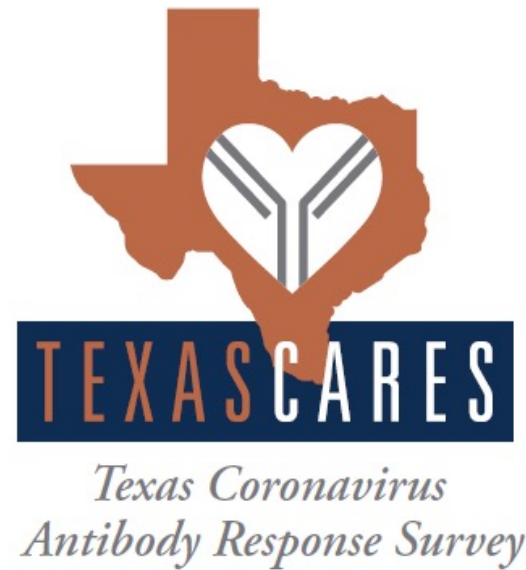
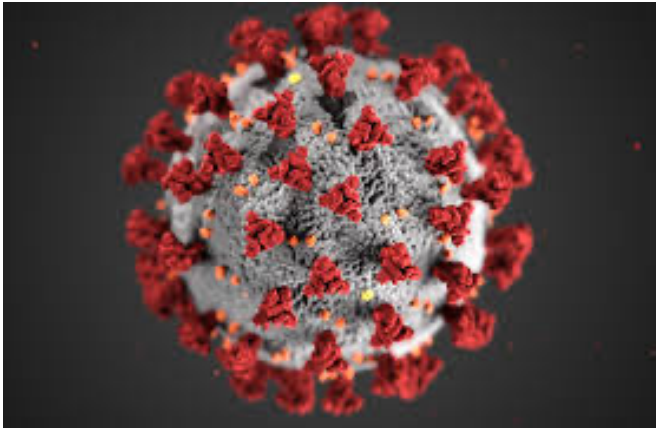
CHILDREN AND ADOLESCENTS:

Why vaccinate if severe illness and death are low in these groups?

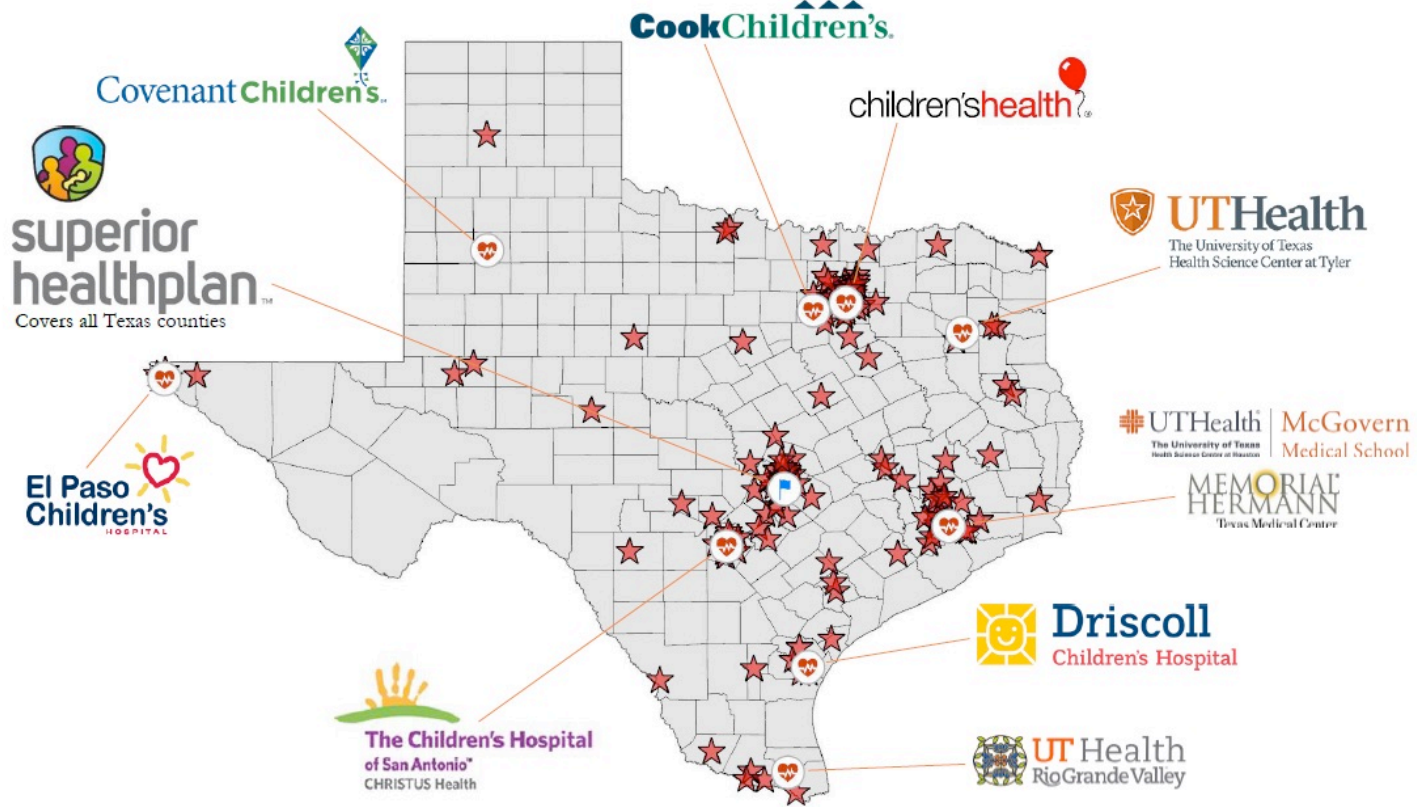
- Transmission to others can still occur: implications for older family members
- Immunity from natural infection is lower than with vaccination, regardless of antibody status
- Decreasing the likelihood of complications and serious adverse outcomes:
 - Getting any COVID-19 infection: 4.5 times less likely if fully vaccinated
 - Hospitalization: 10 times less likely if fully vaccinated
 - Death: 11 times less likely if fully vaccinated
 - Multisystem inflammatory syndrome (MIS) – does not occur with vaccine
 - Long-haul COVID-19 (aka Post-acute COVID-19 Syndrome) - does not occur with vaccine
 - Myocarditis/pericarditis: 2-6 cases/100,000 vaccinated persons versus nearly 30% among hospitalized COVID-19 patients. Mostly affects young males in their teens.
- Adds to group immunity

Sources: CDC, 09/17/21; Wiberg et al, 2021; Simone et al, 2021.

Epidemiology of SARS-CoV-2 Serostatus in the Texas Pediatric Population



Recruitment Partners



	<h2>Texas CARES Pediatric Population</h2>	
	Children's Hospital Association of Texas Member	Managed Care Organization
Clinical Pathology Lab		

Recruitment Strategies

Study Flyers and Posters in Pediatric Clinics, Social Media Campaign

Help Texas fight COVID-19

ENROLL YOUR CHILD IN TEXAS CARES

School-aged children (5-17 years) who have tested positive, negative, or have never been tested for COVID-19 are welcome to participate. Up to two people per household are eligible. For more information visit: <https://sph.uth.edu/landing/texascares/>

Let's get back to this!

Scan the code and sign up today!

Open the camera on your smart phone. Aim your camera at the code. Tap the Notification when it appears.



VOLUNTARIO PARA LA ENCUESTA TEXAS CARES

Este estudio nos ayudará a comprender mejor la respuesta de los anticuerpos humanos a COVID-19.



ESCANEE EL CÓDIGO Y REGÍSTRESE HOY MISMO

Abra la cámara de su teléfono inteligente. Apunte su cámara al código. Toque la notificación cuando aparezca. O visite go.uth.edu/bxCARES.



PARA MÁS INFORMACIÓN VISITE: SPH.UTH.EDU/LANDING/TEXASCARES



KNOW YOUR ANTIBODY STATUS

FREE COVID-19 ANTIBODY TESTING
TexasCARESproject.org



KNOWLEDGE IS A SUPERPOWER

FREE COVID-19 ANTIBODY TESTING
TexasCARESproject.org

Demographics and Clinical Characteristics - Children 5-19

	Positive (N=1439)	Negative (N=2506)
Age Group (years)		
10-14	576 (40.2%)	1010 (40.6%)
15-19	548 (38.2%)	908 (36.5%)
5-9	310 (21.6%)	568 (22.8%)
Missing	5	20
Age (years)		
Mean (SD)	12.9 (3.8)	12.8 (4.1)
Median (Q1, Q3)	13.0 (10.0, 16.0)	13.0 (10.0, 16.0)
Range	3.0 - 20.0	3.0 - 43.0
Missing	4	8
Gender		
Female	734 (51.0%)	1254 (50.1%)
Male	703 (48.9%)	1249 (49.9%)
None of these describe me	1 (0.1%)	0 (0.0%)
Missing	1	3
Race		
American Indian or Alaskan Native	8 (0.6%)	10 (0.4%)
Asian	50 (3.6%)	179 (7.4%)
Black	31 (2.2%)	64 (2.6%)
Hawaiian or Other Pacific Islander	2 (0.1%)	4 (0.2%)
Multi-racial	57 (4.0%)	136 (5.6%)
White	1260 (89.5%)	2034 (83.8%)
Missing	31	79
Hispanic Ethnicity		
Hispanic	309 (22.0%)	565 (23.1%)
Non-Hispanic	1098 (78.0%)	1877 (76.9%)
Missing	32	64

Total N= 3,945

Major Finding #1: Higher Seroprevalence in Pediatric Population vs Adult Populations

Texas CARES [Core] Populations

Texas Workforce



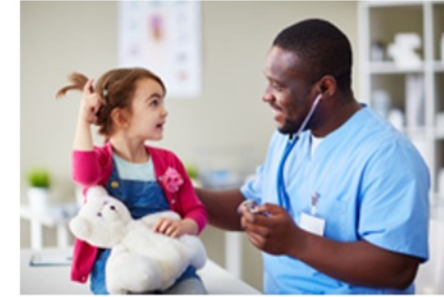
K-12 Educators & Staff



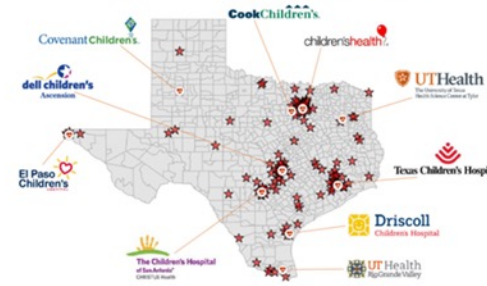
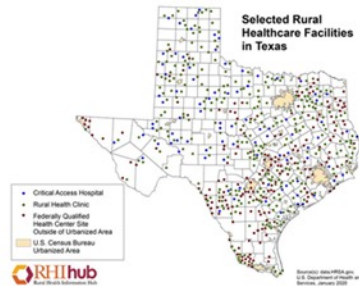
Community Clinics



School-age Children



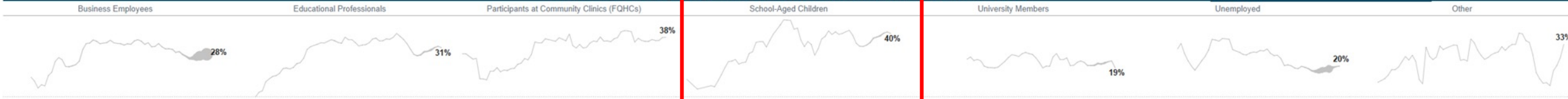
University Staff & Students



Survey populations - Current enrollment

Business Employees	Educational Professionals	Participants at Community Clinics (FQHCs)	School-Aged Children	University Members	Unemployed	Other
45,481	6,111	2,027	3,463	5,814	25,459	255

5-weeks weighted moving average of seropositivity for each population type - (Roche Total Ab- N test)



	Pre-Delta		Delta	
	Positive	Negative	Positive	Negative
Age				
Overall Sample	226 (32.9%)	460 (67.1%)	1434 (36.6%)	2486 (63.4%)
5-to-9 year olds	37 (16.4%)	76 (16.5%)	310 (21.6%)	568 (22.8%)
10-to-14 year olds	67 (29.6%)	160 (34.8%)	576 (40.2%)	1010 (40.6%)
15-to-19 year olds	122 (54.0%)	224 (48.7%)	548 (38.2%)	908 (36.5%)
Symptom Status				
Symptomatic	99 (43.8%)	138 (30.0%)	684 (49.7%)	714 (30.0%)
Asymptomatic	118 (52.2%)	289 (62.8%)	693 (50.3%)	1668 (70.0%)
Specific Symptom				
Headache	62 (27.4%)	78 (17.0%)	391 (28.4%)	373 (15.7%)
Fatigue	54 (23.9%)	64 (13.9%)	327 (23.7%)	276 (11.6%)
Congestion or runny nose	51 (22.6%)	84 (18.3%)	395 (28.7%)	504 (21.2%)
Fever or chills	49 (21.7%)	55 (12.0%)	327 (23.7%)	269 (11.3%)
Sore throat	47 (20.8%)	69 (15.0%)	299 (21.7%)	372 (15.6%)
Cough	48 (21.2%)	71 (15.4%)	327 (23.7%)	373 (15.7%)
New loss of taste or smell	40 (17.7%)	11 (2.4%)	220 (16.0%)	32 (1.3%)
Muscle or body aches	41 (18.1%)	40 (8.7%)	219 (15.9%)	197 (8.3%)
Shortness of breath or difficulty breathing	24 (10.6%)	28 (6.1%)	81 (5.9%)	85 (3.6%)
Diarrhea	16 (7.1%)	25 (5.4%)	89 (6.5%)	108 (4.5%)
Nausea or vomiting	15 (6.6%)	24 (5.2%)	85 (6.2%)	118 (5.0%)

Major Finding #2:

- ❑ Majority of pediatric participants with + serostatus reported **no** symptoms
- ❑ Delta variant produces **more** symptoms
- ❑ Frequency of specific symptoms changed slightly

Relative Risk of SARS-CoV-2 Seropositivity (Pre-Delta and Delta) by Age

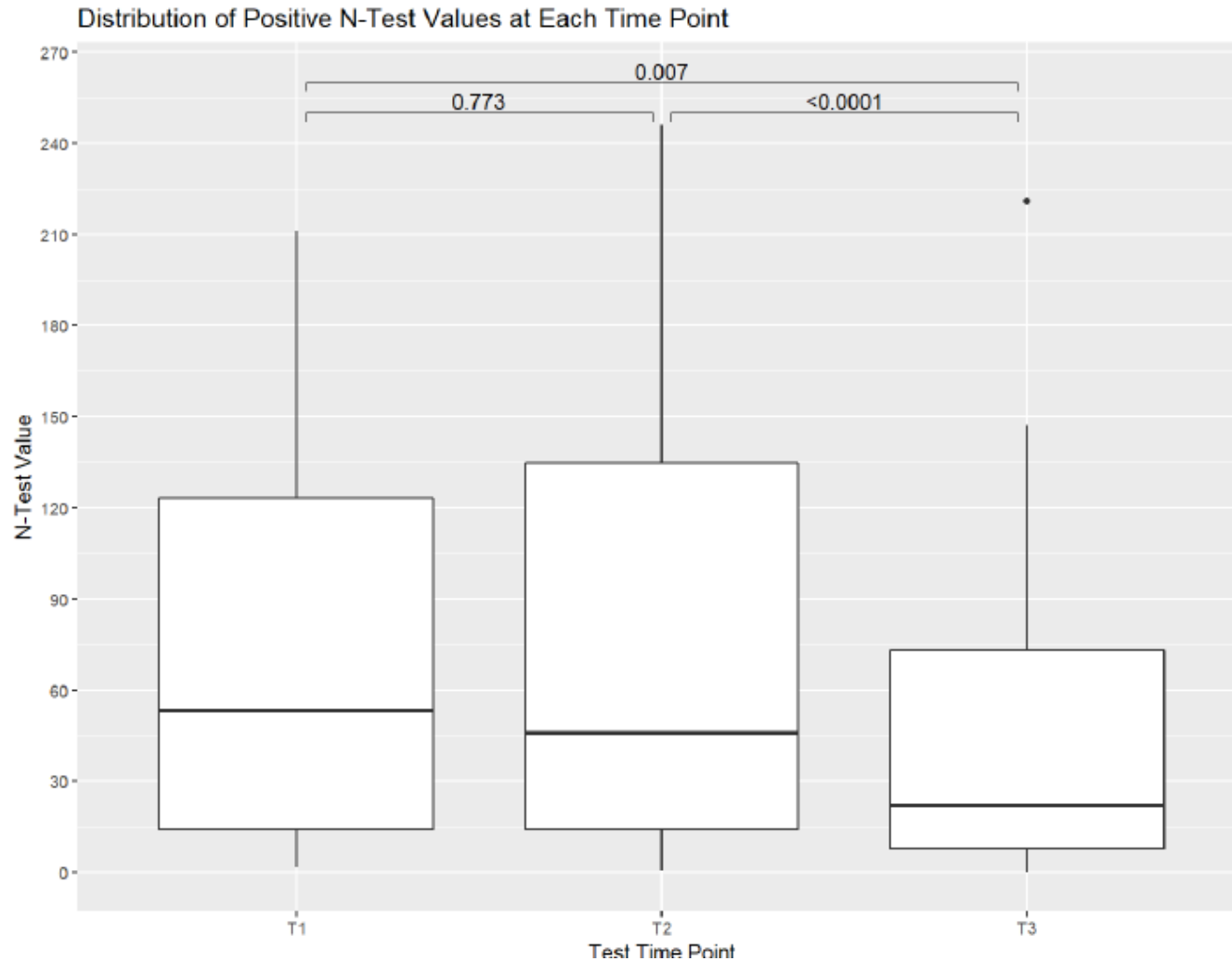
Age group, years	SARS-CoV-2 serology test result		Relative Risk (95% CI)	P value ^a
	Positive N (%)	Negative N (%)		
Pre-Delta				
5-9, (n=113)	37 (32.7%)	76 (67.3%)	1.30 (0.94 – 1.80)	0.114
10-14 (n=227)	67 (29.5%)	160 (70.5%)	1.17 (0.92 – 1.49)	0.202
15-19 (n=346)	122 (35.3%)	224 (64.7%)	1.40 (1.17 - 1.68)	<0.001
20+ (n=9911)	2498 (25.2%)	7413 (74.8%)	REF	
Delta				
5-9, (n=723)	254 (35.1%)	469 (64.9%)	1.16 (1.05 – 1.28)	0.004
10-14 (n=1299)	484 (37.3%)	815 (62.7%)	1.22 (1.14 – 1.32)	<0.001
15-19 (n=1075)	412 (38.3%)	663 (61.7%)	1.24 (1.15 - 1.34)	<0.001
20+ (n=72657)	16558 (22.8%)	56099 (77.2%)	REF	

^aT-test

Major Finding #3:

- ❑ Older teens were 40% more likely to be sero+ pre-Delta vs. adults
- ❑ ALL pediatric age groups were significantly more likely to be sero+ during Delta vs. adults
- ❑ No differences by age, race/ethnicity for either pre-Delta or Delta

Antibody Durability Due to Natural Infection

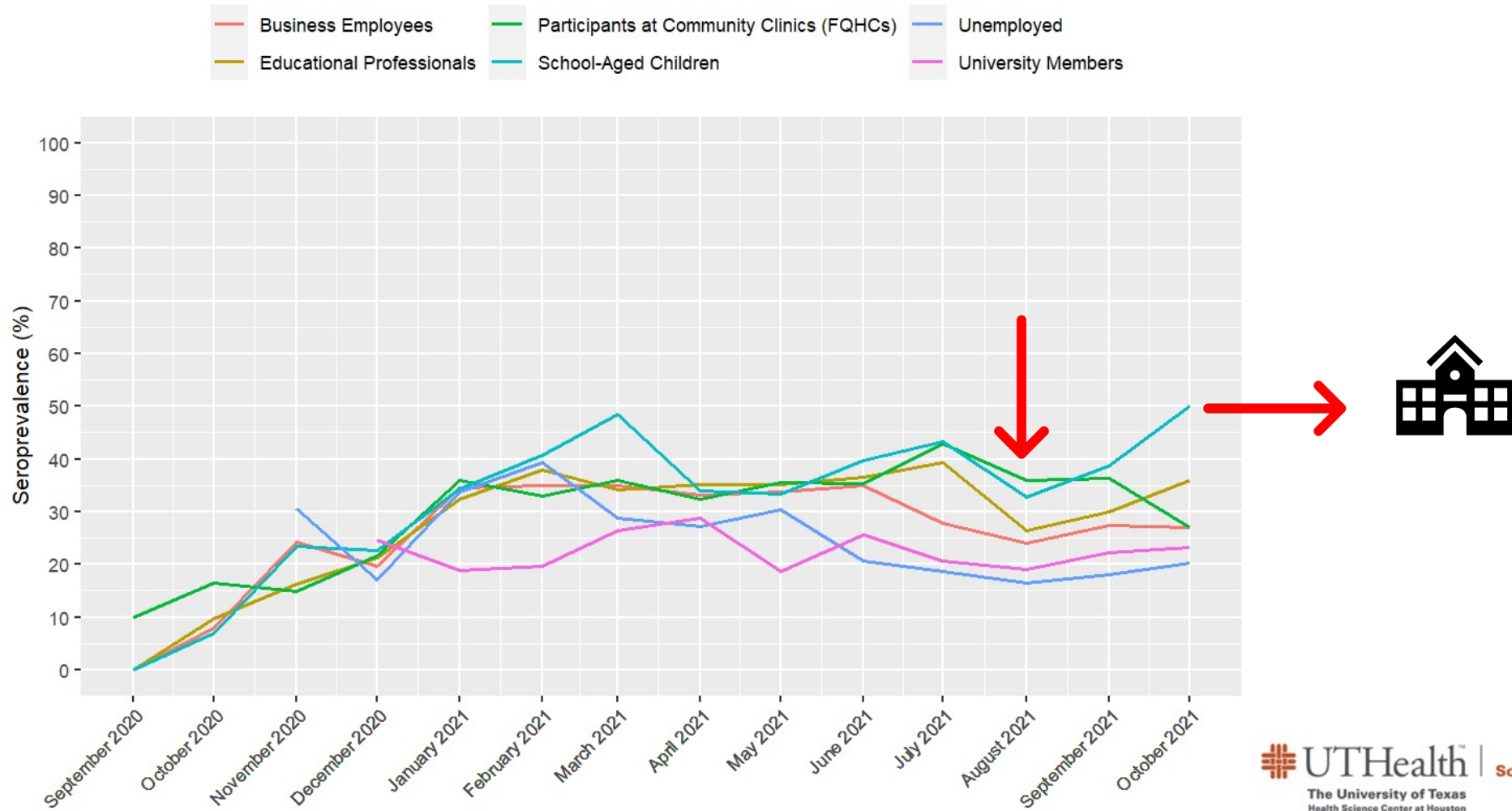


Major Finding #4:

- 98% of participants had antibodies 6.7 months later
- No difference by symptom status or severity
- No difference by age, sex, body mass index

Pediatric Versus Adult Seroprevalence, 9/2020-10/2021

Texas CARES Monthly Natural (N-test) Seroprevalence by Population
T1 through T3 combined



Other Important Findings: Mental Health Impacts

How much has your child's mental/emotional health been worsened by the COVID-19 pandemic (in the past two weeks)?	Positive (N=1415)	Negative (N=2464)
Extremely	16 (1.4%)	41 (2.0%)
Moderately	124 (10.6%)	277 (13.2%)
Not at all	725 (61.7%)	1082 (51.5%)
Slightly	284 (24.2%)	605 (28.8%)
Very	26 (2.2%)	95 (4.5%)
Missing	240	364

Vaccine Findings

Plan to get child vaccinated for COVID-10	Sero+	Sero-
No	604 (53.4%)	449 (22.5%)
Yes	528 (46.6%)	1550 (77.5%)
Parent plan to get vaccinated for COVID-10		
No	447 (39.7%)	299 (15.0%)
Yes	679 (60.3%)	1698 (85.0%)

PEDIATRIC LONG HAULERS STUDY, DALLAS

Table 1. Patient demographic and medical information:
MIS-C children (N=27)

Age, mean (SD), years	9.1 (4.8)
Boys, n (%)	13 (48.1)
Race/ethnicity, n (%)	
Non-Hispanic White	7 (25.9)
Non-Hispanic Black	7 (25.9)
Hispanic	10 (37.0)
Other	3 (11.1)
Prior hospitalization, n (%)*	26 (100)
Prior ICU admission, n (%)	12 (44.4)

Table 2. Patient's demographic and medical information:
non-MIS-C children (N=190)

Age, mean (SD), years	6.6 (6.0)
Boys, n (%)	98 (51.6)
Race/ethnicity, n (%)	
Non-Hispanic White	41 (21.6)
Non-Hispanic Black	34 (17.9)
Hispanic	106 (55.6)
Other	9 (4.7)
Prior hospitalization, n (%)*	161 (84.7)
Prior ICU admission, n (%)	13 (6.8)

*Nmissing = 1

Pediatric Long Symptoms

48.15% of children with MIS-C report long symptoms

23.68% of children hospitalized with COVID-19 (non-MIS-C) report long symptoms

MIS-C children are ~3½ times as likely to have long symptoms versus children hospitalized with COVID-19 but not diagnosed with MIS-C

Age or sex did not predict the presence of long symptoms

Non-Hispanic black children and >6 times as likely as non-Hispanic white children to report long symptoms from COVID-19

Hispanic children >3 times as likely as non-Hispanic white children to report long symptoms from COVID-19

Prior Hospitalization or ICU admission did not predict long symptoms



Thank you!

- DSHS Team
- UTSPH Team
- Children's Hospital Association of TX
- Superior Health Plan
- Texas Pediatric Society
- Clinical Pathology Laboratories

Texas Coronavirus Antibody Response Survey (TX CARES): Fall 2021 Update

Learn more at:
sph.uth.edu/projects/texascares/

