CORONAVIRUS

Do face masks work? Here are 49 scientific studies that explain why they do

by: Russell Falcon
Posted: Aug 7, 2021 / 01:48 PM CDT
Updated: Dec 23, 2021 / 10:08 AM CST

SHARE

AUSTIN (KXAN) — Since the beginning of the historic COVID-19 pandemic, one of the most hotly debated subjects has been about masks and whether they actually help slow the spread of the disease. Now, as omicron cuts its way across the globe, the question is back on people's minds.

At the onset of the pandemic, there was slim evidence to either prove or disprove the effectiveness of mask-wearing to slow the spread of this particular coronavirus because,

obviously, COVID-19 was a new disease. Additionally, there was little research focusing on respiratory disease transmission during a global pandemic of COVID-19's magnitude — a once-in-a-lifetime worldwide disaster. Naturally, there was little data to go on about the efficacy of mask-wearing during these exact circumstances.

This lack of information was perhaps confusing for many but millions in the scientific community quickly jumped to help the world understand this disease better. They built upon years of existing data on coronaviruses and communicable diseases. While researchers of all 49 studies listed below acknowledge there's still much more data to be explored, they have all acknowledged the efficacy of mask-wearing *to some degree* at slowing the spread of COVID-19.

Busting mask myths: 3 false rumors debunked ›

Researchers of one study urge people not to infer when reading studies: *"Various authors have justified not wearing masks on four main grounds. Firstly, they claim that there is limited evidence that they are effective. The first argument can be challenged on the grounds that* ***absence of evidence is not evidence of absence."***

Reasons for mask hesitancy and doubt include conflicting data from health officials, political biases and cultural unfamiliarity (studies showed mask-wearing was lower in countries where face masking to prevent disease was not as common as in others). While studies disputing masking claims *do* exist — as is the nature of scientific research — in researching this piece, the majority explored for this article appeared to conclude either in the affirmative or that more information was needed.

Through the writing of this article, efforts were made to be transparent about publication dates, sources, data sets, and when findings that ***were*** *critical of mask-wearing appeared. Where they arose, they were included and we worked to give them context.*

Below, find 49 studies (some pending peer review) which show the effectiveness of masking.

Peer-reviewed studies:

1. Researchers (including a CDC doctor) for a February 2021 article published by the Journal of the American Medical Association reviewed data from 10 previous studies conclude mask wearing substantially reduces spread. They write that wearing a cloth mask can reduce transmission of exhaled droplets from infected wearers into the air by around 50% to 70%. Additionally, masks were shown to help prevent *un*infected wearers from inhaling large respiratory droplets. Overall, the authors found mask wearing's main benefit is source control, which protects *others* by reducing the number of respiratory droplets released, rather than respiratory protection, which protects the wearer. ***Peer reviewed.***

2. Universal mask adoption for people when in public is recommended by the authors of the "An evidence review of face masks against COVID-19," first published in January by Proceedings of the National Academy of Sciences of the U.S. Researchers poured over at least 150 other studies, models and findings to draw their conclusion: *"The available evidence suggests that near-universal adoption of nonmedical masks when out in public, in combination with complementary public health measures, could successfully reduce virus reproduction levels to below 1, thereby reducing community spread if such measures are sustained."* Additionally, they posit that mask wearing mandates could add $1 trillion to the U.S. GDP by preventing business closures. ***Peer reviewed.***

3. A high-speed laser-light video experiment in The New England Journal of Medicine caused oral fluid droplets to appear as flashes in the light. When observed, between 227 and 347 oral fluid droplets flashed when participants said the words "stay healthy" without a mask. When the same phrase was spoken *with* a mask, "the flash count remained close to background level." ***Peer reviewed.***

4. A June 2020 University of Iowa study published in the Health Affairs medical journal estimated over 200,000 COVID-19 cases were prevented in May after masking was mandated in several states. For this experiment, researchers used data analysis and models to measure community spread before and after a mask mandate was enacted. Data found that within 1-5 days after a mandate was issued, daily case rates dropped nearly one percentage point. Within 21 or more days, they dropped two. ***Peer reviewed.***

5. A symptomatic traveler with a dry cough traveled from Wuhan, China, to Toronto, Canada, while wearing a mask, Canadian Medical Association Journal researchers reported in an April 2020 response to a February 2020 study. None of the 25 passengers considered "close

contacts" aboard the flight contracted the virus. This study indicated that droplet transmission was likely more prevalent than airborne transmission. ***Peer reviewed.***

6. A June 2020 study in medical journal The Lancet reviewed 172 other studies from 16 countries and found that while different masks offer different effectiveness, masks overall result in a "large reduction in risk of infection." ***Peer reviewed.***

7. Research in the journal Science addressed one key claim by mask opponents: that masks don't work because they can still let quite a bit of respiratory matter through. The study explains, however, that the amount of particles that can come through a mask are dependent on environment and how infected a certain area is. For example, a highly infected group of individuals in a closed space will result in more particles being present *overall*, including through a mask. Nevertheless, face masks were found to effectively limit probability of COVID-19 transmission. ***Peer reviewed.***

8. A study published in the International Journal of Nursing Studies found that out of a total of 19 randomized controlled trials of communities, masks were effective — even without hand washing. ***Peer reviewed.***

9. Authors of a Science Advances journal study found that ***some*** masks — particularly neck gaiters — ***could*** disperse large droplets into smaller, more airborne droplets. However, surgical masks, cotton masks and bandanas were found to cause a reduction in transmission and a significant delay between when they left one person's mouth and when they were detected. ***Peer reviewed.***

10. An article in the medical journal Respirology concluded (based on 10 previous studies and data) says while questions remain, there are "a range of reasons to advocate public mask wearing." Authors noted that while masks protect wearers from droplets more than airborne particles, studies of influenza spread show masks are about 40-95% efficient. While they believe more information is still needed, they conclude that although cloth masks are inferior to medical masks, they're "certainly better than no masks at all." ***Peer reviewed.***

11. Models created by the authors of a January 2021 study in the Frontiers in Medicine journal indicated wearing face masks showed favorable outcomes in reducing infection rates. Most importantly, mathematical models indicated a big decrease in mortality when population mask coverage was near-universal. This was true even if mask type were less effective types. ***Peer reviewed.***

12. A November 2020 article published in the Environmental Pollution journal concluded mask wearing is effective at preventing contact, droplet and possibly airborne transmission of COVID-19. Based on their research — through review of existing data — they urged government officials to further emphasis the importance of masking. ***Peer reviewed.***

13. An October 2020 study in Extreme Mechanics Letters found that cloth face coverings, particularly masks with multiple layers, have over 70% blocking efficiency. Multiple-layered fabric was found to stop droplets with more than 94% efficiency, which is equitable to that of medical masks. ***Peer reviewed.***

14. A scenario in Nature Medicine projected what would happen if each U.S. state implemented and achieved 95% of public mask use — this resulted in the lowest projected cumulative death toll. Under this scenario, no states reached daily death rates of eight deaths per million. Other projections found that even if lockdowns/restrictions were not mandated, *"any additional coverage that can be achieved through mask use will save lives."* ***Peer reviewed.***

15. Authors of the "How effective is a mask in preventing COVID-19 infection?" study published in Medical Devices & Sensors examined transmission of droplets through various masks, ultimately finding that correctly wearing masks — despite the varying effectiveness of different types — can largely reduce overall risks of infection and boost protection. ***Peer reviewed.***

16. Consumer-grade masks (cloth, bandana) with modifications can offer protection that's almost the exact same or *even better* than non-N95 medical masks professionals use. That's according to the researchers in a December 2020 study published in JAMA Internal Medicine. Modifications in fit was the main contributor to increased effectiveness, researchers wrote. ***Peer reviewed.***

17. The Annals of Internal Medicine published a study indicating that while researchers don't have enough data to rule that cloth masks stop transmission of respiratory droplets from coming *in* through a mask, there's "convincing" evidence to say that cloth masks *do* reduce particles from going out of a mask and contaminating air and surfaces. The researchers explain: *"Every virus-laden particle retained in a mask is not available to hang in the air as an aerosol or fall to a surface to be later picked up by touch."* ***Peer reviewed.***

18. While authors of a December 2020 Eurosurveillance infectious disease journal review of 74 sources decided more data and research is needed, they ultimately estimated face masks to offered up to 15% reduction in disease transmission in their sample pool. ***Peer reviewed.***

19. The authors of this April 2020 study found that Taiwan recorded only 348 COVID-19 cases at that time, while Singapore recorded 1,114. Only Taiwan encouraged masking at the onset of the pandemic, according to the Emerging Infectious Diseases-published study. While researchers say the reduction was "marginal," they believe the reduction could still produce substantial results, especially if implemented early on. Researchers acknowledge limitations to the study, saying a small sample size was used and there was "suboptimal" adherence to mask wearing among participants. They write: *"Taiwan had the foresight to create a large stockpile of medical and surgical masks; other countries or regions might now consider doing so as part of future pandemic plans."* ***Peer reviewed.***

20. In a study in Journal of Travel Medicine, published by Oxford University, researchers found that while mask effectiveness varies depending on type and fit, cloth masks were suitable for non-healthcare workers and could prevent transmission of infection, especially during early onset. The authors argue that a model showed that even if face masks are only 20% effective and only 25% of the population used them, infection would be reduced by 30%. ***Peer reviewed.***

21. A March 2021 study looked at the impact of New York City's April 2020 executive order mandating mask wearing for all in public. At that time, NYC was the epicenter of infections in the U.S., the study published in Journal of Urban Health explains. Results showed that NYC's mask mandate prevented 99,517 infections and 7,978 COVID-19 deaths. Additionally, researchers say if the order had been implemented just one week earlier than that, 111,475 infections and 9,017 deaths would have been prevented. ***Peer reviewed.***

22. This Hong Kong study published in The International Journal of Tuberculosis and Lung Disease laments the lack of support for masking in Western countries, as many Asian countries accept and have normalized mask wearing for decades. The researchers point to a previous study cited to dispute benefits of face masks — particularly cloth masks — because they're considered far less effective than surgical masks. The authors argue that while cloth masks are less effective than surgical masks, the difference is about 70% versus 90%, which they say is still a "very meaningful benefit." ***Peer reviewed.***

23. Authors of a December 2020 study published in Future Microbiology felt strongly about their findings on mask fit, which found they significantly reduce particle transmission when worn properly. They write: *"Quantitative analysis of the most efficient and effective face masks (in terms of both fit and fabric) will undoubtedly help to stem the spread of not just SAR-CoV-2 but also any illness spread through respiratory particles."* ***Peer reviewed.***

24. Researchers in this study of efficacy of different materials used for homemade masks found, as expected, different materials have different capabilities in preventing transmission. The laboratory study was performed in West China Hospital of Sichuan University in Chengdu, China and published in October 2020 by the PLOS One scientific journal community. The lab tested various materials and layering for filtration. The study found that while homemade masks did not meet surgical mask standards, the filtration efficiency and pressure difference inside did. They write: *"…homemade masks using available materials, based on the results of this study, can minimize the chance of infection to the maximum extent."* ***Peer reviewed.***

25. This BMJ-published study from New South Wales, Australia, used simulation scenarios to deduce that when used together, masking, high community testing and contact tracing are effective at controlling COVID-19 transmission. The researchers predictions and models lined up pretty closely with how case numbers played out in New South Wales. ***Peer reviewed.***

26. Mathematical models were generated based on huge swaths of data for this study published in Nature Communications. These models found: 1) Even limited distribution of masks offering only 25% protection and containment would result in significant drop in death rates, 2) Even if only 10% of people used the masks offering 25% protection, the death rate would drop 5%, 3) If people used homemade masks that offered even 5% protection and containment, death rates would drop from 2.5 to 2.26 percentage points. Places requiring public masking could also expect a 3-5% reduction in deaths, researchers write. ***Peer reviewed.***

27. In this study published in the European Respiratory Journal, researchers examined information from several countries to determine the differences in spread among those who masked and those who largely didn't. They urge lawmakers and residents to heed mask guidelines, as it's a favorable alternative to shutdowns and prolonged social distancing. The authors write: *"… We strongly support the use of cloth masks as a simple, economic and sustainable alternative to surgical masks as a means of source control for general community*

use, so that disposable surgical masks and N95 respirators can be reserved for use in healthcare facilities." ***Peer reviewed.***

28. A September 2020 study published by the Association for Psychological Science reviewed several previous studies to determine why many people refuse or resist doing so when, they believe, face masks and social distancing have been proven to help slow disease spread. Researchers of the study, which centered on empathy, reviewed many previous studies to come to the *what* before examining the *why*. ***Peer reviewed.***

29. Using data from 15 previous studies, researchers in this The Lancet-published study write: *"This study supports universal face mask use, because masks were equally effective in both health-care and community settings when adjusted for type of mask use."* While the authors acknowledge that surgical and N95 masks are more effective than cloth masks, data indicate universal mask wearing can reduce the rate of infection, even with moderately effective ones. Additionally, researchers cite data showing mask wearing in Beijing homes prevented secondary transmission, if worn before symptoms appear. ***Peer reviewed.***

30. The Beijing study cited in #38 was published in May 2020 by BMJ Global Health — it followed 335 people in 124 families that had at least one family member with a confirmed COVID-19 case. Authors found that after nearly a month in the same household, face mask use by all parties before symptom development was 79% effective in transmission reduction. ***Peer reviewed.***

31. This study published in the Emerging Infectious Diseases medical journal concluded that while cloth masks are inferior to surgical masks and shouldn't be used by healthcare workers, they are a suitable option for community use. Fit and material are key, researchers write, indicating that fabrics with high thread count and fine weave should be used — in addition to several layers of the material. ***Peer reviewed.***

32. These New York University Abu Dhabi researchers examined the resistance of mask wearing in Spain during the early stages of the pandemic. Here, while exploring how attitudes and biases affect decisions to wear masks, explain that many still resist *"despite growing evidence of the effectiveness of face mask use against transmission of respiratory viruses."* Based on their research, the authors urged governments to create programs to improve mask-wearing compliance. ***Peer reviewed.***

33. A Vietnamese study published in the Journal of Community Health this year took a look at mask use among university students. Researchers noted Vietnam's strict mitigation policies during the pandemic, especially given its proximity to China, helped keep case numbers low (about 28 cases per 10 million people). Measures including mandatory masking in public places — and a monetary fine of about $13 US — led to the successful containment of the coronavirus, researchers write. Again, while surgical masking is the preferred method, researchers urge mask use and community education on their importance. ***Peer reviewed.***

34. This January 2021 study published in Journal of Econometrics used robust models, experiments and data sets to review how further masking during the pandemic's onset may have prevented infections and deaths. They conclude that their analysis "robustly indicates" face mask mandates have reduced the spread of COVID-19. They explain that if all U.S. states had implemented mandatory masking policies on March 14, 2020, the cumulative death toll by the end of May would have been about 19% to 45% smaller — or about 19,000 to 47,000 saved lives. ***Peer reviewed.***

35. Just last month, research published on scholarly site PLOS One examined the "substantial" decline in new COVID-19 cases when mask mandates began amid a surge in Melbourne, Australia. Using models and logarithm data analysis, it's estimated that mask usage in public spaces rose from around 43% to 97% — resulting in a plunge in virus reproduction and new cases. The authors say they strongly support mask usage in communities. ***Peer reviewed.***

36. "Of Masks and Methods," published in March in Annals of Internal Medicine, explored how the way masks are worn and implemented affect how effective they are. Researchers examined observational studies and other experiments to conclude that community mask use, especially if widespread, correlates to reduced risk for COVID-19. They write: *"Across all analyses odds ratios were approximately 0.8, consistent with a 20% reduction in incident SARS-CoV-2 infection if masks are recommended… Multiple observational studies have documented an association between mask mandates and reduced COVID-19 incidence."* ***Peer reviewed.***

37. This Irish study appearing in scientific journal publisher MDPI observed the transmission of particles through various mask materials to determine filtration, how porous they were and how much they resist airflow (among other factors). Using mathematical models, statistical data and historical data, they found masks to be an overall effective and necessary tool for the

foreseeable future. They explain that as advancements in material occur — including many existing antimicrobial fabrics — masks will prove even more effective. They write: *"Current materials used in production including non-woven fibrous substances have been in use since the beginning of the 20th century and have been shown to be still sufficiently viable in their use."* ***Peer reviewed.***

38. A February 2021 study from Ethiopia and published in Risk Management and Healthcare Policy medical journal combed through databases and other COVID-19 writings to conclude that universal face mask use can contribute to community containment if properly used and available as needed. ***Peer reviewed.***

39. This February 2021 JAMA-published study examined several other studies and created a table of different populations around the globe and how their masking use affected spread. They found: *"When masks are worn and combined with other recommended mitigation measures, they protect not only the wearer but also the greater community."* Further, they explain that as mutations emerge, masking will be even more important. ***Peer reviewed.***

40. Echoing other findings, the doctor/researcher behind this December 2020 Wisconsin Medical Journal review used over 88 scholarly references to aggregate his ultimate conclusion that the bulk of mask wearing works to control community spread. The author notes that while a mask can only protect wearers from infection to a certain extent, they can help control the viral load they're exposed to and thus, the severity of their infection. ***Peer reviewed****.*

41. This May 2021 Medical Decision Making analysis used models to test the ability of masks to slow the spread of COVID-19 during an initial outbreak and an insurgence. The authors used over 50 sources to determine that even with moderately effective masking *"it is evident that mask effectiveness significantly affects transmission."* The researchers recommend masking until at least widespread vaccination occurs. ***Peer reviewed.***

Peer-review pending

1. Researchers in this study carried out several simulations where one infected person was put into a population of other participants who were susceptible. Mask wearing among the uninfected was gradually increased and a "striking" decrease was seen in the overall number of COVID-19 cases. In addition to several other mask-affirming findings, authors of the study published in the Yale University-BMJ-affiliated health sciences site MedRxiv, write: *"If all*

individuals move freely and randomly interact with others (i.e., 0% SD), the rate of daily infection through the population depends on the percentage of individuals wearing masks."

2. University of North Texas Health Science Center researchers found in this July 2020 study that "states with an early mask mandate have been able to protect against the June [2020] surge across the country. Here, researchers reviewed data — including number of daily case numbers and transmission rate — to determine if local mask mandates affected spread in that state. Observing the four counties in the Dallas-Forth Worth metroplex, researchers found Dallas and Tarrant counties (both had mask mandates) showed a dramatic drop in new cases, hospitalizations and ER visits. The other two counties, Collin and Denton, did not have mask mandates experienced either growth or marginal decrease.

3. A study from the Population Research Institute at the Family Federation of Finland found that if 80% of people in the U.K. masked, it would do more to squelch the pandemic than a full shutdown.

4. This Malaysian observational study tracked mask use among patients being admitted into hospitals. They concluded that extensive use of facemasks could help mitigate impact and more work is needed to make sure people are correctly wearing them.

5. The U.S. Environmental Protection Agency (EPA) performed testing of various face masks — while effectiveness varied, certain cloth masks were found to be even better than medical-grade masks. All masks were found to be effective at stopping transmission at some level.

6. A late 2020 study looking at COVID-19 transmission in Georgia school districts found that schools in the state that required masks to be worn had a 37% lower incidence of COVID-19 among teachers and staff than those that didn't. The study, published as part of the CDC's Morbidity and Mortality Weekly Report, led researchers to recommend mask use for both adults and children during in-person learning.

7. Researchers at the European Centre for Disease Prevention and Control found that while mask types offer different degrees of protection and said they think more data is needed, they ultimately recommended mask wearing as a "non-pharmaceutical intervention."

8. This March study included in the CDC's Morbidity and Mortality Weekly Report indicates that county-level COVID-19 cases and death rates dropped increasingly in the 20 days following a mask mandate in that county. Mandates were associated with 0.5 percentage rate drops in the first 1-20 days and 1.1-1.8 percentage point drops between 21-100 days.

Researchers highly recommended mask mandates in addition to other mitigation efforts following their work.

Retracted/disputed claims

1. A "research letter" published by JAMA Pediatrics just one month ago has since been retracted due to claims that the authors couldn't back up their findings. The letter, "*Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy Children: A Randomized Clinical Trial,*" claimed that toxic amounts of carbon dioxide were "measured" inside of face masks worn by children. The claim was touted by Fox News host Tucker Carlson in early July and proliferated online, however, the scientific community scrutinized the study before it was ultimately retracted.

2. A Texas A&M study took a look at how COVID-19 is transmitted found people who wore masks prevented a projected 66,000 people in New York City from getting infected in less than one month. Based on mathematical analysis, they explained that global statistics showed: *"… Wearing of face masks in public corresponds to the most effective means to prevent interhuman transmission*," researchers wrote. This research has been rejected for peer review twice due to ambiguous data, assumptions made by researchers, and uncontrolled factors. One peer who did not approve the findings wrote that while there's "growing evidence" to support masking recommendations, it's still too early.

3. This April 2020 study published in the Annals of Internal Medicine was retracted in July 2020 after some data was found to be incorrect due to miscalculations, including data showing surgical masks were *less* effective than cloth masks and possibly led readers to believe surgical masks were ineffective. While researchers requested to correct the data, editors insisted the study be pulled.

4. One of the most famous and controversial mask studies is among the first that was performed during the pandemic. Dubbed "The Danish Study," or "DANMASK-19"**,** the findings were labeled on social media as proof that cloth and surgical masks don't work. However, the interpretation of its findings has been disputed by many who say it ultimately rules "more information needed" and is "inconclusive." Overall, protection was deemed to be limited. Moreover, the study's authors also wrote: *"[the study] should not be used to conclude that a recommendation for everyone to wear masks in the community would not be effective in*

reducing SARS-CoV-2 infections, because the trial did not test the role of masks in source control of SARS-CoV-2 infection."

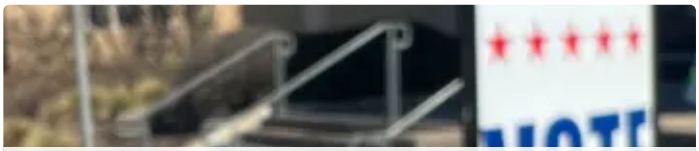
5. Another often-cited study many say proves masks are inefficient was published in a January 2021 issue of Medical Hypotheses and called "Facemasks in the COVID-19 era: A health hypothesis." The study concluded that masks — both cloth and medical — were "ineffective." The study circulated on social media with some claiming it originated from Stanford University and/or the National Institutes of Health. Neither is true, with Stanford Medicine explaining it strongly supports mask usage.

Follow KXAN's Russell Falcon on Twitter @RussellFalcon for more coronavirus updates.

TOP STORIES

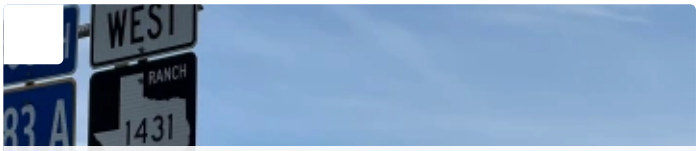
2 men arrested in separate Kyle gas skimming incidents

Drier days ahead with slow warming trend



Early voting turnout at just 1% in May 7 elections

Here are the candidates running for Cedar Park mayor



Cedar Park voters to consider $158M bond program

Top Stories

MORE STORIES

Biden still considering student loan forgiveness

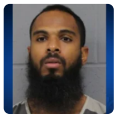
2 men arrested in separate Kyle gas skimming incidents

Drier days ahead with slow warming trend

Early voting turnout at just 1% in May 7 elections

Here are the candidates running for Cedar Park mayor

Cedar Park voters to consider $158M bond program



APD looking for man accused of ‘lewd acts’ in public

Everything to know about 2022 Eeyore’s Birthday Party

More Stories

KXAN Austin Video

Georgetown lifts water conservation notice

Cedar Park’s $158M bond program could improve...

Travis County launches new COVID-19 vaccinatio...

Norma at Mar

12 mins ago

14 mins ago

17 mins ago

More Videos

BESTREVIEWS

Best makeup brush

Reviews 1 hour ago

Is Kaytee wild bird food worth it?

Reviews 1 hour ago

Best deep-pocket flannel sheets

Bedding 1 hour ago

Best glass rinser

Sinks & Hardware

1 hour ago

Bes
Day

Jewe

More reviews

Your email

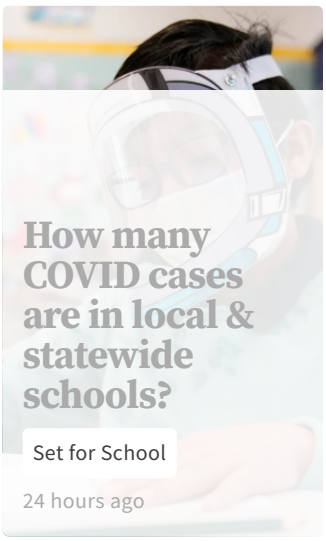
Sign Up

Report!t

Help shape the way KXAN covers the news that matters to you.

All submissions considered anonymous.

TRACKING THE CORONAVIRUS



How many COVID cases are in local & statewide schools?

Set for School

24 hours ago

MAPS: COVID-19 vaccination rates in your zip code

Texas Coronavirus Vaccine

1 week ago

237 COVID cases reported in KXAN viewing area Tuesday

Coronavirus

1 min ago

TX COVID hospitalizations at record low levels

Coronavirus

11 mins ago

Coronavirus Cases Tracker

AUSTIN WEATHER

Current	Tonight	Tomorrow
76°	**59°**	**80°**
Fair	**Mostly Cloudy** Precip: 0%	**Mostly Cloudy** Precip: 0%

TRENDING STORIES

1. **Mom charged monthly fee to be on a child care waitlist**
2. **Judge asks to be recused from 4 APD officer cases**
3. **Landlord fights property value spike**
4. **APD looking for man accused of 'lewd acts' in public**
5. **Trial to begin Tuesday for former Hutto police officer**

DON'T MISS

- **How to protest your 2022 property appraisal**
- **Austin ranked the best city in the US for dating**
- **Event safety report released after Astroworld deaths**

Study: Austin 2nd most overpriced housing market

Follow Us

News App

Download on the App Store

GET IT ON Google Play

Weather App

Download on the App Store

GET IT ON Google Play

KBVO: Children's TV Programming

EEO Report

Privacy Policy

Terms Of Use

Best Reviews

Do Not Sell My Personal Information

FCC Applications

Public File Assistance Contact