



SDCOE AND COUNTY PUBLIC HEALTH K-12 COLLABORATION

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WHO WE ARE?



- We are members of the San Diego County Office of Education and the County Department of Public Health
- A collaboration between two county departments working to improve the health of our K-12 community

OBJECTIVES



At the end of this presentation, the learner will:

1. Understand how both school-based and public health resources can impact the K-12 response to communicable disease.
2. Understand the trends of COVID-19 case rates and vaccination status for the K-12 community.
3. Identify potential environmental effects that impact the health of the K-12 community.
4. Identify infectious disease monitoring in the K-12 setting.

COVID-19 TIMELINE

San Diego County
Office of Education
(SDCOE) begins
education
monitoring COVID-
19

SD HHSA & SDCOE
K-12 Telebriefings
Begin

K-12 School
Response Team
developed

January 20,
2020

March
13, 2020

March
17, 2020

July 20,
2020

August
15, 2020

April–June
2020

San Diego Unified
School District
becomes first district
to close their schools
followed by other
districts in the
coming weeks

SD County Public
Health nurses begins
taking K-12 COVID-
19 calls and begins
process for official
school response
team

COVID-19 liaisons
from every
school/district begin
to be identified to
work hand in hand
with HHSA School
Epi Team

Throughout SD Office of Education & SD County Health and Human Services Collaborated

COVID-19 TIMELINE



San Diego County
testing sites opened
for teachers and
students

Sept. 30,
2020

Wastewater
monitoring for safe
school reopening
begins

Feb. 12,
2021

SDCOE and UCSD
releases first E-
Decision Tree

Nov. 1,
2021

SD Public Health
Officer declare a
“stay at home” order

Dec. 5,
2020

CDPH releases new
2021-2022 school
year guidance

July 12,
2021

CDPH masking
requirement no
longer in effect in K-
12 schools

March 1,
2022

Throughout SD County Office of Education and SD Health and Human Services Collaborated

- 43 school districts (+charters and private schools)
- 2021-2022 Enrollment = 481,102
- Largest district (~150 schools) has about 120 credentialed school nurses, 190 health techs, and 7 LVNs
- Many districts have one school nurse for entire district
- 6 districts without a school nurse

Mental Health of School Nurses in the US during the COVID-19 Pandemic

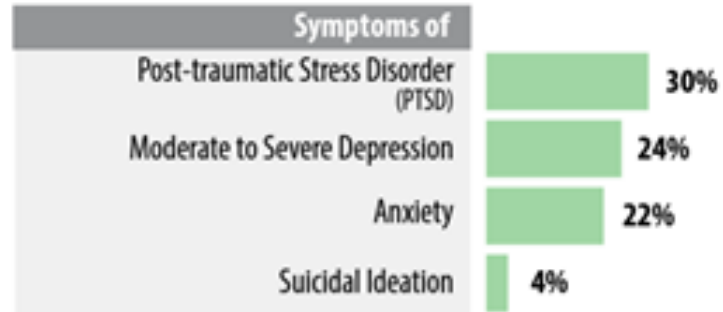
Highlights from a national survey / March 7-30, 2022



LIVE WELL
SAN DIEGO



Conditions Reported by School Nurses



Almost half (45%) reported symptoms of at least one adverse mental health condition in the two weeks prior to completing the survey.

Work-Related Stressors Reported by School Nurses Since COVID-19 Was Declared a Pandemic (March 2020)



School nurses were more likely to report symptoms of mental health conditions if they:



- Worked >40 hours weekly
- Reported inadequate staffing support or compensation
- Experienced lack of peer, supervisor, or school leadership support
- Felt unappreciated
- Worried about workplace exposure to COVID-19
- Reported stigma, discrimination, job-related threats, or harassment
- Took on additional COVID-19-related job duties, such as notifying parents about COVID-19 quarantine and isolation, and caring for students and staff suspected of having COVID-19

Overall, work-related stressors and COVID-19-related job duties were significantly associated with mental health symptoms among the school nurses who responded to the survey.

HOW WE ACCESS INFORMATION

Guidance from CDPH

CDC Guidance

We are constantly communicating with each other to ensure that we are up to date and providing accurate information

Cal-OSHA Emergency Temporary Standards

Local Health Orders

First Decision Tree



Fever / Covid Symptom Decision Tree; San Diego County Office of Education [DRAFT ONLY; 07/08/2020]

At school, student or staff develops any one of the following signs or symptoms:

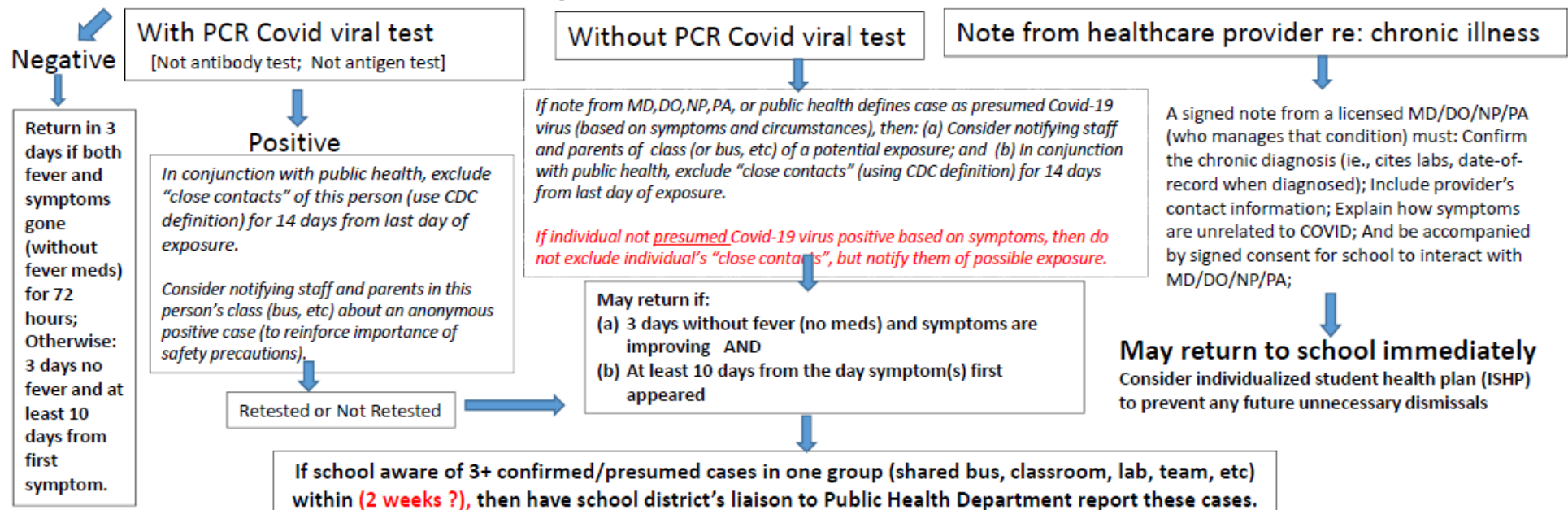
- Fever with or without chills rigors (fever defined as $T > 100.0$ that does not resolve within 30 min without medication);
- Cough* Shortness of breath Nasal congestion/rhinorrhea (runny nose) * Sore throat Nausea, vomiting or diarrhea*
- Rash* Fatigue* New loss of taste/smell Headache* Muscle or body aches* Poor feeding or poor appetite*

*Disregard this symptom if school personnel are already aware of a chronic, pre-existing condition that causes that symptom. The nature of the symptom (e.g., duration, intensity) is consistent with what school personnel and parent are familiar.

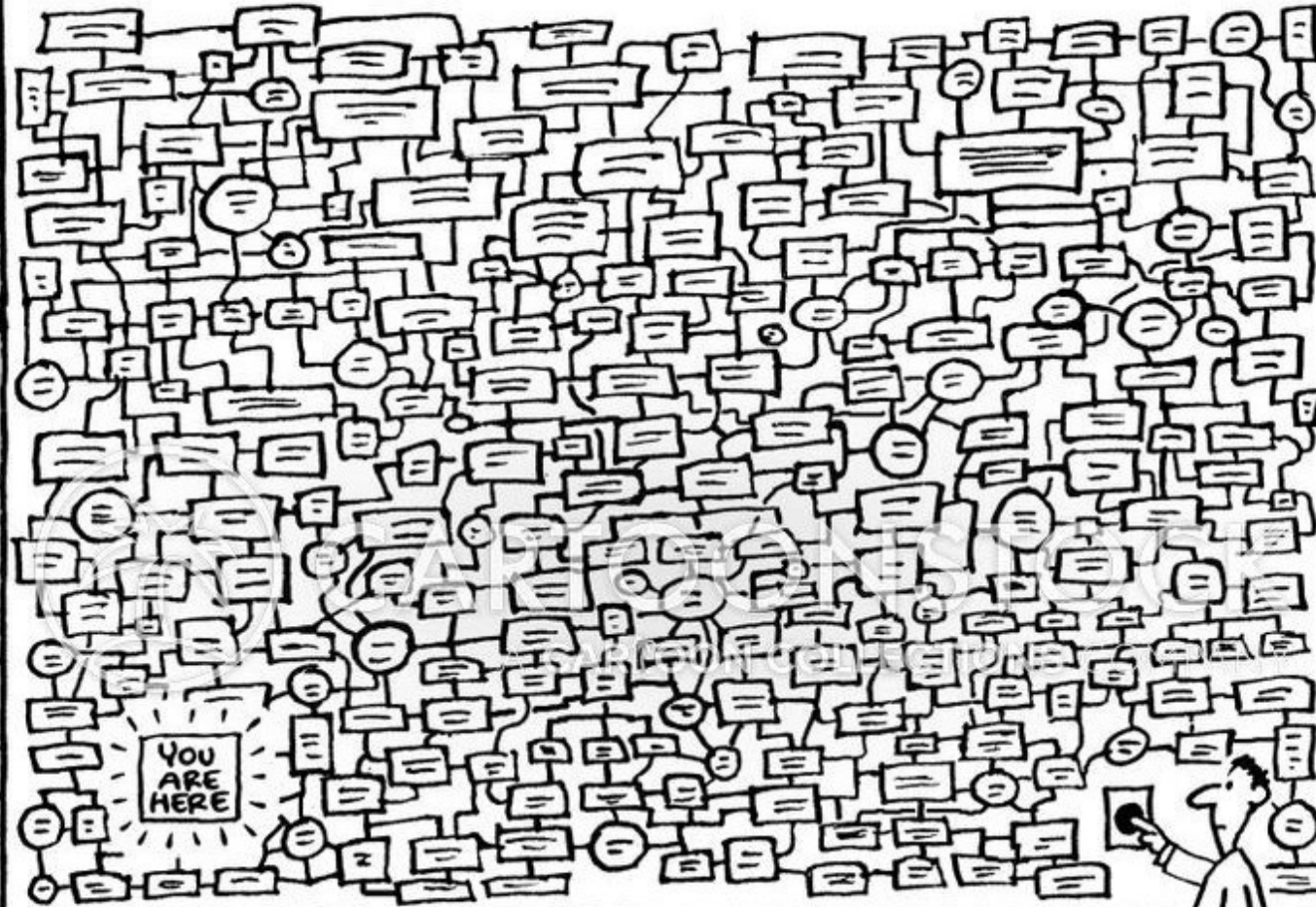
ACTION: Don appropriate PPE; Isolate student/staff member until sent home; Recommend they reach health care provider for instructions.

Note: Other infections can cause same symptoms (e.g. Flu, Strep, etc) but these do not rule out COVID-19 as a comorbidity

STUDENT / STAFF TO STAY HOME UNTIL.....



Covid-19 Decision Tree



September 1, 2022

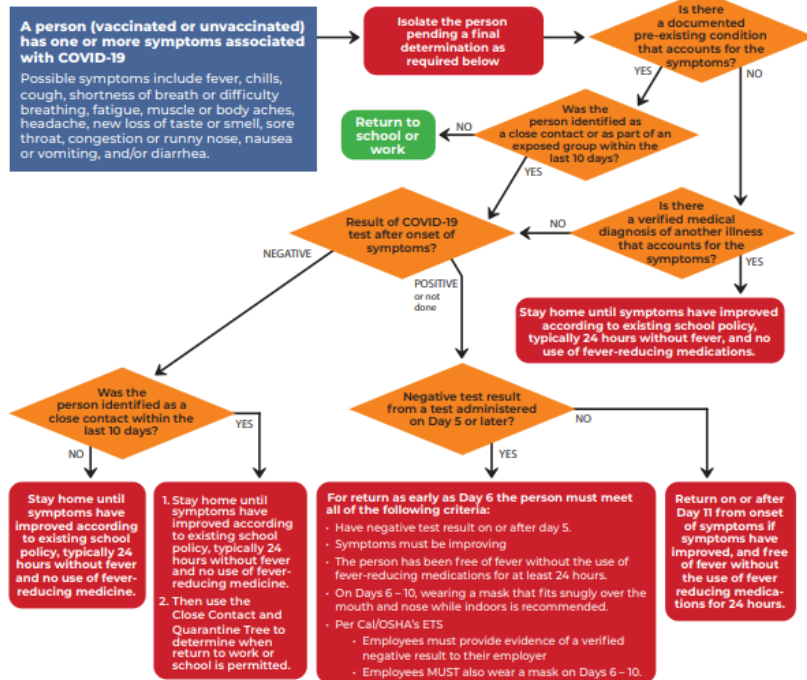
COVID-19 Decision Trees for K-12 Schools

If the person...

- Has **symptoms**, use the **Symptom and Isolation Tree**
- Has **tested positive** and **does not have symptoms**, use the **Asymptomatic Positive Tree**
- Is identified as a **close contact** and **does not have symptoms**, use the **Close Contact and Quarantine Trees**

Today's updates: An update was made on the Asymptomatic Positive Tree to clarify that staff must provide evidence of a negative test to return to work.

Symptom and Isolation Tree for Students and K-12 Workers



Asymptomatic Positive Tree for Students and K-12 Workers

A person (vaccinated or unvaccinated) has tested positive for COVID-19 using any test type and does not have symptoms
Confirmation testing is not recommended

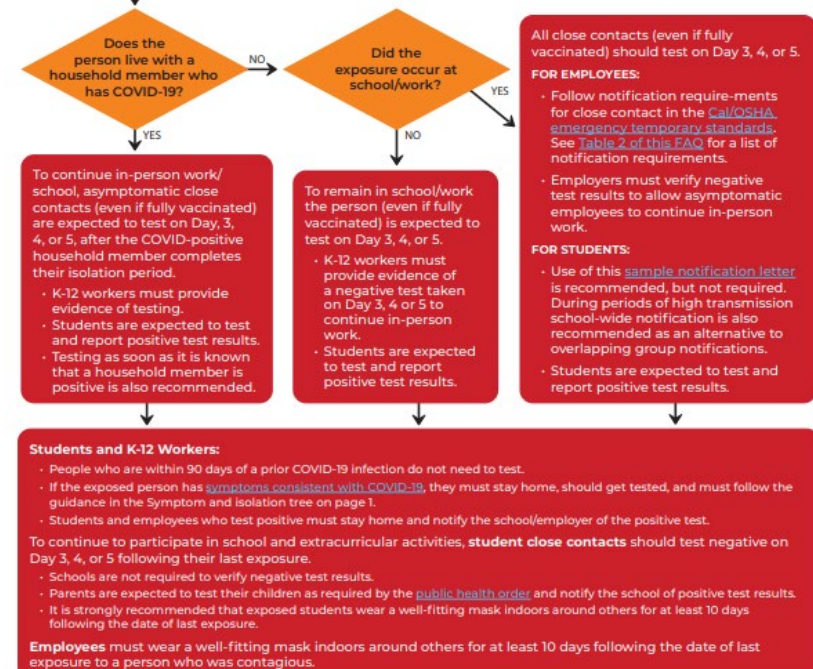
Isolate at home for 5 days from the date on which the first sample was collected.

- Return on or after day 6 with a diagnostic sample collected on or after day 5 that is negative. For staff, evidence of a negative test must be provided.
- On Days 6-10, students should wear a mask that fits snugly over the mouth and nose while indoors and when around others outside. Per Cal/OSHA's ETS, employees must wear a mask on days 6-10.
- If unable or unwilling to test, return on Day 11.
- If symptoms develop, isolate immediately and follow the **Symptom and Isolation Tree**.

Close Contact Tree for Students and K-12 Workers

Did the person share a common indoor airspace with a person who was contagious with COVID-19 for 15 minutes or more in a 24-hour period?

NOTE: Update based on the [CDC's current definition for close contact](#)



E-DECISION TREE

- Started in November 2021 as a collaboration between SDCOE/UCSD/County Public Health
- Interactive way for both schools and parents to access the most up to date guidance for COVID-19 and School Health
- [e-Decision Tree, updated 9/1/2022 \(sdsc.edu\)](https://sdsc.edu)



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State and County Requirements on Masking, Testing, and Notifications for San Diego County Schools

(Sept. 23, 2022)

This table highlights recommendations and requirements, but not the full depth or scope present in the source documents. In addition to using links embedded in the document, readers should review the full text of [Cal/OSHA's emergency temporary standards for COVID-19](#), as expressed in the California Code of Regulations. School districts, charter schools, and private schools have authority to exceed these recommendations and requirements.

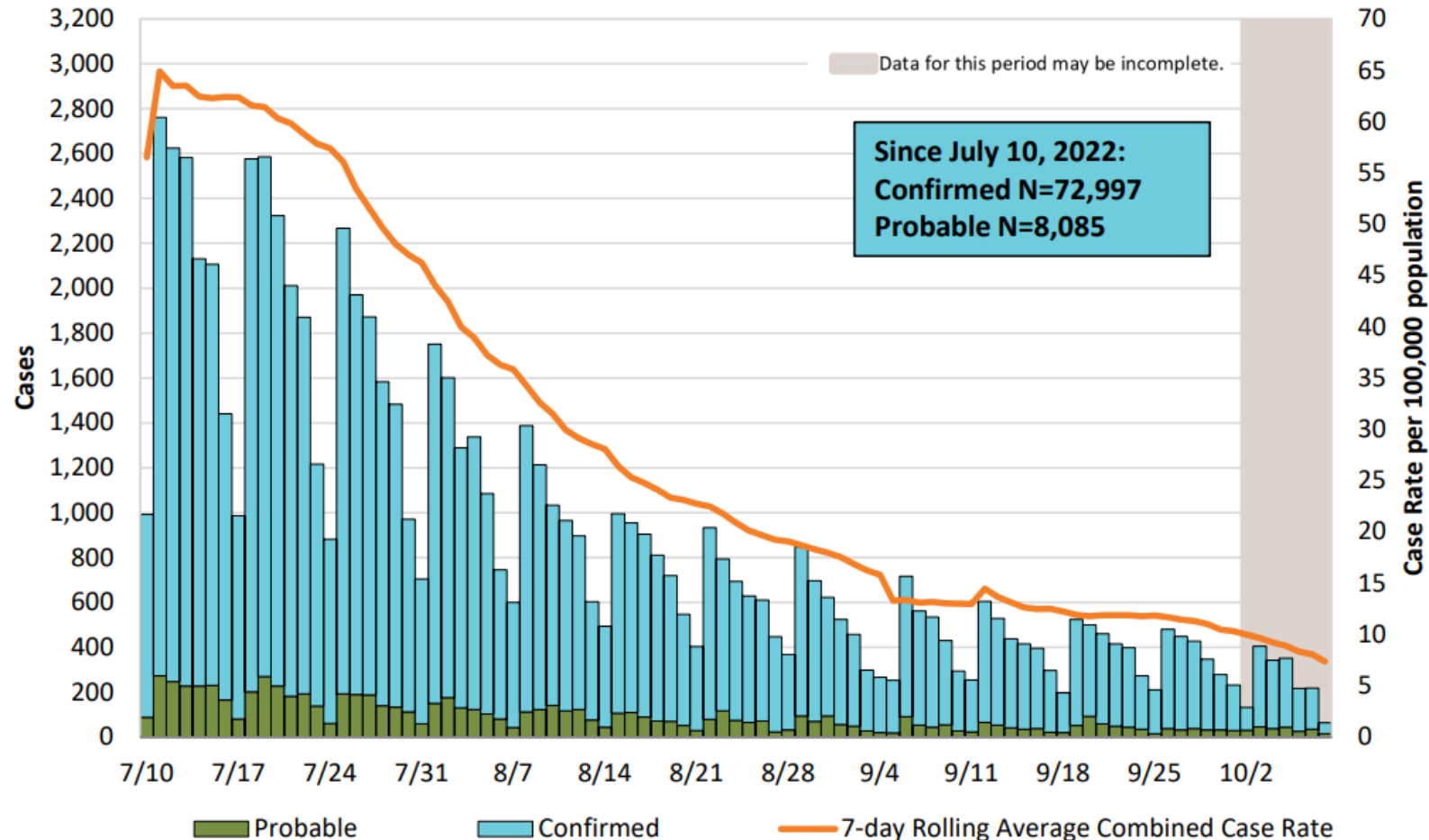
	SCENARIO	STUDENTS	EMPLOYEES
 MASKING	General	Masking guidance in all indoor settings is now based on CDC COVID-19 Community Levels . Schools cannot prevent a student from wearing a mask. Schools are required to provide masks free of charge to students who request one. (See the CDPH School Guidance .)	Masks are strongly recommended in all indoor settings. Employers are required to allow employees to wear a mask unless it would create a safety hazard. Employers are required to provide an N95 respirator in the appropriate size to any employee who requests one for voluntary use. Fit testing is not required for voluntary use. (See Cal/OSHA FAQ on Face Covers and Other Controls .)
	Close Contact	Masks are strongly recommended through Day 10 for close contacts who remain asymptomatic and COVID-negative. (See the CDPH School Guidance .)	Masks are required through Day 10 for close contacts who remain asymptomatic and COVID-negative. (See Cal/OSHA FAQ - Face Covers and Other Controls question 4 .)
	Returning from Isolation	Strongly recommended through Day 10 when return before Day 11 is authorized per the Decision Trees .	Required through Day 10 when return before Day 11 is authorized per the Decision Trees . (See Cal/OSHA FAQ - Face Covers and Other Controls question 4 .)
	School Health Offices	Schools are required to isolate persons with symptoms. Persons with symptoms are required to wear a mask if they can tolerate one. As matter of practice, schools should consider requiring that all persons put on a mask before entering a school health office. (See the county public health order and CDPH guidance on face covers.)	Masking is required for employees who are responsible for tending to children or adults with respiratory symptoms. (See Cal/OSHA FAQ - Face Covers and Other Controls question 4 .)
	Licensed Health Clinics	Masks are required for all individuals in healthcare settings, regardless of vaccination status. Surgical masks or higher-level respirators (e.g., N95s, KN95s, KF94s) with good fit are highly recommended. (See the CDPH guidance on face covers .)	Healthcare facilities must adhere to Cal/OSHA's standards for Aerosol Transmissible Diseases, which requires respirator use in areas where suspected and confirmed COVID-19 cases may be present. Fit testing is required for employees in these settings. (See Public Health Order on Healthcare Worker Protections in High-Risk Settings .)
 TESTING	Routine	Schools have the option to use routine testing with students, or for student activities.	Effective Sept. 17, 2022 , routine weekly testing for unvaccinated K-12 workers is no longer required (See updated Public Health Officer Order).
	Close Contact	To remain at school through Day 10, students who remain asymptomatic are expected to test on Day 3, 4, or 5, following their last exposure, and notify the school if positive. (See the CDPH School Guidance .)	To remain at school through Day 10, employees are required to test on Day 3, 4, or 5, following their last exposure, and provide verified results to the district/school. Employers are also required to provide access to testing free of charge during work hours. (See Cal/OSHA FAQ - Testing question 1 and CDPH Isolation and Quarantine question 1 .)
	Returning from Isolation	Students may return to school from isolation on or after Day 6, when all the following conditions are met: <ul style="list-style-type: none"> Their symptoms are resolving They have been free of fever for at least 24 hours without the use of fever-reducing medications 	Employees may return to work from isolation on or after Day 6, when all the following conditions are met: <ul style="list-style-type: none"> Their symptoms are resolving They have been free of fever for at least 24 hours without the use of fever-reducing medications

	SCENARIO	STUDENTS	EMPLOYEES
 NOTIFICATIONS		<ul style="list-style-type: none"> They have tested negative on Day 5 or later. State guidance does not require schools to obtain evidence of verified test results. Students may return on Day 11 without a negative test result. (See the CDPH School Guidance.) 	<ul style="list-style-type: none"> They have tested negative on Day 5 or later. Cal/OSHA's emergency temporary standards require employers to obtain evidence of verified test results. Employees may return on Day 11 without a negative test result. (See Cal/OSHA FAQ - Testing question 1 and CDPH Isolation and Quarantine question 1.)
	Exposed Worksite	For students, see the information for close contacts in this table.	Employers are required to make COVID-19 testing available at no cost to employees in an exposed worksite during employees' paid time. For additional information and requirements review CCR §3205(b) and §3205.1 .
	Positive Tests	Per CCR Title 17, Section 2508 referenced in CDPH school guidance "It shall be the duty of anyone in charge of a public or private school, kindergarten, boarding school, or day nursery to report at once to the local health officer the presence or suspected presence of any of the communicable diseases" (CCR Section 2500 (also referenced in school guidance) includes COVID-19 in the list that must be reported. County public health services (PHS) has informed SDCOE that schools/employers are required to report to PHS , information on all positive cases that were on a school campus while infectious, including OTC results reported by parents and employees.	
	Close Contact	Prompt notification to students and families regarding exposure to COVID-19, can allow for rapid testing, early treatment, and prevention of further spread. While not a requirement , school provided notification is encouraged. CDPH also recommends that schools should consider providing a general notification to the entire school community during times of elevated community transmission of COVID-19.	Employers are required to notify employee close contacts within one business day of learning that a person was infectious while in the workplace. The notification must include masking and testing requirements and provide information on where employees can test during work hours. (See Cal/OSHA FAQ - CDPH Isolation and Quarantine question 1 , Communication with Employees and CCR §3205(d)(3)(B)(3) .)
	Isolation	While not a requirement , notifying COVID-positive students and their families on the criteria for return before Day 11, is encouraged.	Employers are required to ensure employees who have symptoms and/or have tested positive isolate according to the Guidance on Isolation and Quarantine . Notification on the requirements for return before Day 11 and testing options is necessary to meet this requirement . (See Cal/OSHA FAQ - CDPH Isolation and Quarantine question 1 and Communication with Employees .)
	Exposed Worksite	For students, see the information for close contacts in this table.	Within one business day of the time the employer knew or should have known of a COVID-19 case, the employer is required to give written notice to employees in an exposed group. (For additional information and requirements review CCR §3205(b) and §3205.1 .)
	Supplemental Leave	Does not apply to students, but regarding absences schools should discontinue attendance incentive programs, or revise them to align with and support COVID-19 prevention requirements.	California requires employers with 26 or more employees to provide COVID-19 supplemental paid sick leave for workers through Sept. 30, 2022. This includes circumstances in which workers are experiencing symptoms of COVID-19 and seeking a medical diagnosis, attending a vaccine appointment for themselves or for a family member, and/or if a worker's child is isolating due to COVID-19 infection.

COVID-19 Confirmed and Probable Cases & Rolling Average



Figure 1. COVID-19 Confirmed and Probable Cases and 7-Day Rolling Average Case Rate by Episode Date*, San Diego County Residents, N=81,082



*Episode date is the earliest of the following available dates: symptom onset date, specimen collection date, date of death, date reported.

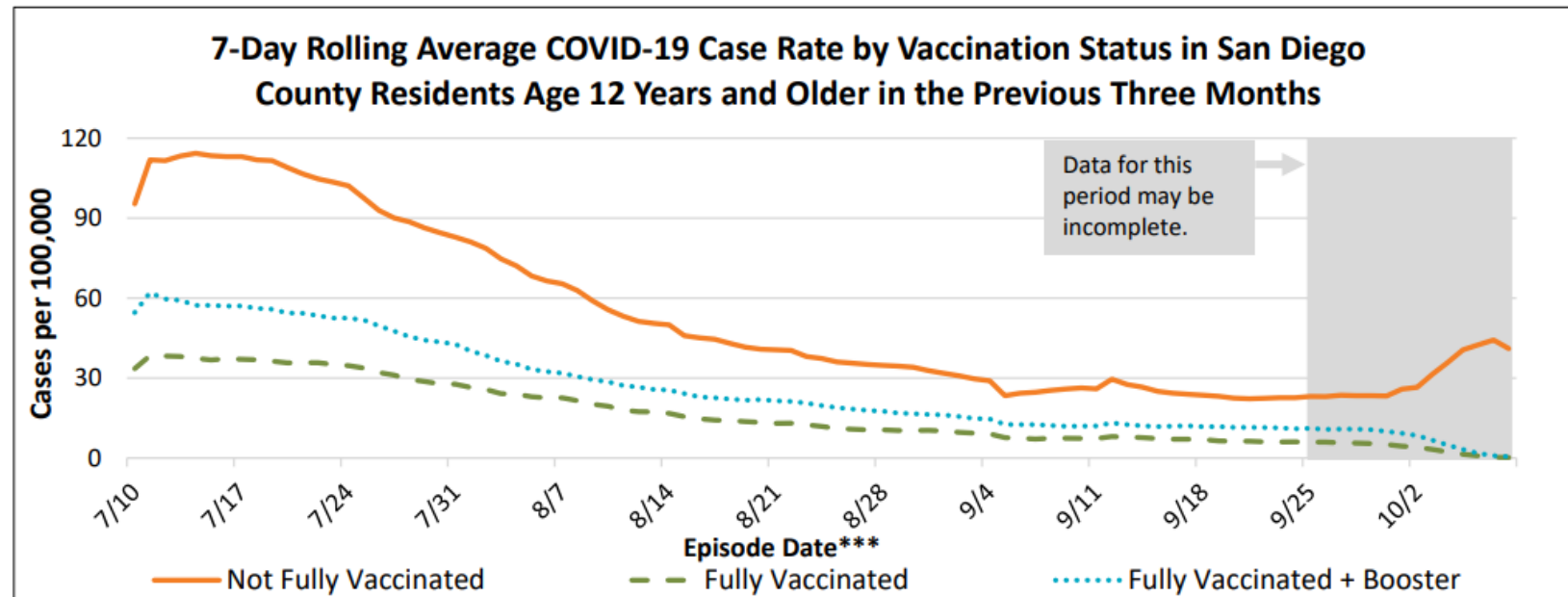
**Probable cases are antigen positive tests received since August 1, 2020.

COVID-19 Case Rate by Vaccination Status



Case rate for not fully vaccinated residents is **2 times higher** than fully vaccinated + booster residents

Average Daily Cases per 100,000 People 12 Years and Older (7-day average with 14-day lag: 9/18/2022 – 9/24/2022)		
Not Fully Vaccinated* (per 100K – 12+yrs)	Fully Vaccinated** (per 100K – 12+yrs)	Fully Vaccinated + Booster‡ (per 100K – 12+yrs)
22.65	6.08	11.01



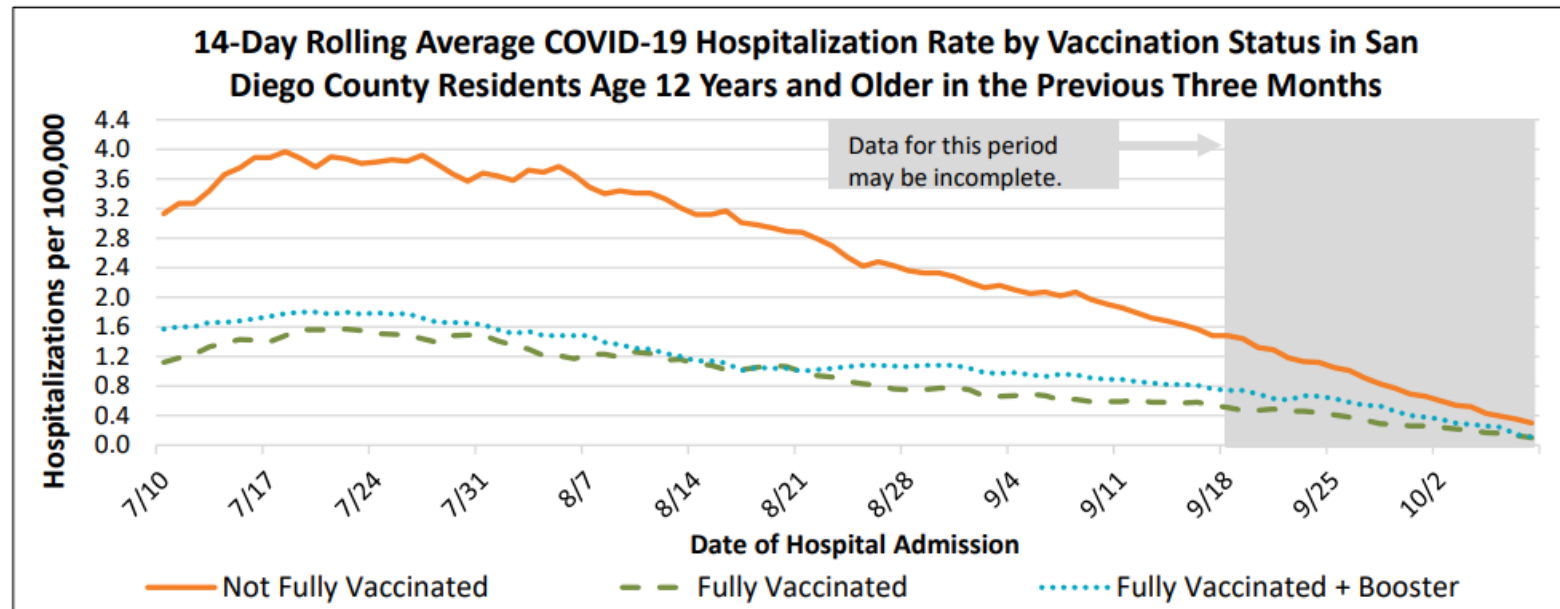
According to CDC, several factors likely affect crude case rates by vaccination and booster dose status, making interpretation of recent trends difficult. Starting 3/2/2022, data used is from persons 12 years of age and older instead of all ages. *Not fully vaccinated includes individuals with one dose of the two-dose series, no doses, or unknown vaccination status. Individuals who are not yet eligible for the vaccine are also included. **Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving the final dose of COVID-19 vaccine. ***If case did not have symptoms or illness onset date is unavailable, the earliest of specimen collection date, date of death, or date reported is used instead. ‡ Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving a booster dose of COVID-19 vaccine at least 2 months after a J&J vaccine or 5 months after a Pfizer or Moderna vaccine series. For more information see the [COVID-19 Watch](#) and the [Summary of Cases by Vaccination Status](#). Prepared by the County of San Diego. Data through 10/08/2022, updated 10/13/2022.

COVID-19 Hospitalization Rate by Vaccination Status



Hospitalization rate for not fully vaccinated residents is **2 times higher** than fully vaccinated + booster residents

Average Daily Hospitalizations per 100,000 People 12 Years and Older (14-day average with 21-day lag: 9/4/2022 – 9/17/2022)		
Not Fully Vaccinated* (per 100K - 12+ yrs)	Fully Vaccinated** (per 100K - 12+ yrs)	Fully Vaccinated + Booster*** (per 100K - 12+ yrs)
1.48	0.54	0.76



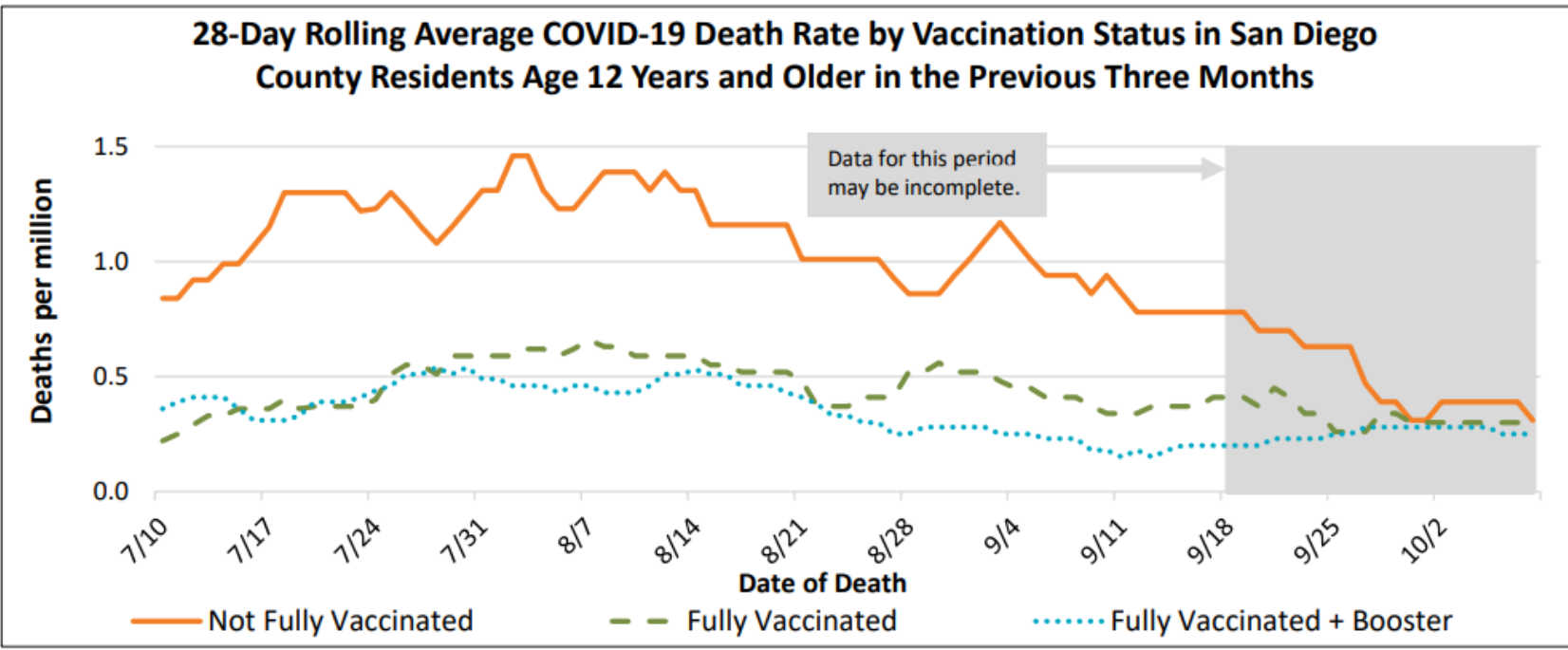
According to CDC, several factors likely affect crude case rates by vaccination and booster dose status, making interpretation of recent trends difficult. Limitations include higher prevalence of previous infection among the unvaccinated and un-boostered groups; difficulty in accounting for time since vaccination and waning protection; and possible differences in testing practices (such as at-home tests) and prevention behaviors by age and vaccination status. Starting 3/2/2022, data used is from persons 12 years of age and older instead of all ages. *Not fully vaccinated includes individuals with one dose of the two-dose series, no doses, or unknown vaccination status. Individuals who are not yet eligible for the vaccine are also included. **Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving the final dose of COVID-19 vaccine. ***Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving a booster dose of COVID-19 vaccine at least 2 months after a J&J vaccine or 5 months after a Pfizer or Moderna vaccine series. For more information see the [COVID-19 Watch](#) and the [Summary of Cases by Vaccination Status](#). Prepared by the County of San Diego. Data through 10/08/2022, updated 10/13/2022.

COVID-19 Deaths by Vaccination Status



Death rate for not fully vaccinated residents is **4 times higher** than fully vaccinated + booster residents

Average Daily Deaths per Million People 12 Years and Older (28-day average with 21-day lag: 8/21/2022 – 9/17/2022)		
Not Fully Vaccinated* (per million-12+years)	Fully Vaccinated** (per million-12+years)	Fully Vaccinated + Booster*** (per million-12+years)
0.78	0.41	0.20



*Not fully vaccinated includes individuals with one dose of the two-dose series, no doses, or unknown vaccination status. Individuals who are not yet eligible for the vaccine are also included. **Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving the final dose of COVID-19 vaccine. ***Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving a booster dose of COVID-19 vaccine at least 2 months after a J&J vaccine or 5 months after a Pfizer or Moderna vaccine series. For more information see the [COVID-19 Watch](#) and the [Summary of Cases by Vaccination Status](#). Prepared by the County of San Diego. Data through 10/08/2022, updated 10/13/2022.

COVID-19 Spread in San Diego County: R-effective Trend

- The effective reproduction number (R effective or R-eff) is the average number of people each infected person will pass the virus onto and represents the rate at which a virus is spreading. If R-eff >1, the number of infected persons will increase. If R-eff <1, the number of infected persons will decrease. If R-eff =1, the number of infected persons is constant.
- R effective should be interpreted with caution. It is based on a theoretical set of assumptions to derive an average number across San Diego County. It does not take into account factors such as local population density or social behavior.
- These R effective estimates come from the California COVID Assessment Tool Nowcasts (<https://calcat.covid19.ca.gov/cacovidmodels/>). Each estimate on the graph comes from a different group with different modeling methods. The ensemble takes the median of all the nowcasts available on a given date and smooths it with a three-day moving average.

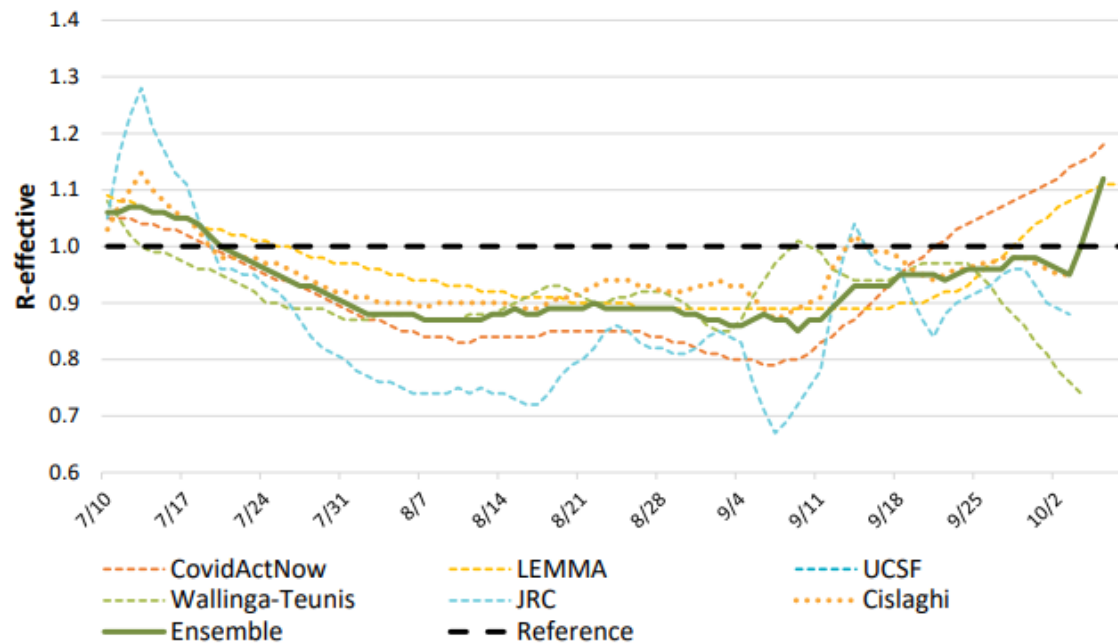


Figure 5. R-effective Trend in San Diego County Over the Past Three Months

Latest estimate of R-effective is:

1.12

Spread of COVID-19 is likely increasing



Source: <https://calcat.covid19.ca.gov/cacovidmodels/>

Data through
10/08/2022

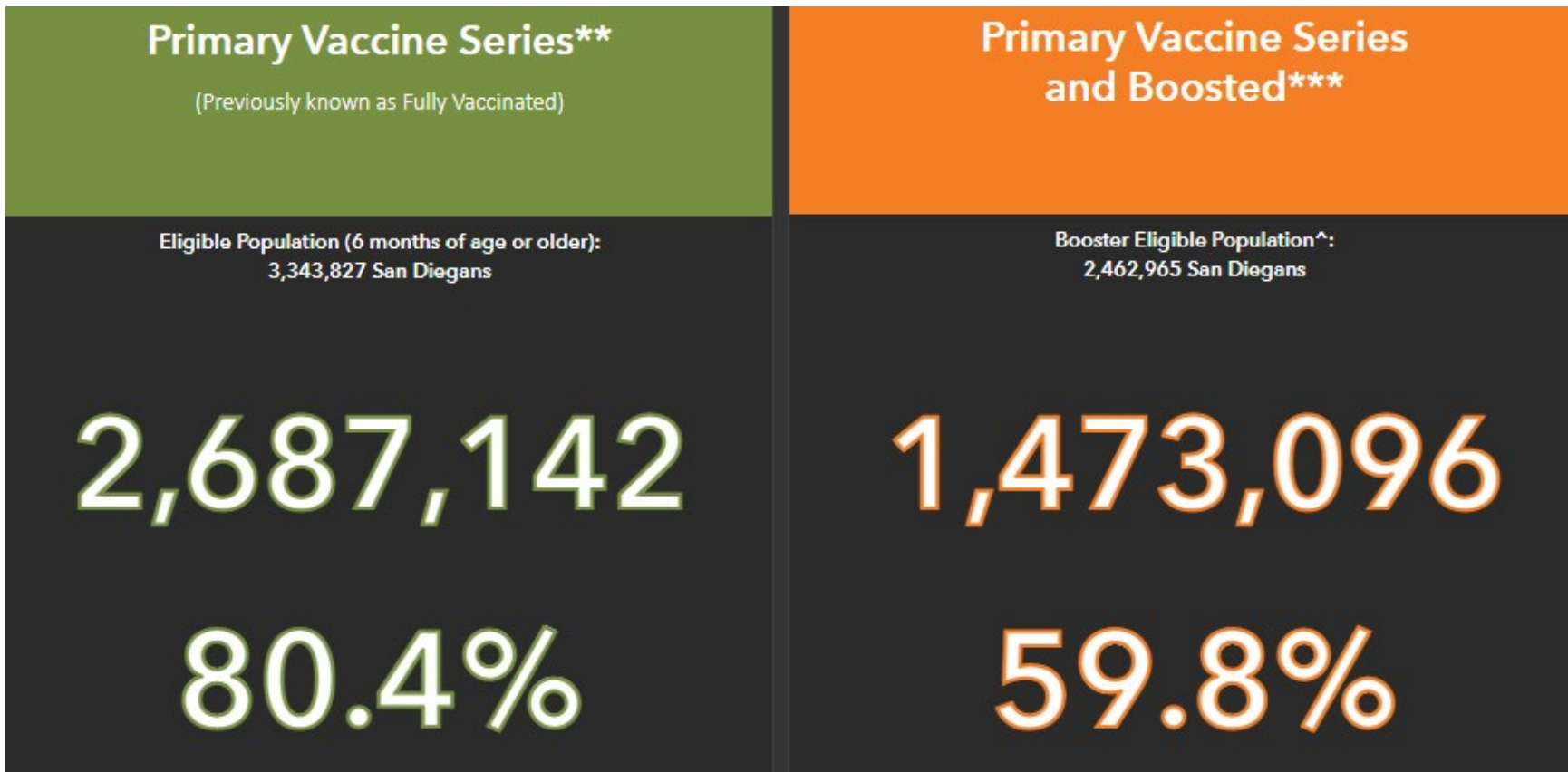
Metrics Beyond the Blueprint



Date Updated	Dates of Interest for Analyses	Average Daily Case Rate per 100,000*	Testing Positivity Percentage	Health Equity Testing Positivity Percentage	Testing Rate per 100,000
9/1/2022	8/14-8/20	20.3	10.1%	11.3%	232.2
9/8/2022	8/21-8/27	17.0	8.6%	8.9%	229.8
9/15/2022	8/28-9/3	14.1	7.4%	7.9%	232.0
9/22/2022	9/4-9/10	11.3	6.8%	6.7%	210.9
9/29/2022	9/11-9/17	10.9	5.8%	6.2%	241.1
10/6/2022	9/18-9/24	10.1	5.7%	6.0%	230.6
10/13/2022	9/25-10/1	9.4	5.5%	5.3%	204.6

Data are preliminary and subject to change. *Previously referred to as the unadjusted case rate under the Blueprint for a Safer Economy Tier Framework. All metrics calculated using local data using a 7-day daily average with a 7-day lag; case rate uses episode date and testing metrics use specimen collection date. California Department of Finance 2020 Projection Population Estimate for San Diego County is 3,370,418. Prepared by County of San Diego, Emergency Operations Center, 10/13/2022.

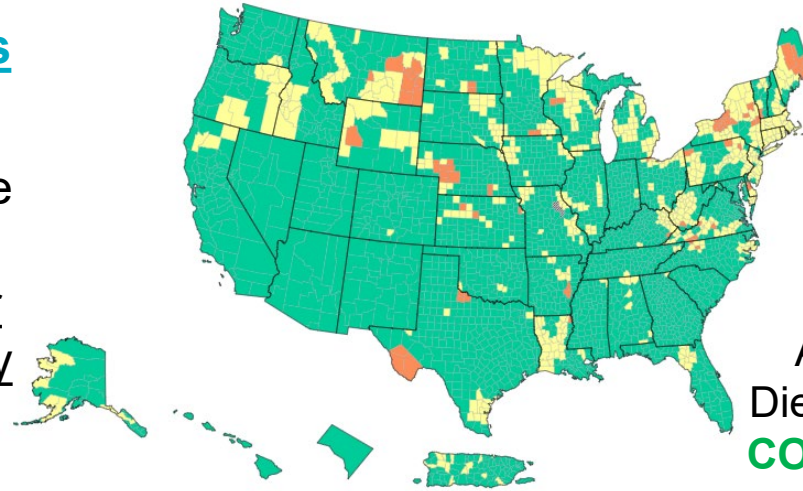
County of San Diego COVID-19 Vaccination Dashboard



Fully Vaccinated is based on receiving either a single dose of Johnson & Johnson or both doses of Moderna or Pfizer, therefore completing the recommended vaccination series. However, individuals are not considered fully vaccinated until two weeks after completing the series, as defined by the Centers for Disease Control and Prevention (CDC). *Booster doses includes only doses recorded in CAIR2 (excludes Veterans Affairs and Department of Defense). ^Booster Eligible Population is updated each week and is the number of San Diego County residents who are fully vaccinated and eligible to receive a booster dose. As of 5/18/2022, individuals are eligible for a booster dose if 1) they are 5 years of age and older, AND 2) at least 5 months have passed after the vaccination date of the second mRNA dose (Moderna or Pfizer-BioNTech) or at least 2 months have passed since the first Janssen/Johnson & Johnson dose. Eligible Population for the primary series (at least one dose and fully vaccinated categories) expanded to 6 month and older as of 6/17/2021. Eligible Population is San Diego County residents age 6 months and older, or 3,343,827 individuals. The total San Diego County population is 3,343,827. Population estimates are California Department of Finance 2021 Population Estimates, July 2021 release. Updated 10/13/2022.

COVID-19 Community Levels

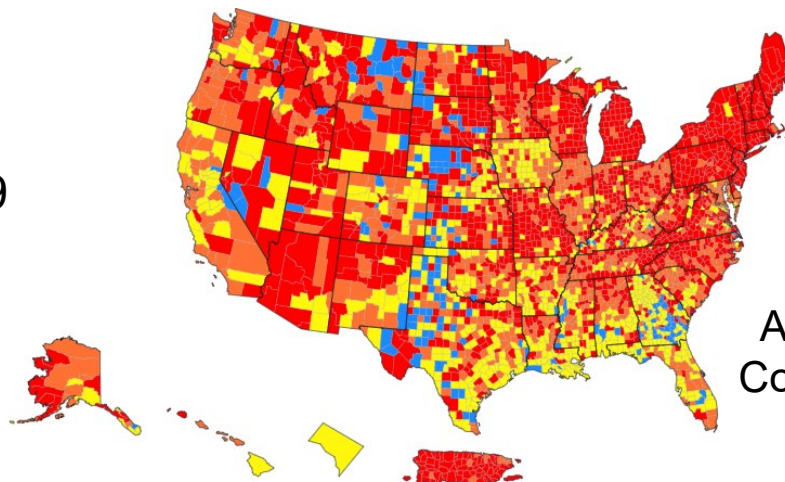
Levels represent COVID-19 hospitalizations, intensive care unit staffing, and COVID-19 case rates. Reflects how your community will be impacted by COVID-19.



As of 10/13, San Diego County = **LOW COMMUNITY LEVEL**

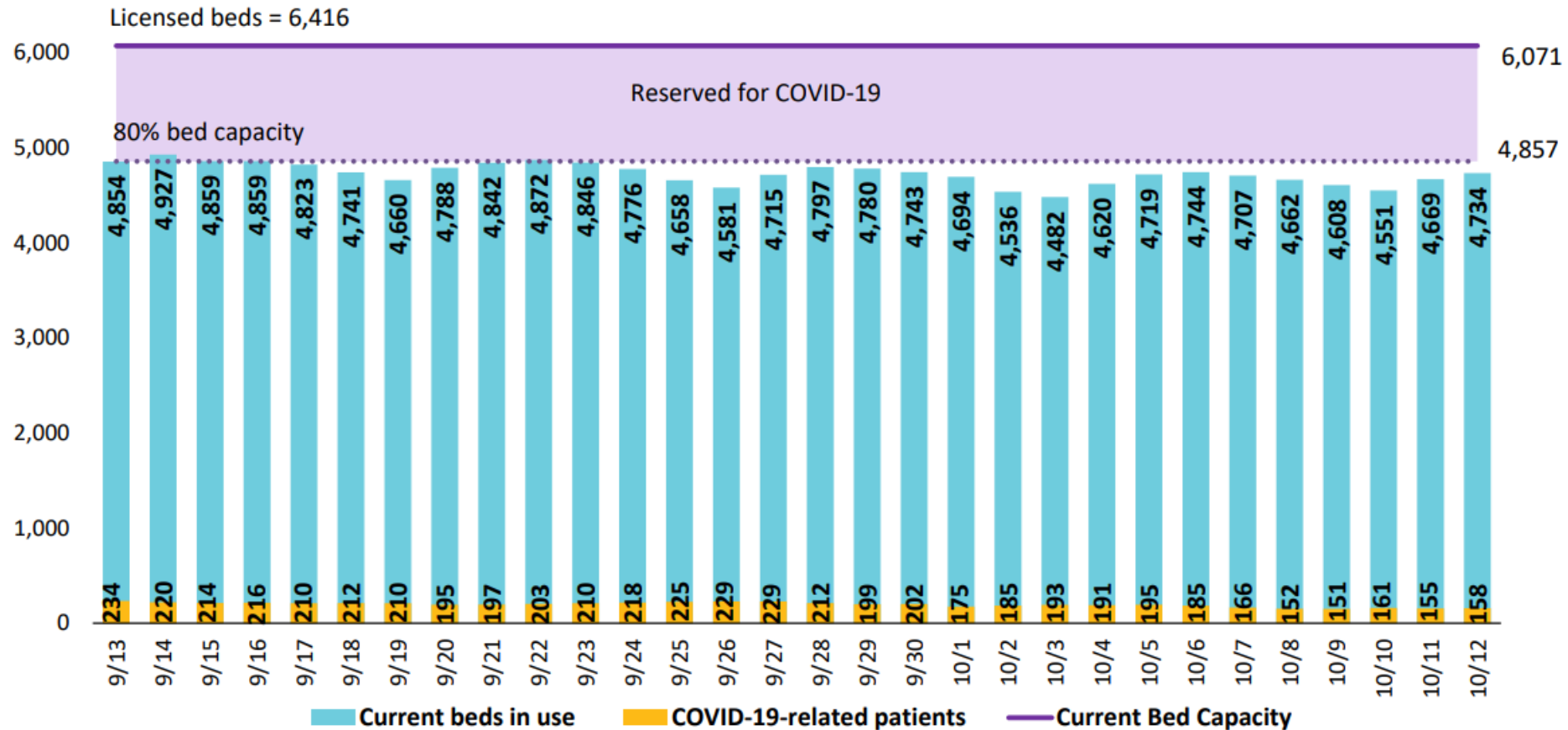
Community Levels of Transmission

Levels represent COVID-19 transmission and cases in the county. Reflects your risk of getting COVID-19.



As of 10/13, San Diego County = **SUBSTANTIAL TRANSMISSION**

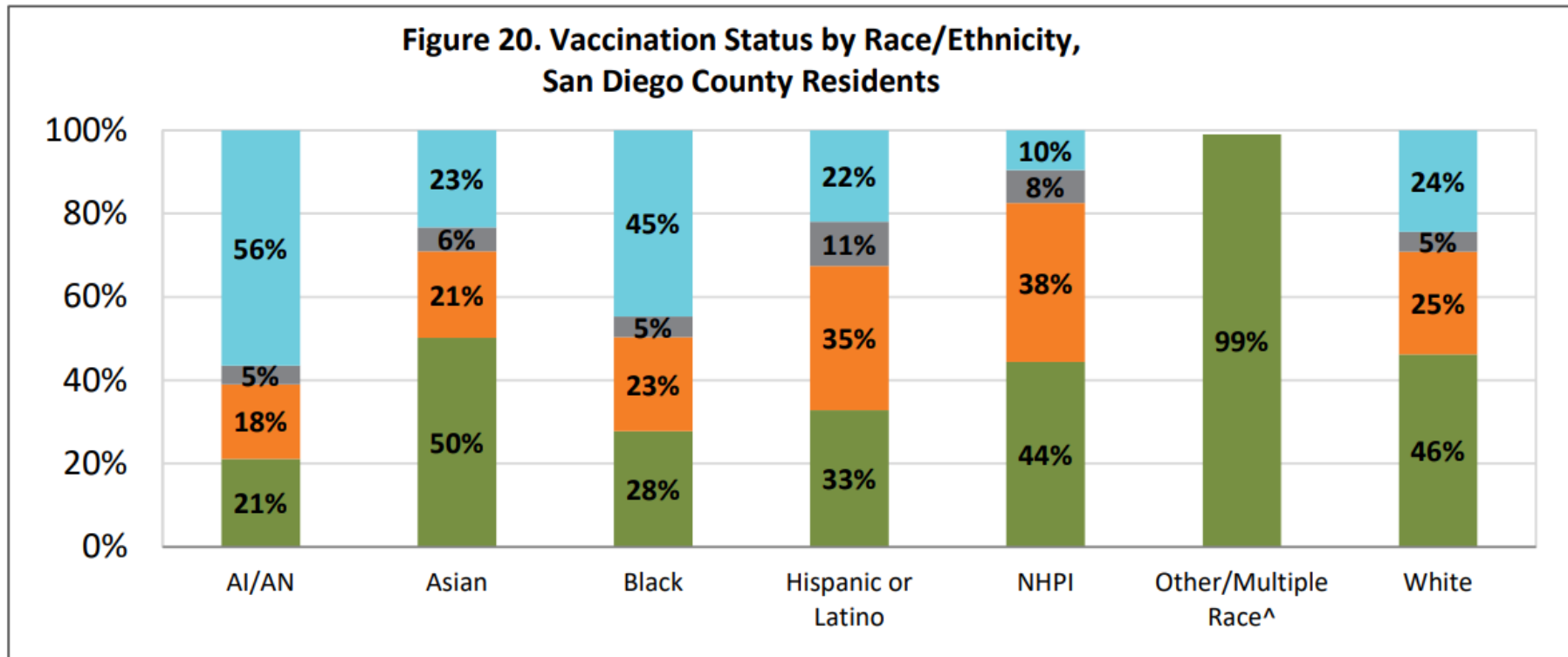
COVID-19 Daily Hospital Census, San Diego County Includes Cases and Suspect COVID-19 Patients



Data are preliminary and subject to change; data from hospitals reporting directly to the County of San Diego; includes cases and suspect patients for non-federal hospitals for San Diego County residents and non-residents; current bed capacity for non-federal hospitals in San Diego County. Prepared by County of San Diego, Emergency Operations Center, 10/13/2022.

COVID-19 Vaccinations by Race/Ethnicity and Health Equity

■ Fully Vaccinated + Booster
 ■ Fully Vaccinated
 ■ Partially Vaccinated
 ■ Not Vaccinated

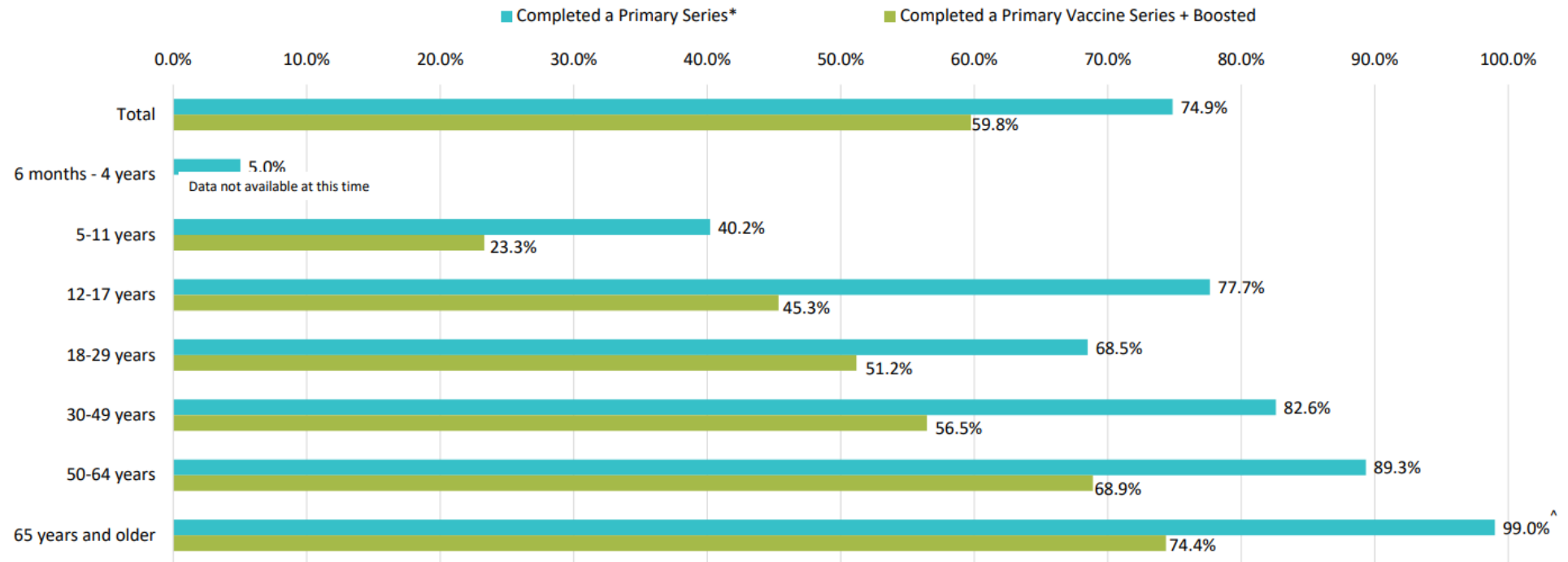


^The percentage and rate of the population vaccinated with at least one dose of COVID-19 vaccine may approach, or exceed, 99% or 999 per 1,000 San Diego residents aged five years and older. The most recent race/ethnicity populations are 2019 estimates, which may underestimate the current population. When these demographics are analyzed, the population estimates may not reflect social and environmental changes of a community, possibly leading to an under- or overestimate of a population. Individuals vaccinated by Veterans Affairs or Department of Defense are not included. COVID-19 vaccine is not approved for those under age five at this time. Data source: California Immunization Registry, SANDAG 2019 Population Estimates (Prepared June 2020). Total population five years of age and older=3,144,061. Population estimate of 50,289 individuals do not reside in a census tract with a Healthy Places Index score. Data through 10/13/2022

COVID-19 Vaccinations by Age Group



Percent of Eligible Population Vaccinated by Age Group

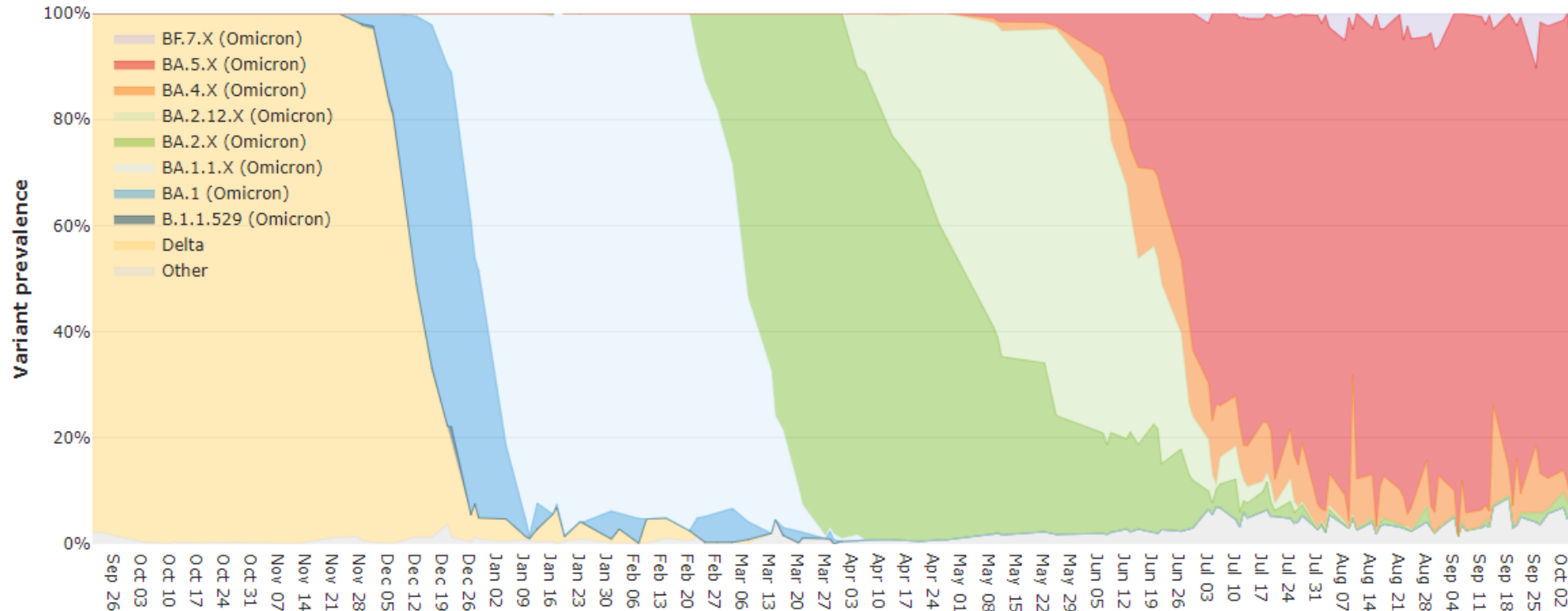


Individuals vaccinated by Veterans Affairs or Department of Defense are not included. COVID-19 Vaccine is not approved for individuals under the age of 6 months old at this time. Data are preliminary and subject to change. Data source: California Immunization Registry (CAIR2), SANDAG 2019 Population Estimates (Prepared June 2020). Total population 6 months of age and older=3,351,784. *Fully Vaccinated is based on receiving either a single dose of Johnson & Johnson or both doses of Moderna or Pfizer, therefore completing the recommended vaccination series. However, individuals are not considered fully vaccinated until two weeks after completing the series, as defined by the Centers for Disease Control and Prevention (CDC). **Booster eligibility is updated each week as the number of San Diego County residents who are fully vaccinated and eligible to receive a booster dose. Individuals are eligible for a booster dose if: 1) they are 5 years of age and older AND 2) at least 5 months have passed after the vaccination date of the second mRNA dose (Moderna or Pfizer-BioNTech) or at least 2 months have passed since their first Janssen/Johnson & Johnson dose. There may be instances where the booster eligible population exceeds the 2019 population estimates provided by SANDAG. ^The percentage and rate of the population vaccinated with at least one dose of COVID-19 vaccine may approach, or exceed, 99% or 999 per 1,000 San Diego residents aged 5 years and older. The most recent age, gender, region, and race/ethnicity population are 2019 estimates, which may under estimate the current population. When these demographics are analyzed, the population estimates may not reflect social and environmental changes of a community, possibly leading to an under- or overestimate of a population. Data through 10/12/2022, updated 10/13/2022.

Summary of Variant Cases – Wastewater Lineage Prevalence



Wastewater Lineage Prevalence Over Time in San Diego



Source: [SEARCH Wastewater Surveillance Dashboard](#), Accessed 10/13/2022.

†Confirmed cases are based on whole genome sequencing (WGS) results, which are not available until approximately 2-4 weeks after initial testing. These results do not represent all variant cases in San Diego County. Not all confirmed case samples are sequenced and not all sequencing results are immediately available to Public Health Services. Case counts will be updated as sequencing results become available. See CDC variant website for more information about variants, including classifications and definitions. Source: San Diego County Communicable Disease Registry. Prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Epidemiology and Immunization Services Branch

- A recent study evaluated over 880,000 children 5-11 years of age.
 - There were 7 deaths, and all were unvaccinated.
 - The vaccine was over 75% effective at preventing hospitalization 4-5 months after receiving the vaccine series.
 - 1 in 200 unvaccinated kids vs 1 in 1000 vaccinated kids were hospitalized.
 - Prior infection is protective, but it is even more protective if the child is also vaccinated.
- Vaccination rates in children are low, and now there is more data to prove it is safe and effective

Effects of Vaccination
and Previous
Infection on Omicron
Infections in Children

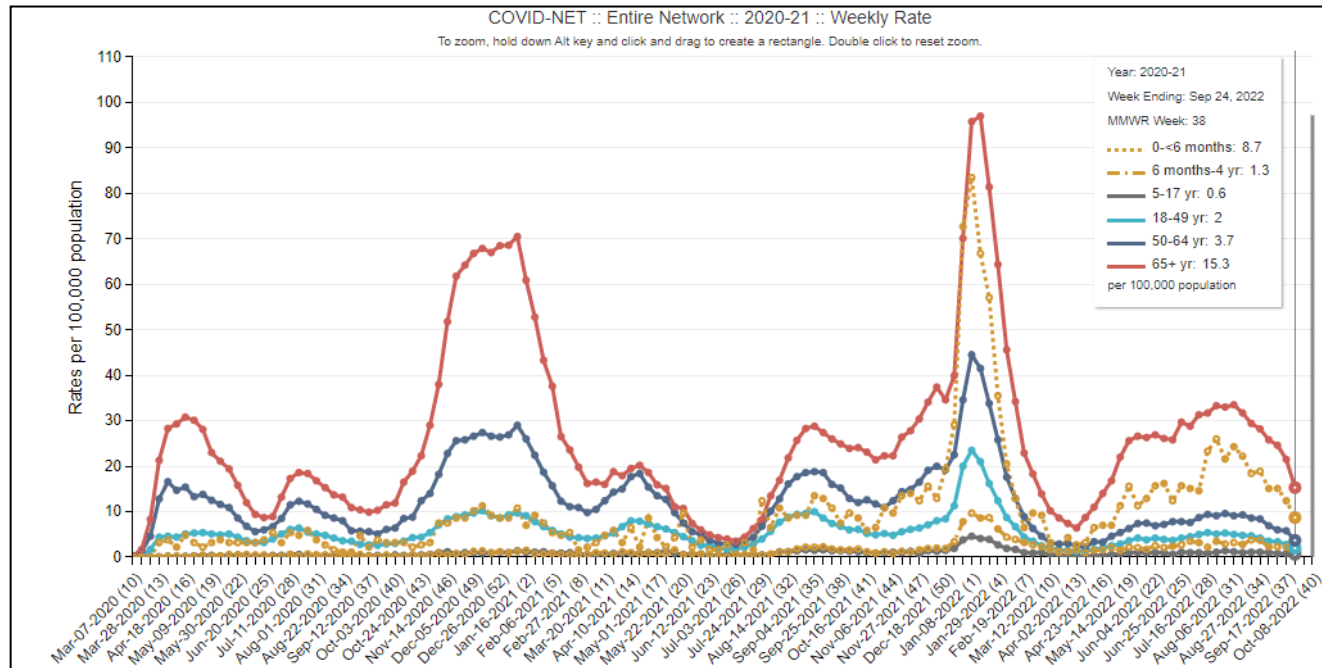


Children and COVID-19: State-Level Data Report



- For the week ending September 22nd, about 55,000 COVID-19 cases were reported among children and teens, the fourth consecutive decrease of weekly reported cases.
 - Almost 14.7 million children have tested positive for COVID-19 since the beginning of the pandemic.
 - Children represent 18.4% of all COVID-19 cases.
- Only 31.4% of 5–11-year-olds and 60.7% of 12–17-year-olds have been fully vaccinated against COVID-19.

INFANT HOSPITALIZATION FROM COVID-19



During the pandemic, over 1% of all infants followed by the [CDC COVID-NET data tracker](#) have been hospitalized in their first 6 months of life.

- During the peak of Omicron, 0-5 month olds were hospitalized at a higher rate than 65-74 year olds.
- Infants are far less likely to have any immunity from COVID-19 and are fragile.
- What can be done?
 - Wear masks in crowded settings
 - Encourage pregnant and lactating people to be vaccinated/boosted
 - Vaccinate children as young as 6 months

HOSPITALIZATION AND SEVERE DISEASE

- During the Omicron surge the hospitalization rate for unvaccinated children was 2.1 times that of children who had been vaccinated
- Additionally, rates of MIS-C were lower in vaccinated pediatric patients with 91% effectiveness of 2 doses of the Pfizer vaccine
- <https://www.who.int/news/item/11-08-2022-interim-statement-on-covid-19-vaccination-for-children>

SASEA WASTEWATER

Human wastewater PCR from Dr. Robert Knight Laboratory, UCSD

Approved by UCSD IRB as a deidentified public health intervention (with parental consents required for student COVID-19 testing)

2020 involved 15 lower socio economic primarily elementary schools expanded to 30 in 2021

Human nasal swab and environmental testing at SD County Public Health Laboratory

2 school year contract ending Sept 2022

Figure 1: Site selection criteria: Incidence rate quartile based on 10/6/21 data and % enrolled students eligible for free and reduced price meals. Selected site enrollment boundaries in purple

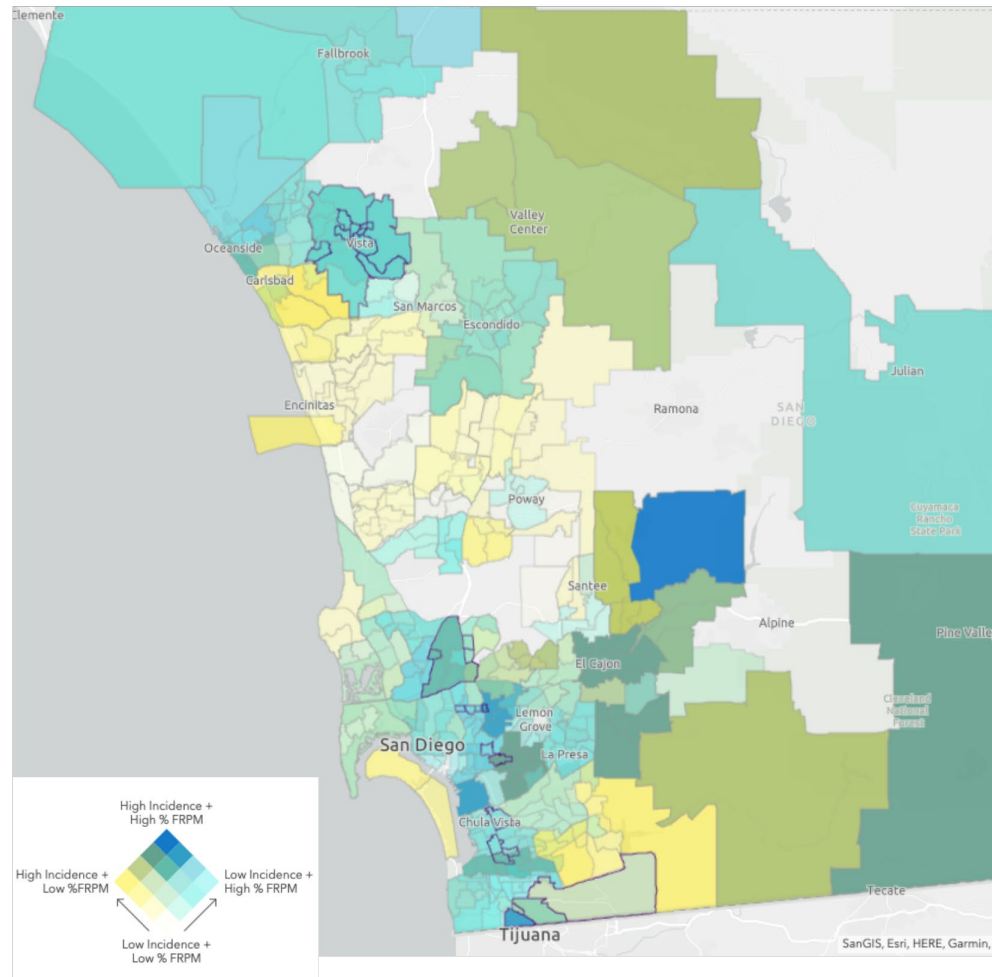
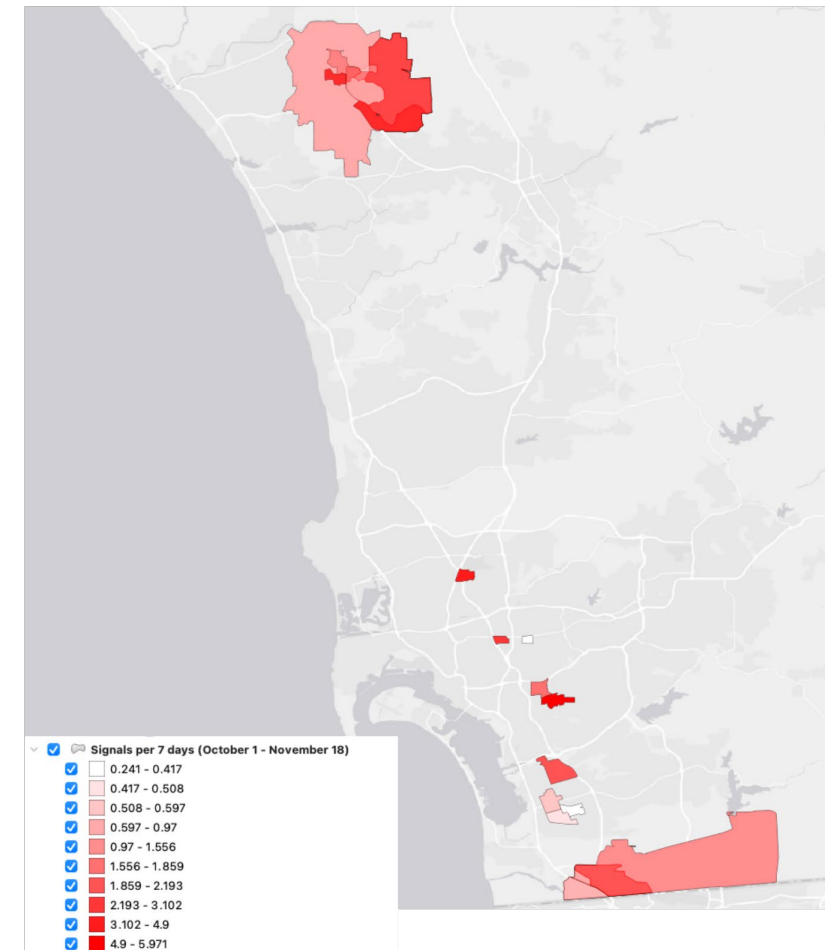


Figure 2: SASEA enrolled site wastewater signal rates per 7-days, October 1 - November 18





**LIVE WELL
SAN DIEGO**



sasea
Safer at School Early Alert

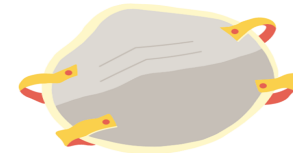
UC San Diego
Herbert Wertheim
School of Public Health and
Human Longevity Science

What to do if your child tests positive

- The sick person and those who are caring for the sick person should wear a KN95 mask or a disposable surgical mask covered with a fabric mask.
- As much as possible, the sick person should stay in a space separate from others. If possible, avoid sharing bathrooms or eating areas.
- Make sure the sick person's space is circulating fresh air by opening windows, or turning on an air purifier or fan with an air filter.
- Avoid sharing personal items like cups, dishes, silverware, and bedding.

Seek emergency care if they show signs of:

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Pale, gray, or blue-colored skin, lips, or nail beds, depending on skin tone



Where to get a KN95 mask

- Wellbefore.com
- Projectn95.org

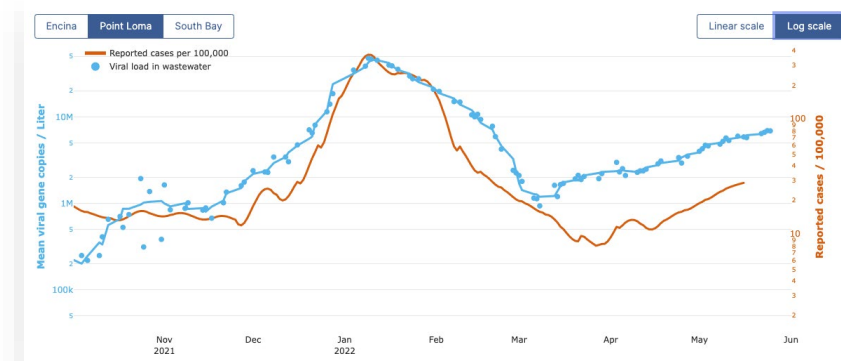
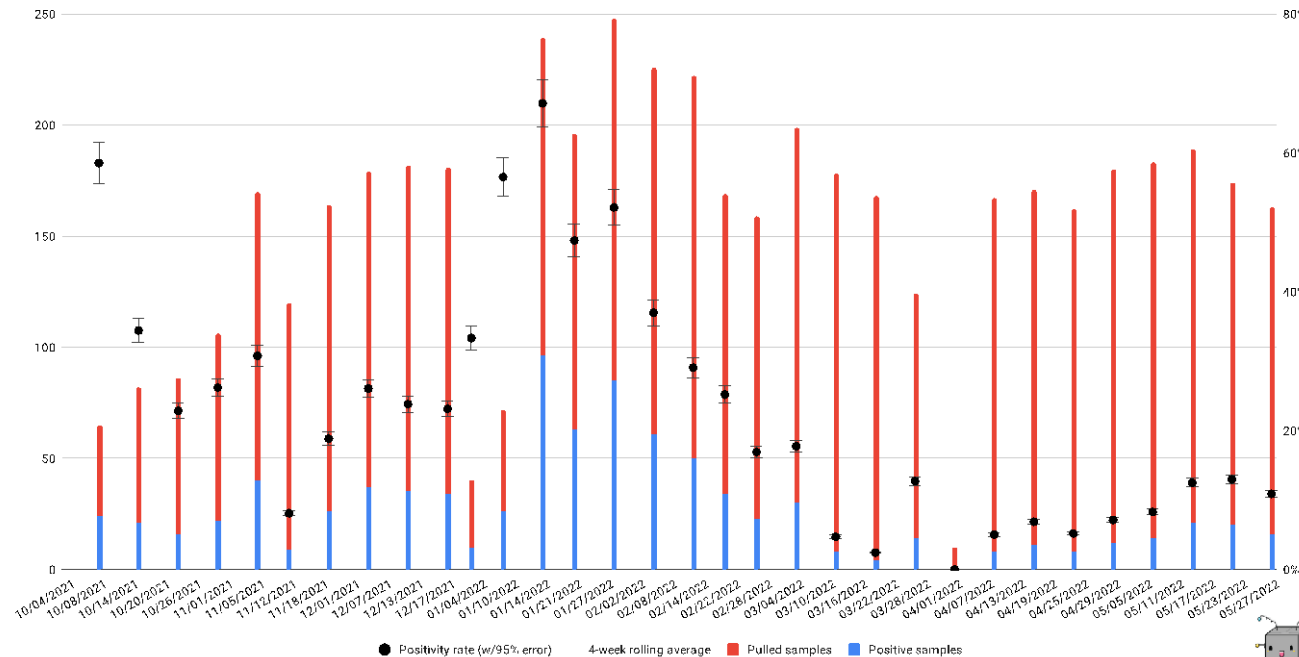
Source: Centers for Disease Control and Protection

SASEA Overall Data



Data Courtesy Dr. Rebecca "Becca" Fielding Miller, PhD University of California San Diego

SASEA Weekly Samples Pulled + Positivity Rate



SASEA data probably predictive of school outbreaks by 1 week (Delta variant), certainly reflective of community COVID-19 increase in cases

CAN WE USE ABSENTEE DATA TO PREDICT COVID-19 AND OTHER DISEASE

- Absenteeism could be used as a proxy for disease
- Dependent upon individual disease pattern (incubation/sx etc)
- Needs real time monitoring and evaluation
- More research needed
- Recent pilot study in England linking online ap to cause of absence
 - Large increase in the number of absence reports in March 2020 compared to March 2019 corresponding to the first COVID-19 pandemic wave in England
 - [Developing a sentinel syndromic surveillance system using school-absenteeism data, example monitoring absences over the 2020 COVID-19 pandemic - PMC \(nih.gov\)](#)

K-12 SCHOOLS AND EARLY CARE AND EDUCATION PROGRAMS

- Encourages staying up to date on COVID-19 vaccines
- Staying home when sick
- VENTILATION
- Hand Hygiene and Respiratory Etiquette
- Cleaning
- Evaluation of COVID-19 Community Levels

IMPROVED/OPTIMIZED VENTILATION IMPROVE AIR QUALITY

- Reduces the risk of germs and contaminants in the air
- U.S. Department of Education has ESSER Programs to support ventilation improvements, repairs, upgrades, and replacements
- MERV-13 filters
- Portable air cleaners
- Upper-room germicidal ultraviolet irradiation systems
- Opening windows and doors

DECREASED DISEASE AND IMPROVED HEALTH/LEARNING

- COVID-19 incidence was found to be 39% lower in schools that improved ventilation, and this included dilution methods only or dilution and filtration
- According to the EPA children with asthma aged 5-17 missed 13.8 million days of school per year
- Loss of learning associated with absenteeism

NEXT STEPS



Continued close collaboration between SDCOE and the County Department of Public Health

Evaluation of areas of need

Work collaboratively to provide resources and information for potential health funding

Expand beyond COVID-19 and work with Live Well San Diego on projects to protect the physical and mental health of our K-12 population



SCHOOL HEALTH SUMMIT



Partnering with Schools to Improve Student Wellness

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Tools for Schools Resources

Focus Areas

Strategies

HOME | LIVEWELLSCHOOLS | SCHOOLSUMMIT

PARTNERSHIP WITH SDCOE

Save the Date for the 2022 Summit: December 7 at the San Diego Convention Center

The 2021 School Summit featured the following informative sessions, led by an engaging group of speakers.

NEXT STEPS

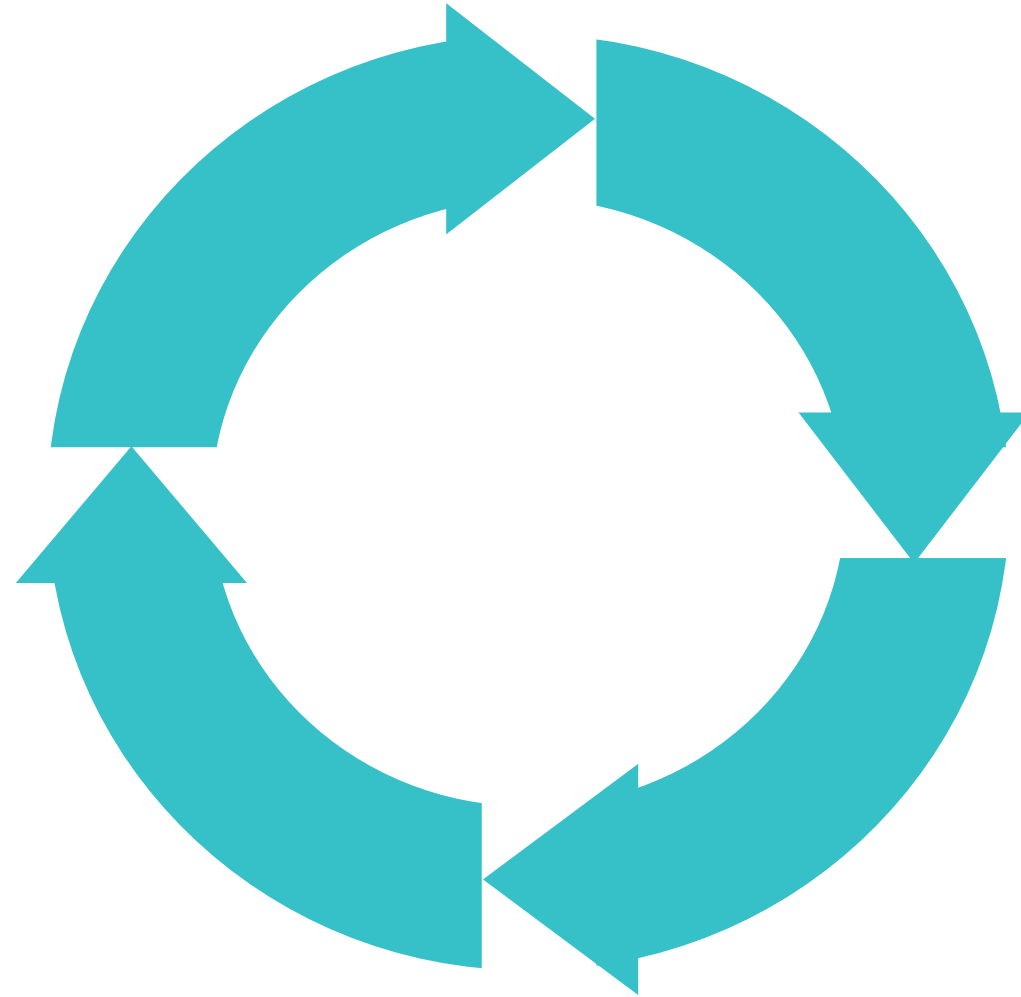


State and County
Guidance

SDCOE

Local Healthcare
Providers

San Diego
County Health
Department



SUGGESTIONS?



How can we partner with our healthcare providers to ensure a continuum of health for our vulnerable populations?

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