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# COVID-19 FAMILY INFORMATION SESSION

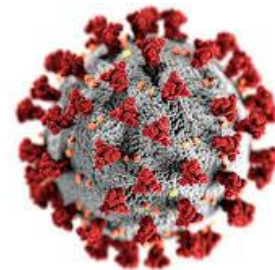
March 22nd 2021

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# COVID 19: Science and Mitigation

Presented by members of the  
UCSF Collaborative on Reopening Education Safely (CARES)  
\*\*\*



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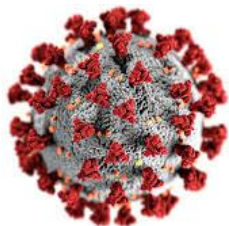
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# Presentation based on UCSF Pediatric Advisory Task Force



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\*\*\*

Center for Child and  
Community Health



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**OAKLAND UNIFIED  
SCHOOL DISTRICT**

Community Schools, Thriving Students



# Important Reminders

- Our goal is to partner with BUSD families, students, teachers and staff in providing accessible, trustworthy scientific information to reduce COVID transmission risk
- We are independent medical providers here to offer expertise and support for better understanding existing data and guidelines
- **This presentation addresses how to reduce your risk when schools reopen, not whether or when schools should reopen**
- New data comes out constantly, so what may be true today can change tomorrow
- These slides were updated 3/17/2021

# Values of Trauma-Informed Systems



# Transparency



## Safety



# Racial Equity



## Collaboration and Empowerment



## Recovery and Resilience



Kadir Nelson, *After the Storm*  
<https://store.kadirnelson.com/product/afterthestorm/117>

# Agenda



## HEALTH EQUITY IN COVID

- Communities disproportionately impacted
- Importance of addressing root causes of inequities

## COVID TRANSMISSION

- How COVID is spread

## RISK REDUCTION

- Layers of action you can take for defense

## VARIANTS

- What we know about mutated versions of the virus

## Q & A

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# COVID-19 WHERE ARE WE NOW



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# CASES IN ALAMEDA COUNTY OVER PAST 14 DAYS



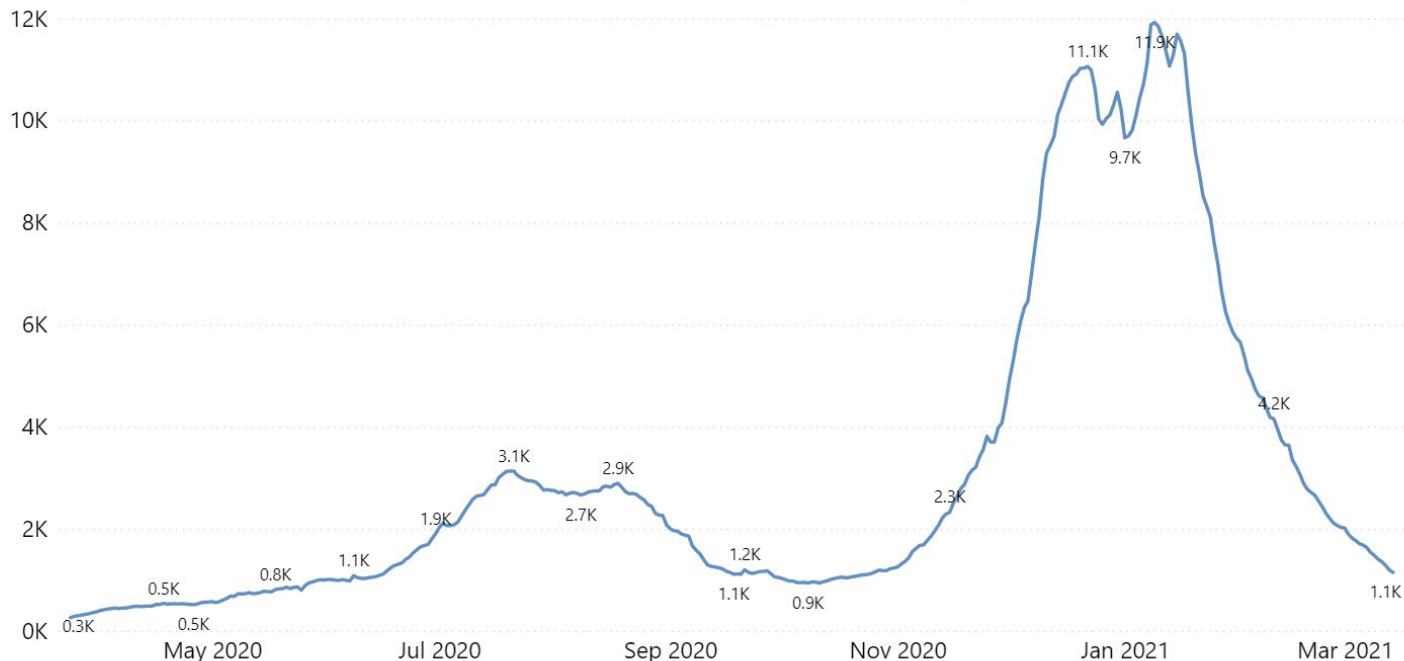
Cases

Case Rates

Deaths

Death Rates

Total Cases Over Previous Fourteen Days







# Alameda County COVID-19 Tier Metrics

Current Tier  
Status

2

## Understanding our County's Status

Every county is assigned a tier by the State of California according to its Blueprint for a Safer Economy. The state reviews data weekly and County Tier assignments may occur any day of the week and may occur more than once a week when CDPH determines immediate action is needed.

Counties may be moved back more than one tier if CDPH determines a need for intensive intervention. Key considerations include the rate of increase in new cases and/or test positivity, public health capacity, and other epidemiological factors. Counties may move with one week of worsening metrics (as opposed to the usual two weeks during times of stability). The most recent reliable data will be used to complete the assessment. [Click to learn more about tier assignments and metric details.](#)

Adjusted Cases per Day  
per 100,000

3.6

Unadjusted: 5.6

This is the number of new cases of COVID-19 reported in Alameda County per day per 100,000 residents, averaged over 7 days. The number is calculated using a 4-day delay to ensure enough time for accurate reporting.

The State adjusts the case rate by a corrective factor that compares testing in each county to the statewide testing average. Testing beyond the statewide average adjusts a county's case rate downward. The unadjusted case rate for Alameda County is also posted here. [Click to learn more about tier assignments and metric details.](#)

	Tier 1 Widespread	Tier 2 Substantial	Tier 3 Moderate	Tier 4 Minimal
Adjusted Cases per Day per 100,000	>7	4 to 7	1 to 3.9	<1
Overall Test Positivity Rate	>8%	5% to 8%	2% to 4.9%	<2%
Lowest HPI Quartile Test Positivity Rate	>8%	5.3 to 8*	2.2 to 5.2%	<2.2%

Overall Test Positivity  
Rate

1.5%

This is the percentage of tests that were positive among all tests conducted in Alameda County residents over a 7-day period. The number is calculated using a 4-day delay to ensure enough time for accurate reporting. [Click to learn more about tier assignments and metric details.](#)

Lowest HPI Quartile Test  
Positivity Rate

2.4%

This is the percentage of tests that were positive among all tests conducted in residents of the least advantaged census tracts in Alameda County over a 7-day period. The State uses the [Healthy Places Index](#) (HPI) to identify these census tracts. The HPI is a composite measure of different indicators that reflect geographic socioeconomic disadvantage. In general, the neighborhoods with the lowest quartile HPI scores also have the highest COVID-19 rates, and there is significant overlap with the neighborhoods identified by Alameda County as being high-priority areas.

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# HEALTH EQUITY AND COVID-19



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# Role of Racism and Medical Abuse

- **Mistrust of healthcare systems and medicine** stems from historical and ongoing experiences of abuse and harm
- Poverty, educational gaps, housing instability, and lack of healthcare put **racial and ethnic minority groups at higher COVID risk**
- Some strategies to slow spread **harmed impacted communities** unintentionally due to lost wages, increased stress and other consequences

Death rate for  
Latino people is  
**22% higher** than  
statewide

Deaths per 100K people:

**162** Latino  
**133** all ethnicities

Case rate for  
Pacific Islanders  
is **32% higher**  
than statewide

Cases per 100K people:

**11,381** NHPI  
**8,653** all ethnicities

Death rate for  
Black people is  
**6% higher** than  
statewide

Deaths per 100K people:

**141** Black  
**133** all ethnicities

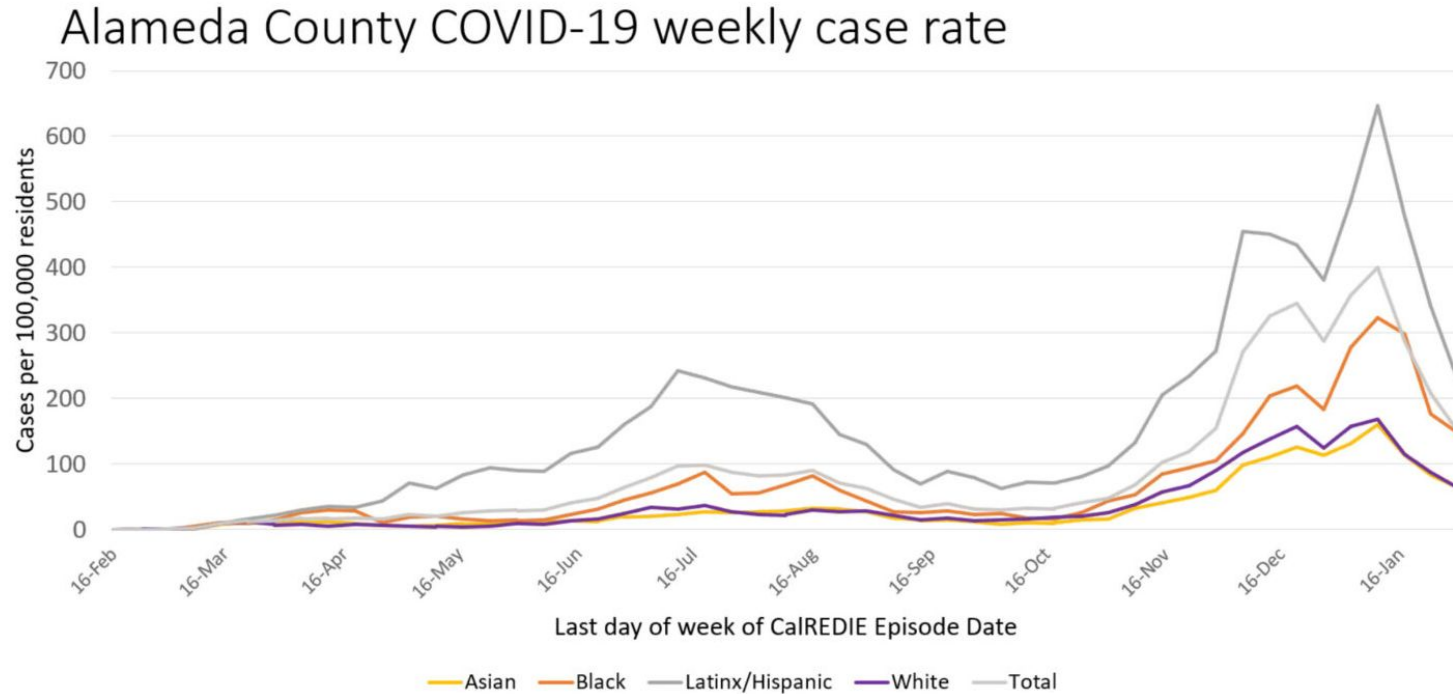
Case rate for  
communities  
with median  
income <\$40K is  
**38% higher** than  
statewide

Cases per 100K people:

**11,901** income <\$40K  
**8,653** all income brackets

COVID-19 has highlighted existing inequities in health. Many of these inequities are the result of structural racism. One form this takes is the unequal distribution of and access to health care resources.

# Case Rates by Race and Ethnicity



Includes City of Berkeley

Cases source: CalREDIE Data Distribution Portal download February 11, 2021 8:00 am.



Alameda County  
Health Care Services Agency



Alameda County Public Health Department  
Celebrating Healthy People in Healthy Communities

# Unequal Mental Health Impacts

**Students with disabilities, Black and Latinx, English learners, unhoused and LGBTQ+ youth and families face greater mental health challenges.**

Issues*	Increased Depression and Anxiety**	Protective Factors
Grief and loss	1 in 3 high school students report feeling chronically sad and hopeless	Relationships
Isolation	Over half of LGBT students report feeling chronically sad and hopeless	Structure and routine
Multiple people sharing limited space at home	1 in 6 high school students report having considered suicide in the past year	Exercise
Lack of access to health care, childcare, employment, distance learning tools	1 in 3 LGBT students report having considered suicide in the past year	Connection to something bigger

\*Source: <https://doi.org/10.1016/j.jaac.2020.05.009>.

\*\*Source: [https://www.mhsoac.ca.gov/sites/default/files/schools\\_as\\_centers\\_of\\_wellness\\_final.pdf](https://www.mhsoac.ca.gov/sites/default/files/schools_as_centers_of_wellness_final.pdf)

# COVID Science and Equity Focus

"We started with different levels of awareness at the beginning of the pandemic about the legacy of systemic, structural racism and inequality...It does feel different, now. There is this awareness, in some an awakening, and in everybody a reckoning.

**What keeps me up at night is misinformation and disinformation, and how fast it's moving.** I wouldn't have predicted that in the throes of a national pandemic, there would be actors pushing intentional misinformation, often targeted at the very groups that are suffering the greatest.

**I'm hoping, as part of the new normal, that we really restore trust in...science and evidence and data."**



-- Marcella Nunez-Smith, MD, MHS  
Co-Chair, President Biden's COVID  
Equity Task Force

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# COVID-19 TRANSMISSION

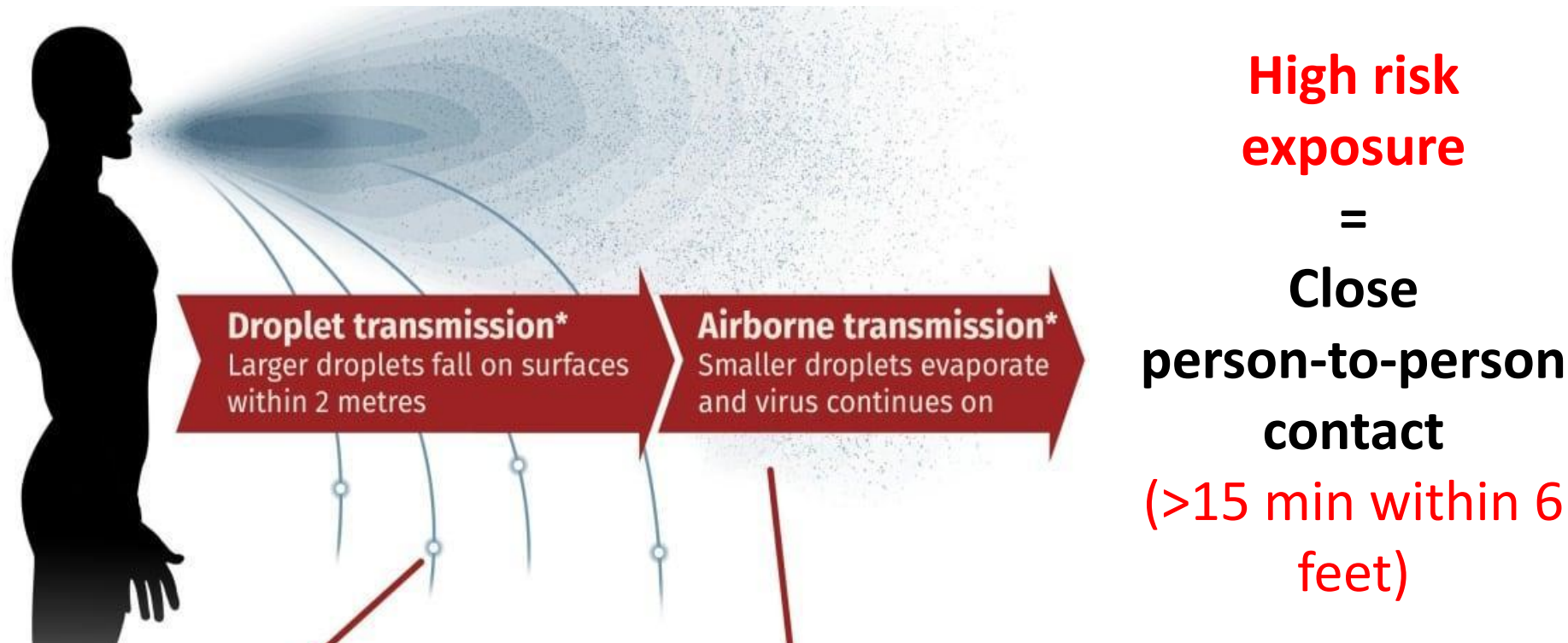


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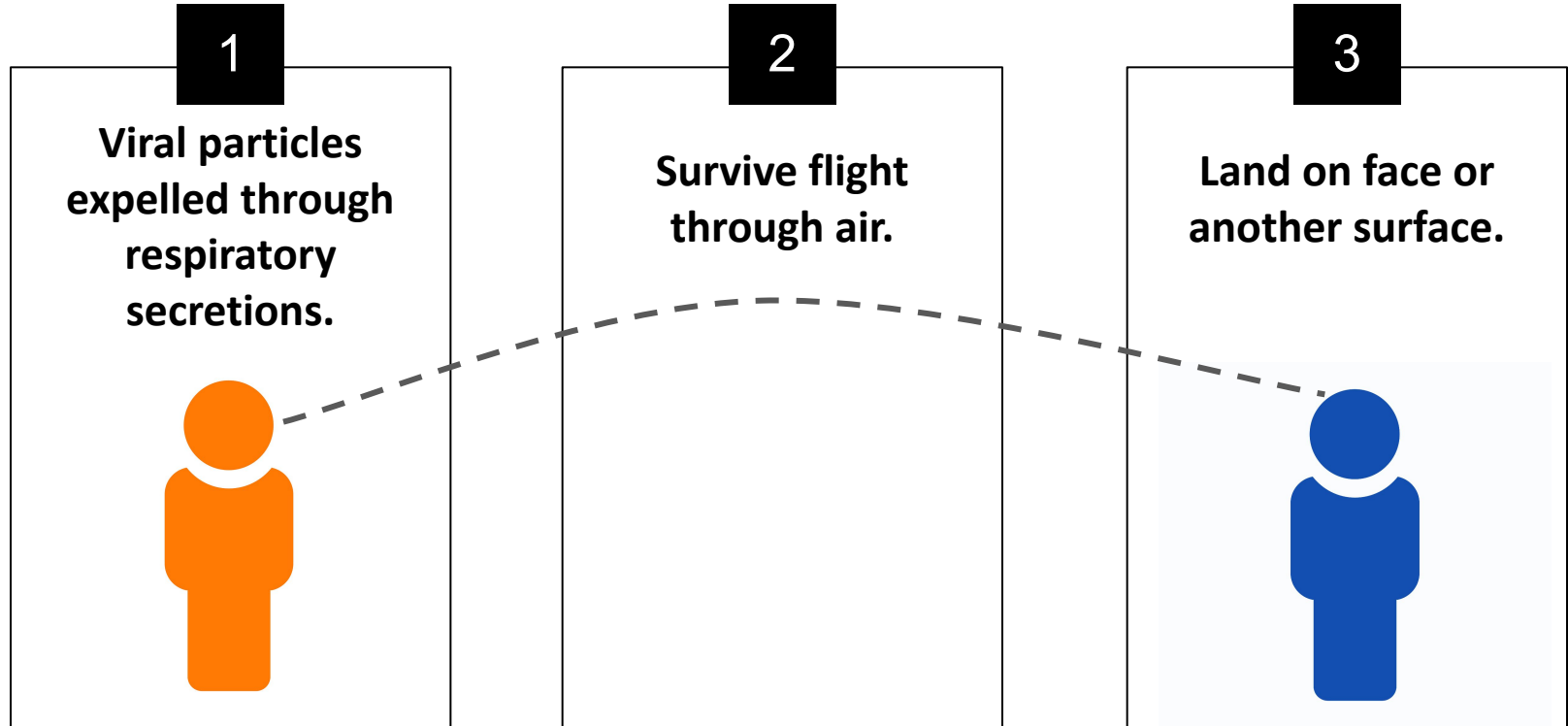


To get infected, your nose, mouth, or eyes must make contact with respiratory droplets from an infected person when they exhale, speak, sing, cough, or sneeze.



Airborne transmission is possible. Surface transmission is not thought to be significant.

# Stages of Respiratory Transmission



# Protection Against Respiratory Spread

## Minimize Exposure

- Home-based screening
- School-based screening
- Masks
- Cohorting
- Testing
- Vaccination



## Mitigate Exposure

- Physical distancing
- Being outdoors
- Improving ventilation
- One-way traffic flow

## Physical Obstruction

- Masks
- Other facial coverings
- Physical barriers



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# RISK REDUCTION



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# Swiss Cheese Model of Defense

No single safety measure is perfect at preventing spread.  
Each layer has imperfections. Multiple layers improve success.

## Personal Responsibilities

## Shared Responsibilities

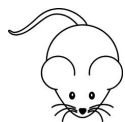
**Physical distancing, stay home if sick**

Hand hygiene, cough etiquette

If crowded, limit time

Ventilation, outdoors, air filtration

Quarantine & isolation



Misinformation can weaken layers of protection



**Masks**

Avoid touching face

**Stable cohorts;**  
Fast & sensitive contact tracing

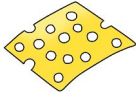
Gov't messaging & financial support

Vaccines



**Source:** [New York Times](https://www.nytimes.com)

# Slice 1: Stay Home if Sick



- Screen **prior** to departing for school
- Stay home for:
  - Symptoms in student or family within 24 hours
  - If anyone is waiting for non-routine COVID result
  - Any **high risk** COVID-19 exposure or COVID+ household contact
- **High Risk = within 6 feet for greater than 15 min**
- Temperature checks are not especially effective yet require a lot of resources

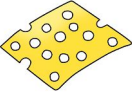
## 12 Possible Symptoms of COVID-19

Symptoms vary by case and typically appear 2-14 days after exposure to the virus.

 Fever or Chills	 Cough	 Shortness of Breath or Difficulty Breathing	 Fatigue
 Muscle or Body Aches	 Headache	 New Loss of Taste	 New Loss of Smell
 Sore Throat	 Congestion or Runny Nose	 Nausea or Vomiting	 Diarrhea

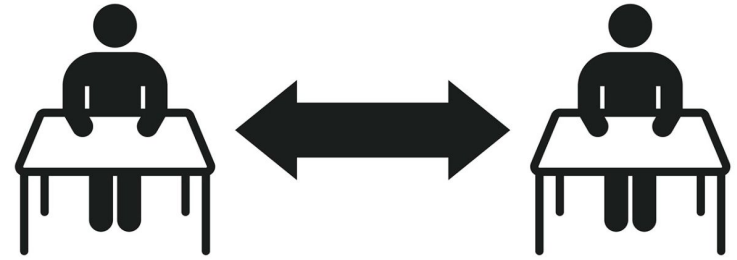
CHI St. Luke's Health      Source: CDC      [StLukesHealth.org/COVID-19](https://StLukesHealth.org/COVID-19)

# Slice 2: Physically Distance



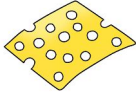
## Current CDC guidance

- **Student to student distance:**
  - Elementary School - at least 3 feet apart
  - Middle / High School - at least 3 feet apart; 6 feet if high community transmission
- **Stay 6 feet apart:**
  - Between adults
  - Between adults and students
  - When masks cannot be worn (e.g. eating)
  - During activities with increased exhalation (singing, band, PE, sports)



**in classrooms**

# Slice 3: Masking



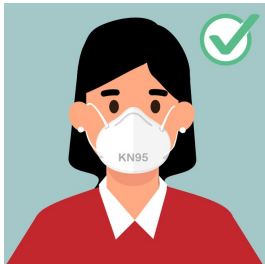
## Cloth Mask

- Reusable
- At least 2 layers



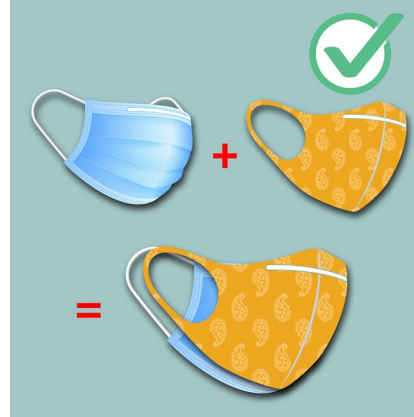
## Disposable Mask

- 3 layers of tightly woven fibers



## N95

- More specialized
- Most appropriate for prolonged, close exposure
- Best if fitted



## Double Mask

- Disposable mask worn under a cloth mask

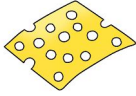


## DO NOT WEAR ANY Mask with a Valve

- Lets particles escape out
- Not acceptable



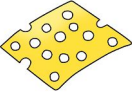
# Slice 4: Hand Hygiene Before Touch Face



**"Deep cleaning" is less useful for COVID prevention than regular hand washing**

- Hand sanitizer fine if hands not visibly soiled
- Washing with soap for at least 20 seconds before and after eating and after using bathroom
- Teach and practice handwashing with regular times each time

# Slice 5: Make it Harder to Touch Face

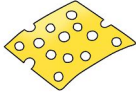


**Face shield is NOT a substitute for wearing a mask.**

If you wear a face shield, wear a mask with it as well.



# Slice 6: Minimize Time in Crowded Spaces

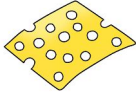


## Consider a staggered approach.

- Stagger arrival and departure
- Stagger class times to minimize people in hallway
- Stagger lunch and bathroom times



# Slice 7: Testing and Contact Tracing

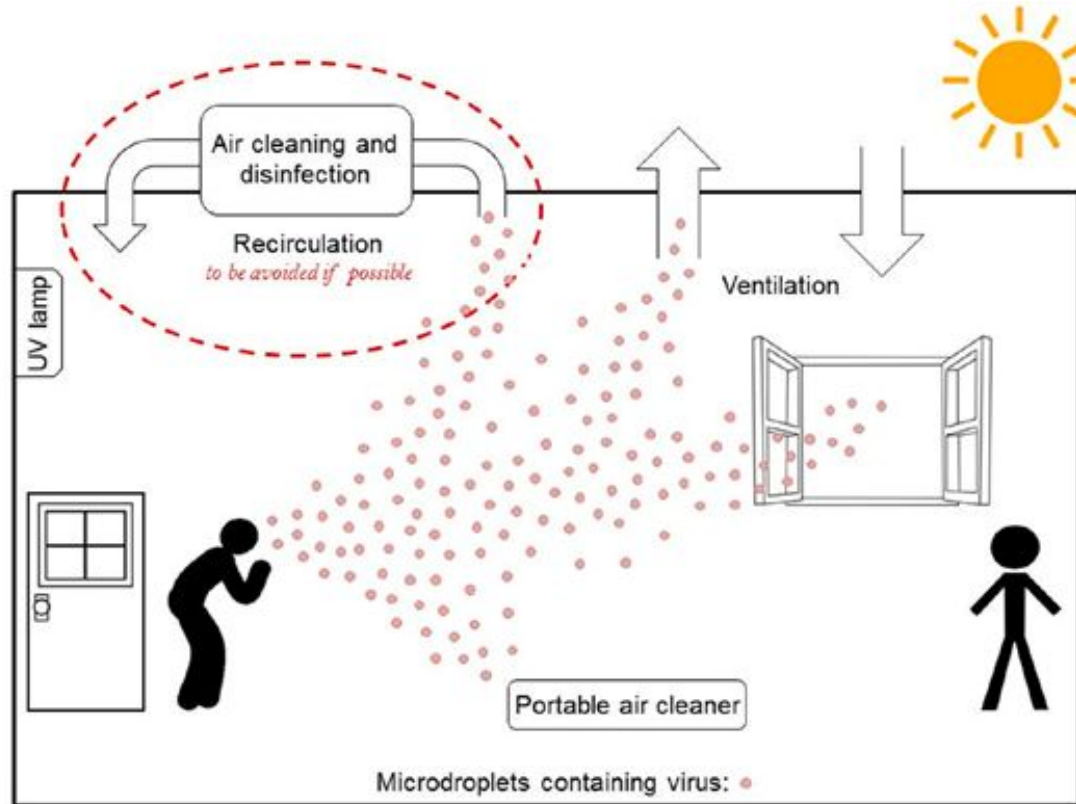
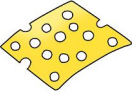


## Three types:

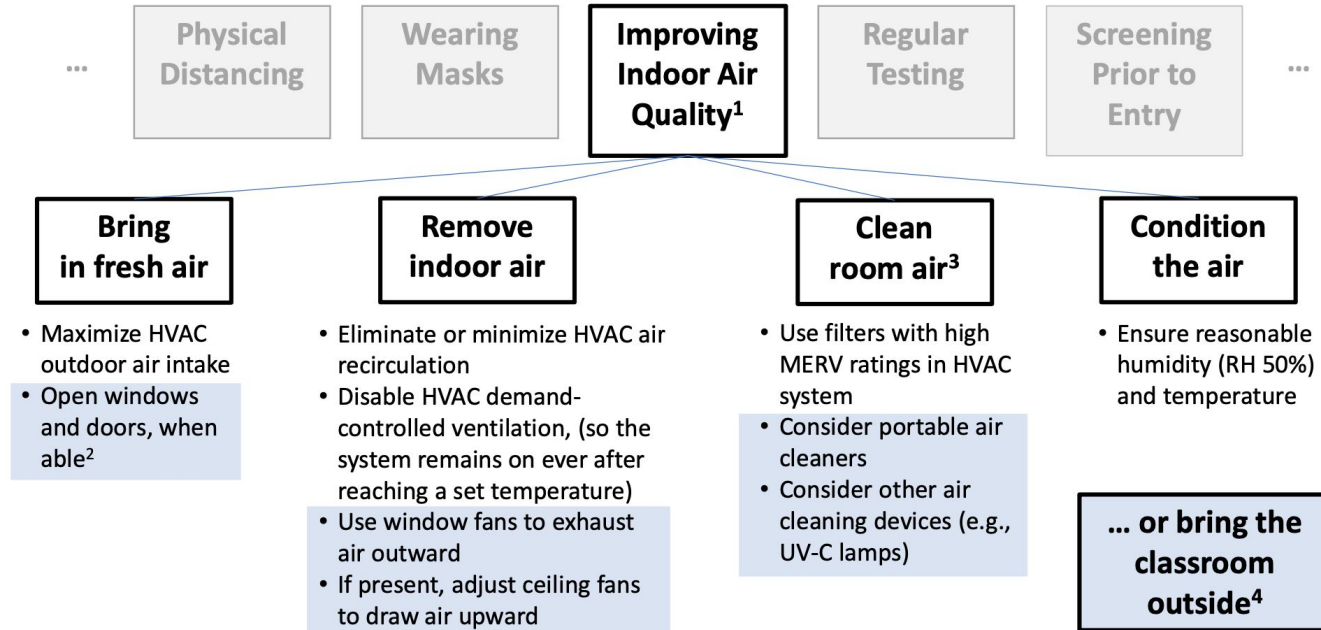
- **Symptom-based:** when someone has symptoms that might be caused by COVID
- **Exposure/outbreak:** when someone or a group of people are exposed to COVID
- **Monitoring:** regular testing to detect infection without symptoms and monitor prevention



# Slice 8: Maximize Ventilation



# Mitigation Strategies Against COVID-19 in Educational Settings

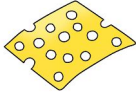


## Notes:

Blue shading indicates high-yield countermeasures that do not require HVAC systems.

1. Improving indoor air quality is just one piece of layered mitigation strategy and will not protect against short range (large-droplet) respiratory spread, for which masking, distancing and other measures remain paramount.
2. Opening windows and doors are not trivial interventions. They can lead to substantial improvements in air flow and are used in older hospitals around the world without HVAC systems. See references.
3. Air cleaning measures are important *if* there is limited ability to ensure adequate air exchange (i.e., bring in fresh air and remove indoor air)
4. Instead of interventions to make the indoor environment more similar to the outdoors (i.e., with air exchange and cleaning, etc.), consider interventions to make outdoor environments more amenable for education

# Slice 9: Vaccine Effectiveness



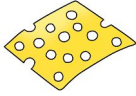
**All questions about the vaccine are valid.**

## Is the vaccine effective?

- All vaccines reduce risk of disease, hospitalization, and death
- Five vaccines have been developed, all are very effective!
- Rates of infection decreasing rapidly in countries that are achieving vaccination rates over 30%



# Slice 9: Vaccine Safety



## Is the vaccine safe?

- Years of research on this type of technology
- Same regulatory standard as other vaccines
- Trials involved age >16 and all ethnicities

## What are the side effects?

- Most side effects are relatively minor
- Severe allergic reactions are rare

## Can the vaccine cause COVID-19?

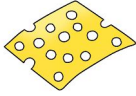
- No, there is no live virus in any of the vaccines

**Table 1:** Common Side Effects

- **Injection site pain**
- **Swollen lymph nodes**
- **Fever or chills**
- **Nausea**
- **Headache**
- **Fatigue**
- **Muscle aches**



# Slice 9: Vaccine Other Things to Know

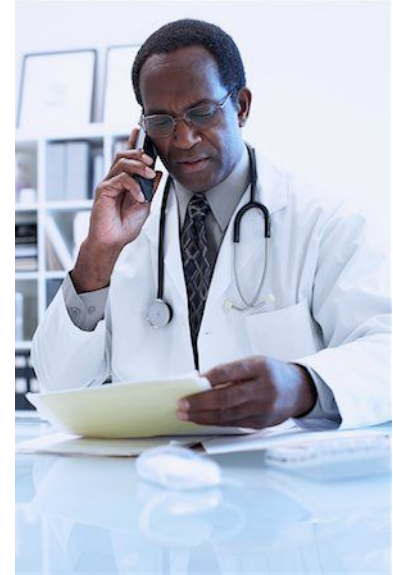


## Reasons not to get vaccinated:

- The rare and severe allergic reaction (anaphylaxis) occurs most often with people who had allergic reactions to vaccines in the past
- Anaphylaxis to the first dose of the vaccine

## Talk to your doctor if you:

- Are pregnant or breastfeeding
- Take medications that suppress your immune system
- Have a history of anaphylaxis to another vaccine or injectable medication





# Alameda County COVID-19 Vaccination Dashboard

% of population >= 16 Years

% >= 16 Years with at Least One Dose

34.1%

See Counts

See Percentages

% >= 16 Years Fully Vaccinated

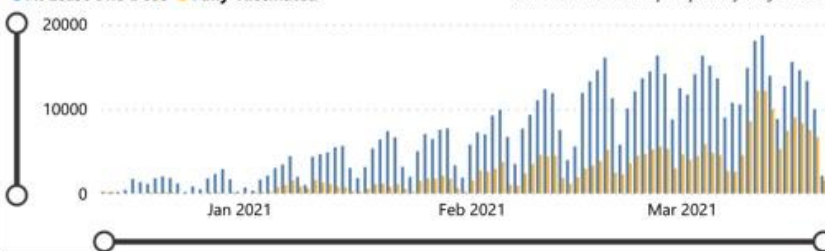
18.6%

Doses Received by the County

Alameda County Vaccine Doses Administered by Dose Type by Day

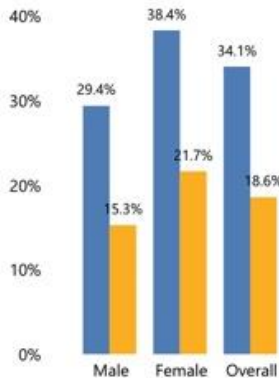
At Least One Dose Fully Vaccinated

Data from last five days especially subject to change.



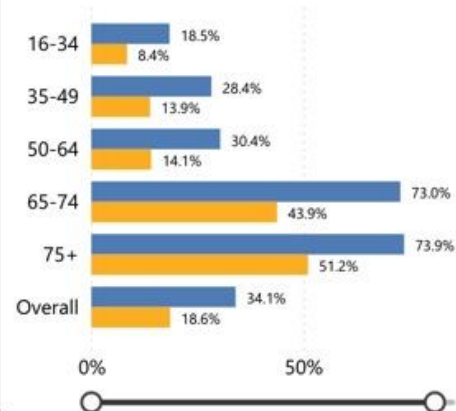
Doses by Gender (% of population >= 16 years)

At Least One Dose Fully Vaccinated



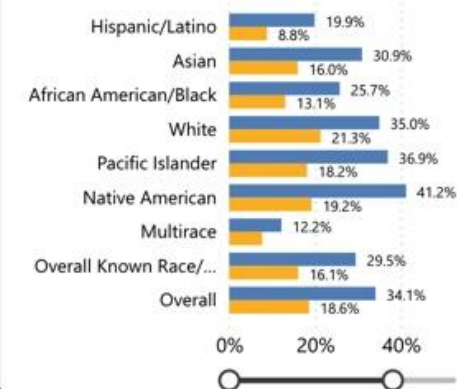
Doses by Age Group (% of population)

At Least One Dose Fully Vaccinated



Doses by Race/Ethnicity (% of population >= 16 Years)

At Least One Dose Fully Vaccinated



Place	At Least One Dose	Fully Vaccinated
Alameda	39.6%	22.1%
Albany	42.5%	23.6%
Ashland	26.3%	12.1%
Berkeley	36.5%	21.4%
Castro Valley	39.8%	22.7%
Cherryland	27.0%	13.8%
Dublin	27.3%	14.5%
Emeryville	30.8%	16.0%
Fairview	37.3%	21.2%
Fremont	29.9%	16.6%
Hayward	32.5%	16.6%
Hayward	23.2%	11.3%
Acres		
Livermore	32.3%	19.2%
Newark	30.4%	16.1%
Oakland	34.7%	18.1%
Piedmont	52.7%	32.8%
Pleasanton	35.4%	21.4%
Remainder of County	34.5%	20.5%
San Leandro	38.0%	19.0%
San Lorenzo	37.2%	18.5%
Sunol	43.9%	25.2%
Union City	37.2%	20.8%

Notes and disclaimers: This dashboard is populated with data from the California Immunization Registry (CAIR), the State's electronic immunization information system. Vaccination records were accessed via CAIR's Snowflake platform. Information currently available in CAIR for Alameda County may not include all vaccinations among county residents. Dashboard totals include vaccinations of residents of the City of Berkeley, which is a separate health jurisdiction. Total doses include all doses given; for some of these the dose number is

unknown

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# VARIANTS



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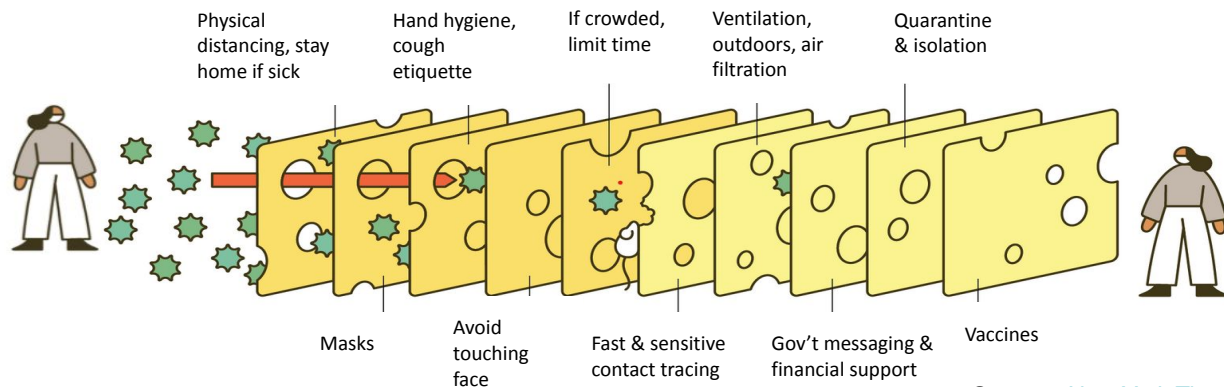


# Variants happen with ALL viruses...

**New variants COULD make the virus:**  
More contagious, cause more serious illness,  
less responsive to vaccine and antibodies.

## **The Swiss Cheese Model protects against variants:**

To be as safe as possible, use the slices together to prevent holes from letting virus through. Vaccines are effective against current variants!



Source: [New York Times](#)

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# QUESTIONS



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UCSF Benioff Children's Hospitals

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# SUPPLEMENTAL SLIDES



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# COVID Vocabulary: What Does It Mean?

**DROPLET:** large, short-range (less than 6 feet) particles produced by sneezing, coughing, or talking.

**VIRAL SHEDDING:** when a virus replicates inside your body and is released outside your body. At that point, it may be contagious.

**DNA:** Material that carries information for how living things look and function.

**MESSENGER RNA (mRNA) Vaccines:** mRNA vaccines teach your immune system how to disarm proteins in the body that make us sick from coronavirus.

**PROTEIN:** the building blocks of living things.

**MITIGATE:** to decrease the effect of something.