San Francisco Village

COVID – 19
Research and Advisory Team:
Report and Recommendations #15
June 21, 2020

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This report contains a summary of the key updates on the status of Covid-19 that are more evident since our last report (June 14), along with our current recommendations for actions for SFV to consider taking. Sources include: CDC, WHO, SFDPH, CA DPH, Science Journal, Nature Journal, New England Journal of Medicine, Journal of the American Medical Association, Scripps Research Institute, Johns Hopkins Coronavirus Resource Center, UCSF Medical Grand Rounds, STAT, Institute for Health Metrics & Evaluation, the Covid Tracking Project, other clinical journals, reports from public health professionals, and news media.

RECENT FINDINGS

Global
New Cases: 143,073
Confirmed Cases: 8,525,042
Deaths: 456,973

1) Global Spread

While coronavirus infection rates across much of Europe and parts of the United States have begun to fall, the pandemic is continuing to accelerate in other regions of the world.

The situation is particularly dire in Latin America, which has become the new epicenter of the pandemic, and where scientists say the peak of infections is still weeks away.

The situation in Brazil is especially concerning. The country has been one of the hardest-hit nations in the world, with nearly 1 million confirmed cases of coronavirus and nearly 50,000 deaths, according to researchers at Johns Hopkins University, second only to the United States. As Latin America's largest country, Brazil accounts for about a quarter of the 4 million coronavirus cases in the region, and about a quarter of the deaths — and the rate of infection is increasing.

India, too, is seeing an escalating number of cases. On Thursday, the Indian health ministry reported a record spike in the number of coronavirus cases, bringing the total to nearly 400,000.

2) Promising Steroid Treatmenet: Dexamethasone

Dexamethasone, a cheap and widely used steroid, has become the first drug shown to be able to save lives among Covid-19 patients. The RECOVERY trial compared outcomes of around 2,100 patients who were randomly assigned to get the steroid, with those of around 4,300 patients who did not get it.

The World Health Organization (WHO) welcomes the initial clinical trial results from the United Kingdom (UK) that show dexamethasone, a corticosteroid, can be lifesaving for patients who are critically ill with COVID-19. For patients on ventilators, the treatment was shown to reduce mortality by about one third, and for patients requiring only oxygen, mortality was cut by about one fifth, according to preliminary findings shared with WHO. The benefit was only seen in patients seriously ill with COVID-19, and was not observed in patients with milder disease. Among patients with Covid-19 who did not require respiratory support, there was no benefit from treatment with dexamethasone.

3) Uncertainty Over Fatality Rate

The metric called infection fatality rate (IFR)is used to calculate how deadly a new disease is. It is the proportion of infected people who will die as a result, including those who don't get tested or show symptoms. Calculating an accurate IFR is challenging in the midst of any outbreak because it relies on knowing the total number of people infected — not just those who are confirmed through testing.

For a true understanding of how deadly the virus is, scientists need to know how readily it kills different groups of people. The risk of dying from COVID-19 can vary considerably depending on age, ethnicity, access to healthcare, socioeconomic status and underlying health conditions. Widespread population surveys that test people for antibodies to the virus, known as seroprevalence surveys, were expected to help refine IFR estimates even further. One of the first studies to account for the effect of age was posted

on a preprint server last week. The study, based on seroprevalence data from Geneva, Switzerland, estimates an IFR of 0.6% for the total population, and an IFR of 5.6% for people aged 65 and older.

4) New strain

New research on mutations in the novel coronavirus reveals that an evolved strain of the disease may possess a significantly increased ability to infect people. Physically, this mutation's changes have increased the number and flexibility of the protein spikes on the virus' surface. Viruses with this mutation were much more infectious than those without the mutation in the cell culture system we used, according to Scripps Research Institute.

The functional spikes, which give SARS-CoV-2 its crown-like appearance, are biologically important because they make it possible for the virus to bind to and infect cells. The virus uses the spikes to connect to target cell receptors, known as ACE2. With the new mutation, known as D614G, the quantity of the spikes has increased and the structure of each spike's "backbone" has enhanced flexibility. More flexible spikes allow newly made viral particles to navigate the journey from producer cell to target cell fully intact, with less tendency to fall apart prematurely.

One of the ongoing mysteries of the pandemic is why certain strains have overwhelmed health systems (such as in New York and Italy) while outbreaks in areas like Washington state and San Francisco have been more easily contained. The new research suggests that, because the variant of SARS-CoV-2 that circulated in regions affected by the outbreak earlier on lacked the D614G mutation, those versions of the disease may not have been as infectious as the new, mutated strain. Los Alamos scientists said the mutation would have implications for treatment

5) Genetic Variations (Blood type) May Affect Severity

A team of European scientists say they have found two genetic variations that may show who is more likely to get very sick and die from coronavirus, and they say they have also found a link to blood type. Their findings, published in the New England Journal of Medicine, point to a possible

explanation for why some people get so seriously ill with the virus, while most barely show any symptoms at all.

They found people with Type A blood have a higher risk of catching coronavirus and of developing severe symptoms, while people with Type O blood have a lower risk. The genetic data confirm that blood group O is associated with a risk of acquiring Covid-19 that was lower than that in non-O blood groups, whereas blood group A was associated with a higher risk than non-A blood groups. They found people with Type A blood had a 45% higher risk of becoming infected than people with other blood types, and people with Type O blood were just 65% as likely to become infected as people with other blood types.

The genes that control blood type also affect structures called sugars on the surfaces of cells, which in turn could affect the ability of the virus to infect those cells. The risk reduction may be statistically significant, but it is a small change in actual risk. The findings are more useful in designing drugs or vaccines against coronavirus.

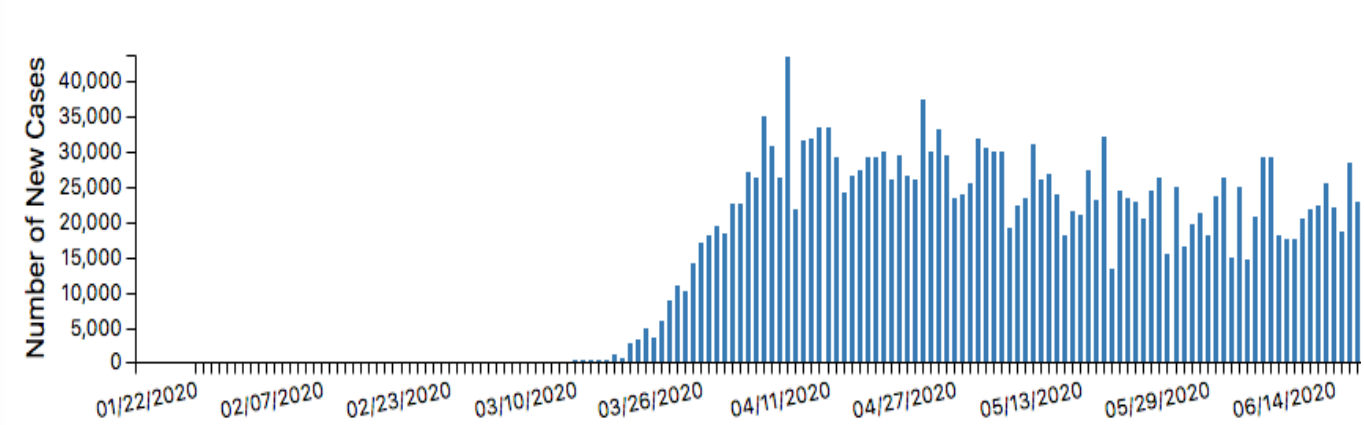
6) Antibody Duration

Coronavirus antibodies may last only two to three months after a person becomes infected with Covid-19, according to a new study published Thursday in Nature Medicine.

Researchers in the Wanzhou District of China compared the antibody response of 37 asymptomatic people with that of 37 symptomatic people. The researchers found people without symptoms had a weaker antibody response than those with symptoms.

Additionally, within eight weeks, antibodies fell to undetectable levels in 40% of asymptomatic people, compared with 12.9% of symptomatic people, according to the study's findings. A poor immune response in people who recover from the virus may not bode well for the development of an effective vaccine.

UNITED STATES
Total cases: 2,215,618
Total Deaths: 119,055



<u>1) Spread</u>
The United States has seen new cases climb from about 21,000 a day the last week of May to nearly 23,000 a day this week. Positive tests and, in some places, hospitalizations have spiked, too, leading many to wonder if a change in behavior caused outbreaks in states such as California, Arizona and Florida. Surges seem to be most intense in counties that had avoided the worst coronavirus outbreaks earlier this year. No single cause seems to explain why some places have seen spikes and others haven't.

These 24 states are seeing upward trends in newly reported cases from one week to the next: Alabama, Arizona, California, Colorado, Florida, Georgia, Hawaii, Idaho, Kansas, Oregon, Louisiana, Michigan, Missouri, Montana, Nevada, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Utah, Washington, West Virginia and Wyoming.

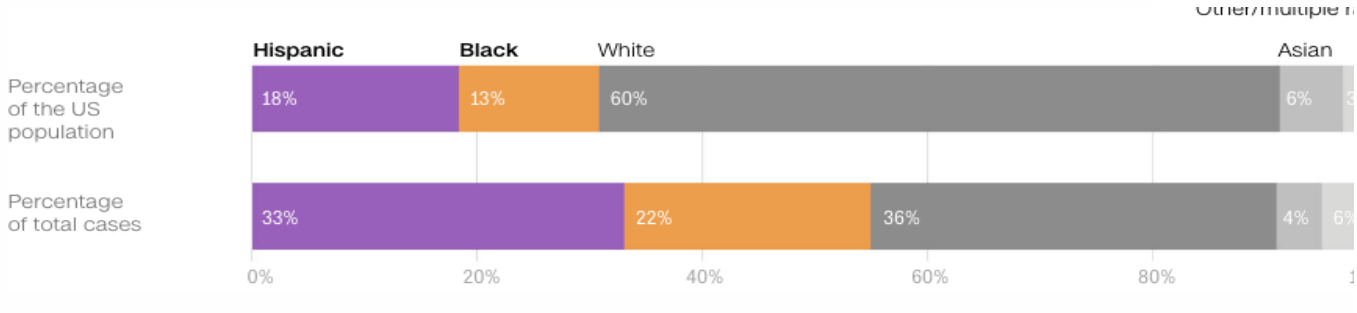
Seven states are seeing steady numbers of newly reported cases: Alaska, Arkansas, Delaware, Indiana, Kentucky, Nebraska and Wisconsin.

These 18 states are seeing a downward trend: Connecticut, Illinois, Iowa, Maine, Mississippi, Maryland, Massachusetts, Minnesota, New Hampshire, New Mexico, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, Rhode Island, South Dakota, and Virginia.

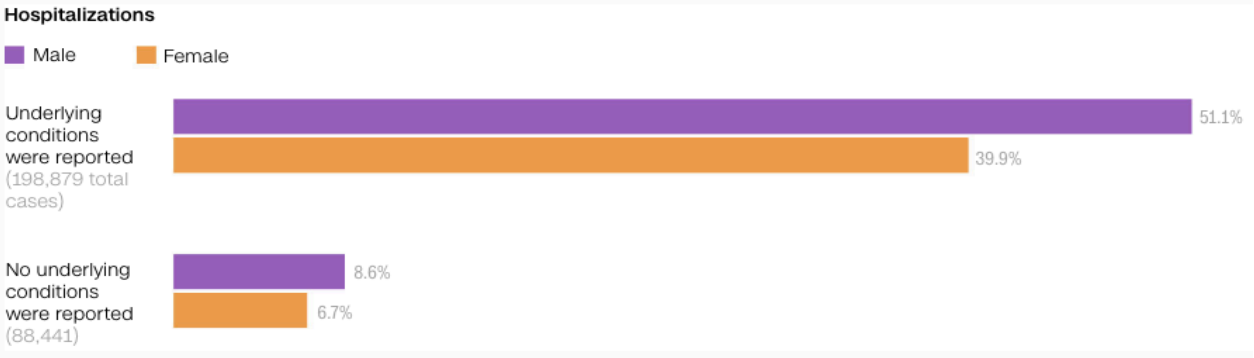
One state, Vermont, has seen a decrease of at least 50%.

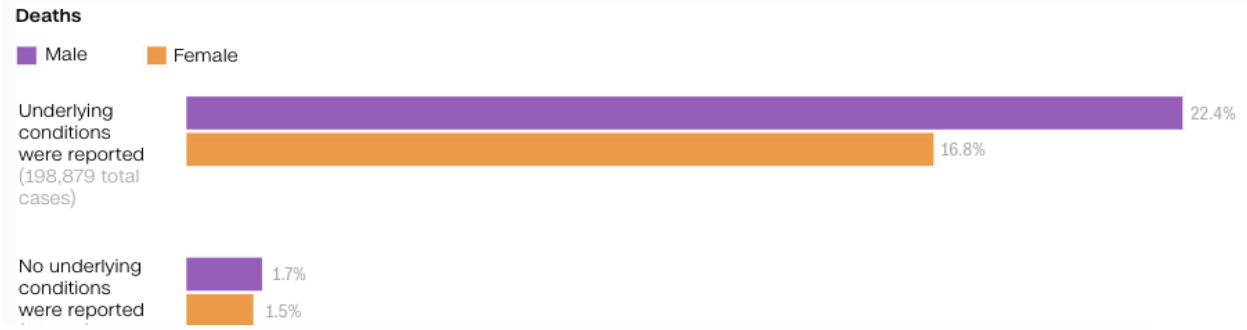
2) Impact on Minorities

A new report released Monday by the Centers for Disease Control and Prevention shows how the coronavirus has been especially devastating to Black people, Hispanics and those with underlying conditions -- especially men and elderly people. A breakdown by race and ethnicity shows the disproportionate infection rates among Hispanics and Blacks, far beyond their share of the population. Included in the Other/multiple races category, American Indians and Alaska Natives were also disproportionately affected.

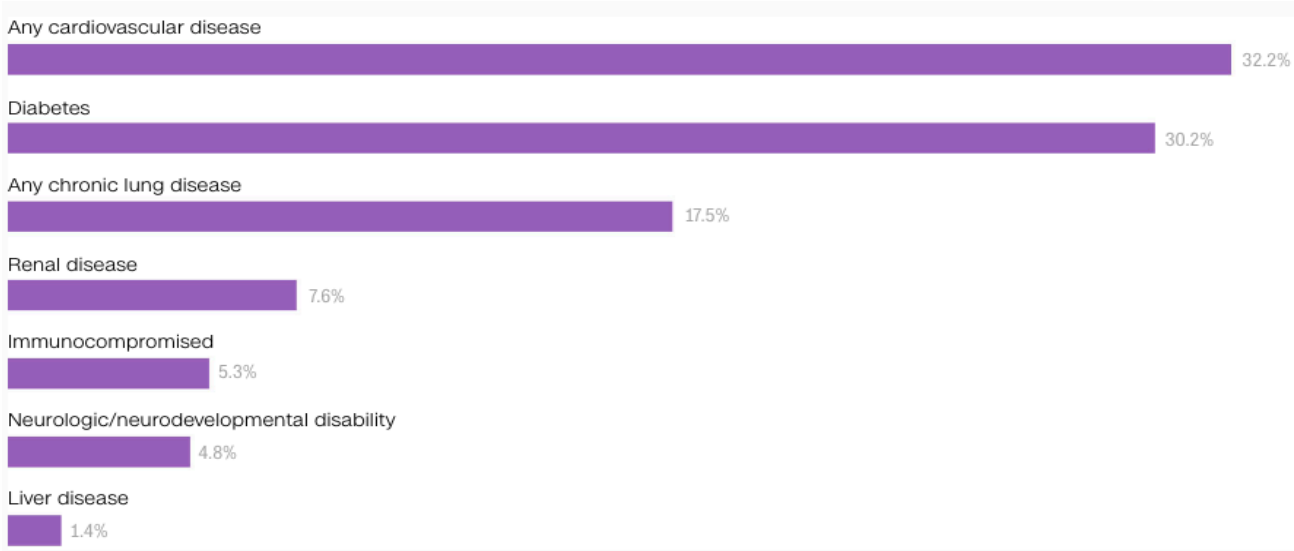


Among the 287,320 patients for whom the status of underlying conditions was known, hospitalizations were six times higher among those who reported underlying conditions. A higher percentage of men with underlying conditions were hospitalized than women with underlying conditions.





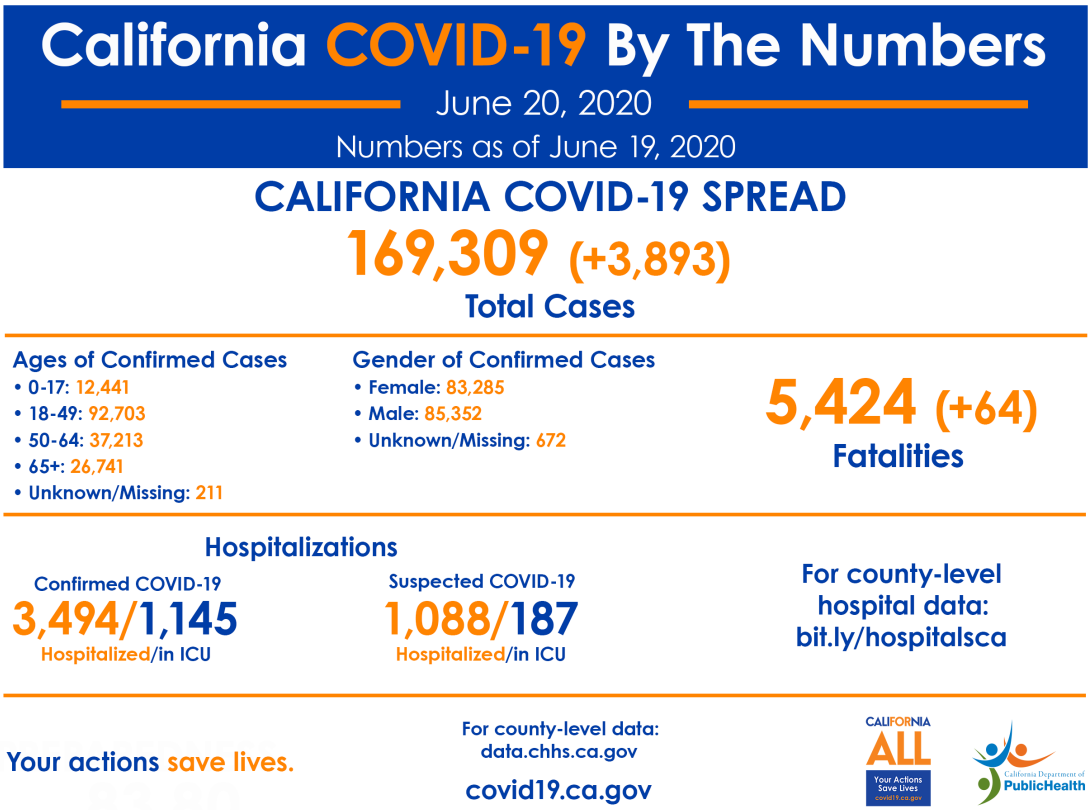
Underlying Conditions



3) Increase in Heart Attacks

The longer the pandemic continues, the more researchers are learning about its ripple effects. Fatal cardiac arrests soared in New York at the peak of the coronavirus epidemic there in March and April, researchers reported Friday. People needing emergency resuscitation increased three-fold in 2020 and 90% of those people died, the team at Albert Einstein College of Medicine/Montefiore Health System found. While coronavirus likely caused many of these deaths, others were probably a consequence of an overwhelmed medical system, the researchers reported in the journal JAMA Cardiology.

CALIFORNIA
Positive Cases: 169,309
Deaths: 5,424



<u>1) Younger People Infected at Higher Rates</u>

People between ages of 18 to 34 now claim the largest share of new infections in the state, with 12,919 known cases diagnosed between May 31 to June 13. The second largest group, with 9,691 new cases, is people between the ages of 35 and 49.

There has been a worrisome jump in youth under the age of 17. From the beginning of the pandemic until May 13, cases were rare, with a cumulative tally of only 2,799 diagnoses reported in this group. But that number was surpassed in merely two weeks, between May 14 and May 30, with 3,455 new cases. And it was exceeded again between May 31 and June 13, with 3,930 new cases.

The trend helps explain why the state isn't seeing a spike in hospital visits and deaths from the disease — even as counties reopen and cases are gradually rising,

2) Masks Are Now Required

Governor Gavin Newsom issued a statewide order requiring all residents to wear face coverings in public to reduce the spread of COVID-19. Newsom's order arrived one day after the state recorded a record number of new COVID-19 cases in one day, over 4,000. Cities like San Francisco have had similar orders in place for weeks, but now Gov. Newsom has stepped in to try to level the pandemic playing field as a handful of California counties are seeing rising numbers of confirmed cases. The only people exempt from Newsom's order are children ages 2 and under, people with a physical or mental health condition that prevents wearing a face covering, and people communicating with someone who is hearing impaired. It remains unclear how this order will be enforced.

SAN FRANCISCO

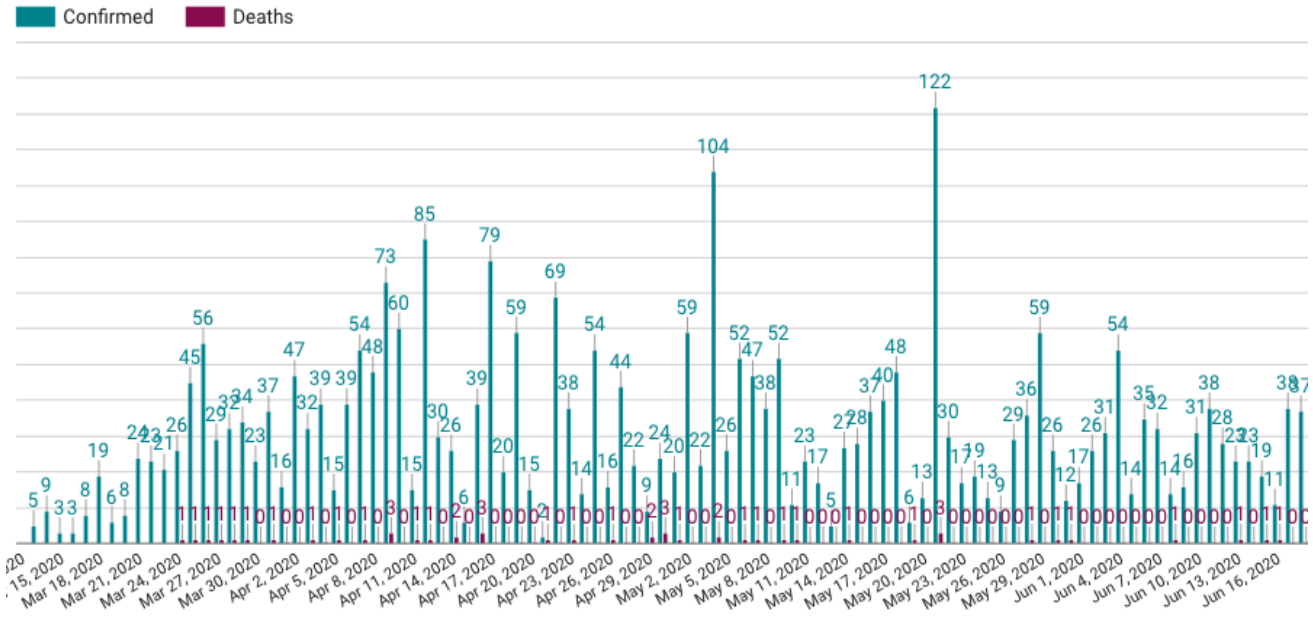
Total Tested: 115,756

Total Positive Cases: 3,058

Total Deaths: 47

Acute Care Hospital Beds Available: 855 ICU Hospital Beds Available: 409

Daily Totals



Those 3,058 cases are not even distributed throughout the city's demographics. Half of the people who have contacted COVID-19 are Latinx, despite only making up 15 percent of the population in San Francisco. And even though the city is 53 percent white, only 15 percent of those infected have been white. Broken down by age, roughly two thirds of the people infected have been younger than 50, while roughly a third is older than 50.

1) Stay at Home and Masking Order Remain in Place

The Stay-Safe-At-Home Order still requires that most people continue sheltering in their place of residence and a related order requires most people to wear face coverings when they leave their residence. But recent amendments to the Order made a number of significant changes to the original stay-at-home order. See this site for a list of amendments: https://sf.gov/sites/default/files/2020-05/Stay%20Safe%20at%20Home%20Health%20Officer%20Order%20FAQs%20Rev%205.28.2020.pdf

The SF Department of Public Health states that older adults and those with underlying health conditions are the most vulnerable to the virus and recommends going out as little as possible if you're over 60 or have a chronic health conditions. This site contains tips for safer social interactions - however these tips may not be sufficient for older adults and those with chronic conditions: https://www.sfcdcp.org/wp-content/uploads/2020/06/COVID-19_Tips_Final_SaferSocialInteractions_06.13.2020.pdf

2) Phases of Reopening in San Francisco

Stay home
Time:
March to May 17

Essential activities only
All non-essential employees should telework.
and

Limited openings
Time:
May 17

Business

- Curbside retail for goods and services with minimal contact, including takeout and delivery
- Outdoor businesses
- All construction with protocols for small and large projects
- Hotels, hospitality, and short-term rentals for first responders and homeless, for isolation and quarantine rooms, and as needed for essential travel and other activities that the health order permits
- Office: all non-essential employees must telework with limited exceptions

2

Small activities
Time:
June 1

Business

- Non-essential manufacturing, warehousing, and logistics with fewer than 50 onsite employees
- Non-essential curbside retail for goods, outdoor equipment rental, and limited contact services with fewer than 10 onsite employees
- Elective surgeries and dental appointments
- Limited private household outdoor services like a gardener or landscaping
- Virtual appointments for real estate, but limited in-person appointments where there are no occupants
- Professional sports practices only with approved plan, including regular testing

Childcare and education

- Daycare and preschools with stable groups of up to 10 to 12, and in-home care

Culture and recreation

- Botanical gardens
- Outdoor historical sites

- Outdoor museums
- Dog parks
- Parks, beaches, and skate parks
- Golf, with limits
- Tennis (singles-only outside a household) with no shared equipment

and

Outdoor dining
Time:
June 12

Outdoor dining including restaurants and bars serving food

and

Now: Phase 2b
Time:
June 15

Indoor retail and small activities
Business

- Indoor retail (malls require approved plans)
- All curbside retail
- All manufacturing, warehouse and logistics with no limit on the number of on-site personnel subject to social distancing
- Non-emergency medical appointments
- All private indoor household services like cooks and house cleaners
- Office: anyone who can telework must continue to do so except as needed on site for operations

Childcare and education

- Summer camps with stable groups of up to 12

Culture and recreation

- Small outdoor gatherings, including religious services and ceremonies
- Outdoor fitness with social distancing
- Professional sports and other entertainment for broadcast but with no in-person spectators, under approved plans

and

Phase 2c
Time:
July 13

Hair salons, indoor dining, and real estate open houses (if also allowed by the State)

Business

- Hair salons and barber shops
- Indoor dining
- Real estate open houses with appointments only

3

Larger activities

Time:

August and beyond

May include more than 1 sub-phase

Businesses

- Hotels, hospitality, and short-term rentals (if also allowed by the State)
- Gyms and fitness centers
- Limited indoor leisure like movie theaters, billiards, and bowling alleys
- Nonessential healing arts
- All other personal services like indoor personal training, nail salons, tattoo, permanent makeup, and piercing
- Bars without food

Childcare and education

- Public schools, academic year begins (learning plans being developed by SFUSD)
- Other schools, including primary, secondary, and higher education

Culture and recreation

- Indoor museums
- Basketball courts
- Playgrounds
- Indoor and outdoor swimming pools
- Indoor tennis
- Zoos

4

Full reopening

Time:

Unknown

Phase 4 will be the full reopening of our economy. We will remove all social distancing limits and other restrictions related to the COVID-19 response. The timing for Phase 4 will depend on our experience in Phases 1 to 3. We will rely on our health experts and health indicators to determine when to safely enter Phase 4.
All activities will be allowed, including mass gatherings including:

- Concert
- Live audience sports and performances
- Night clubs
- Festivals

RECOMMENDATIONS

The current information about Covid-19 is uncertain and shifting and questions about transmission avenues, limited antibody effect, infection surges, treatment and vaccine research, and safety protocols abound. The great majority of information about all these areas is not specific, and may not be applicable to, older populations and those with comorbidities.
Given this confusion, we suggest SFV consider a recommendation that was offered in a previous report:

- ☐ SFV members are making choices about how they will "reopen" their lives as restrictions lift. These choices are complex, and raise both hopes and anxieties. Consider hosting a weekly informal Coffee Chat for members to share with each other about their experiences of the pandemic and the choices, they are making – and to create those essential social connections that are lifelines during this time. Perhaps members can facilitate this chat.