

# Community COVID-19 Update

**September 10, 2020**

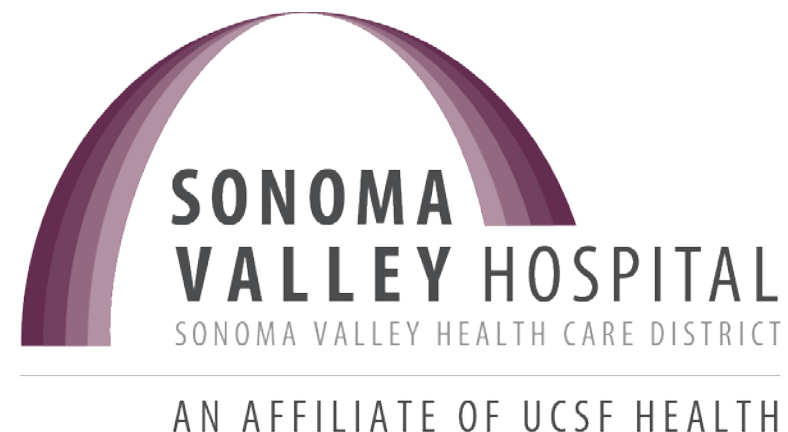
**Sabrina Kidd, MD, FACS, FASCRS**

Chief Medical Officer and UCSF Medical Director  
for Sonoma Valley Hospital

**(Please hold your questions till the end)**

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Sonoma Valley Hospital  
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Sonoma Valley Hospital and Vintage House continue the lively and informative *virtual* series this Fall!

# ACTIVE AGING LECTURE SERIES

## 'Live Your Best Life Now'

Thurs, Sept 10, 17, 24 & Oct 1  
1:30 pm - 3:00 pm

Sept 10



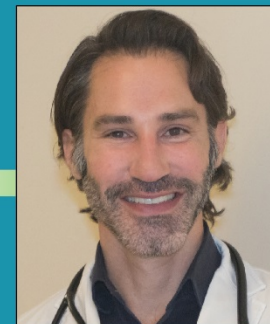
**"Sonoma Valley  
COVID-19 Update"**  
Sabrina Kidd, MD,  
FACS, FASCRS

Sept 17



**"Collaborative Diagnosis  
and Treatment of Stroke"**  
Cathra Halabi, MD,  
UCSF Neurology

Sept 24



**"A Look Inside Our  
Emergency Department."**  
Jasper Schmidt, MD,  
Medical Director of SVH's ED

Oct 1



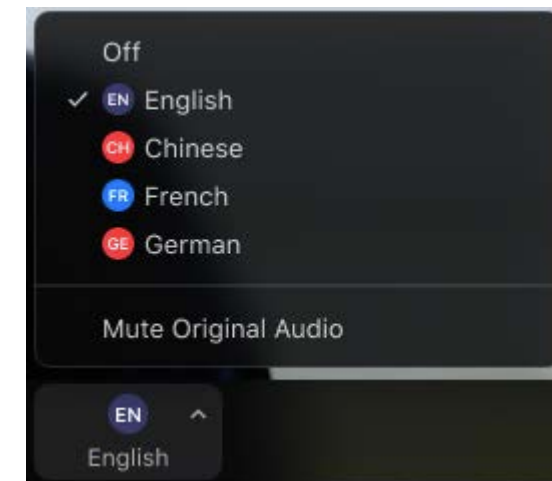
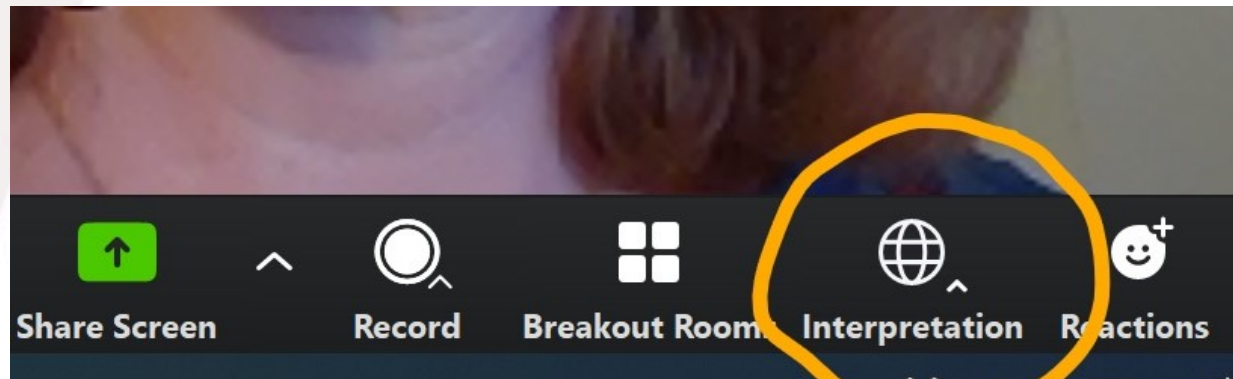
**"What Moves You To Your  
Best Personal Health?"**  
Ellen Barnett, MD,  
Clinical Professor of Family  
and Community Medicine  
at UCSF School of Medicine

**Register:** Online at [vintagehouse.org/events](https://vintagehouse.org/events)  
and you will receive a unique link for each talk.  
**Call:** 707.996.0311 for support.



# ZOOM Webinar Tips

- Please select your language
  - English or Spanish
  - If Spanish, mute the original audio.

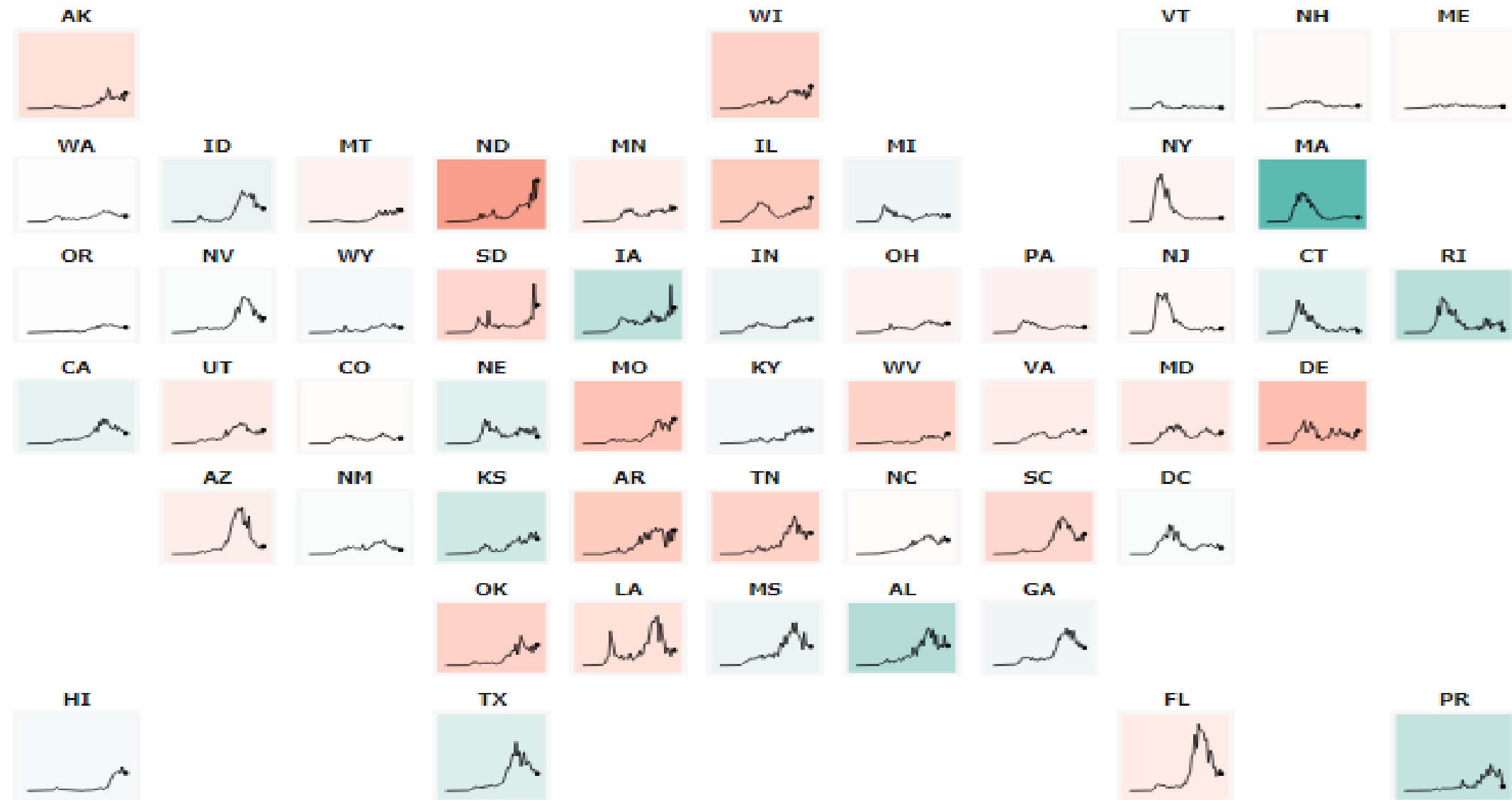


- All questions will be taken at the end of the presentation
  - Use Chat or Q&A feature to ask a questions

# Where We Are Today

## United States

Daily New Cases per 100k people. Data shown from 1/22/20 to 9/6/20.



**Green = Downward Trend      Red= Upward Trend**

**Active Cases As of September 9, 2020**

SOURCE: John Hopkins Coronavirus Resource Center

[www.coronavirus.jhu.edu/map.html](http://www.coronavirus.jhu.edu/map.html)

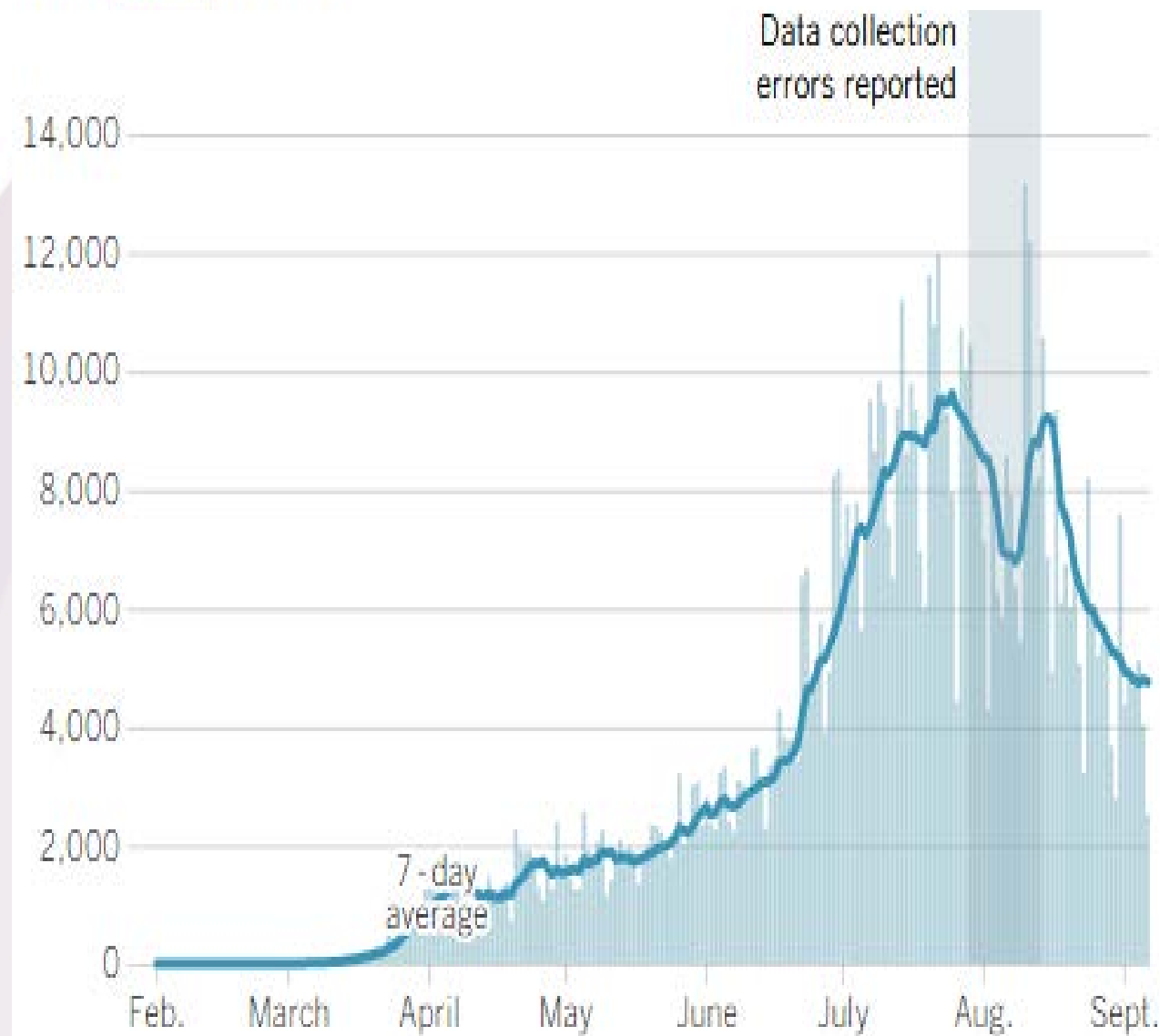


# Where We Are Today

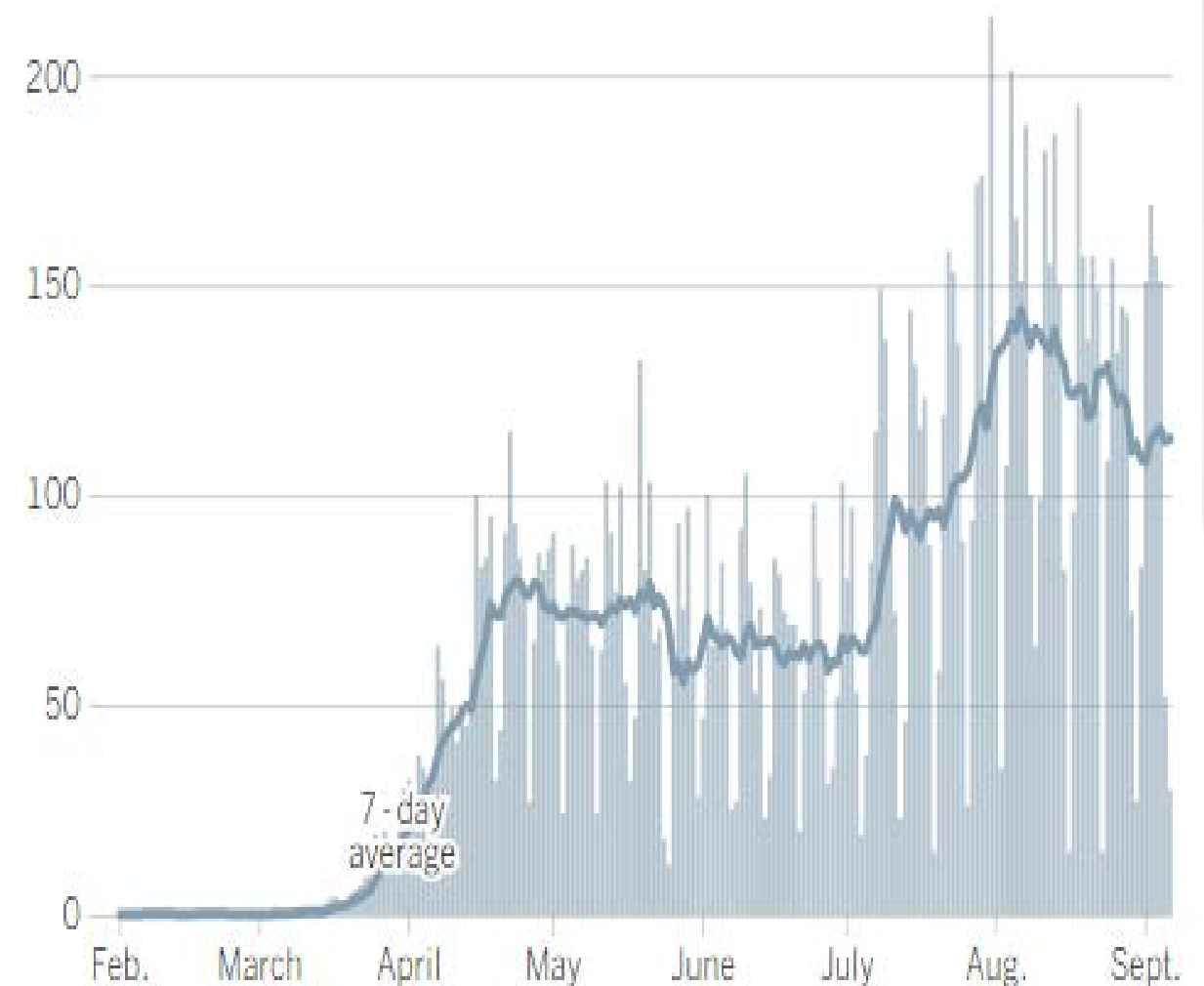
## California



New cases by day



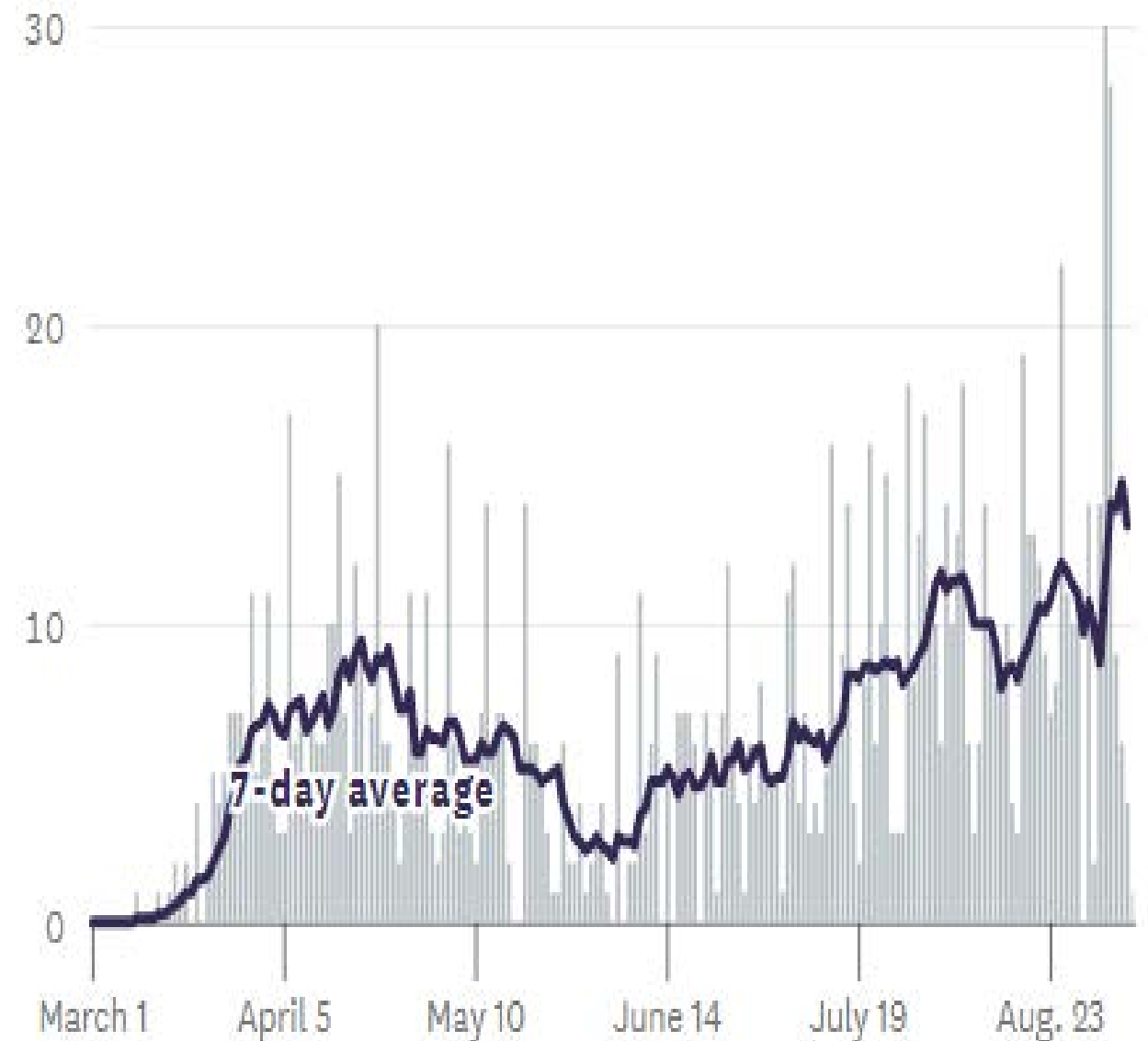
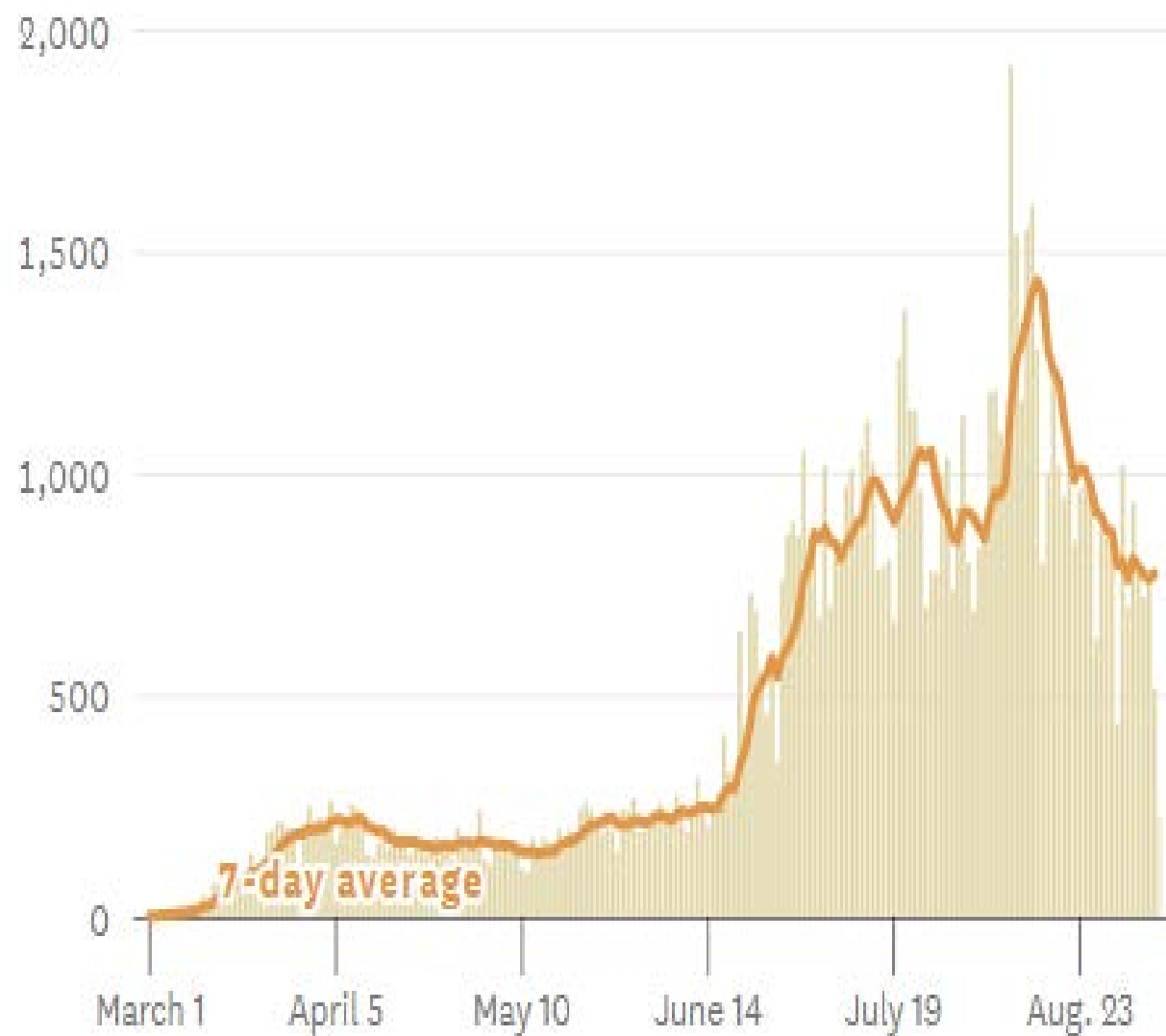
Deaths by day



SOURCE: LA Times

# Where We Are Today

## Bay Area



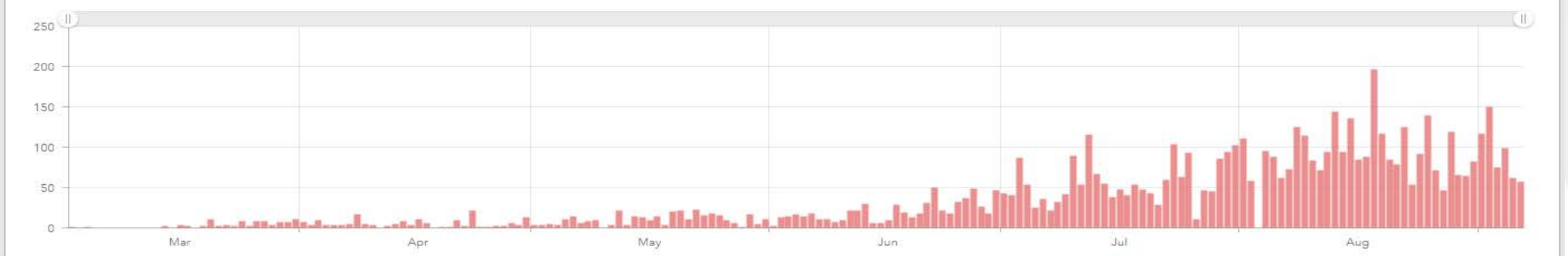
SOURCE: SF Chronicle

# Where We Are Today

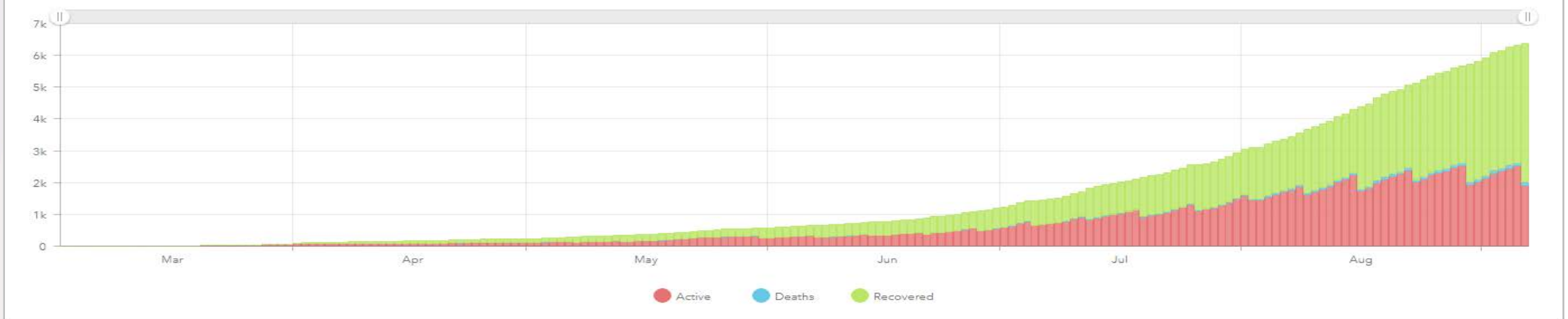
## Sonoma County

Sonoma County Cases				Sonoma County Last 24 Hrs			
Active	Deaths	Recovered	Total	Active	Deaths	Recovered	Total
1,920	93	4,347	6,360	↓601	0	↑658	↑57
0.38% of Population	1.5% of Cases	68% of Cases	1.25% of Population				

Sonoma County New Cases by Date



Sonoma County Total Cases by Date



# Where We Are Today

Sonoma Valley Hospital

- **September 7, 2020:**
  - Tests collected to date: 2109
  - Positive Individuals to date: 73
  - Inpatient Deaths to date: 6



# SVH Preparedness Highlights

- **Late February 2020:**
  - Began developing screening protocols and signs with Infection Prevention Nurse
  - Soft opening of Incident Command Center
- **March 2020:**
  - Incident Command Center Opens **March 13**
    - Shelter in Place Begins
      - Sonoma County **March 17**
      - State on **March 19.**
  - All non-emergent services postponed
  - SVH is an early adopter of “**Universal Masking**”
  - SVH sets up a **COVID-19 Hotline** and **drive thru testing**
  - SVH works closely with the **UCSF Affiliates Network**

# SVH Preparedness Highlights

- **April 2020:**
  - Shelter in Place Extended
  - All non-emergent services remain restricted
  - SVH finishes **“Surge” preparations** by converting from a 24 bed hospital to a 59 bed hospital with two usable ED spaces.
  - Surge does not occur, begin **“Exit Strategy planning”**
- **May 2020:**
  - May 4: Phase 1: Limited numbers of **non-emergent surgeries** and outpatient **services resume**.
  - May 12: Increased number of procedures allowed per day as **PPE supplies stabilized**
  - May 26: Phase 2: More types of procedures and screening exams such as mammography

# SVH Preparedness Highlights

- **June-July-August 2020**
  - June 1: Phase 3: **All service lines resume** with safety modifications in place.
  - Continued **pre-op testing for SVH & UCSF** through drive thru.
  - **July 2: Mini-ICC (Re)Opens**
  - **Infection Preventionist Joins the TEAM**
    - Leah Heinrich
  - **Fires / Air Quality / PSPS added to ICC Agenda**
  - **In house PCR machine arrived**
    - Supplies expected soon

# Testing, testing, testing

## ■ **DIAGNOSTIC:**

- PCR (Polymerase Chain Reaction) Tests
  - Not perfect, but best we have
- Point of Care (Rapid) Antigen Tests (Abbott)
  - Helpful for Symptomatic individuals
  - If negative, may need PCR
- Other: Saliva, Fingerstick,
  - Limited use, and access. Overall thought to have lower accuracy.

## ■ **EPIDEMIOLOGIC & ADJUNCT**

- Antibody Tests
  - As evidence of lasting immunity is scarce, these are mainly used for studies and can be helpful if a patient is symptomatic and PCR is negative.
  - T-cell immunity may be MORE important

# Test Accuracy

## ■ False Negative

- a test result which incorrectly indicates that a particular condition or attribute is absent.
  - More common 1-2 days in or after 7 days.

## ■ False Positive

- a test result which incorrectly indicates that a particular condition or attribute is present.
  - Other Coronaviruses (common cold).

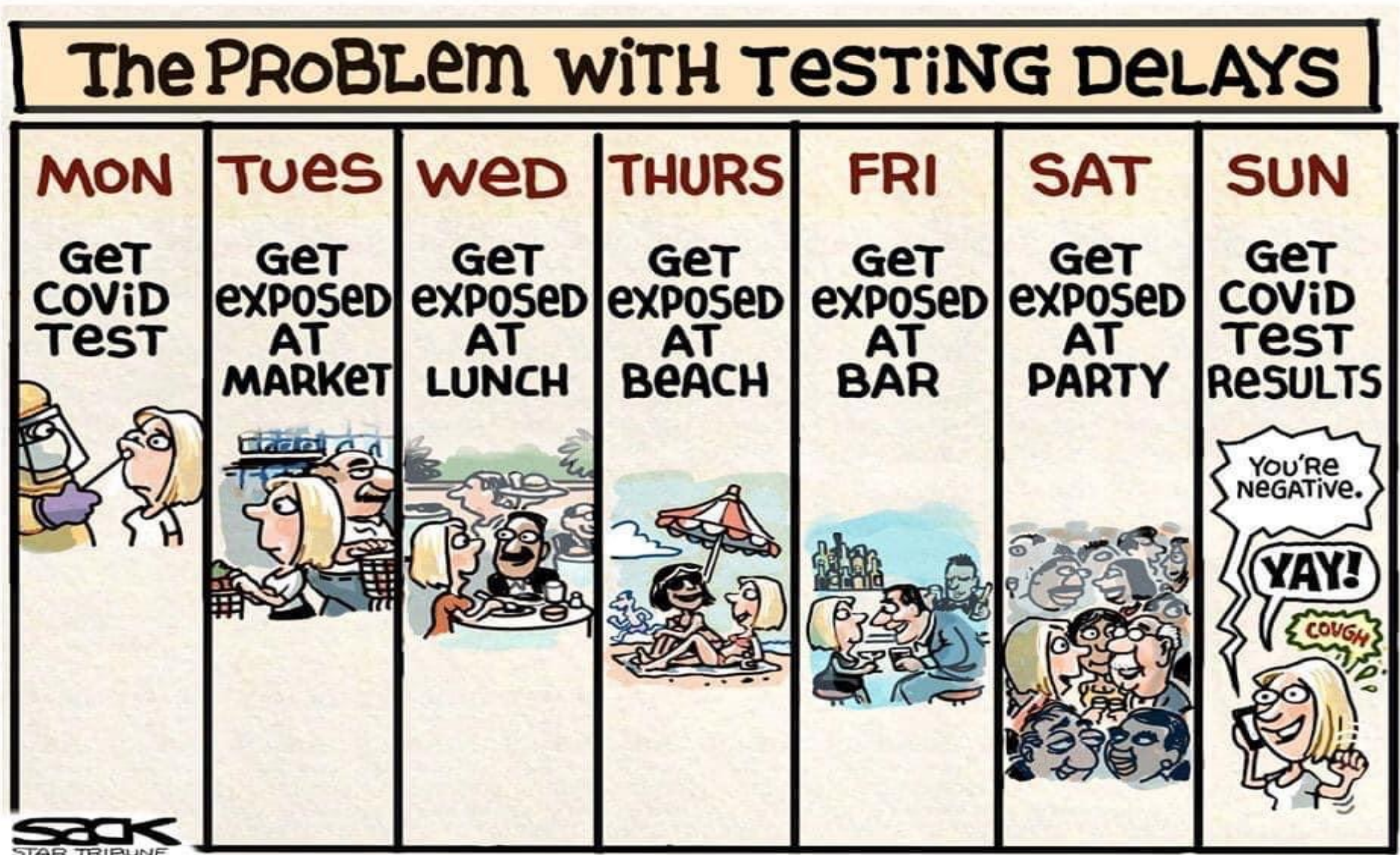


# Testing Accuracy

- **Emergency Use Approval (EUA)**
  - ALL PCR, Antigen, & Antibody tests
- **Problematic:**
  - Early PCR
  - Rapid (Point of Care)
  - Many antibody tests
- **PCR (Diagnostic) Nasopharyngeal Swab**
  - Best we have
  - Up to 30% FALSE NEGATIVE RATE

# Testing

“I got tested last week, I’m ok”





# A Word on Immunity

## ■ Antibodies

- a blood protein produced in response to and counteracting a specific antigen. Antibodies combine chemically with substances which the body recognizes as alien, such as bacteria, viruses, and foreign substances in the blood.

## ■ T-Cells

- a lymphocyte of a type produced or processed by the thymus gland and actively participating in the immune response.

# Herd Immunity

## ■ Herd Immunity

- the resistance to the spread of a contagious disease within a population that results if a sufficiently high proportion of individuals are immune to the disease, especially through vaccination.
- Estimates vary, but likely need at least 60% of population immune.
- This approach would further stress / break our healthcare system and result in more deaths.
- Re-infection IS possible, so may NOT be achievable through natural means.

# CDC Guideline Changes

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-overview.html>

- If you have been in **close contact** (within 6 feet) of a person with a COVID-19 infection for at least 15 minutes but **do NOT have symptoms**:
  - You do **NOT Necessarily need a test unless you are a vulnerable individual or your health** care provider or State or local public health officials recommend you take one.
    - A negative test does not mean you will not develop an infection from the close contact or contract an infection at a later time.
  - You should **monitor** yourself for symptoms. If you develop symptoms, you should evaluate yourself under the considerations set forth above.
  - You should strictly adhere to **CDC mitigation protocols**, especially if you are interacting with a [vulnerable individual](#). You should adhere to CDC guidelines to protect vulnerable individuals with whom you [live](#).



# Current Testing Guidelines

(By State & County Order)

- Individuals with **signs and symptoms** compatible with COVID-19 and **hospitalized and significantly ill**.
- **Healthcare personnel**, including first responders with direct contact with patients.
- All other **first responders** (i.e., fire and law enforcement).
- Individuals who live in or work at a long-term care facility, **skilled nursing facility**, residential care facility for the elderly.
- Individuals experiencing **homelessness**.
- Individuals who are **incarcerated** or who work in a jail or prison.
- Individuals identified as **contacts** of persons with laboratory-confirmed COVID-19.

# Current Testing at SVH

- **Drive Thru Testing**
  - Scheduled by Patient Access Center (PAC)
    - All Pre-op patients who will have airway management
    - Employees / Contacts as indicated
- **ED**
  - Any patient with symptoms
- **Inpatients**
  - All patients admitted
- **Lab = UCSF**
  - Limited use of DPH lab as needed

# Future Testing at SVH

- **In house PCR tests**
  - Aries Machine is being set up
    - Awaiting testing cartridges / supplies
    - 2 hour TAT
    - 6 samples at a time
- **In-house Antibody Tests Now Available**
  - IgG test with 99% sensitivity and specificity
  - Used to aid in DIAGNOSIS

# Exposures: What is High Risk?

PPE WORN BY PERSON EXPOSED TO COVID-19

<u>PPE WORN BY PERSON WITH COVID-19</u>	PPE WORN BY <u>PERSON EXPOSED TO COVID-19</u>			
	Unmasked	Face mask and NO eye protection	Face mask AND eye protection	
	Unmasked	Medium Risk Exposure	Low Risk Exposure	Low Risk Exposure
Face mask with or without eye protection	Medium Risk Exposure	Low Risk Exposure	Low Risk Exposure	

**Less than 6 feet away for more  
than 15 minutes, poor ventilation.**



# What can YOU Do?










## But First... What NOT To DO





# Masks

## Best and worst face coverings

TYPE OF COVERING	EFFICIENCY AT FILTERING LARGE DROPLETS	EFFICIENCY AT FILTERING AEROSOLS	WHERE IT CAN BE WORN
 <b>N95 mask</b>	<b>99.9%</b>	<b>95%</b>	Healthcare settings
 <b>Surgical mask</b>	<b>98.5%</b>	<b>89.5%</b>	Healthcare settings
 <b>Hybrid mask</b>	<b>96%</b>	<b>94%</b>	Public, indoor, and/or crowded settings
 <b>Two-layer cotton mask</b>	<b>99.5%</b>	<b>82%</b>	Public, indoor, and/or crowded settings
 <b>Tea towel or dishcloth</b>	<b>98%</b>	<b>72.5%</b>	Outdoor areas
 <b>100% cotton t-shirt</b>	<b>97%</b>	<b>51%</b>	Outdoor areas
 <b>Natural silk</b>	<b>56%</b>	<b>54%</b>	Outdoor areas
 <b>Scarf or bandana</b>	<b>44%</b>	<b>49%</b>	As a last resort
 <b>Mask with built-in valve or vent</b>	<b>90%</b>	<b>90%</b>	Never (does not protect others)

# What Can YOU Do?

## 5 Mask Myths

- **You don't need a mask outside as sunlight kills virus**
  - This only applies to surfaces – not noses and mouth. This does not translate in human transmission.
- **You only need to wear a mask if you have symptoms**
  - Asymptomatic and folks with mild symptoms account for > 50% of COVID -19
- **Masks can cause self-contamination**
  - No evidence to support this. Handle your mask safely. Think of mask as any other surface – wash your hands!
- **Wearing a mask will reduce your oxygen levels, right?**
  - All masks provide airflow. Just like oxygen can get in, carbon dioxide can get out
  - When measured by pulse oximetry, no decline in oxygen levels found.
  - We have years of experience using masks in health care, including patients with pulmonary disease.
- **Anything other than an N-95 mask is useless for limiting virus transmission**
  - Predominant mode of transmission IS droplet, NOT airborne
  - Any mask provides a barrier to respiratory droplets. Fit and comfort more important than type of mask.

# What YOU Can Do To Protect Yourself, Loved ones, & Patients

- **UNIVERSAL MASKING: It works!!!**
  - You protect me, I protect you!
    - Cover Nose & Mouth!
    - Beware of one-way valve masks and carry a clean extra mask to give to anyone you see wearing one.
- **WASH YOUR HANDS FREQUENTLY (at least 20 sec)**
  - Soap & Water are best
  - Hand sanitizer (>60% alcohol)
- **KEEP YOUR DISTANCE**
  - 6 Feet or MORE
  - Stay Outside!

# What Can YOU Do?

## Masks: The science

- Both pre-symptomatic & asymptomatic transmission are possible.
- Lower death rates in countries where cultural norms or government policies favor masks.
- Hair salon in Missouri
  - 2 positive employees
  - 0/140 symptomatic clients
- 80% of the population wearing masks more effective than strict lockdown
  - Control with 4-8 weeks



# Masks... if you still aren't convinced

- Fine amounts are identical to those in the Sonoma County ordinance and are as follows:
  - *Personal (non-commercial) violation:* up to \$100 per violation.
  - *Commercial violation:* up to \$1,000 for a first violation, up to \$5,000 for a second violation, and up to \$10,000 for third and each additional violation by same responsible party.





# Current Therapies

## Remdesivir & Plasma

- Remdesivir
  - Available based on weekly distribution
  - Modest survival benefit. Likely more effective when given prior to need for high flow oxygen.
- Convalescent Plasma
  - Now available under EUA (Emergency Use Authorization)
  - Study proved no harm and possible benefit

# Current Therapies

## Steroids

- Steroids (dexamethasone)
  - Widely available
  - Meta analysis shows definite benefit for hospitalized / ICU patients
  - Blocks inflammatory pathway

# Future Therapies

- A Supercomputer Analyzed Covid-19 – and an Interesting New Theory Has Emerged
  - <https://elemental.medium.com/a-supercomputer-analyzed-covid-19-and-an-interesting-new-theory-has-emerged-31cb8eba9d63>
  - <https://elifesciences.org/articles/59177>
  - **Bradykinin** (Greek brady-, slow; -kinin, kīn(eîn) to move) is a peptide that promotes inflammation. It causes arterioles to dilate (enlarge) via the release of prostacyclin, nitric oxide, and endothelium-derived hyperpolarizing factor and makes veins constrict, via prostaglandin F2, thereby leading to leakage into capillary beds, due to the increased pressure in the capillaries. Bradykinin is a physiologically and pharmacologically active peptide of the kinin group of proteins, consisting of nine amino acids (Wikipedia).
- Bradykinin inhibitors
  - Danazol, Stanozolol, Ecallantide, Vitamin D

# Medical Care During Covid-19

- **Transmission Rate Within UCSF Workplace:**
  - Comparing the rate of transmission within the UCSF workplace to that of the general community
    - Employees are **50% less likely** to become infected with COVID as the general population. This would suggest that it's safer to come into work than being exposed to the general community.
    - Coming to the hospital is as safe if not more so than going to the grocery store.
  - **Don't delay necessary health care that could lead to problems in the future.**

# Double Pandemic

## Flu + Covid-19

- Healthcare resources are stretched and in short supply world wide.
- Clinical outcomes of a double infection are likely to be deadly.
- GET YOUR FLU SHOT NOW!
  - Downside: a given year's flu vaccine may only offer immunity for 6 months, so vaccinating early may open the door for infection late in the flu season.
    - We hope to have a COVID vaccine by that time!



# Fires, Smoke, & PSPS

## ■ Masks:

- N95 or better respirator may help with smoke, but due to shortages, the need to fit test, and problems with certain health conditions NOT recommended for general public.
- STAY INSIDE WITH WINDOWS CLOSED

## ■ Disaster Preparation:

- Plenty of water and food on hand (2 weeks)
- Extra medications in “disaster supply”
- Generator with gas if available
- Battery back ups for devices / communication

# Schools, Kids, & Covid-19

- Middle and High School Age:
  - Transmission similar to adults
  - Some evidence that in low-incidence areas with masking and physical distancing measures transmission can be limited
- Elementary Age:
  - Epidemiologic evidence suggests transmission is less common than amongst adults
  - Expression of ACE-2 may be lower in this group
    - Less likely to acquire, but once acquired viral load similar to adults.

# Schools, Kids, & Covid-19

- Teachers:
  - Risk is greater for teacher to teacher transmission than child to teacher transmission.
  - Good news is masks and distancing work for adults.
- Role of Testing:
  - Necessary for case-contact investigations
  - Surveillance testing – role remains unclear

# Living with COVID-19

## A Word on Travel

- Drive with household members only
- Hand washing and hand sanitizer
- Prepare your own food and/or takeout
- Stay in a hotel or other private accommodation
- Visits with non-household members
  - Short
  - Outside
  - Masked

Source: National Geographic

URL: <https://www.nationalgeographic.com/travel/2020/07/if-you-must-travel-now-how-to-stay-safe-coronavirus/>



# What's Next

## Living with COVID-19

- Covid-19 will be with us until we have a vaccine AND better therapies
  - Vaccine likely for early 2021
- SVH will continue to operate all services with extensive precautions and testing unless:
  - Bed shortage
  - Shelter in Place guidelines recommend decreasing services again
  - PPE supplies are insufficient for non-emergent services
  - Staff shortage

# THANK YOU!

Together We Will Keep Sonoma Valley  
Safe and Open For All!





# Community COVID-19 Update

## Questions and Answers

**Sabrina Kidd, MD, FACS, FASCRS**

Chief Medical Officer and UCSF Medical Director

**To ask a question:**

Type your question into the Q&A box  
or use **Chat** feature