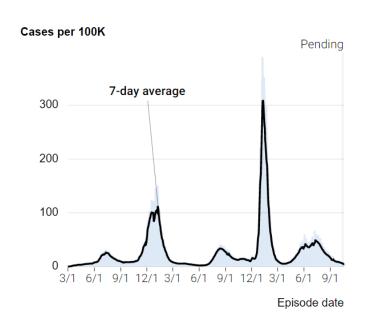
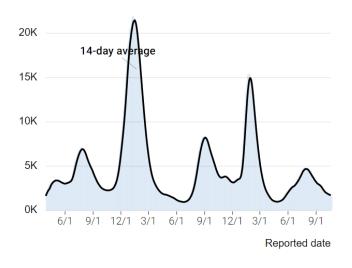
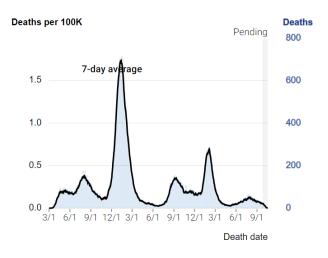
#### Testing Taskforce: New California COVID-19 cases, hospitalizations and deaths



#### 14 day average Hospitalizations



#### 7 day Average Deaths

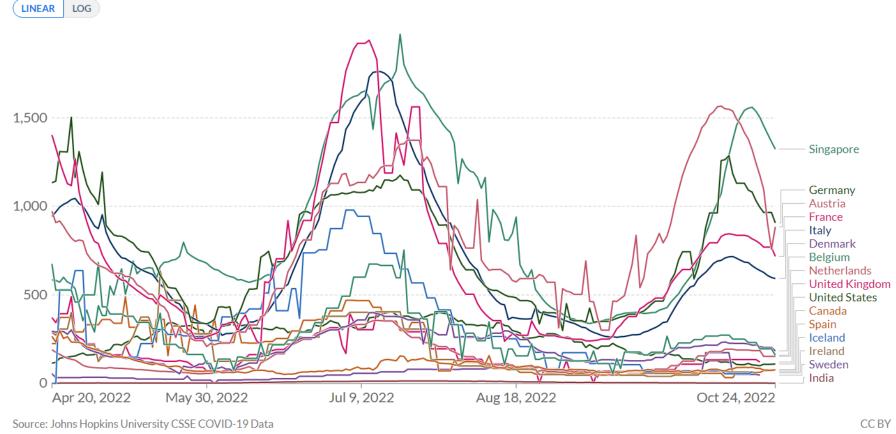


Average test positivity past 7 days 4.4%, Down 0.1% from last week Cases have fallen from the peak, test positivity remains moderately high 14 day average hospitalizations have declined but are about 1.6 times the previous low level 7 day average deaths remain at low levels.

For the week ending 10/22, 93% of molecular tests resulted in less than 24 hours and 98% of tests resulted in less than 48 hours.

#### Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.



COVID-19 cases are beginning to plateau and start to fall in Europe and Singapore from high levels. High levels of cases in Europe have often preceded rising cases in the US.

Waning pop. immunity likely contributed to rise of cases in addition to new immune evasive variants BQ.1 and XBB

Highlighting the importance of booster vaccination

# Variant update

- BA.5: US 62.2%, California 71.6%
- Decline in BA.5 as other variants emerge.
- Emerging variants have immune evasive properties affecting use of monoclonal antibodies
- Cases across the US are stable and at low levels, but hospitalizations are beginning to rise
- In the US there has been a rise in deaths to ~400-500/day up from a prior baseline of ~250/day.

### BF.7, BQ.1, BQ1.1, XBB

- BF.7 (BA.5.2.1.7),
  - US: 6.7%
  - California 5.7%, cases are rising, Growth advantage 10-15% over BA.5
- BQ.1 (daughter of BA.5)
  - 15% growth advantage over BA.5, first reported in the UK
  - Cases have now plateaued in Europe after a period of exponential growth
  - Has immune evasive mutations impairing use of monoclonal antibodies (Evusheld and Bebtelovimab)
  - US 9.5%, California 8.1%
  - BQ.1.1 US 7.2%, California 5.5%, In New York BQ.1.1 and BQ.1 represent approximately 28% of sequenced cases and this is growing week over week. However overall cases of COVID-19 are not rising in New York currently although hospitalizations are rising.
- XBB XBB is a daughter of BA.2 and has mutations that prompt immune evasion. Responsible for surge in cases that has now plateaued and has led to a rise hospitalizations in Singapore. Singapore has a high percentage of people (78%) that have received 3 doses of a COVID-19 vaccine which has likely prevented an even higher number of people from getting hospitalized.

### BA.2.75 and BA.2.75.2

- First detected in India, cases of BA2.75 are rising there, and it is outcompeting BA5
- BA.2.75 has multiple mutations in the spike protein of the virus which may increase infectivity and may evade the immune system. Estimated 5% growth advantage over BA.5
- Daughter strain BA.2.75.2 has a 10% growth advantage and is emerging in California

Resistance to Bebtelovimab and Evusheld

- BA.2.75 California: 1.9% of sequenced cases, US 1.3%, no big changes to growth
- BA.2.75.2 California: 1.8% of sequenced cases, US 1.6%

## Convergent mutations in different strains

 Noticing similar mutations in the emerging strains across lineages that confer fitness advantage

California Nowcast for variants: CalCAT

CDC Nowcast for variants: https://covid.cdc.gov/covid-data-tracker/#variant-proportions

# Paxlovid Resistance Currently Not Seen

 Currently we are NOT seeing signs of mutations in SARS-CoV-2 likely to impact the effectiveness of Paxlovid

 We are monitoring the genomic sequencing data for known Paxlovid resistance mutations