

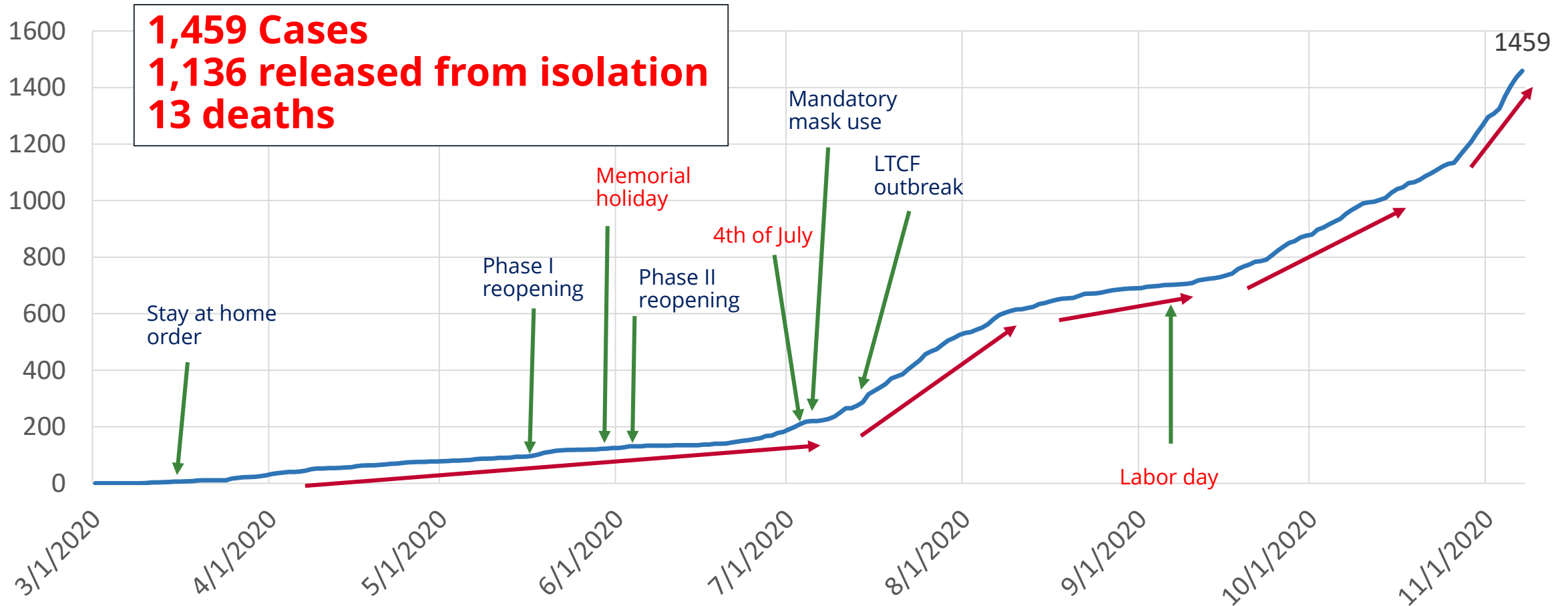
Health Services

Covid19 Risk and Mitigation Approaches

George A. Conway, MD, MPH



Deschutes County Cases (Cumulative)

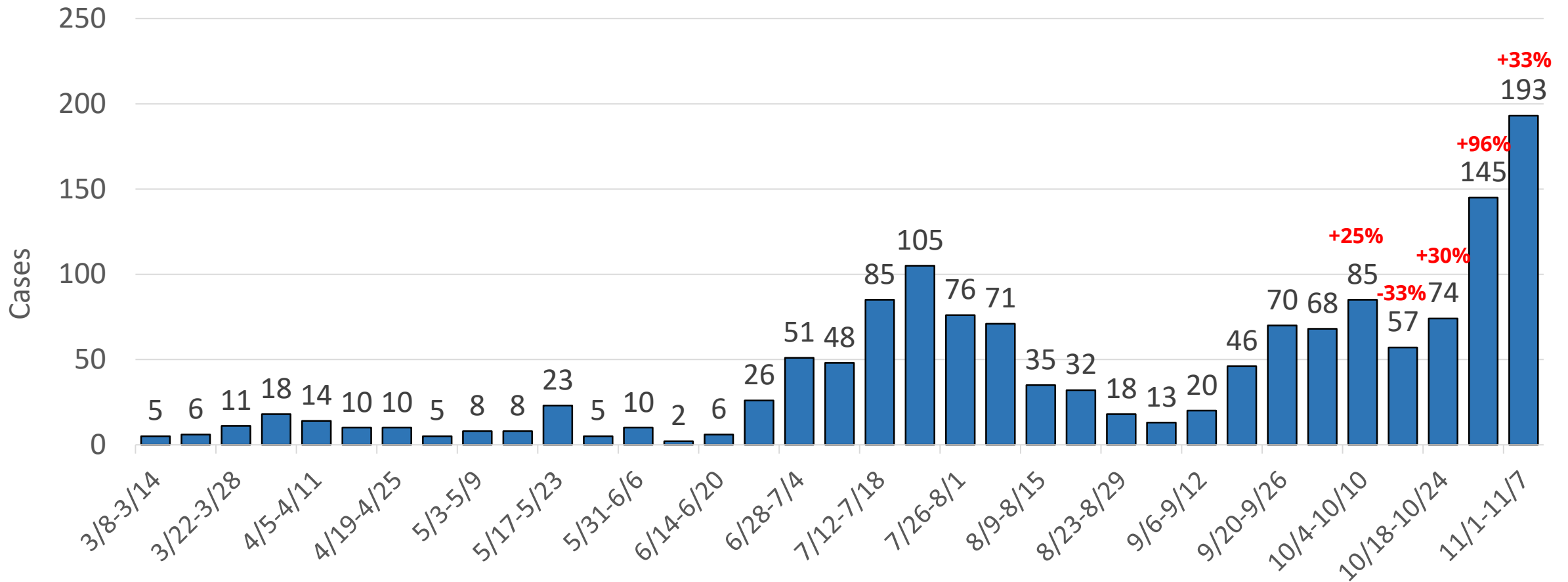


Data are shown based on the date a case first became identified as a case.

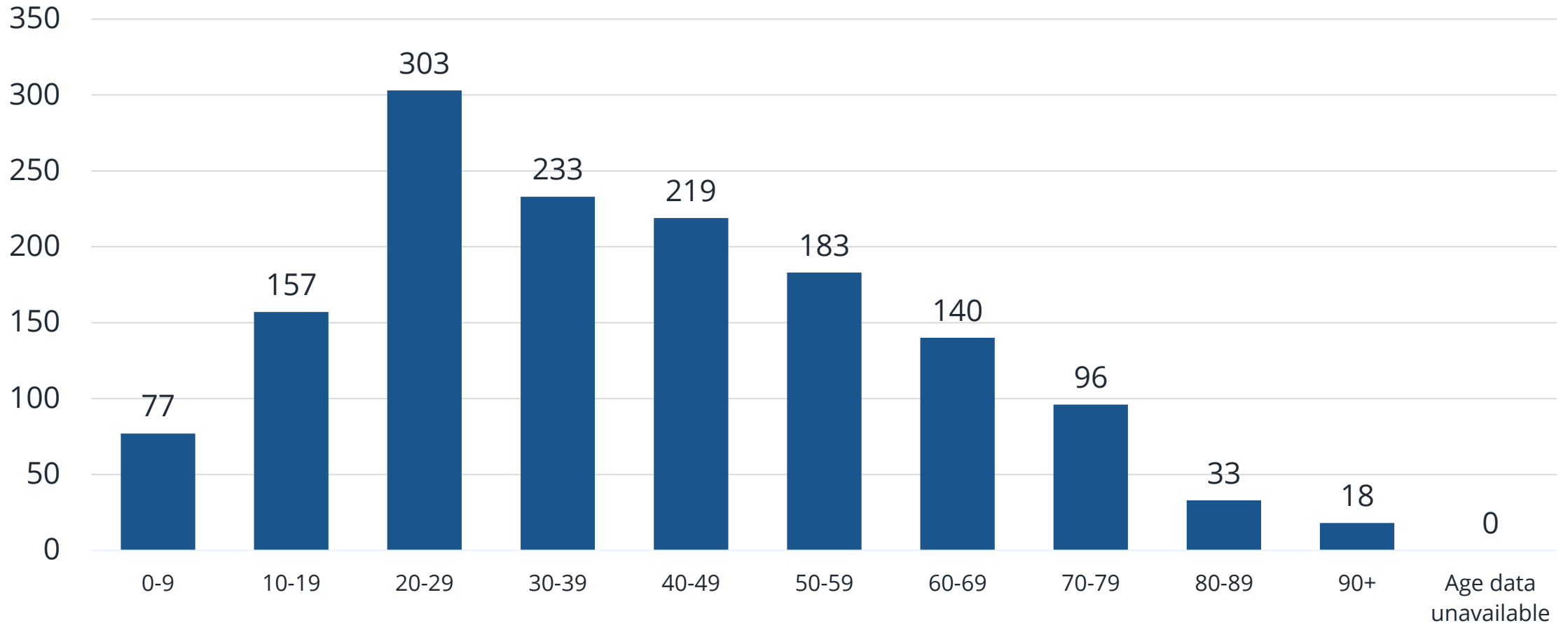
Data as of 11/9/20



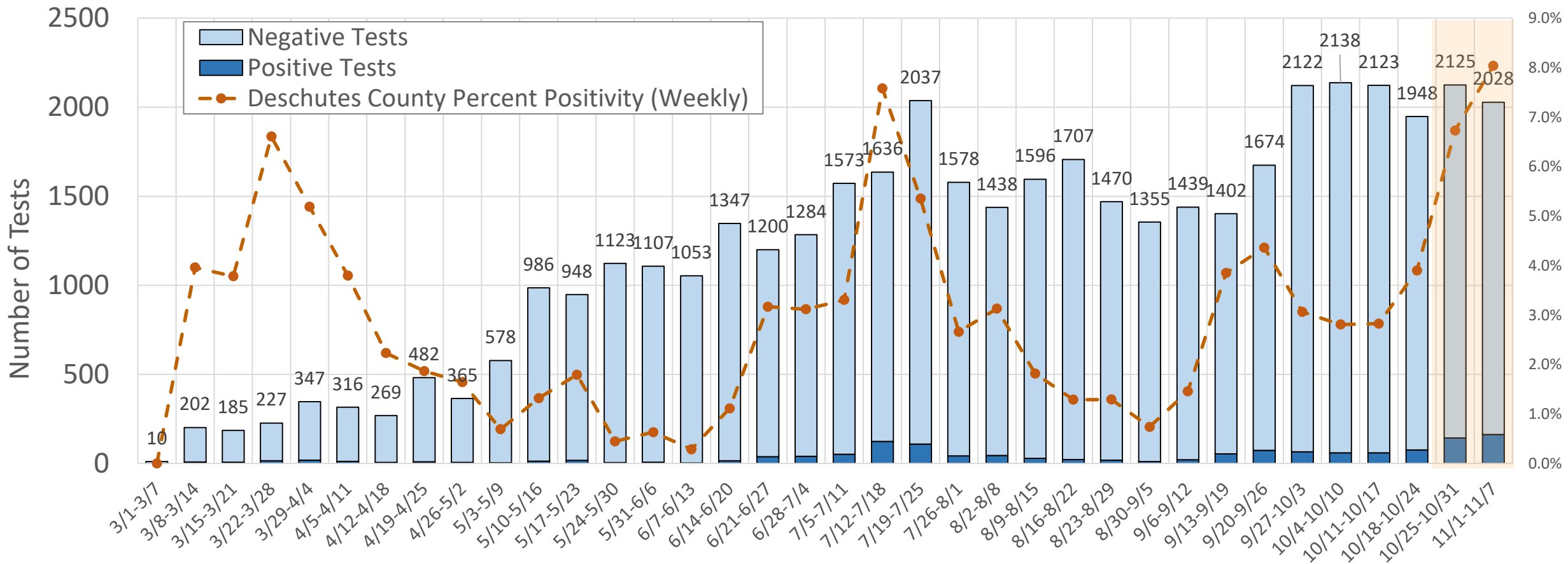
Deschutes County Cases by Week



Deschutes County Cases by Age Group



Deschutes County Testing by Week

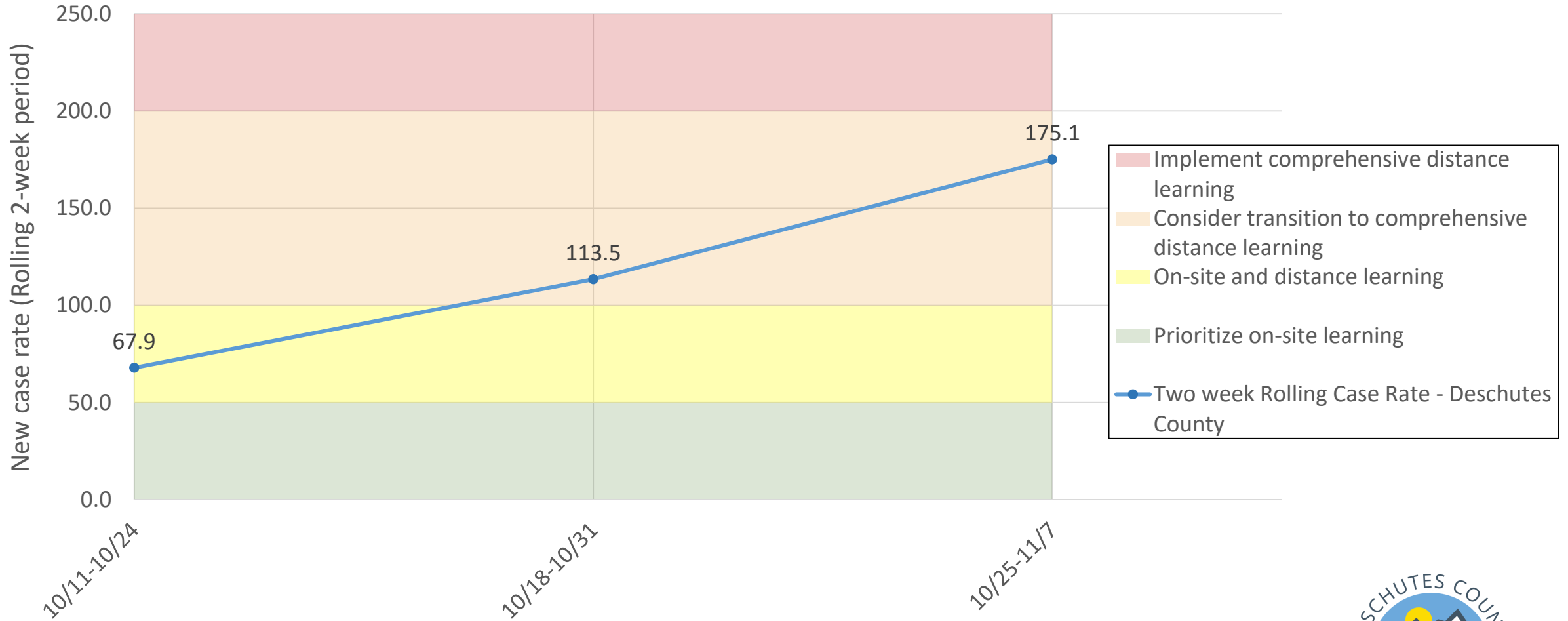


Tests are shown by week of test collection. Data for the most recent few weeks is not yet complete due to testing turnaround time.

Data as of 11/9/20



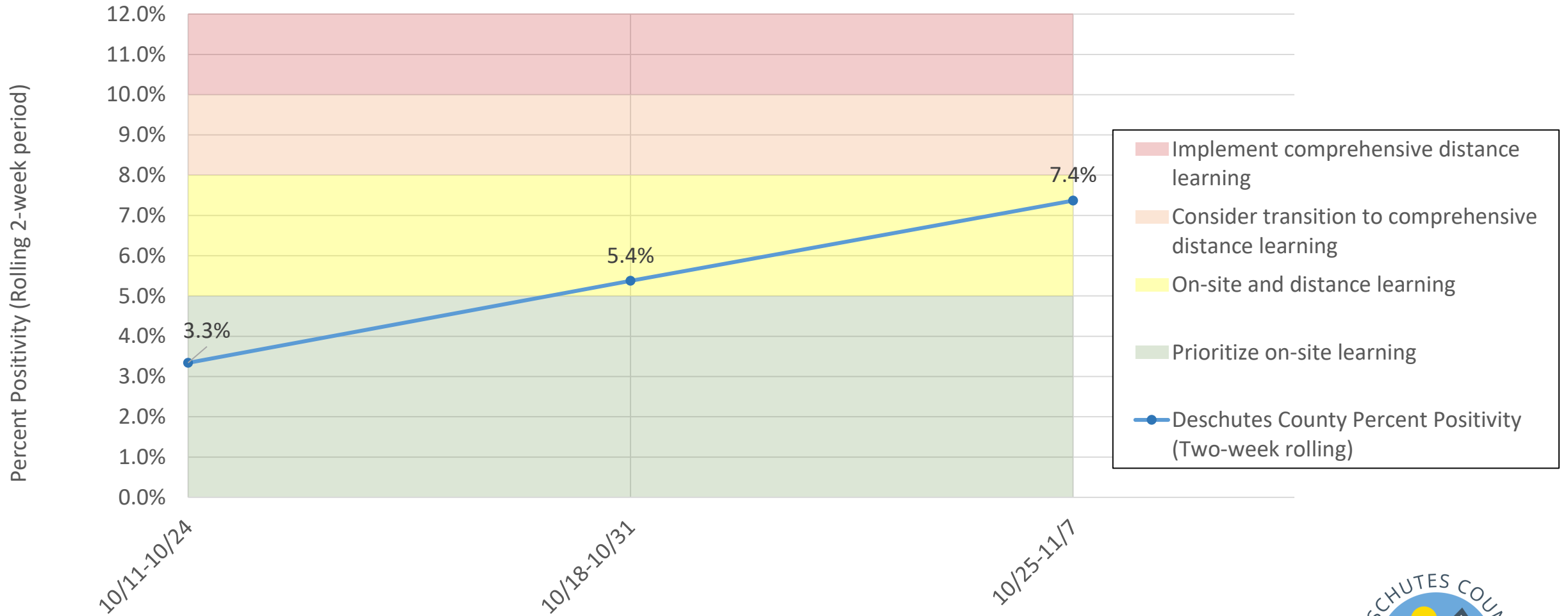
School Metrics: Two-week Case Rates per 100,000 population



Data are provisional and subject to change.



School Metrics: Two-week Percent Positivity

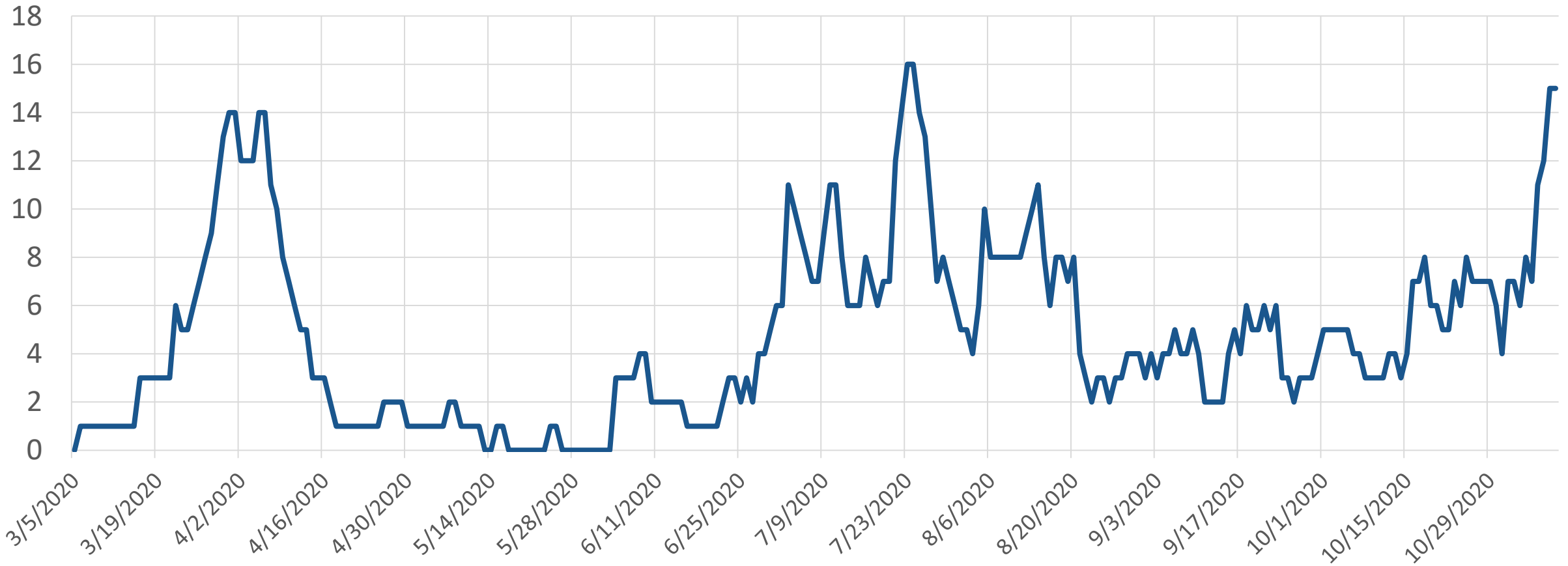


Data are provisional and subject to change.

Data as of 11/9/20



Daily Count of COVID-19 Patients Hospitalized (St. Charles Health System Data)



The following analysis focuses on our “new” outbreaks opened since 10/1/20.

- Deschutes has had 36 new outbreaks opened since 10/1/20, 25 of those in Bend.
- The 36 have 183 associated cases, 30% of all cases 10/1-11/8 (n=606 cases).
- These are not all of our outbreak-associated cases from that time frame, just those cases associated with the 36 new outbreaks opened since 10/1/20.
- **It is very important to understand the limitations on these data:**
 - Our Communicable Disease team is currently conducting case investigation and contact tracing at an heroic scale, > 200 cases 11/4-10, monitoring 279 close contacts. Staffing is very strained to keep up.
 - This precludes lengthy interviews beyond the scope of OPERA (OHA Database)
 - Despite many discussions, OHA has not yet added bars and restaurants to the investigative guidelines nor to the investigation/tracing questionnaire
 - This means that cases so classified are typically only incidental to workplace outbreaks or other outbreak investigations
 - OHA may implement a bar/ restaurant/ club questionnaire module in the next week or two, so we may have more information going forward soon
 - Thus, absence of evidence in some categories may not = evidence of absence

Deschutes County COVID-19 outbreaks opened since 10/1/20:

N= 36 total new outbreaks opened since 10/1/20

N=183 total cases associated with these new outbreaks. This represents 30% of all new cases (n=606) between 10/1/20 and 11/9/20.

Location of outbreaks:

- 25 in Bend (135 total cases)
- 6 in Redmond (19 cases)
- 2 elsewhere in the county (7 cases)
- 3 involving Deschutes county residents in settings outside of Deschutes County (22 cases)

Setting of outbreaks in Bend (n=25 outbreaks):

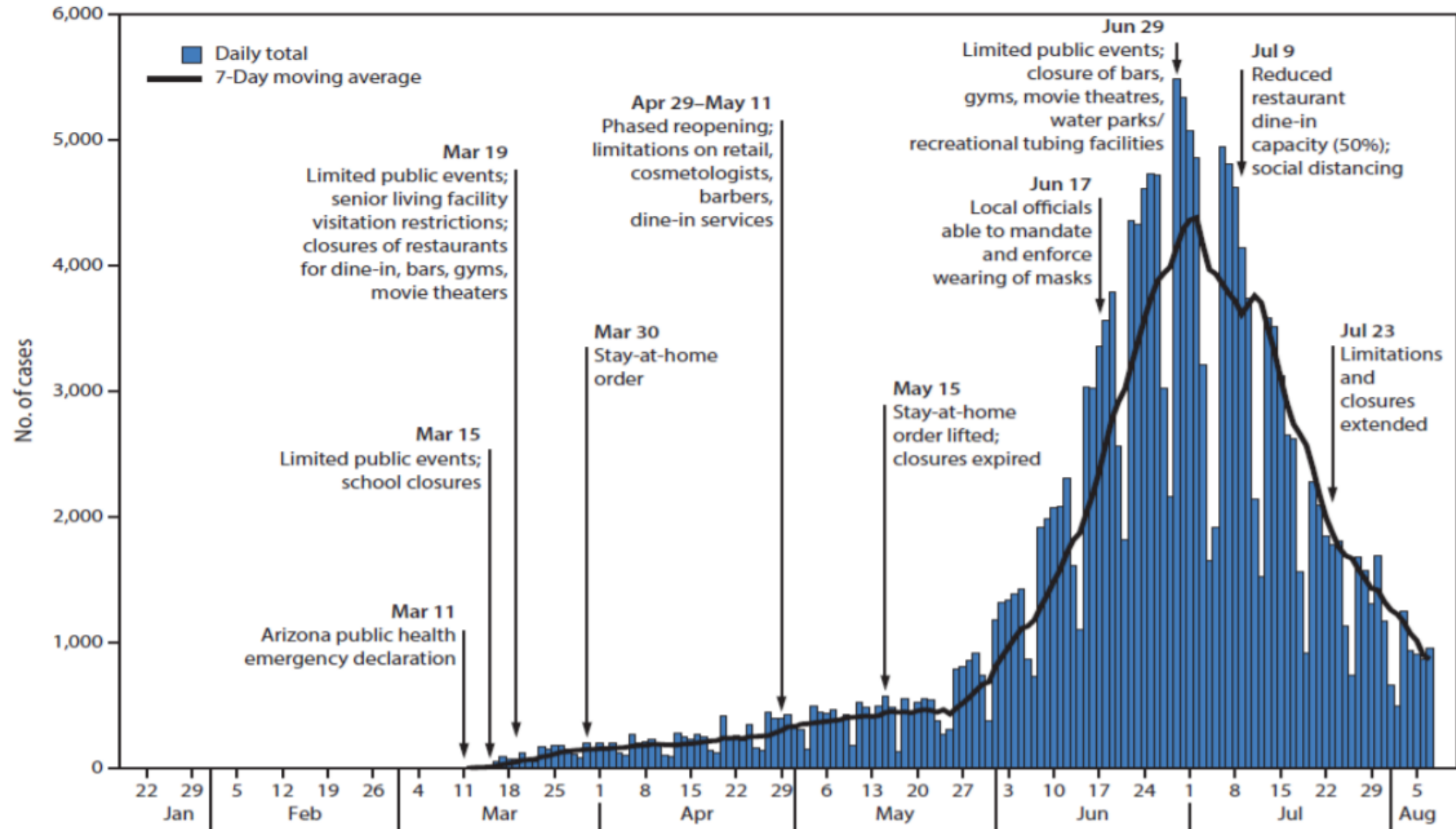
- Long term care facility or other congregate living setting: 6 outbreaks (33 total cases)
- Gyms, exercise facilities, and recreational facilities: 3 outbreaks (31 total cases)
- Daycare center or school: 5 outbreaks (27 total cases). These include 2 large, private school outbreaks, with 14 and 6 cases respectively.
- Private parties or gatherings: 1 outbreak (5 total cases)
- Other businesses:
 - Restaurants or bars: 3 outbreaks (5 total cases)
 - Healthcare facilities: 2 outbreaks (7 total cases)
 - “Other” workplaces with operations that are primarily public-facing (e.g., retail, hospitality): 2 outbreaks (8 total cases)
 - “Other” workplaces with operations that are not primarily public-facing (e.g., construction, manufacturing, other): 3 outbreaks (19 total cases)

Bend outbreaks are broken down by sector.

- Outbreaks (cases with shared exposure with other case) and cases continue to occur in long-term care & congregate housing
- Most concerning may be how many cases are associated with gyms, exercise, and recreational facilities.
- Daycare operations and schools are also major settings for outbreaks and cases.
- Construction employees are in outbreaks and among sporadic (i.e., no known exposure to another case or outbreak) cases, but some appear to be acquiring Covid19 in social gatherings.
- With colder weather, these operations may move to the interiors of incomplete structures, often sealed with plastic sheeting and heated by forced air space heaters. Attention to air exchange ventilation, masks, and distancing will be important.

Morbidity and Mortality Weekly Report: Trends in COVID-19 Incidence After Implementation of Mitigation Measures — Arizona, January 22–August 7, 2020

FIGURE. Selected community mitigation measures* and COVID-19 case counts† and 7-day moving averages§ — Arizona, January 22–August 7, 2020



Arizona's prevention and control measures over the summer months helped slow the spread of COVID-19

151% 

in cases after stay-at-home order lifted

Number of cases stabilized then decreased after multiple statewide and local prevention measures implemented



75% 

in cases following sustained prevention efforts across the state

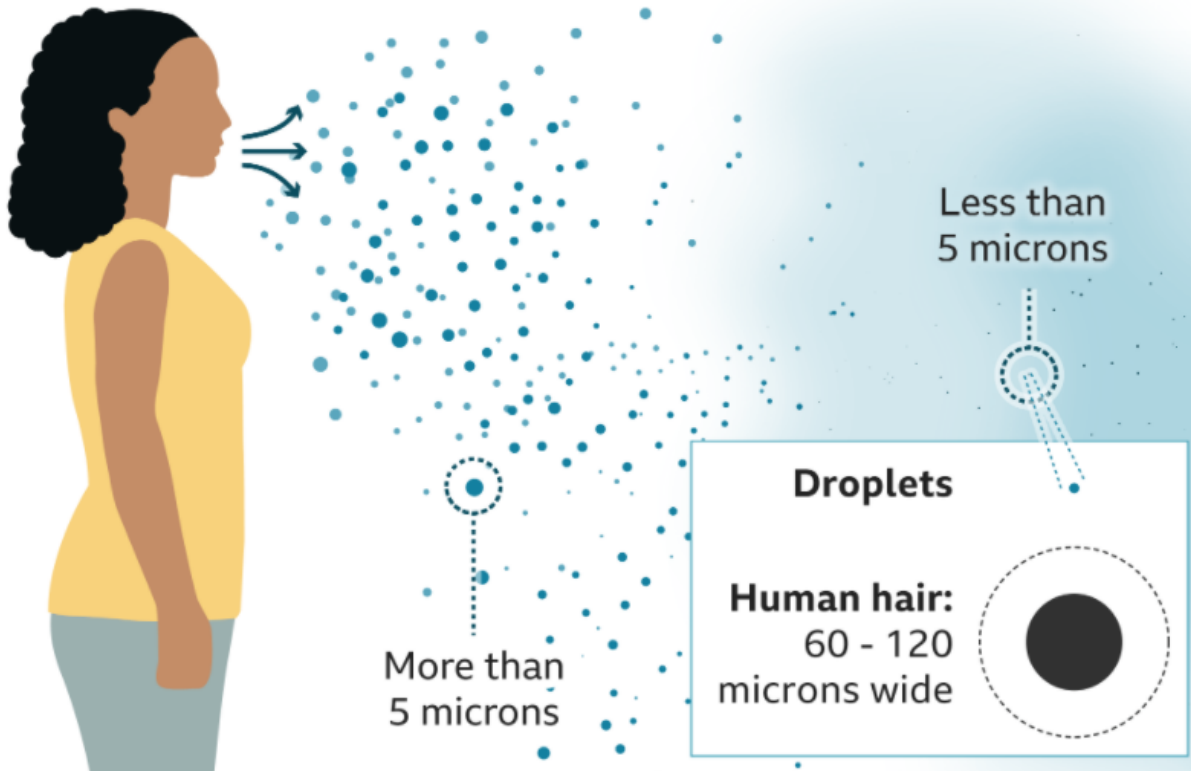
The difference between droplet and airborne transmission

Droplet transmission

Coughs and sneezes can spread droplets of saliva and mucus

Airborne transmission

Tiny particles, possibly produced by talking, are suspended in the air for longer and travel further



Source: WHO



COVID-19

CORONAVIRUS DISEASE

BE INFORMED:

Know Your Risk During COVID-19

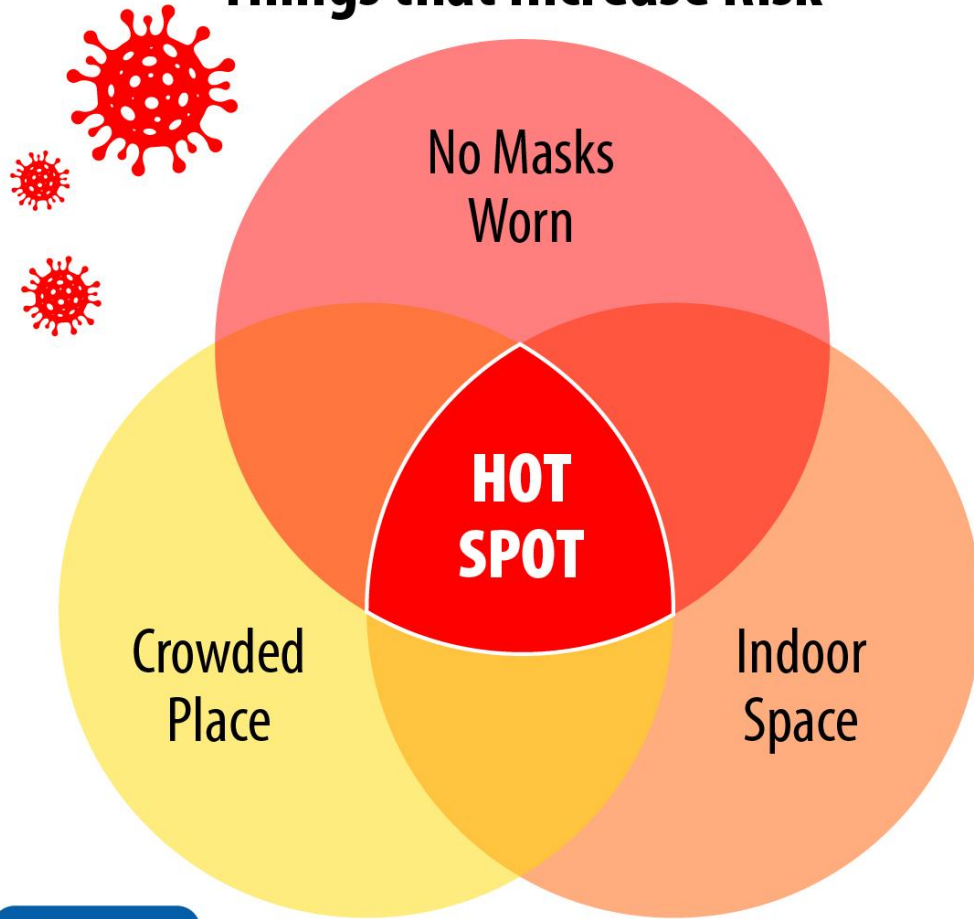
On a scale of 1 to 10, how risky is...

Ranked by physicians from the TMA COVID-19 Task Force and the TMA Committee on Infectious Diseases. Please assume that participants in these activities are following currently recommended safety protocols when possible.

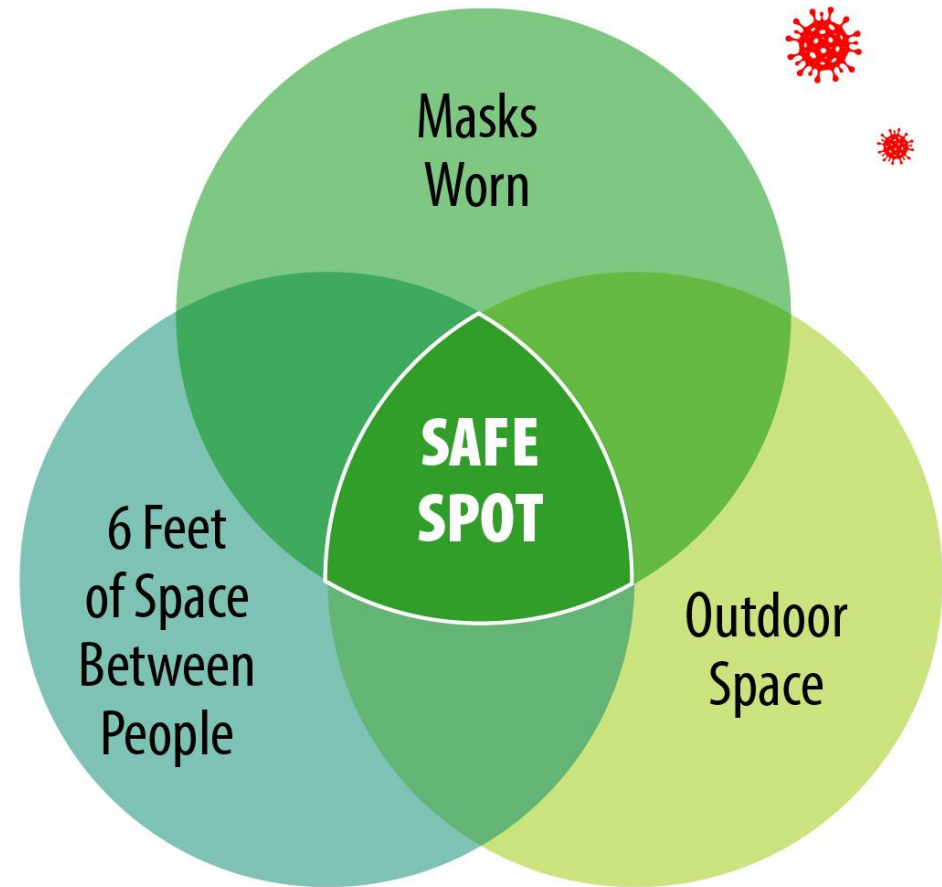


Tips for Reducing Risk of Getting COVID-19

Things that Increase Risk



Things that Decrease Risk

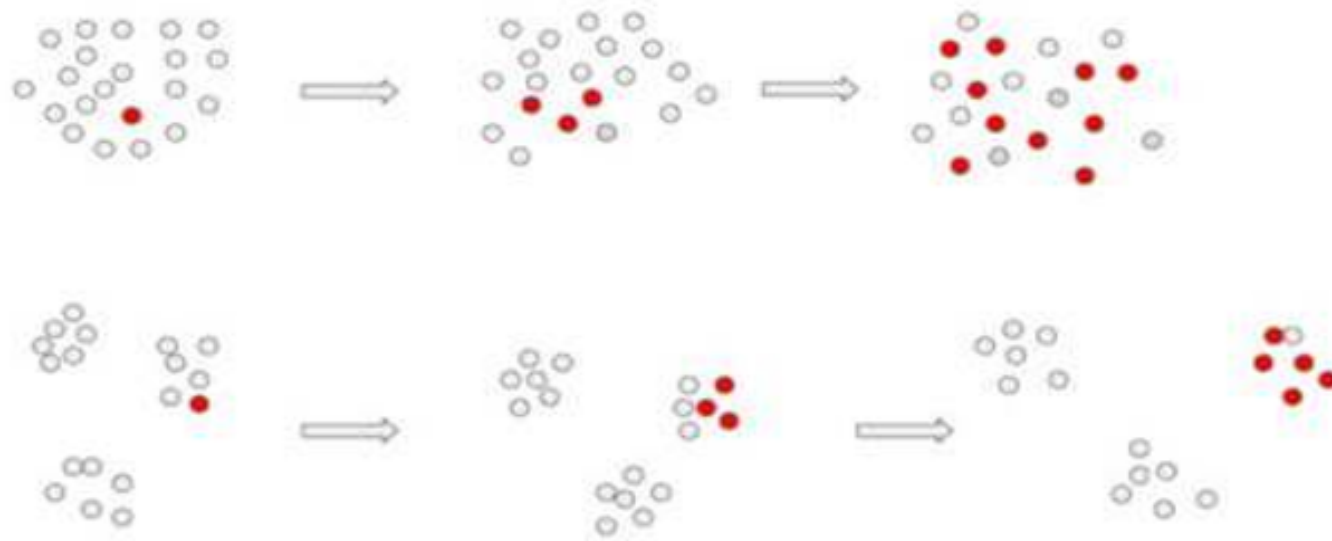


www.cdc.gov/coronavirus

School reopening approaches

- DOE & OHA revised reopening metrics
- Biweekly SARS-CoV-2 Antigen testing for teachers and staff?
- Ventilation assessment and improvements
- Rigorous attention to cohorting:

Age-appropriate cohorting







HEALTHY CLASSROOMS

Following safe practices in classrooms.

- Wear masks
- Wash hands frequently
- Maximize physical distancing to protect individuals
- Maximize group distancing to slow transmission chains
- Disinfect objects between users



HEALTHY BUILDINGS

Breathing clean air in the school building.

- Increase outdoor air ventilation
- Filter indoor air
- Supplement with portable air cleaners
- Verify ventilation and filtration performance
- Consider advanced air quality techniques
- Use plexiglass as physical barrier
- Install no-contact infrastructure
- Keep surfaces clean
- Focus on bathroom hygiene



HEALTHY POLICIES

Building a culture of health, safety, and shared responsibility.

- Establish and reinforce a culture of health, safety, and shared responsibility
- Form a COVID-19 response team and plan
- Prioritize staying home when sick
- Promote viral testing and antibody testing
- Establish plans for when there is a case
- Support remote learning options
- De-densify school buildings
- Protect high-risk students and staff



HEALTHY SCHEDULES

Moving between rooms and locations safely.

- Manage transition times and locations
- Make lunchtime safer
- Rethink transportation
- Modify attendance

5 Step Guide to Measuring Ventilation Rates in Classrooms

1. Measure the Classroom Dimensions
2. Perform Preliminary Audio and Visual Checks
3. Measure or Estimate Outdoor Air Ventilation Rate (using one of four methods)
4. Compare Results to Targets
5. If Needed, Consider Supplemental Air cleaning Strategies to Meet Targets



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P										
1	SIMPLE TOOL FOR SCHOOLS FOR SELECTING PORTABLE AIR CLEANER FOR ROOMS (input fields are bright yellow)																									
2																										
3	STEP 1 HOW BIG IS THE ROOM?																									
4	Select units of preference	feet																								
5	How big is your room?	500	<i>Input your room size here in square feet</i>																							
6	How tall are your ceilings?	8	<i>Input your room size here in feet</i>																							
7																										
8	STEP 2 WHAT IS THE 'CLEAN AIR DELIVERY RATE' OF THE AIR PURIFIER? (you get this from the manufacturer)																									
9																										
10	What is the clean air delivery rate of the air cleaner?	300	<i>Find the CADR from the manufacturer in units of cubic feet per minute, or cfm; if they report multiple numbers, use the one for 'dust'</i>																							
11																										
12	STEP 3 HOW MUCH OUTDOOR AIR VENTILATION DO YOU HAVE?																									
13																										
14	How is the ventilation in my school?	Low ventilation	Good ventilation	3 ACH	<i>This is the approximate minimum air exchange rate that schools should be designed for, but most don't achieve (see 'README')</i>																					
15			Enhanced ventilation	4 ACH	<i>Select this only if your school has made enhancements beyond code minimums</i>																					
16			Typical school	1.5 ACH	<i>This is an approximate average air exchange rate in many schools based on research studies</i>																					
17			Low ventilation	1 ACH	<i>Select this if your school has poor ventilation or you're not sure (for reference, a typical U.S. home is 0.5 ACH)</i>																					
18																										
19	STEP 4 COMBINING AIR CLEANING AND VENTILATION, IS YOUR ROOM MEETING THE TARGET?																									
20																										
21	Air changes from outdoor air ventilation	1	TARGET IS AT LEAST 5 TOTAL AIR CHANGES PER HOUR																							
22	Air changes from air cleaner	4.5	<table border="1"> <tr> <td>Green</td> <td>Ideal (6 ACH)</td> </tr> <tr> <td>Light Green</td> <td>Excellent (5-6 ACH)</td> </tr> <tr> <td>Yellow</td> <td>Good (4-5 ACH)</td> </tr> <tr> <td>Light Red</td> <td>Bare minimum (3-4 ACH)</td> </tr> <tr> <td>Red</td> <td>Low (<3 ACH)</td> </tr> </table>														Green	Ideal (6 ACH)	Light Green	Excellent (5-6 ACH)	Yellow	Good (4-5 ACH)	Light Red	Bare minimum (3-4 ACH)	Red	Low (<3 ACH)
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Red	Low (<3 ACH)																									
23	Total air changes in the room per hour	5.5																								
24																										
25																										
26																										
27																										
28	STEP 5 WHAT SIZE ROOM WILL WORK FOR THIS PORTABLE AIR CLEANER?																									
29																										
30	Cubic feet per minute (cfm) of clean air from cleaner	300	<i>This is from the manufacturer (see cell 'c10')</i>																							
31	Cubic feet per minute (cfm) of outdoor air from ventilation	67	<i>This is calculated from air changes per hour and volume of room</i>																							
32	Total cfm of air cleaning and ventilation	367																								
33																										
34	Recommended room size for this air cleaner (in square feet)	550	<i>This is the recommended maximum size of the room for this air cleaner to achieve 5 total ACH</i>																							
35																										

Recommendations and reminders:

- Our communities must set a high priority on reopening schools, and organizing around how to do that (i.e., bringing COVID19 infection rates down, improving ventilation and cohorting, consider routine testing).
- Focused outreach to teens and young adults re: risk avoidance
- Message and discourage large Holiday gatherings
- Maintaining social distance indoors and out
- Universal mask wearing at all times around others that are not household members:
 - Promote as a social norm, enforcement as necessary
- Energetic outreach and enforcement as indicated for high-risk settings
- Continue to better define what interactions carry the highest risk

Thanks

Questions?

<https://www.deschutes.org/health/page/covid-19-novel-coronavirus>

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