

GEEERC COVID-19 Epi Update

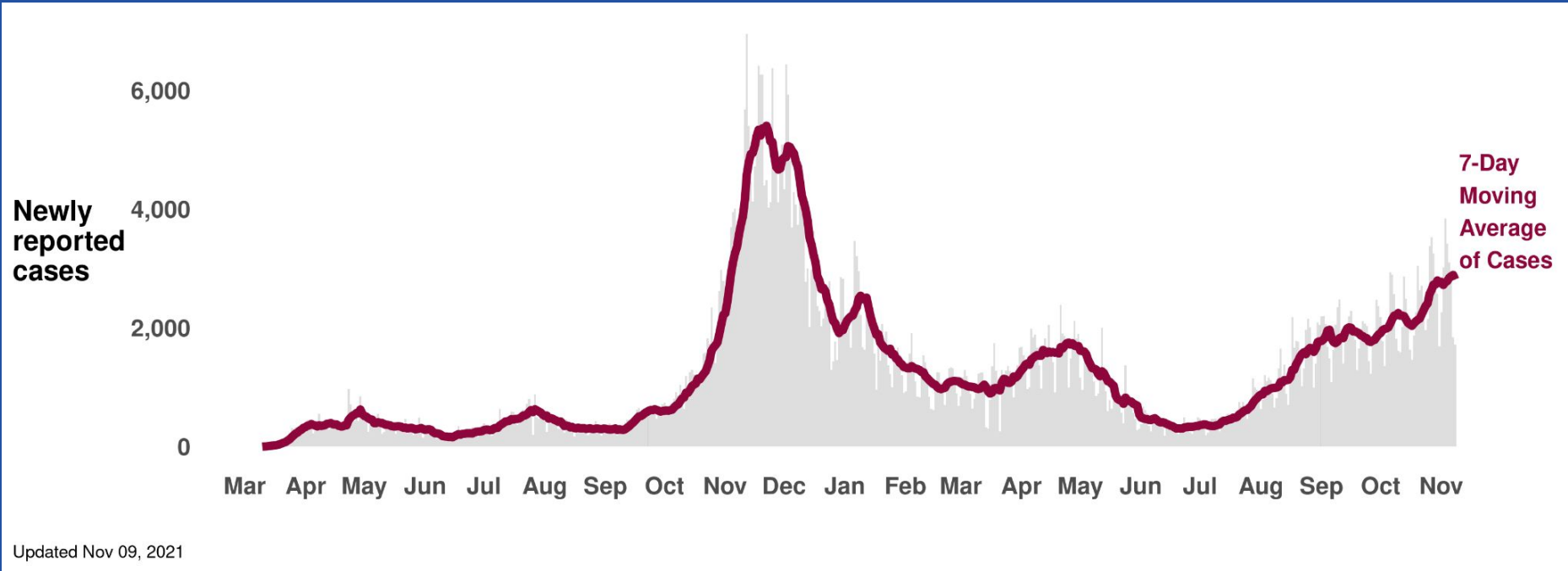
Rachel Herlihy, MD, MPH
State Epidemiologist

	Aug. 11, 2021	Nov. 9, 2021
Cases	586,562	771,160
Currently hospitalized	501	1,426
COVID-19 coded deaths	7,268	8,754
Outbreaks	5,639 (5,493 resolved)	6,601
Three day average percent positivity	6.14%	9.9%
Confirmed variant cases	>98% B.1.617.2 - Delta	100% B.1.617.2 - Delta

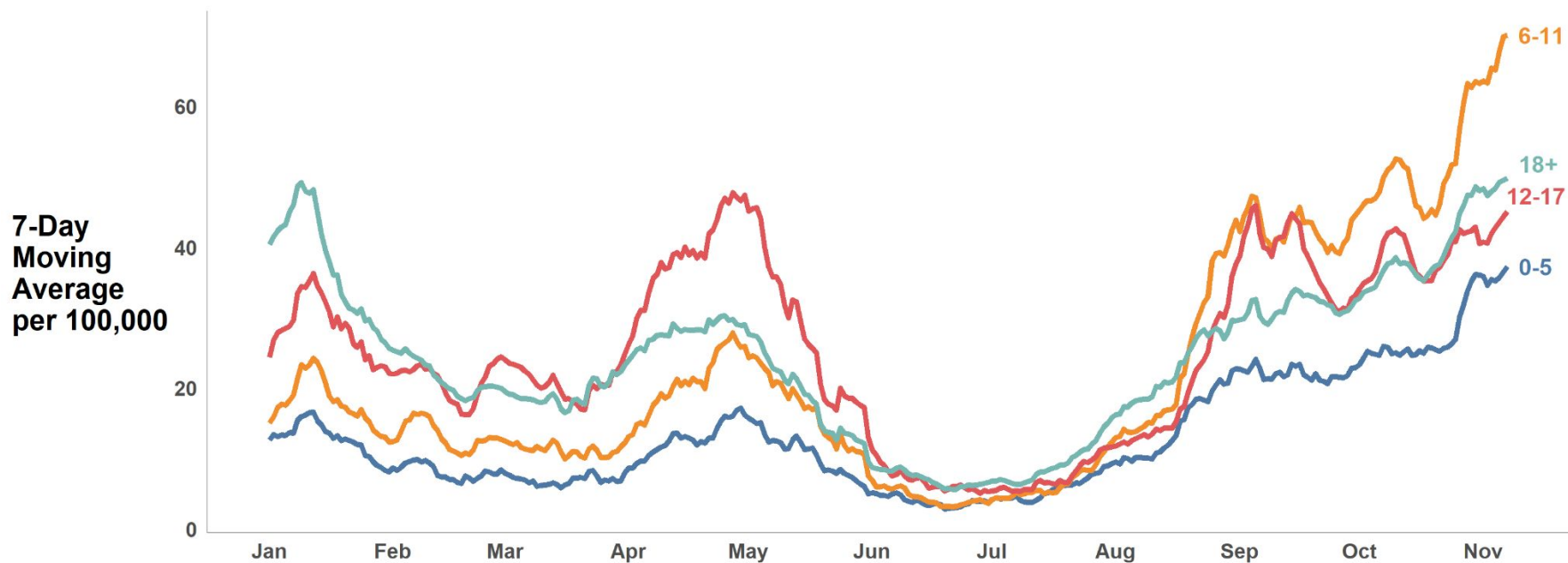
Overview of key trends

- COVID-19 cases, test percent positivity, hospitalizations, and deaths have been increasing in Colorado since August. Delta variant dominates.
- Case rates and percent positivity are highest among school-age children.
- The majority of hospitalizations and deaths are occurring among unvaccinated adults.
- Vaccine effectiveness against hospitalization and death remain high, but there is evidence of waning immunity among older Coloradans, emphasizing booster dose need.
- Modeling projections updated Nov. 9, 2021, following a rapid increase in hospitalizations, show that COVID-19 hospital demand will increase until late December and could exceed current hospital capacity.
- In addition to non-pharmaceutical interventions, booster vaccination and monoclonal antibody treatment can decrease hospital demand.
- Outbreaks in long term care facilities have increased with the current wave, but involve fewer cases, hospitalizations, and deaths.

Cases continue to increase

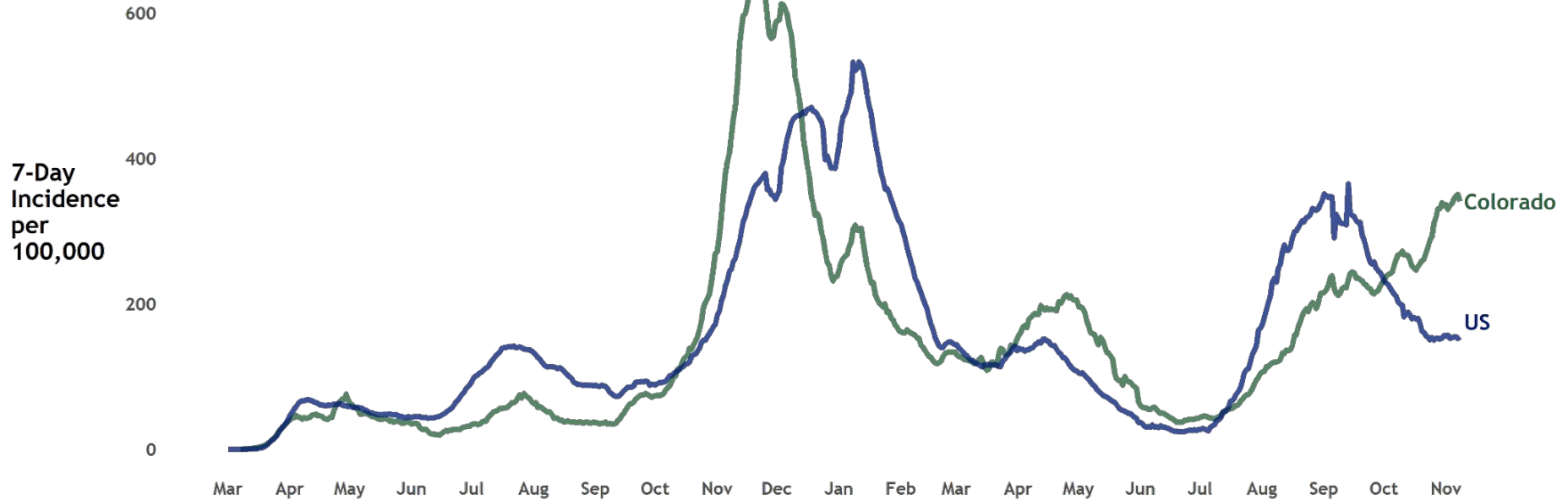


Case rates are highest among school-aged children



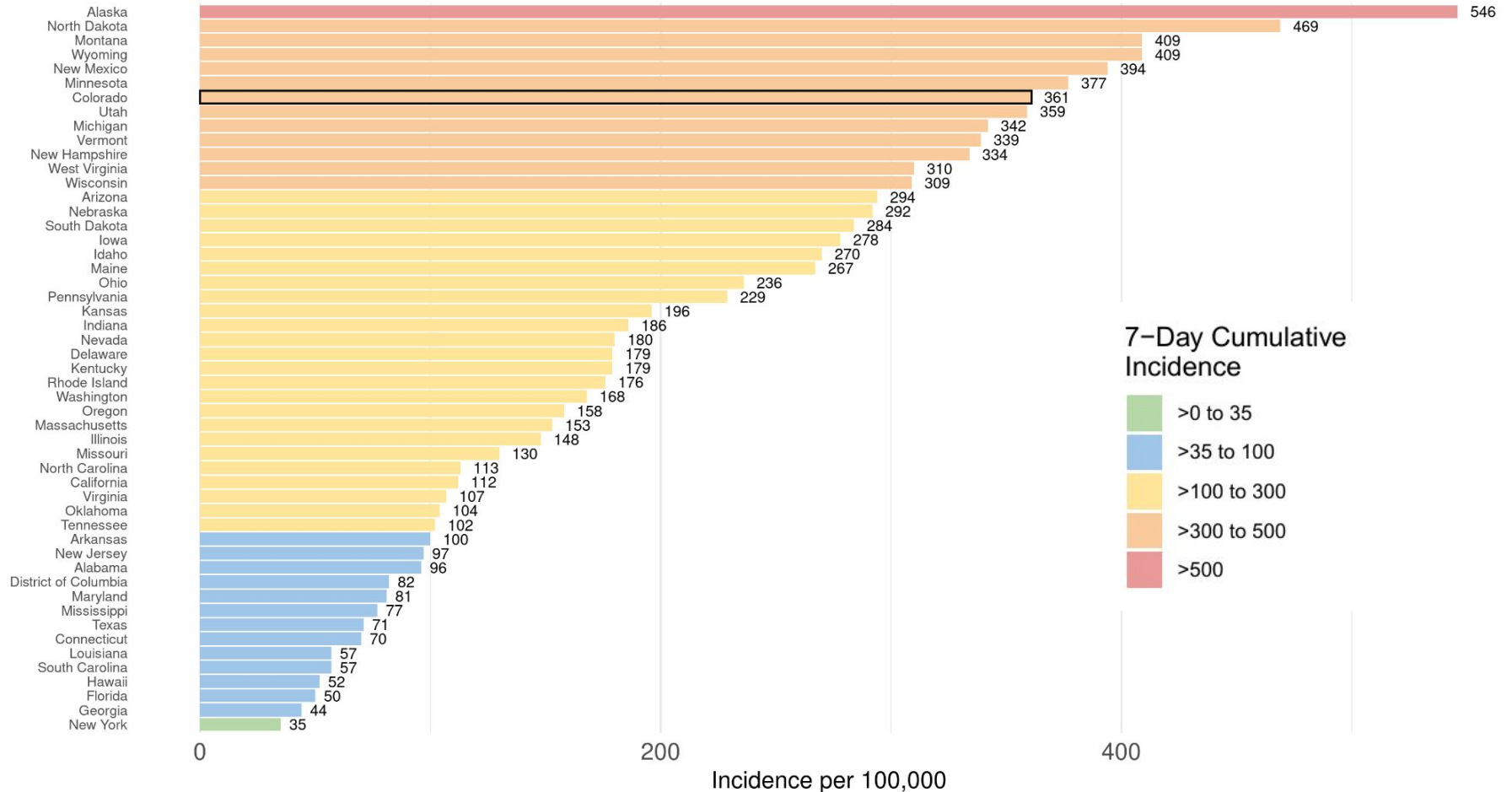
Updated Nov 09, 2021

Comparison of Colorado and U.S. case rates

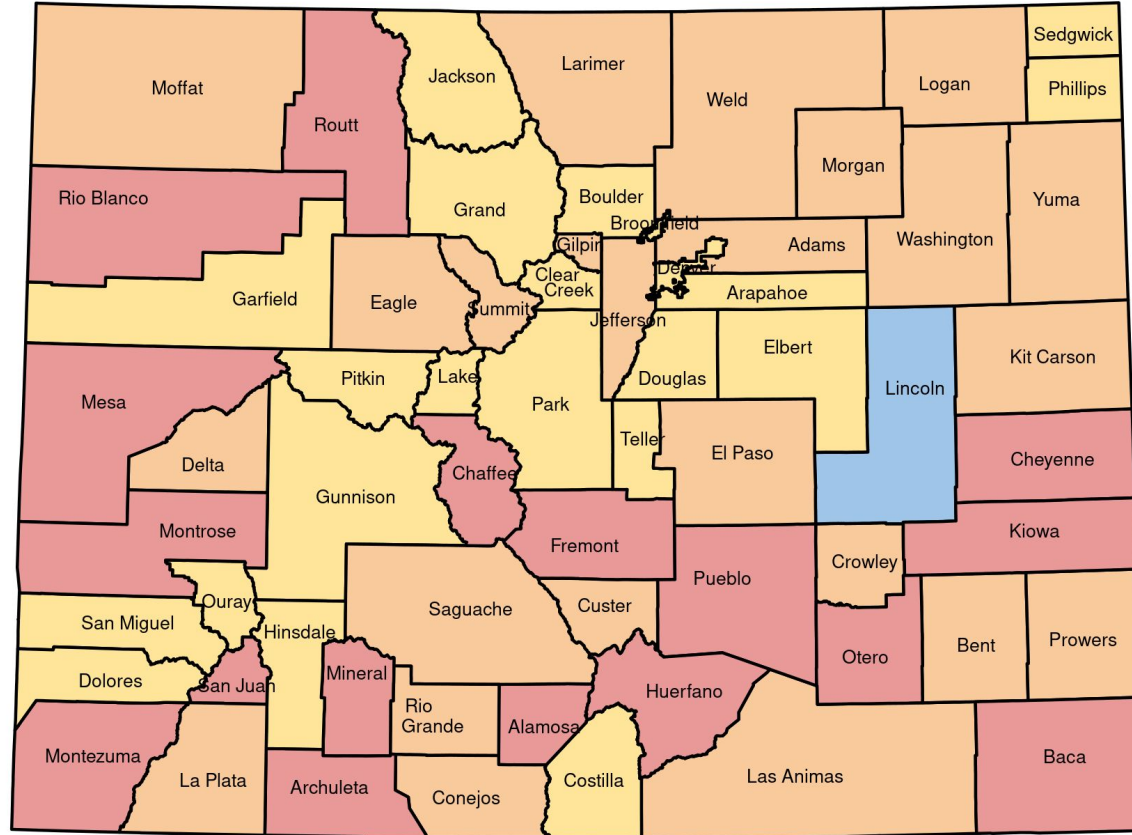


Source for US data: Johns Hopkins University, updated Nov 9, 2021

7-Day Incidence per 100,000 (CDC, updated Nov 9, 2021)



7-Day Incidence per 100,000 (CEDRS, updated Nov 09, 2021)

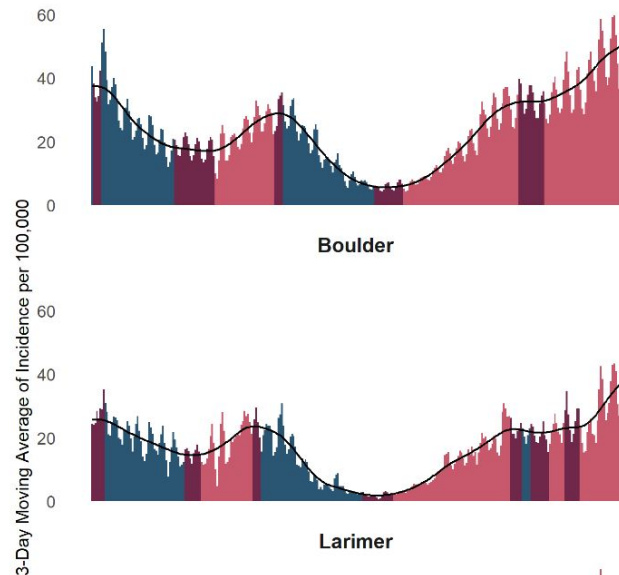


7-Day Cumulative Incidence

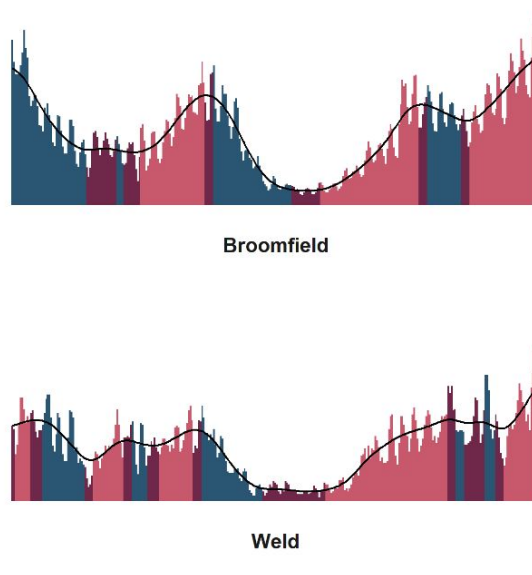


Regional Epidemic Curves (Updated Nov 09, 2021)

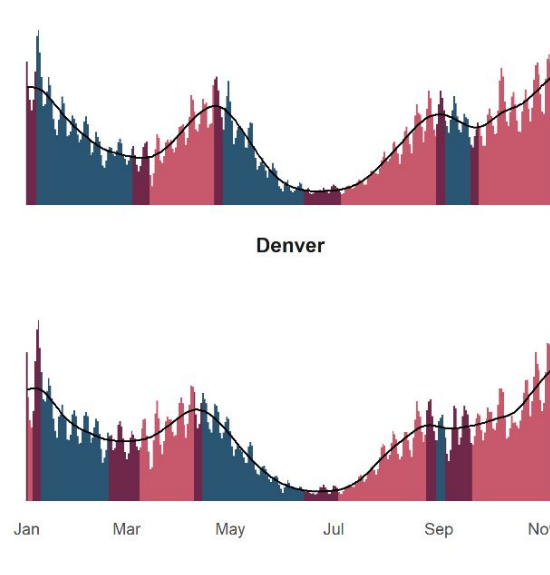
Colorado



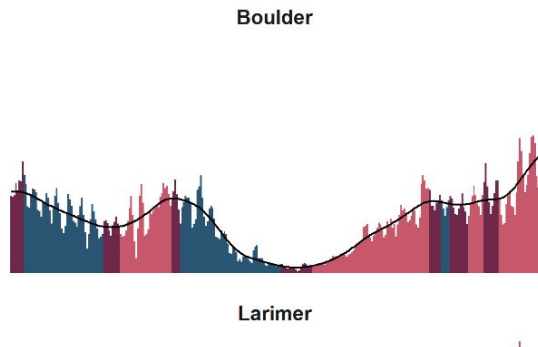
Adams



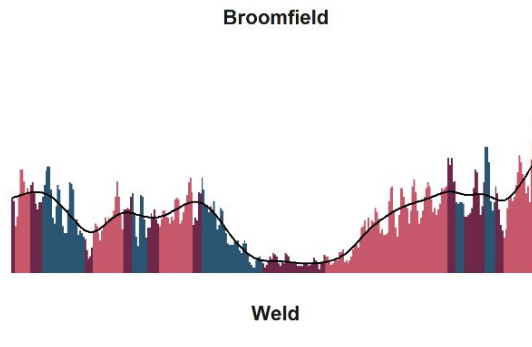
Arapahoe



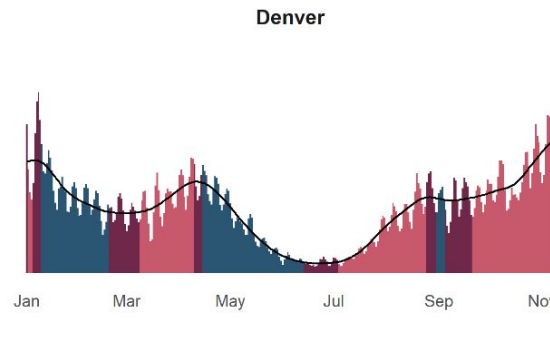
Boulder



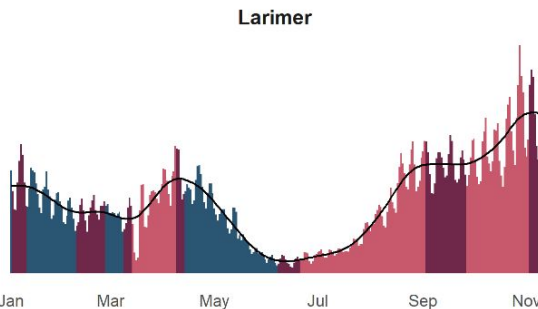
Broomfield



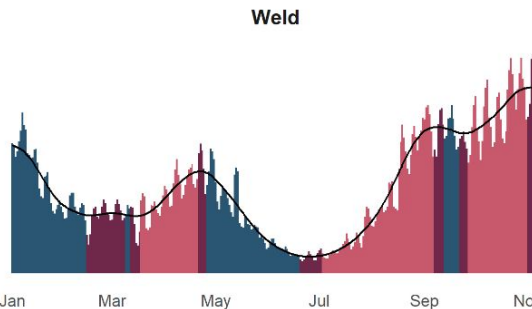
Denver



Larimer



Weld



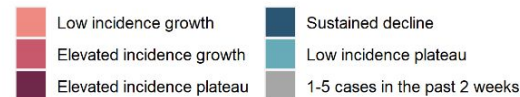
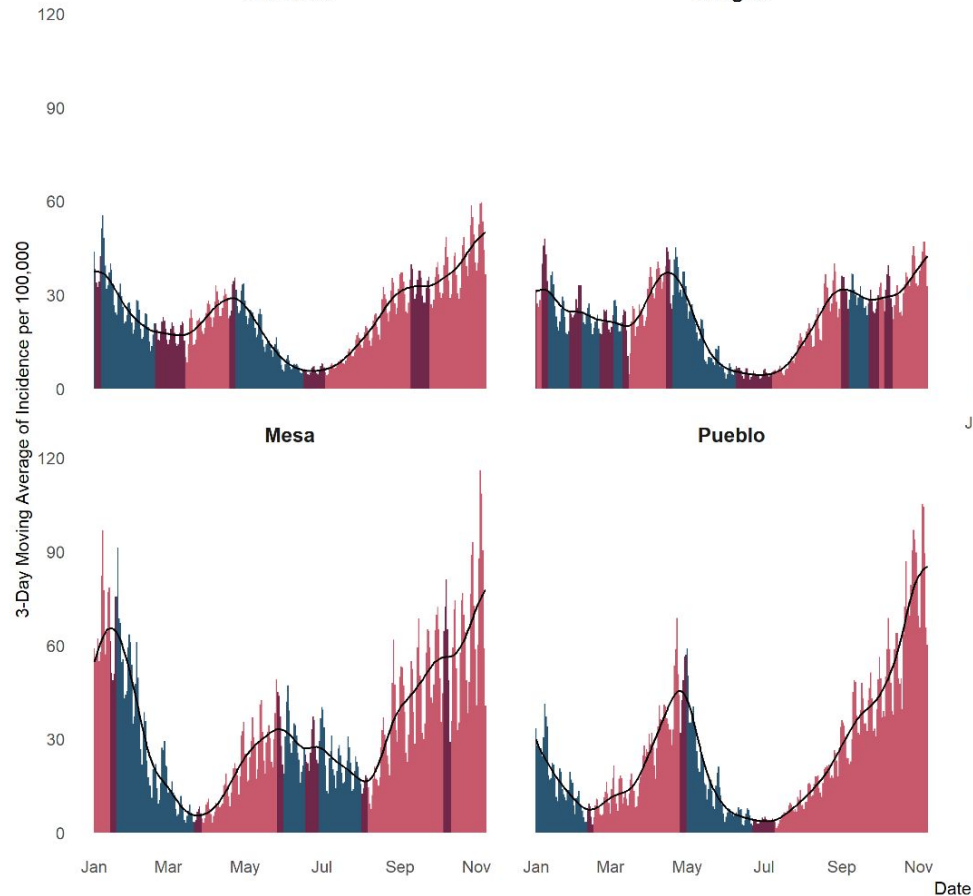
Regional Epidemic Curves (Updated Nov 09, 2021)

Colorado

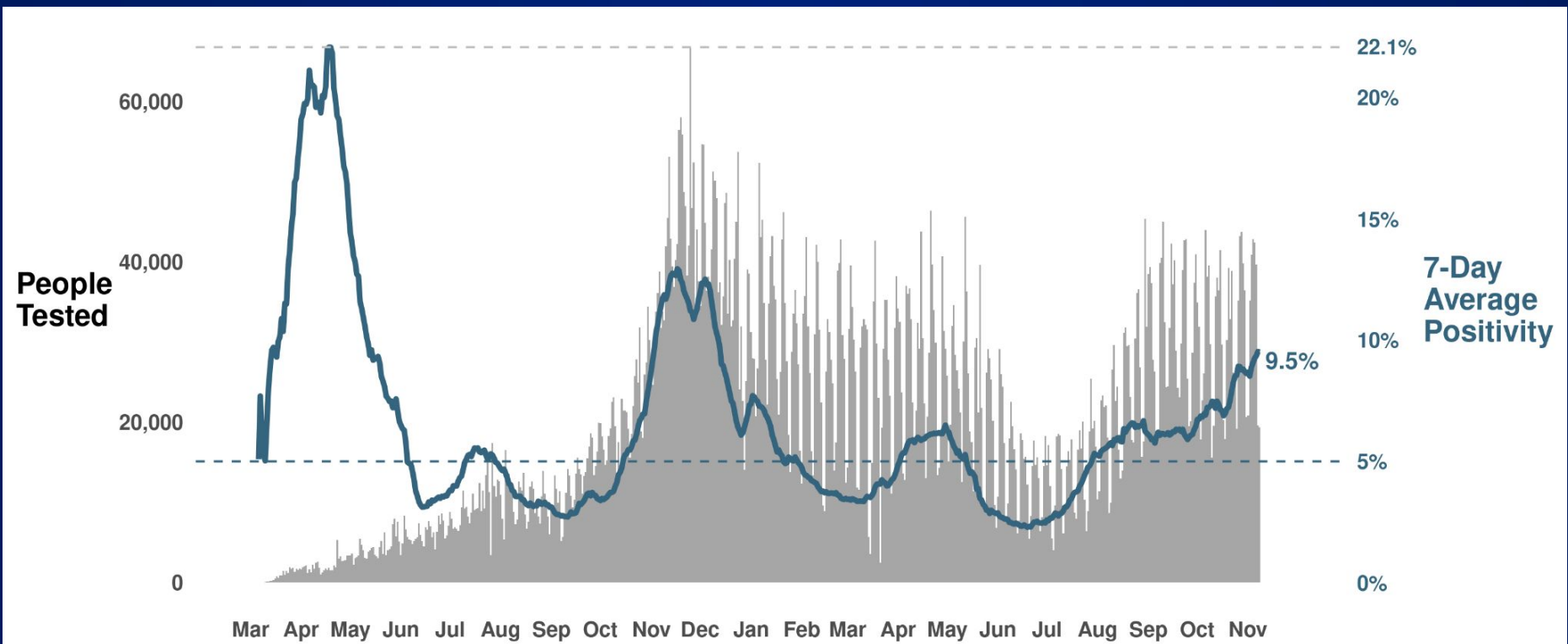
Douglas

El Paso

Jefferson

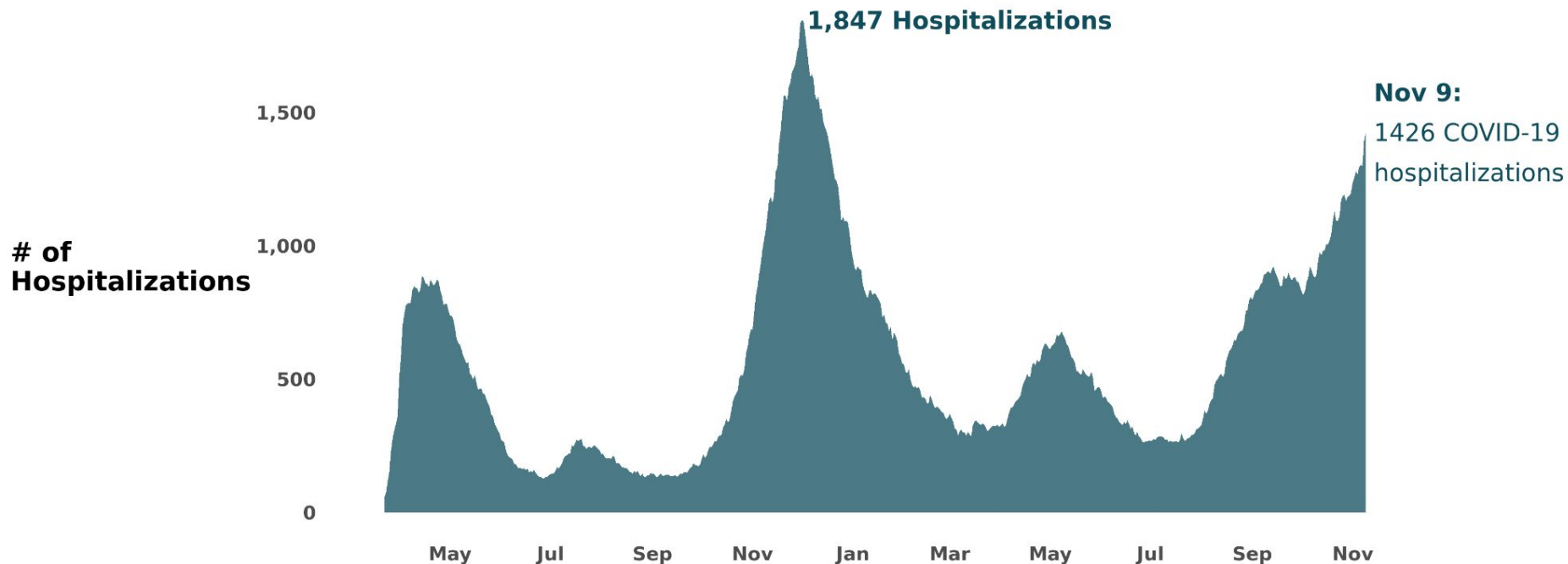


Number of PCR tests performed daily and 7-day average percent positivity



Updated Nov 09, 2021

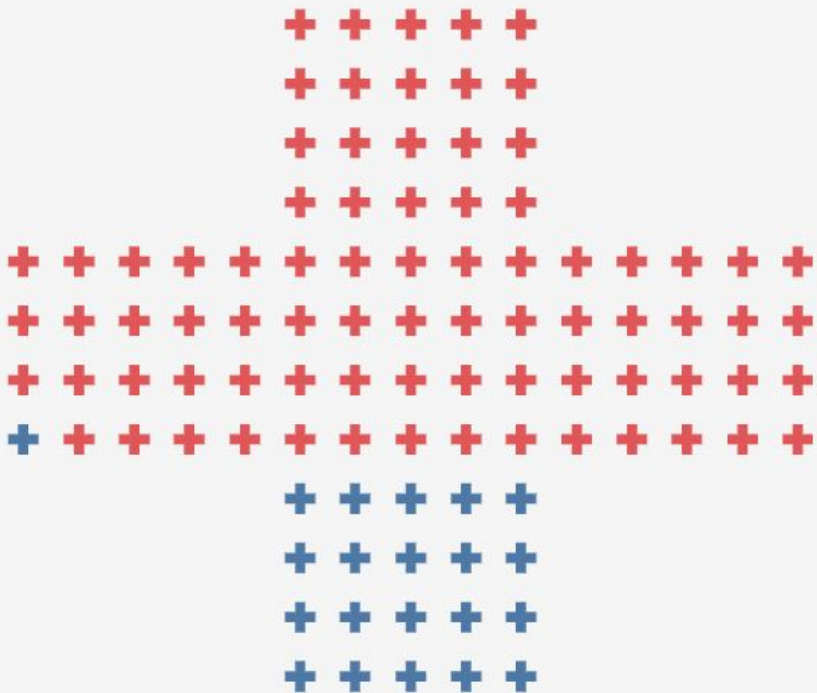
Hospitalizations continue to increase



Coloradans currently hospitalized with COVID-19 by vaccination status

79% of Those Currently Hospitalized are Unvaccinated

■ Unvaccinated
■ Vaccinated

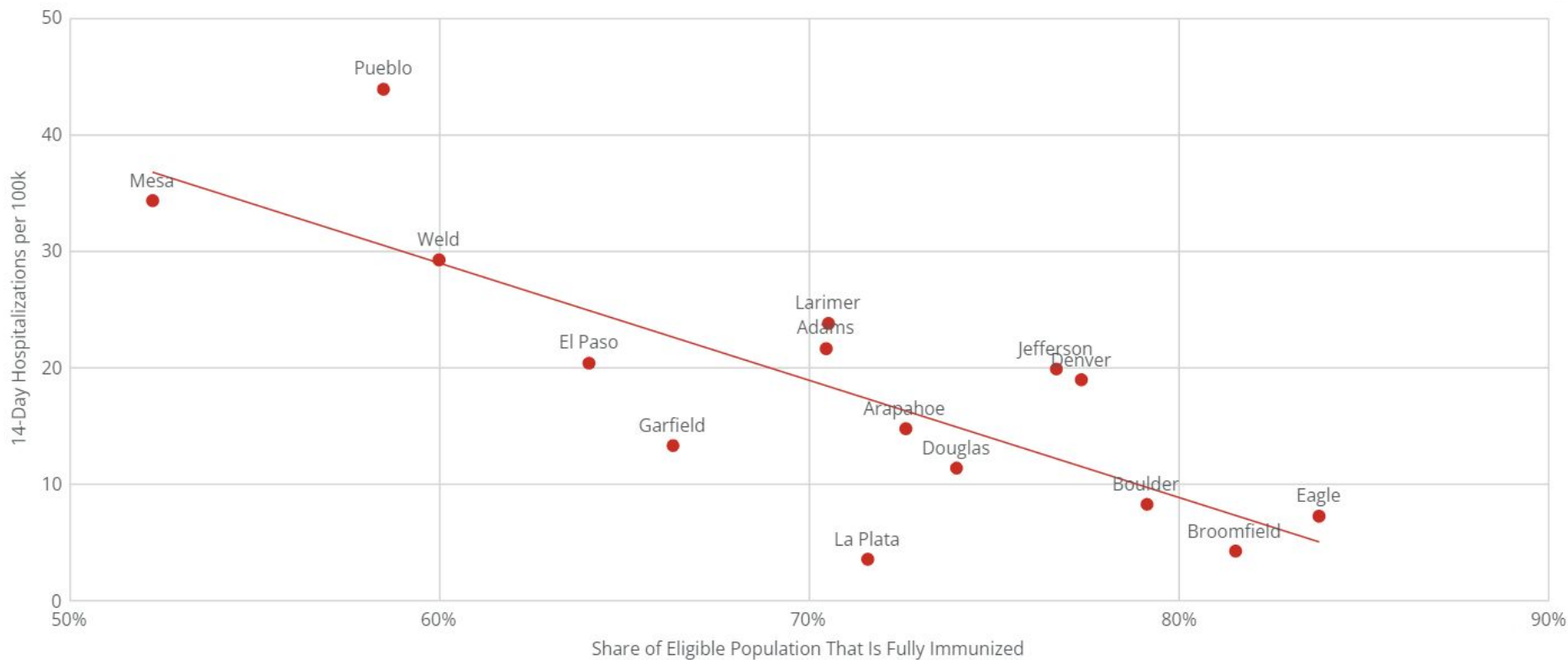


299 Vaccinated Hospitalized Patients

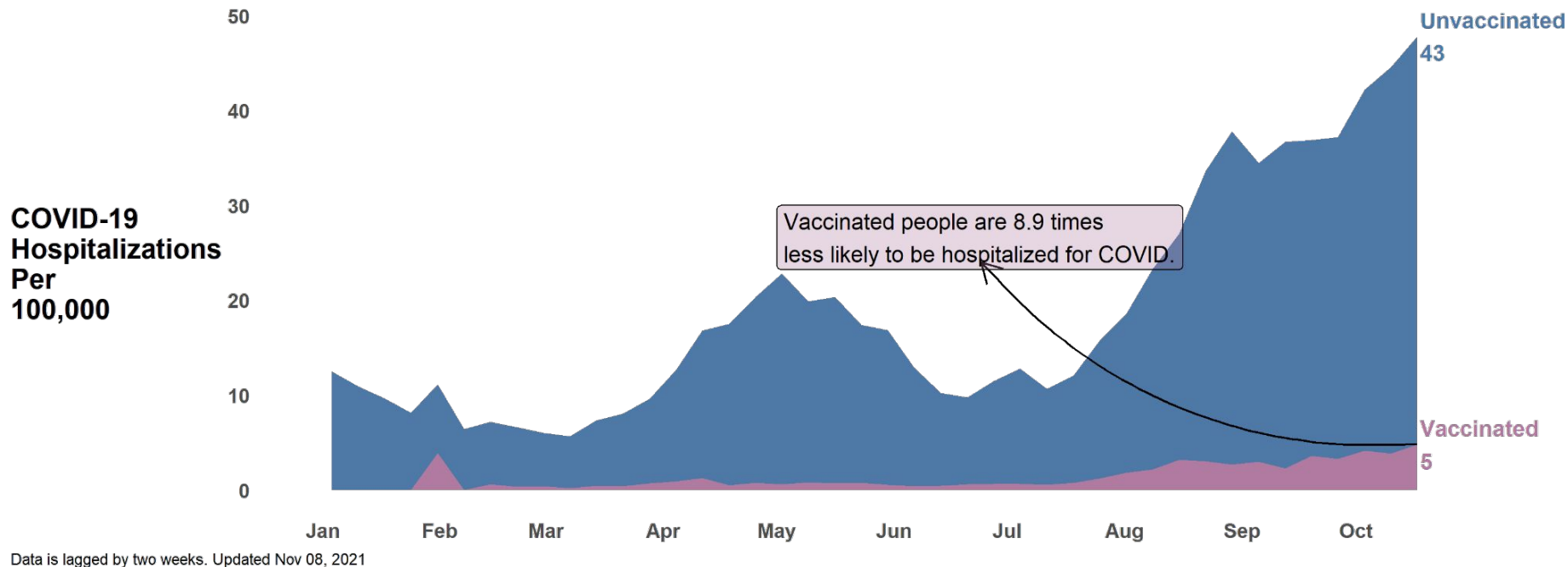
1,127
Unvaccinated
Hospitalized Patients

The vaccination status of those currently hospitalized is based on data reported daily to public health by hospitals through the Healthcare Emergency Resource Management system (EMResource). Vaccination status of currently hospitalized individuals is reported in aggregate, and therefore not verified by public health at the patient level. EMResource data provides a snapshot of hospitalizations in Colorado, and is meant to be used for situational awareness. For trends in the vaccination status of hospitalized cases over time, please refer to the COVID-19 Vaccinated & Unvaccinated Case Data dashboard (<https://covid19.colorado.gov/vaccine-breakthrough>).

Correlation between 14-day COVID-19 hospitalization rates and vaccination rate among 15 most populous counties



Age-adjusted hospitalization rates, unvaccinated vs. vaccinated



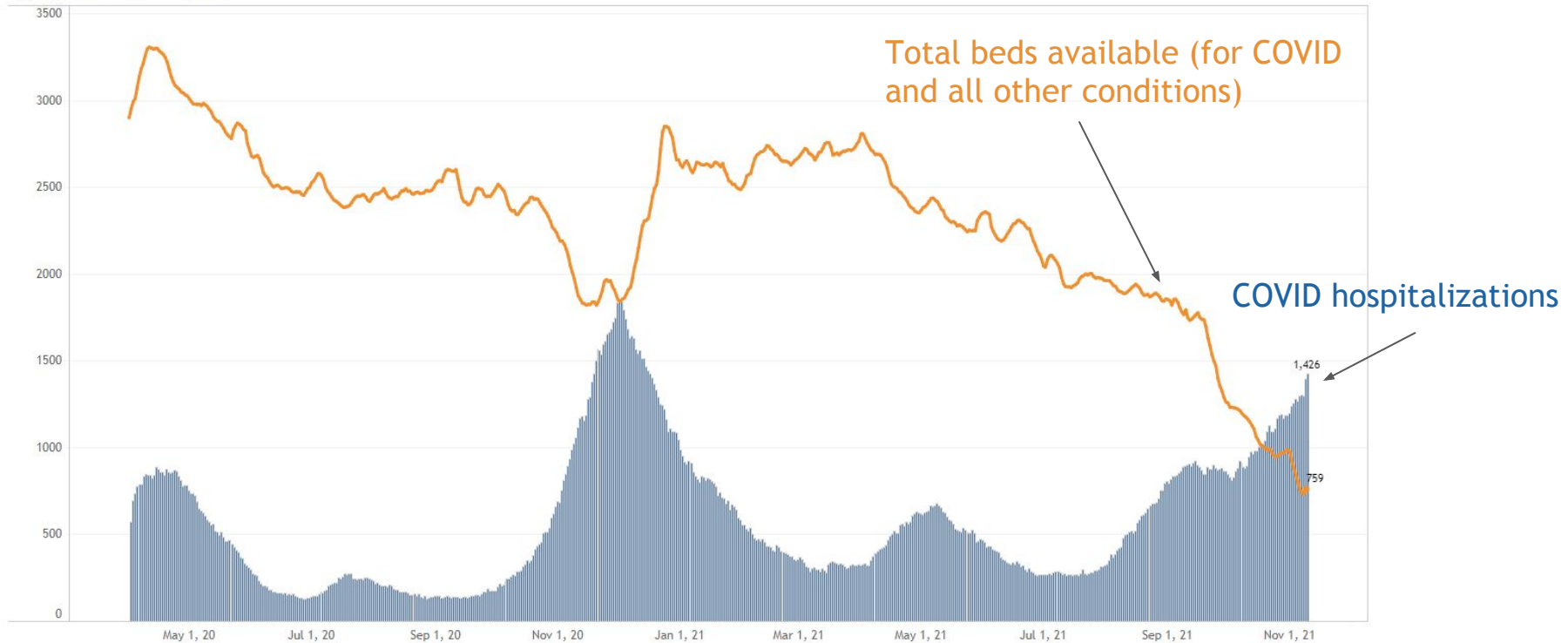
Estimated crude vaccine effectiveness against hospitalizations with COVID-19 and death due to COVID-19 cases since July*

Age group	Hospitalizations	Deaths
12-39	94%	100%
40-59	94%	94.8%
60-79	90.9%	93.8%
80+	65.9%	77.6%

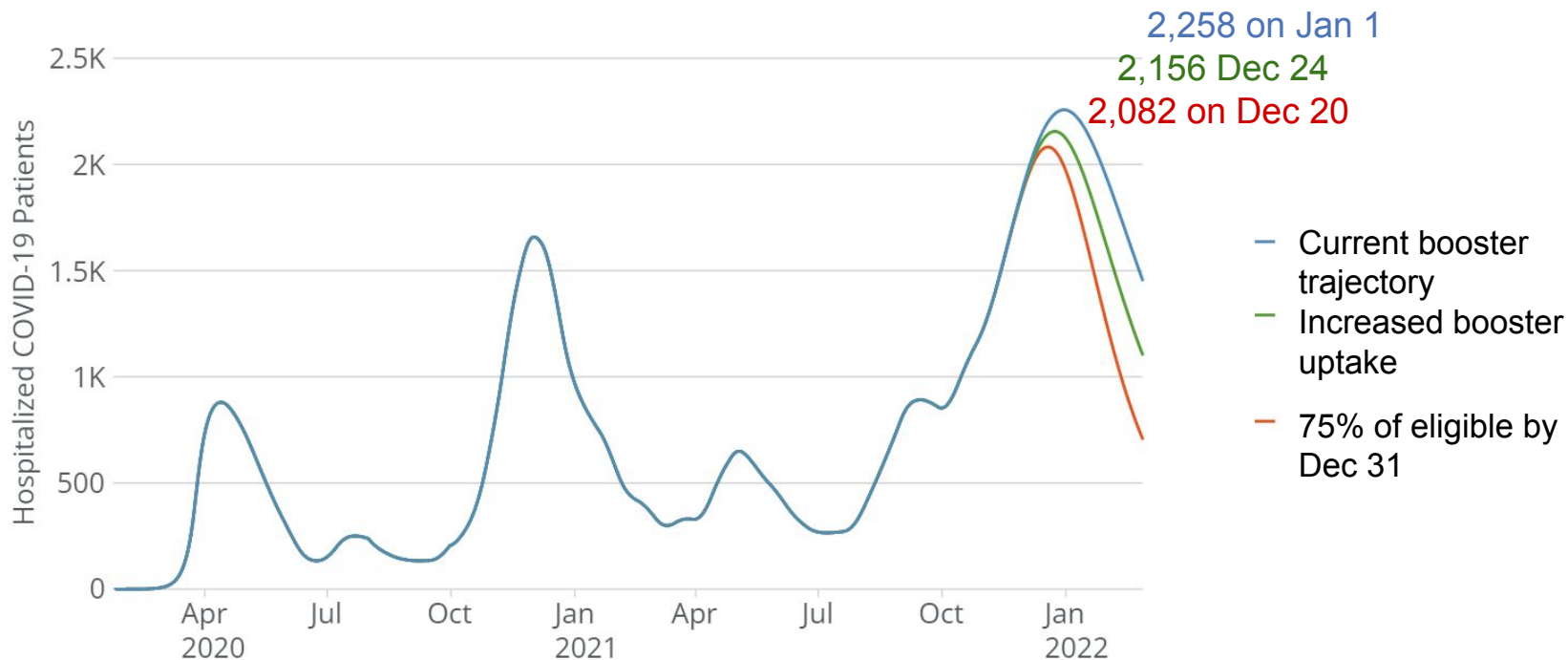
*To ensure data completeness, analysis includes cases occurring since July 1, 2021 that resulted in hospitalization through Oct. 15, 2021 or death due to COVID through Sept. 30, 2021. Vaccine efficacy is estimated by calculating (rate among unvaccinated - rate among vaccinated) / rate among unvaccinated. Vaccinated and unvaccinated populations are based on the midpoint of each date range.



Hospital bed capacity is at an all-time low



Increased booster dose uptake could decrease peak hospital demand

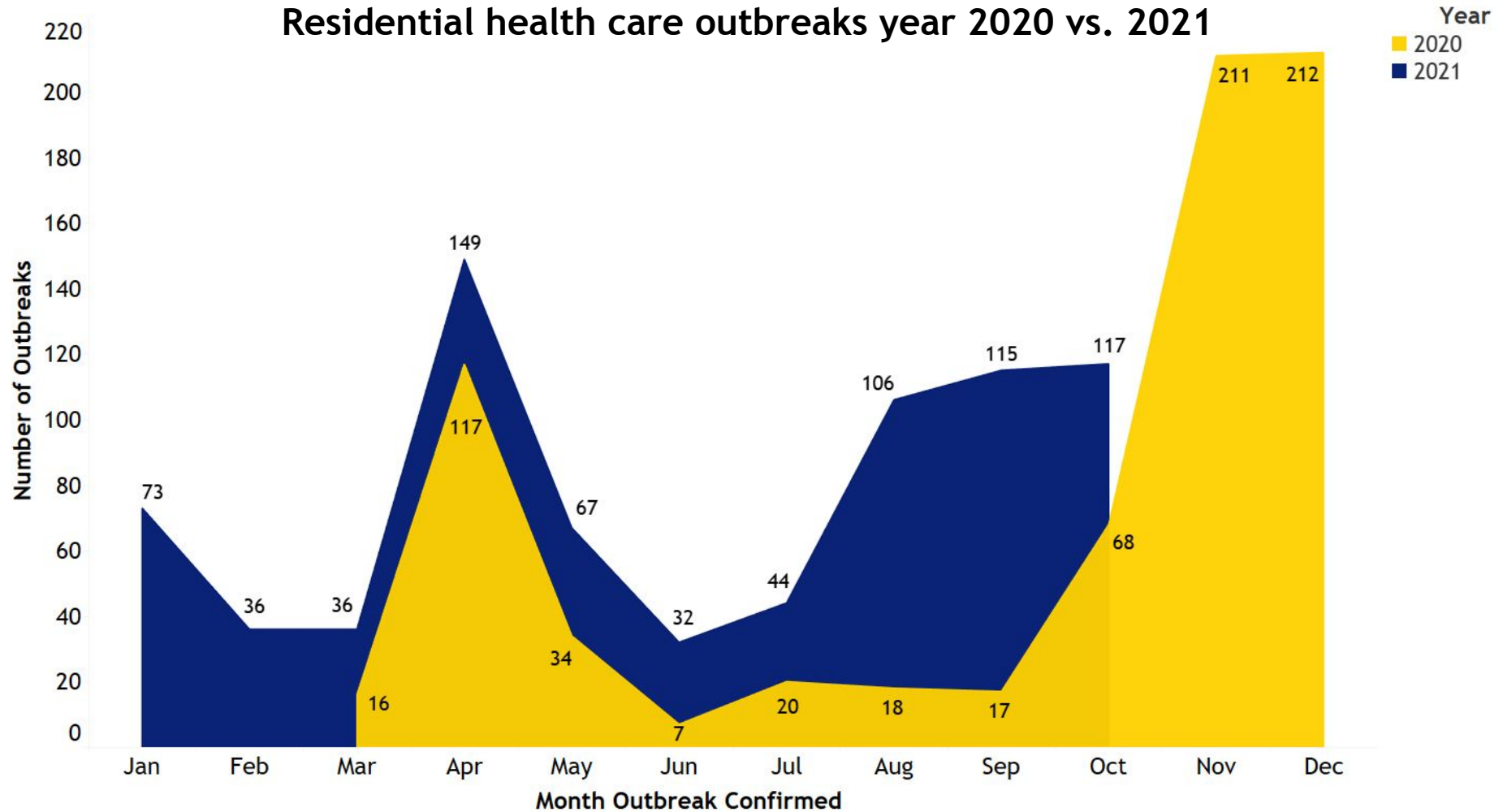


Important role of monoclonal antibody therapy in preserving hospital capacity

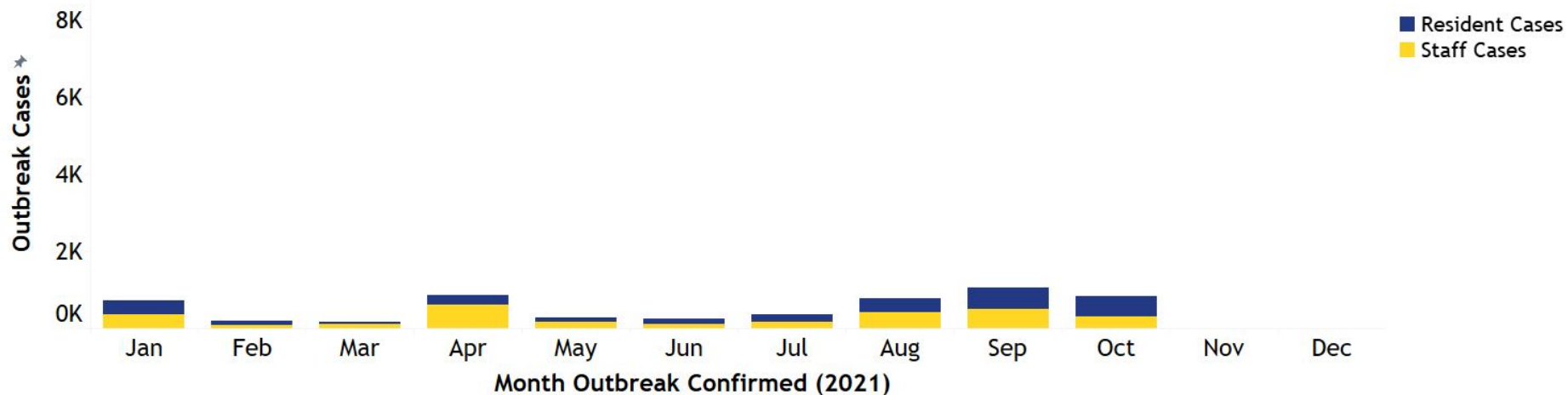
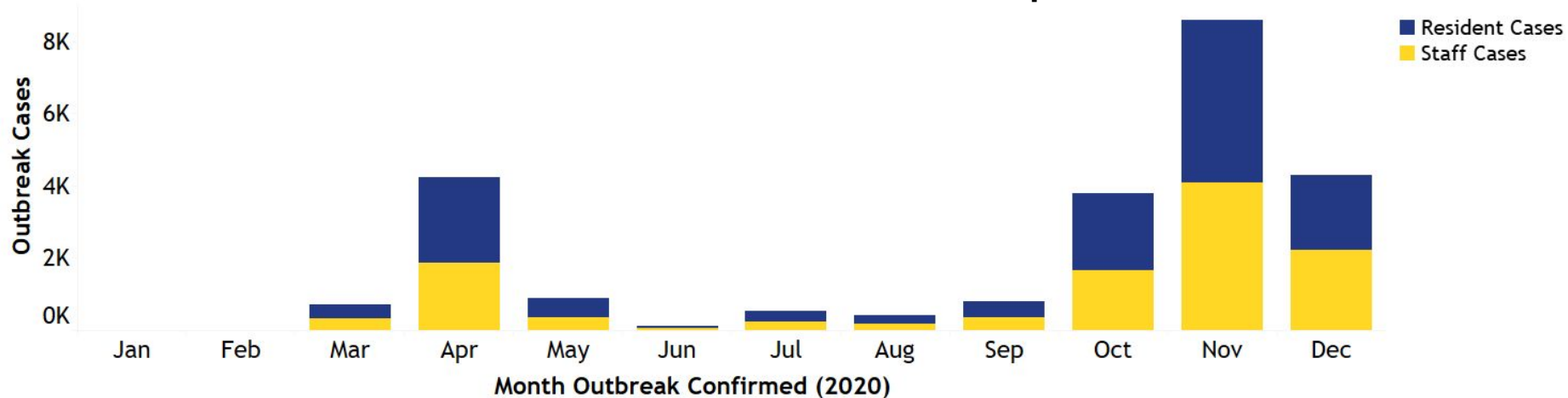
***13-23% reduction translates to ~200-400 fewer hospitalizations at peak**

	<i>Low efficacy estimate</i> 70% Reduction in hospitalizations 79% Reduction in hospital-days	<i>High efficacy estimate</i> 80% Reduction in hospitalizations 89% reduction in hospital-days
<i>Low uptake estimate</i> 30% of Eligible 16% of potential hospitalizations	13% Reduction in hospitalizations peak	14% Reduction in hospitalizations peak
<i>High uptake estimate</i> 50% of Eligible 26% of potential hospitalizations	21% Reduction in hospitalizations peak	23% Reduction in hospitalizations peak

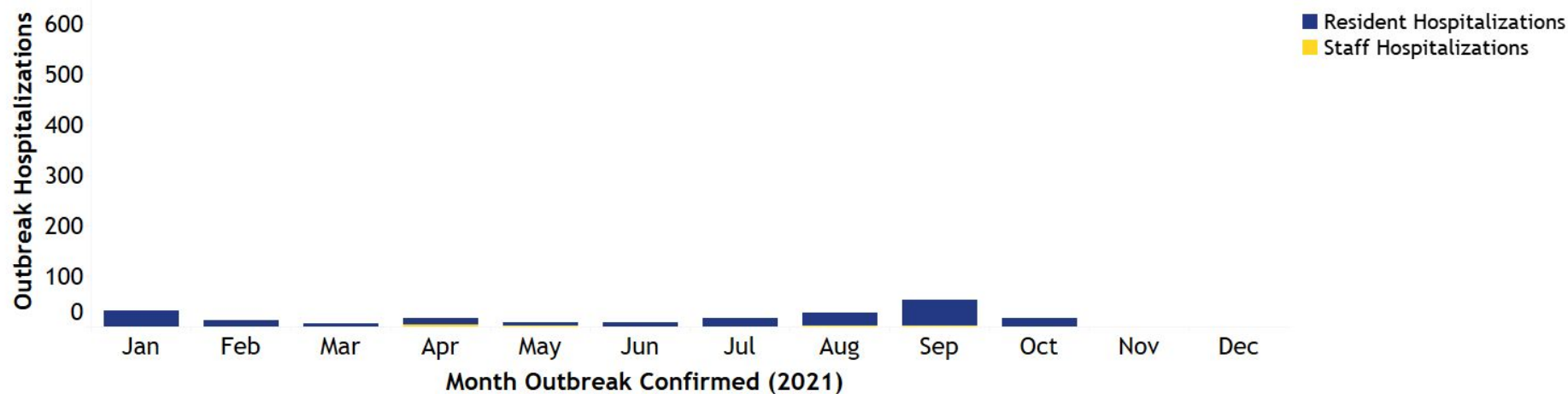
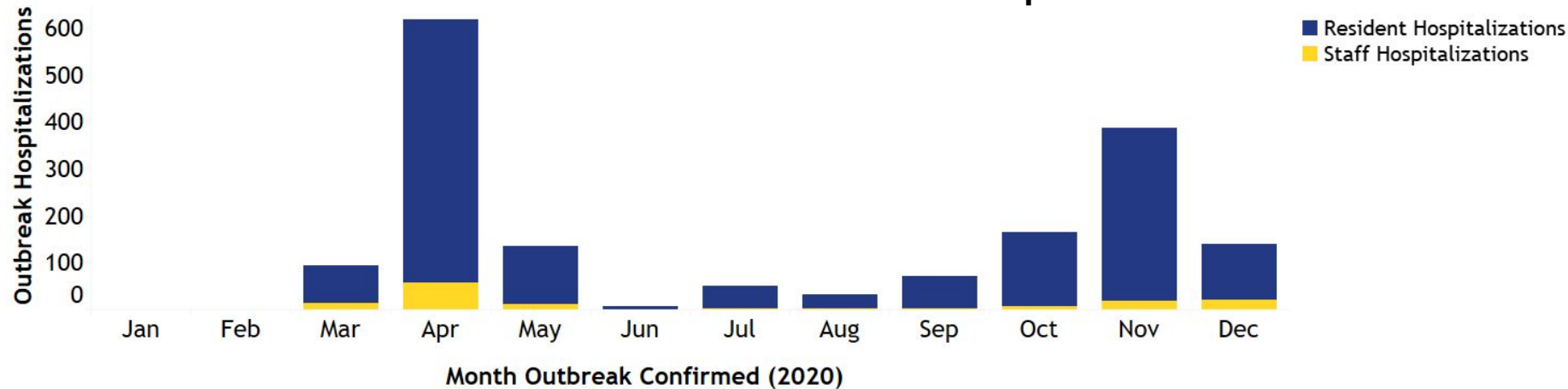
Residential health care outbreaks year 2020 vs. 2021



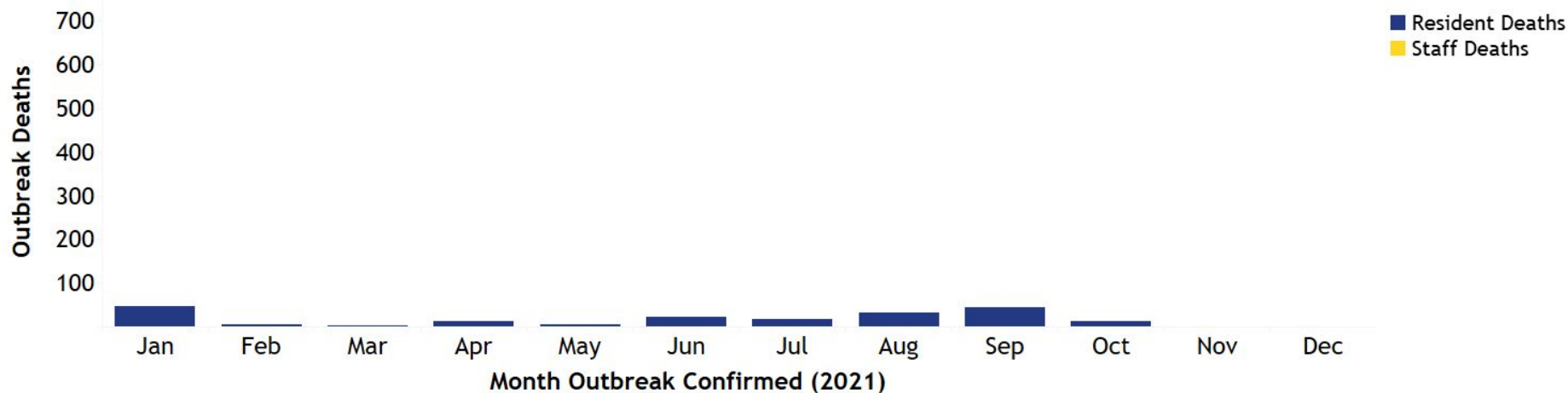
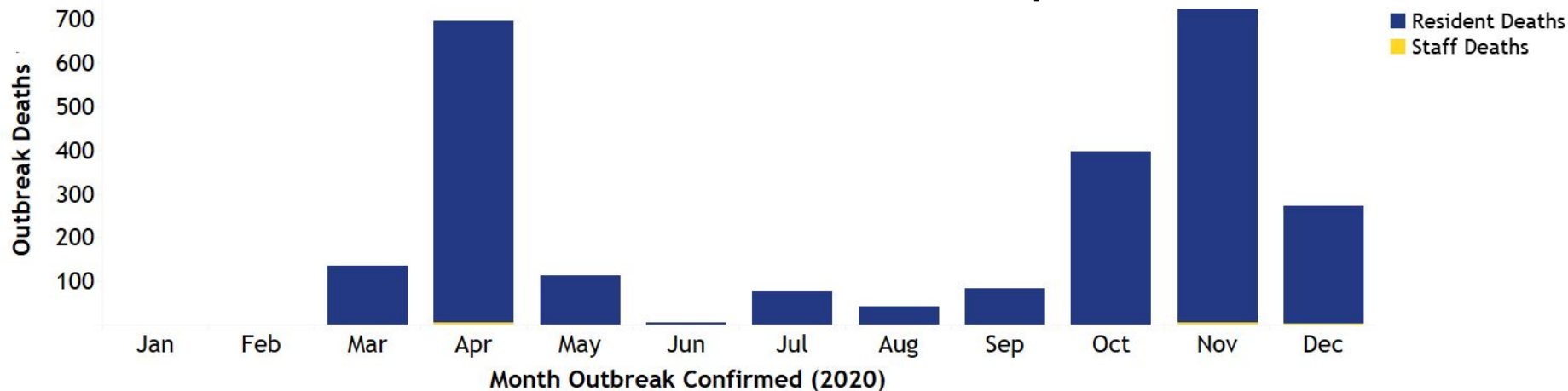
Residential health care outbreak epi curve



Residential health care outbreak epi curve



Residential health care outbreak epi curve



Questions?