



Oregon Hospital Forecast and Trends: COVID, Flu, RSV

Edition: 3/17/2023

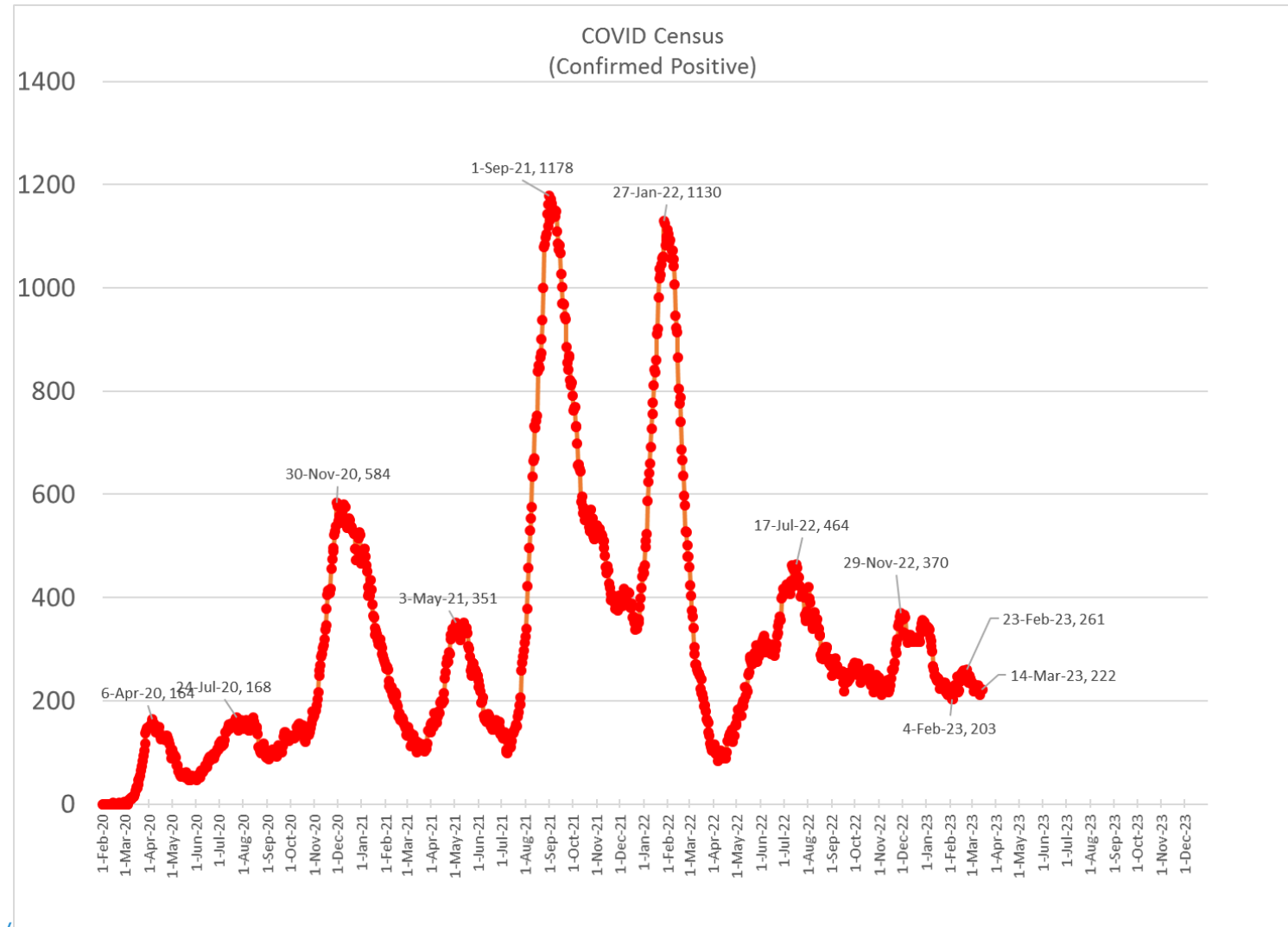
Peter Graven, PhD; Office of Advanced Analytics, BIAA, ITG

Key Outcomes

The next forecast is expected by Friday, 4/14/2023.

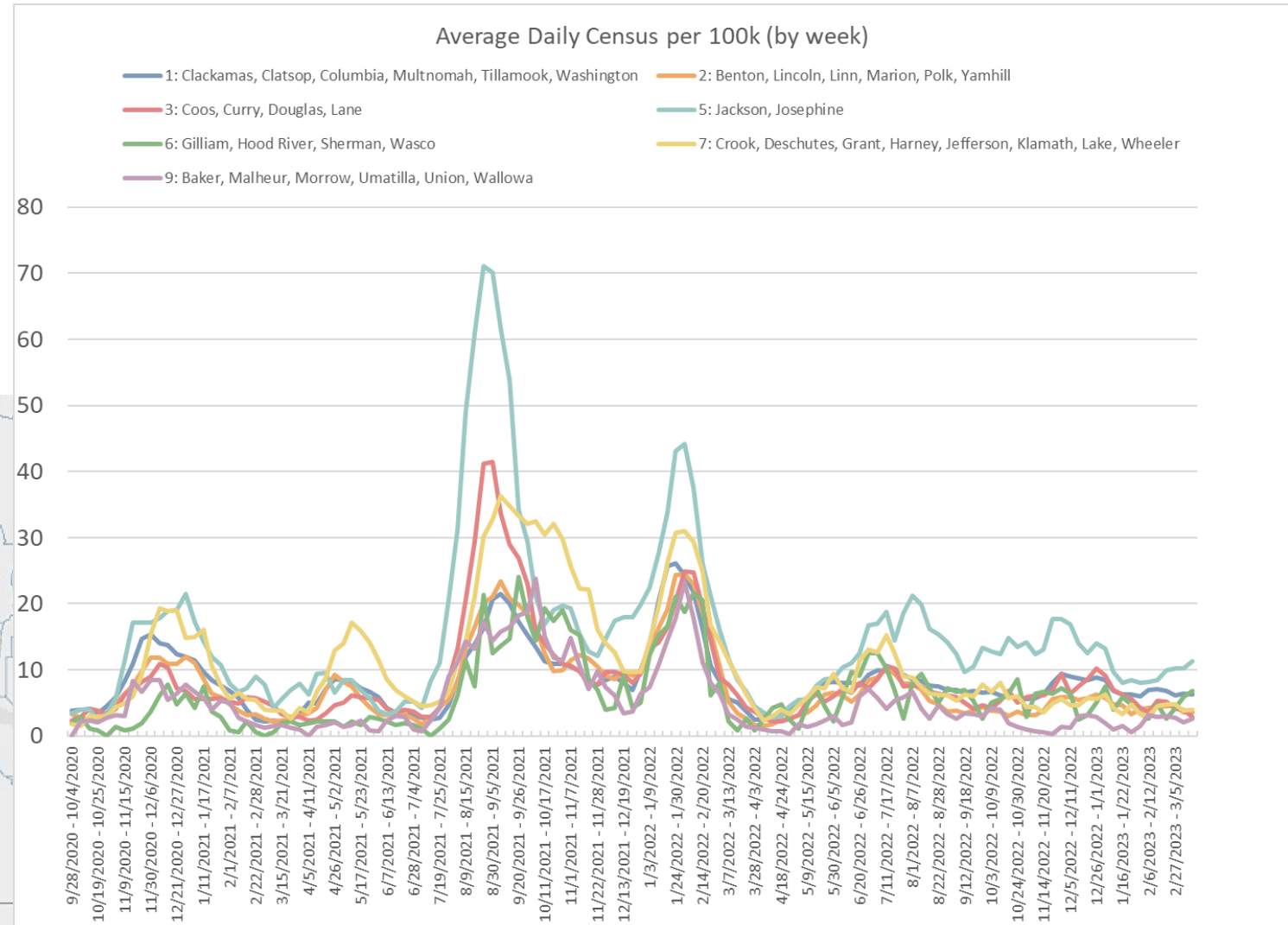
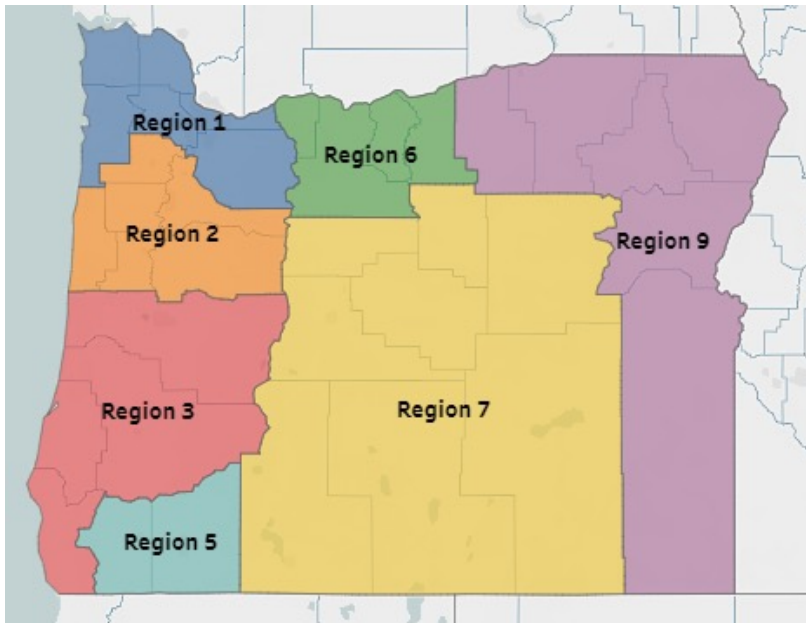
COVID Census in Oregon

As of 3/14/2023, 222 people are hospitalized with COVID-19 in Oregon. The peak of the XBB wave was at 261 on 2/23.



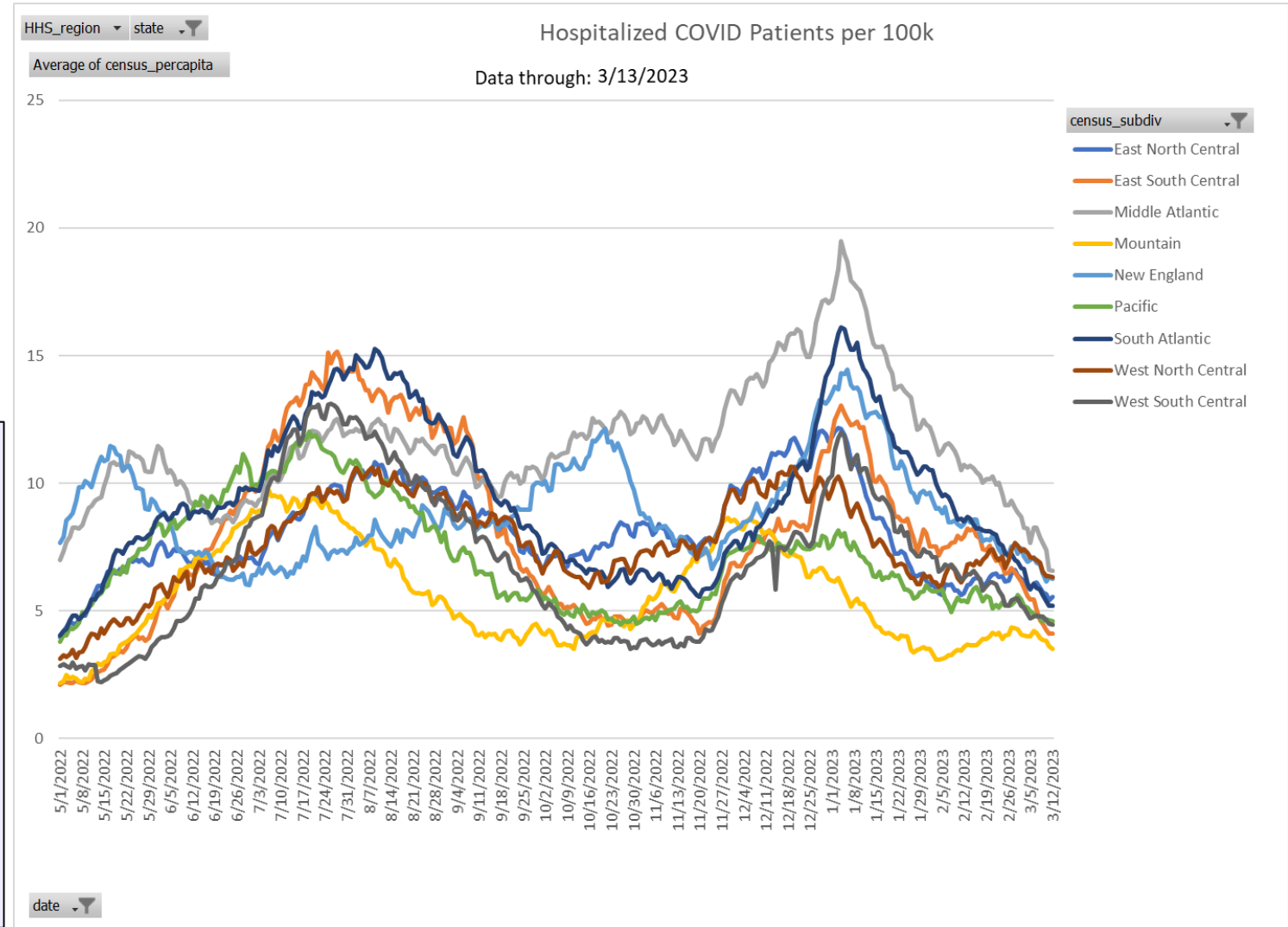
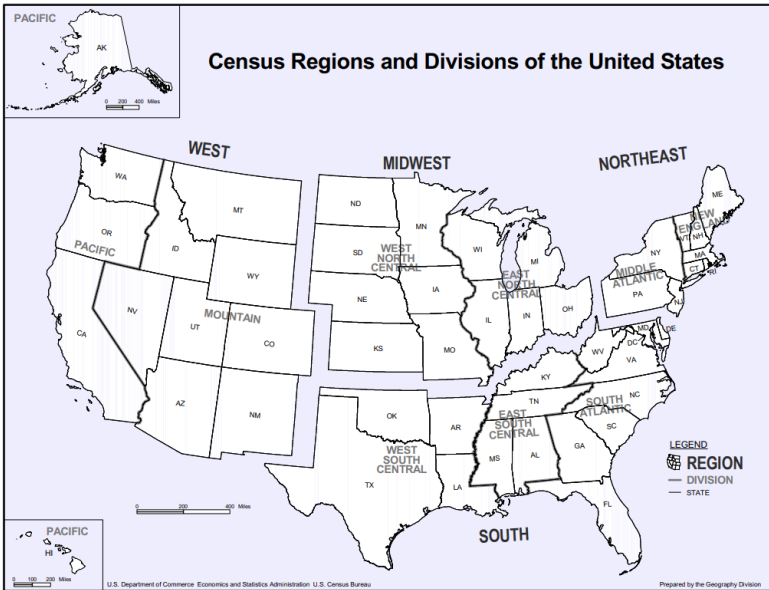
COVID Census by Oregon Region

A slight increase in region 5 is evident. This may be a later occurring XBB wave in that area.



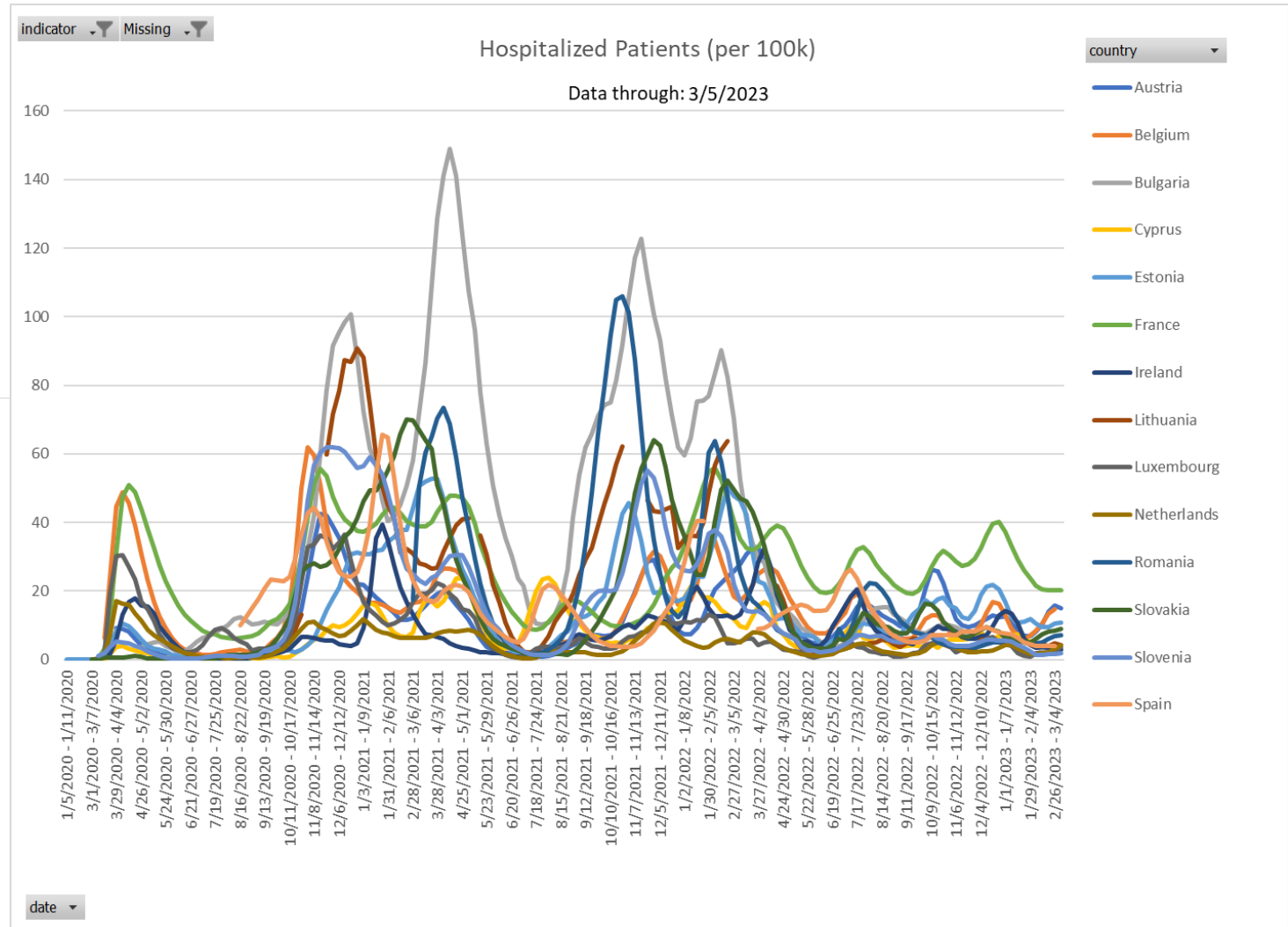
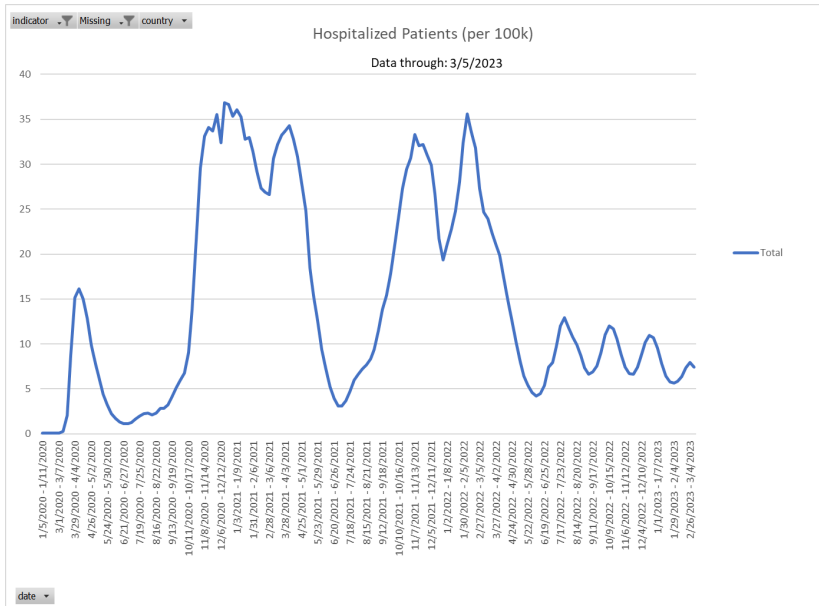
COVID Census in US

Census levels are dropping in all regions of the US.



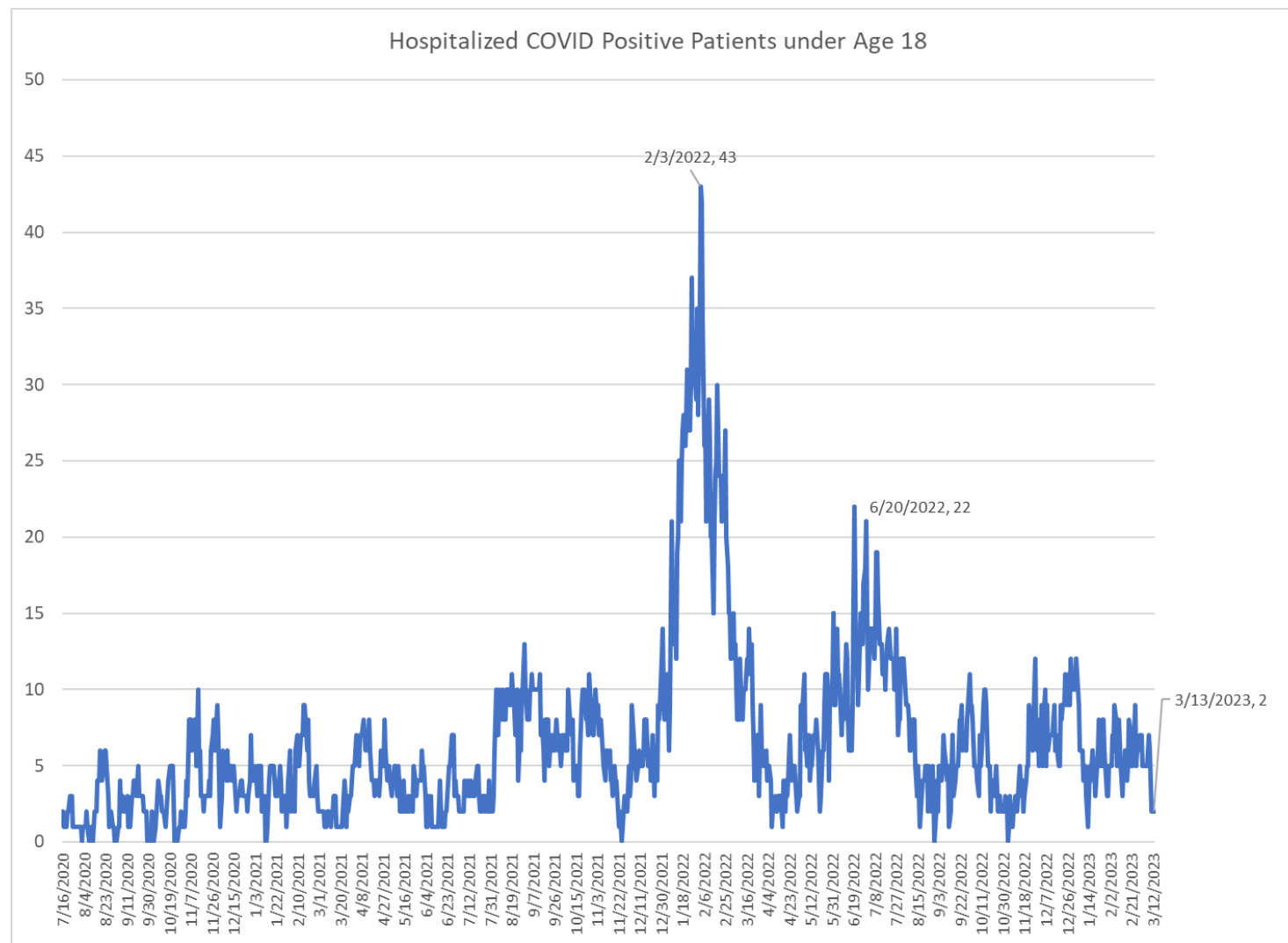
COVID Census in Europe

The level of hospitalized patients in European countries remains low with various minor fluctuations occurring.



COVID Census in Oregon Peds

The pediatric census for COVID is 2 as of 3/13.

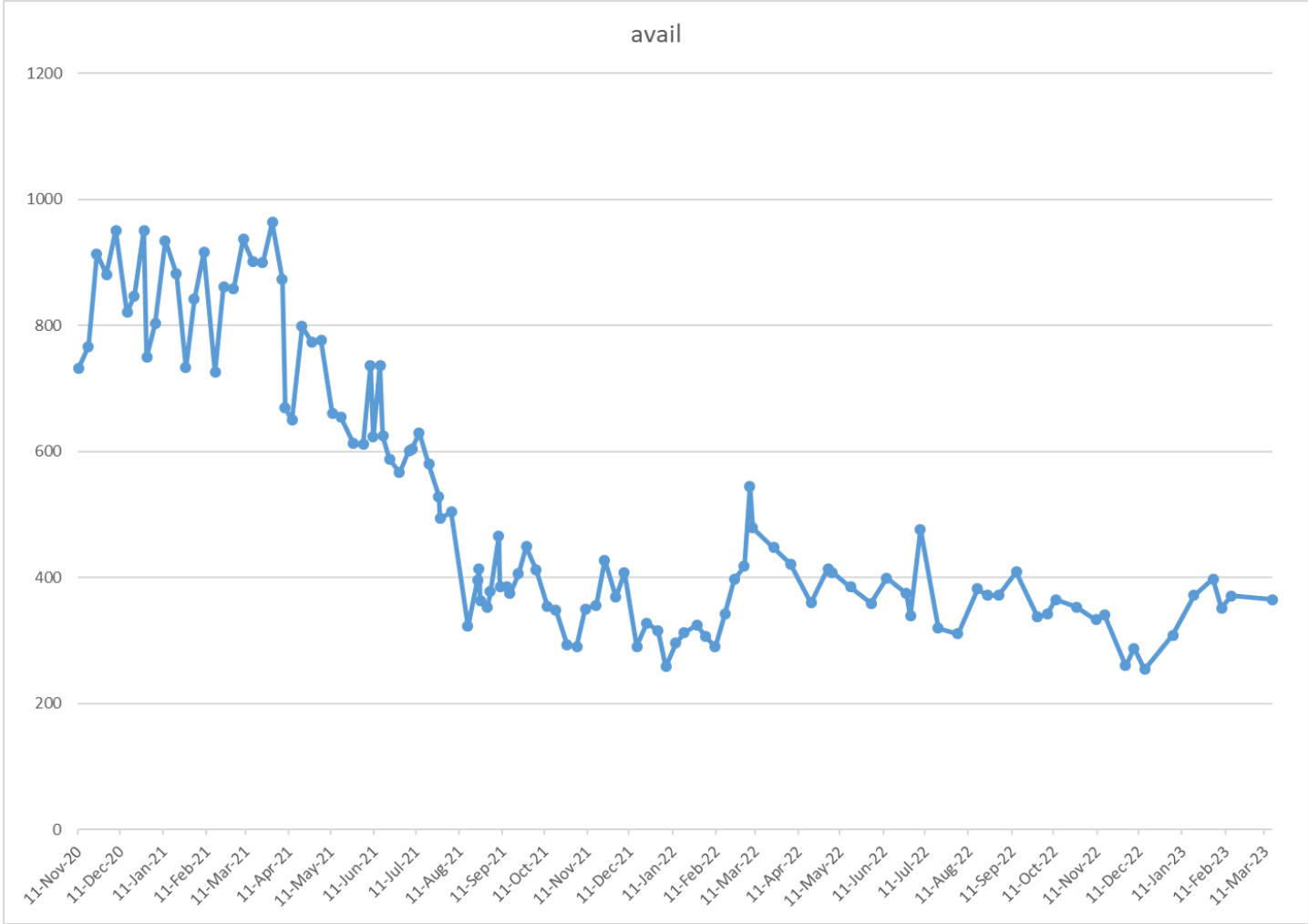


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Source: <https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/g62h-sveh/data>



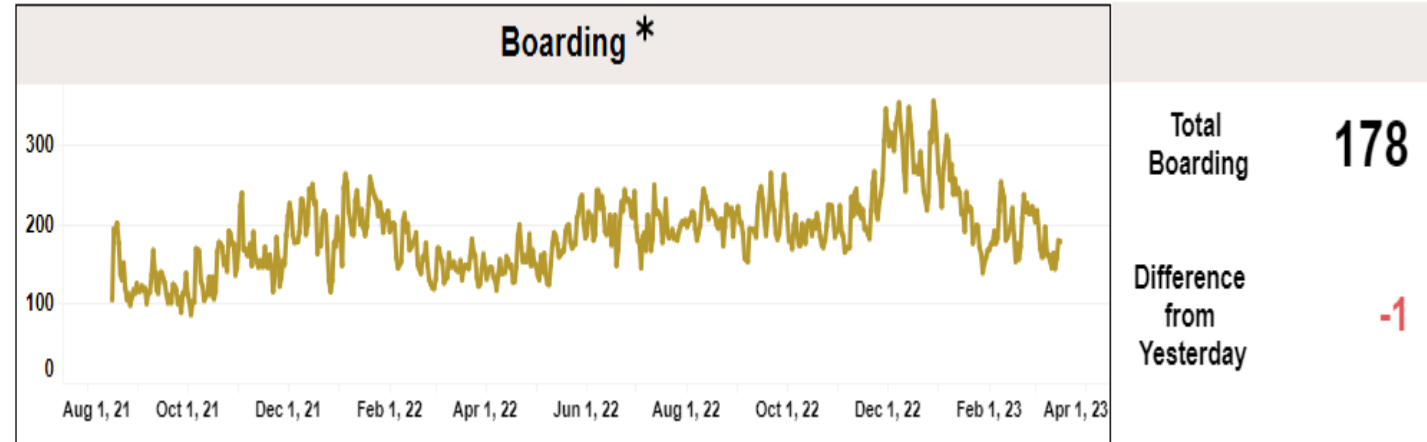
Available Beds in Oregon

Available beds have remained steady since last month.



ED Boarding in Oregon

Boarding is down from the peak and even a little below pre-winter surge levels.



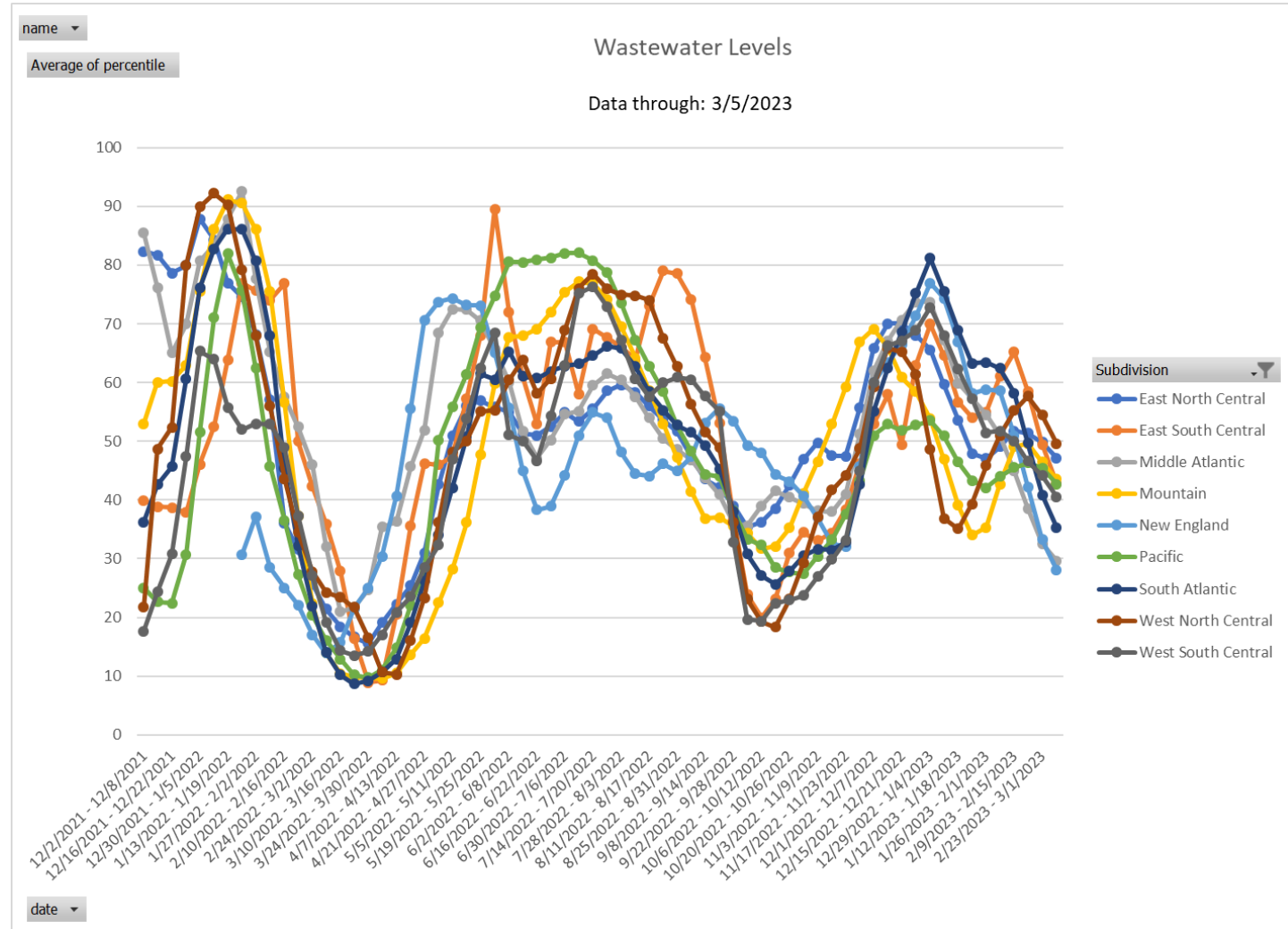
COVID Wastewater in Oregon

The wastewater levels show the effect of the recent XBB wave. While infections levels in the water reached similar levels to those observed during the winter surge the impact on hospitalizations remained mild.



COVID Wastewater in US

Wastewater levels around the US have continued to decline.

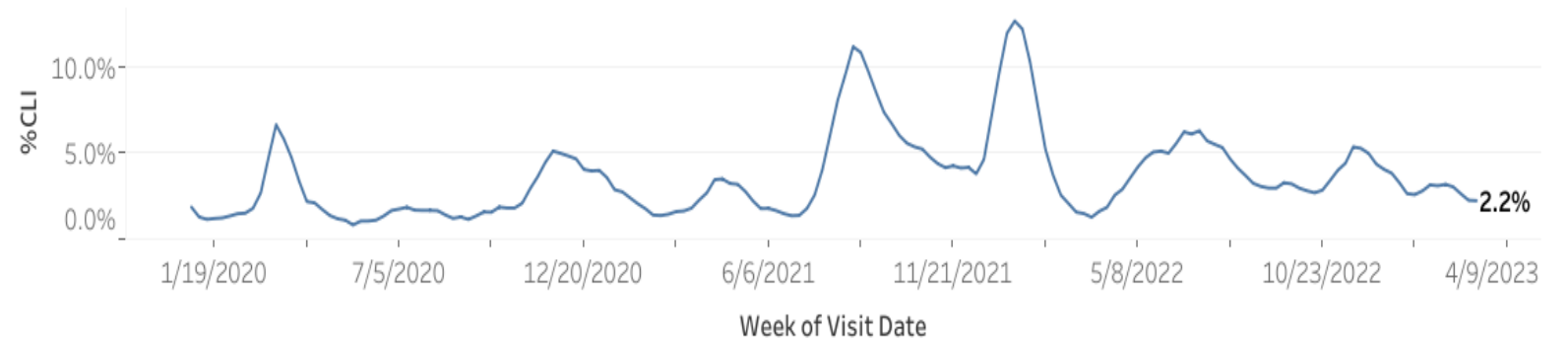


ED Visits for COVID in Oregon

The percent of ED visits for COVID peaked on 2/12/23 at 3.2%. The rate has declined since then.

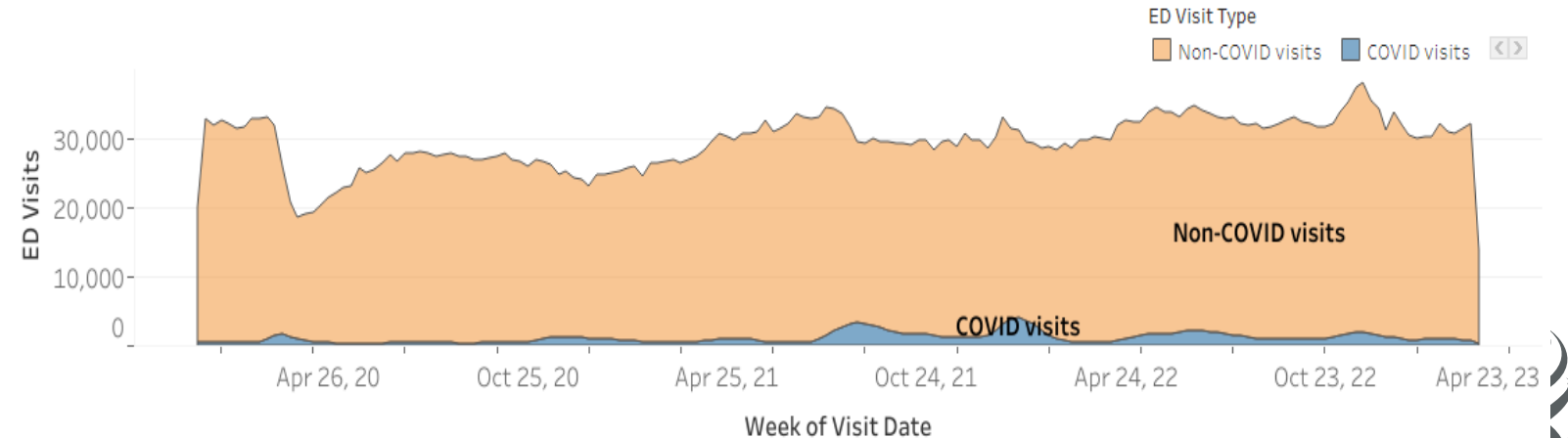
2. Percentage of statewide emergency department visits for COVID-19-like illness (CLI) over time

This line chart shows the percentage of emergency department visits for CLI, the number of CLI visits divided by the number of total emergency department visits, by date of visit.



1. Number of statewide emergency department visits over time

This area chart shows total emergency department visit counts by the date of visit and whether the visit was for COVID-19-like illness.



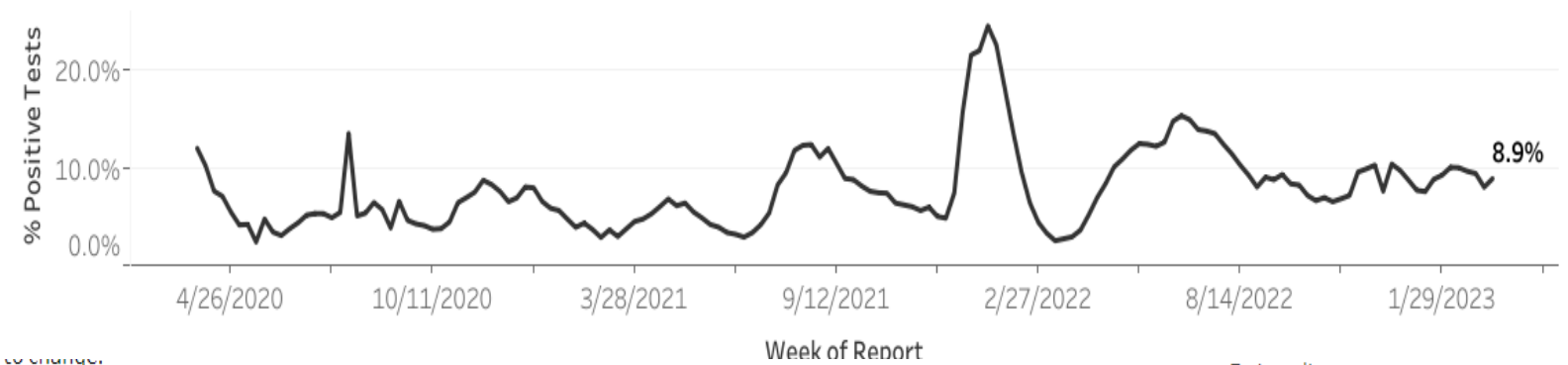
COVID Testing in Oregon

Test positivity decreased from its peak of 10.0% on 2/12/23. A slight increase is shown in the most recent week of data but unclear if it is a trend.

Overall testing remains very low.

2. COVID-19 test positivity over time - Statewide

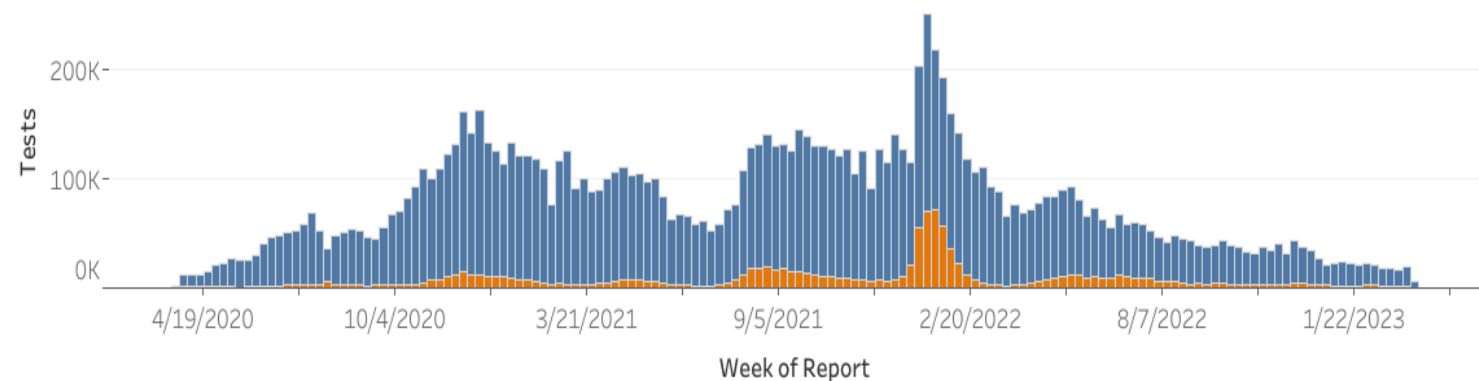
This line chart shows the percent test positivity, the number of positive tests divided by the number of total tests, by date reported to public health.



to change.

1. Positive and Negative COVID-19 test counts over time - Statewide

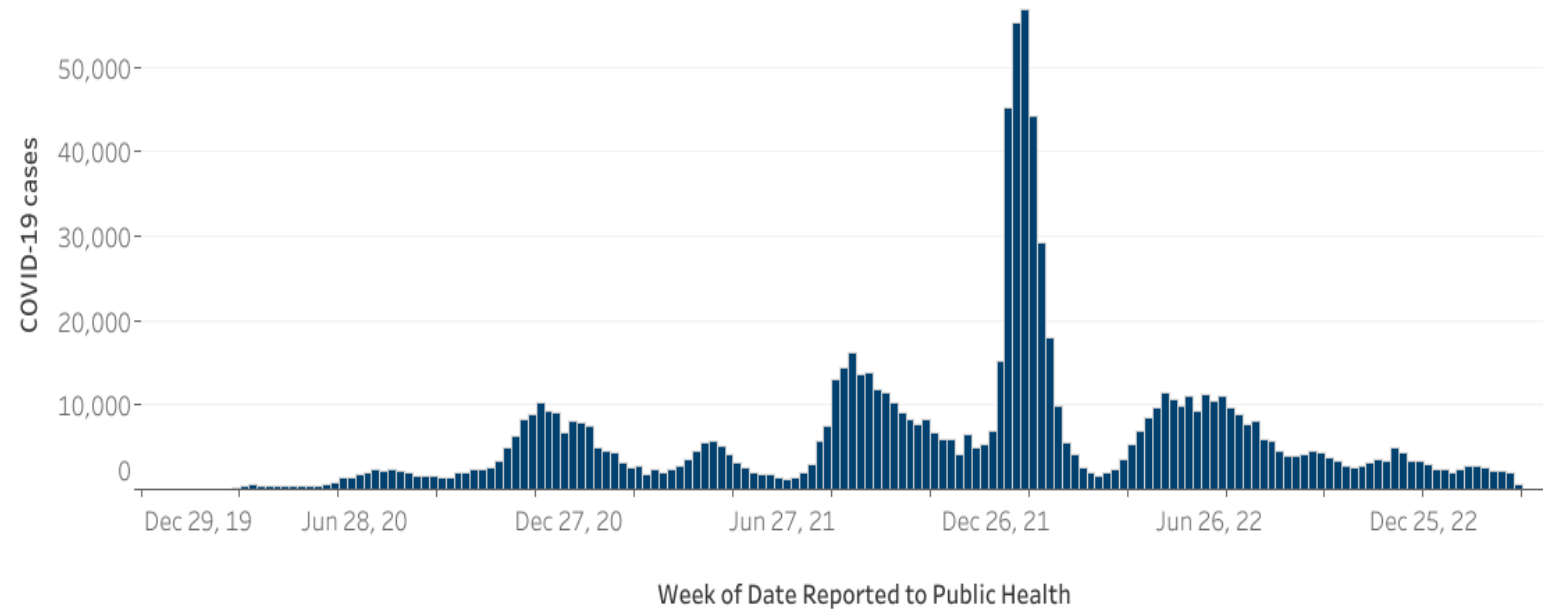
This stacked bar chart shows total tests by the date reported to public health and result (positive or negative).



COVID Cases in Oregon

Cases remain low.

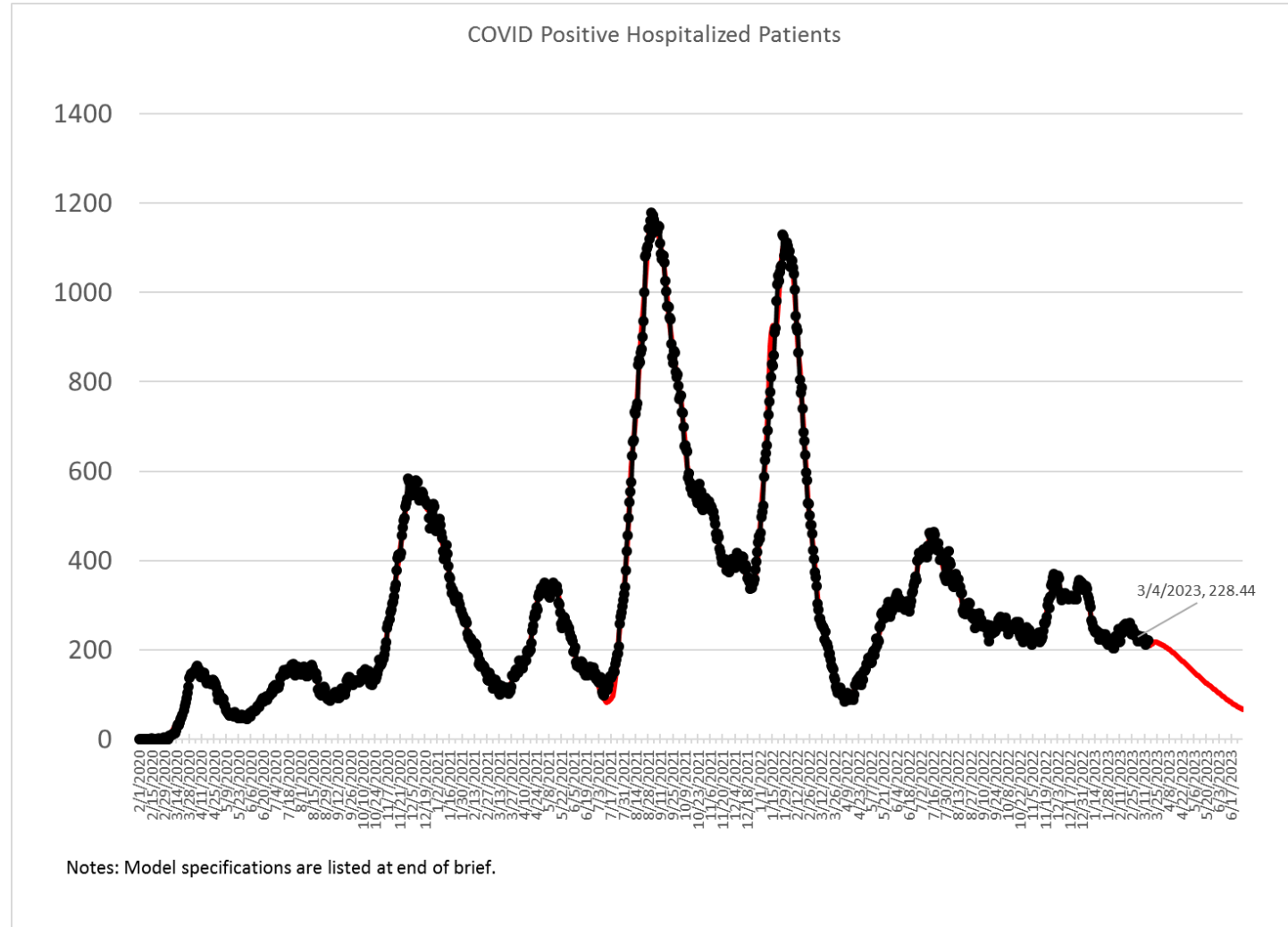
1. COVID-19 cases by date reported to public health - Statewide



COVID Forecast

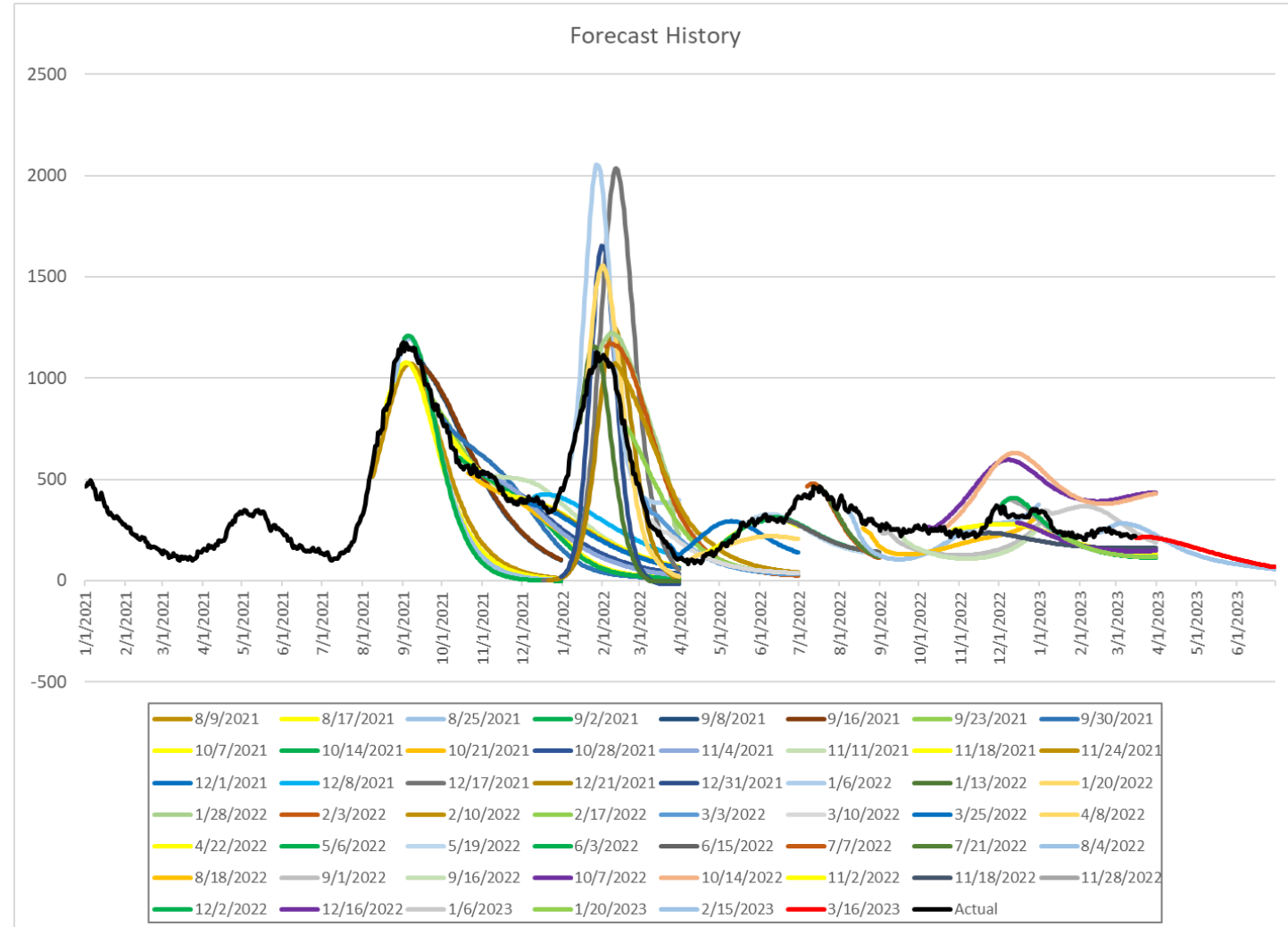
COVID Census-Oregon Forecast

The XBB wave peaked in late February and further declines are expected.



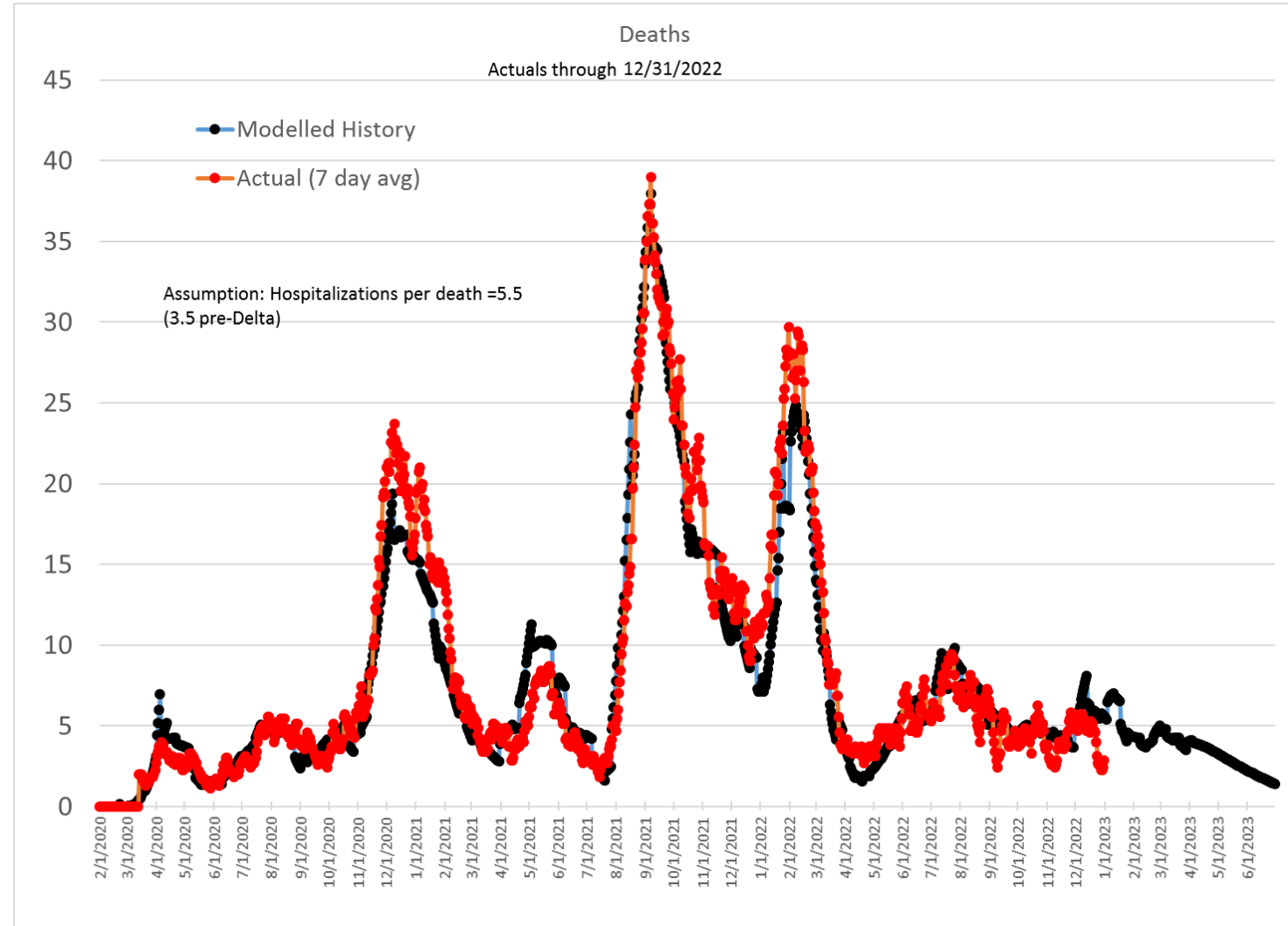
COVID Census-Forecast History

The forecast shows the earlier than expected XBB wave.



COVID Death Forecast in Oregon

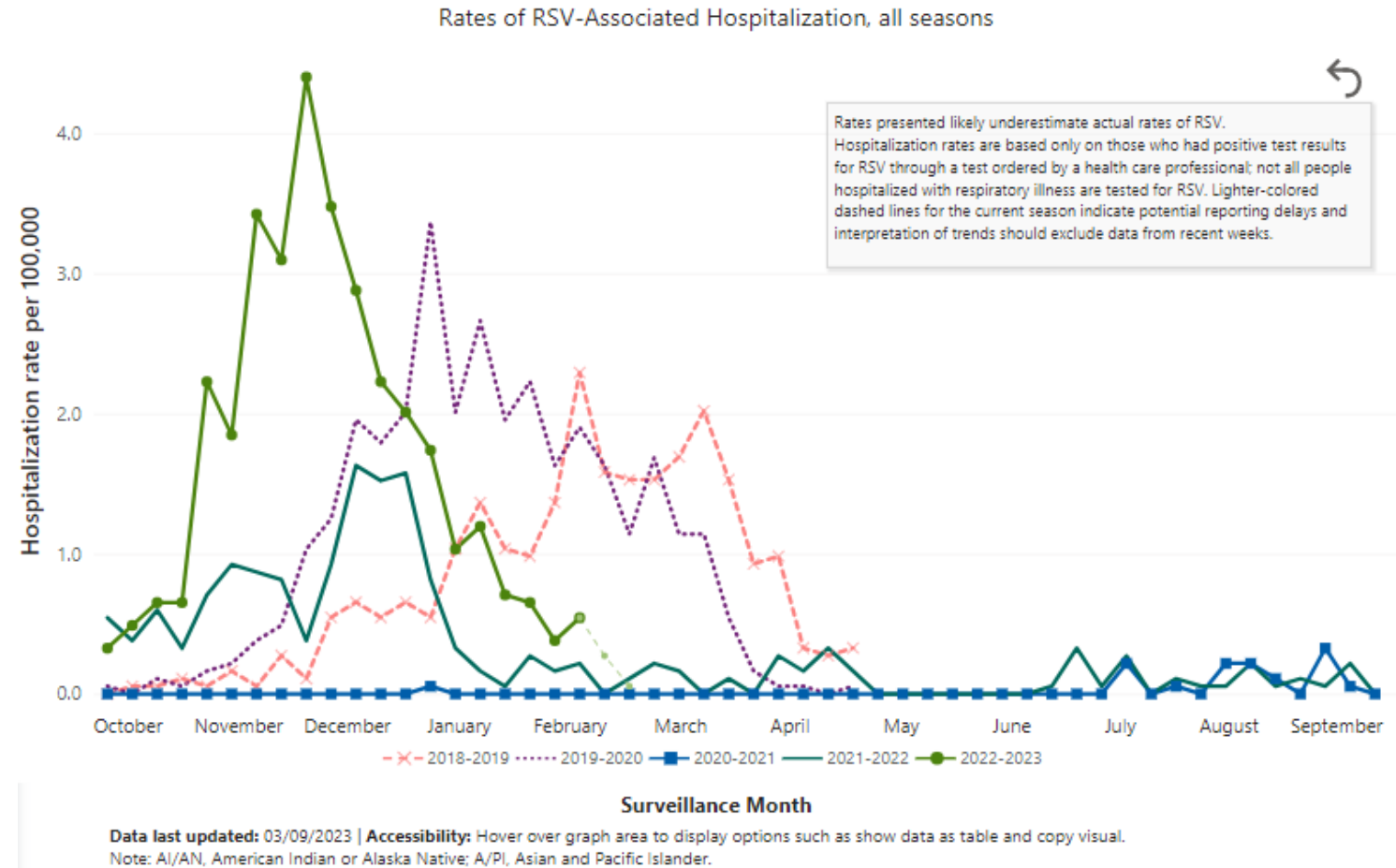
The number of deaths is expected to remain low.



RSV Forecast

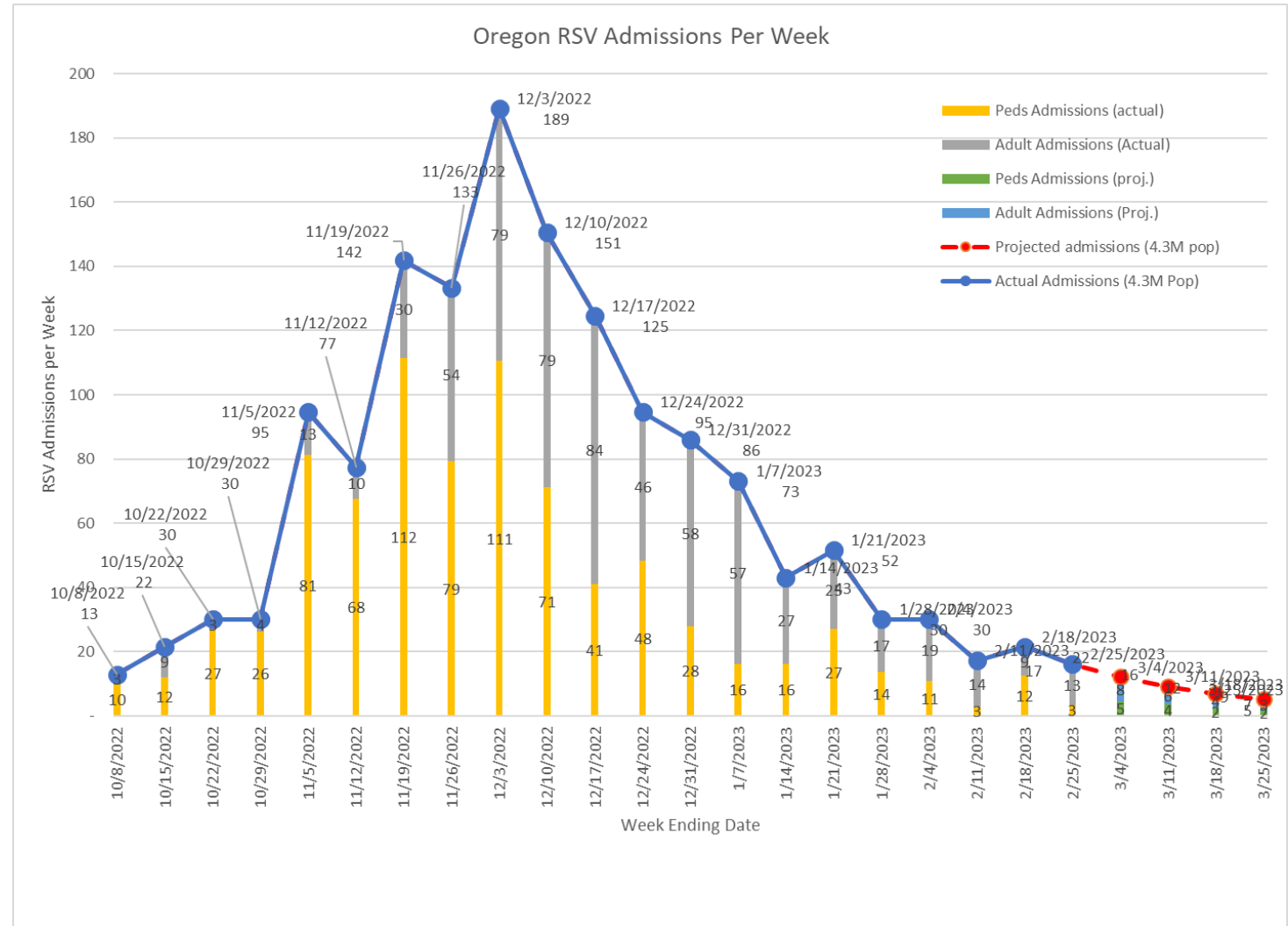
RSV-Oregon

RSV has returned to nearly negligible levels in Oregon.



RSV-Oregon Forecast

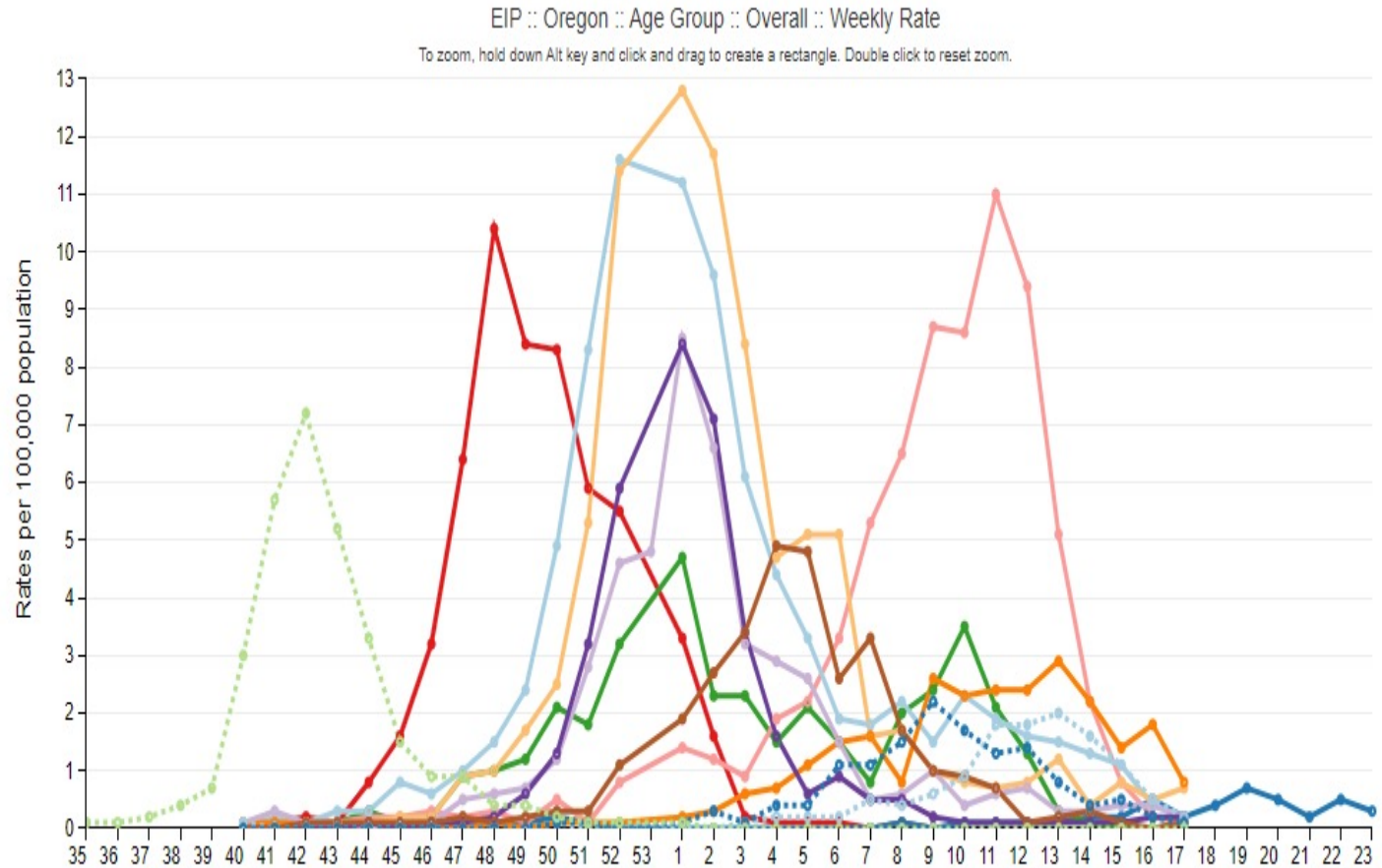
A continued decline is expected.



Flu Forecast

Influenza-Oregon

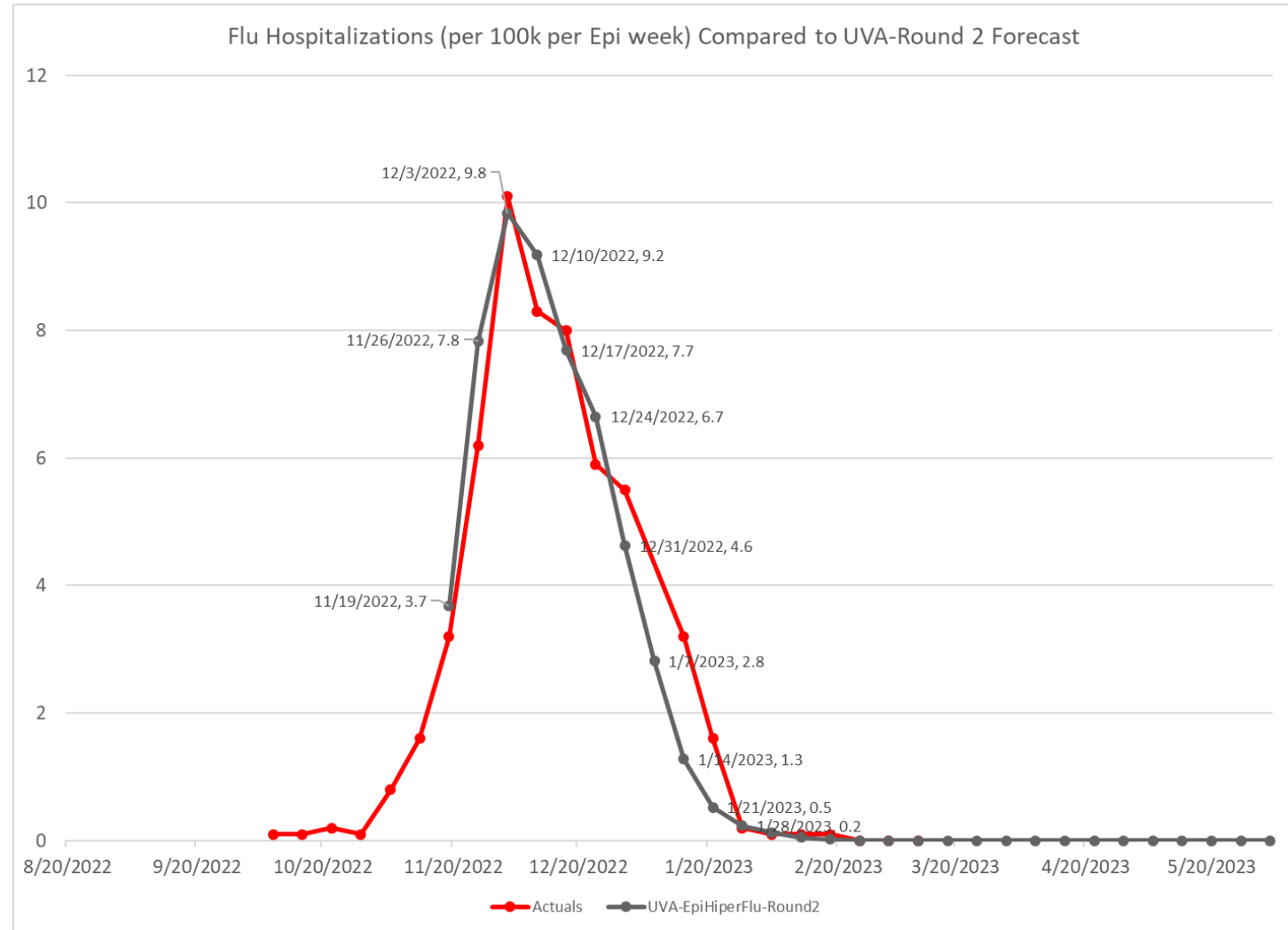
Flu hospitalization levels have dropped to near zero.



Flu-Oregon Forecast

Flu levels are not expected to increase this season. However this is based on notion that Type B does not appear to be getting started and still needs to be monitored.

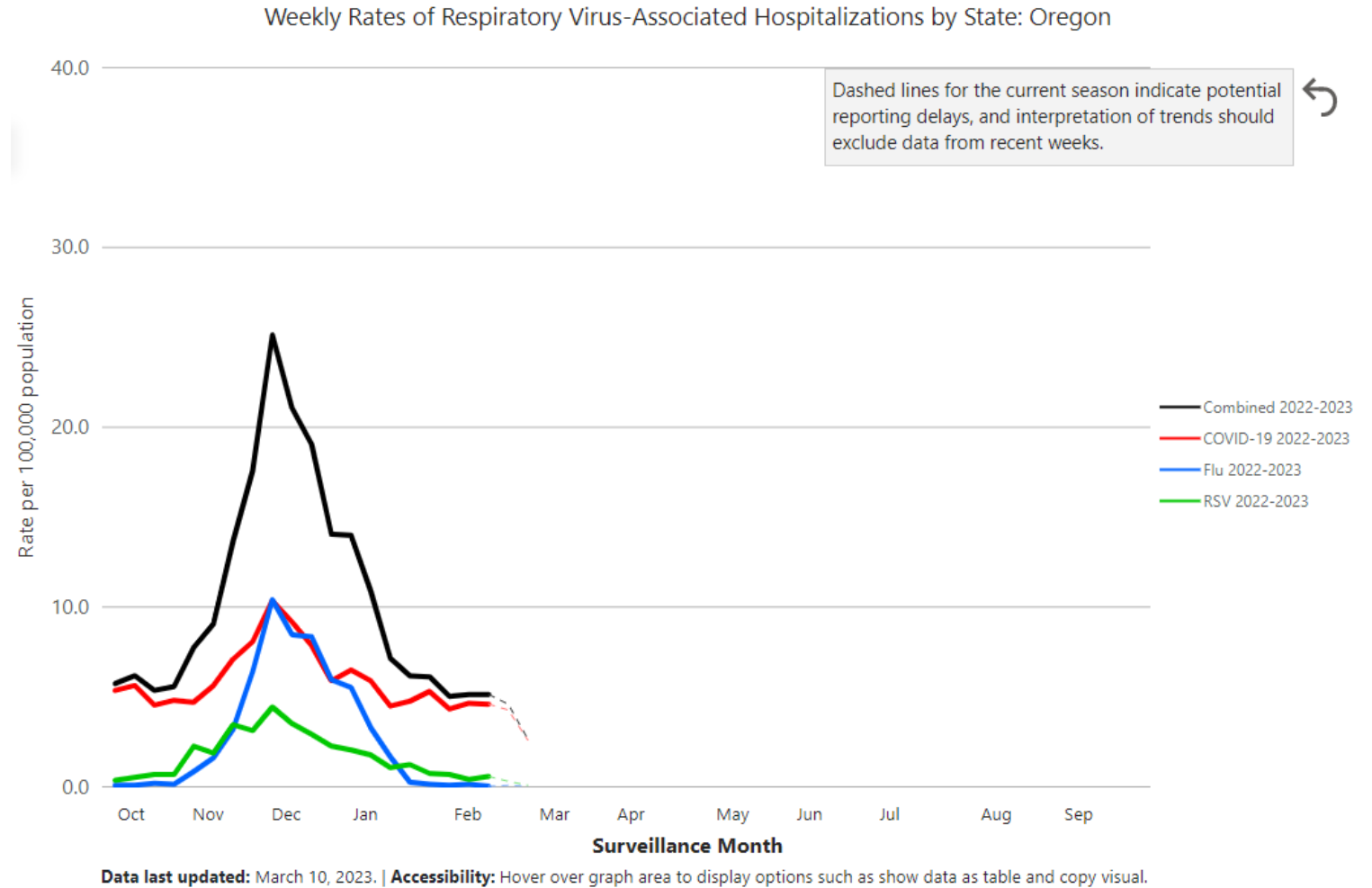
The Round 2 forecast from UVA-EpiHiperFlu is selected as the forecast that has fit the history best and its results are given directly in the chart. The results from the low vaccine effect/pessimistic immunity scenario are shown.



Combined Forecast

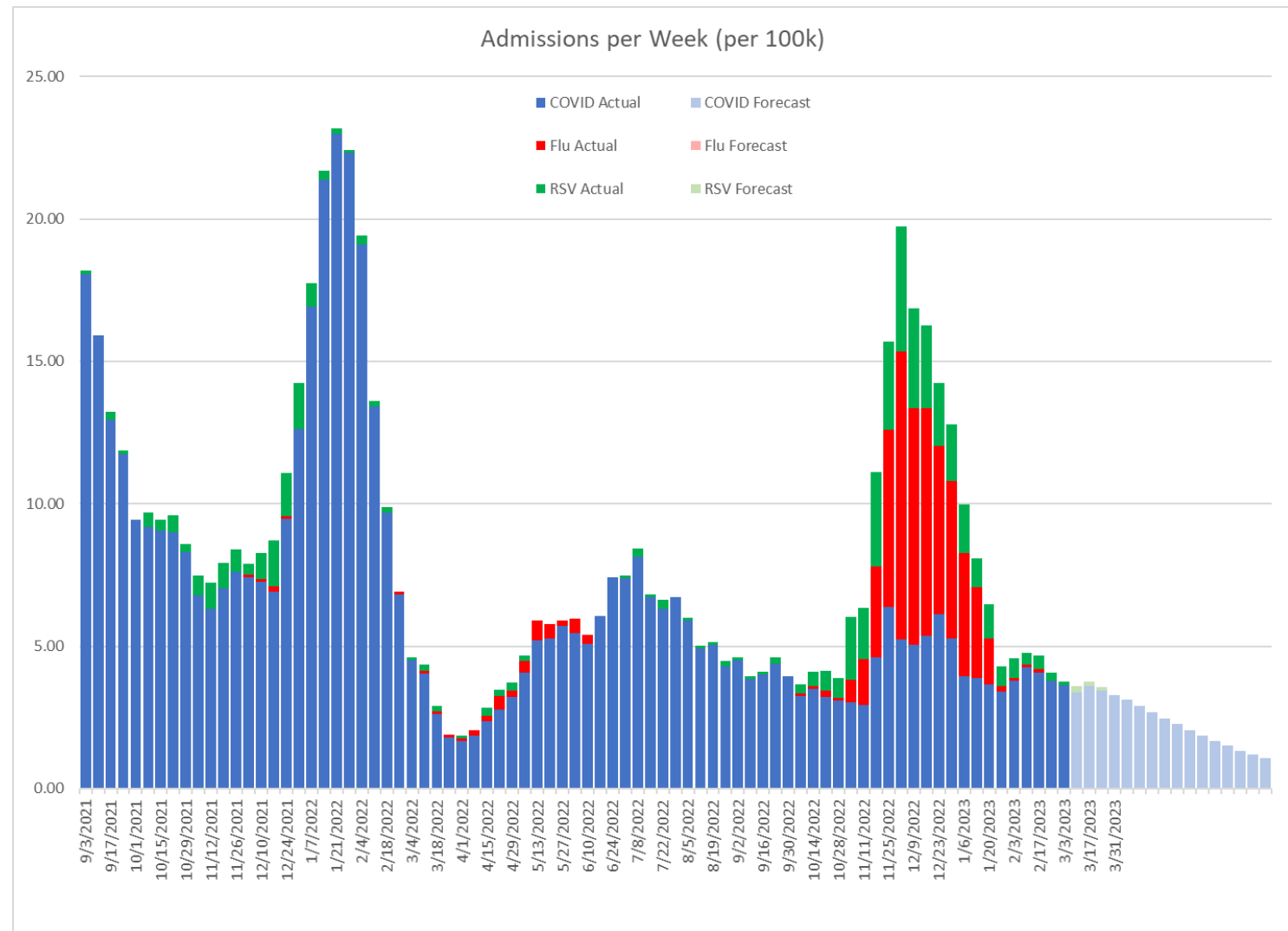
RSV, Flu, COVID -Oregon

The combined impact of respiratory viruses has decreased to pre-surge levels.



RSV, Flu, COVID –Oregon Forecast

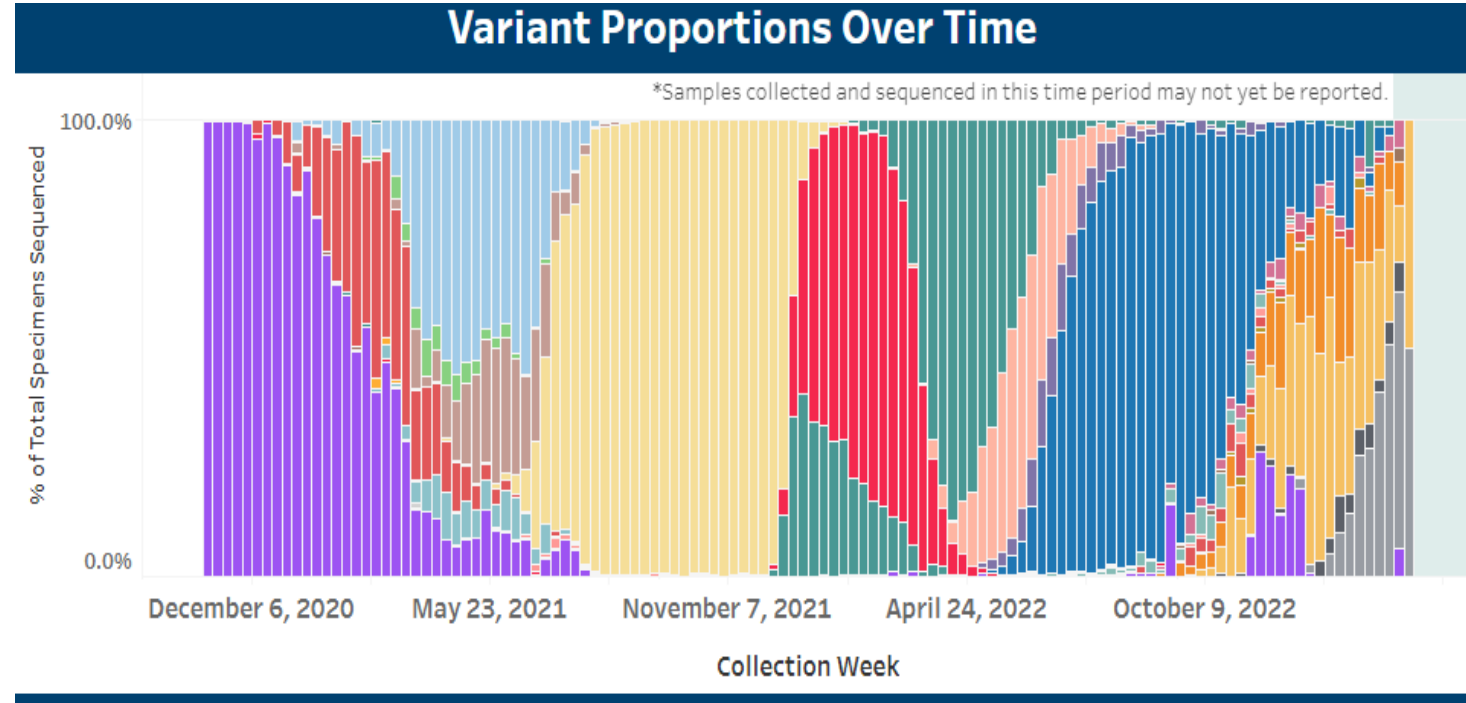
RSV and Flu are expected to remain low but COVID is expected to have a slight increase before declining again.



Ancillary Data

COVID Lineage Prevalence

XBB.1.5 has increased to over 60% of the sequenced samples in the week ending February 19th.



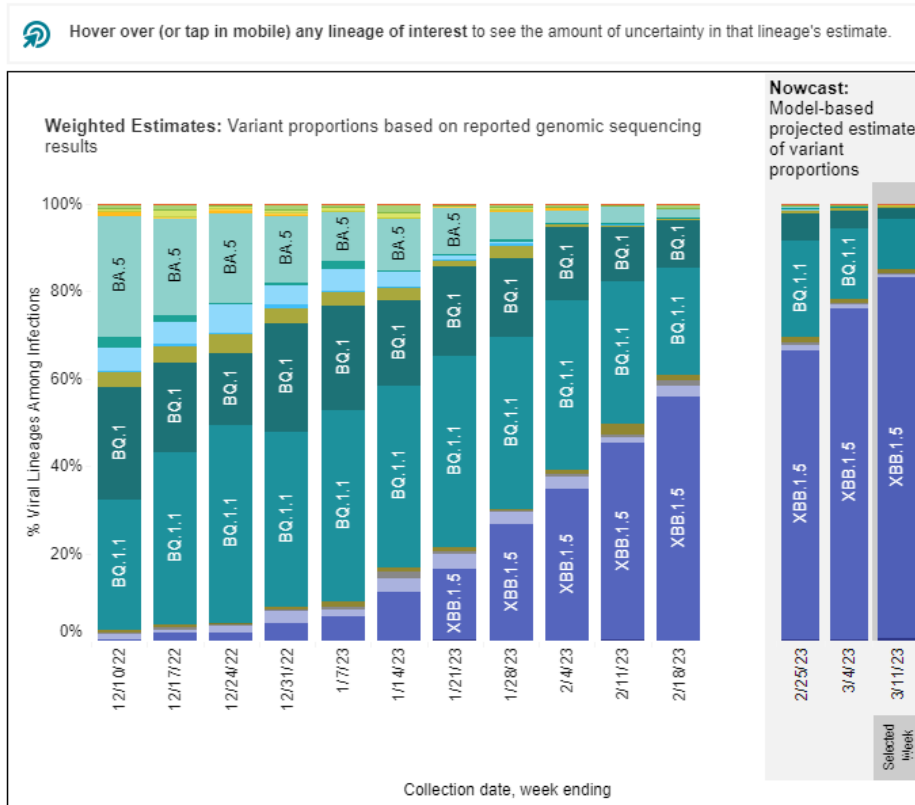
Lineage Legend

XBB.1.5	■	BN.1	■	BA.5.2.6	■	BA.2.75.2	■
XBB	■	BA.2	■	BF.11	■	B.1.1.529	■
BQ.1.1	■	BA.5.2.6	■	BA.2.75	■	BA.4	■
BQ.1	■	BF.7	■	BA.4.6	■	BA.1.1	■
BA.5	■					BA.2.12.1	■
						All other variants	■

COVID Lineage Prevalence

In data from the region including Washington, Idaho, and Alaska, the share of XBB is estimated at 82% in the week ending 3/11/23.

Weighted and Nowcast Estimates in HHS Region 10 for Weeks of 12/4/2022 – 3/11/2023



Nowcast Estimates in HHS Region 10 for 3/5/2023 – 3/11/2023

Region 10 - Alaska, Idaho, Oregon, and Washington

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	XBB.1.5	VOC	82.8%	71.1-90.7%
	BQ.1.1	VOC	11.4%	6.3-19.4%
	BQ.1	VOC	2.6%	1.2-5.3%
	CH.1.1	VOC	0.9%	0.2-2.7%
	XBB	VOC	0.7%	0.5-1.0%
	XBB.1.5.1	VOC	0.5%	0.2-1.2%
	BN.1	VOC	0.4%	0.2-0.9%
	BA.5	VOC	0.2%	0.1-0.3%
	BA.2	VOC	0.1%	0.0-0.4%
	BF.7	VOC	0.1%	0.0-0.1%
	BA.5.2.6	VOC	0.0%	0.0-0.1%
	BA.2.75	VOC	0.0%	0.0-0.1%
	BF.11	VOC	0.0%	0.0-0.0%
	BA.2.75.2	VOC	0.0%	0.0-0.0%
	BA.4.6	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
	BA.4	VOC	0.0%	0.0-0.0%
	BA.1.1	VOC	0.0%	0.0-0.0%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.2%	0.1-0.6%



Acknowledgments

Each week this model requires updates, input and expertise from many people.

Thank you to Guang Fan, Xuan Qin and Brian O’Roak, at OHSU, for their work to monitor variants in Oregon.

Thank you to Dr. William Messer and Dr. Marcel Curlin for their expertise in virus dynamics and transmissions.

Thank you to the modeling team at UVA for producing an influenza model with excellent fit for Oregon.

Thank you!

COVID Variant Specifications

Parameter	Original	CA/Alpha/G								
		amma	Alpha	Delta	BA1	BA2	BA4/BA5	BQ1	XBB.1.5	
Immune Escape		1	0	0	0	0.5	0	0.15	0.15	0.14
Date Start	2/1/2020	12/30/2020	3/1/2021	8/1/2021	12/1/2021	3/1/2022	5/1/2022	9/1/2022	12/1/2022	
Herd Immunity	69%	72%	76%	78%	78%	80%	80%	81%	81%	
Hosp rate	1.40%	1.40%	1.40%	2.80%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
R0	3.2	3.6	4.2	4.5	4.5	5	5	5.2	5.4	
Recovery	9	8	8	7	6	6	6	6	6	