
COVID-19 Cases, Testing, Tracing, and Variants

*House Committee on Health Care,
Subcommittee on COVID-19*

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Oregon
Health
Authority

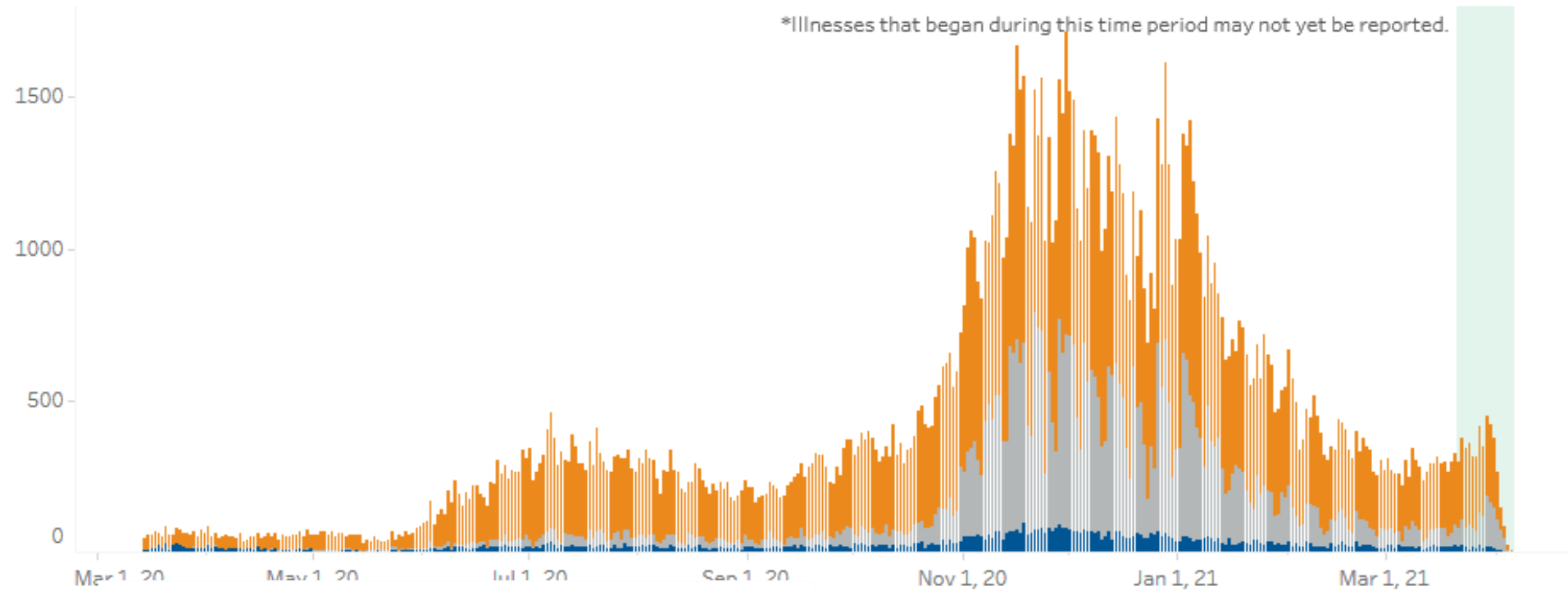
COVID-19 Cases in Oregon

Oregon's Epi Curve: COVID-19 cases

This chart shows the number of Oregonians who have been identified as COVID-19 cases and whether they were ever hospitalized for their illness.‡

Total Cases	Hospitalized	Not Hospitalized	Hospitalization Status Unknown
167,658	9,357	113,274	45,027

*Illnesses that began during this time period may not yet be reported.



■ Not Hospitalized
 ■ Hospitalized
 ■ Hospitalization Status Unknown

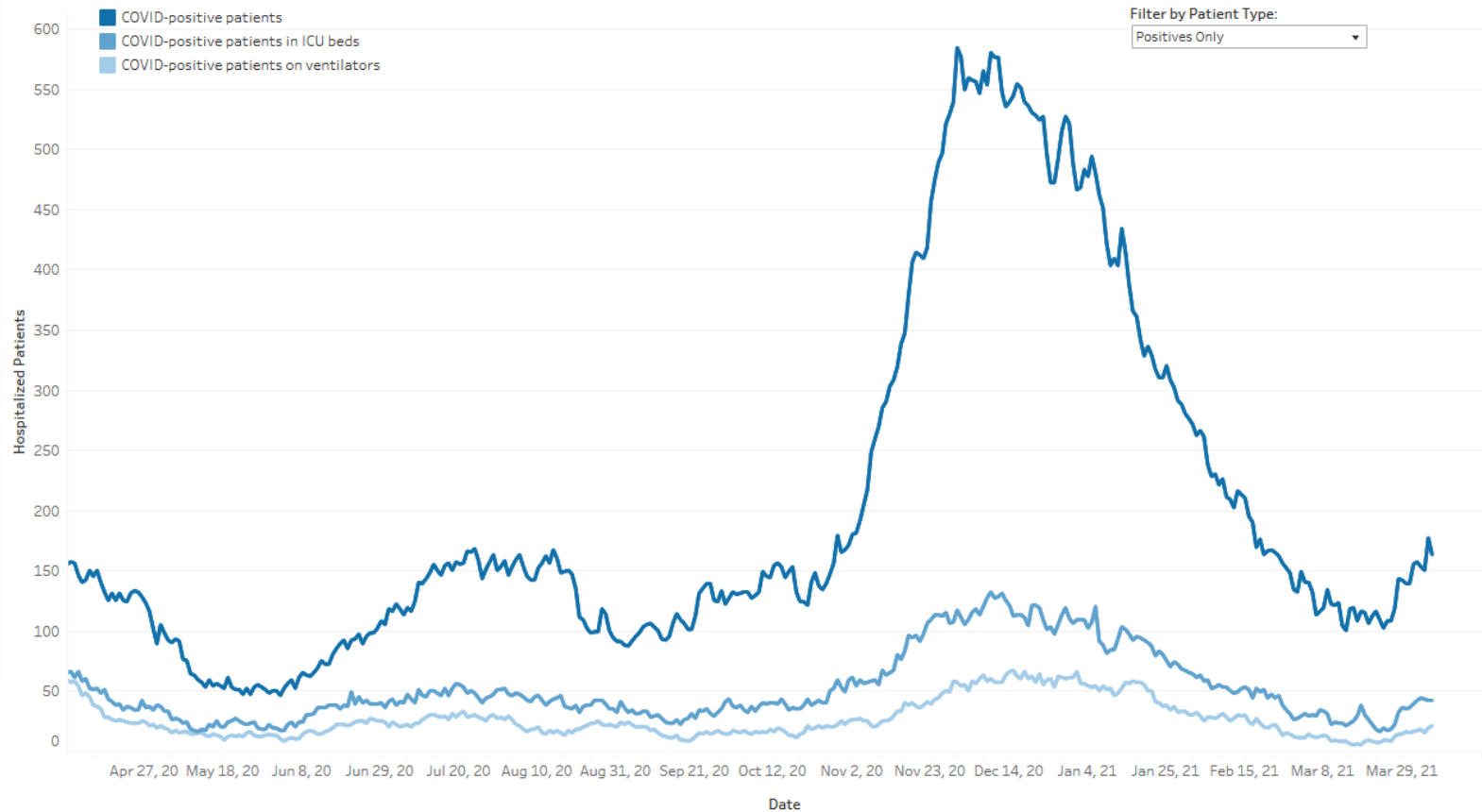
https://public.tableau.com/profile/oregon.health.authority.covid.19#!/vizhome/OregonHealthAuthorityCOVID-19DataDashboard/COVID-19EPICases?display_count=v&toolbar=n&origin=viz_share_link&:showShareOptions=false
 Accessed 04.06.2021



Hospitalizations by Severity

Oregon's Hospitalization Trends by Severity

This chart shows daily COVID-19 hospitalizations and whether patients were in the ICU or on ventilators, as reported to Oregon's Hospital Capacity Web System (HOSCAP)¹. It initially displays only those who tested positive, but you can view all suspected or confirmed patients² using the dropdown menu below. Click on a legend item to highlight it in the chart (ctrl+click to select multiple items).



<https://public.tableau.com/profile/oregon.health.authority.covid.19#!/vizhome/OregonCOVID-19HospitalCapacity/BedAvailabilitybyRegion>
Accessed 04.06.2021

Weekly Trends

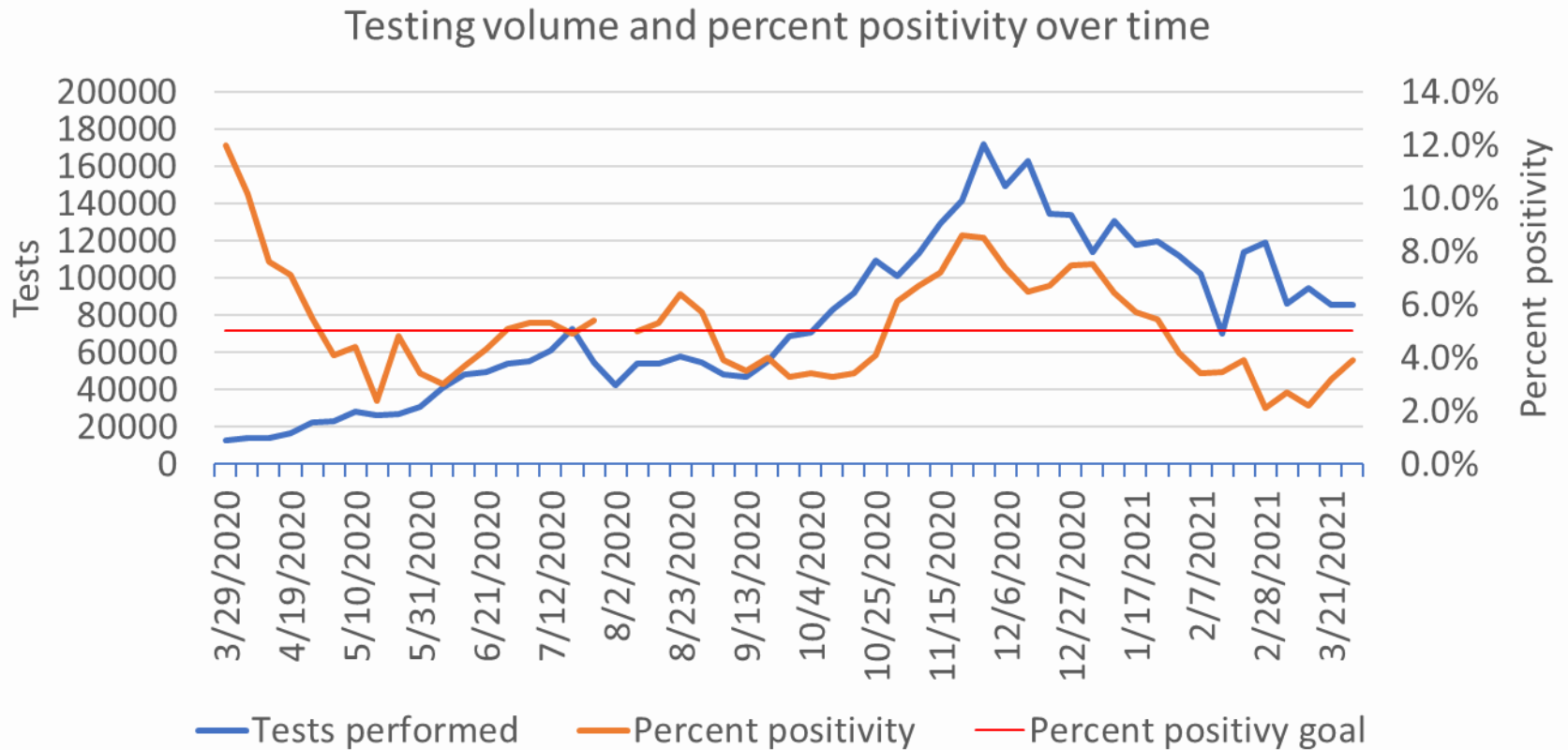
Summary Statistics For the Previous 6 MMWR Weeks - All			
Week of True Case Date	Total New Cases	Average New Cases Per Day	% Cases Not Traced to a Known Source
2/21/21	2,834	405	44.9%
2/28/21	1,745	249	48.4%
3/7/21	2,349	336	51.3%
3/14/21	1,966	281	51.2%
3/21/21	2,428	347	55.3%
3/28/21	2,933	419	56.7%

https://tableau.dhsoha.state.or.us/t/OHA/views/InternalStakeholdersDashboardFinal/InternalDashboard?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no&:origin=viz_share_link#1

Accessed 04.06.2021

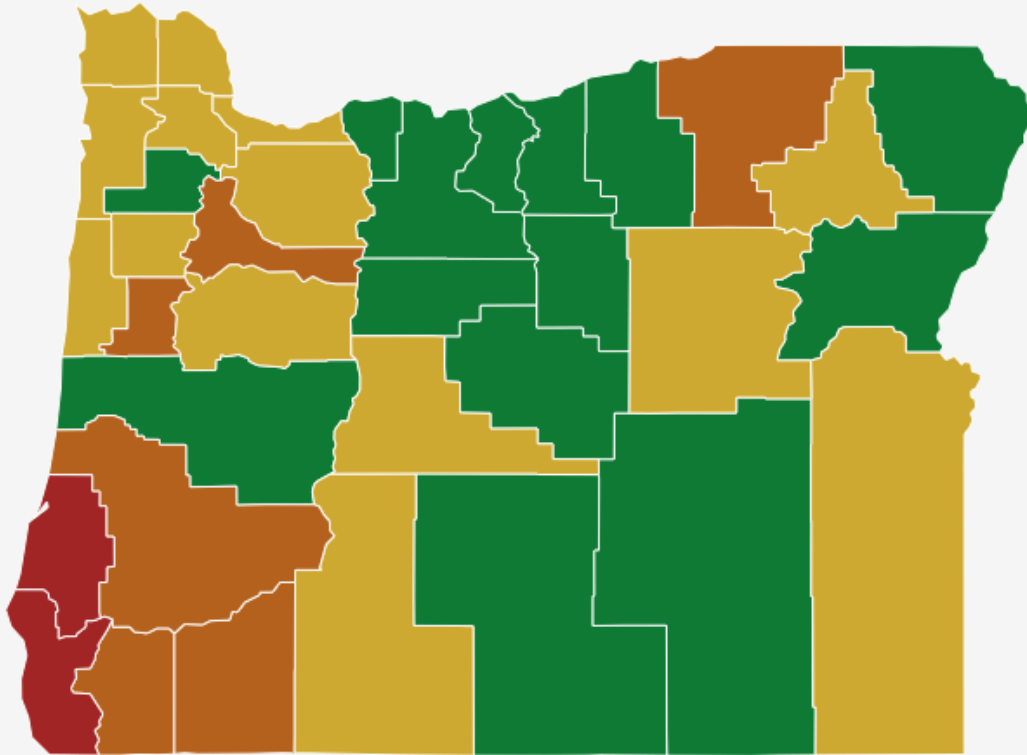
Testing Volume Trends

- From 3/28-4/3, estimated testing volume was 85,369 and **percent positivity was 3.9%** (goal $\leq 5\%$)



COVID-19 Risk Levels by County

Hover over a county to see more information



Statewide Metrics

03/14/2021 - 03/27/2021

104.1 cases per 100k residents

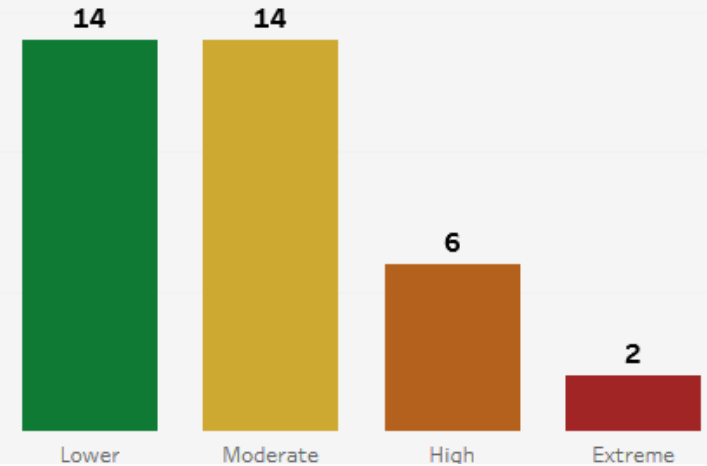
3.3% test positivity

Risk Level

- Extreme
- High
- Moderate
- Lower

Hover over one of the bars below to highlight the counties in that risk level

Oregon Counties by COVID-19 Risk Level



PUBLIC HEALTH INDICATORS: TIMELY FOLLOW-UP

Case Investigation



After a health care provider lets you know that you have COVID-19, you'll get a call from your local or tribal public health authority.

They will help you ...

- **Understand how to self-isolate.**
 - » When you self-isolate it means you stay away from everyone. This includes the people you live with.
- **Remember who you saw and where you went while you were contagious.**
 - » They will ask everyone you were in contact with to quarantine. Quarantine means to stay home and six feet away from others.
 - » To protect your privacy, the caller will not mention your name to your contacts.



They will share information about how to:



Prevent the spread
of the virus



Care for yourself
and your family



Connect with
resources near you



Oregon, let's
answer the call.

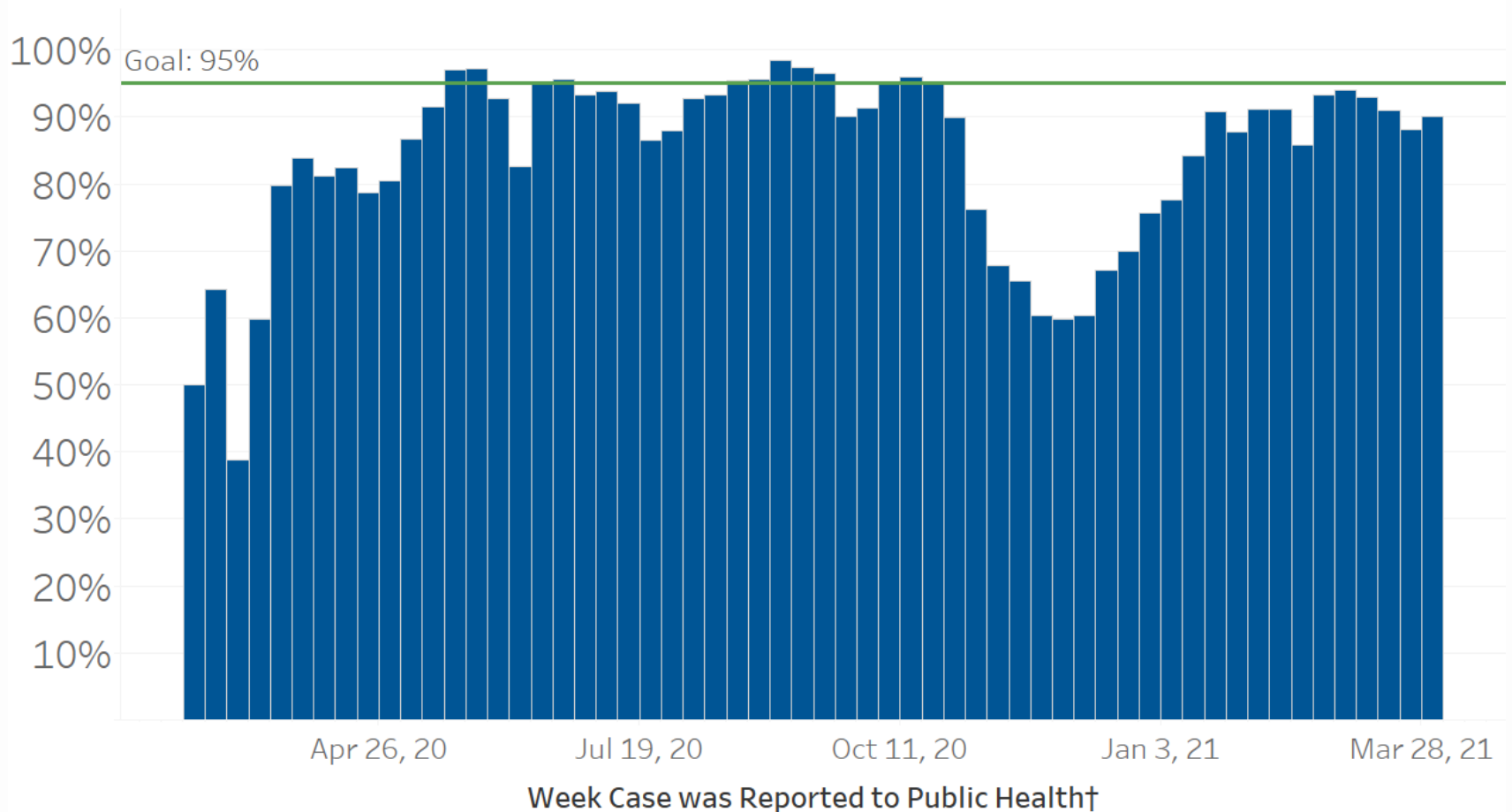
Remember, you can spread the virus without feeling sick.

Definition: Time to initiated follow up

- Time to follow up is calculated as the difference between:
 - Date case is identified as a confirmed or presumptive case, and
 - Date of first call try (or interview date, if former is blank).
- Indicator is the percentage of cases each MMWR week that have a time to follow up of 24 hours or less.

Statewide

Percentage of COVID-19 cases with follow up initiated within 24 hours - All



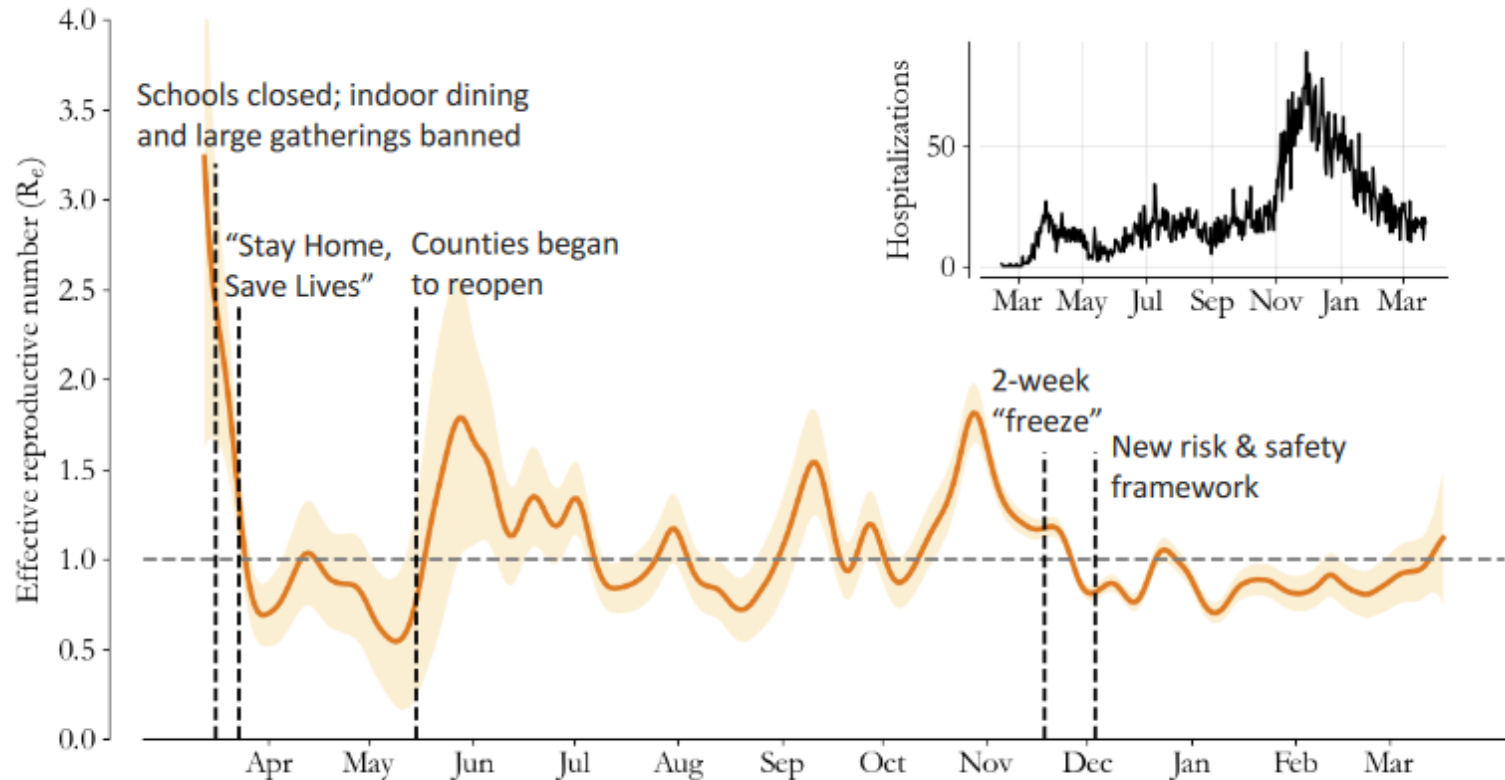
**COUNTIES IN SURGE,
TRANSITIONING OUT OF
SURGE, AND
OPERATING AT FULL
CAPACITY**

Surge Status of Counties as of April 1st

- Counties using modified workflows as defined in the *COVID-19 Case Investigation, Contact Tracing, and Outbreak Response under Surge Conditions Guidelines* due to cases exceeding capacity for timely response from LPHA
 - Jackson
 - Klamath
 - Lake
- Counties working on additional support due to high numbers of cases as they move out of using modified workflows, but not yet operating at full capacity
 - Columbia
 - Marion
- Counties able to provide timely response for all case investigations, contact tracing, and outbreaks

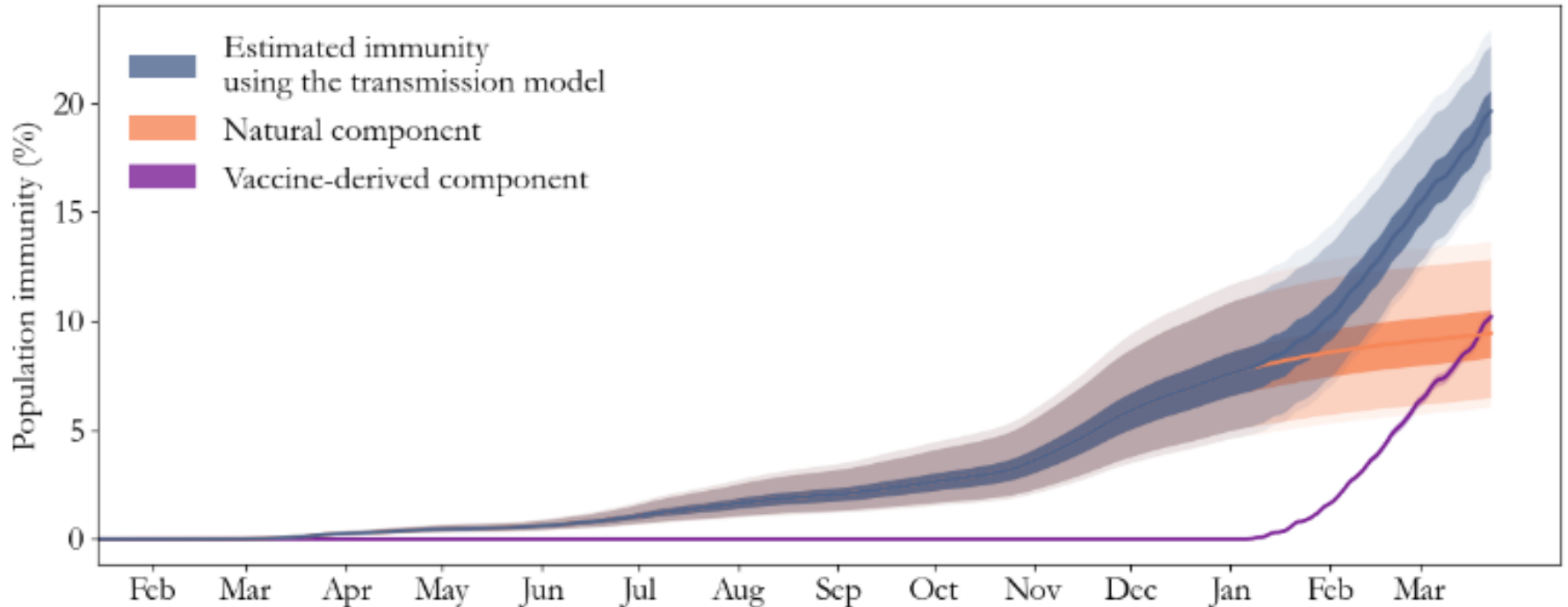
LATEST PROJECTIONS

Re Estimates over Time with 95% Confidence Intervals



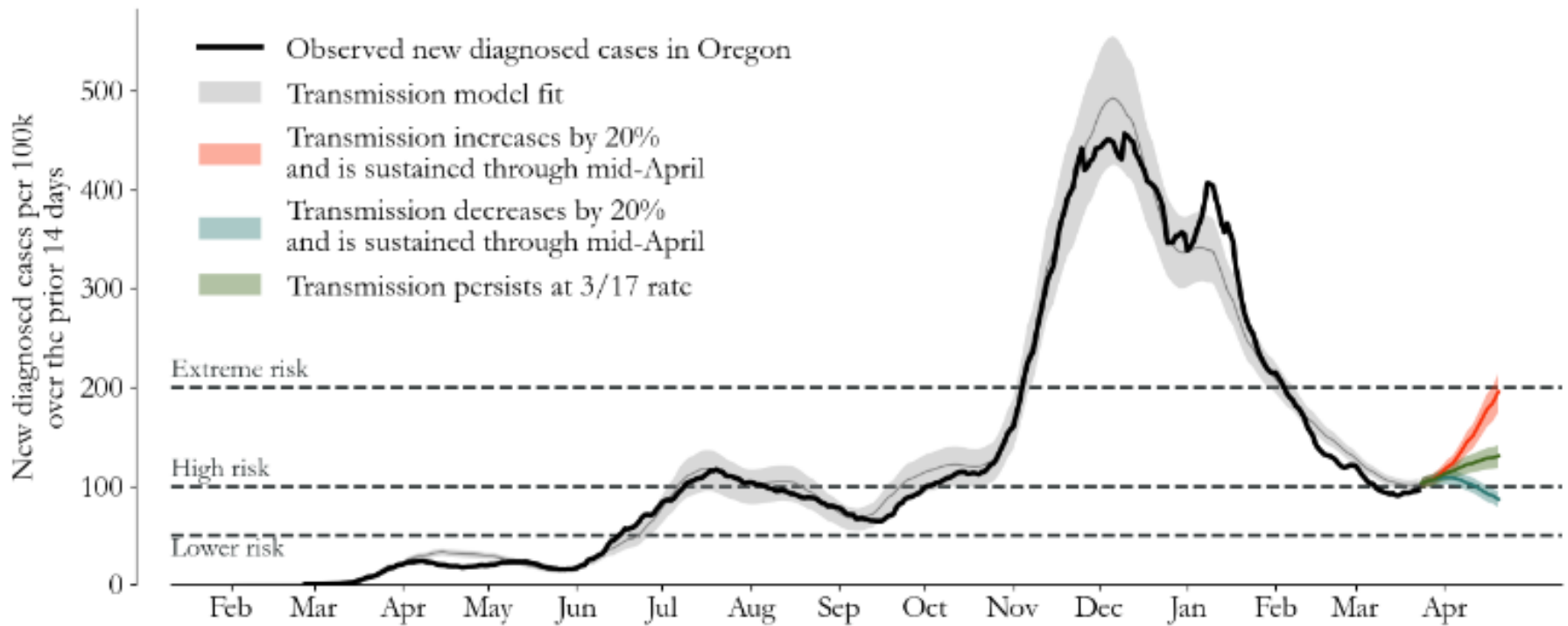
<https://www.oregon.gov/oha/covid19/Documents/DataReports/Epidemic-Trends-and-Projections.pdf>
Accessed 04.05.2021

Population Level Immunity Estimates



<https://www.oregon.gov/oha/covid19/Documents/DataReports/Epidemic-Trends-and-Projections.pdf>
Accessed 04.05.2021

Observed Diagnosed Cases with Projections



<https://www.oregon.gov/oha/covid19/Documents/DataReports/Epidemic-Trends-and-Projections.pdf>
Accessed 04.05.2021

Acknowledgement: Melissa Sutton

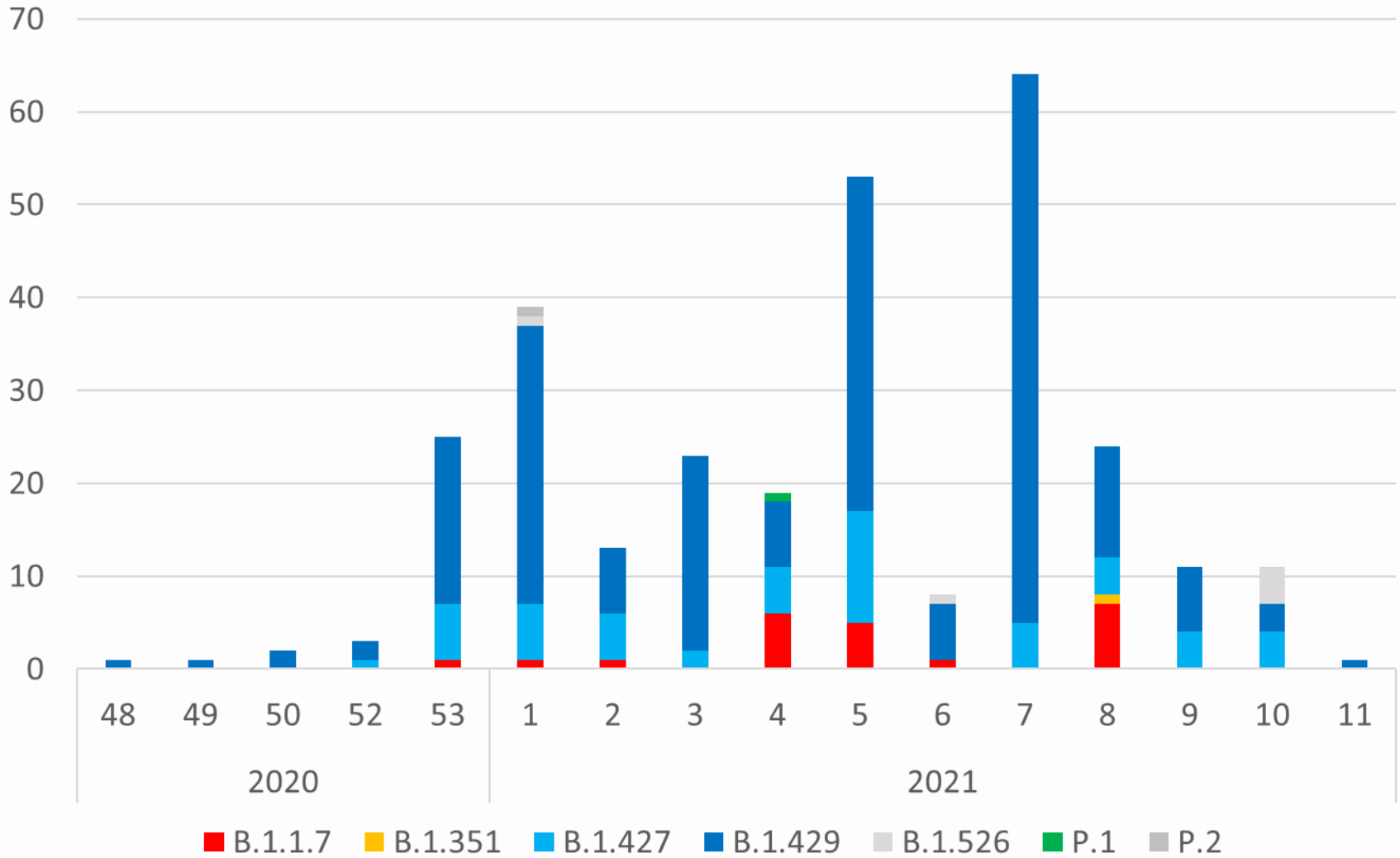
ADVANCED MOLECULAR DETECTION

Situational overview

B.1.429	B.1.427	B.1.1.7	B.1.351	P.1	B.1.526	P.2
213	54	22	1	1	6	1

- Oregon has sequenced more than 3,700 specimens since the beginning of the pandemic
- 291 variants of concern (VOCs) and 7 variants of interest (VOIs) have been identified
- B.1.1.7 (the “UK variant”) has been identified in several communities
 - Approximately 50% more transmissible
 - Likely cause more severe disease (i.e., more hospitalizations, deaths)
- B.1.427 and B.1.429 (the “California variants”) have been identified statewide and represent the majority of VOCs
 - Once introduced, these appear to slowly replace other variants
 - Wastewater surveillance confirms this trend
 - Approximately 20% more transmissible
 - Concern that antibody response may be impaired—increased risk of reinfection and reduced effectiveness of monoclonal antibody therapies

Oregon SARS-CoV-2 Variants of Concern/Interest by Epi Week



Oregon Sequencing Surveillance

- Oregon is sequencing individual-level and community-level (i.e., wastewater) samples
 - **Individual samples:**
 - OSPHL sequencing request criteria include international travel within 14 days, vaccine breakthrough, suspected super-spreader events, reinfection, etc.
 - Current capacity 100/week, will increase to 150-200/week
 - Overflow surveillance capacity through OHSU – in progress
 - Clinical partners sequencing statewide include OHSU, OSU, UO, Providence and Kashi
 - **Community samples:** all wastewater surveillance samples are being sequenced weekly
 - Does not give the same level of genetic detail, but does allow for tracking of high-frequency variants over time
 - 40 sites currently participating; plan to expand to every county and Portland
- Partnering with OSU on a historical study to better understand how variants have emerged statewide and inform required sequencing volume
 - CDC has not endorsed an artificial threshold such as 1% or 5% as rational
 - Oregon has sequenced 2.3% of cases to date

Contributing to National Surveillance

- CDC National SARS-CoV-2 Strain Surveillance (NS3)
 - Contributing the requested number of specimens to calculate weighted proportions of variants circulating nationwide
 - Current ask is 11 per week
- CDC Emerging Infections Program (EIP) special surveillance projects
 - Oregon is one of 10 EIP sites nationwide
 - Participate in COVID-19 hospitalization surveillance (COVID-NET) and will be adding sequencing data for severely ill patients
 - Will partner with local healthcare system to sequence all positive specimens over 12 months—shedding light on both variants and vaccine breakthrough

Variants of Interest in Oregon

Name (Pango lineage)	Substitution	Name (Nextstrain ^a)	First Detected	BEI Reference Isolate ^b	Predicted Attributes
B.1.526	Spike: (L5F*), T95I, D253G, (S477N*), (E484K*), D614G, (A701V*) ORF1a: L3201P, T265I, Δ3675/3677 ORF1b: P314L, Q1011H ORF3a: P42L, Q57H ORF8: T11I 5'UTR: R81C	20C	New York/November 2020		<ul style="list-style-type: none"> • Potential reduction in neutralization by monoclonal antibody treatments • Potential reduction in neutralization by convalescent and post-vaccination sera
B.1.525	Spike: A67V, Δ69/70, Δ144, E484K, D614G, Q677H, F888L ORF1b: P314F ORF1a: T2007I M: I82T N: A12G, T205I 5'UTR: R81C	20C	New York/December 2020		<ul style="list-style-type: none"> • Potential reduction in neutralization by monoclonal antibody treatments • Potential reduction in neutralization by convalescent and post-vaccination sera
P.2	Spike: E484K, D614G, V1176F ORF1a: L3468V, L3930F ORF1b: P314L N: A119S, R203K, G204R, M234I 5'UTR: R81C	20J	Brazil/April 2020		<ul style="list-style-type: none"> • Potential reduction in neutralization by monoclonal antibody treatments • Potential reduction in neutralization by convalescent and post-vaccination sera

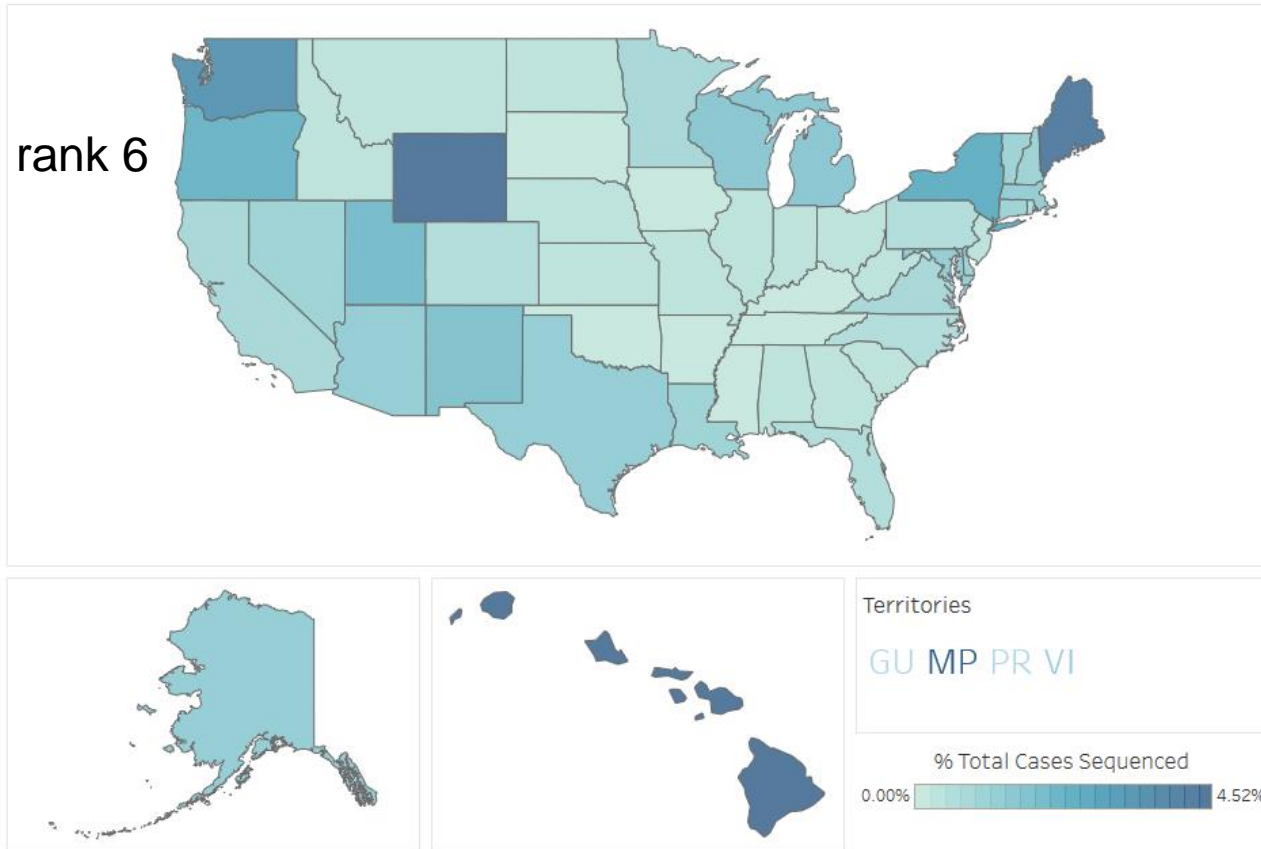
Variants of Concern in Oregon

Name (Pango lineage)	Spike Protein Substitutions	Name (Nextstrain ¹)	First Detected	BEI Reference Isolate ²	Known Attributes
B.1.1.7	Δ69/70 Δ144Y (E484K*) (S494P*) N501Y A570D D614G P681H	20I/501Y.V1	United Kingdom	NR-54000	<ul style="list-style-type: none"> • ~50% increased transmission ³ • Likely increased severity based on hospitalizations and case fatality rates ⁶ • Minimal impact on neutralization by EUA monoclonal antibody therapeutics ^{7, 14} • Minimal impact on neutralization by convalescent and post-vaccination sera ^{8,9,10,11,12,13, 19}
P.1	K417N/T E484K N501Y D614G	20J/501Y.V3	Japan/ Brazil	NR-54982	<ul style="list-style-type: none"> • Moderate impact on neutralization by EUA monoclonal antibody therapeutics ^{7,14} • Reduced neutralization by convalescent and post-vaccination sera ¹⁵
B.1.351	K417N E484K N501Y D614G	20H/501.V2	South Africa	NR-54009	<ul style="list-style-type: none"> • ~50% increased transmission¹⁶ • Moderate impact on neutralization by EUA monoclonal antibody therapeutics ^{7,14} • Moderate reduction on neutralization by convalescent and post-vaccination sera ^{8,12,18,19,20}
B.1.427	L452R D614G	20C/S:452R	US- California		<ul style="list-style-type: none"> • ~20% increased transmissibility ²¹ • Significant impact on neutralization by some, but not all, EUA therapeutics • Moderate reduction in neutralization using convalescent and post-vaccination sera ²¹
B.1.429	S13I W152C L452R D614G	20C/S:452R	US- California		<ul style="list-style-type: none"> • ~20% increased transmissibility ²¹ • Significant impact on neutralization by some, but not all, EUA therapeutics • Moderate reduction in neutralization using convalescent and post-vaccination sera ²¹



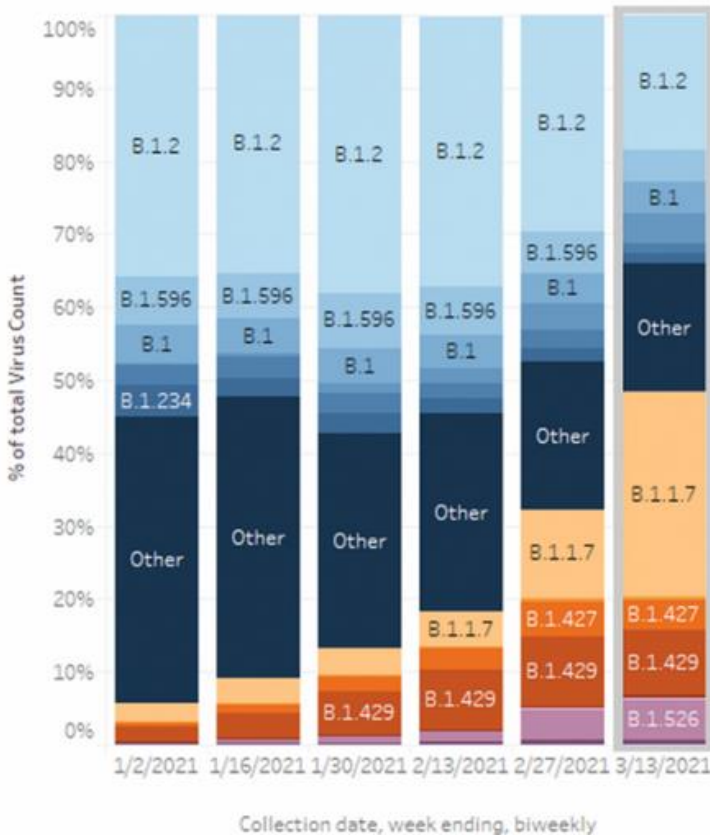
Percentage of Cumulative Cases Sequenced

OR: 2.24%, rank 6



<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/genomic-surveillance-dashboard.html>
Accessed 04.05.2021

Variants Circulating in the US



	Lineage	% Total	95% CI	Type
Most common lineages	B.1.2	15.5	12.3 - 19.3	
	B.1.429	8.2	5.9 - 11.4	VOC
	B.1.1.7	32.0	27.7 - 36.6	VOC
	B.1.596	3.7	2.7 - 5.1	
	B.1	4.7	3.3 - 6.6	
	B.1.427	4.2	2.9 - 6.1	VOC
	B.1.526	6.2	3.5 - 10.6	VOI
	B.1.1.519	3.4	2.5 - 4.8	
	B.1.243	1.2	0.8 - 1.8	
	B.1.234	1.6	1 - 2.6	
Additional VOI/VOC lineages	P.2	0.5	0.3 - 0.9	VOI
	B.1.351	0.7	0.4 - 1.3	VOC
	B.1.525	0.1	0 - 0.4	VOI
	P.1	0.4	0.2 0 - 0.8	VOC
Other*	Other	17.6	13.8 - 22.1	

Percentages represent the proportion of viruses belonging to the indicated lineage, based on two weeks of data with collection dates ending March 13.

*Other represents >200 additional lineages, which are each circulating at <2% of viruses.

** Most recent data (shaded) are subject to change as samples from that period are still being processed.

HOW DO WE COMPARE

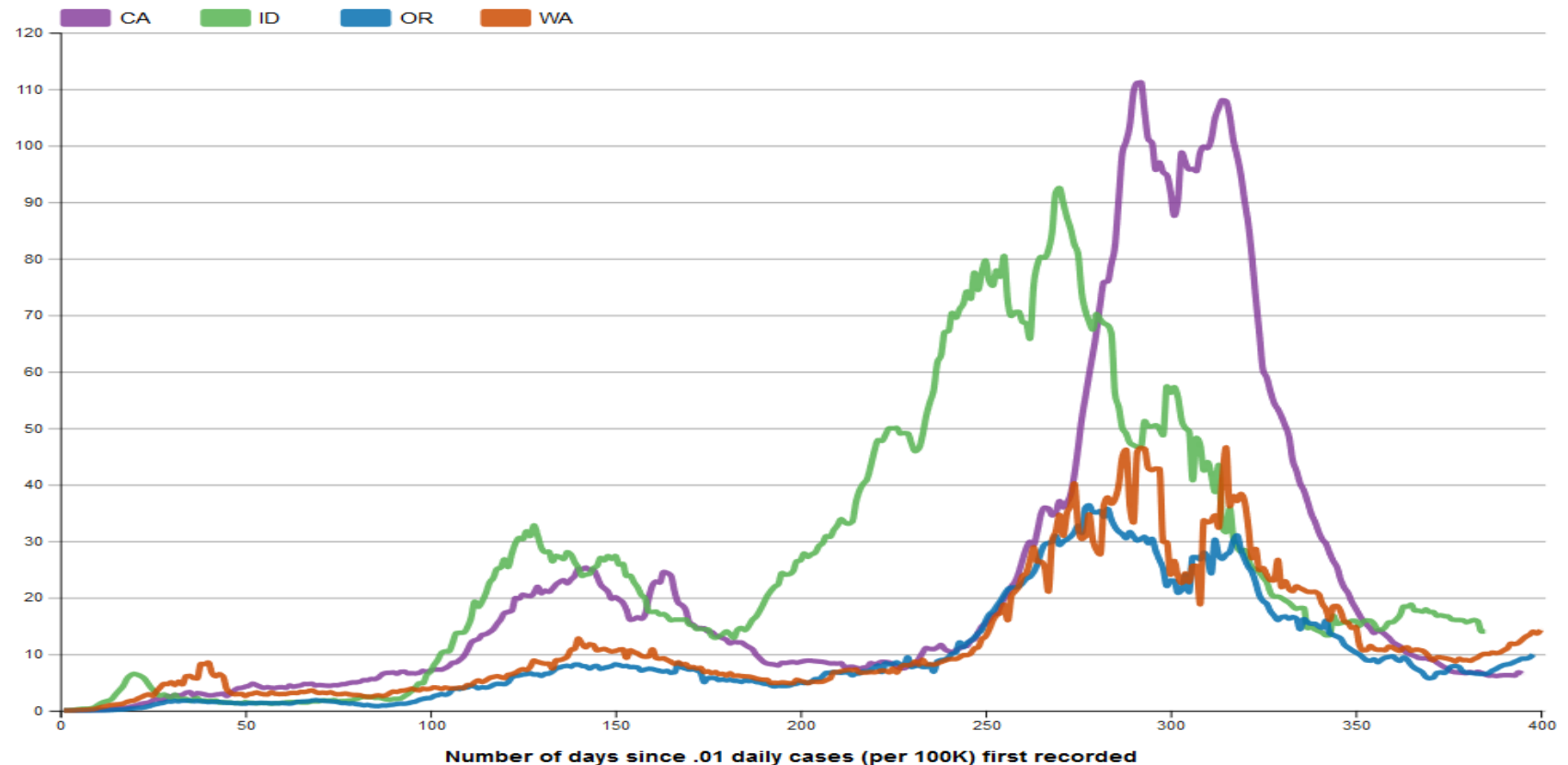
National comparisons

- Disease burden: remains exceptionally low
 - Last 7 days:
 - Daily cases/100,000 rank 15th **lowest** of 50 states
 - Daily deaths/100,000 rank 5th **lowest** of 50 states
 - To date:
 - Cumulative cases/100,000 rank 4th **lowest** of 50 states
 - Cumulative deaths/100,000 rank 5th **lowest** of 50 states
- Testing volume: remains mid-pack
 - Last 7 days:
 - Daily PCR tests/100,000 rank 22nd
 - To date:
 - Cumulative PCR tests/100,000 rank 26th
- Seroprevalence estimate: 6.7%, 4th

Regional Comparisons

New cases of Covid-19, reported to CDC, in CA, ID, OR, and WA

Seven-day moving average of new cases (per 100K), by number of days since .01 average daily cases (per 100K) first recorded.



<https://covid.cdc.gov/covid-data-tracker/#datatracker-home>
Accessed 04.05.2021

Questions/ Discussion