

COVID-19 Breakthrough Report

Oregon's Weekly Surveillance Summary



Breakthrough case report - September 23, 2021

Background

Data for the weekly breakthrough case report will include data through the most recent Sunday and the report will be published on Thursdays.¹ Vaccine breakthrough cases are defined as instances in which an individual tested positive for COVID-19 at least 14 days following the completion of any COVID-19 vaccine series.² Vaccine breakthrough cases that result in hospitalization or death are reported to CDC.

COVID-19 cases in vaccinated and unvaccinated people

Weekly summary

During the week of September 12–September 18, there were 11,994 cases of COVID-19. 9,216 (76.8%) were unvaccinated and 2,778 (23.2%) were vaccine breakthrough cases. The median age of breakthrough cases was 49 years. 84 (3%) breakthrough cases were residents of care facilities, senior living communities or other congregate living settings. 700 (25.2%) cases were 65 or older. There were 68 (2.4%) cases aged 12-17.

OHA publishes the most up-to-date information about cases from the most recently completed MMWR week. However, not all information about a case's vaccination status may be available at time of publication. The following table (Table 1) includes updated totals of cases by vaccine breakthrough case status for the previous six weeks.

¹ The weekly summary, Figure 1, and Figure 2 use the date that cases are reported to OHA, to provide information on the most recently identified cases. All other dates in this report use specimen collection date to align with the breakthrough case definition.

² This definition is consistent with the CDC's definition, available here: <https://www.cdc.gov/vaccines/covid-19/downloads/COVID-vaccine-breakthrough-case-investigations-Protocol.pdf>

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Table 1. Updated totals for vaccine breakthrough cases

MMWR week ending	Total cases	Breakthrough cases	Percent breakthrough case
2021-07-24	3,054	627	20.5
2021-07-31	5,652	1,157	20.5
2021-08-07	7,492	1,499	20.0
2021-08-14	13,134	2,467	18.8
2021-08-21	14,484	2,776	19.2
2021-08-28	16,209	3,053	18.8
2021-09-04	13,774	2,953	21.4
2021-09-11	14,008	2,872	20.5
2021-09-18	11,994	2,778	23.2

Cumulative summary

Overall, there have been 22,879 vaccine breakthrough cases identified in Oregon. The median age of breakthrough cases is 48 years (range: 12-106). 886 (3.9%) breakthrough cases were residents of care facilities, senior living communities or other congregate living settings. 5,785 (25.3%) cases were 65 or older. There have been a total of 441 (1.9%) cases aged 12-17. Breakthrough cases have been reported in all 36 counties.

Cases of COVID-19 are much more common in unvaccinated³ individuals than in vaccinated individuals (Figure 1). The rate of COVID-19 cases among unvaccinated individuals in the most recent week was approximately 4 times the rate of COVID-19 cases among those who are fully vaccinated. Community spread remains elevated throughout the state and is particularly high in areas with lower vaccination rates. As COVID-19 cases have increased across Oregon, vaccine breakthrough cases have also

³ Unvaccinated persons are defined as people who have not received an approved COVID-19 vaccine, or who have not completed a COVID-19 vaccine series.

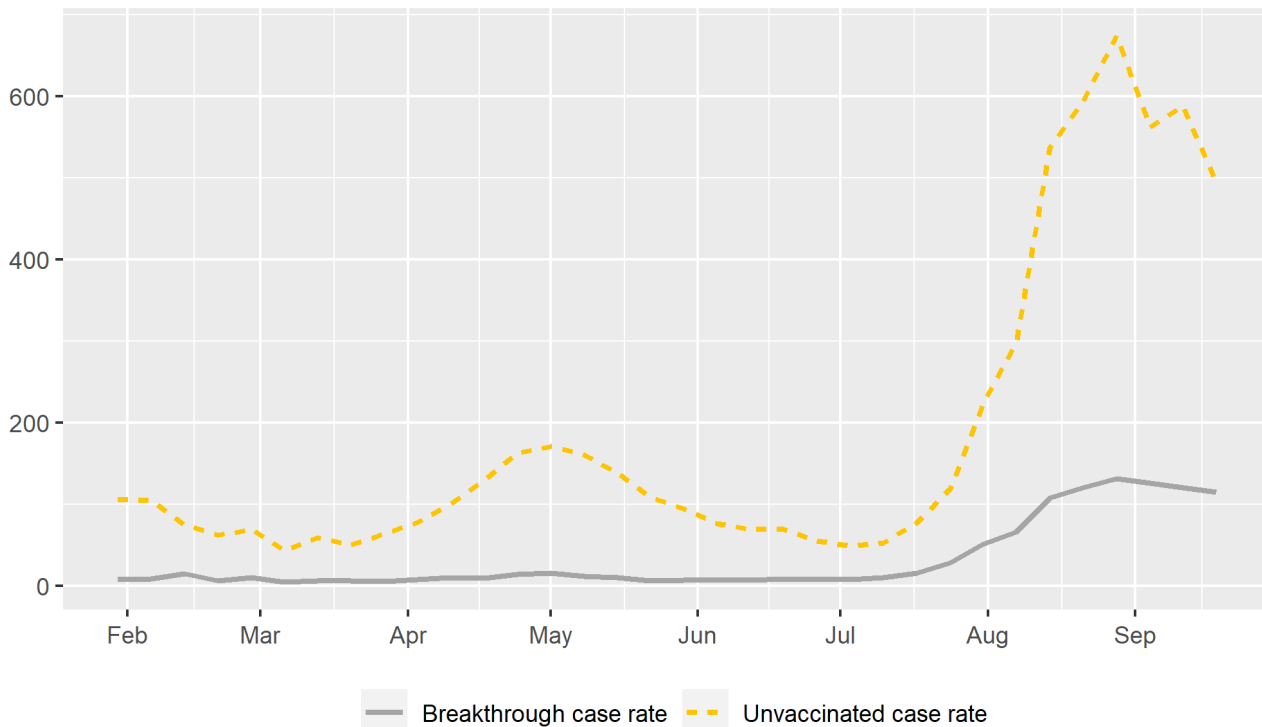
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increased, but at a much lower rate than in the unvaccinated. Vaccination remains the most effective tool to reduce the spread of COVID-19.

Figure 1. COVID-19 cases per 100,000 per week, by vaccination status



Vaccine breakthrough cases and severity

The Pfizer, Moderna and Johnson & Johnson COVID-19 vaccines are highly effective at preventing severe COVID-19 illness and death. Relatively few breakthrough cases have been hospitalized, and even fewer have died (Figure 2).

To date, 4.5% of all known breakthrough cases have been hospitalized (n=1036), and only 0.9% have died (n=204). The median age of the people who died is 81 (range: 36-101).

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Figure 2. COVID-19 breakthrough cases, hospitalizations and deaths, by week

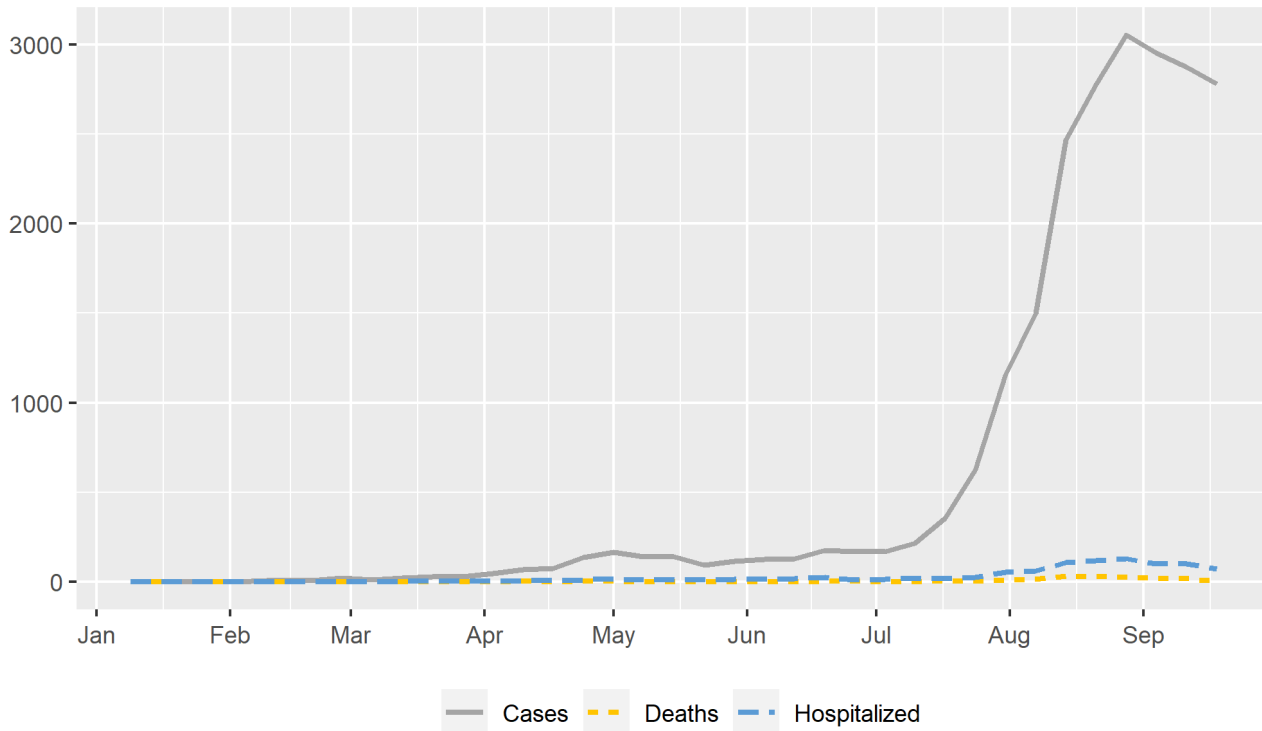


Table 1. COVID-19 breakthrough cases by age group and severity

Age Group	Cases	Hospitalized	Deaths
12-19	902	4	0
20-29	3,273	15	0
30-39	3,875	33	1
40-49	3,842	40	3
50-59	3,570	96	6
60-69	3,234	210	27
70-79	2,533	286	56
80+	1,650	352	111

Data are provisional and subject to change.

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Age Group	Cases	Hospitalized	Deaths
Total	22,879	1,036	204

Variants of concern and variants of interest

Table 2. COVID-19 breakthrough cases associated with variants of concern

Overall, 5.1% of positive specimens in Oregon have been sequenced. Delta is currently the dominant variant circulating in Oregon. At this time, vaccine breakthrough cases appear to reflect the variants circulating in the community. Additional information on variants can be found here:

<https://public.tableau.com/app/profile/oregon.health.authority.covid.19/viz/GISAIDVariantDashboardUpdated/OregonVariantDashboard>

Subtype	Cases
B.1.1.7 (Alpha)	143
B.1.351 (Beta)	16
B.1.617.2 (Delta)	763
P.1 (Gamma)	55

Table 3. COVID-19 breakthrough cases associated with variants of interest

Subtype	Cases
B.1.427/B.1.429 (Epsilon)	38
B.1.526 (Iota)	29

Table 4. COVID-19 breakthrough cases by county of residence⁴

County	Cases
Baker	84

⁴ Counties that have a total of fewer than 10 cases will be reported as 1-9 cases.

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County	Cases
Benton	425
Clackamas	1995
Clatsop	168
Columbia	196
Coos	251
Crook	140
Curry	90
Deschutes	1666
Douglas	850
Gilliam	1-9
Grant	30
Harney	33
Hood River	155
Jackson	1345
Jefferson	118
Josephine	890
Klamath	242
Lake	26
Lane	2792
Lincoln	306
Linn	679

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County	Cases
Malheur	140
Marion	2317
Morrow	76
Multnomah	3536
Polk	481
Sherman	1-9
Tillamook	209
Umatilla	496
Union	133
Wallowa	48
Wasco	209
Washington	2221
Wheeler	1-9
Yamhill	512