







A breakthrough COVID-19 infection is defined as a positive SARS-CoV-2 specimen collected  $\geq 14$  days after completing the primary COVID-19 vaccine series of an FDA-authorized COVID-19 vaccine. Studies show that protection from COVID vaccination decreases over time; in response, the CDC has recommended booster doses for eligible populations to protect against waning immunity. As of 3/25/2022, Montana reports 42,678 cases of confirmed breakthrough disease, which includes 1,416 hospitalizations and 386 deaths. CDC data from January show that unvaccinated individuals aged 12 years and older were more than 3 times more likely to become infected with COVID-19, compared to fully vaccinated individuals in the same age group with a booster dose. Additionally, unvaccinated individuals 12 and older had 21 times the risk of dying from COVID-19 compared to fully vaccinated individuals in the same age group with booster doses.<sup>1</sup>

### Hospitalizations and Deaths and Vaccination Status

COVID-19-related hospitalizations and deaths were analyzed between **April 1, 2021 and March 25, 2022** to review vaccination status. Since the beginning of April 2021, 80% of Montanans who were hospitalized and 77% of those who died were unvaccinated at the time of infection (Table 3). Of the 6,976 individuals who were hospitalized during this time period, 134 (2%) were <18 years old, 945 (14%) were 18 to 44 years old, 2,285 (33%) were 45 to 64 years old and 3,612 (52%) were  $\geq 65$  years old.

Additionally, COVID-19-related hospitalization and death data from **January 29– March 25, 2022** (last 8 weeks) were analyzed to review vaccination status. Sixty-six percent of Montanans who were hospitalized and 62% of those who died had not received a COVID-19 vaccine (Table 4)<sup>†</sup>. Of the 682 individuals who were hospitalized during this time period, 22 (3%) were <18 years old, 56 (8%) were 18 to 44 years old, 172 (25%) were 45 to 64 years old and 432 (63%) were  $\geq 65$  years old.

**Table 3. Vaccination status of COVID-19 hospitalizations and deaths – April 1, 2021 to March 25, 2022**

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	<b>6,976</b>	<b>1,653</b>
UNVACCINATED	5,567 (80%)	1,268 (77%)
VACCINATED (BREAKTHROUGH CASE)	1,409 (20%)	385 (23%)
UNVACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>&lt;1-102 (63)</b>	<b>23-103 (71)</b>
VACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>7-103 (73)</b>	<b>20-101 (81)</b>

**Table 4. Vaccination status of COVID-19 hospitalizations and deaths – January 29 to March 25, 2022**

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	<b>682</b>	<b>154</b>
UNVACCINATED	447 (66%)	95 (62%)
VACCINATED (BREAKTHROUGH CASE)	235 (34%)	59 (38%)
UNVACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>&lt;1-100 (70)</b>	<b>40-100 (75)</b>
VACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>18-103 (72)</b>	<b>48-100 (79)</b>

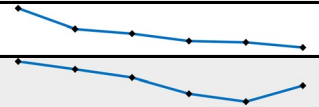
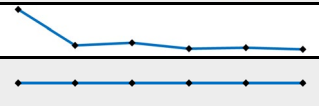


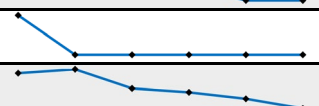

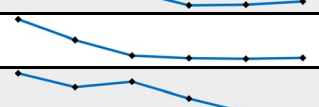
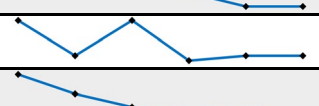

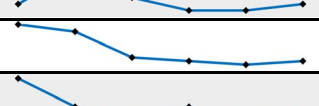

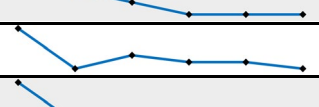


<sup>†</sup>The analysis of hospitalizations and deaths by vaccination status does not include data on booster doses. Booster doses are recommended by the CDC and have been shown to improve protection against hospitalization and death from COVID-19<sup>1</sup>.

<sup>1</sup> CDC – COVID Data Tracker – Rates of COVID-19 Cases and Deaths by Vaccination Status.

<https://covid.cdc.gov/covid-data-tracker/#rates-by-vaccine-status>. March 28, 2022.





<b>Missoula</b>	306	160	129	76	68	31	-37	
<b>Park</b>	87	14	19	7	9	6	-3	
<b>Phillips</b>	9	1	9	3	4	2	-2	
<b>Powder River</b>	5	2	1	0	1	2	1	
<b>Prairie</b>	3	0	0	0	0	0	0	
<b>Richland</b>	20	13	20	31	27	3	-24	
<b>Rosebud</b>	144	68	12	2	0	3	3	
<b>Sheridan</b>	8	1	8	0	1	1	0	
<b>Stillwater</b>	13	7	26	0	2	3	1	
<b>Teton</b>	11	9	2	1	0	1	1	
<b>Treasure</b>	0	0	0	0	0	0	0	
<b>Wheatland</b>	6	0	2	1	1	0	-1	
<b>Yellowstone</b>	326	203	460	77	47	25	-22	
<b>MONTANA</b>	<b>4686</b>	<b>2606</b>	<b>2577</b>	<b>637</b>	<b>412</b>	<b>289</b>	<b>-123</b>	

*\*Note: Data are based on the date of report into the Montana Infectious Disease Information System (MIDIS). Underlined numbers in the above table reflect adjusted counts and may include cases diagnosed but not reported in earlier time frames. These adjustments result from local and state data reconciliation efforts, conducted to ensure accurate data.*

County name	Eligible population 5+	Dose 1	Dose 2	Dose 3	Fully Immunized	Total Doses Administered	Percent eligible with first dose (5+)	Percent Fully Vaccinated (5+)
BEAVERHEAD	9,091	5,500	4,415	2,612	5,113	12,527	60%	56%
BIG HORN	11,975	8,240	7,094	2,793	7,468	18,127	69%	62%
BLAINE	6,044	3,730	3,135	1,504	3,342	8,369	62%	55%
BROADWATER	6,092	2,380	1,745	953	1,987	5,078	39%	33%
CARBON	10,476	5,596	4,785	2,678	5,138	13,059	53%	49%
CARTER	1,141	379	335	182	357	896	33%	31%
CASCADE	76,124	42,912	34,126	17,835	38,204	94,873	56%	50%
CHOUTEAU	5,430	2,227	1,884	1,296	2,071	5,407	41%	38%
CUSTER	10,692	5,367	4,324	2,351	4,835	12,042	50%	45%
DANIELS	1,559	743	653	347	708	1,743	48%	45%
DAWSON	8,071	3,543	2,928	1,615	3,239	8,086	44%	40%
DEER LODGE	8,887	6,361	5,271	3,239	5,848	14,871	72%	66%
FALLON	2,646	1,081	950	470	1,000	2,501	41%	38%
FERGUS	10,495	5,487	4,761	2,769	5,158	13,017	52%	49%
FLATHEAD	99,993	52,069	40,828	22,331	45,126	115,228	52%	45%
GALLATIN	110,900	82,820	63,570	33,632	69,784	180,022	75%	63%
GARFIELD	1,188	319	253	104	296	676	27%	25%
GLACIER	12,447	10,478	7,309	3,200	7,870	20,987	84%	63%
GOLDEN VALLEY	788	387	326	159	358	872	49%	45%
GRANITE	3,218	1,453	1,162	618	1,267	3,233	45%	39%
HILL	14,914	9,907	7,697	4,096	9,087	21,700	66%	61%
JEFFERSON	11,819	6,734	5,709	3,281	6,122	15,724	57%	52%
JUDITH BASIN	1,880	803	692	392	756	1,887	43%	40%
LAKE	29,280	19,955	16,397	8,852	17,628	45,204	68%	60%
LEWIS & CLARK	66,257	45,128	36,856	21,433	39,737	103,417	68%	60%
LIBERTY	2,234	857	724	448	824	2,029	38%	37%
LINCOLN	19,480	9,448	7,646	4,226	8,353	21,320	49%	43%
MADISON	8,589	4,400	3,487	2,077	3,924	9,964	51%	46%
MCCONE	1,562	454	420	238	430	1,112	29%	28%
MEAGHER	1,726	1,008	872	501	956	2,381	58%	55%
MINERAL	4,302	2,626	1,899	1,193	2,369	5,718	61%	55%
MISSOULA	115,881	84,904	70,637	41,134	76,695	196,675	73%	66%
MUSSELSHELL	4,458	1,729	1,409	728	1,607	3,866	39%	36%
PARK	15,969	11,171	8,686	4,980	9,613	24,837	70%	60%
PETROLEUM	483	162	141	85	152	388	34%	31%
PHILLIPS	3,675	1,904	1,467	907	1,773	4,278	52%	48%
PONDERA	5,389	3,552	2,784	1,460	3,161	7,796	66%	59%
POWDER RIVER	1,588	498	404	206	461	1,108	31%	29%
POWELL	6,534	4,224	3,149	1,905	3,939	9,278	65%	60%
PRAIRIE	994	464	413	243	437	1,120	47%	44%
RAVALLI	42,972	24,477	19,673	11,932	22,060	56,082	57%	51%
RICHLAND	10,310	4,466	3,544	1,865	4,226	9,875	43%	41%
ROOSEVELT	9,918	5,700	4,282	2,150	5,037	12,132	57%	51%
ROSEBUD	8,160	5,433	4,333	2,198	4,856	11,964	67%	60%
SANDERS	11,641	5,035	4,173	2,328	4,475	11,536	43%	38%
SHERIDAN	3,075	1,935	1,708	983	1,841	4,626	63%	60%
SILVER BOW	33,267	23,811	20,357	11,336	21,710	55,504	72%	65%
STILLWATER	9,451	4,350	3,439	2,052	3,997	9,841	46%	42%
SWEET GRASS	3,523	1,700	1,324	796	1,549	3,820	48%	44%
TETON	5,819	3,110	2,194	1,257	2,634	6,561	53%	45%
TOOLE	4,391	2,332	1,765	832	2,181	4,929	53%	50%
TREASURE	623	426	297	144	320	867	68%	51%
VALLEY	6,931	3,374	2,729	1,680	3,191	7,783	49%	46%
WHEATLAND	2,035	803	697	398	752	1,898	39%	37%
WIBAUX	898	354	301	136	309	791	39%	34%
YELLOWSTONE	153,378	92,534	76,934	39,571	83,222	209,039	60%	54%
<b>MONTANA</b>	<b>1,020,663</b>	<b>630,840</b>	<b>509,093</b>	<b>278,731</b>	<b>559,553</b>	<b>1,418,664</b>	<b>62%</b>	<b>55%</b>