







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 3/18/2022, Montana reports 42,481 cases of confirmed breakthrough disease, which includes 1,406 hospitalizations and 381 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 18, 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 6,958 individuals who were hospitalized during this time period, 133 (2%) were <18 years old, 942 (14%) were 18 to 44 years old, 2,279 (33%) were 45 to 64 years old and 3,604 (52%) were  $\geq 65$  years old.

Additionally, COVID-19-related hospitalization and death data from **January 22– March 18, 2022** (last 8 weeks) were analyzed to review vaccination status. Sixty-six percent of Montanans who were hospitalized and 66% of those who died had not received a COVID-19 vaccine (Table 4)<sup>†</sup>. Of the 945 individuals who were hospitalized during this time period, 33 (4%) were <18 years old, 87 (9%) were 18 to 44 years old, 246 (26%) were 45 to 64 years old and 579 (61%) were  $\geq 65$  years old.

**Table 3. Vaccination status of COVID-19 hospitalizations and deaths – April 1, 2021 to March 18, 2022**

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	<b>6,958</b>	<b>1,644</b>
UNVACCINATED	5,559 (80%)	1,265 (77%)
VACCINATED (BREAKTHROUGH CASE)	1,399 (20%)	379 (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 22 to March 18, 2022**

	HOSPITALIZATIONS	DEATHS
TOTAL REPORTED	<b>945</b>	<b>182</b>
UNVACCINATED	626 (66%)	121 (66%)
VACCINATED (BREAKTHROUGH CASE)	319 (34%)	61 (34%)
UNVACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>&lt;1-101 (69)</b>	<b>40-101 (75)</b>
VACCINATED AGE RANGE IN YEARS (MEDIAN AGE)	<b>7-103 (72)</b>	<b>48-100 (80)</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 22, 2022.





<b>Missoula</b>	533	306	160	130	76	68	-8		
<b>Park</b>	176	87	14	19	7	9	2		
<b>Phillips</b>	23	9	1	9	3	4	1		
<b>Powder River</b>	6	5	2	1	0	1	1		
<b>Prairie</b>	6	3	0	0	0	0	0		
<b>Richland</b>	43	20	13	20	31	27	-4		
<b>Rosebud</b>	356	142	68	12	2	0	-2		
<b>Sheridan</b>	24	8	1	8	0	1	1		
<b>Stillwater</b>	30	13	7	26	0	2	2		
<b>Teton</b>	14	11	9	2	1	0	-1		
<b>Treasure</b>	2	0	0	0	0	0	0		
<b>Wheatland</b>	18	6	0	2	1	1	0		
<b>Yellowstone</b>	658	326	203	460	77	47	-30		
<b>MONTANA</b>	<b>6494</b>	<b>4685</b>	<b>2606</b>	<b>2578</b>	<b>635</b>	<b>418</b>	<b>-217</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	5,497	4,412	2,604	5,110	12,513	60%	56%
BIG HORN	11,975	8,235	7,071	2,765	7,445	18,071	69%	62%
BLAINE	6,044	3,729	3,135	1,500	3,343	8,364	62%	55%
BROADWATER	6,092	2,380	1,743	941	1,985	5,064	39%	33%
CARBON	10,476	5,590	4,782	2,674	5,132	13,046	53%	49%
CARTER	1,141	376	332	181	354	889	33%	31%
CASCADE	76,124	42,876	34,105	17,763	38,181	94,744	56%	50%
CHOUTEAU	5,430	2,229	1,886	1,292	2,073	5,407	41%	38%
CUSTER	10,692	5,352	4,314	2,339	4,824	12,005	50%	45%
DANIELS	1,559	743	653	345	708	1,741	48%	45%
DAWSON	8,071	3,535	2,921	1,607	3,230	8,063	44%	40%
DEER LODGE	8,887	6,355	5,267	3,233	5,845	14,855	72%	66%
FALLON	2,646	1,083	952	471	1,002	2,506	41%	38%
FERGUS	10,495	5,486	4,759	2,763	5,158	13,008	52%	49%
FLATHEAD	99,993	52,038	40,755	22,211	45,052	115,004	52%	45%
GALLATIN	110,900	82,726	63,475	33,452	69,682	179,653	75%	63%
GARFIELD	1,188	319	253	104	296	676	27%	25%
GLACIER	12,447	10,459	7,301	3,185	7,859	20,945	84%	63%
GOLDEN VALLEY	788	386	325	156	357	867	49%	45%
GRANITE	3,218	1,451	1,162	608	1,268	3,221	45%	39%
HILL	14,914	9,897	7,684	4,074	9,073	21,655	66%	61%
JEFFERSON	11,819	6,728	5,702	3,274	6,116	15,704	57%	52%
JUDITH BASIN	1,880	801	691	388	754	1,880	43%	40%
LAKE	29,280	19,897	16,353	8,786	17,572	45,036	68%	60%
LEWIS & CLARK	66,257	45,093	36,816	21,367	39,689	103,276	68%	60%
LIBERTY	2,234	858	724	448	824	2,030	38%	37%
LINCOLN	19,480	9,436	7,633	4,213	8,339	21,282	48%	43%
MADISON	8,589	4,397	3,483	2,069	3,919	9,949	51%	46%
MCCONE	1,562	452	419	237	428	1,108	29%	27%
MEAGHER	1,726	1,011	874	498	958	2,383	59%	56%
MINERAL	4,302	2,627	1,894	1,189	2,365	5,710	61%	55%
MISSOULA	115,881	84,856	70,561	41,004	76,616	196,421	73%	66%
MUSSELSHELL	4,458	1,727	1,406	725	1,604	3,858	39%	36%
PARK	15,969	11,167	8,678	4,962	9,605	24,807	70%	60%
PETROLEUM	483	163	142	85	153	390	34%	32%
PHILLIPS	3,675	1,901	1,465	904	1,771	4,270	52%	48%
PONDERA	5,389	3,552	2,785	1,457	3,162	7,794	66%	59%
POWDER RIVER	1,588	499	404	204	461	1,107	31%	29%
POWELL	6,534	4,220	3,143	1,895	3,932	9,258	65%	60%
PRAIRIE	994	464	413	242	437	1,119	47%	44%
RAVALLI	42,972	24,461	19,650	11,898	22,034	56,009	57%	51%
RICHLAND	10,310	4,461	3,541	1,860	4,223	9,862	43%	41%
ROOSEVELT	9,918	5,687	4,269	2,132	5,021	12,088	57%	51%
ROSEBUD	8,160	5,433	4,315	2,183	4,838	11,931	67%	59%
SANDERS	11,641	5,033	4,168	2,318	4,470	11,519	43%	38%
SHERIDAN	3,075	1,934	1,707	978	1,840	4,619	63%	60%
SILVER BOW	33,267	23,795	20,332	11,268	21,682	55,395	72%	65%
STILLWATER	9,451	4,341	3,433	2,047	3,989	9,821	46%	42%
SWEET GRASS	3,523	1,700	1,323	795	1,548	3,818	48%	44%
TETON	5,819	3,111	2,193	1,251	2,635	6,555	53%	45%
TOOLE	4,391	2,334	1,766	826	2,183	4,926	53%	50%
TREASURE	623	426	297	142	320	865	68%	51%
VALLEY	6,931	3,373	2,726	1,675	3,188	7,774	49%	46%
WHEATLAND	2,035	803	696	398	751	1,897	39%	37%
WIBAUX	898	354	301	136	309	791	39%	34%
YELLOWSTONE	153,378	92,424	76,826	39,388	83,104	208,638	60%	54%
<b>MONTANA</b>	<b>1,020,663</b>	<b>630,261</b>	<b>508,416</b>	<b>277,510</b>	<b>558,817</b>	<b>1,416,187</b>	<b>62%</b>	<b>55%</b>