MONTANA COMMUNICABLE DISEASE EPIDEMIOLOGY

Weekly COVID-19 Update in Montana (as of 3/25/2022)

This report is a weekly snapshot of COVID-19 activity in Montana. Data are analyzed based on information available as of March 25, 2022. Data are provisional and expected to change as more information is received.

Case Data

Table 1. Summary of COVID-19 Activity – Montana, as of 3/25/2022

	TOTAL	RECENT WEEK	PERCENT CHANGE FROM PREVIOUS WEEK
LABORATORY TESTS	**2,714,669**	**16,996**	**-8%**
DEATHS	**3,245**	**9**	**-31%**

Figure 1. COVID-19 Cases and Hospitalizations over Time – Montana, as of 3/25/2022

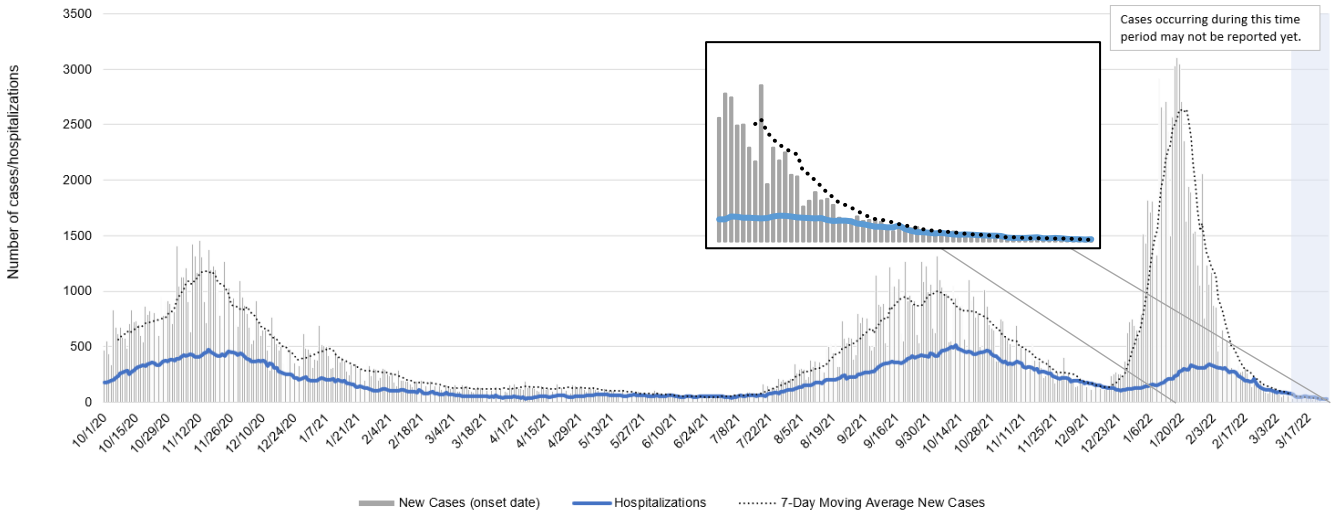


Figure 2: Status of Acute Care and ICU Beds – Hospitals in Montana, 3/16 - 3/29/2022

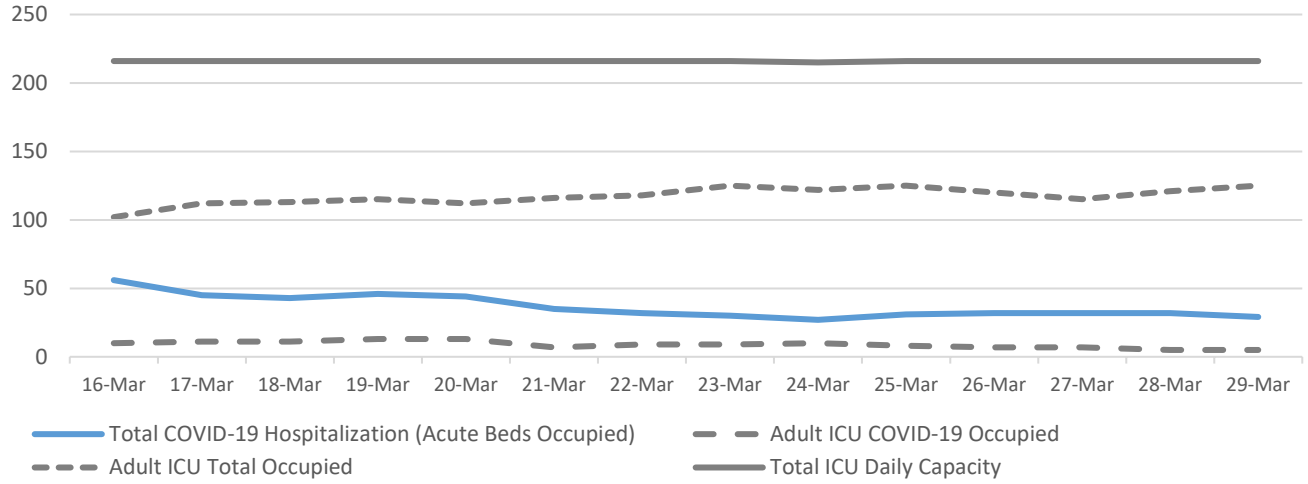
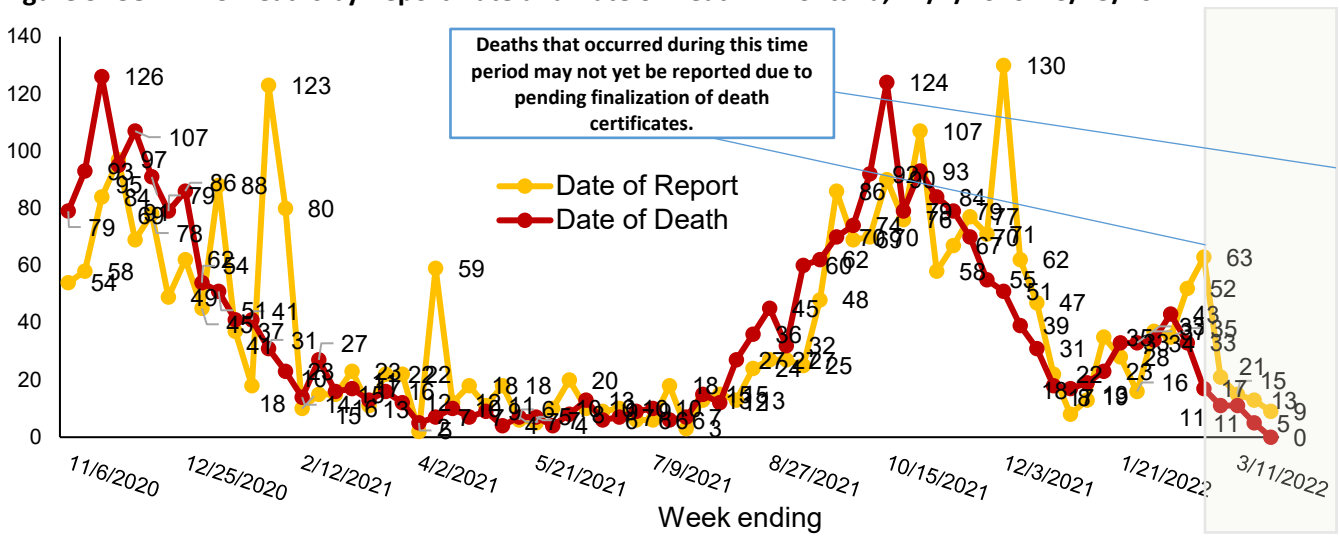


Figure 3. COVID-19 Deaths by Report Date and Date of Death – Montana, 11/1/2020 – 3/25/2022



Vaccine Data

Montana began vaccinating individuals in mid-December 2020 with a phased process: Phase 1A on December 14, 2020, Phase 1B on January 19, 2021, and Phase 1B+ on March 8, 2021. Vaccinations were opened to all Montanans age 16+ on April 1, 2021 and expanded to all Montanans age 12+ on May 10th, 2021. Most recently, the Pfizer vaccine was approved for the 5-11 year old age group on October 29th, 2021. To date, 1,418,664 doses have been given across the state and 55% of the eligible population is considered fully vaccinated (table 2).

Table 2: COVID-19 Vaccine Doses Administered for the 5 and older population – Montana, as of 3/25/2022

	NUMBER	PERCENT OF ELIGIBLE POPULATION	WEEK ENDING 3/11	WEEK ENDING 3/18	WEEK ENDING 3/25*
TOTAL DOSES ADMINISTERED	**1,418,664**		2,301	2,128	**1,763**
DOSE 1 ADMINISTERED	**630,840**	**62%**	531	514	**421**
FULLY VACCINATED INDIVIDUALS	**559,553**	**55%**	791	679	**454**

*the data for the most recent week are preliminary and are expected to be an underestimate of the doses administered during the week, due to a reporting lag.

Figure 4. COVID-19 Vaccine Doses Administered by Week, 5+ Years – Montana, as of 3/25/2022

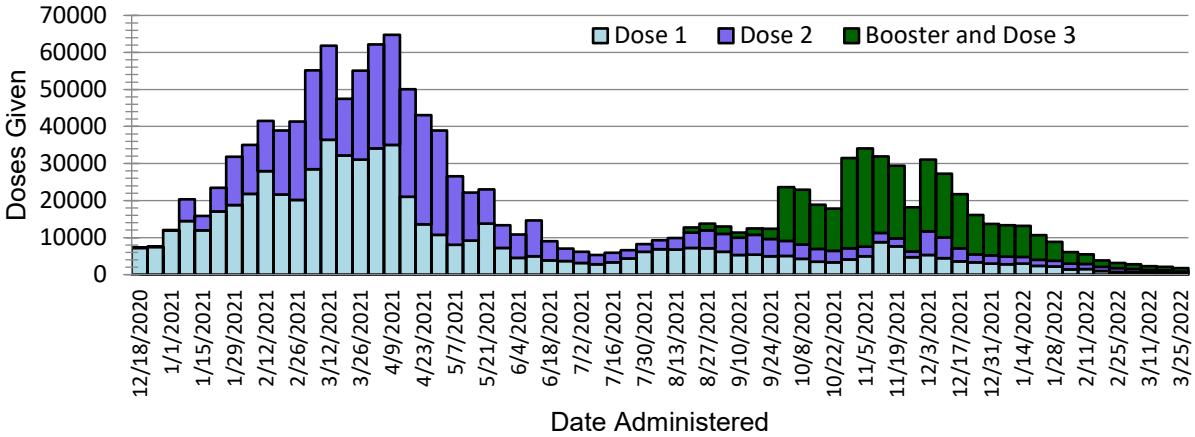
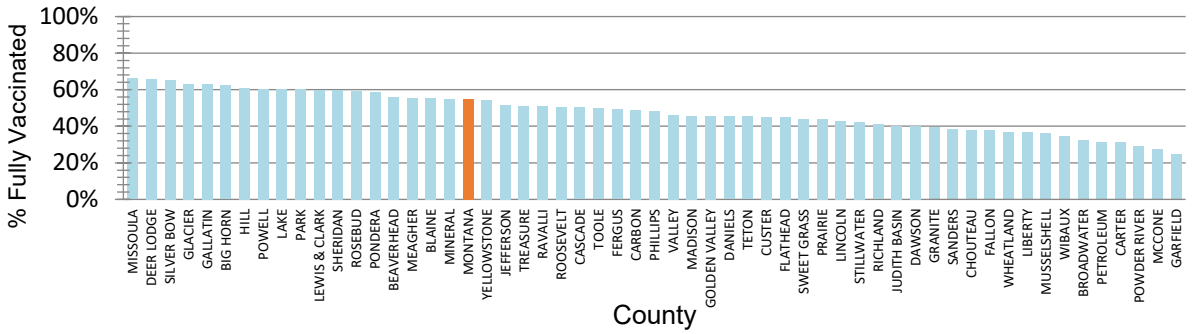


Figure 5. Percent of Eligible Montanans (5+ years) Fully Vaccinated by County – Montana, 3/25/2022



Variant and Breakthrough Cases

Figure 7 displays the percentage of the most common SARS-CoV-2 lineages detected each week, of all Montana samples sequenced that were collected that week. There were 12,835 samples from Montana that were sequenced and their lineages were reported to GISAID since September 2020; figure 6 displays the number of specimens sequenced by week. **Please note the relatively small number of samples sequenced in recent weeks limits interpretation of the available variant sequencing data.**

As of March 29, there have been 3,612 cases across Montana infected with Omicron variants—3,588 infected with BA.1/B.1.1.529 and 24 infected with BA.2. DPHHS is monitoring sublineages of the omicron variant, including BA.2 (pink, below). There have been 24 cases of BA.2 reported since the first detection on January 30, 2022. In the past four weeks, 77 sequences have been reported to GISAID—70 (91%) BA.1/B.1.1.529 and 7 (9%) BA.2. Among the three samples collected and sequenced last week, two were BA.2.

Figure 6. Number of COVID-19 samples sequenced by collection date, Montana 3/26/2022

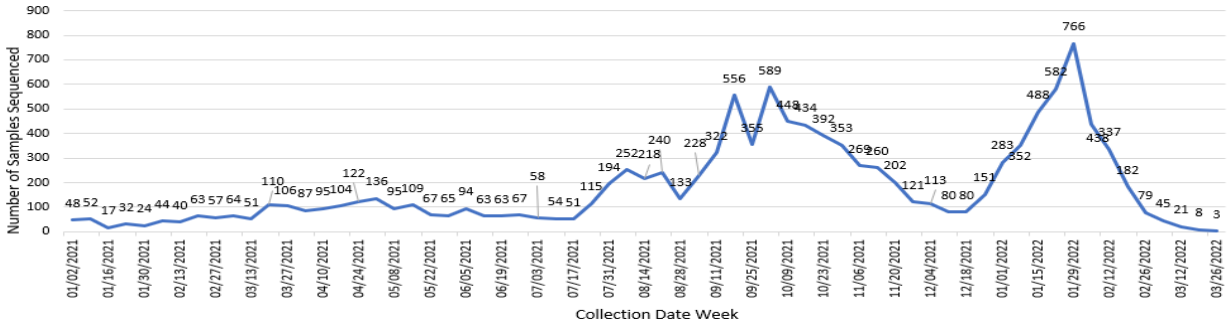
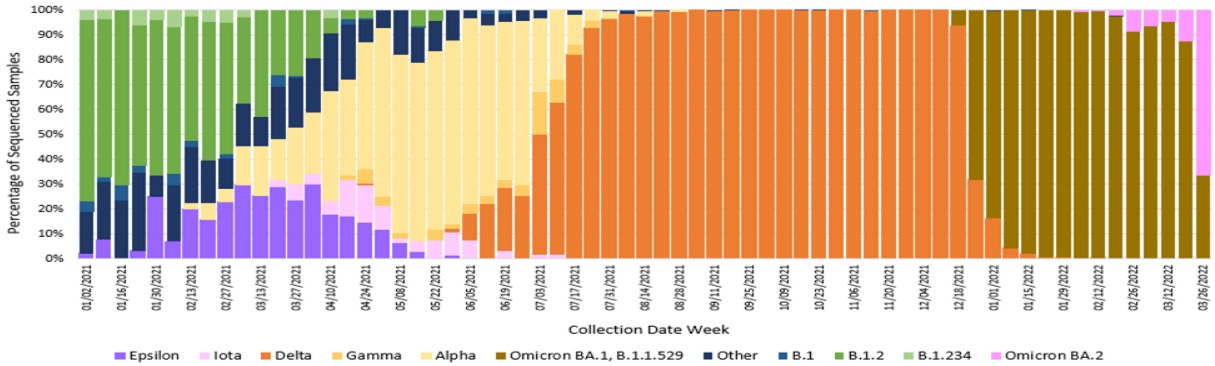


Figure 7. Percent of COVID-19 variants in sequenced samples by collection date, Montana 3/26/2022



A breakthrough COVID-19 infection is defined as a positive SARS-CoV-2 specimen collected ≥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.[1]

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 ≥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)[†]. 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 ≥65 years old.

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

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

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

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

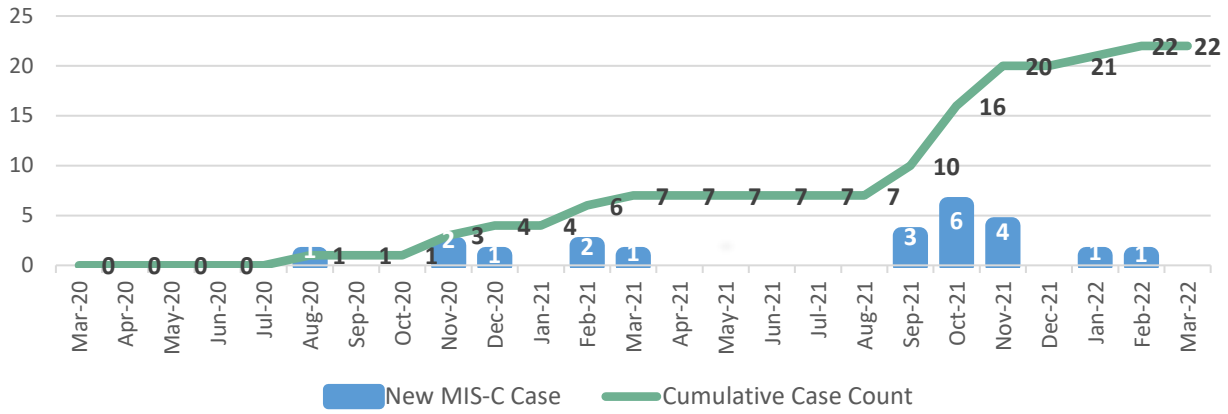
[†]The analysis of hospitalizations and deaths by vaccination status does not include data on booster doses. Booster doses are recommended by the CDC and have been shown to improve protection against hospitalization and death from COVID-19[1].

[1] 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.

Multisystem Inflammatory Syndrome in Children (MIS-C)

As of March 25, 2022, there have been a total of 22 reported cases of multisystem inflammatory syndrome in children, or MIS-C, reported in Montana. There have been no deaths. Ages range from less than 1 year to 20 years old; median is 8 years. Ten cases were female, 12 were male. Cases are from 13 counties around Montana. The first case of MIS-C was reported in August 2020; 15 of the 22 cases have been reported since September 2021 (Figure 8).

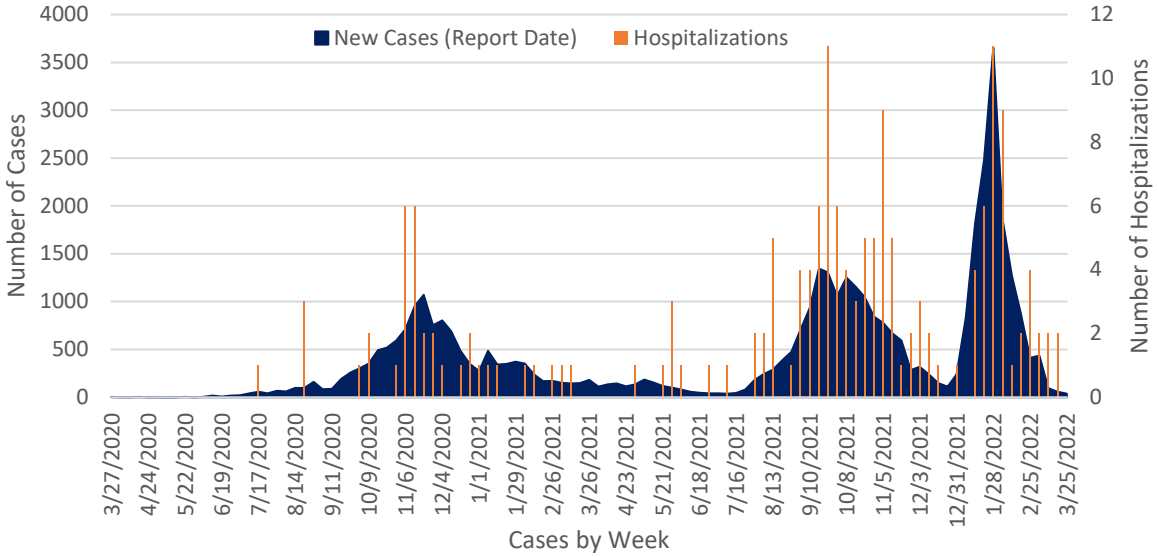
Figure 8. Montana MIS-C Cases by Month of Onset, March 2020 – March 2022



Cases and Hospitalizations Associated with COVID-19 Among Children

To date, there have been 42,846 children <18 years old in Montana diagnosed with COVID-19. Of those, 170 (<1%) have been hospitalized. Case rates among children follow a similar pattern to COVID-19 cases among all age groups (see Figure 1 for comparison) and increased sharply during the recent Omicron surge (Figure 9). There were 38 cases of COVID-19 in children reported during the week of March 19 – March 25, 2022, which is a 36% decrease in cases among that age group compared to the previous week. Zero hospitalizations in children were reported that week.

Figure 9. COVID-19 Cases and Hospitalizations by Week, March 2020 – March 25, 2022, Children <18



Reported COVID-19 Cases by County with Trendline – Montana, past 6 weeks

County	18 Feb	25 Feb	4 Mar	11 Mar	18 Mar	25 Mar	change from previous week*	Trendline
Beaverhead	12	12	10	1	3	4	1	
Big Horn	240	9	6	11	0	4	4	
Blaine	23	9	61	11	2	1	-1	
Broadwater	30	13	6	5	4	1	-3	
Carbon	15	11	15	8	2	4	2	
Carter	2	2	6	1	2	0	-2	
Cascade	961	717	461	90	29	21	-8	
Chouteau	13	12	3	2	0	0	0	
Custer	35	8	8	4	6	2	-4	
Daniels	1	3	3	0	0	0	0	
Dawson	8	8	11	2	1	1	0	
Deer Lodge	29	39	30	16	5	6	1	
Fallon	6	0	0	0	0	0	0	
Fergus	73	22	17	3	7	8	1	
Flathead	1041	643	734	57	20	31	11	
Gallatin	257	180	127	81	37	32	-5	
Garfield	3	0	0	1	0	0	0	
Glacier	204	32	86	12	6	3	-3	
Golden Valley	0	1	0	0	0	0	0	
Granite	9	2	0	1	1	1	0	
Hill	32	24	87	8	4	4	0	
Jefferson	21	4	6	0	1	0	-1	
Judith Basin	3	1	0	0	1	0	-1	
Lake	234	65	17	10	4	13	9	
Lewis and Clark	170	93	62	33	53	27	-26	
Liberty	5	7	5	0	0	2	2	
Lincoln	41	41	15	22	21	11	-10	
Madison	12	4	1	3	1	0	-1	
McCone	3	1	0	0	0	0	0	
Meagher	3	3	1	0	0	0	0	

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

†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%
MONTANA	**1,020,663**	**630,840**	**509,093**	**278,731**	**559,553**	**1,418,664**	**62%**	**55%**