



Historical Reinfection Report

IDENTIFYING POSSIBLE COVID-19 REINFECTION CASES FROM
MARCH 11, 2020 - JUNE 26, 2021

A HISTORICAL REVIEW

September 10, 2021

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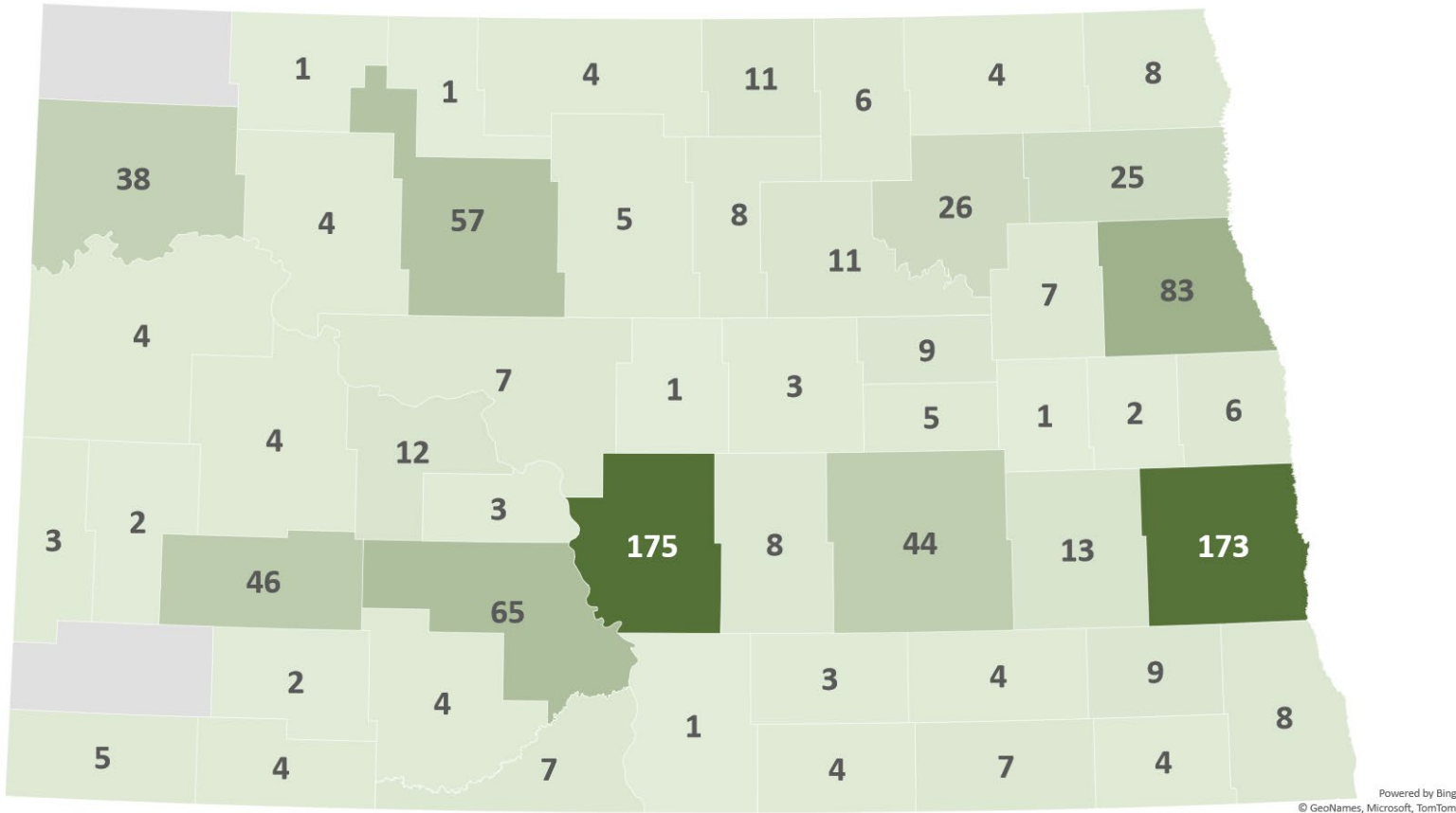
On June 27, 2021, the Council of State and Territorial Epidemiologists approved a COVID-19 reinfection case definition. Reinfection is defined as >90 days between positive COVID-19 test results. In order to see the complete picture of the pandemic, NDDoH reviewed historical case reports (cases reported between March 2020 and June 26, 2021) to identify those that may have met the new case definition. A total of 947 possible reinfection cases were identified. The following report provides demographic information on those possible reinfections.

HISTORICAL REINFECTIONS BY COUNTY

County	Number of Reinfections	Percent
Adams	4	0.4%
Barnes	13	1.4%
Benson	11	1.2%
Billings	2	0.2%
Bottineau	4	0.4%
Bowman	5	0.5%
Burke	1	0.1%
Burleigh	175	18.5%
Cass	173	18.3%
Cavalier	4	0.4%
Dickey	7	0.7%
Dunn	4	0.4%
Eddy	9	1.0%
Emmons	1	0.1%
Foster	5	0.5%
Golden Valley	3	0.3%
Grand Forks	83	8.8%
Grant	4	0.4%
Griggs	1	0.1%
Hettinger	2	0.2%
Kidder	8	0.8%
LaMoure	4	0.4%
Logan	3	0.3%
McHenry	5	0.5%
McIntosh	4	0.4%

McKenzie	4	0.4%
McLean	7	0.7%
Mercer	12	1.3%
Morton	65	6.9%
Mountrail	4	0.4%
Nelson	7	0.7%
Oliver	3	0.3%
Pembina	8	0.8%
Pierce	8	0.8%
Ramsey	26	2.7%
Ransom	9	1.0%
Renville	1	0.1%
Richland	8	0.8%
Rolette	11	1.2%
Sargent	4	0.4%
Sheridan	1	0.1%
Sioux	7	0.7%
Stark	46	4.9%
Steele	2	0.2%
Stutsman	44	4.6%
Towner	6	0.6%
Traill	6	0.6%
Walsh	25	2.6%
Ward	57	6.0%
Wells	3	0.3%
Williams	38	4.0%
Grand Total	947	100.0%

Map of Reinfection Case Numbers by County, March 11, 2020 – June 26, 2021



Powered by Bing
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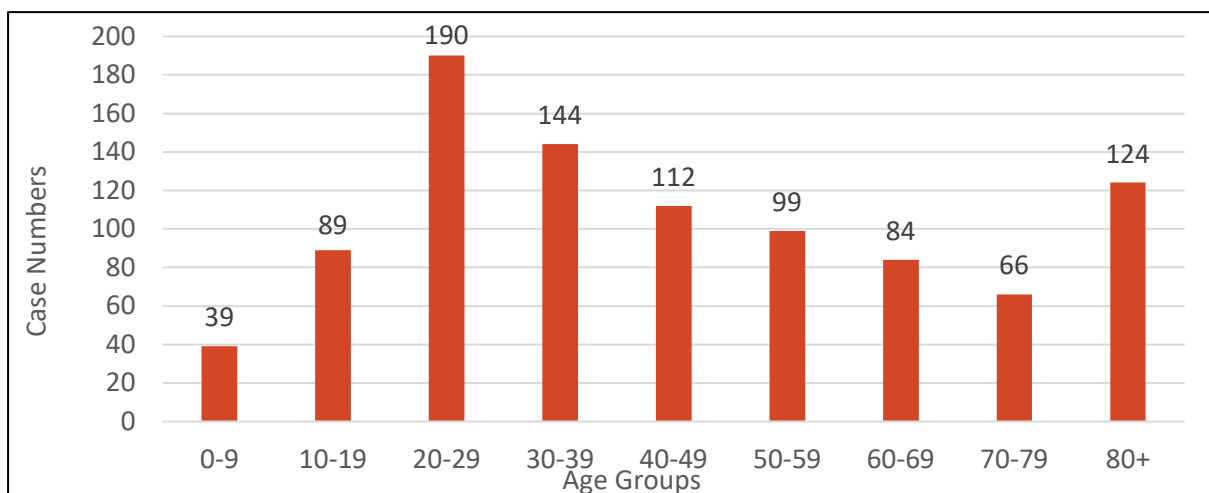
ND COUNTIES WITH GREATEST NUMBER OF REPORTED REINFECTIONS (N=10)

County	Number of Reinfections	Percent
Burleigh	175	18.5%
Cass	173	18.3%
Grand Forks	83	8.8%
Morton	65	6.9%
Ward	57	6.0%
Stark	46	4.9%
Stutsman	44	4.6%
Williams	38	4.0%
Ramsey	26	2.7%
Walsh	25	2.6%

HISTORICAL ND REINFECTIONS BY AGE

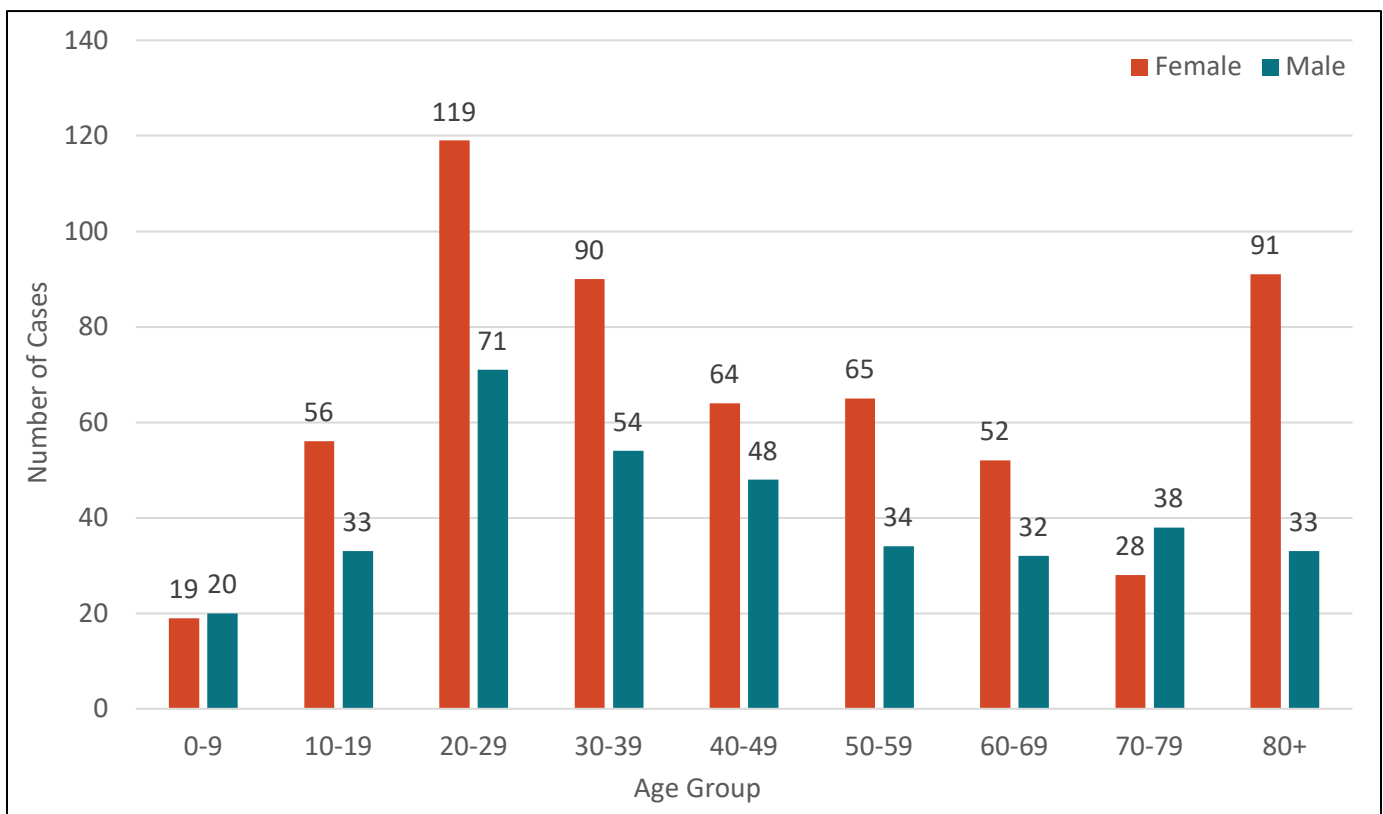
Age Group	Number of Reinfections	Percent
0-9	39	4.1%
10-19	89	9.4%
20-29	190	20.1%
30-39	144	15.2%
40-49	112	11.8%
50-59	99	10.5%
60-69	84	8.9%
70-79	66	7.0%
80+	124	13.1%

Most reinfections occurred among those ages 20-49 and those 80 years of age and older.



HISTORICAL ND REINFECTIONS BY GENDER AND AGE GROUPS

Age Group	Female	Percent Female	Male	Percent Male	Grand Total
0-9	19	48.7%	20	51.3%	39
10-19	56	62.9%	33	37.1%	89
20-29	119	62.6%	71	37.4%	190
30-39	90	62.5%	54	37.5%	144
40-49	64	57.1%	48	42.9%	112
50-59	65	65.7%	34	34.3%	99
60-69	52	61.9%	32	38.1%	84
70-79	28	42.4%	38	57.6%	66
80+	91	73.4%	33	26.6%	124



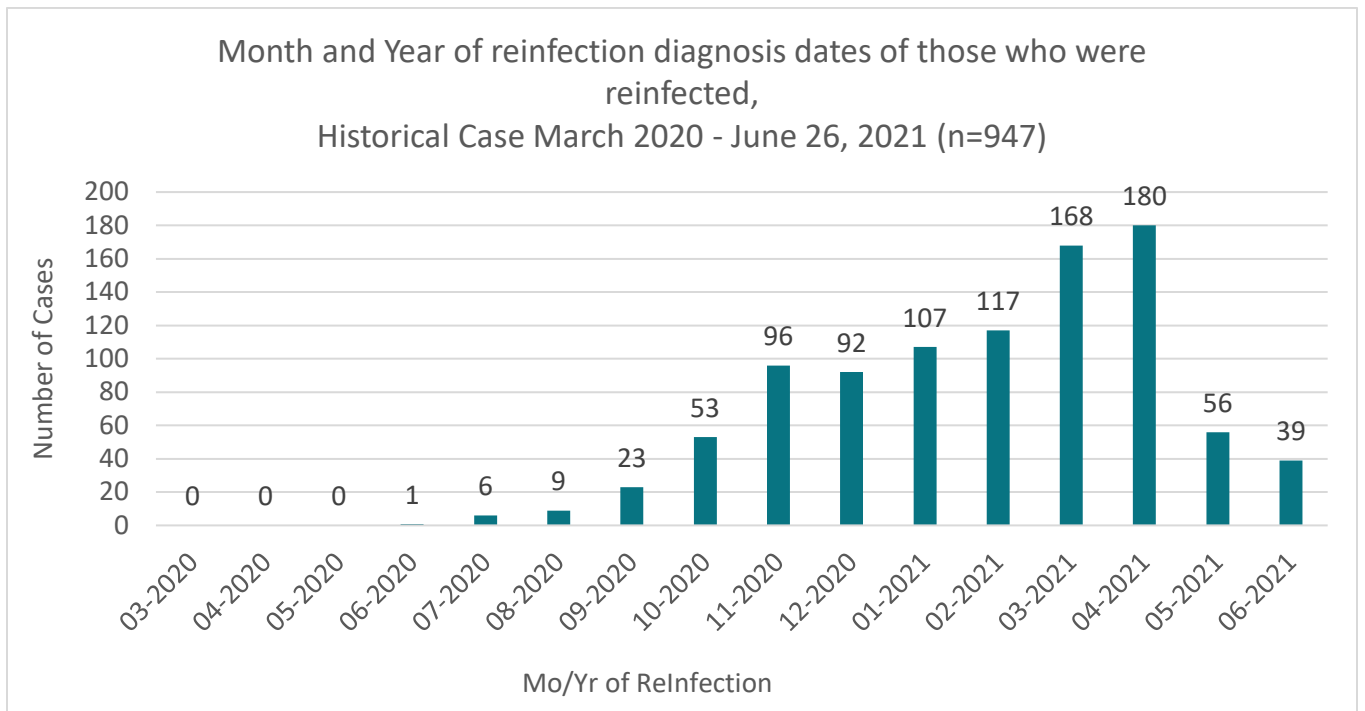
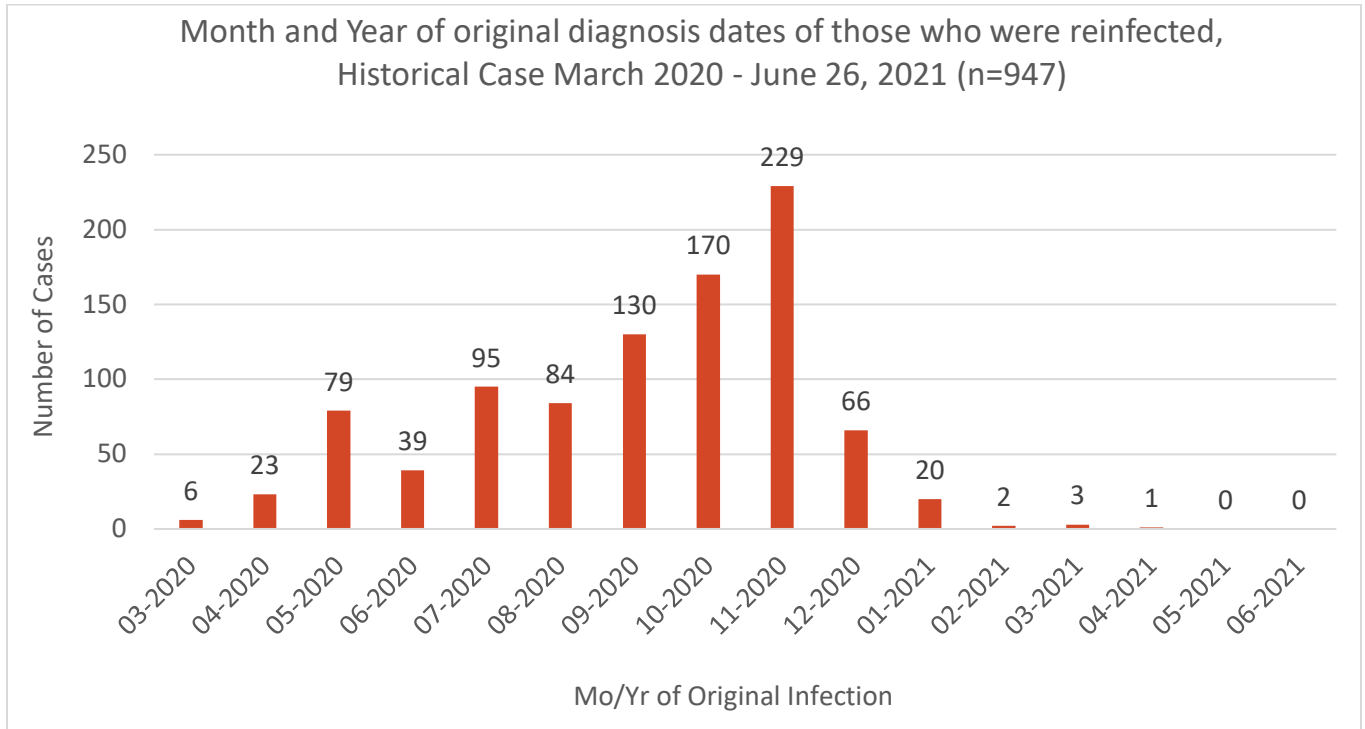
Of the identified 947 historical reinfections, here is the breakdown by age groups and vaccination status.

Those ages 0-9 are not included as they are not eligible for vaccination, and those in the 10–19-year-old age group only include those 16 years of age and older.

HISTORICAL ND REINFECTIONS BY AGE GROUPS AND VACCINATION STATUS

Age Group	Breakthrough	BT Percent	Not Vaccinated	NV Percent	partial/incomplete vaccination	PIV Percent	Grand Total
10-19	4	4.5%	84	94.4%	1	1.1%	89
20-29	7	3.7%	177	93.2%	6	3.2%	190
30-39	7	4.9%	131	91.0%	6	4.2%	144
40-49	7	6.3%	97	86.6%	8	7.1%	112
50-59	8	8.1%	85	85.9%	6	6.1%	99
60-69	17	20.2%	56	66.7%	11	13.1%	84
70-79	14	21.2%	46	69.7%	6	9.1%	66
80+	22	17.7%	88	71.0%	14	11.3%	124
Grand Total	86	9.1%	803	84.8%	58	6.1%	947

HISTORICAL ND REINFECTIONS MONTH AND YEAR OF DIAGNOSIS DATES BOTH FOR ORIGINAL DIAGNOSIS AND DATE OF REINFECTION



INVESTIGATED ND HISTORICAL CASES

After NDDoH reviewed historical case reports (cases reported between March 2020 and June 26, 2021) there were 947 possible reinfection cases identified. Of these,

- 586 of them were investigated as a possible reinfection at the time
- 361 cases were not investigated as a possible reinfection at the time and therefore, information on these cases is not available

Of these 586 possible reinfections that were investigated at the time:

- 10 died following reinfection
- 38 were hospitalized following reinfection (in comparison to 39 at the time of their original diagnosis)
- 308 (52.6%) were pre-symptomatic or symptomatic at the time of reinfection (in comparison to 410 (70.0%) at the time of their original diagnosis)
 - Additionally, symptom status was unknown or blank in 11.9% (n=74) of reinfection cases in comparison to 7.2% (n=42) of the original infections.

CONCLUSION

The North Dakota Department of Health is currently conducting a larger review of the historical reinfection data to consider the effect of vaccination status on hospitalization rates and deaths. When that information is complete, it will be posted to the ND COVID-19 website.

Information in this report is based on reported data, and it is subject to updates and revisions without notice.

For additional information about this report, contact the [North Dakota Department of Health](#).

Updated August 26, 2021