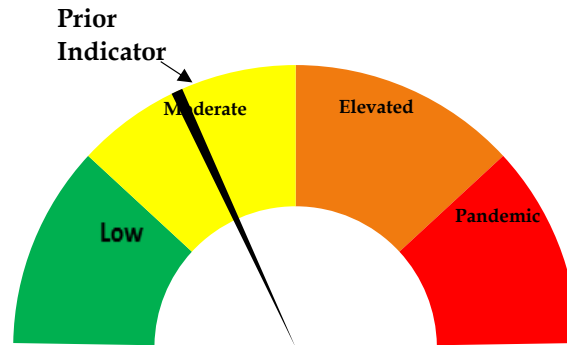




Risk Dial May 6, 2021



Risk Dial for COVID-19 Two Rivers Public Health Published May 6, 2021

- COVID-related hospitalizations have remained between 4-9% for the past month (see <https://www.trphd.org/> for details). ICU bed availability has fluctuated between 1/3rd to 2/3rd the district's total capacity.
- A little under 9 cases per day were recorded in Two Rivers Health District in the past week, a test positivity rate of 7% (excluding long term care facilities). Test utilization has dropped dramatically across the districts. Only 37 tests were conducted through TestNebraska in the past week, none of them positive. See weekly report (Apr 28 - May 4) at <https://www.trphd.org/covid-19/weekly-reports.html> for details.
- As of May 3, 41.1% of TRPHD's eligible population has been fully vaccinated. Almost 78% of residents aged 65+ years have been fully vaccinated. However, only about 16% of those aged 16-29 years are fully vaccinated. See weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details.
- For these reasons, the risk dial is lowered from the previous week, although risk is still assessed to be "moderate". The decrease reflects expanded vaccination coverage, decreasing case rates and outbreak events in the district over the last 3 weeks.



Weekly report Apr 28 – May 4, 2021

Overview

The weekly report will look at COVID-19 cases in TRPHD across different time periods, presenting graphs showing daily progress of cases and a weekly summary in conclusion

- The tables describe total tests conducted and positive cases across TRPHD. We show positive cases and tests conducted by county, age and gender from **April 28 – May 4** (1 week) and **April 6 – May 4** (4 weeks). We describe cases in residential facilities¹ separately from other tests conducted in the district.
- The first graphic describes **the proportion of TRPHD residents vaccinated** between **December 15, 2020 – May 3, 2021**. All residents of the seven counties **over 16** years are included to calculate the eligible population.
- The second set of graphs look at the progress of the pandemic from **April 1, 2020 – May 4, 2021** (13 months) across all counties.
 - We describe the 7-day rolling average² of positive cases across TRPHD since April, describing overall cases as well as 10-year age categories (**Apr 2020 – May 2021**)
 - Secondly, we plot daily tests conducted outside of residential and long-term facilities, showing daily positives and negatives compared to the 7- day rolling positivity rate.³
- The second set of graphs look at the progress of the pandemic from **April 1, 2020 – May 4, 2021** (13 months) across all counties.
 - We describe the 7-day rolling average⁴ of positive cases across TRPHD since April, describing cases by age categories (**1 year**)
- The third set of graphs describe the daily average of cases (7-day rolling average) from **March 30 – April 27**.
 - Progress is described by age, county and city of residence.
- The final graph shows positive cases in **Residential facilities**, displaying each week's cases by the county where the facility is located (Oct – Apr)

To conclude, new COVID cases fell in the previous week across TRPHD, especially among residents aged 60 years and over. Weekly positivity rate has risen slightly, probably due to less tests being availed by residents in the district. Testing coverage has contracted further, especially through TestNebraska. 41.1% of the district is fully vaccinated and over 45% have received at least one dose so far. Those eligible for the vaccine are advised to contact their physician or refer to the vaccination clinic schedule at www.trphd.org. In the meantime, residents are advised to continue to adhere to strict preventive measures (social distancing, correct and consistent masking) at all times to protect themselves and others.

¹ For information on residential facilities, please see appendix 3

² 7-day rolling average refers to the sum of the cases reported on that day and the preceding 6 days divided by 7.

This number is presented for each day to 'smooth out' the line for cases.

³ For details on average positivity rate, please see appendix 1

⁴ 7-day rolling average refers to the sum of the cases reported on that day and the preceding 6 days divided by 7.

This number is presented for each day to 'smooth out' the line for cases.



Testing & Vaccination Overview

- As of May 4, over 45,000 residents of Two Rivers Health District were tested at least once for COVID-19. Over 130,000 tests have been conducted since March 1, 2020 and over 11,000 of these tests were positive.⁵ TRPHD has publicly notified 120 deaths due to COVID-19 across the district.
- As of May 4, 41% of TRPHD’s eligible population has been fully vaccinated. ⁶ Details of vaccination progress are discussed separately.

Details of all tests conducted in Two Rivers’ Health District the past 1 week and 4 weeks is displayed below

	Apr 28 - May 4 (1 week)			Apr 6 - May 4 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	443	39	8.8%	1989	157	7.9%
TestNebraska	37	0	0.0%	266	44	16.5%
Residential Facility	1001	0	0.0%	7067	21	0.3%
Lab/ Pharmacy	47	2	4.3%	542	13	2.4%
Other	120	5	4.2%	372	18	4.8%
TOTAL	1,648	46	2.8%	10236	253	2.5%

- A total of 7067 tests were availed by residents and staff of long-term care and other residential facilities ⁷ in the last 4 weeks. Details are provided below:

Residential Facility In:	Apr 28 - May 4 (1 week)			Apr 6 - May 4 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	629	0	0.0%	4254	19	0.4%
Dawson	120	0	0.0%	649	0	0.0%
Franklin	0	0	0.0	0	0	0.0
Gosper	10	0	0.0%	91	0	0.0%
Harlan	60	0	0.0%	178	0	0.0%
Kearney	8	0	0.0%	473	1	0.2%
Phelps	135	0	0.0%	1237	1	0.1%
Outside TRPHD	39	0	0.0%	185	0	0.0%
TOTAL	1001	0	0.0%	7067	21	0.3%

⁵ Note: The minor differences between the numbers reported and totals displayed on www.trphd.org dashboards is explained by testing in residential facilities and isolated rapid test results that are not reflected in the state’s public dashboards. Tests of persons missing date of birth are excluded from the analysis

⁶ For information on vaccine-eligible population in each of the counties, please see appendix 4

⁷ For information on residential facilities, please see appendix 3



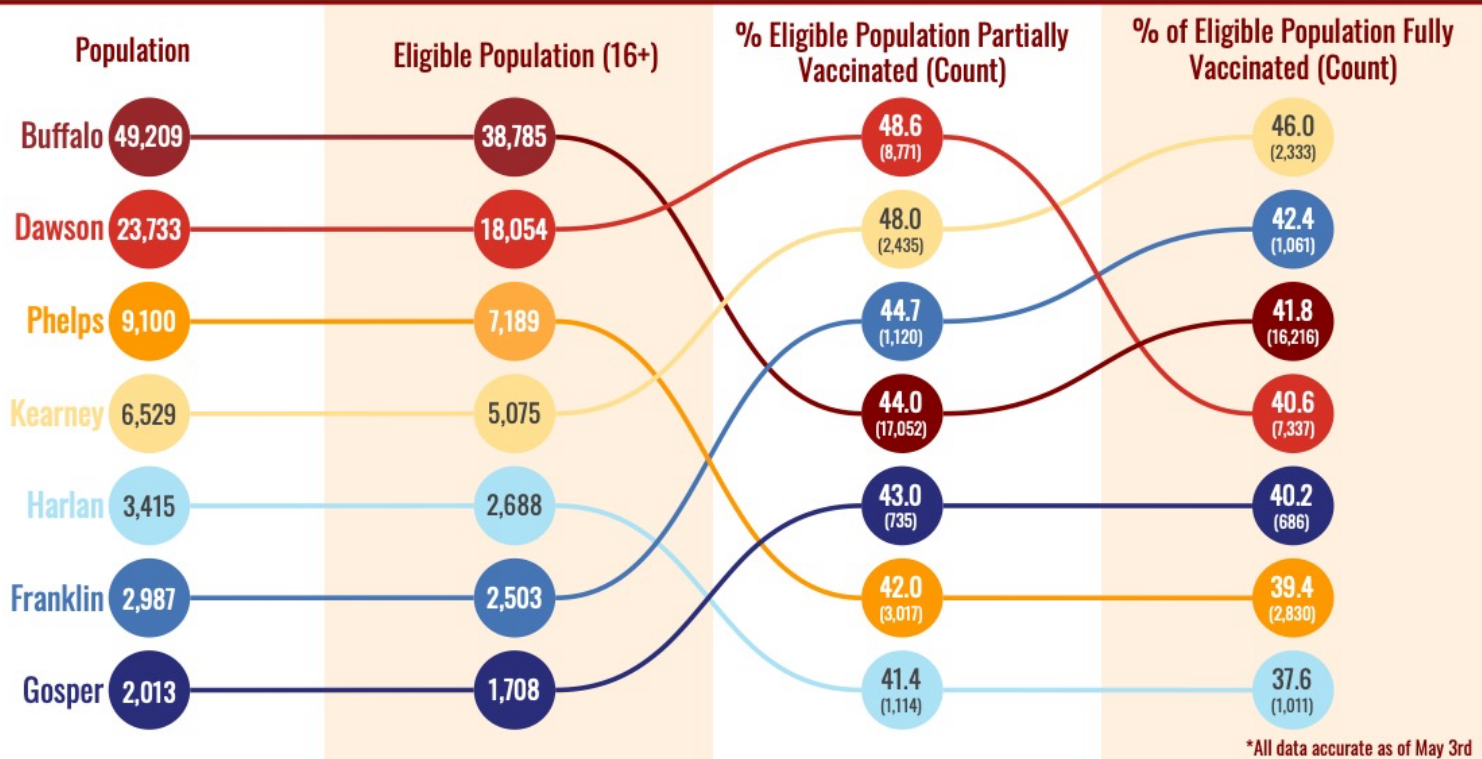
Excluding residential facilities, a total of 3169 tests were conducted in the past 4 weeks. The following table gives details of positive cases in the past week and past 4 weeks by county, age categories and gender.

	Apr 28 - May 4 (1 week)			Apr 6 - May 4 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	393	32	8.1%	1859	160	8.6%
Dawson	117	7	6.0%	826	25	3.0%
Franklin	14	1	7.1%	51	5	9.8%
Gosper	5	1	20.0%	16	1	6.3%
Harlan	8	0	0.0%	36	2	5.6%
Kearney	32	2	6.3%	101	13	12.9%
Phelps	72	2	2.8%	264	24	9.1%
Data missing/ not disclosed	6	1	16.7%	16	2	12.5%
Total	647	46	7.1%	3,169	232	7.3%
Age (in yrs)						
0-17	107	5	4.7%	429	29	6.8%
18-29	128	8	6.3%	908	53	5.8%
30-39	86	12	14.0%	498	51	10.2%
40-49	80	7	8.8%	383	27	7.0%
50-59	111	9	8.1%	404	27	6.7%
60-69	67	3	4.5%	273	17	6.2%
70-79	38	1	2.6%	157	13	8.3%
80-89	26	1	3.8%	89	9	10.1%
90+	4	0	0.0%	28	6	21.4%
Total	647	46	7.1%	3,169	232	7.3%
Gender						
Female	379	20	5.3%	1771	123	6.9%
Male	263	26	9.9%	1381	109	7.9%
Data missing/ not disclosed	5	0	0.0%	17	0	0.0%
Total	647	46	7.1%	3,169	232	7.3%



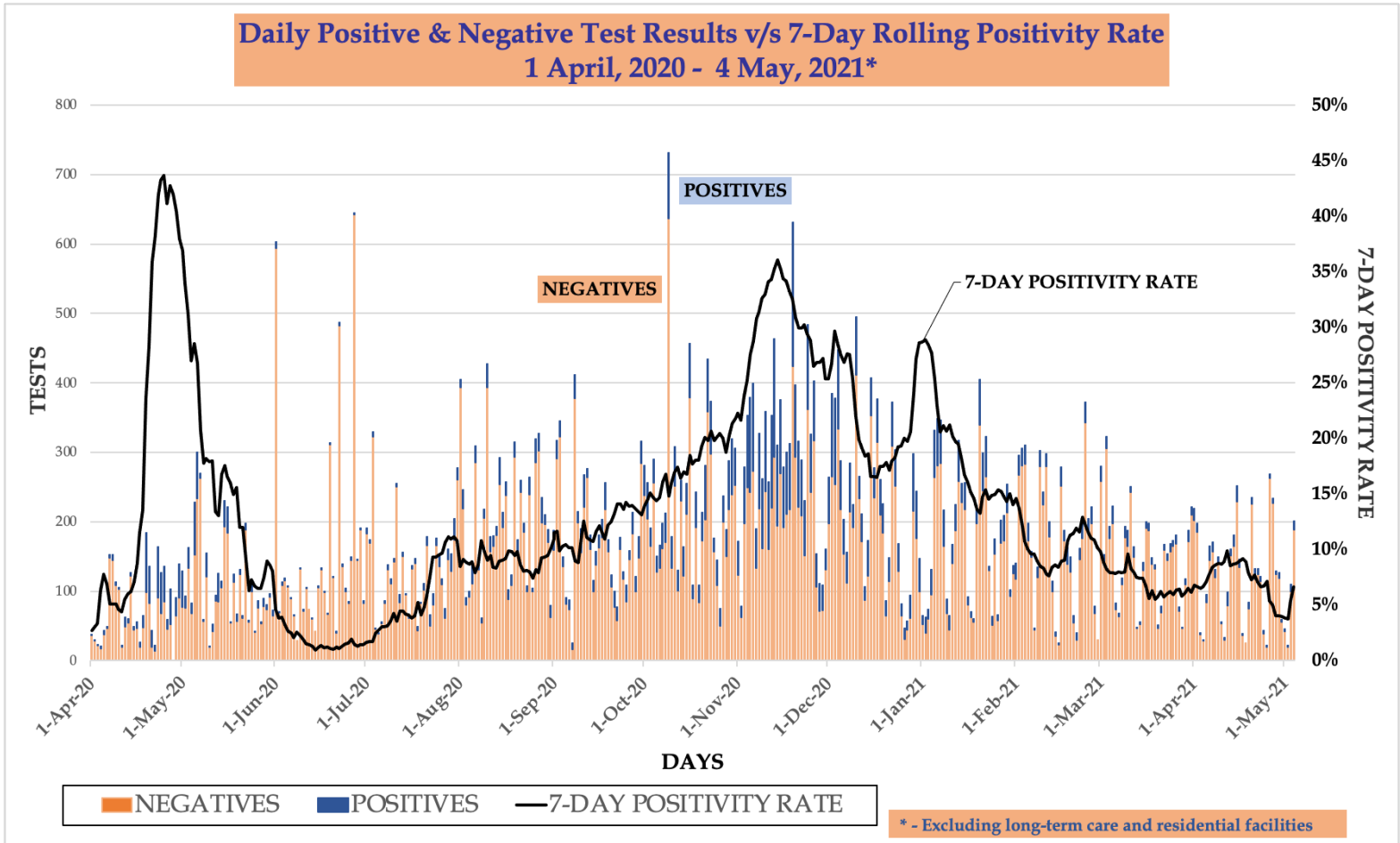
- The graph below describes **all TRPHD residents vaccinated** between **December 15, 2020 – May 3, 2021**. All residents of the seven counties **over 16 years** are included.
- Each county is depicted by a colored circle, and the relative position of each corresponds to the proportion vaccinated. Actual numbers (count) are included in parenthesis.
- **Overall, 41.1% of the eligible population in Two Rivers Health District is now fully vaccinated.**

Vaccinations of Eligible Population in TRPHD





- The graph below describes the **daily tests conducted** across Two Rivers Health District from April 1, 2020 – May 4, 2021. The height of each bar corresponds to the actual number of tests done that day. Total tests are further divided into **negative and positive results** ⁸.
- Also shown is the **average test positivity rate (7-day rolling average)** as a running line. Only tests outside of residential facilities were included. ⁹



⁸ For information on total tests and test positivity rate, please see appendix 1

⁹ For information on residential facilities, please see appendix 3



- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1, 2020 – May 4, 2021**.
- The second graph describes 7-day rolling average of COVID-19 cases by age across TRPHD for the same time period. The height of the graph corresponds to total cases and the thickness of each colored band corresponds to each age group.

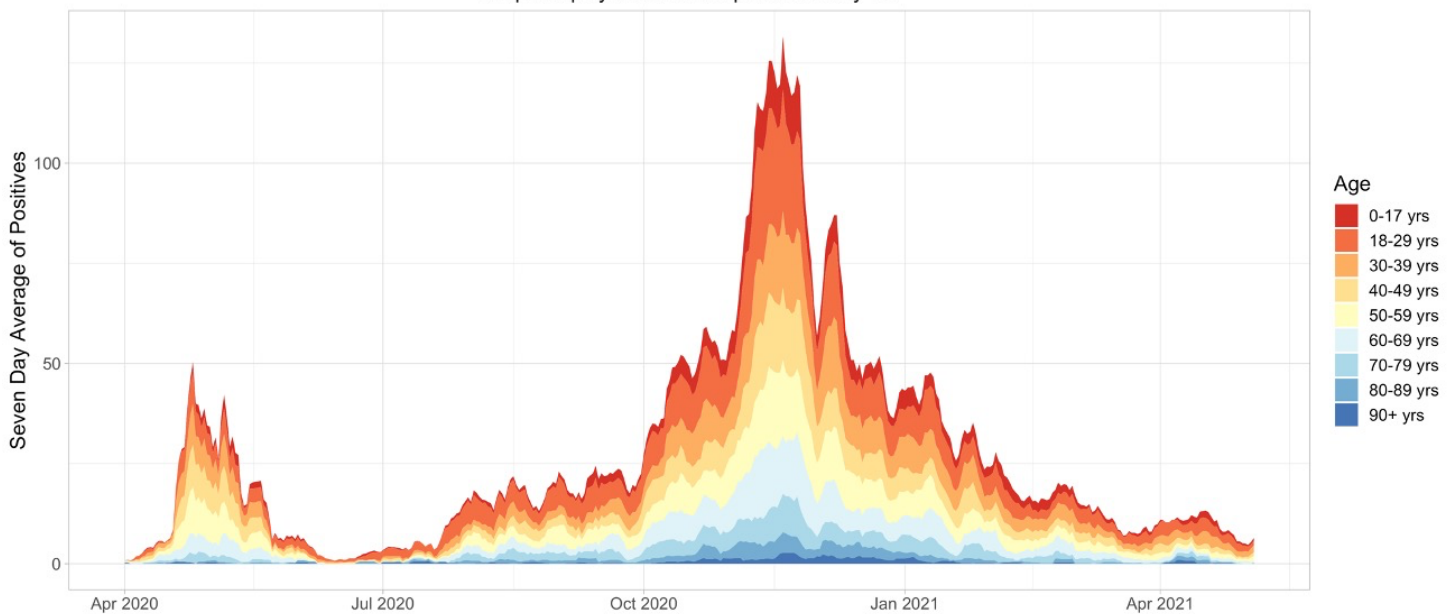
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to May 4th



7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from April 1st to May 4th



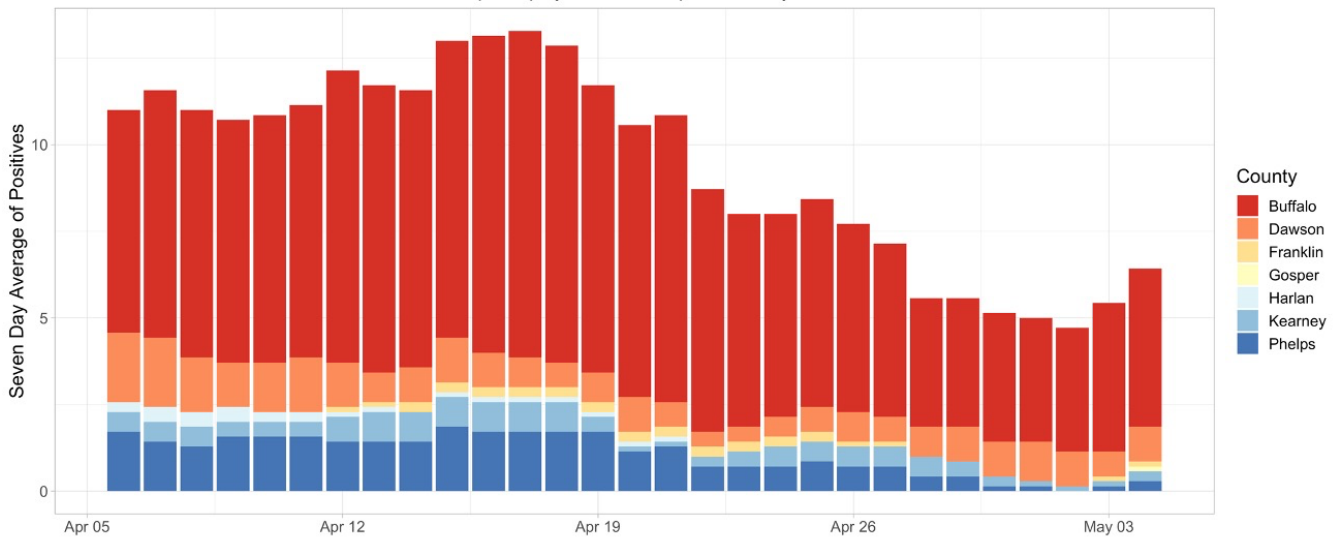
Information Updated as of 5/04 at 8 p.m.



- The following bar graph describes the 7-day rolling averages of COVID-19 cases by county for the past four weeks (Apr 6 – May 4).
- The second graph describes the same data per 100,000 population.¹⁰

7 Day Rolling Average of COVID-19 Cases in Two Rivers by County

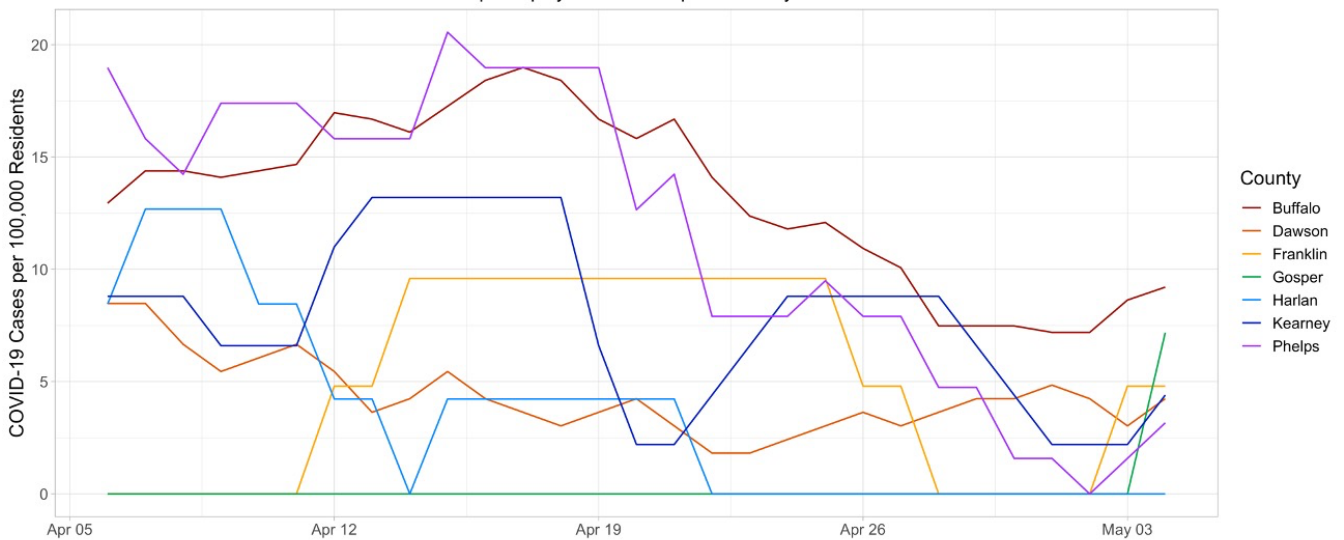
Graph displays data from Apr 6th to May 4th



Information Updated as of 5/04 at 8 p.m.

7 Day Rolling Average of COVID-19 Cases Per 100,000 Resident in Two Rivers by County

Graph displays data from Apr 6th to May 4th



Information Updated as of 5/04 at 8 p.m.

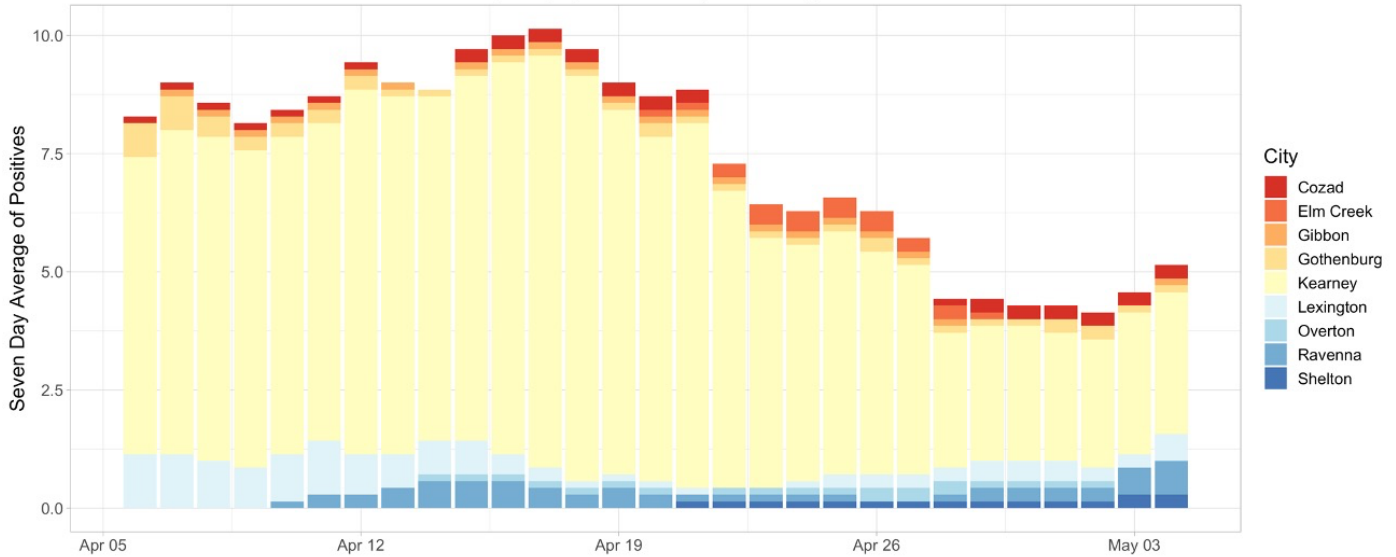
¹⁰ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graphs describes the 7-day rolling averages by city for the past four weeks (Apr 6 - May 4) in TRPHD. The graph above shows cities in **Buffalo and Dawson** counties and the one below shows the graph for cities in **Gosper, Harlan, Kearney and Phelps** counties. The scale is different for both graphs.

7 Day Rolling Average of COVID-19 Cases Buffalo and Dawson County

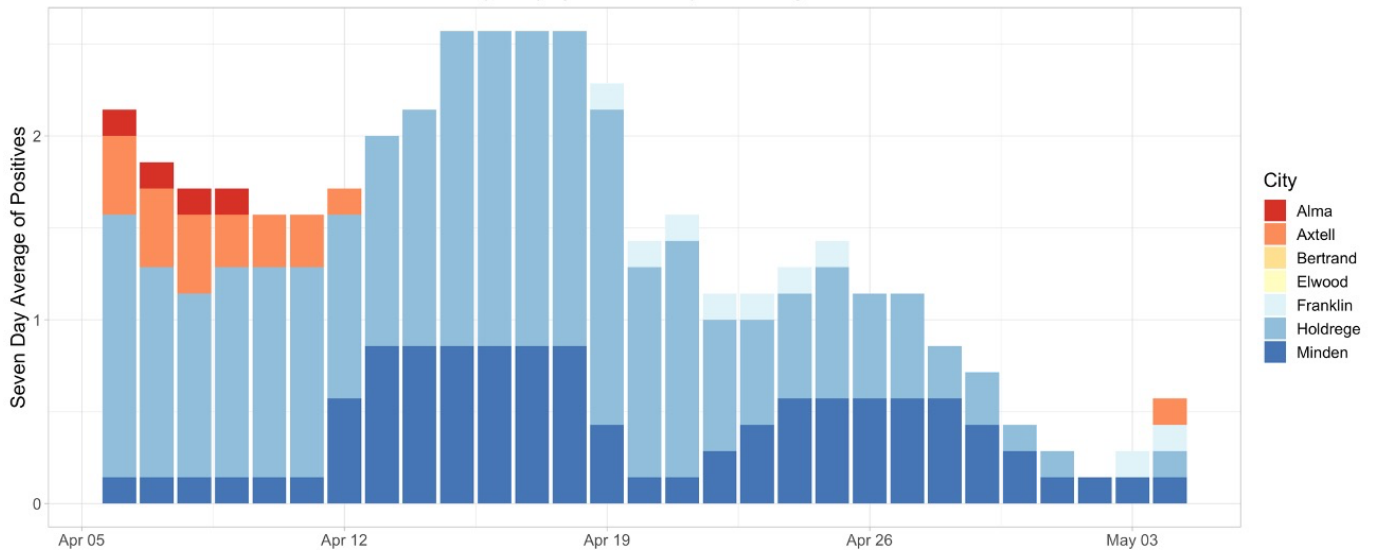
Graph displays data from Apr 6th to May 4th



Information Updated as of 5/04 at 8 p.m.

7 Day Rolling Average of COVID-19 Cases Gosper, Franklin, Kearney, and Phelps County

Graph displays data from Apr 6th to May 4th



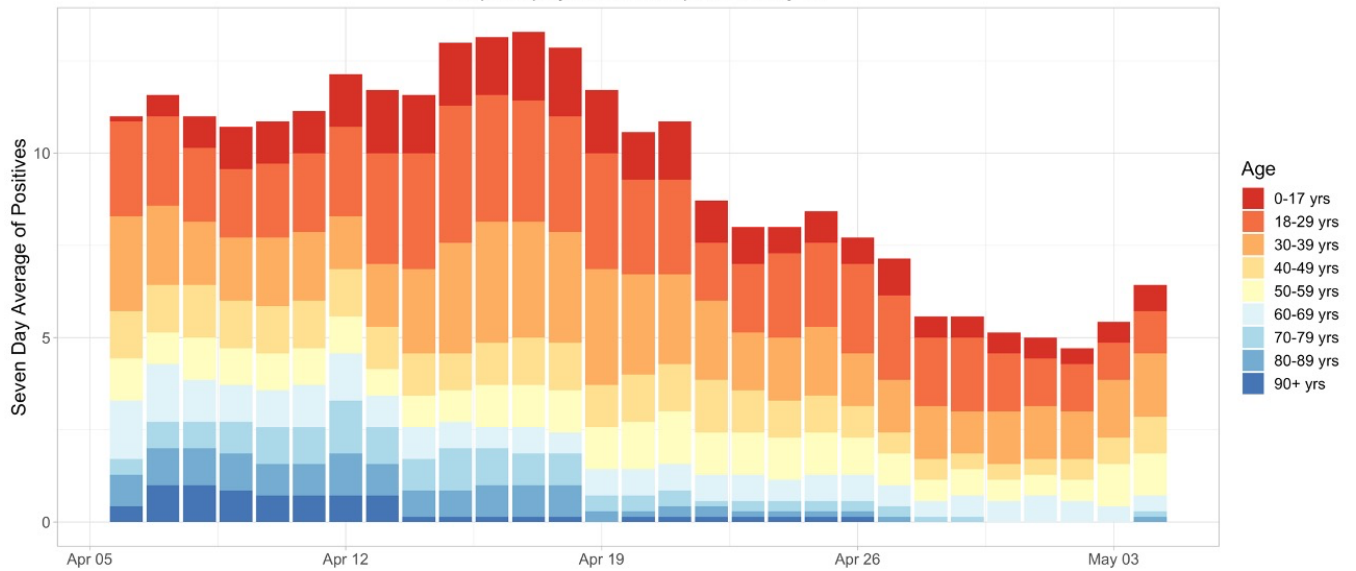
Information Updated as of 5/04 at 8 p.m.



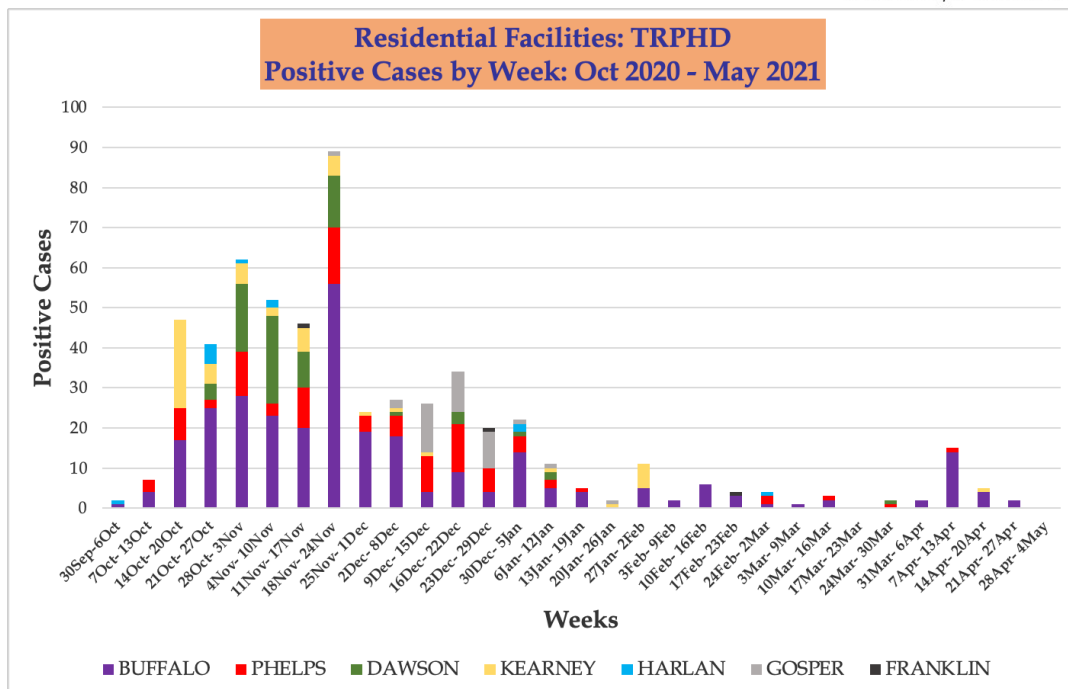
- The graph below describes the **7-day rolling average** of cases from **Apr 6 - May 4** by age. The height of the graph corresponds to total cases and the thickness of each colored band corresponds to each age group.
- The second graph shows the distribution of cases per week in **residential facilities** in the district, broken up by county (**Sep 30 - May 4**). Regular and widespread testing in long term care facilities in TRPHD began in early October.

7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from Apr 6th to May 4th



Information Updated as of 5/04 at 8 p.m.





Weekly summary

- A little under 9 cases per day were recorded in Two Rivers Health District in the past week, a test positivity rate of 7% (excluding long term care facilities). Test utilization has dropped dramatically across the districts. Only 37 tests were conducted through TestNebraska in the past week, none of them positive.
- COVID-related hospitalizations have remained between 4-9% for the past month (see <https://www.trphd.org/> for details). ICU bed availability has fluctuated between 1/3rd to 2/3rd the district's total capacity.
- Positivity rates among residents aged 60 years and over is very low. No new cases were reported from long term care facilities in the district in the previous week.
- As of May 3, 41.1% of TRPHD's eligible population has been fully vaccinated. Almost 78% of residents aged 65+ years have been fully vaccinated. However, only about 16% of those aged 16-29 years are fully vaccinated. A little under half of Kearney county's eligible residents have been fully vaccinated while only a little over a third of Harlan is fully vaccinated. See weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details
- COVID-19 vaccination continues to be provided via through private clinics, hospitals, and Vaccines For Children (VFC) clinics across the district, including by Two Rivers Health Department. All persons aged 16 and over are eligible for the vaccine. TRPHD has scheduled mass vaccination clinics at multiple sites across seven counties to distribute vaccines and to focus on areas of potential shortfall. Those eligible for the vaccine are advised to refer to the vaccination clinic schedule at www.trphd.org

To conclude, new COVID cases fell in the previous week across TRPHD, especially among residents aged 60 years and over. Weekly positivity rate has risen slightly, probably due to less tests being availed by residents in the district. Testing coverage has contracted further, especially through TestNebraska. 41.1% of the district is fully vaccinated and over 45% have received at least one dose so far. Those eligible for the vaccine are advised to contact their physician or refer to the vaccination clinic schedule at www.trphd.org. In the meantime, residents are advised to continue to adhere to strict preventive measures (social distancing, correct and consistent masking) at all times to protect themselves and others.



APPENDIX 1

Background

The Two Rivers Public Health Department (TRPHD) covers 7 counties in central Nebraska, reaching 97,132 people who live and work in the health district spread across roughly 4663 square miles. Over three quarters of residents live in Buffalo and Dawson county, a tenth live in Phelps county, and the remaining 15% is spread somewhat comparably among the four counties of Kearney, Harlan, Franklin and Gosper in decreasing order of population. The largest cities are Holdrege (pop. 5408), Lexington (pop. 10115) and Kearney (pop. 33867) meaning that well over half the residents of TRPHD live in three cities, and over a third are in Kearney alone. The population of all 7 counties in TRPHD are shown below.

County	Population
Buffalo	49,659
Dawson	23,595
Franklin	2,979
Gosper	1,990
Harlan	3,380
Kearney	6,495
Phelps	9,034
TRPHD total	97,132
Nebraska state	1,934,408
United States	328,239,523

- Data is presented as 7-day rolling averages for daily numbers and absolute counts for cumulative cases. The 7-day rolling average is the sum of all cases reported on that day plus the previous six divided by 7.
- Total (cumulative) cases refer to all COVID cases that have been confirmed by testing in the district since the beginning of the pandemic in TRPHD (March 19)
- All tests refers to all types of tests conducted across the Health District, including laboratory-based PCR and rapid antigen.
- Average positivity rate refers to a seven-day rolling average positivity rate, which is the sum of all cases for that day and the previous six divided by the sum of all tests done in that day and the previous six. This is also the same as the “weekly positivity rate”
- In cases that call for comparison across larger areas (counties v/s state of Nebraska, for eg), we present the count per 100,000 population. 100,000 roughly corresponds to the population of Two Rivers Health District (97,132)
- In cases that call for comparison between cities, (Kearney v/s Minden for eg), we present a count per 10,000 population. 10,000 roughly corresponds to the population of Lexington (10,115), the second largest city in TRPHD.
- Deaths due to COVID-19 are identified in death certificates (usually COVID -19 is the Underlying Cause of Death) and attested by the attending physician or medical examiner/ coroner. Each case is further investigated by TRPHD over telephone - the next



of kin is contacted, condolences conveyed and exit interviews conducted by Department staff before releasing a public notification. For further details on the procedure for COVID-19 death certification, please see <https://www.cdc.gov/nchs/data/nvss/vsrg/vsrg03-508.pdf>

- For calculation, we use the 2019 mid- year census estimate (American Community Survey, ACS) and data from The Atlantic’s COVID tracking project (<https://covidtracking.com/data>)

APPENDIX 2

Total (cumulative) cases per 100,000 population

The total/ cumulative case counts are the **total** cases confirmed by testing in an area (county, city, state or health district) calculated from the first recorded case (in case of TRPHD this is March 19, 2020). This is expressed as a fraction of the total population of the area and standardized to 100,000 persons. A population of 100,000 is used to compare counties as it is comparable to the overall population of Two Rivers Health District (97,032).

Total (cumulative) cases / 100,000 persons is calculated as:

$$[(\text{Total positive test results for residents in the region}) / (\text{mid-year population}) * 100,000]$$

Daily average of cases per 100,000 population

The daily average (7-day rolling) of cases is the sum of all cases reported on that day plus the previous six divided by 7. This is expressed as a fraction of the total population of the area and standardized to 100,000 persons. A population of 100,000 is used to compare counties as it is comparable to the overall population of Two Rivers Health District (97,032).

Daily average of cases / 100,000 persons is calculated as:

$$[(\text{7-day rolling average of cases among residents}) / (\text{mid-year population}) * 100,000]$$

APPENDIX 3

About a third of all tests conducted since March in the district have been availed by residents or staff of residential facilities. “Residential facilities” include long-term care facilities, in-patient psychiatry services, retirement villages, veterans’ homes and correctional facilities within Two Rivers Health District.

Considering the specific nature of COVID risk of long-term residents of institutional facilities and taking into account the frequent testing performed at facilities, we present numbers separately for long term care facilities and others in the district.



APPENDIX 4

Vaccine-eligible population

The total COVID-19 vaccine-eligible population of Two Rivers Health District is about 76,002. This includes all residents over the age of 16 years living in the seven counties that make up the district. The table below describes the eligible population in each of the seven counties divided by age category.

	16-29 YRS	30-49 YRS	50-64 YRS	65+ YRS	TOTAL(16+ YRS)
TRPHD	19580	22863	17760	15799	76002
BUFFALO	11828	11910	8184	6863	38785
DAWSON	4301	5723	4334	3696	18054
FRANKLIN	391	586	717	809	2503
GOSPER	232	418	532	526	1708
HARLAN	459	649	735	845	2688
KEARNEY	985	1508	1343	1239	5075
PHELPS	1384	2069	1915	1821	7189

Vaccines used in TRPHD

In the first phase, COVID-19 vaccines have been approved for use in all persons over the age of 16 years. Currently, Pfizer and Moderna vaccine formulations are being offered in Two Rivers Health District. Use of the Johnson & Johnson (Janssen) vaccine formulation has been paused pending further scrutiny by the Food and Drug Administration (FDA).

The Nebraska Department of Health and Human Services paused use of the Johnson & Johnson (Janssen) COVID-19 vaccine after Centers for Disease Control and Prevention (CDC) and Food and Drug Administration (FDA) recommendations following reports of six women who have been hospitalized with severe blood clots after receiving the vaccine dose, including one woman in Douglas county. The women were aged between 18-48 years. Vaccine use was reinstated on April 26, 2021 and is now available at private pharmacies across the state.

To date, over 6.8 million doses of Janssen vaccine have been administered in the United States, over 31,500 in Nebraska, and 1560 in Two Rivers Health District.

Symptoms in the 6 hospitalized individuals included headache, back pain, other unexplained pain. Symptoms typically began 6-13 days after vaccination, and hospital admission was within 15 days, on average. More than 55% of the Janssen vaccine was administered before 22nd of March in Two Rivers Health District.