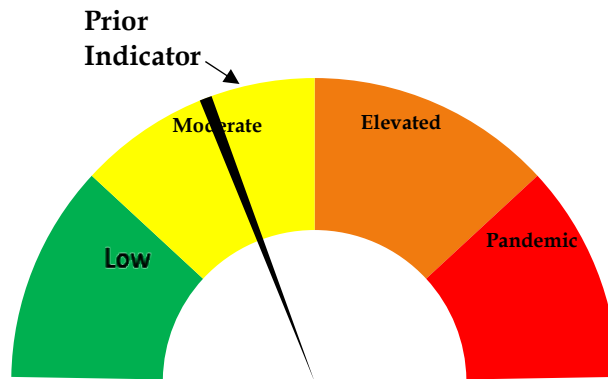


Risk Dial Apr 29, 2021



**Risk Dial for COVID-19
Two Rivers Public Health
Published April 29, 2021**

- COVID-related admissions have remained below 3% for the past 2 weeks (see <https://www.trphd.org/> for details). ICU bed availability has fluctuated between 1/3rd to half the district's total capacity.
- A little over 7 cases per day were recorded in Two Rivers Health District in the past week, a test positivity rate of 5%, excluding long term care facilities. Positive cases detected are more likely to be clustered within small communities with history of close contact.
- Testing utilization and availability continues to drop across the district. TestNebraska conducted only 74 COVID tests in the previous week. See weekly report (Apr 21 - Apr 27) at <https://www.trphd.org/covid-19/weekly-reports.html> for details.
- As of April 26, 39.7% of TRPHD's eligible population has been fully vaccinated. In general, older residents are more likely to be vaccinated compared to younger residents. However, universal vaccine availability to all aged 16 years and over has not shown a concomitant increase in utilization. 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 positivity rates and the lowered mortality rates, especially in the last 8 weeks.



Weekly report Apr 21 - Apr 27, 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 21 - April 27** (1 week) and **March 30 - April 27** (4 weeks). We describe cases in residential facilities¹ separately from other residents of the district.
- The first set of graphs looks at the proportion of persons that are fully vaccinated in each of the 7 counties of TRPHD. Residents are described in **16-29, 30-49, 50-64, and 65+** year age categories. The graphs describe the location where residents received their first and second shots.
- The second set of graphs look at the progress of the pandemic from **April 1, 2020 - April 27, 2021** (13 months) across all counties.
 - We describe the 7-day rolling average ² 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) ³

New COVID cases fell in the previous week across TRPHD, especially among residents aged 60 years and over. Positive cases that are detected tend to be clustered within smaller groups that are in close contact, like families. Expansion of vaccination to all aged 16 years and above has not resulted in a connected increase in individuals getting vaccinated, especially among younger residents. 40% of the district is fully vaccinated. Those eligible for the vaccine are advised to contact their physician or register at Two Rivers Health Department (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.



Testing & Vaccination Overview

- As of Apr 27, over 45,000 residents of Two Rivers Health District were tested at least once for COVID-19. Almost 130,000 tests have been conducted since March 1, 2020, over 11,000 of these tests were positive.⁴ TRPHD has publicly notified 119 deaths due to COVID across the district.
- As of April 27, 40% of TRPHD’s eligible population has been fully vaccinated.⁵ 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 21 - Apr 27 (1 week)			Mar 30 - Apr 27 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	545	33	6.1%	2030	169	8.3%
TestNebraska	74	7	9.5%	338	61	18.0%
Residential Facility	2301	2	0.1%	7219	24	0.3%
Lab/ Pharmacy	203	5	2.5%	714	16	2.2%
Other	89	5	5.6%	342	17	5.0%
TOTAL	3,212	52	1.6%	10643	287	2.7%

- A total of 7219 tests were availed by residents and staff of long-term care and other residential facilities⁶ in the last 4 weeks. Details are provided below:

Residential Facility In:	Apr 21 - Apr 27 (1 week)			Mar 30 - Apr 27 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	1636	2	0.1%	4204	21	0.5%
Dawson	203	0	0.0%	715	0	0.0%
Franklin	0	0	0.0	0	0	0.0
Gosper	10	0	0.0%	84	0	0.0%
Harlan	0	0	0.0	149	0	0.0%
Kearney	122	0	0.0%	466	1	0.2%
Phelps	289	0	0.0%	1377	1	0.1%
Outside TRPHD	41	0	0.0%	224	1	0.4%
TOTAL	2301	2	0.1%	7219	24	0.3%

⁴ 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

⁵ For information on vaccine-eligible population in each of the counties, please see appendix 4

⁶ For information on residential facilities, please see appendix 3

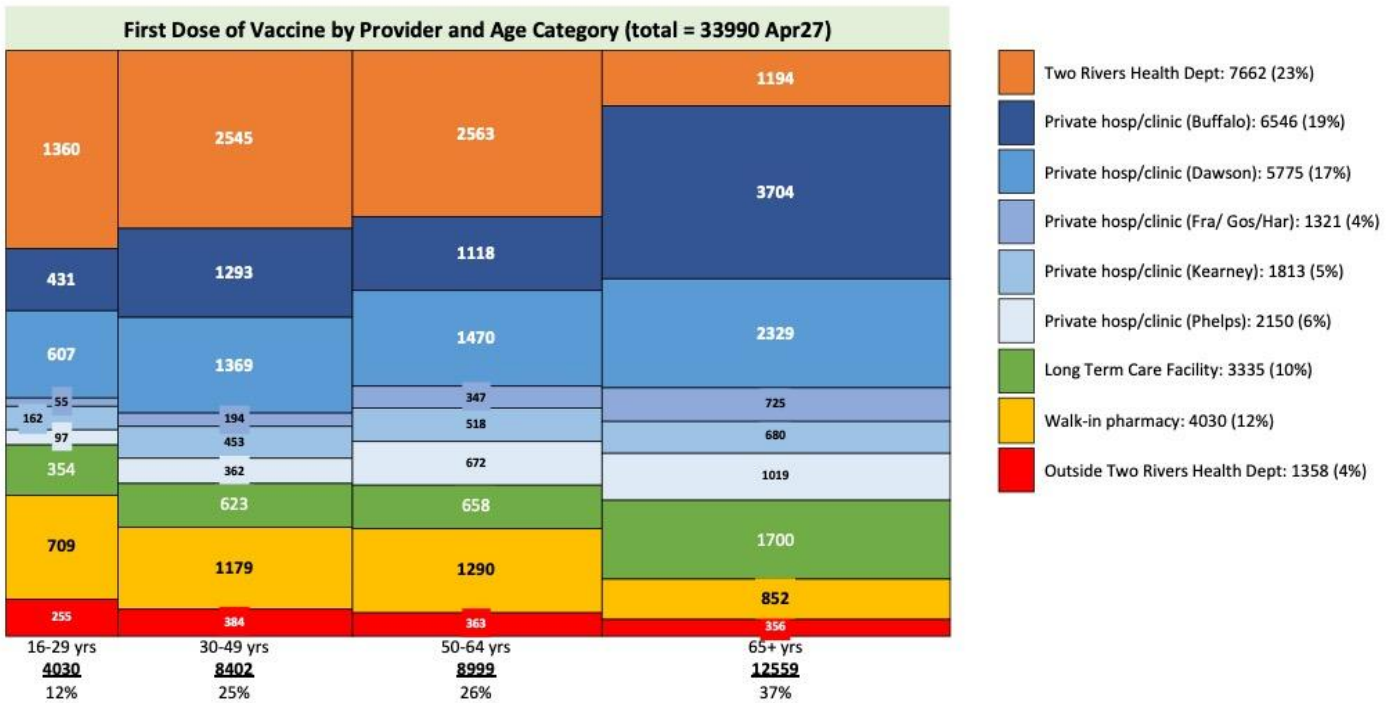


Excluding residential facilities, a total of 3424 tests were conducted in the past 4 weeks. The following table gives details of positive cases in the past week and past 4 weeks by county, age categories and gender.

	Apr 21 - Apr 27 (1 week)			Mar 30 - Apr 27 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	559	35	6.3%	1950	174	8.9%
Dawson	211	5	2.4%	991	32	3.2%
Franklin	11	1	9.1%	53	4	7.5%
Gosper	3	0	0.0%	20	0	0.0%
Harlan	8	0	0.0%	38	4	10.5%
Kearney	23	4	17.4%	97	14	14.4%
Phelps	95	5	5.3%	263	34	12.9%
Data missing/ not disclosed	1	0	0.0%	12	1	8.3%
Total	911	50	5.5%	3,424	263	7.7%
Age (in yrs)						
0-17	114	7	6.1%	417	25	6.0%
18-29	320	15	4.7%	1041	65	6.2%
30-39	144	10	6.9%	570	56	9.8%
40-49	99	4	4.0%	415	28	6.7%
50-59	95	7	7.4%	415	27	6.5%
60-69	60	4	6.7%	295	24	8.1%
70-79	45	2	4.4%	157	15	9.6%
80-89	23	1	4.3%	82	14	17.1%
90+	11	0	0.0%	32	9	28.1%
Total	911	50	5.5%	3,424	263	7.7%
Gender						
Female	464	25	5.4%	1886	137	7.3%
Male	440	25	5.7%	1522	126	8.3%
Data missing/ not disclosed	7	0	0.0%	16	0	0.0%
Total	911	50	5.5%	3,424	263	7.7%

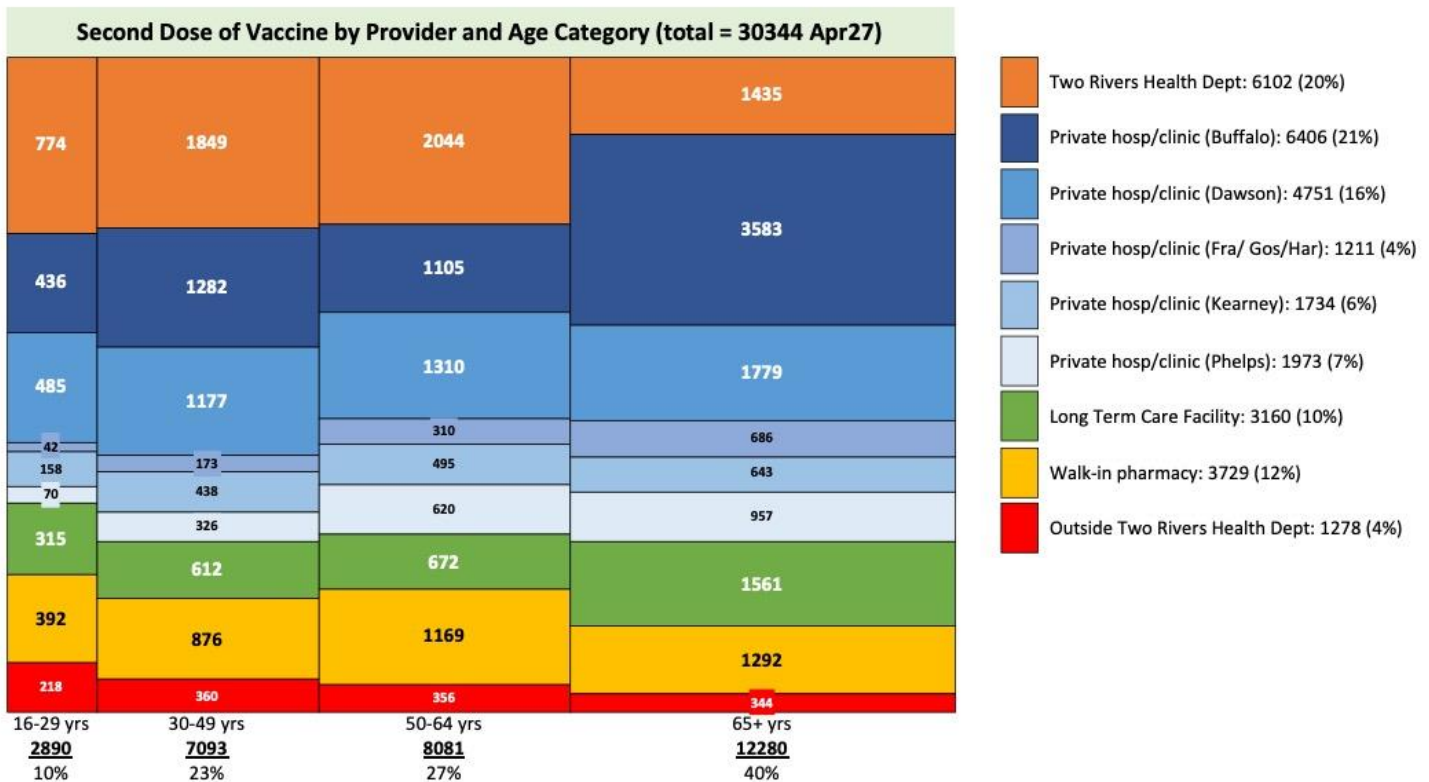


- The graph below describes **all first doses of the vaccine** availed by TRPHD residents between December 15, 2020 – April 27, 2021.
- Vaccinated persons are described by **age group (16-29, 30-49, 50-64, 65+ years)**. Data is described monthly from December, 2020 – April, 2021.
- Data is further divided by the entity performing the vaccination. Two Rivers Health Department, private hospitals and clinics in each of the 7 counties, long term care facilities and walk-in pharmacies.
- Persons shown in this graph may be considered ‘partially vaccinated’ and typically precede the second dose by 3-5 weeks.





- The graph below describes **all second doses of the vaccine** availed by TRPHD residents between December 15, 2020 - April 27, 2021. Graph also includes those who received the single dose Johnson & Johnson (Janssen) vaccine.
- Vaccinated persons are described by age group (16-29, 30-49, 50-64, 65+ years). Data is described monthly from December, 2020 - April, 2021.
- Data is further divided by the entity performing the vaccination. Two Rivers Health Department, private hospitals and clinics in each of the 7 counties, long term care facilities and walk-in pharmacies
- Persons shown in this graph may be considered 'fully vaccinated' and typically follow the first vaccine dose by 3-5 weeks.





- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1, 2020 - April 27, 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.

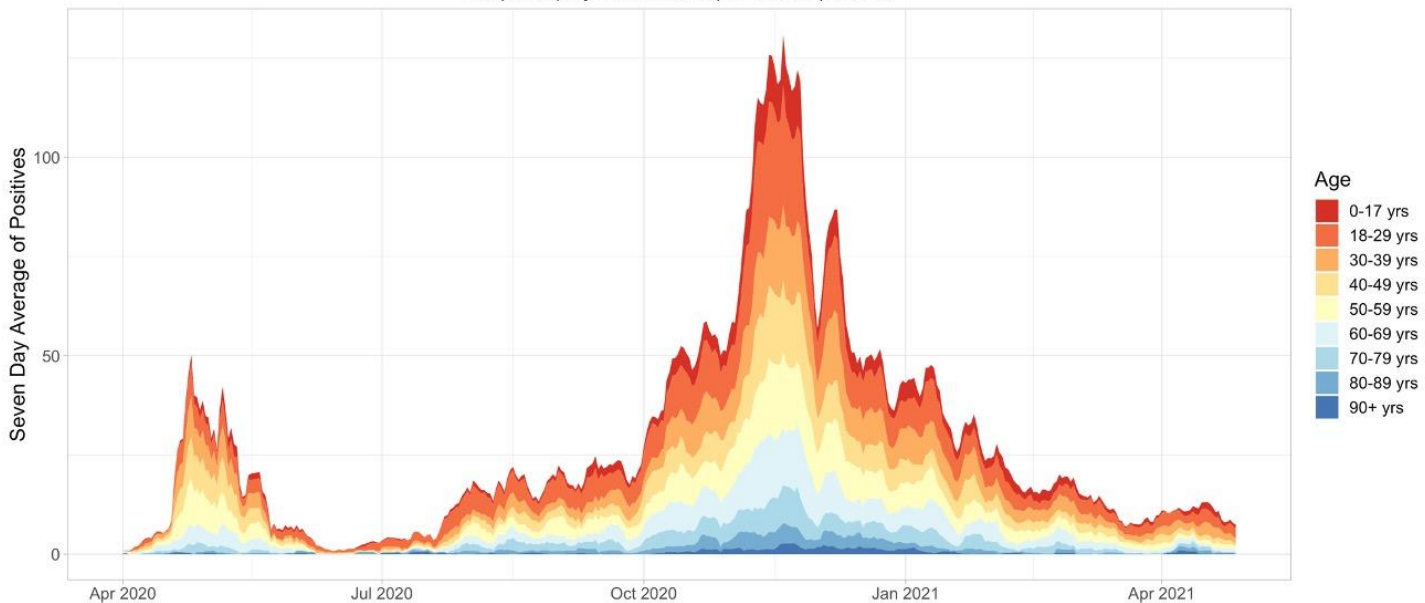
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to April 27th



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

Graph displays data from April 1st to April 27th



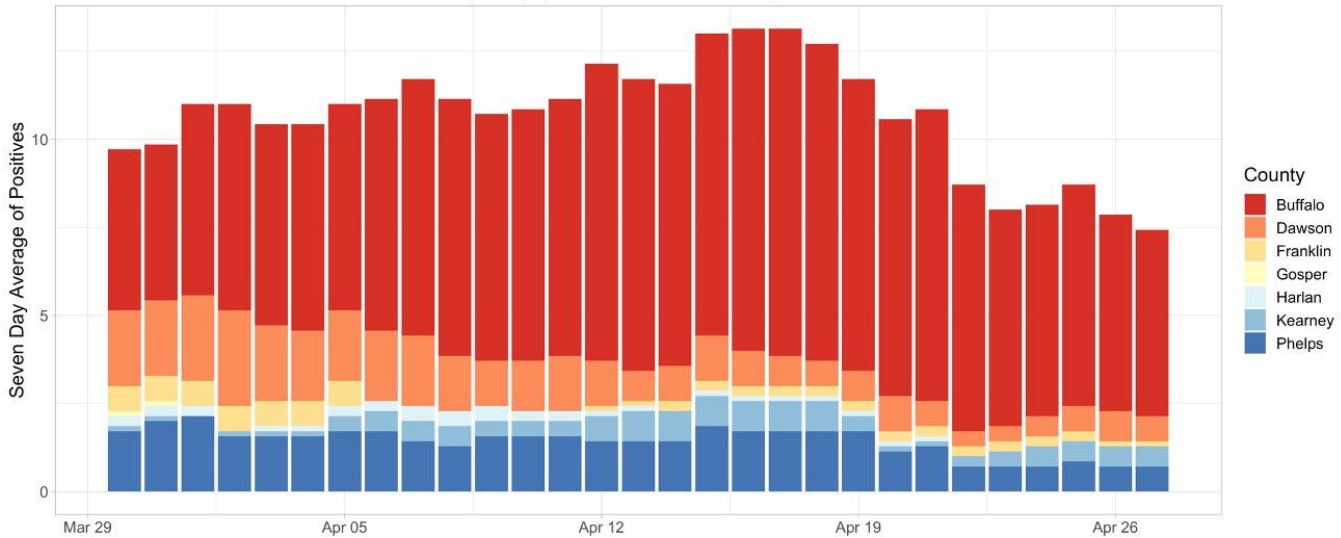
Information Updated as of 4/27 at 8 p.m.



- The following bar graph describes the 7-day rolling averages of COVID-19 cases by county for the past four weeks (Mar 30 – Apr 27).
- The second graph describes the same data per 100,000 population.⁷

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

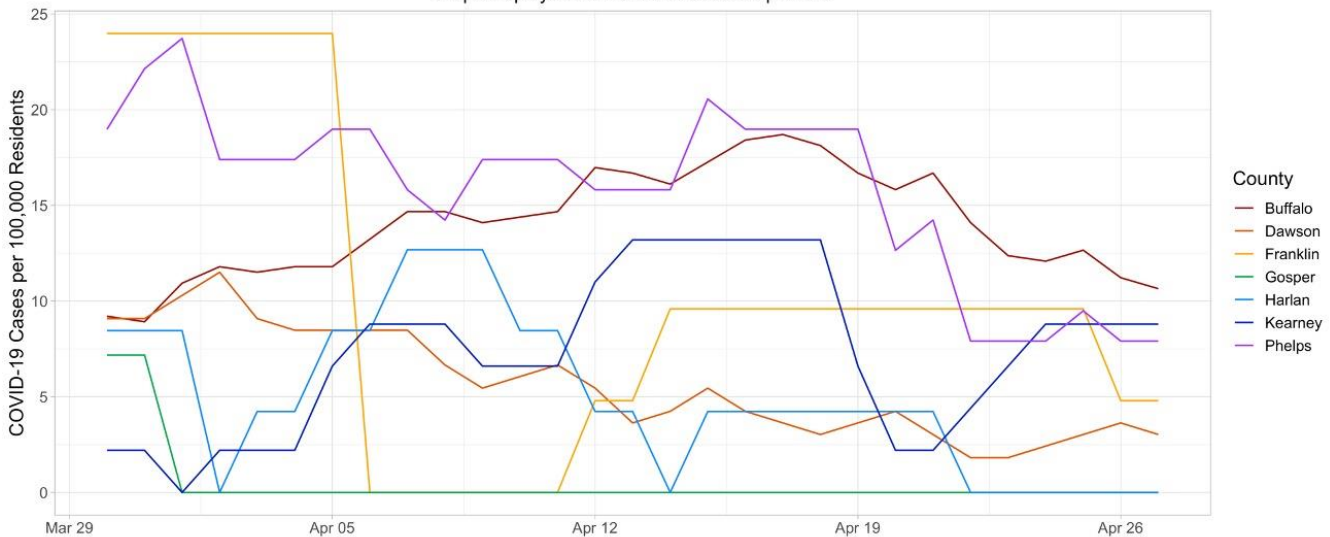
Graph displays data from Mar 30th to April 27th



Information Updated as of 4/27 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 Mar 30th to April 27th



Information Updated as of 4/27 at 8 p.m.

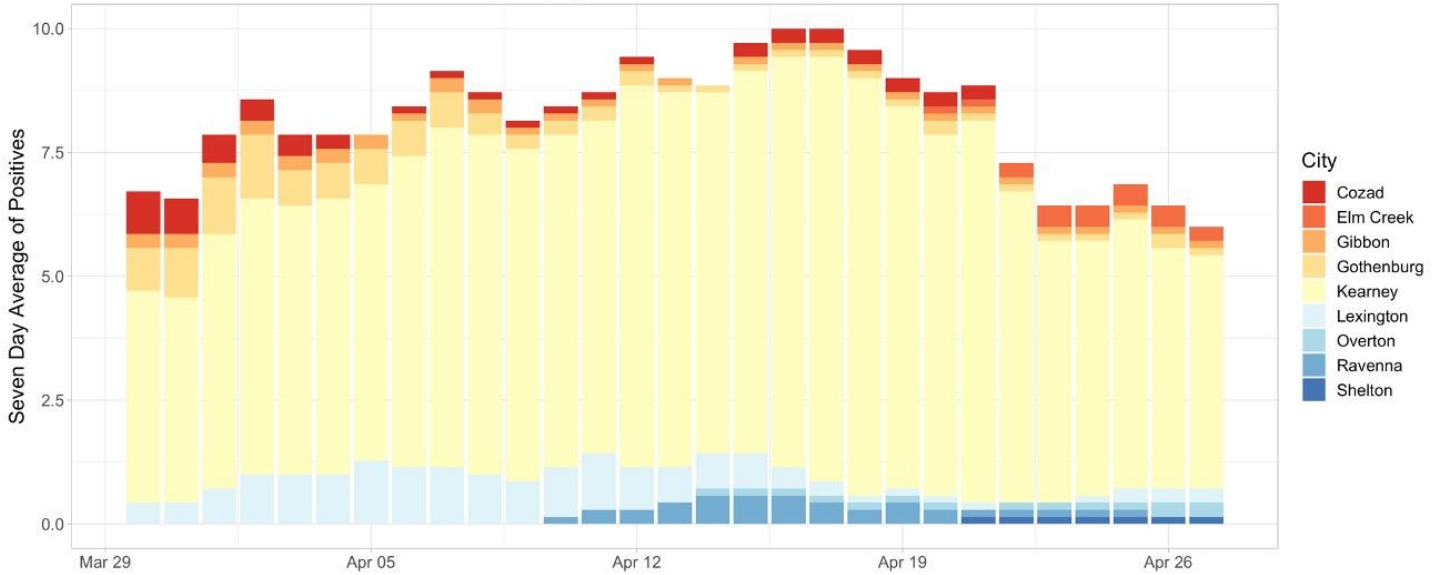
⁷ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graphs describes the 7-day rolling averages by city for the past four weeks (Mar 30 - Apr 27) 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

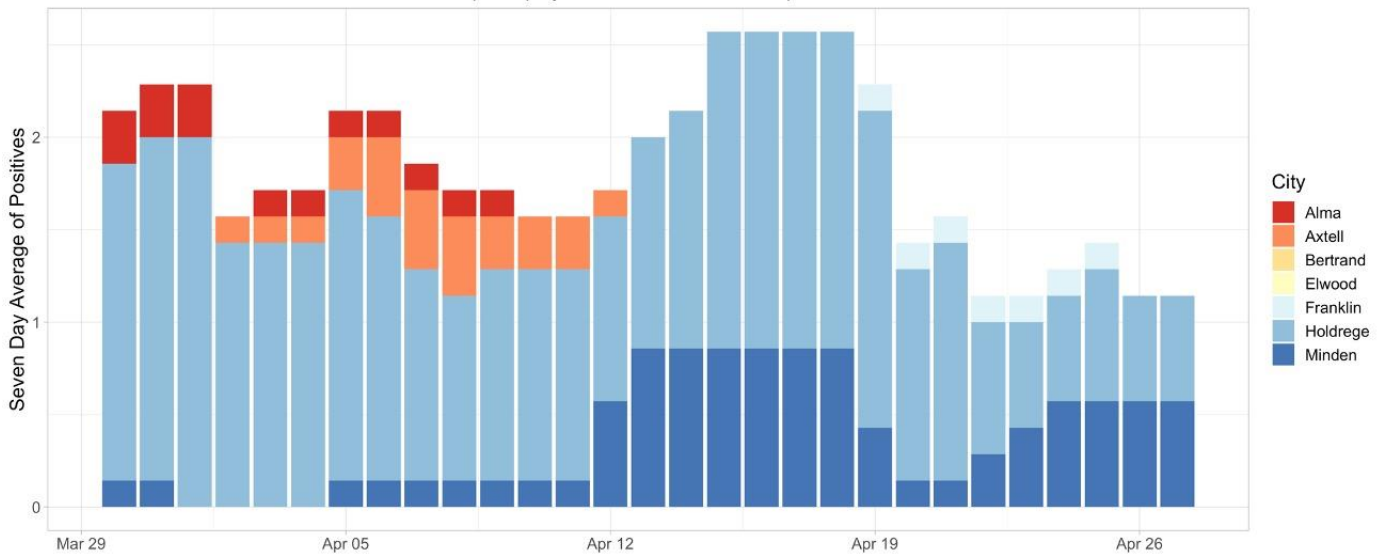
Graph displays data from Mar 30th to April 27th



Information Updated as of 4/27 at 8 p.m.

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

Graph displays data from Mar 30th to April 27th



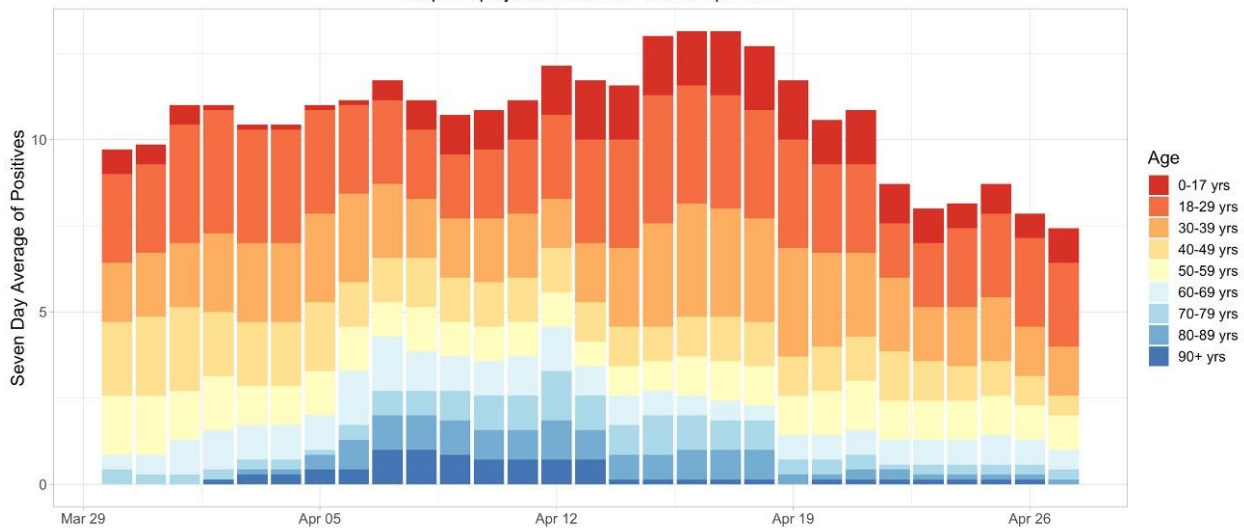
Information Updated as of 4/27 at 8 p.m.



- The graph below describes the **7-day rolling average** of cases from **Mar 30 – Apr 27** 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 – Apr 27**). Regular and widespread testing in long term care facilities in TRPHD began in early October.

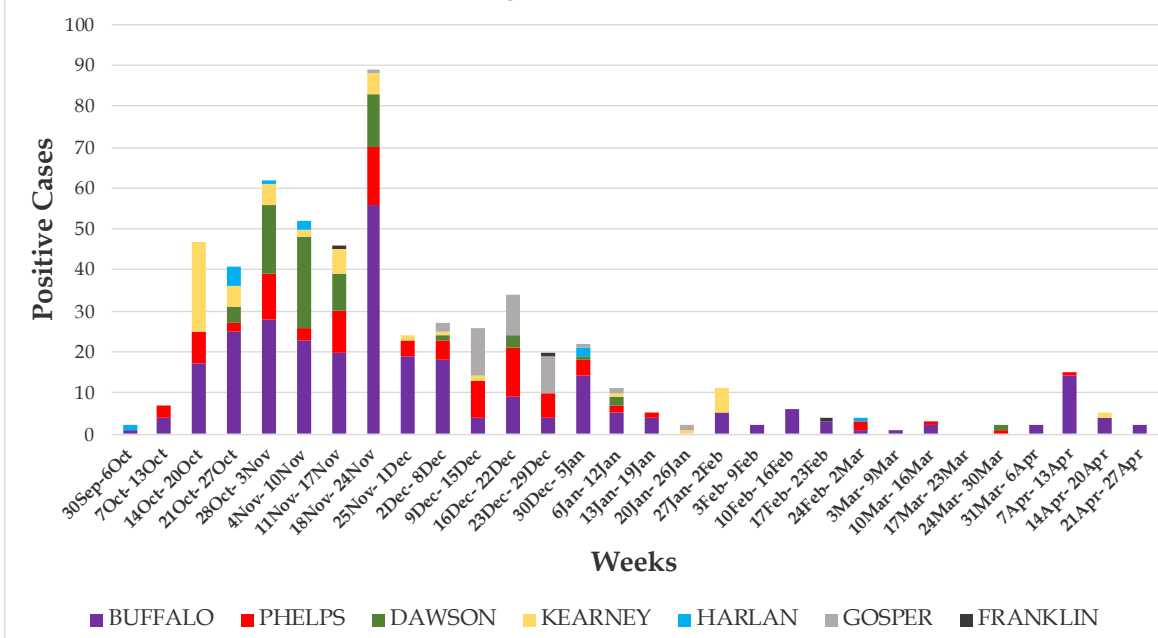
7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from Mar 30th to April 27th



Information Updated as of 4/27 at 8 p.m.

Residential Facilities: TRPHD Positive Cases by Week: Oct 2020 - Apr 2021





Weekly summary

- A little over 7 cases per day were recorded in Two Rivers Health District in the past week, a test positivity rate of 5%, excluding long term care facilities. Testing utilization continues to drop across the districts. Positive cases detected are more likely to be clustered within small communities with history of close contact.
- COVID-related admissions have remained below 3% for the past 2 weeks (see <https://www.trphd.org/> for details). ICU bed availability has fluctuated between 1/3rd to half the district's total capacity.
- Persistently low positivity rates among residents aged 60 years and over is cause for genuine optimism. The high rates of vaccination coverage among this age cohort is also encouraging.
- As of April 26, 39.7% of TRPHD's eligible population has been fully vaccinated. In general, older residents are more likely to be vaccinated compared to younger residents. However, universal vaccine availability for all persons 16 years and over has not shown a concomitant increase in utilization. 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 desirous of receiving the vaccine are advised to contact their physician or register at www.trphd.org

To conclude, new COVID cases fell in the previous week across TRPHD, especially among residents aged 60 years and over. Positive cases that are detected tend to be clustered within smaller groups that are in close contact, like families. Expansion of vaccination to all aged 16 years and above has not resulted in a connected increase in individuals getting vaccinated, especially among younger residents. 40% of the district is fully vaccinated. Those eligible for the vaccine are advised to contact their physician or register at Two Rivers Health Department (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:

[(Total positive test results for residents in the region)] / (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:

[(7-day rolling average of cases among residents)] / (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.