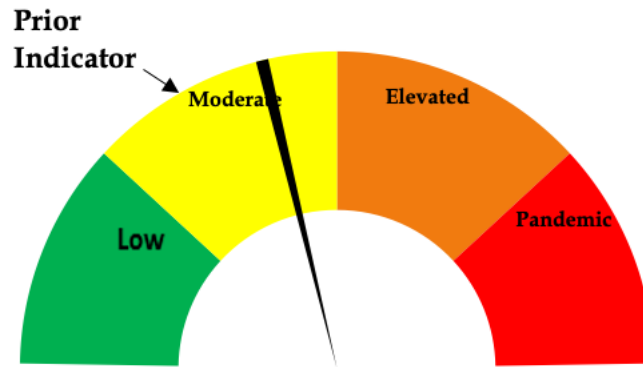


Risk Dial Apr 22, 2021



Risk Dial for COVID-19
Two Rivers Public Health
Published April 22, 2021

- COVID-related admissions have remained below 5% for the past 6 weeks (see <https://www.trphd.org/> for details). There are no COVID patients on ventilator support currently.
- There has been a steady increase in cases that, although low in absolute counts, represents a month-long increase in new cases detected per week. New cases seem to be clustered among residents younger than 40 years, who are also less likely to be vaccinated.
- Testing utilization continues to drop across the district, which leads to a decrease in availability. TestNebraska conducted only 76 COVID tests in the previous week. See weekly report (Apr 4 - Apr 20) at <https://www.trphd.org/covid-19/weekly-reports.html> for details.
- As of April 19, 2021, 36.6% of TRPHD's eligible population has been fully vaccinated. This is the second highest proportion of fully vaccinated residents in the State, after Lincoln-Lancaster health department. See weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details.
- For these reasons, the risk dial is slightly increased from the previous week, although risk is still assessed to be "moderate". The increase reflects the reduced access to testing and the steady rate of increase of new cases, especially among young people.



Weekly report Apr 14 - Apr 20, 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 7 - April 13** (1 week) and **March 16 - April 13** (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 as **16-29, 30-49, 50-64, and 65+ years** old. The graph shows the total proportion of persons fully vaccinated by county in each age group.
- The second set of graphs look at the progress of the pandemic from **April 1, 2020 - April 20, 2021** (1 year) across all counties.
 - We describe the 7-day rolling average² 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 9 - April 6**.
 - 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

To conclude, new COVID cases are being detected across the district in spite of reduced testing access. As vaccination rates pick up for younger residents, incident rates of COVID 19 should hopefully drop drastically. The weekly count of new cases has been rising steadily, although not as dramatically as earlier in the pandemic. Vaccinations are now offered to everyone over 16 years of age in the district, and 36.6% 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 20, over 45,000 residents of Two Rivers Health District were tested at least once for COVID-19. Over 122,000 tests have been conducted since March 1, 2020, almost 11,000 of these tests were positive.⁴ TRPHD has publicly notified 118 deaths due to COVID across the district.
- As of April 20, 36.6% of TRPHD’s eligible population (and 80% of residents aged 65 and over) has been fully vaccinated. 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 14 - Apr 20 (1 week)			Mar 23 - Apr 20 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	506	49	9.7%	2039	176	8.6%
TestNebraska	76	12	15.8%	365	67	18.4%
Residential Facility	2323	6	0.3%	6702	30	0.4%
Lab/ Pharmacy	230	5	2.2%	700	16	2.3%
Other	83	5	6.0%	338	16	4.7%
TOTAL	3218	77	2.4%	10,144	305	3.0%

- A total of 6702 tests were availed by residents and staff of long-term care and other residential facilities⁵ in the last 4 weeks. Details are provided below:

Residential Facility In:	Apr 14 - Apr 20 (1 week)			Mar 23 - Apr 20 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	1414	5	0.4%	3541	20	0.6%
Dawson	166	0	0.0%	785	1	0.1%
Franklin	0	0	0.0	0	0	0.0
Gosper	52	0	0.0%	82	0	0.0%
Harlan	78	0	0.0%	222	0	0.0%
Kearney	162	1	0.6%	445	1	0.2%
Phelps	415	0	0.0%	1332	2	0.2%
Outside TRPHD	36	0	0.0%	295	6	2.0%
TOTAL	2323	6	0.3%	6702	30	0.4%

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 residential facilities, please see appendix 3

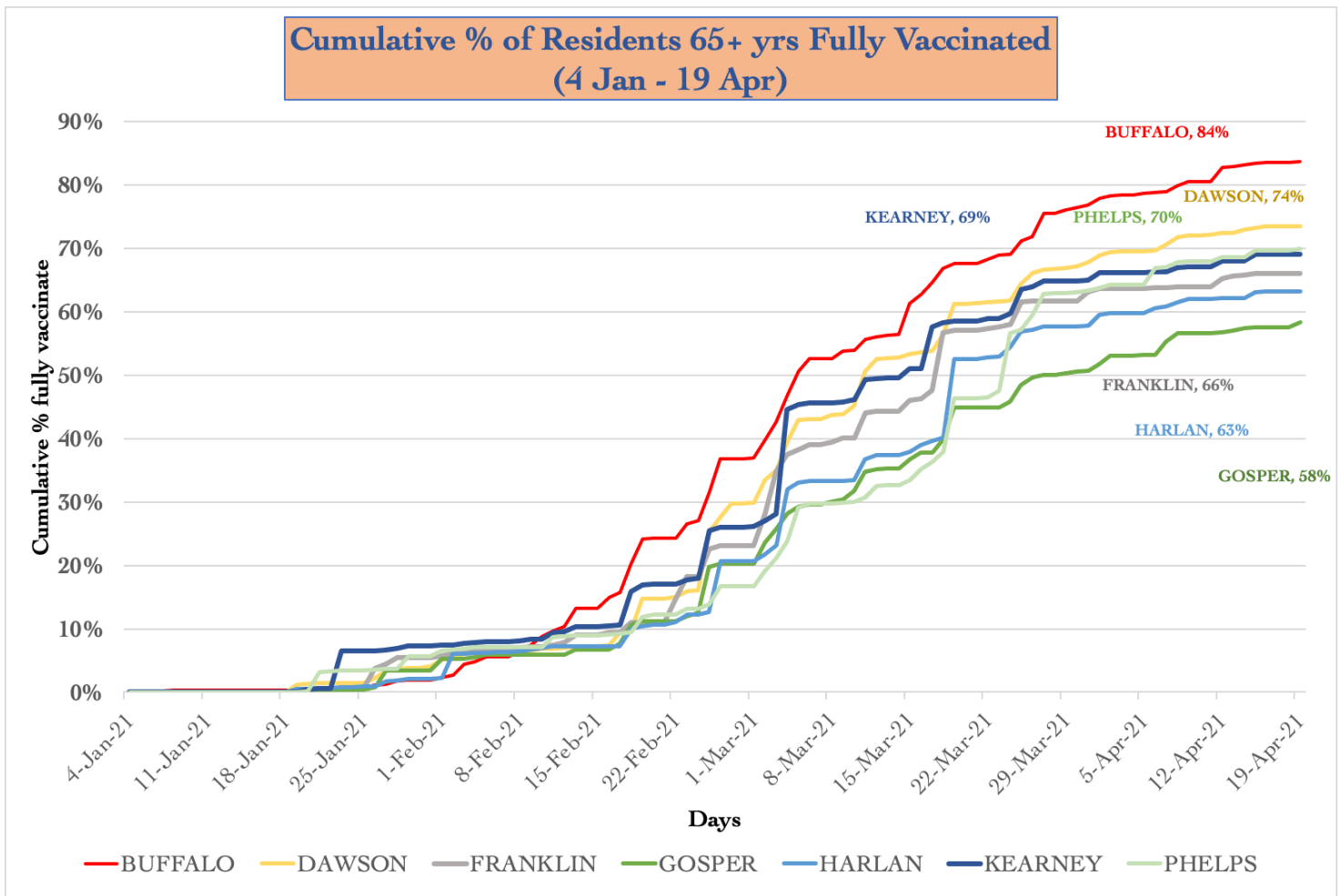


Excluding residential facilities, a total of 3442 tests were conducted in the past 4 weeks. The following table gives details of positive cases in the past week and past 4 weeks by county, age categories and gender.

	Apr 14 - Apr 20 (1 week)			Mar 23 - Apr 20 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	465	51	11.0%	1896	171	9.0%
Dawson	316	7	2.2%	1062	41	3.9%
Franklin	15	2	13.3%	49	3	6.1%
Gosper	4	0	0.0%	25	1	4.0%
Harlan	9	1	11.1%	45	6	13.3%
Kearney	23	1	4.3%	112	11	9.8%
Phelps	60	8	13.3%	239	40	16.7%
Data missing/ not disclosed	3	1	33.3%	14	2	14.3%
Total	895	71	7.9%	3,442	275	8.0%
Age (in yrs)						
0-17	105	9	8.6%	433	22	5.1%
18-29	256	17	6.6%	974	67	6.9%
30-39	169	19	11.2%	570	57	10.0%
40-49	113	9	8.0%	431	36	8.4%
50-59	114	8	7.0%	432	32	7.4%
60-69	78	4	5.1%	332	24	7.2%
70-79	32	3	9.4%	165	15	9.1%
80-89	23	1	4.3%	75	13	17.3%
90+	5	1	20.0%	30	9	30.0%
Total	895	71	7.9%	3,442	275	8.0%
Gender						
Female	512	34	6.6%	1922	140	7.3%
Male	379	37	9.8%	1506	135	9.0%
Data missing/ not disclosed	4	0	0.0%	14	0	0.0%
Total	895	71	7.9%	3,442	275	8.0%



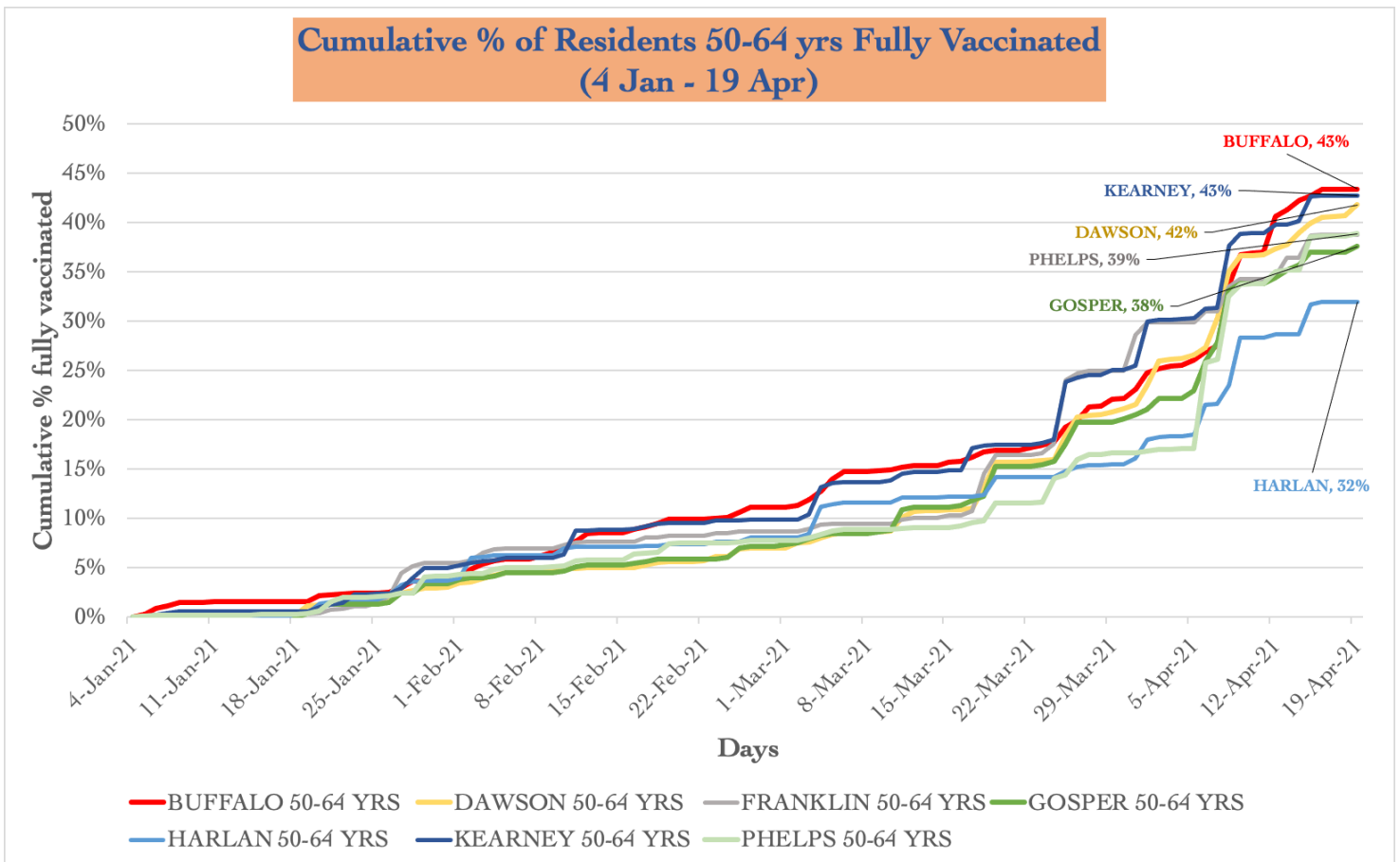
- The following graph tracks the daily progression of the total number of fully vaccinated residents in TRPHD by county from **Jan 4, 2021 to April 19, 2021**.
- Graphs describe the **proportion of residents aged 65 years & over that are fully vaccinated (%)** in seven counties of TRPHD. ⁶
- **84% of residents aged 65 or more in Buffalo** county are fully vaccinated while in **Gosper**, the proportion is **about 58%**
- A majority of persons received their second vaccine dose in late February- March



⁶ For details of eligible population by age by county, please see appendix 4.
 516 W 11th Street, Suite 108
 Kearney, NE 68845



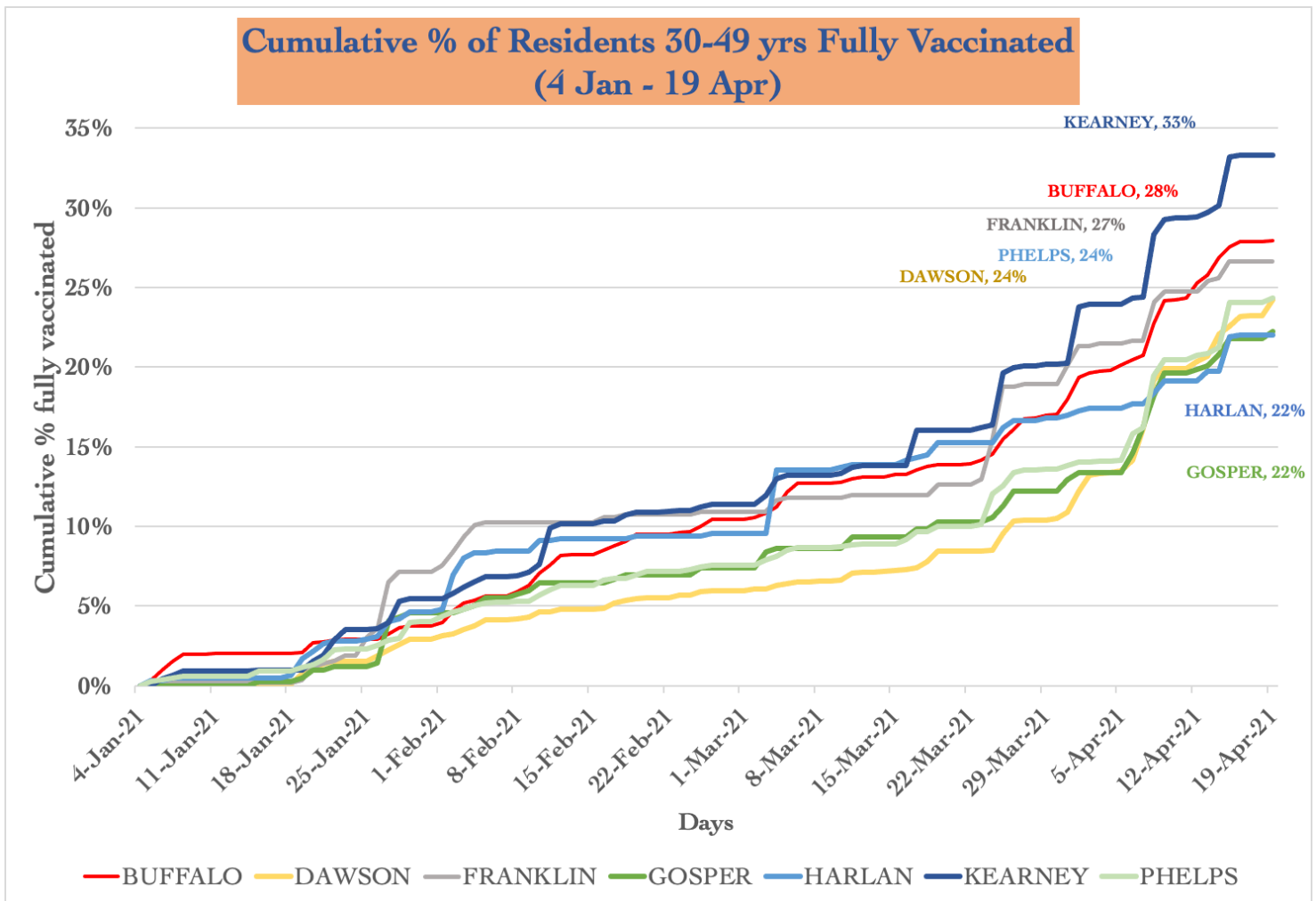
- The following graph tracks the daily progression of the total number of fully vaccinated residents in TRPHD by county from **Jan 4, 2021 to April 19, 2021**.
- Graphs describe the **proportion of residents aged 50-64 years that are fully vaccinated (%)** in seven counties of TRPHD. ⁷
- **43% of Buffalo** county residents aged 50-64 years are fully vaccinated while that number for **Harlan is 32%**
- The proportion of fully vaccinated persons began to increase in early April and this trend appears to be ongoing



⁷ For details of eligible population by age by county, please see appendix 4.



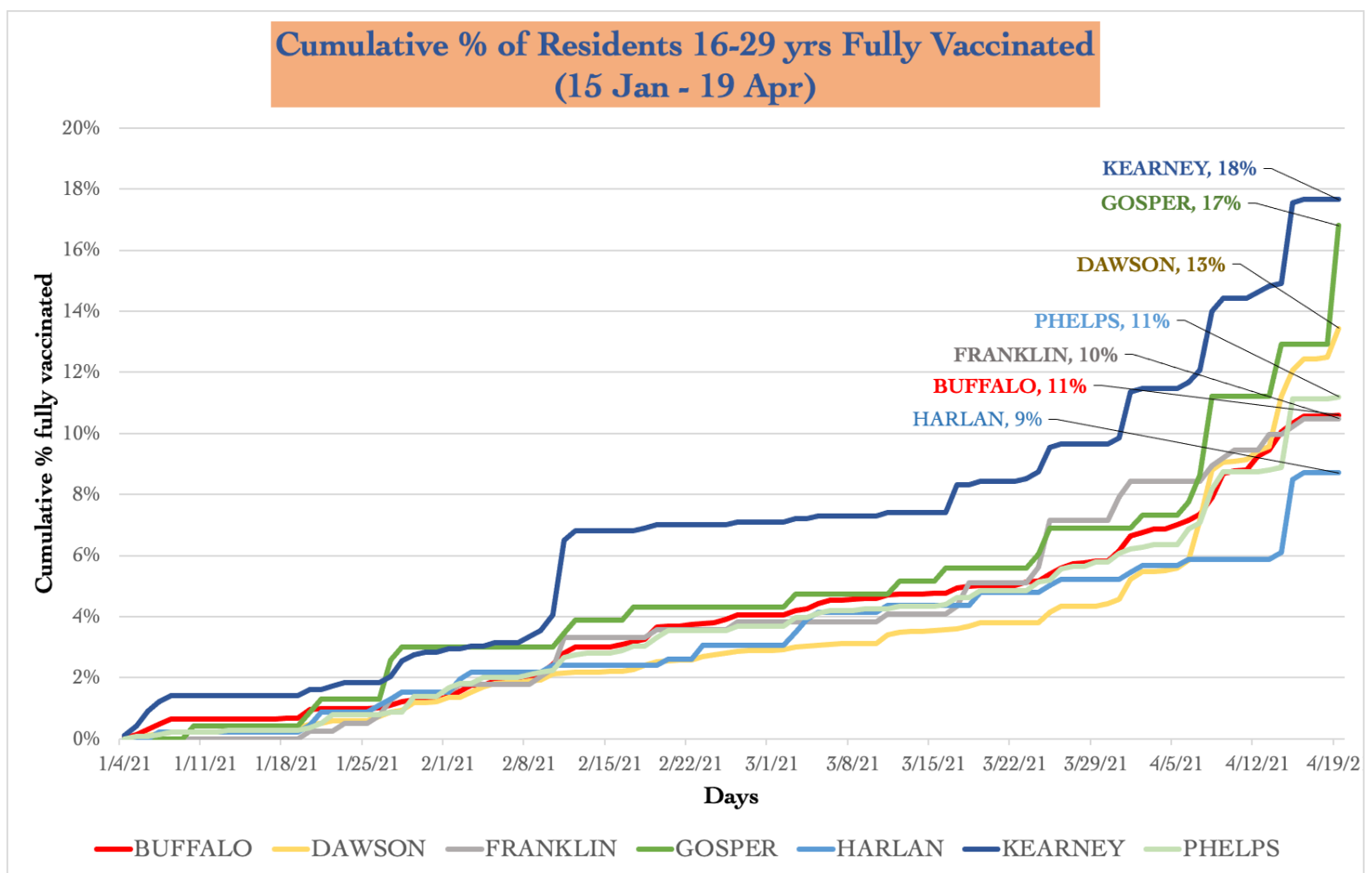
- The following graph tracks the daily progression of the total number of fully vaccinated residents in TRPHD by county from **Jan 4, 2021 to April 19, 2021**.
- Graphs describe the **proportion of residents aged 30-49 years that are fully vaccinated (%)** in seven counties of TRPHD. ⁸
- **33% of Kearney county** residents aged 30-49 have received two doses of the vaccine while in **Harlan**, the proportion receiving two doses is **about 22%**
- The proportion of fully vaccinated persons began to increase in mid- April and this trend appears to be steady for now



⁸ For details of eligible population by age by county, please see appendix 4.
 516 W 11th Street, Suite 108
 Kearney, NE 68845



- The following graph tracks the daily progression of the total number of fully vaccinated residents in TRPHD by county from **Jan 4, 2021 to April 19, 2021**.
- Graphs describe the **proportion of residents aged 16-29 years that are fully vaccinated (%)** in seven counties of TRPHD. ⁹
- Only **18% of Kearney county** residents aged 16-29 have received two doses of the vaccine while in **Harlan**, the proportion fully vaccinated is **less than 10%**
- The proportion of fully vaccinated persons has begun to increase in some counties over the past 1-2 weeks, but this is not a global trend. We are focusing on this age group among others in our efforts to increase overall vaccination rates.



⁹ For details of eligible population by age by county, please see appendix 4.
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 Kearney, NE 68845



- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1, 2020 - April 20, 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.

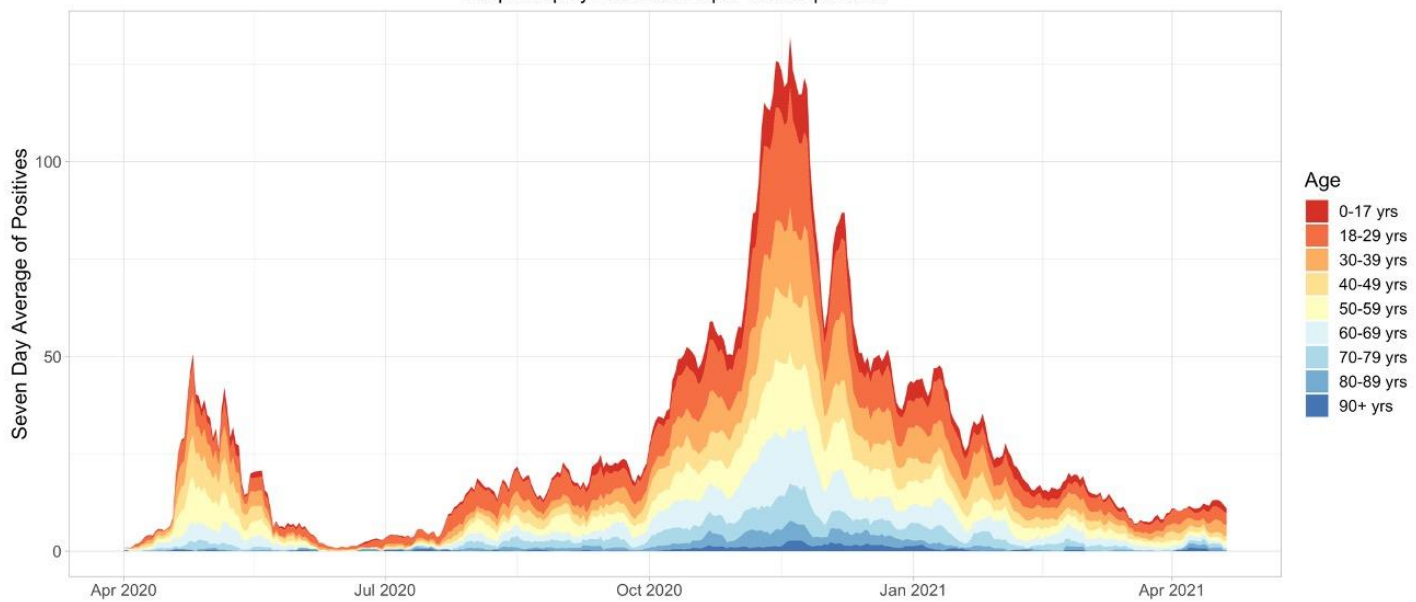
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to April 20th



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

Graph displays data from April 1st to April 20th



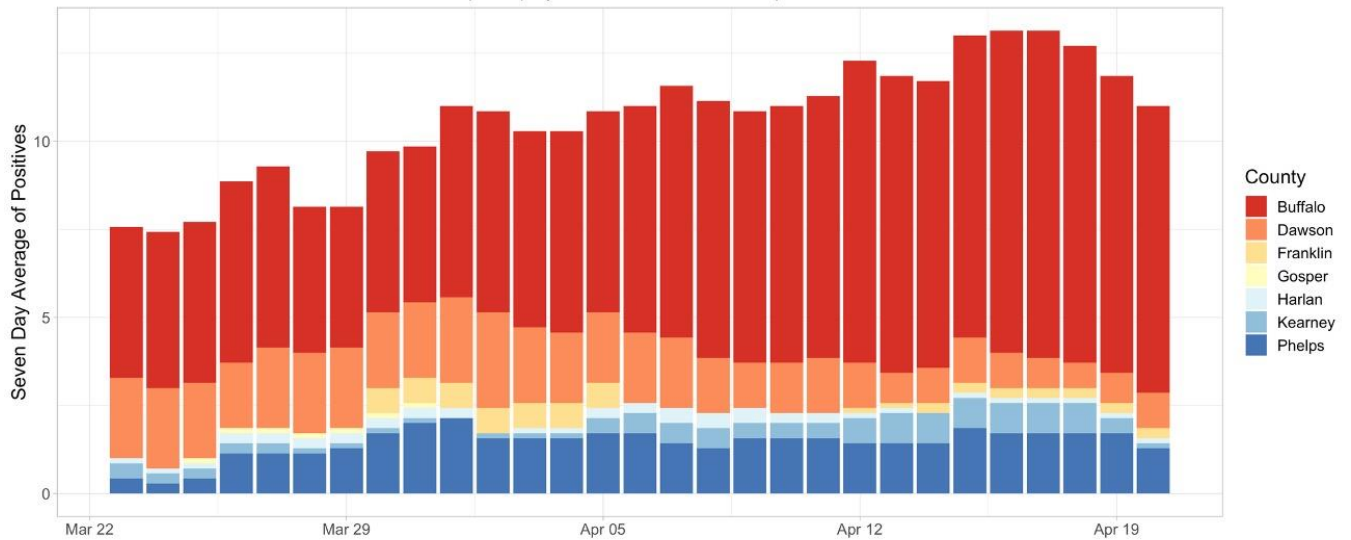
Information Updated as of 4/20 at 8 p.m.



- The following bar graph describes the 7-day rolling averages of COVID-19 cases by **county** for the past four weeks (Mar 23 – Apr 20).
- 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

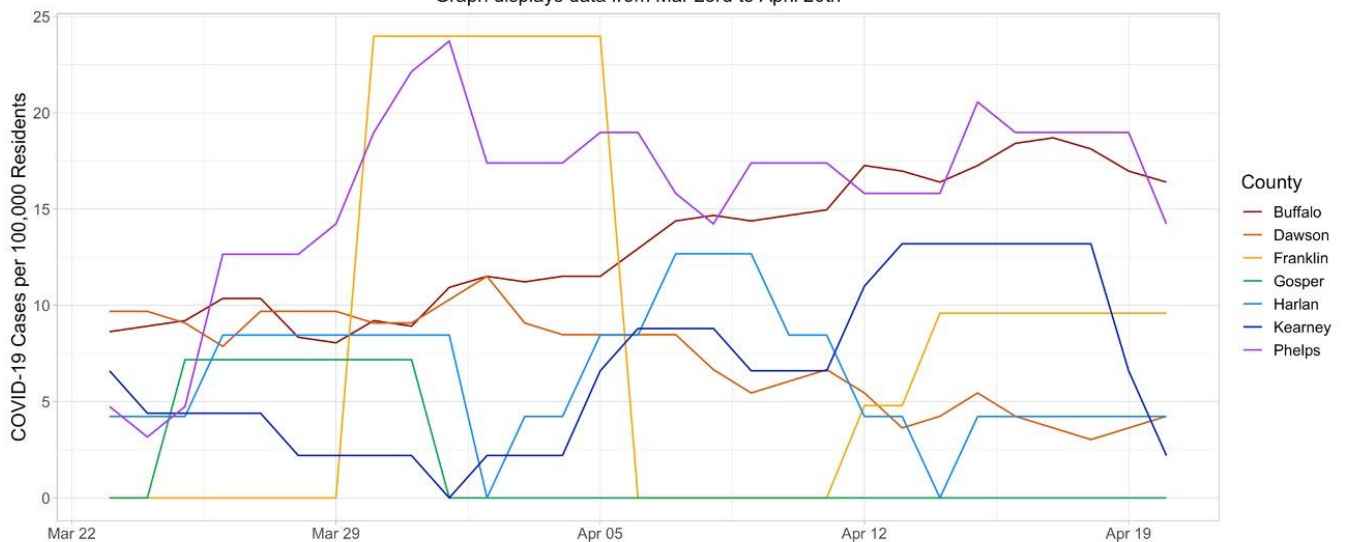
Graph displays data from Mar 23rd to April 20th



Information Updated as of 4/20 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 23rd to April 20th



Information Updated as of 4/20 at 8 p.m.

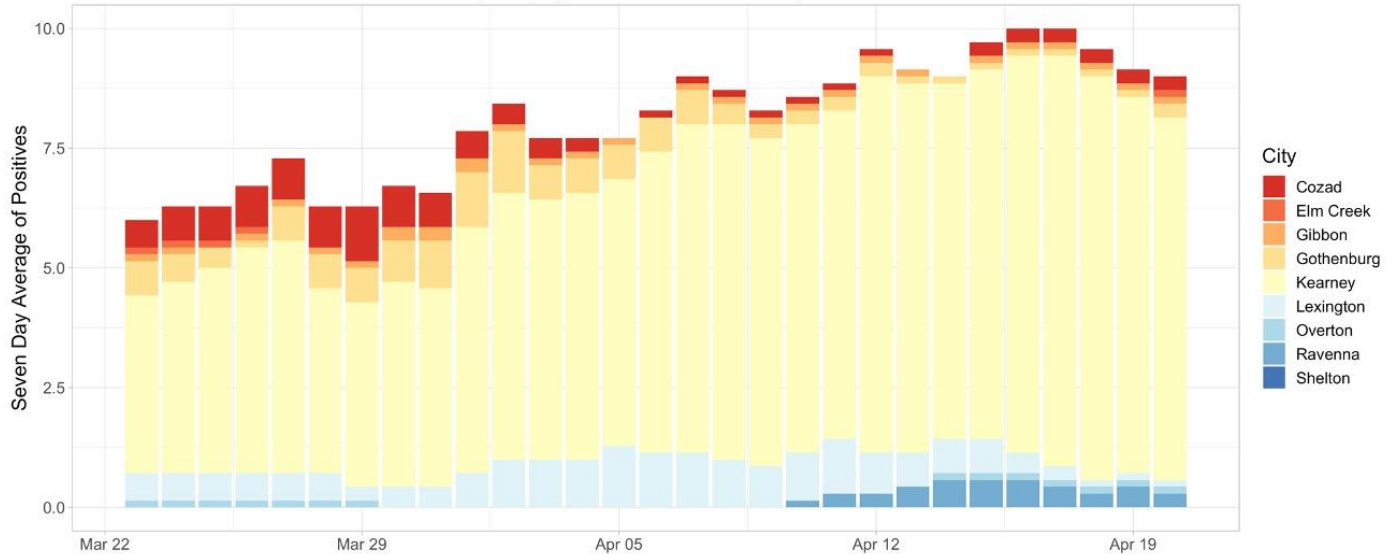
¹⁰ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graphs describes the 7-day rolling averages by city for the past four weeks (Mar 23 - Apr 20) 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

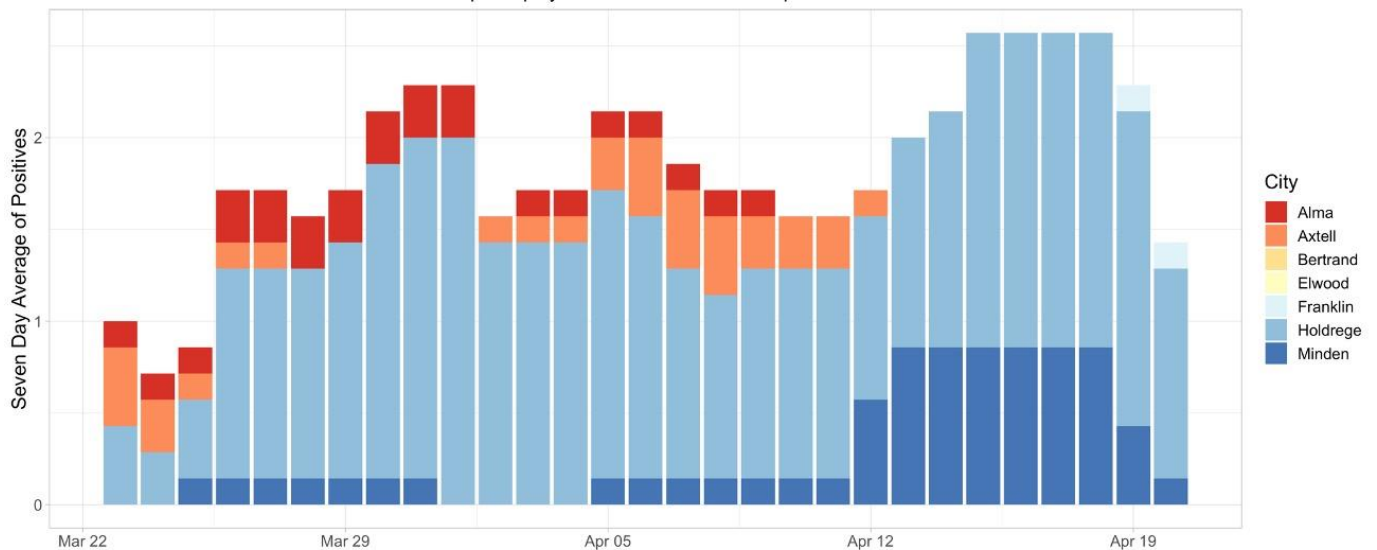
Graph displays data from Mar 23rd to April 20th



Information Updated as of 4/20 at 8 p.m.

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

Graph displays data from Mar 23rd to April 20th



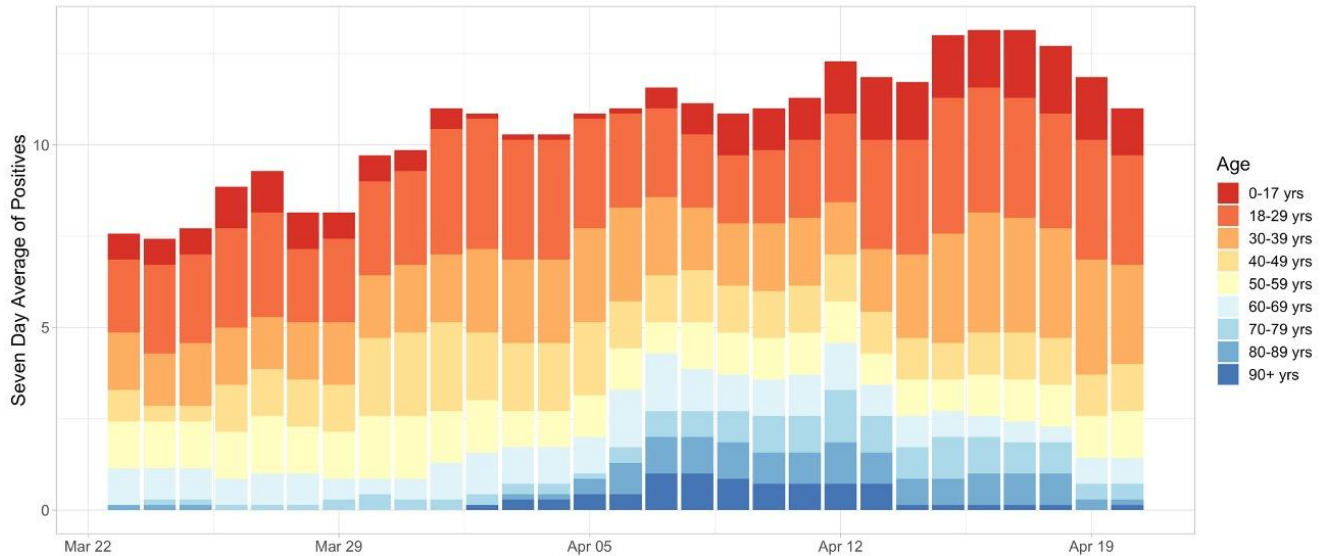
Information Updated as of 4/20 at 8 p.m.



- The graph below describes the **7-day rolling average** of cases from **Mar 23 – Apr 20** 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 20**). Regular and widespread testing in long term care facilities in TRPHD began in early October.

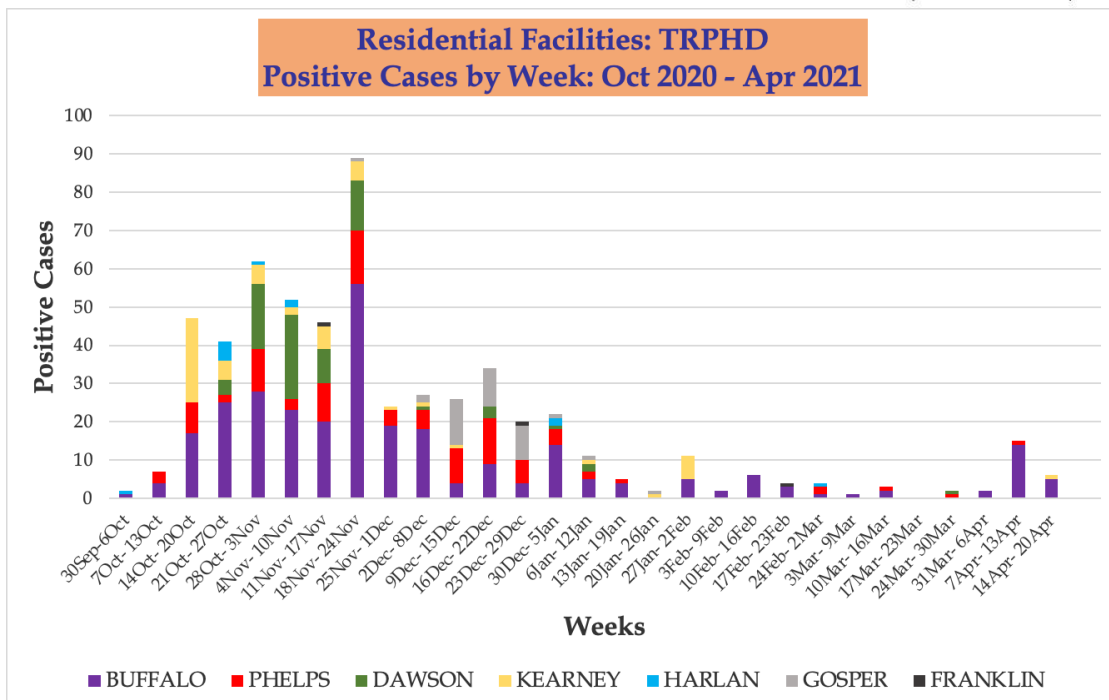
7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from Mar 23rd to April 20th



Information Updated as of 4/20 at 8 p.m.

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





Weekly summary

- As the pace of vaccinations increase across the district, there also appears to be a slight increase in weekly case numbers, especially among persons aged 40 years or less. This is also the age group least likely to be fully vaccinated due to late approval of vaccine use, but we are hopeful that the number of young people fully vaccinated will pick up in 2-4 weeks.
- Testing utilization continues to drop across the districts. Testing sites are reassessing routine scheduling due to a precipitous drop in demand. Less than 11 tests/day were conducted through TestNebraska last week, with over 15% positivity rate.
- As of April 19, 2021, 36.6% of TRPHD's eligible population has been fully vaccinated. This is the second highest proportion of fully vaccinated residents in the State, after Lincoln-Lancaster health department. See weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details
- COVID-related admissions have remained below 5% for the past 6 weeks (see <https://www.trphd.org/> for details). There are no COVID patients on ventilator support currently.
- COVID-19 vaccination continues to be provided via through private clinics, hospitals, and Vaccines For Children (VFC) clinics across the district, including at Two Rivers Health Department. All persons aged 16 and over are eligible for the vaccine. Those desirous of receiving the vaccine are advised to contact their physician or register at www.trphd.org

To conclude, new COVID cases are being detected across the district in spite of reduced testing access. As vaccination rates pick up for younger residents, incident rates of COVID 19 should hopefully drop drastically. The weekly count of new cases has been rising steadily, although not as dramatically as earlier in the pandemic. Vaccinations are now offered to everyone over 16 years of age in the district, and 36.6% 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.

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.