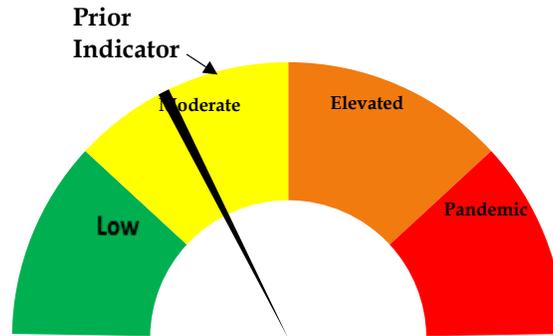




Risk Dial Mar 25, 2021



Risk Dial for COVID-19 Two Rivers Public Health Published March 26, 2021

- ICU and hospital bed availability has fluctuated, although within expected levels for this time of the year. COVID-related admissions have accounted for 5% or less of all occupied beds for the past three weeks (see <https://www.trphd.org/> for details).
- TestNebraska sites in continue to close across the district. Testing access in the district through TestNebraska has contracted over the past month. Testing in private facilities has not shown a concomitant increase.
- Residential and care facilities in TRPHD recorded no new cases in the past week, the first time since regular testing began. See weekly report (Mar 10 - Mar 17) at <https://www.trphd.org/covid-19/weekly-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 at Two Rivers Health Department. Those eligible for the vaccine are advised to contact their physician or register at www.trphd.org
- Around two-thirds of residents aged 65 or more in Buffalo, Dawson and Kearney counties have been fully vaccinated; over a quarter of all eligible persons in Kearney, Gosper and Harlan counties have been fully vaccinated. See the weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details
- For these reasons, the risk dial is further downgraded from the previous week, risk is still assessed to be “moderate”, although lesser than previous weeks.



Weekly report Mar 17 – Mar 23, 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 **March 17 – March 23** (1 week) and **February 23 – March 23** (4 weeks). We describe cases in residential facilities separately from other residents of the district.
- The first set of graphs look at the progress of the pandemic from **April 1 – March 23** (51 weeks) across all counties.
 - We describe the 7-day rolling average¹ of positive cases across TRPHD since April, describing cases by age categories (**Apr – Mar**)
- The second set of graphs look at the total (cumulative) positive cases recorded in each of the seven counties in TRPHD from **March 15, 2020 - March 23, 2021**
 - We present the **total (cumulative) cases recorded in** Buffalo and Dawson counties with TRPHD for comparison.
 - We also present cumulative case counts for Franklin, Gosper, Harlan, Kearney and Phelps counties.²
- The fourth set of graphs describe the daily average of cases (7-day rolling average) from **February 16 – March 23**. Progress is described by age, county and city of residence. Also depicted are countywide rates per 100,000 population and citywide rates per 10,000 population.
- The final graph shows positive cases in Residential facilities, displaying each week's cases by the county where the facility is located (**Oct – Mar**)³

To conclude, at the one year mark following the first detected COVID case in TRPHD, the weekly incidence of COVID seems to be decreasing across all counties, although less sustained in Buffalo and Phelps counties. Over 21% of eligible residents in 7 counties in TRPHD have been fully vaccinated, the majority of these being women. Vaccinations are now offered to everyone over 16 years of age. 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 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.

² For details on daily average of cases/ 100,000 population, please see appendix 1 & 2

³ For information on residential facilities, please see appendix 3



Testing Overview

- As of Mar 23, over 43,000 residents of Two Rivers Health District were tested at least once for COVID-19. Over 102,000 tests have been conducted since March 1, and 10,886 of these tests were positive.⁴ TRPHD has publicly notified 117 deaths due to COVID across the district.
- Half of all tests conducted since March 2020 have been laboratory-based Polymerase Chain Reaction (PCR) tests, and the rest have been rapid (antigen) tests.
 - However, over three-quarter of tests in the past 4 weeks have been rapid, or antigen tests. These are easier to administer and provide immediate results, but are not as sensitive as PCR tests that are used for laboratory confirmation of COVID.²

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

	Mar 17 - Mar 23 (1 week)			Feb 23 - Mar 23 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	564	47	8.3%	2626	229	8.7%
TestNebraska	57	1	1.8%	517	47	9.1%
Residential Facility	2,044	0	0.0%	7045	8	0.1%
Lab/ Pharmacy	134	5	3.7%	810	42	5.2%
Other	184	5	2.7%	594	25	4.2%
TOTAL	2983	58	1.9%	11,592	351	3.0%

- A total of 7045 tests were availed by residents and staff of long-term care and other **residential facilities** in the last 4 weeks. Details are provided below:

Residential Facility In:	Mar 17 - Mar 23 (1 week)			Feb 23 - Mar 23 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	1613	0	0.0%	4228	3	0.1%
Dawson	126	0	0.0%	580	0	0.0%
Franklin	0	0	0.0%	0	0	0.0
Gosper	7	0	0.0%	34	0	0.0%
Harlan	0	0	0.0	250	1	0.4%
Kearney	0	0	0.0	324	0	0.0%
Phelps	240	0	0.0%	1314	4	0.3%
Outside TRPHD	58	0	0.0%	315	0	0.0%
TOTAL	1613	0	0.0%	7045	8	0.1%

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



Excluding residential facilities, a total of 4547 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.

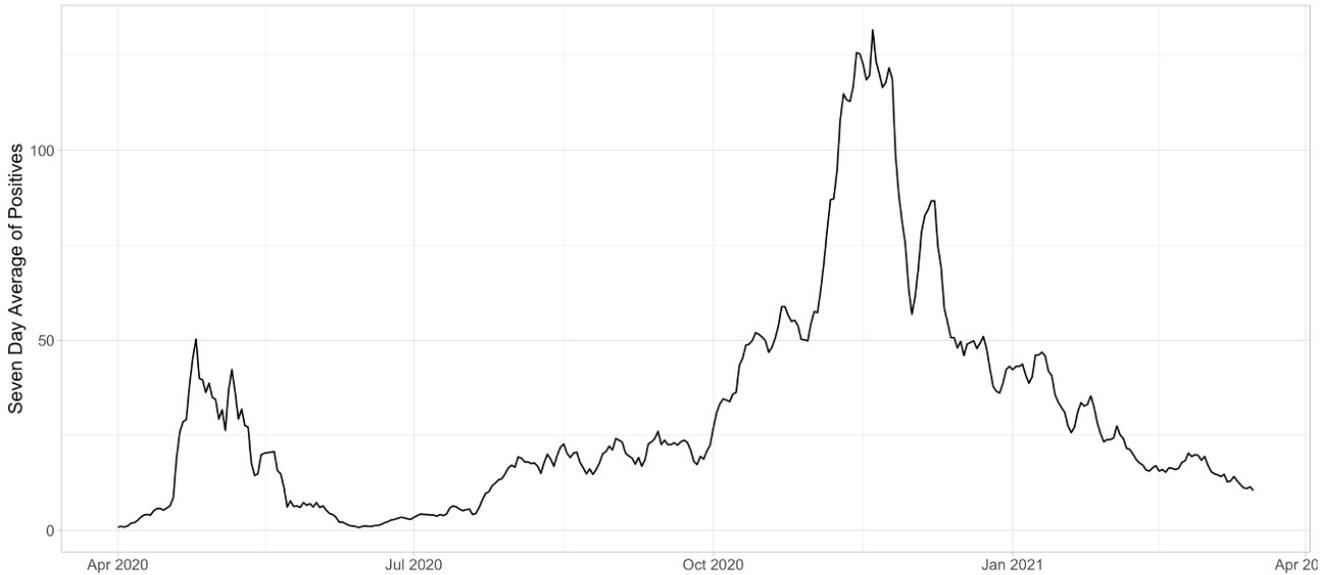
	Mar 17 - Mar 23 (1 week)			Feb 23 - Mar 23 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	541	34	6.3%	2654	205	7.7%
Dawson	254	16	6.3%	1141	70	6.1%
Franklin	23	0	0.0%	72	7	9.7%
Gosper	8	0	0.0%	32	3	9.4%
Harlan	14	1	7.1%	72	7	9.7%
Kearney	32	3	9.4%	210	15	7.1%
Phelps	59	3	5.1%	337	31	9.2%
Data missing/ not disclosed	8	1	12.5%	29	5	17.2%
Total	939	58	6.2%	4,547	343	7.5%
Age (in yrs)						
0-17	86	5	5.8%	502	26	5.2%
18-29	251	16	6.4%	1169	81	6.9%
30-39	146	11	7.5%	684	63	9.2%
40-49	114	6	5.3%	543	45	8.3%
50-59	133	11	8.3%	603	55	9.1%
60-69	91	7	7.7%	523	46	8.8%
70-79	36	0	0.0%	275	21	7.6%
80-89	48	2	4.2%	162	6	3.7%
90+	34	0	0.0%	86	0	0.0%
Total	939	58	6.2%	4547	343	7.5%
Gender						
Female	566	30	5.3%	2614	167	6.4%
Male	369	28	7.6%	1903	176	9.2%
Data missing/ not disclosed	4	0	0.0%	30	0	0.0%
Total	939	58	6.2%	4,547	343	7.5%



- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1, 2020 – March 23, 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.

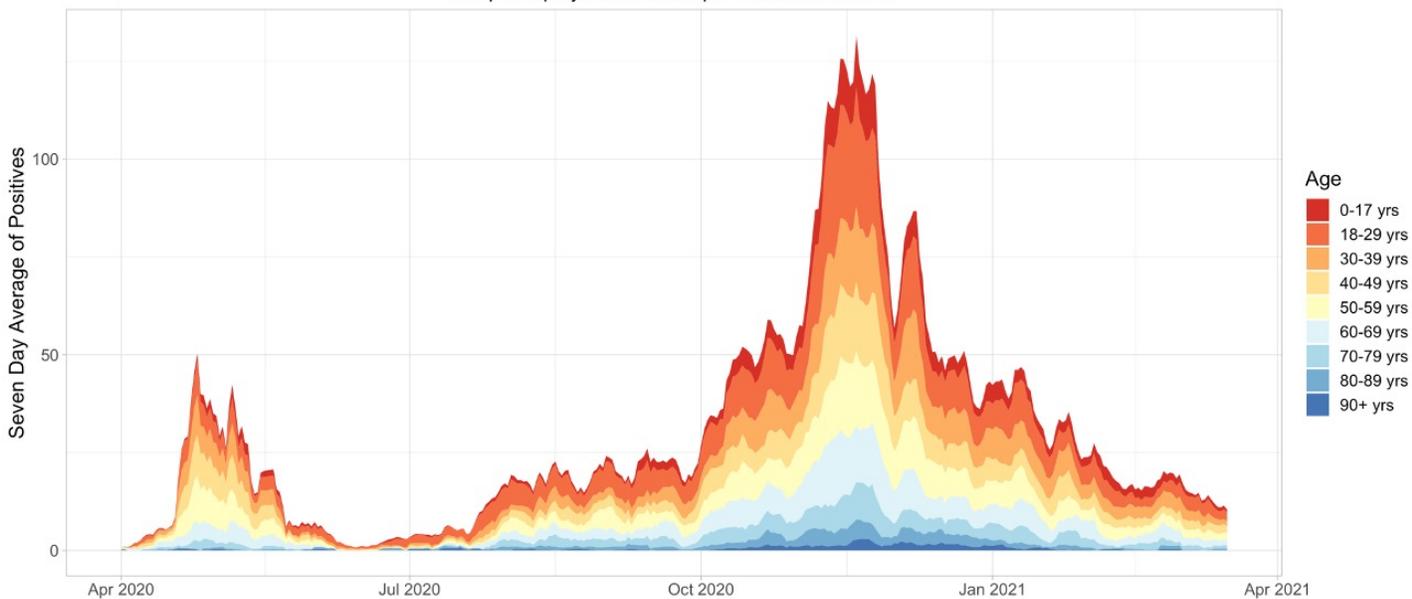
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to March 16th



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

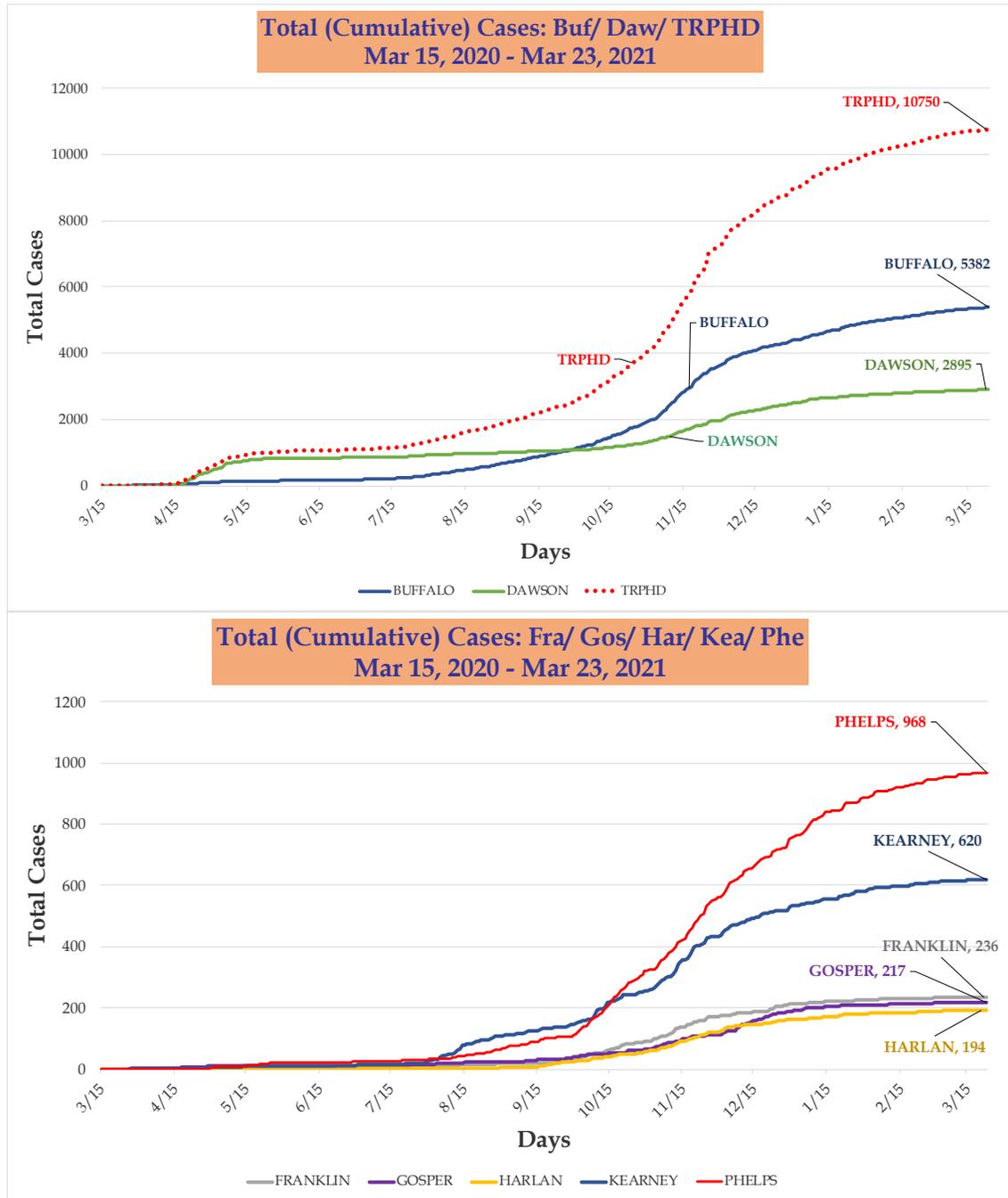
Graph displays data from April 1st to March 16th



Information Updated as of 3/16 at 8 p.m.



- The graph below describes the **total (cumulative)** COVID-19 cases recorded in each of the 7 counties in Two Rivers Health District from **March 15, 2020 - March 23, 2021**.
- Graphs are presented separately for Buffalo and Dawson counties, and for Phelps, Franklin, Gosper, Harlan and Kearney counties. Scales are different for both graphs.

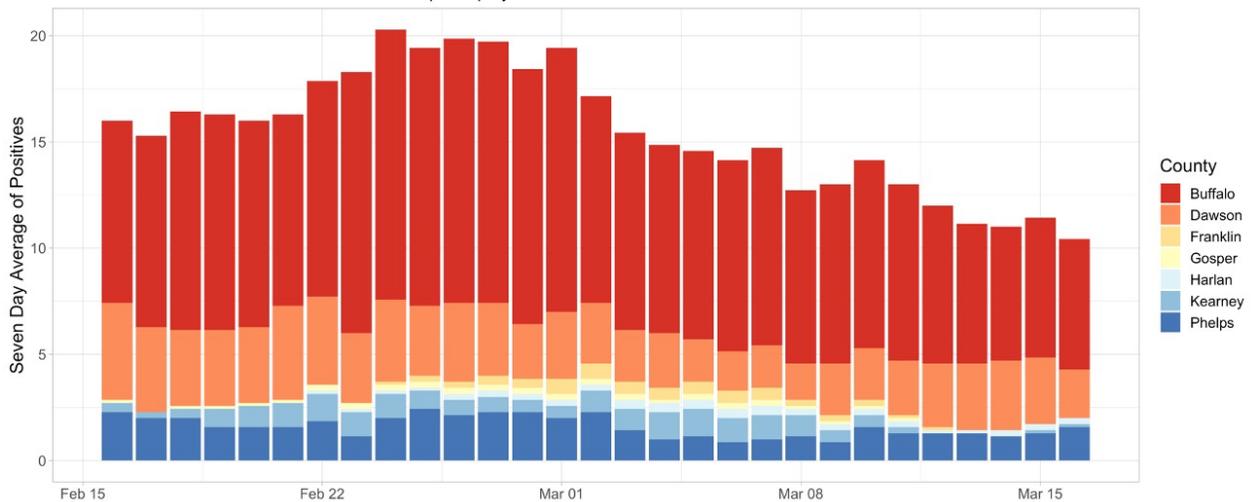




- The following bar graph describes the 7-day rolling averages of COVID-19 cases by **county** for the past four weeks (Feb 23 – Mar 23).
- The second graph describes the same data per 100,000 population.⁵ The graph also depicts the line for the United States and Nebraska.

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

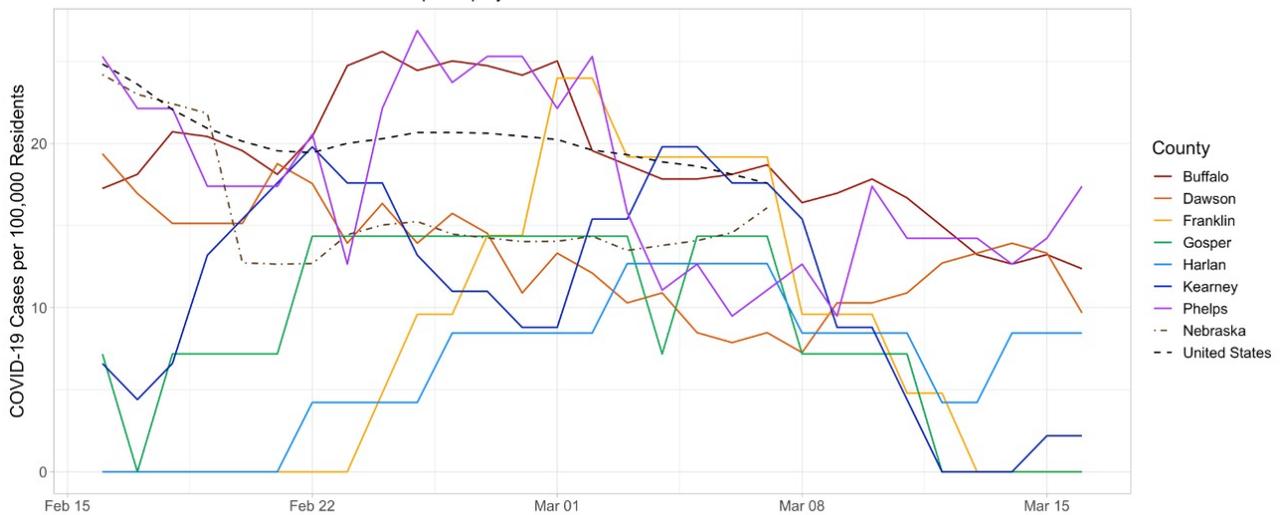
Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 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 Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.

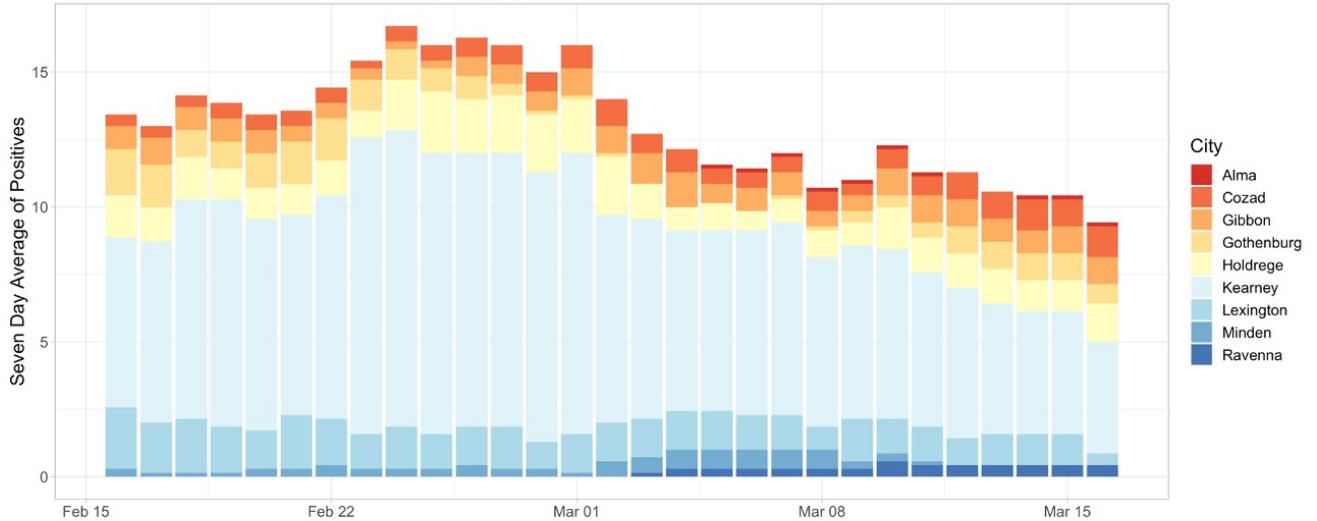
⁵ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graphs describes the 7-day rolling averages by city for the past four weeks (Feb 23 – Mar 23) in TRPHD. The graph above shows cities with population above 1100 and the one below shows the graph for cities with less than 1100 residents. The scale is different for both graphs.

7 Day Rolling Average of COVID-19 Cases in Cities > 1,100 Residents

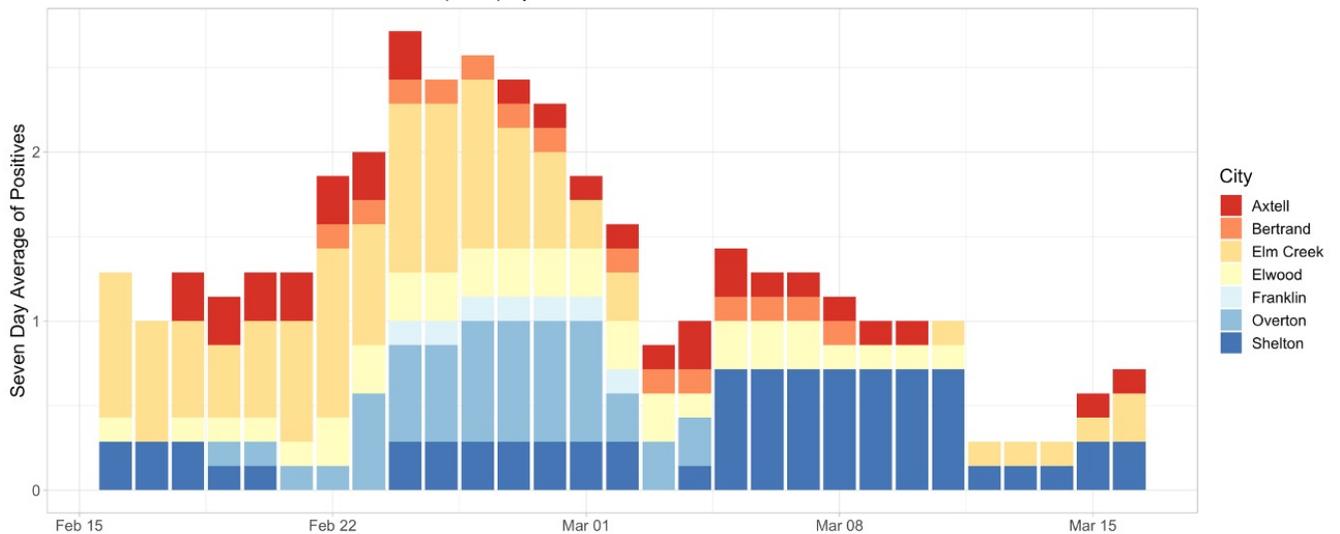
Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.

7 Day Rolling Average of COVID-19 Cases in Cities with 500-1,099 in Residents

Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.



- The following line graph describes the 7-day rolling average of COVID cases per 10,000 population in cities across TRPHD for the past four weeks (Feb 23 – Mar 23) ⁶
- The graph above shows cities with population above 1100 and the one below shows the graph for cities with less than 1100 residents. The scale is different for both graphs.

**7 Day Rolling Average of COVID-19 Cases
Per 10,000 Residents in Cities > 1,100 Residents**

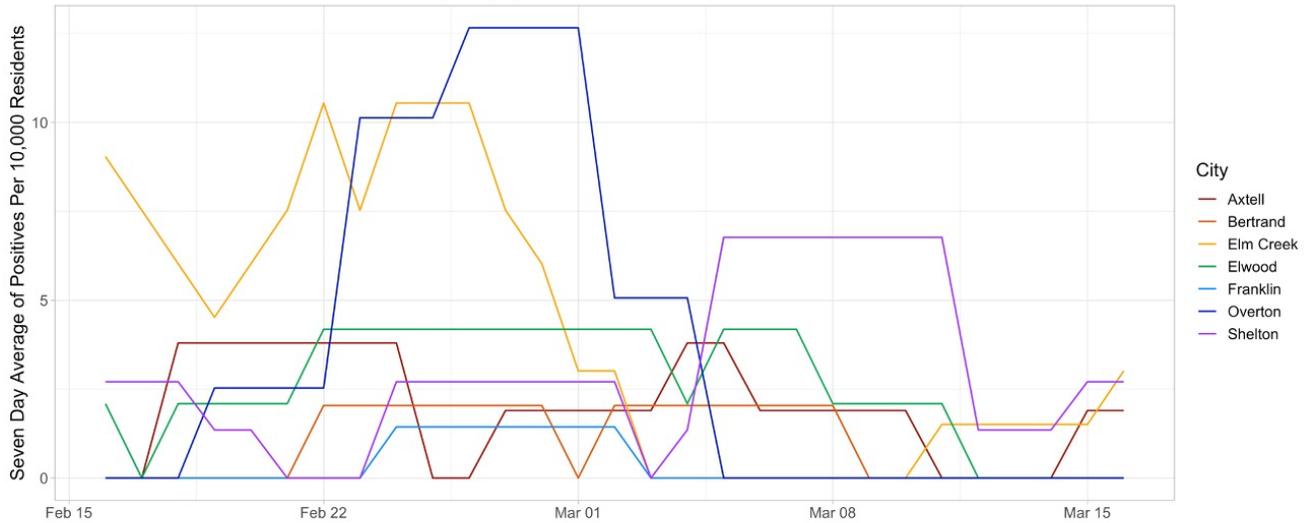
Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.

**7 Day Rolling Average of COVID-19 Cases
Per 10,000 Residents in Cities with 500-1,099 in Residents**

Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.

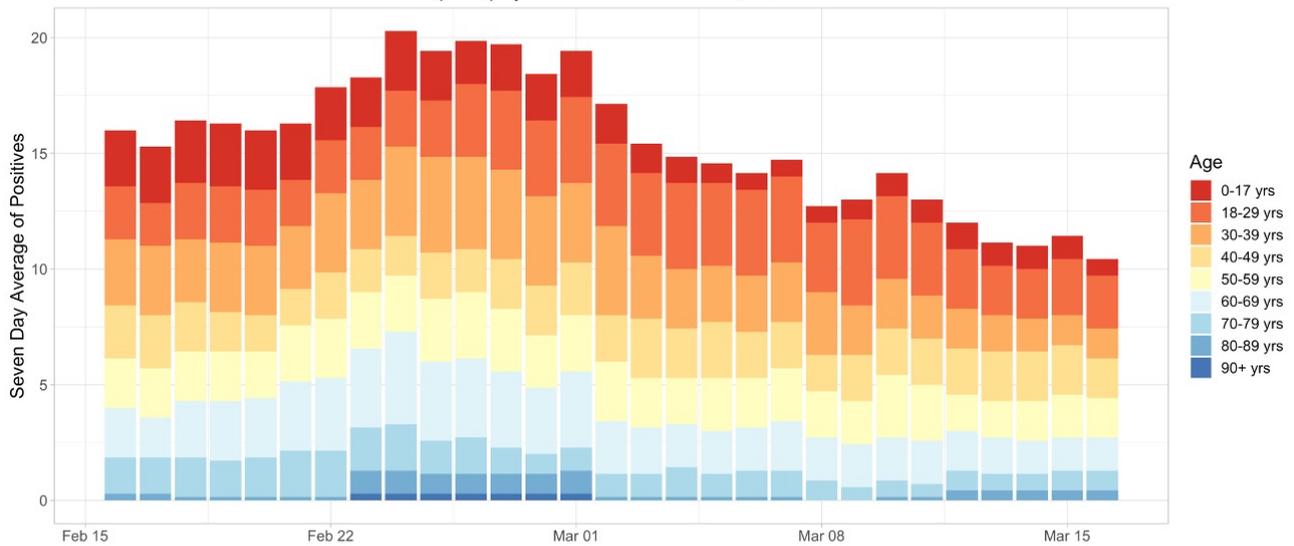
⁶ Please note: When comparing cities, we describe rates per 10,000 population. This is roughly equal to the total population of Lexington (~10,000)



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

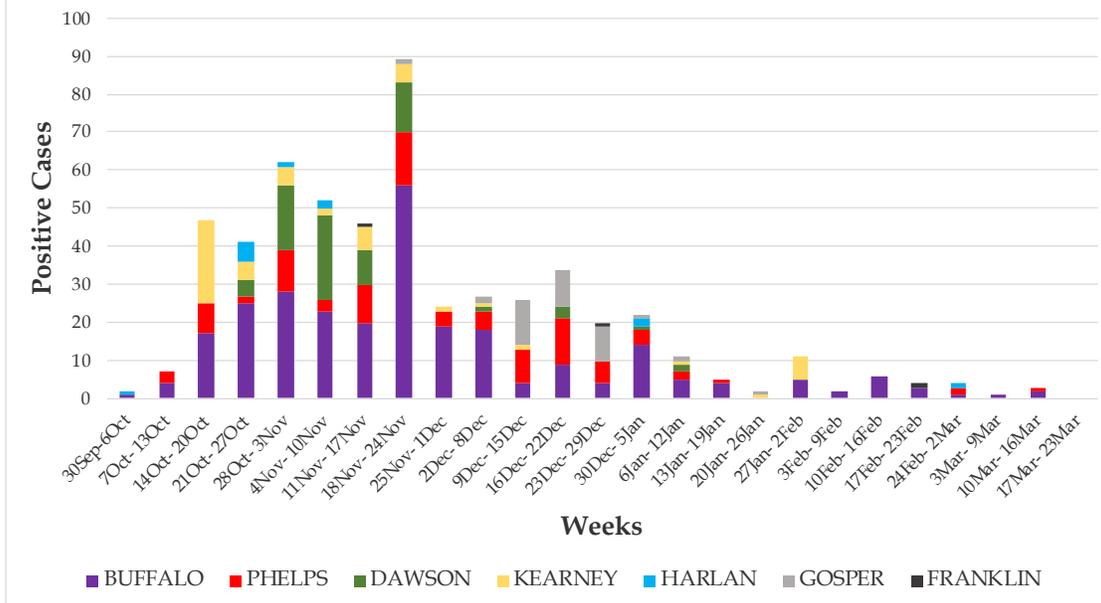
7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from Feb 16th to March 16th



Information Updated as of 3/16 at 8 p.m.

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





Weekly summary

- Testing access in the district through TestNebraska has contracted drastically. Testing uptake has also dropped, travel-related testing seems to be an important motivation for testing.
- Residential and long-term facilities in Two Rivers Health District recorded no new cases in the last week, the first time since regular testing began in these facilities. This continues the decreasing trend of new positives in these facilities, likely related to high rates of vaccination among seniors in TRPHD.
- March 19th marked the one year anniversary of the first detected COVID-19 case in Two Rivers Health District. Cumulative case counts in each of the counties seems to indicate a gradual reduction in incidence in Buffalo and Phelps counties and a more sustained flattening of the curve in other counties.
- Around two-thirds of residents aged 65 or more in Buffalo, Dawson and Kearney counties have been fully vaccinated; over a quarter of all eligible persons in Kearney, Gosper and Harlan counties have been fully vaccinated. See the weekly vaccination report at <https://www.trphd.org/covid-19/vaccination-reports.html> for details
- There seems to be some degree of fluctuation in ICU bed availability rates over the past weeks, but this seems well within the expected occupancy range for this time of the year. COVID-related admissions have accounted for 5% or less of all occupied beds for the past four weeks (see <https://www.trphd.org/> for details)
- 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. Those eligible for the vaccine are advised to contact their physician or register at www.trphd.org

To conclude, at the one year mark following the first detected COVID case in TRPHD, the weekly incidence of COVID seems to be decreasing across all counties, although less sustained in Buffalo and Phelps counties. Over 21% of eligible residents in 7 counties in TRPHD have been fully vaccinated, the majority of these being women. Vaccinations are now offered to everyone over 16 years of age. 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.