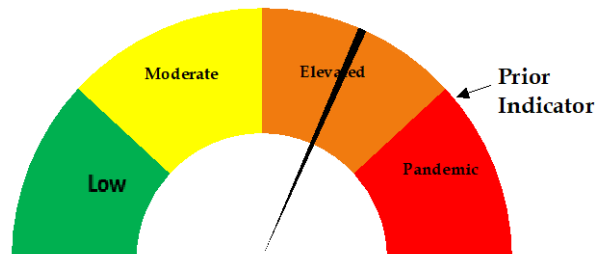




Risk Dial Dec 17, 2020



Risk Dial for COVID-19 Two Rivers Public Health Published December 17, 2020

- COVID-19 related ICU occupancy has decreased drastically in the past month. Over 45% of ICU beds are now available, the first time in 6 weeks. COVID-related hospitalizations have also dropped across TRPHD. (see <https://www.trphd.org/covid-19/> for details)
- After briefly rising last week, the daily average of positive cases has dropped by over 60% across the district. Meanwhile, the number of tests done per week outside residential facilities remain comparable to previous weeks (around 2000). For more details on testing statistics, see weekly report (Dec 9 - Dec 15 <https://www.trphd.org/covid-19/>).
- Although rates are dropping overall, isolated outbreaks (especially in long term care facilities) remain cause for concern. We are continuing to closely track ongoing outbreaks in the district at care facilities.
- The breakdown of tests being used are as follows: 34.3% of tests reported are from hospitals/clinics/labs/pharmacies, 50.7% are from long term care facilities, 14.3% are from TestNebraska sites, and 0.7% are from other sources.
- Contact tracing through DHHS partners has been expanded to allow for more attempts to contact positive cases and collect information. Nearly all disease investigation and contact tracing operations have been performed by Two Rivers Public Health Department in the last week.
- For these reasons, the risk dial has been downgraded to the 'elevated' level from the previous 'pandemic' stage. We are cautiously optimistic that the general downward trend of cases will continue in the upcoming weeks.



Weekly report Dec 9 - Dec 15 2020

Overview

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

- The tables and accompanying text explain the methodology used to calculate positivity rates and case denominators. We show positive cases and tests conducted by county, age and gender from **December 9 - December 15** (1 week) and **November 17 - December 15** (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 - December 8** (36 weeks) across all counties.
 - We describe the 7-day rolling average ¹across TRPHD since July, describing cases by age categories (**Apr - Dec**)
 - We describe the average positivity rate (7-day rolling) ² for all counties in TRPHD. Data describes all tests conducted **excluding Residential facilities** from **April to December**.
- The second set of graphs look at daily cases (7-day rolling average) from **November 17 - December 15**. 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 third set of graphs look at Residential facilities in TRPHD (**Sep - Dec**) ³
 - We describe weekly positive cases detected in residential facilities (Sep 2 - Dec 15), and display each week's cases by the county where the facility is located. ⁴

Daily case counts and positivity rates have decreased dramatically over the past week in Two Rivers Health District. Daily case rates that had begun to rise last week have dropped precipitously across almost all counties in the district. Although ongoing outbreaks in long-term care facilities throughout the district are being closely monitored, the drop in case counts is reason for cautious optimism. Sustained drop in case counts over the next couple weeks could indicate a longer-term trend of decreasing case counts. There is improved ICU availability and lower COVID-related medical/surgical bed usage across hospitals in the district this week compared to last weeks. 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 Average positivity rate (7-day positive)

³ For information on residential facilities, please see appendix 2

⁴ For information on data sources, please see appendix 1



Testing Overview

- As of Dec 15, a little under 37,000 residents of Two Rivers Health District have been tested at least once for COVID-19. Over 72,200 tests have been successfully conducted since March 1, and 8438 positive results have been obtained. ⁵
- A little under 65% of all tests conducted since April have been Polymerase Chain Reaction (PCR) tests conducted in a lab.
 - However, over 55% 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.

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

	Dec 9 - Dec 15 (1 week)			Nov 17 - Dec 15 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	989	167	16.9%	3,972	1,193	30.0%
TestNebraska	551	93	16.9%	2,442	461	18.9%
Residential Facility	1,958	30	1.5%	9,078	180	2.0%
Lab/ Pharmacy	335	50	14.9%	1,731	396	22.9%
Other	27	4	14.8%	94	27	28.7%
TOTAL	3860	344	8.9%	17,317	2,257	13.0%

- A total of 9078 tests were availed by residents and staff of long-term care and other **residential facilities** in the last 4 weeks. Details are provided below:

	Dec 9 - Dec 15 (1 week)			Nov 17 - Dec 15 (4 weeks)		
Residential Facility In:	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	610	7	1.1%	3,472	100	2.9%
Dawson	258	0	0.0%	1,159	15	1.3%
Franklin	28	0	0.0%	282	0	0.0%
Gosper	190	12	6.3%	589	15	2.5%
Harlan	105	0	0.0%	414	1	0.2%
Kearney	145	1	0.7%	1,080	9	0.8%
Phelps	562	9	1.6%	1,779	34	1.9%
Outside TRPHD	60	1	1.7%	303	6	2.0%
TOTAL	1958	30	1.5%	9078	180	2.0%

⁵ Note: The differences between these numbers and totals displayed on www.trphd.org dashboards is explained by testing in residential facilities and isolated rapid test results not reflected in the state's dataset used to generate public dashboards.



Excluding residential facilities, a total of 8696 persons were tested 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.

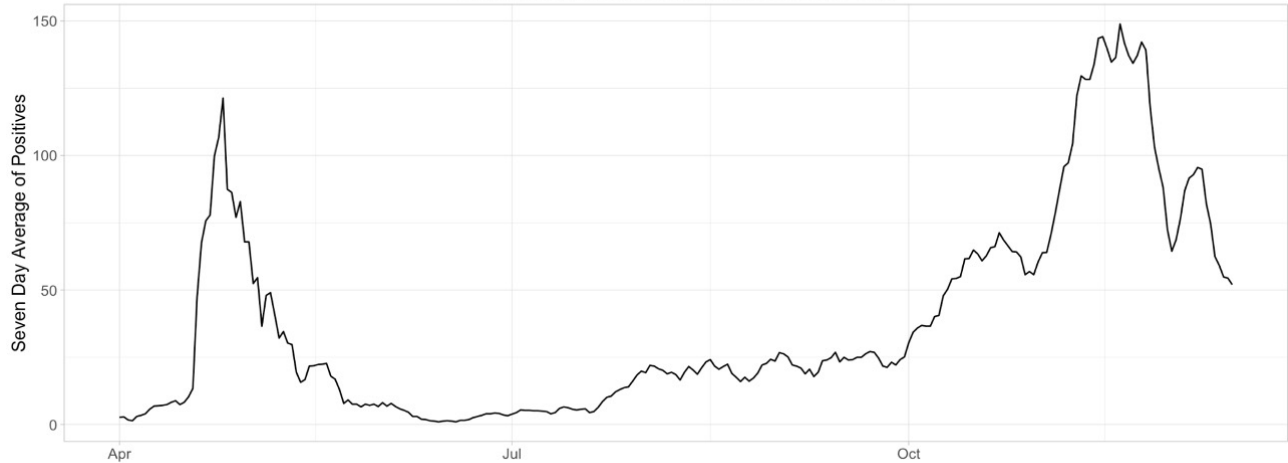
	Dec 9 - Dec 15 (1 week)			Nov 17 - Dec 15 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	932	136	14.6%	4402	1034	23.5%
Dawson	493	98	19.9%	2021	545	27.0%
Franklin	69	5	7.2%	224	43	19.2%
Gosper	44	13	29.5%	127	44	34.6%
Harlan	35	5	14.3%	152	44	28.9%
Kearney	102	20	19.6%	437	117	26.8%
Phelps	202	34	16.8%	689	195	28.3%
Data missing/ not disclosed	25	3	12.0%	187	55	29.4%
Total	1,902	314	16.5%	8,239	2,077	25.2%
Age (in yrs)						
0-17	231	27	11.7%	1057	203	19.2%
18-29	387	57	14.7%	1864	412	22.1%
30-39	336	57	17.0%	1379	362	26.3%
40-49	246	45	18.3%	1095	297	27.1%
50-59	270	56	20.7%	1082	330	30.5%
60-69	241	36	14.9%	968	267	27.6%
70-79	116	20	17.2%	530	132	24.9%
80-89	59	14	23.7%	213	62	29.1%
90+	16	2	12.5%	51	12	23.5%
Total	1902	314	16.5%	8239	2077	25.2%
Gender						
Female	1035	167	16.1%	4405	1,063	24.1%
Male	794	145	18.3%	3709	991	26.7%
Data missing/ not disclosed	73	2	2.7%	125	23	18.4%
Total	1,902	314	16.5%	8,239	2,077	25.2%



- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1 – December 15**.
- 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.

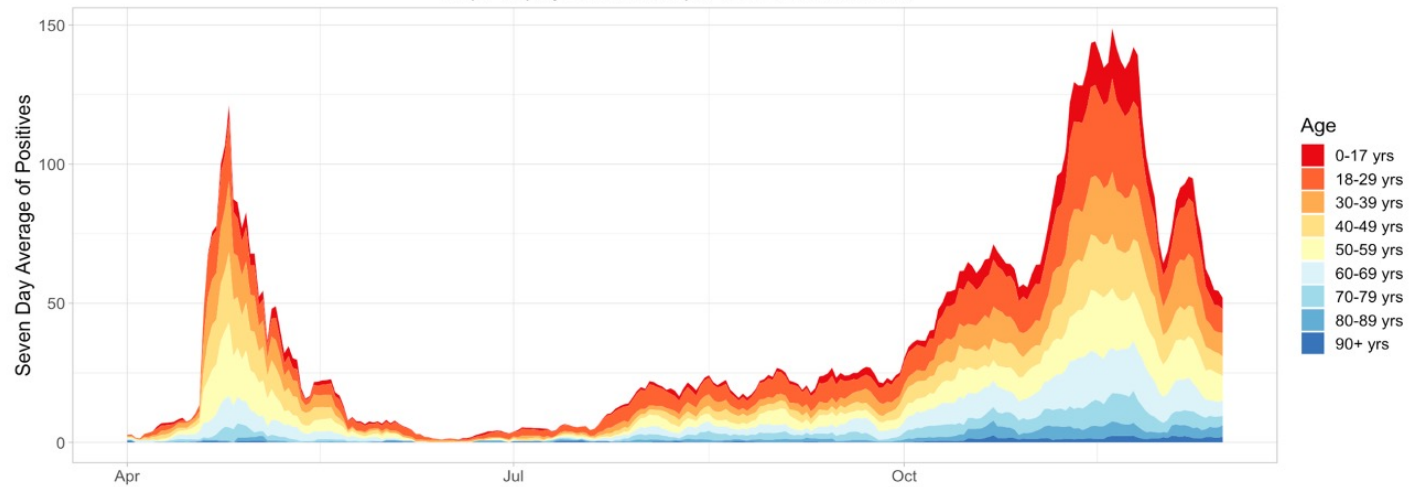
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to December 15th



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

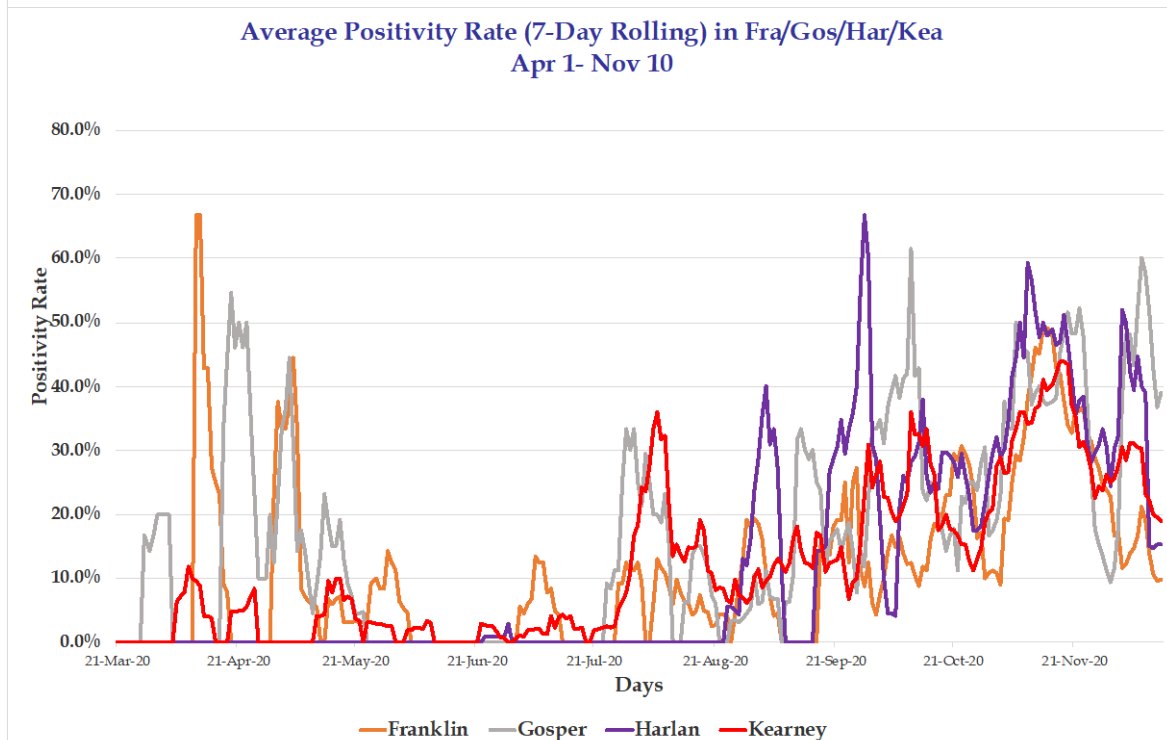
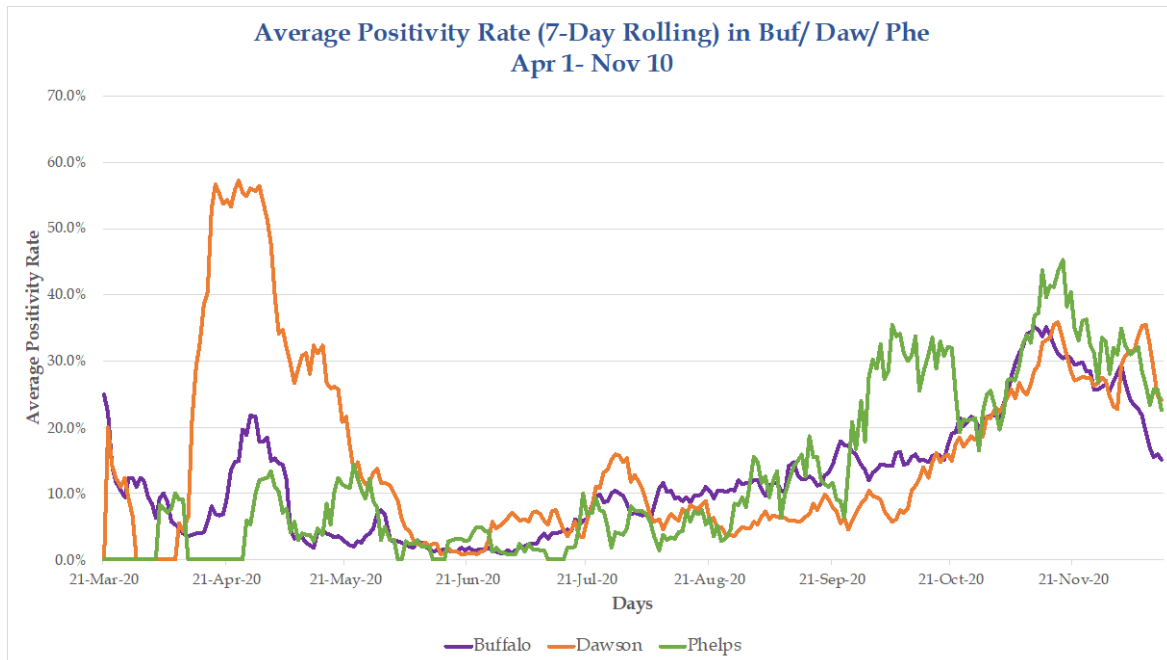
Graph displays data from April 1st to December 15th



Information Updated as of 12/15 at 8 p.m.



- The graph below describes the **daily test positivity rate (7 day rolling average)** across all counties from **April 1 to Dec 15**. Shown are test results for all people in TRPHD who are not residents or staff of residential facilities in the health district.
- Graphs are presented separately for Buffalo, Dawson and Phelps, and for Franklin, Gosper, Harlan and Kearney counties. Scales are different for both graphs.

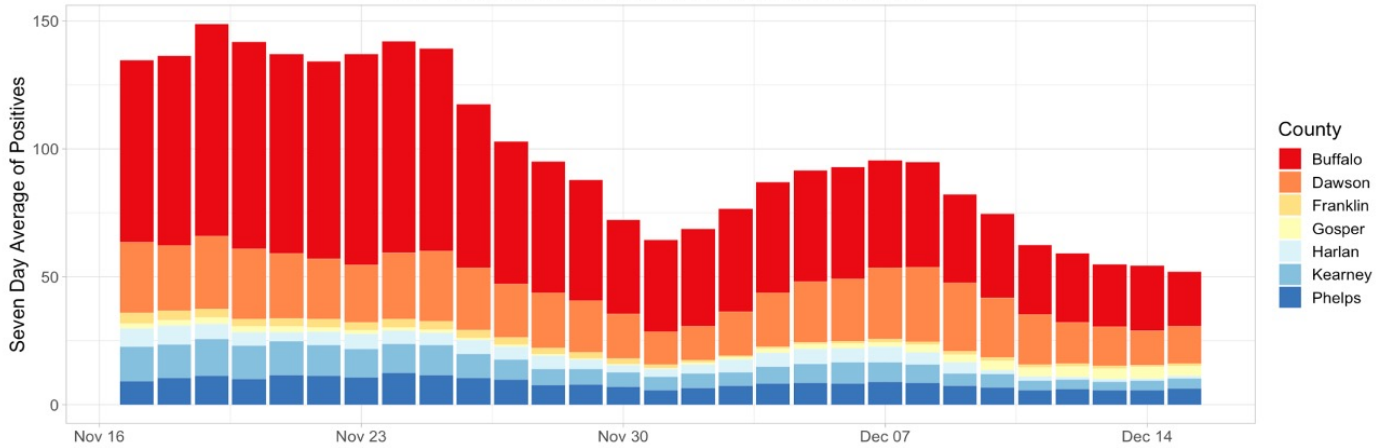




- The following bar graph describes the 7-day rolling averages of COVID-19 cases by **county** for the past four weeks (Nov 17 - Dec 15).
- The line graph describes the same data per 100,000 population.⁶ The graph also depicts the line for the United States and Nebraska.

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

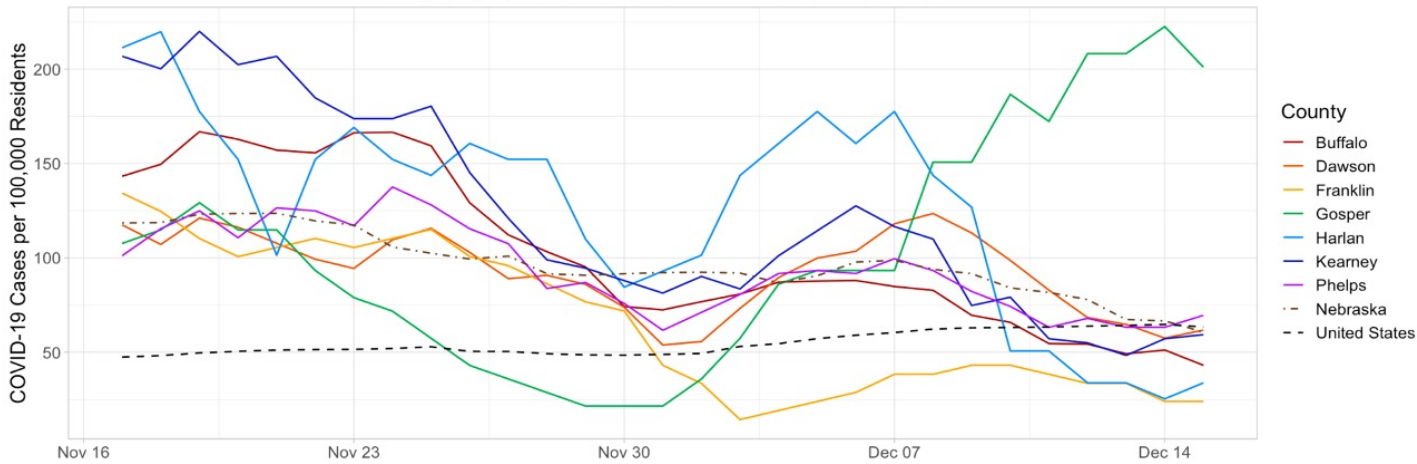
Graph displays data from November 17th to December 15th



Information Updated as of 12/15 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 November 17th to December 15th



Information Updated as of 12/15 at 8 p.m.

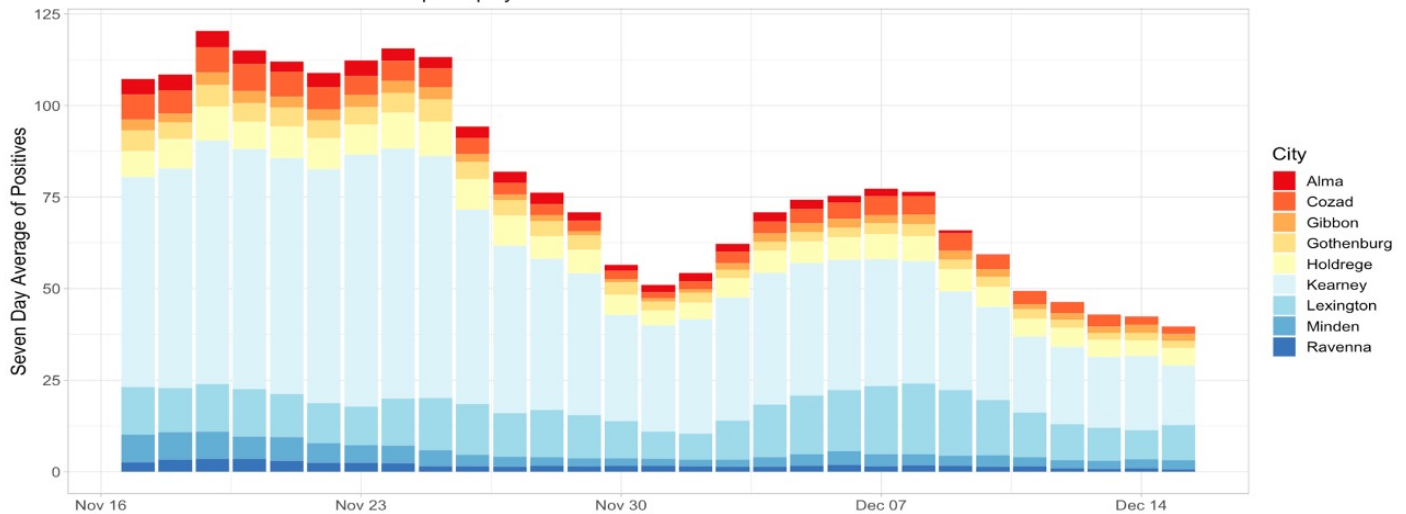
⁶ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graph describes the 7-day rolling averages by **city** for the past four weeks (Nov 17 - Dec 15) in TRPHD. The graph above shows cities with population above 1100 and the one below shows the graph for cities with under 1100 residents. The **scale is different** for both graphs.

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

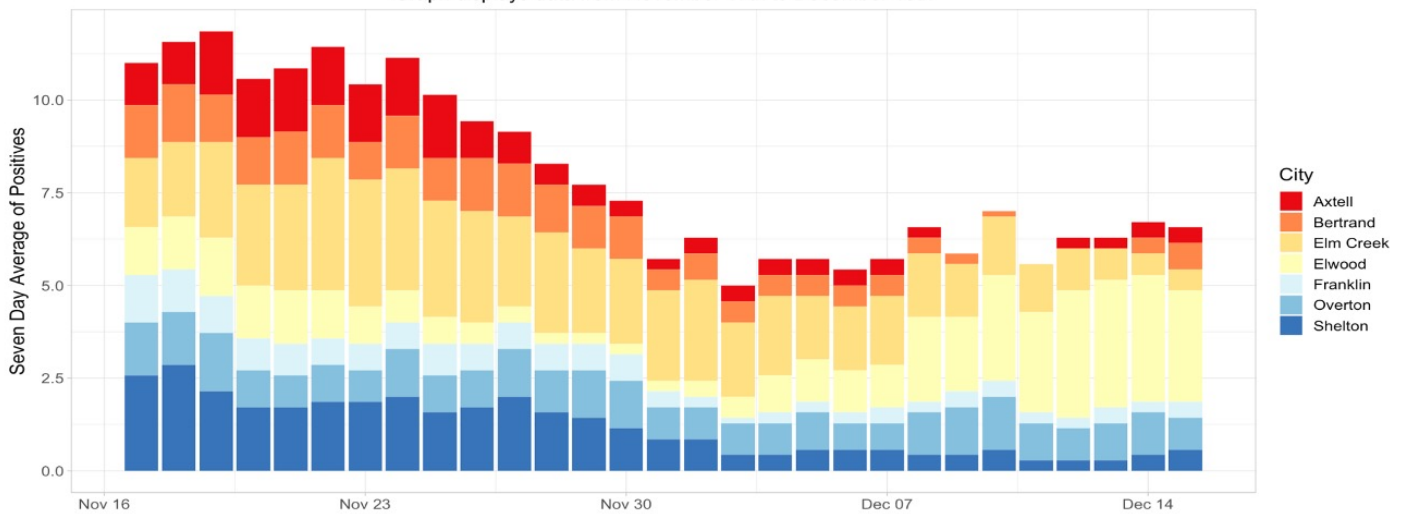
Graph displays data from November 17th to December 15th



Information Updated as of 12/15 at 8 p.m.

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

Graph displays data from November 17th to December 15th



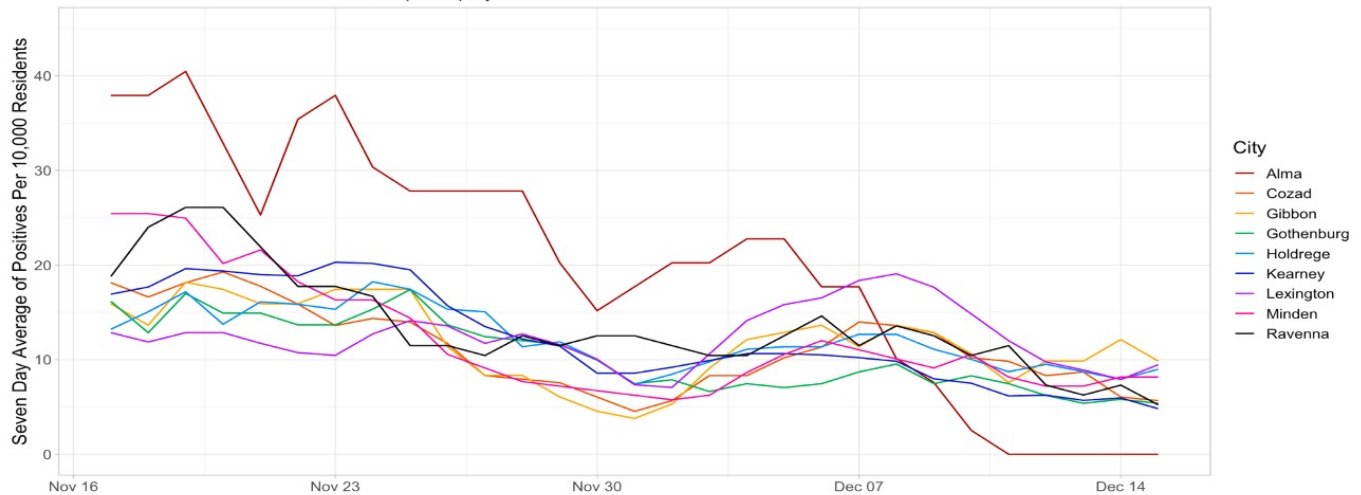
Information Updated as of 12/15 at 8 p.m.



- 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 (Nov 17 – Dec 15)⁷
- The top graph describes shows cities with population above 1100 and the one below shows the graph for cities with under 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

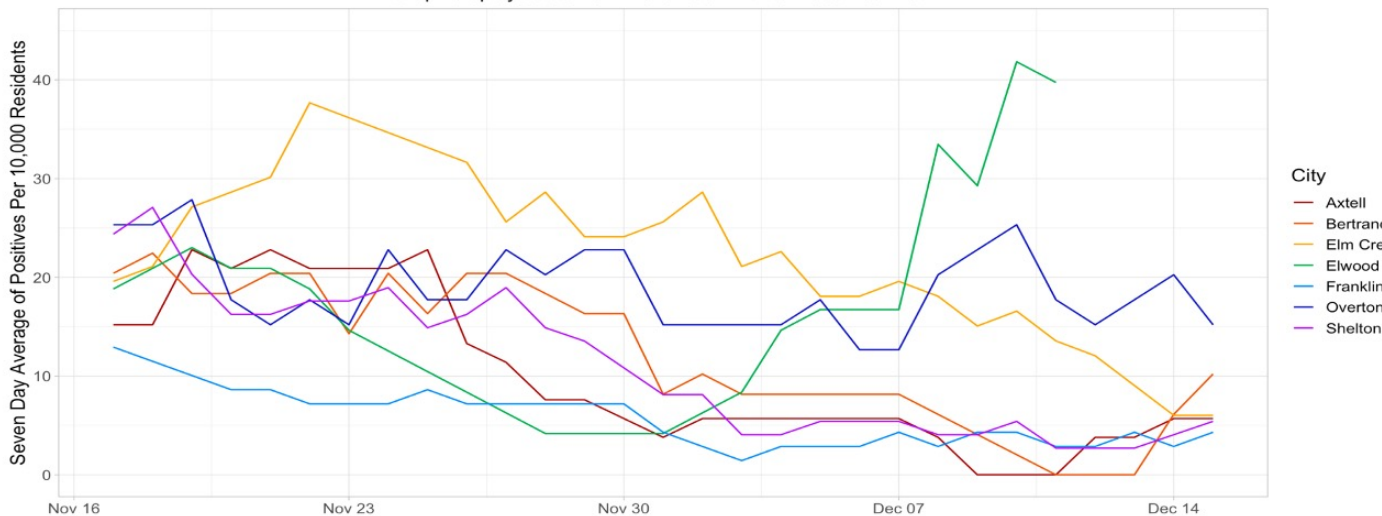
Graph displays data from November 17th to December 15th



Information Updated as of 12/15 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 November 17th to December 15th



Information Updated as of 12/15 at 8 p.m.

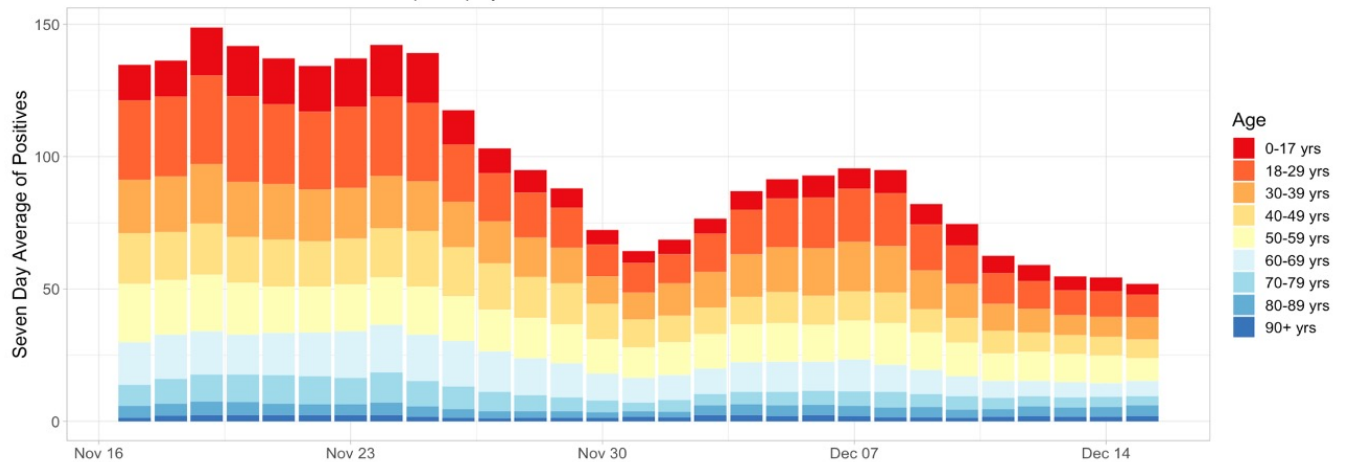
⁷ Please note: When comparing cities, we describe rates per 10,000 population. This is roughly equal to the total population of Lexington (~10,000)



- The first graph below describes the **7-day rolling average** of cases from **November 17 – December 15** by age. Tests were conducted among persons who are not residents of long-term residential facilities. 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 2 – Dec 15**). Regular and widespread testing in long term care facilities in TRPHD began in early October.

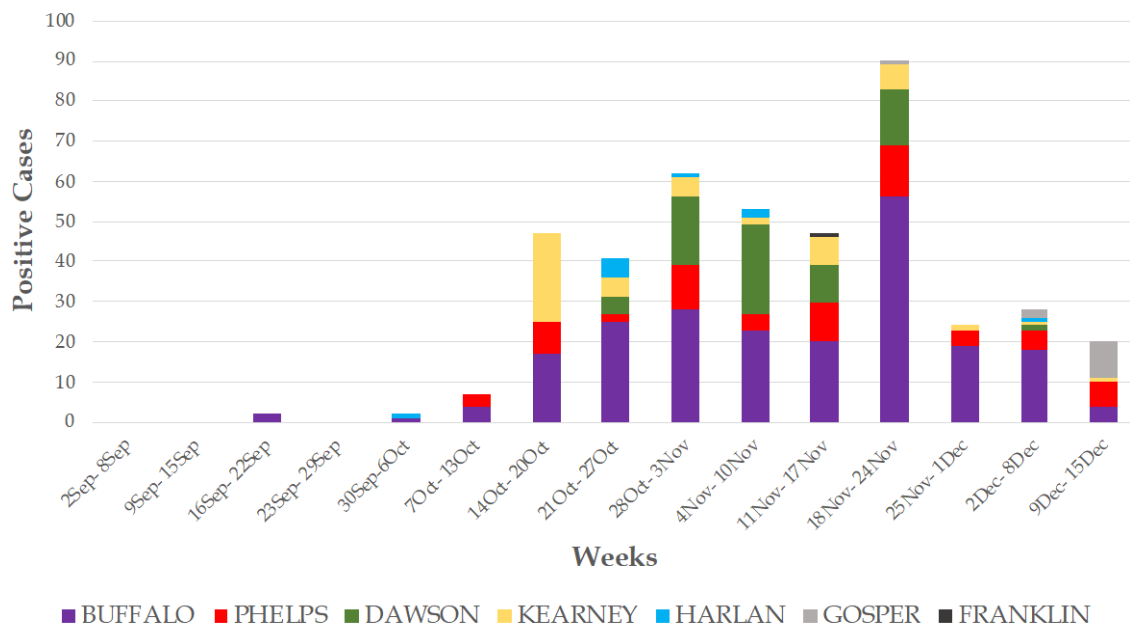
7 Day Rolling Average of COVID-19 Cases in Two Rivers by Age

Graph displays data from November 17th to December 15th



Information Updated as of 12/15 at 8 p.m.

Residential Facilities: TRPHD Positive Cases by Week: Sep 2 - Dec 15





Weekly summary

- After briefly rising last week, the daily average of positive cases has dropped by over 60% across the district. Meanwhile, the number of tests done per week outside residential facilities remain comparable to previous weeks (around 2000). For more details on testing statistics, see weekly report (Dec 9 - Dec 15 <https://www.trphd.org/covid-19/>).
- Although rates are dropping overall, isolated outbreaks (especially in long term care facilities) remain cause for concern. We are continuing to closely track ongoing outbreaks in the district at care facilities.
- Case counts have dropped across all counties after a brief spike last week. Gosper was the only county that saw a significant increase in case counts last week, as cases were concentrated in Elwood city.
- Positivity rates have dropped dramatically over the past week to below 20% positives results for all tests conducted outside residential facilities. This is the first time the positivity rate has dropped below 20% in over a month. Excluding residential facilities, about a fourth of all tests were returned positive in the past 4 weeks.

To conclude, daily case counts and positivity rates have decreased dramatically over the past week in Two Rivers Health District. Daily case rates that had begun to rise last week have dropped precipitously across almost all counties in the district. Although ongoing outbreaks in long-term care facilities throughout the district are being closely monitored, the drop in case counts is reason for cautious optimism. Sustained drop in case counts over the next couple weeks could indicate a longer-term trend of decreasing case counts. There is improved ICU availability and lower COVID-related medical/surgical bed usage across hospitals in the district this week compared to last weeks. 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 populations 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

- 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.
- Cumulative cases refer to all cases that have been confirmed in the district since the beginning of the pandemic in TRPHD (March 19)
- 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
- 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.
- For calculation, we use the 2019 mid- year estimate (American Community Survey, ACS) and data from The Atlantic’s COVID tracking project (<https://covidtracking.com/data>)



APPENDIX 2

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.