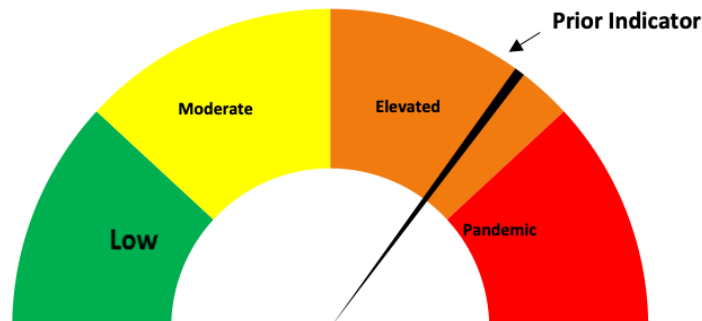


Risk Dial Oct 22 2020



**Risk Dial for COVID-19**  
**Two Rivers Public Health**  
**Published October 22, 2020**

- Testing turnaround time has improved in the last week, contact tracing efforts have been strengthened and have been able to reach a vast majority of potentially exposed residents.
- Hospital bed availability is steady, and ICU bed availability remains high. Testing continues to be offered regularly at seven sites across the district.
- Positivity rates and case numbers have increased to far higher levels than earlier weeks. The weekly rise and fall in case rates across counties show a general upward trend. TRPHD is seeing roughly the same number of test results each week.
- The rise of newly diagnosed positives cases among 60-89-year olds and residents of smaller cities which are removed from the I-80 corridor is concerning. (see weekly report for details)
- For these reasons, we have shifted the risk dial by a minimal amount towards 'pandemic' mode, noting the increase in cases but also accounting for improved test turnaround and stable hospital and ICU bed occupancy.
- The Risk Dial for the district continues to remain "Elevated".



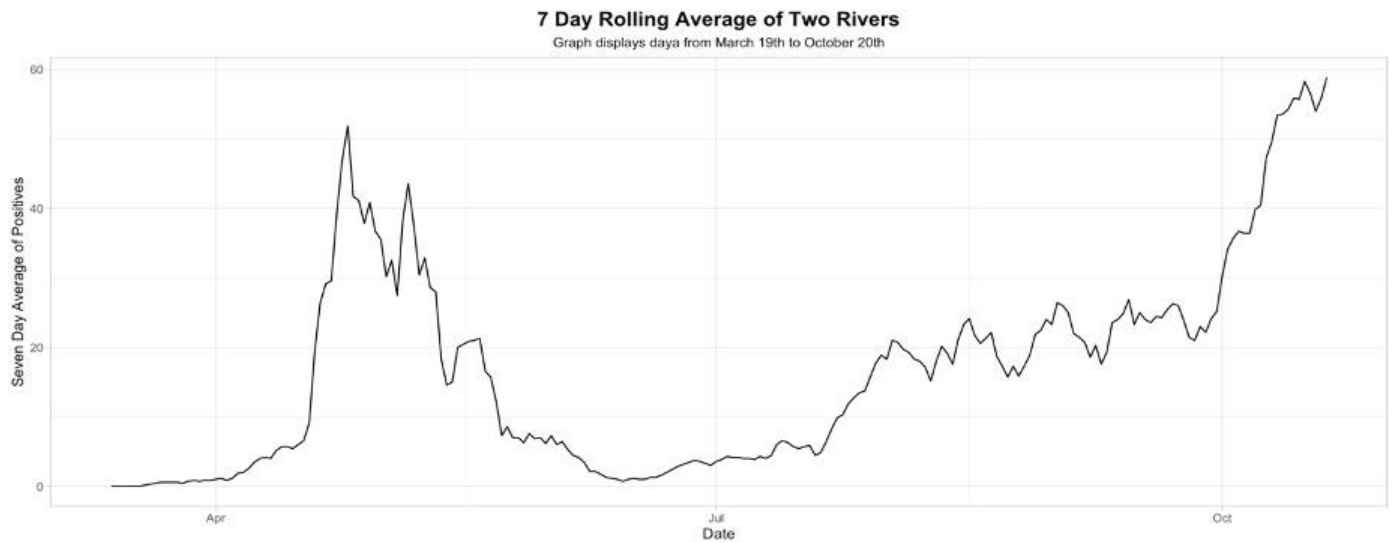
## Weekly report Oct 14 - Oct 20 2020

### Overview

- Figs 1-2 describe the 7-day rolling average of COVID-19 cases in TRPHD from April 1 to October 20, and describes the age of patients across time.
- Fig 3 describes the progress of the pandemic in the past 3 months in TRPHD, showing the daily average per county from July 1 to October 20.
- Fig 4 describes the average weekly positivity rate in TRPHD from July 1 – October 20, also describing the cumulative cases reported across the district. The curve is fitted with a second-degree polynomial regression model, Pearson’s coefficient ( $R^2$ ) is displayed.
- Table 1 describes the persons tested and positive cases for the past one week and four weeks. Persons are described by county of residence, age and gender, and positivity rates are displayed
- Fig 5 describes the rolling average of persons tested, positive cases and weekly positivity rates from Sep 23 – Oct 20 (4 weeks)
- Fig 6 describes the positive cases from Sep 23- Oct 4 by age
- Fig 7 describes the positive cases from Sep 23- Oct 4 by county of residence and Fig 8 describes average positives per 100,000 residents (approximately equal to TRPHD population).
- Fig 9 describes the positive cases from Sep 23- Oct 4 by city of residence and Fig 10 describes average positives per 100,000 residents
- Table 2 describes the shares of tests conducted in each county, as well as by age and gender of persons tested. Also shown is the place where people accessed testing and proportions



**Fig 1 (below)** describes the 7-day rolling average of cases in TRPHD from **March 19 - October 20**.



**Fig 2 (below)** describes the 7-day rolling average of positive cases from **April 1 - Oct 20** showing age categories of patients.

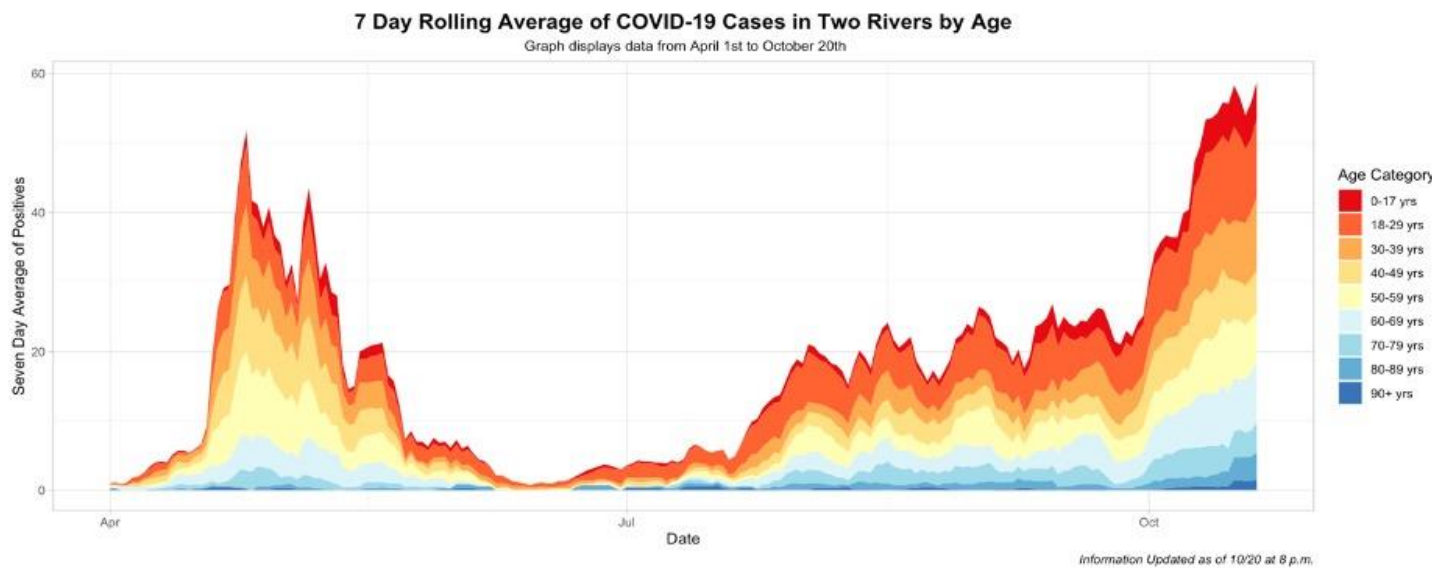




Fig 3 (below) describes the 7-day rolling average of positive cases from July 1 - Oct 20 by county of residence

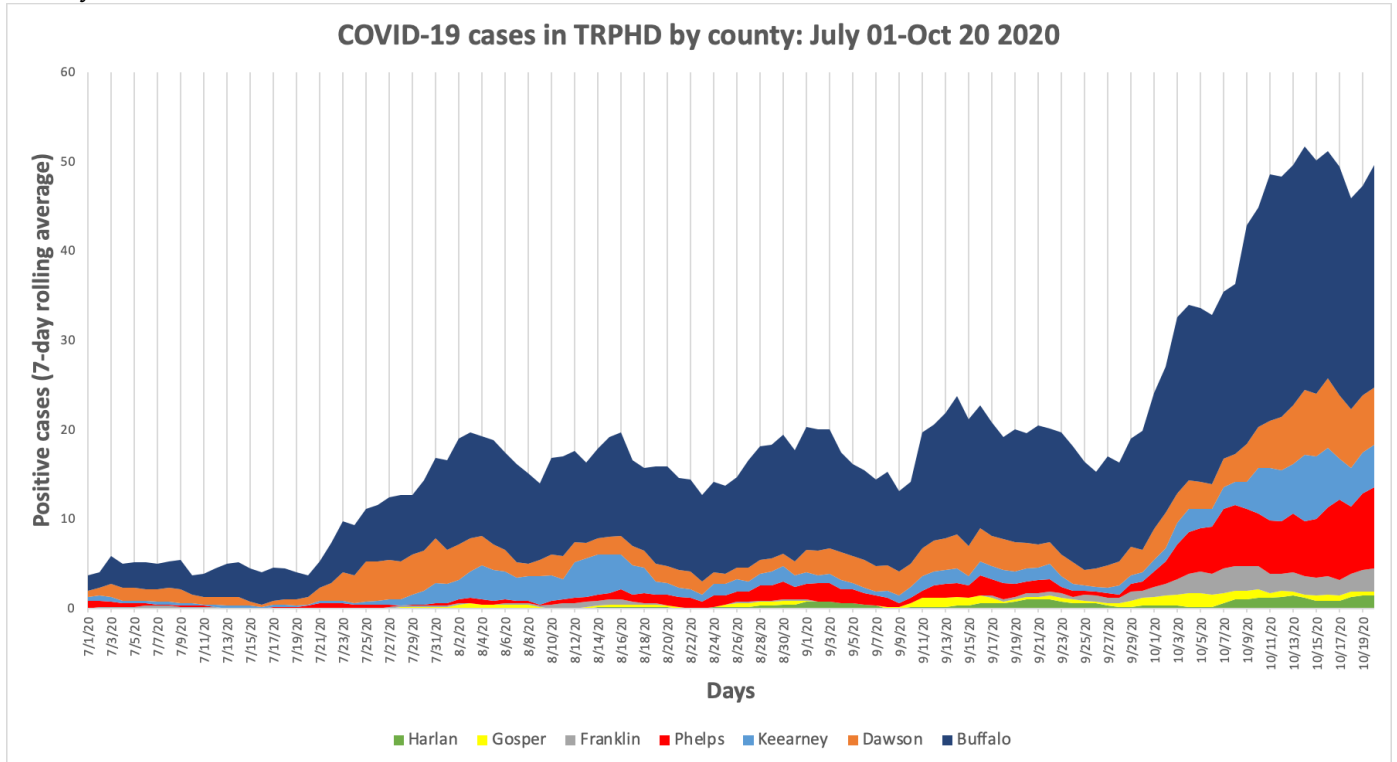
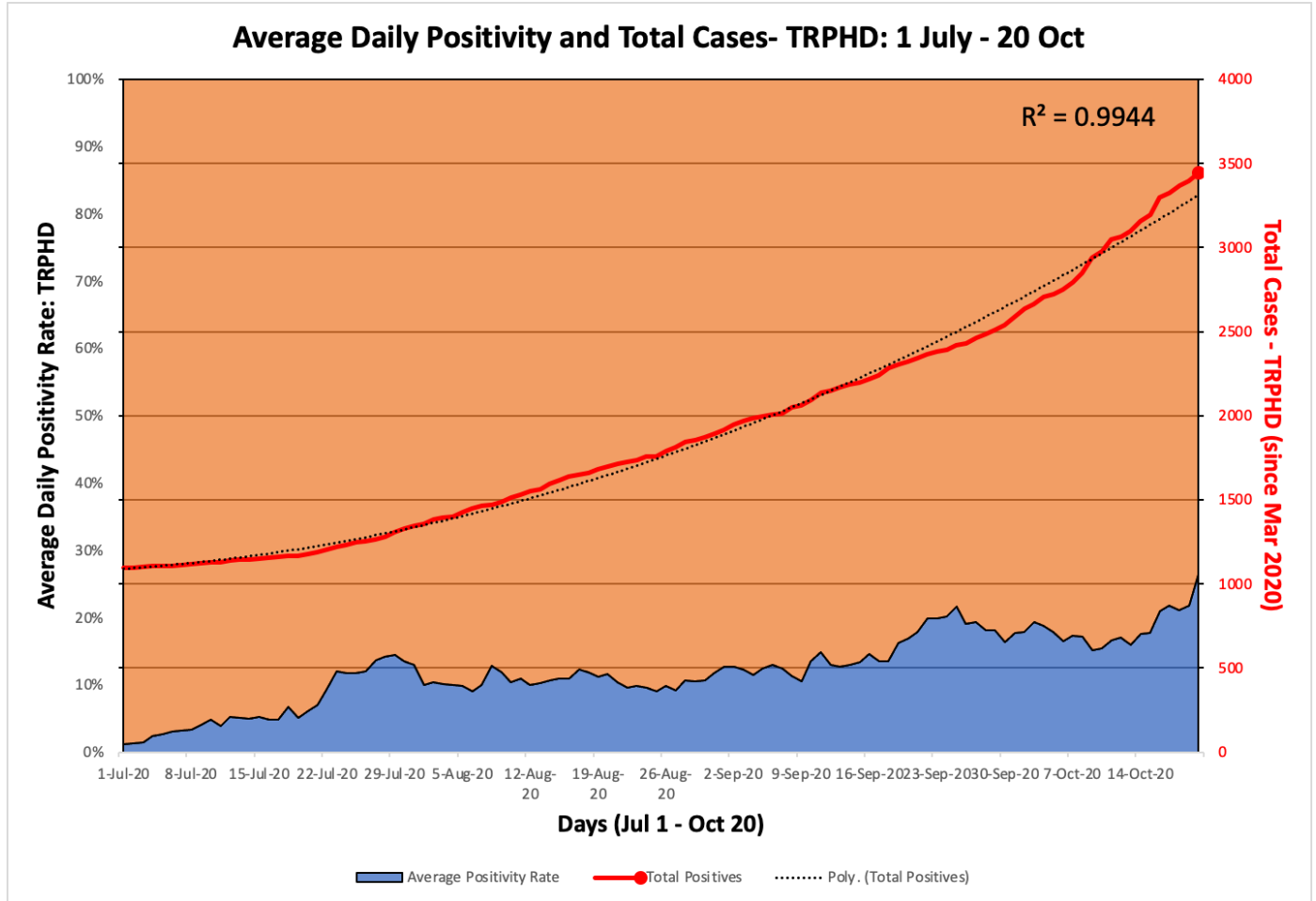




Fig 4 (below) describes the average daily positivity rate across TRPHD from July 1 - Oct 20 with the cumulative cases across the district since March plotted on the z-axis





**Weekly report Oct 14 - Oct 20 2020**

Reporting tests done on patients residing in **Buffalo, Dawson, Phelps, Gosper, Harlan, Kearney and Franklin** counties

**Reporting period :** Oct 14 – Oct 20 2020 (1 week)  
& Sep 23 – Oct 20 2020 (4 weeks)

**Overall testing – previous week**

A total of 1341 persons were tested in the past week, of whom 350 were positive, and 991 were negative. The data issues that were noted last week seem to have been resolved to some extent – only about 6% of results reported this week were flagged for inconsistent resolution. The majority of these tests were negative, and individuals have been contacted and informed of their results by ordering facilities in a timely manner.

	<b>Negative</b>	<b>Positive</b>	<b>Total</b>
<b>Number</b>	991	350	1341
<b>Percentage</b>	73.9%	26.1%	100.0%

**Overall testing – previous month**

A total of 5836 persons were tested in the past 4 weeks, of whom 1085 were positive, and 4751 were negative. The results are displayed below.

	<b>Negative</b>	<b>Positive</b>	<b>Total</b>
<b>Number</b>	4751	1085	5836
<b>Percentage</b>	81.4%	18.6%	100.0%

Table 1 gives details of positive cases done by county, age categories and gender.

**Table 1: Details of total and positive tests – 1 week and 4 weeks**

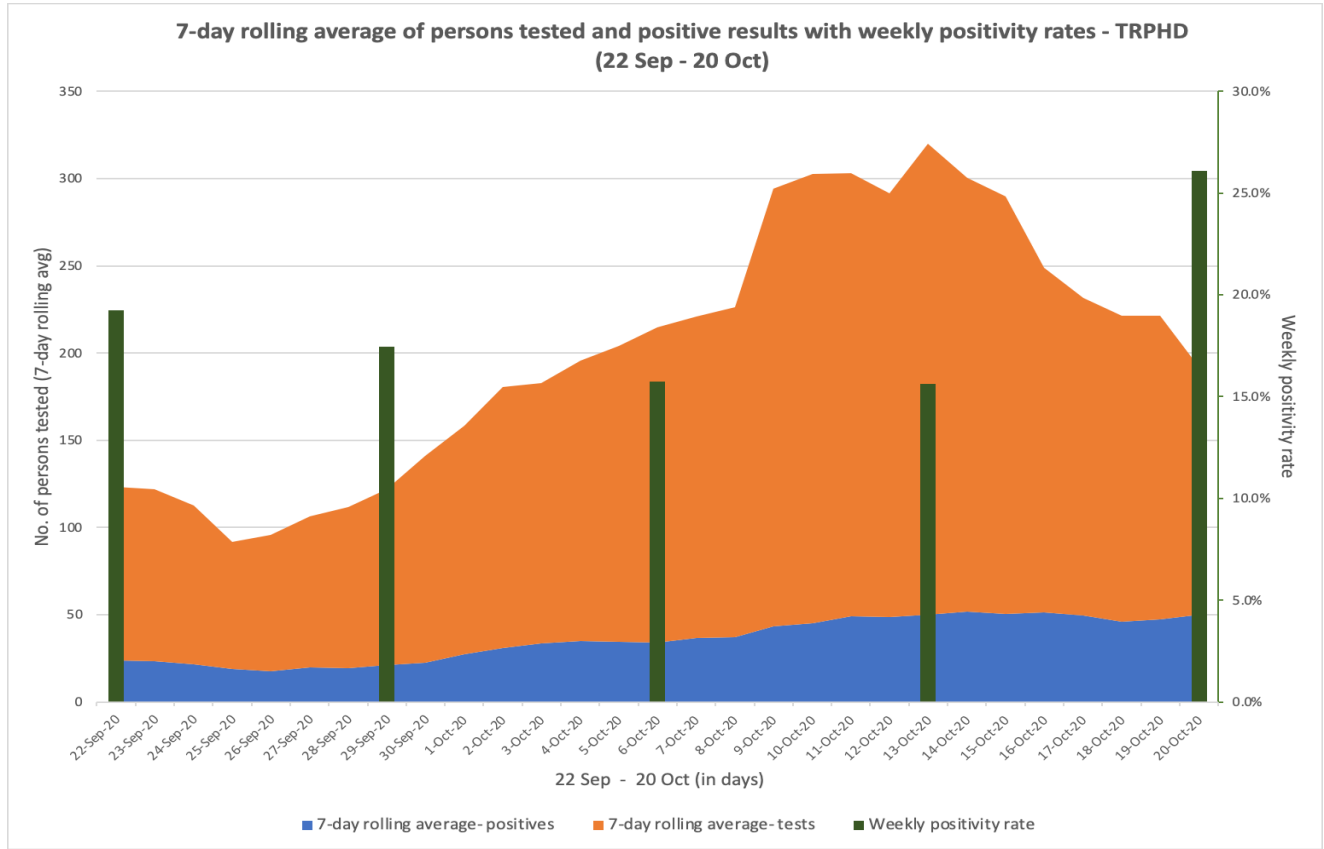
	<b>Oct 14 – Oct 20 (1 week)</b>			<b>Sep 23 – Oct 20 (4 weeks)</b>		
	<b>Total persons tested</b>	<b>Positive cases</b>	<b>P. rate (%)</b>	<b>Total persons tested</b>	<b>Positive cases</b>	<b>P. rate (%)</b>
<b>County</b>						
Buffalo	678	174	25.7%	3126	594	19.0%
Dawson	243	45	18.5%	1009	132	13.1%
Franklin	55	18	32.7%	284	56	19.7%
Gosper	15	3	20.0%	61	20	32.8%
Harlan	35	10	28.6%	173	29	16.8%
Kearney	119	33	27.7%	337	95	28.2%
Phelps	172	64	37.2%	748	155	20.7%



Data missing/ not disclosed	24	3	12.5%	98	4	4.1%
<b>Total</b>	<b>1341</b>	<b>350</b>	<b>26.1%</b>	<b>5836</b>	<b>1085</b>	<b>18.6%</b>
<b>Age (in yrs)</b>						
0-17	178	32	18.0%	674	85	12.6%
18-29	320	68	21.3%	1277	240	18.8%
30-39	195	64	32.8%	760	166	21.8%
40-49	164	40	24.4%	696	150	21.6%
50-59	174	45	25.9%	779	152	19.5%
60-69	168	46	27.4%	694	148	21.3%
70-79	84	27	32.1%	397	87	21.9%
80-89	39	19	48.7%	339	43	12.7%
90+	19	9	47.4%	220	14	6.4%
<b>Total</b>	<b>1341</b>	<b>350</b>	<b>26.1%</b>	<b>5836</b>	<b>1085</b>	<b>18.6%</b>
<b>Gender</b>						
Female	730	186	25.5%	2795	556	19.9%
Male	591	146	24.7%	1967	449	22.8%
Data missing/ not disclosed	20	18	90.0%	1074	80	7.4%
<b>Total</b>	<b>1341</b>	<b>350</b>	<b>26.1%</b>	<b>5,836</b>	<b>1,085</b>	<b>18.6%</b>



**Fig 5 (below)** describes the 7-day rolling average of persons tested across the district over the past 4 weeks, as well as the 7-day rolling average of positive cases. Plotted on the z-axis is the weekly positivity rate for the entire district.



**Fig 6 (below)** describes 7-day rolling average of positive cases by age for the last 4 weeks.

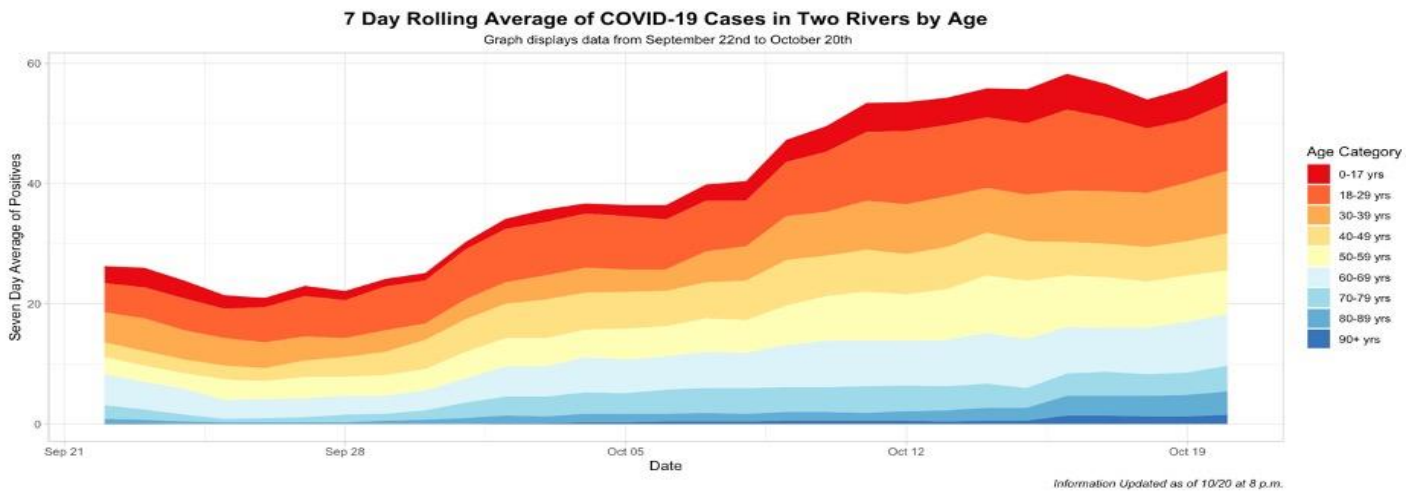






Fig 7 (below) describes the 7-day rolling average of cases per county for the last 4 weeks.

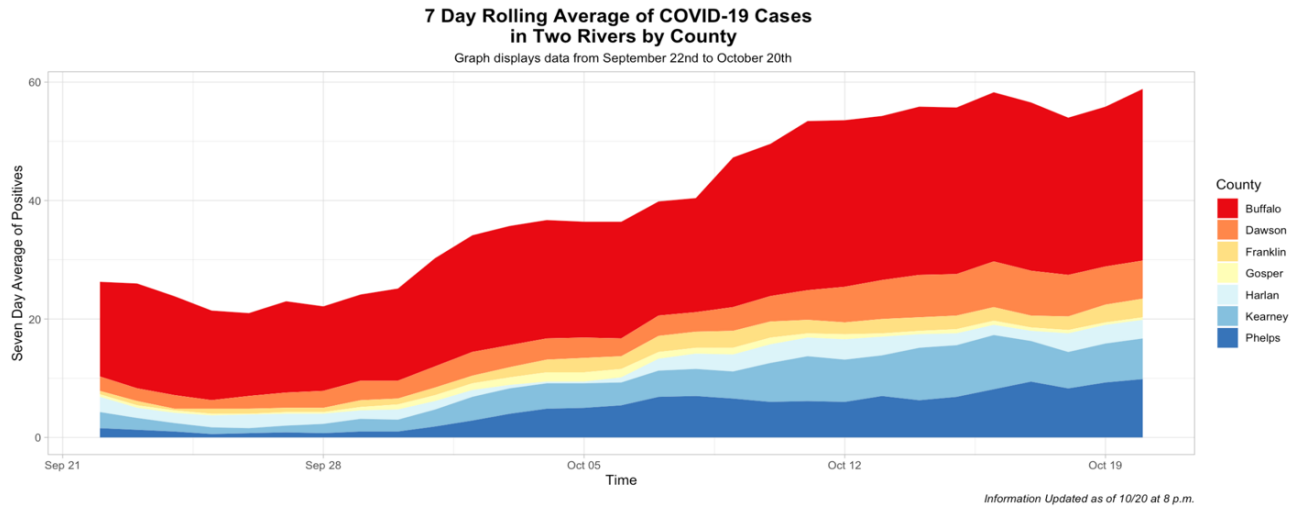
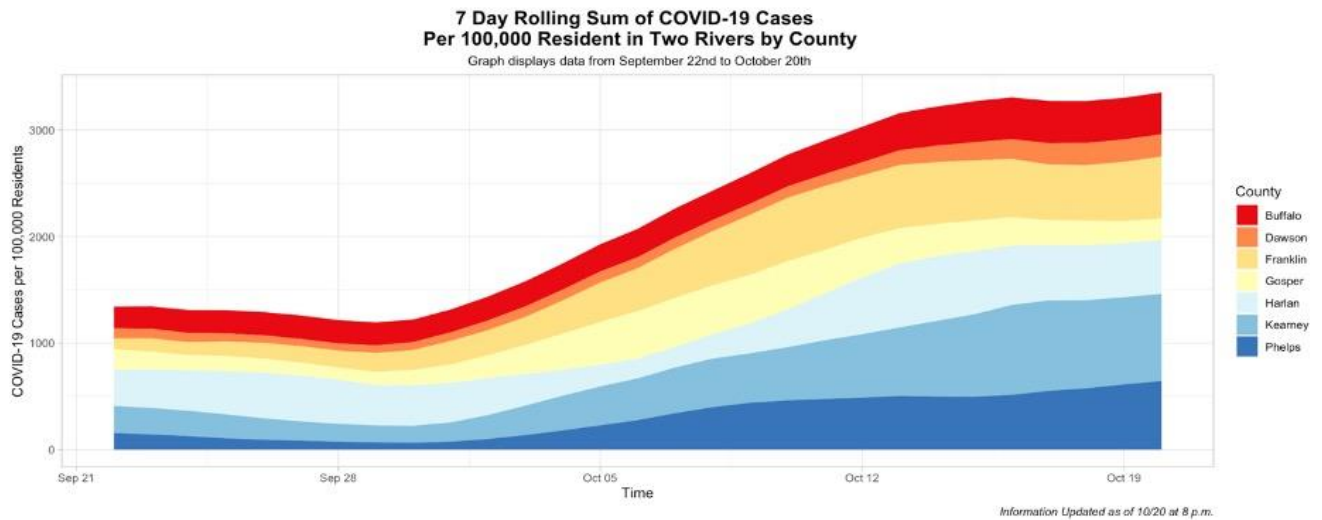
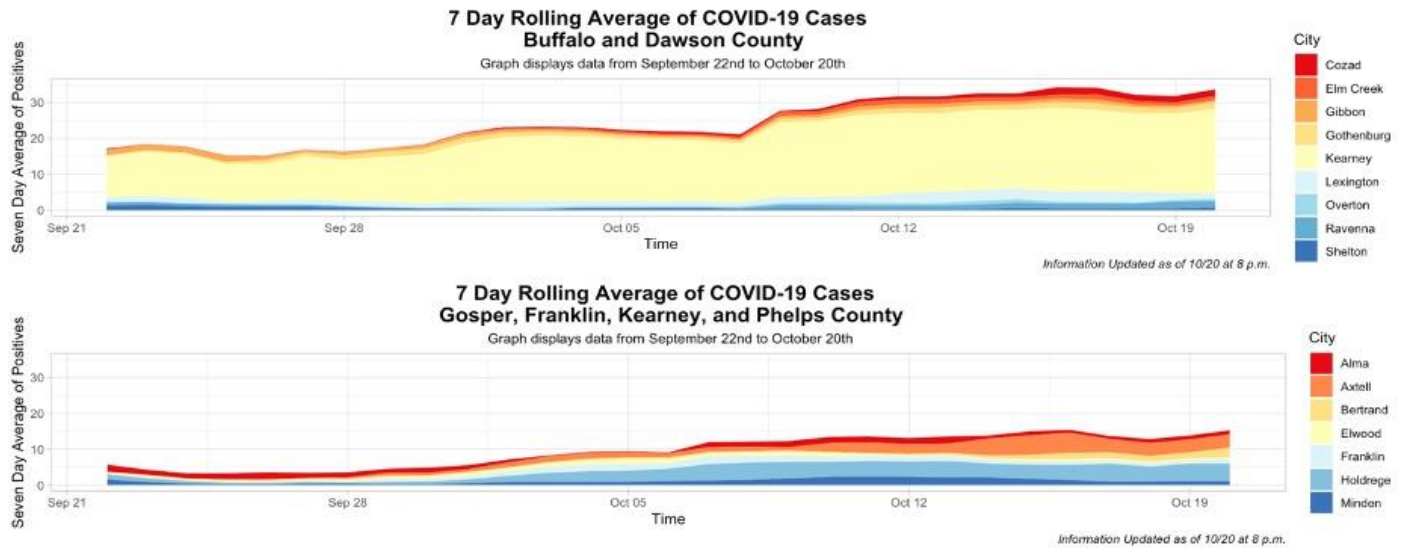


Fig 8 (below) presents 7-day rolling average per 100,000 persons across seven counties for the last 4 weeks. Population estimates used are from the American Community Survey (ACS) mid-year estimate 2019

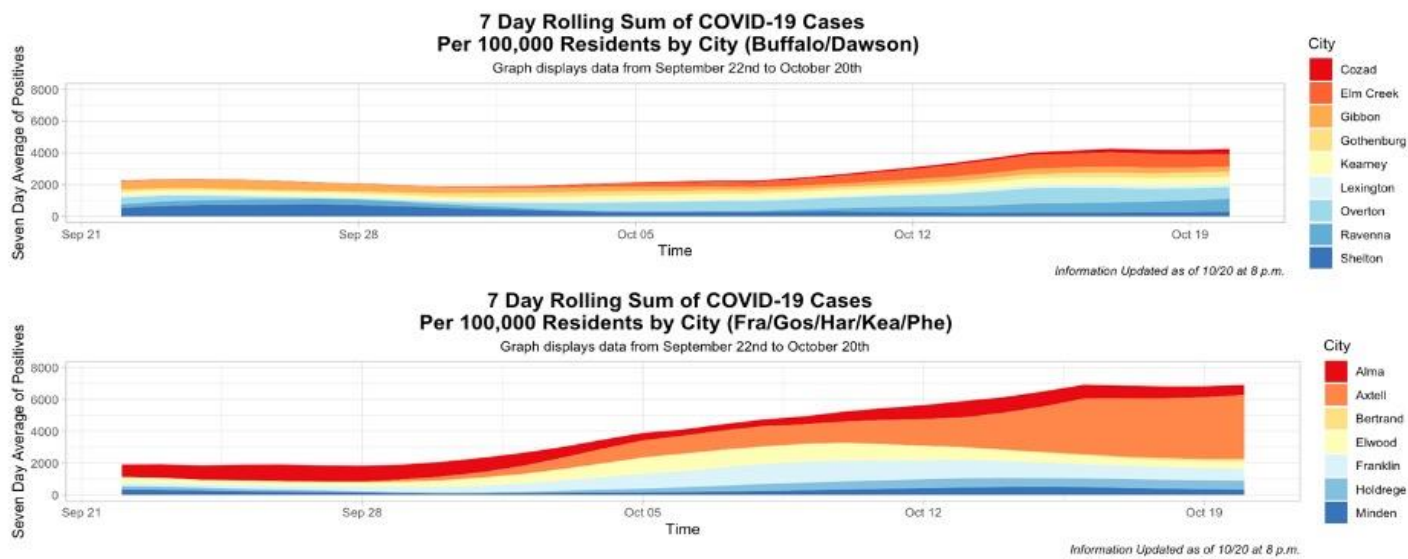




**Fig 9 (below)** depicts the 7-day rolling average for the past four weeks by city. Cities with cumulative count over 30 are included. The top graph shows cities in Buffalo and Dawson counties and the bottom shows all other cities. The scale is identical for both graphs.



**Fig 10 (below)** is the 7-day rolling average per 100,000 population at the city level for the past four weeks. The top graph shows cities in Buffalo and Dawson counties and the bottom shows all other cities. The scale is identical for both graphs. Population estimates are from the American Community Survey (ACS) mid-year estimate 2019





**Table 2: Total tests in TRPHD - past week and past 4 weeks - proportions by county, age and gender**

	Oct 14 - Oct 20 (1 week)		Sep 23 - Oct 20 (4 weeks)	
	Total persons tested	Percentage of tests by county/ age group/ gender (%)	Total persons tested	Percentage of tests by county/ age group/ gender (%)
<b>County</b>				
Buffalo	678	50.6%	3126	53.6%
Dawson	243	18.1%	1009	17.3%
Franklin	55	4.1%	284	4.9%
Gosper	15	1.1%	61	1.0%
Harlan	35	2.6%	173	3.0%
Kearney	119	8.9%	337	5.8%
Phelps	172	12.8%	748	12.8%
Data missing/ not disclosed	24	1.8%	98	1.7%
<b>Total</b>	<b>1341</b>	<b>100.0%</b>	<b>5836</b>	<b>100.0%</b>
<b>Age (in yrs)</b>				
0-17	178	13.3%	674	11.5%
18-29	320	23.9%	1277	21.9%
30-39	195	14.5%	760	13.0%
40-49	164	12.2%	696	11.9%
50-59	174	13.0%	779	13.3%
60-69	168	12.5%	694	11.9%
70-79	84	6.3%	397	6.8%
80-89	39	2.9%	339	5.8%
90+	19	1.4%	220	3.8%
<b>Total</b>	<b>1341</b>	<b>100.0%</b>	<b>5836</b>	<b>100.0%</b>
<b>Gender</b>				
Female	730	54.4%	2795	47.9%
Male	591	44.1%	1967	33.7%
Data missing/ not disclosed	20	1.5%	1074	18.4%
<b>Total</b>	<b>1341</b>	<b>100.0%</b>	<b>5,836</b>	<b>100.0%</b>
<b>Testing facility</b>				
Private facility - Phe/Kea/Fra/Gos/Har	56	4.2%	198	3.39%
Private facility - Buffalo	352	26.2%	1,345	23.05%
Private facility - Dawson	89	6.6%	387	6.63%
Private facility - outside TRPHD	140	10.4%	407	6.97%
TestNebraska.com	512	38.2%	2,505	42.92%
Other	192	14.3%	994	17.03%
<b>Total</b>	<b>1341</b>	<b>100.0%</b>	<b>5836</b>	<b>100.0%</b>



### Weekly summary

- For this week's summary, we looked at COVID-19 incidence in Two Rivers area for the past 33 weeks, disaggregating further by age. (figs 1&2) There are two distinct phases of the outbreak, and we focus on the second wave of cases following July 1.
- We look at the past 16 weeks (figs 2&3), noting the increase in absolute number of cases across counties as well as the rising daily positivity rate across the period. The cumulative cases (calculated from March 19 but displayed since July 1) is plotted on a second-degree polynomial curve ( $R^2 = 0.994$ ,  $p < .001$ ).
- Lastly, we examine the most recent increase in cases over the past week and the past 4 weeks (figs 5-10) described as absolute numbers and averaged to 100,000 population. We can see the increase in positivity rates across time and explore the possible sources for the recent increase in cases, including less densely populated counties.
- The cumulative cases across Two Rivers Health District show a clear upward trend. The continued uptick in detected cases in Buffalo county, specifically Kearney city and surrounding towns like Elm Creek. Kearney city has been joined by increasing case numbers in cities like Axtell, Bertrand and Holdrege.
- This can be seen in figs 7-10. The emergence of a possible outbreak in Axtell can be seen in the rolling average of cases and the rate of increase per 100,000 residents in Kearney county over the past two weeks.
- Of particular concern is the increased positivity rates among 60-69, 70-79 and 80-89 year olds, who accounted for a little over a fifth of all tests last week, but over 27% of positives.
- Of concern also is the clear long-term trend across the district, and the possible increase in daily incidence across the seven counties in the coming weeks.
- Cause for cautious optimism remains the low positivity rates across Dawson county, especially Lexington.