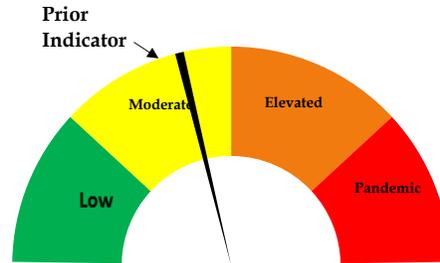




Risk Dial Mar 4, 2020



**Risk Dial for COVID-19
Two Rivers Public Health
Published March 4, 2021**

- Less than a third of ICU beds and half of all medical/surgical beds across the district are currently available, although COVID-related admissions account for less than 8% of all occupied beds; (see <https://www.trphd.org/> for details)
- Test positivity rates have risen in Franklin and Phelps in Two Rivers Health Department, while other counties have remained steady. Residential facilities in Buffalo and Phelps counties have reported new cases.
- Testing rates have fallen across all counties. Increase in incident COVID cases among residents aged 60 years and over is concerning. Revised schedules and reduced public demand for testing mean that Test Nebraska access will contract across the district in the coming weeks.
- 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
- Over 9600 residents of TRPHD have been fully vaccinated as of March 2, representing 12.8% of the eligible population (16+ years). This is the highest proportion of residents vaccinated in any health district in Nebraska to date.
- More than a third of seniors aged 65 years and more in TRPHD have been fully vaccinated. However, there is wide variation between counties; while almost 40% of seniors in Buffalo county are fully vaccinated, this proportion is less than 20% in Phelps county. See weekly report (Feb 24 - Mar 2) at <https://www.trphd.org/covid-19/weekly-reports.html> for details.
- For these reasons, the risk dial is upgraded slightly from the previous week, within the “moderate risk” region of the dial. TRPHD continues to monitor new cases and potential outbreaks across the district.



Weekly report Feb 24 – Mar 2, 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 **February 24 – March 2** (1 week) and **February 2 – March 2** (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 2** (48 weeks) across all counties.
 - We describe the 7-day rolling average ¹ of positive cases across TRPHD since April, describing cases by age categories (**Apr – Mar**)
- The second graph describes the **COVID-19 vaccines given** to residents of TRPHD by age. Data covers **December 15, 2020 - March 2, 2021**.
 - The **bar graphs** represent **total doses given each day** to residents of Buffalo, Dawson, Franklin, Gosper, Harlan, Kearney and Phelps counties²
 - The **line graph** describes the **(7-day) rolling average of doses** given for Two Rivers Health District.
- The third set of graphics describes **persons vaccinated by county** ³ for all 7 districts in Two Rivers Health District. The first diagram describes all residents of TRPHD and the second describes persons aged 65 years or over.
- The fourth set of graphs describe the daily average of cases (7-day rolling average) from **February 2 – March 2**. 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. Also shown is a graphs looking at positive cases in Residential facilities, displaying each week's cases by the county where the facility is located (**Oct – Mar**) ⁴

To conclude, COVID test positivity rates have risen in two counties in the last week, and incident cases among seniors have increased across the district. COVID-related admissions currently account for less than 8% of all medical/ surgical beds in the district. Over 9600 residents of TRPHD (12.8% of eligible population) have been fully vaccinated as of March 2, the highest proportion among health districts in Nebraska. 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.

Testing Overview

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 Total doses per day = doses of Pfizer/ Moderna COVID-19 vaccine administered that day (1st and 2nd)

³ Persons fully vaccinated = Those who received two doses of the Pfizer/ Moderna COVID-19 vaccine.

⁴ For information on residential facilities, please see appendix 3



- As of Mar 2, over 42,000 residents of Two Rivers Health District were tested at least once for COVID-19. Over 107,300 tests have been conducted since March 1, and 10,729 of these tests were positive.⁵ TRPHD has publicly notified 116 deaths due to COVID across the district.
- 53.5% of all tests conducted since March 2020 have been laboratory-based Polymerase Chain Reaction (PCR) tests.
 - However, 73% 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

	Feb 24 - Mar 2 (1 week)			Feb 2 - Mar 2 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	753	77	10.2%	2881	316	11.0%
TestNebraska	164	16	9.8%	633	73	11.5%
Residential Facility	1,613	4	0.2%	6252	15	0.2%
Lab/ Pharmacy	299	18	6.0%	945	49	5.2%
Other	127	8	6.3%	537	38	7.1%
TOTAL	2956	123	4.2%	11,248	491	4.4%

- A total of 6252 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:	Feb 24 - Mar 2 (1 week)			Feb 2 - Mar 2 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	801	1	0.1%	3413	9	0.3%
Dawson	151	0	0.0%	723	0	0.0%
Franklin	0.0	0	0.0%	0.0	0	0.0%
Gosper	4	0	0.0%	160	0	0.0%
Harlan	114	1	0.9%	264	2	0.8%
Kearney	163	0	0.0%	336	1	0.3%
Phelps	286	2	0.7%	962	3	0.3%
Outside TRPHD	94	0	0.0%	394	0	0.0%
TOTAL	1613	4	0.2%	6252	15	0.2%

⁵ 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 4996 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.

	Feb 24 - Mar 2 (1 week)			Feb 2 - Mar 2 (4 weeks)		
	Total tests conducted	Positive cases	P. rate (%)	Total tests conducted	Positive cases	P. rate (%)
County						
Buffalo	746	67	9.0%	2771	277	10.0%
Dawson	368	20	5.4%	1313	95	7.2%
Franklin	16	5	31.3%	88	8	9.1%
Gosper	15	2	13.3%	42	6	14.3%
Harlan	18	2	11.1%	78	6	7.7%
Kearney	77	7	9.1%	281	25	8.9%
Phelps	96	13	13.5%	390	51	13.1%
Data missing/ not disclosed	7	3	42.9%	33	8	24.2%
Total	1,343	119	8.9%	4,996	476	9.5%
Age (in yrs)						
0-17	148	10	6.8%	628	59	9.4%
18-29	328	24	7.3%	1235	77	6.2%
30-39	212	27	12.7%	753	91	12.1%
40-49	159	14	8.8%	595	57	9.6%
50-59	190	19	10.0%	672	76	11.3%
60-69	153	16	10.5%	595	66	11.1%
70-79	92	8	8.7%	311	34	10.9%
80-89	42	1	2.4%	147	12	8.2%
90+	19	0	0.0%	60	4	6.7%
Total	1343	119	8.9%	4996	476	9.5%
Gender						
Female	764	60	7.9%	2777	241	8.7%
Male	565	59	10.4%	2181	231	10.6%
Data missing/ not disclosed	14	0	0.0%	38	4	10.5%
Total	1,343	119	8.9%	4,996	476	9.5%



- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1 - March 2**.
- 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.

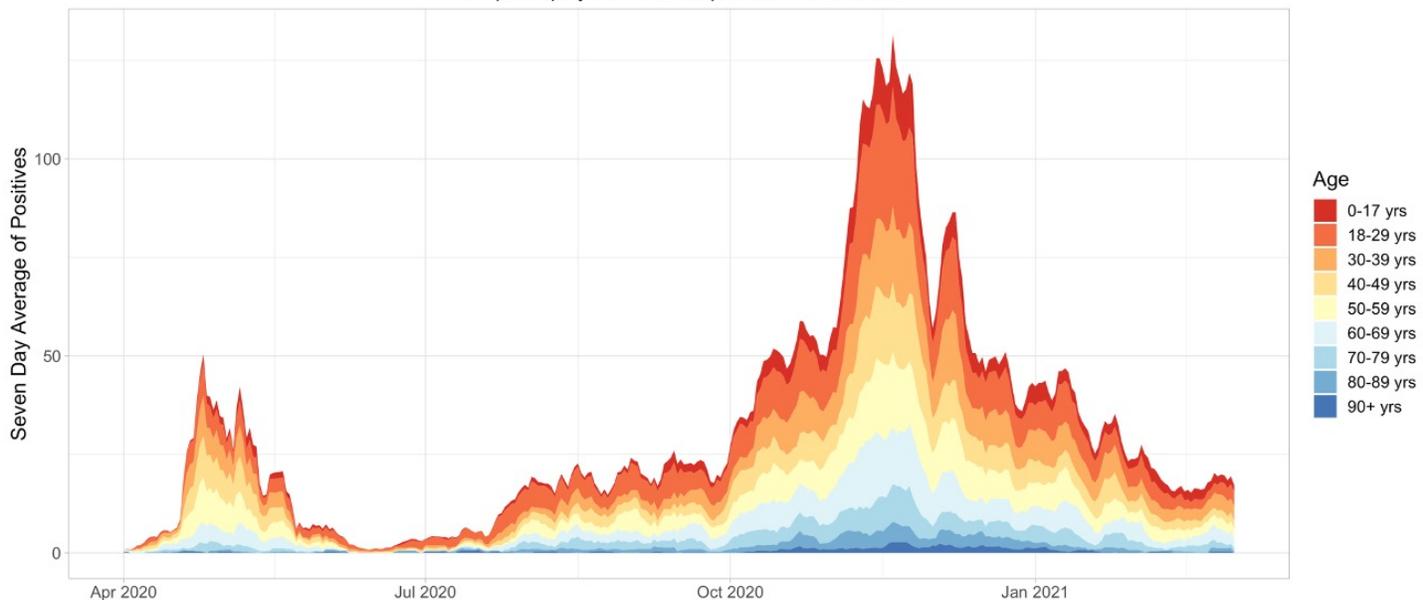
7 Day Rolling Average of Two Rivers

Graph displays data from April 1st to March 2nd



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

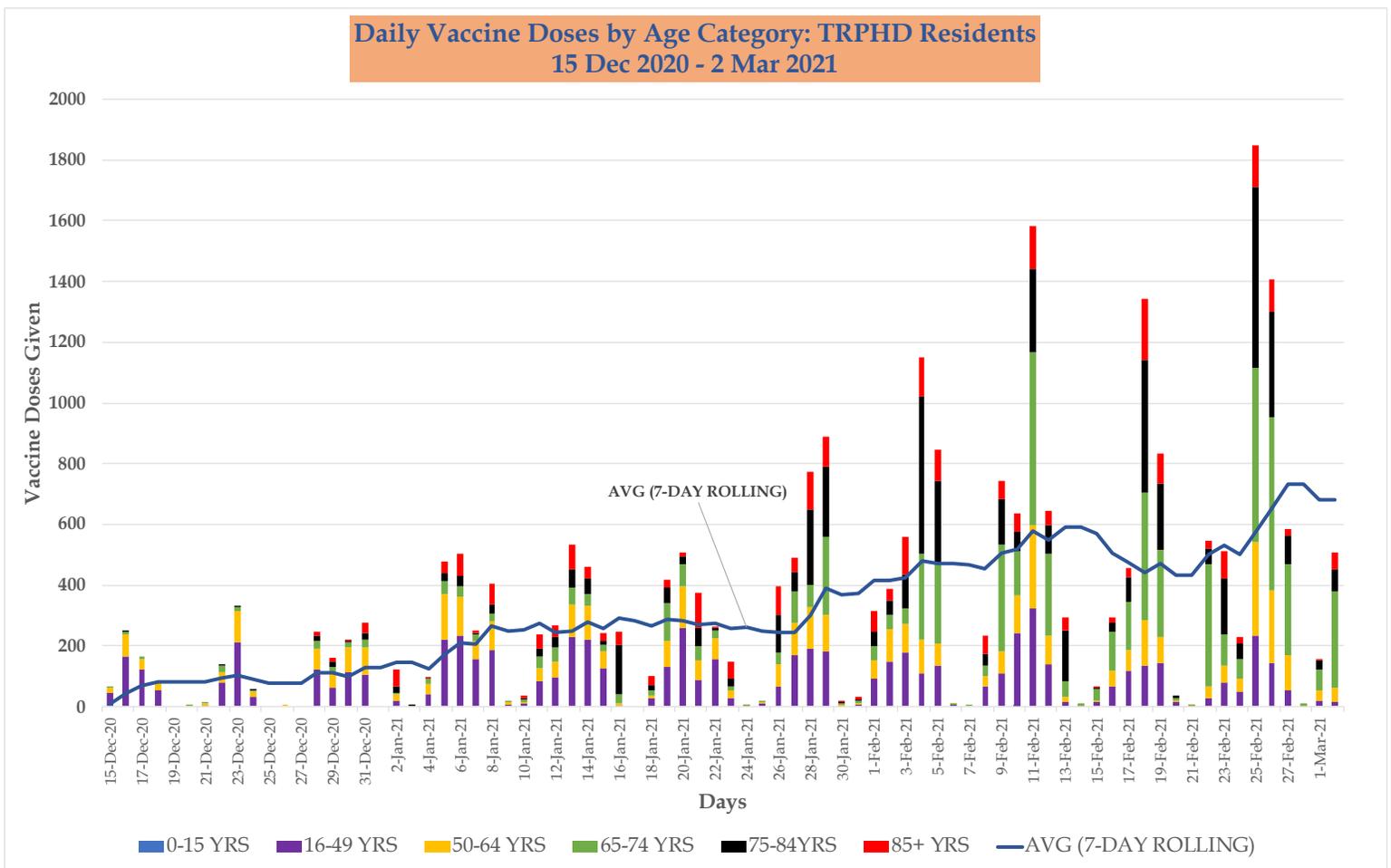
Graph displays data from April 1st to March 2nd



Information Updated as of 3/2 at 8 p.m.



- The graph below describes the **COVID-19 vaccines given** to resident of TRPHD by county. Data covers **December 15 , 2020 - March 2, 2021**.
- The **bar graphs** represent **total doses given each day** to residents of Buffalo, Dawson, Franklin, Gosper, Harlan, Kearney and Phelps counties ⁶
 - Height of each bar shows the persons vaccinated that day, further described by age category.
- The **line graph** describes the **(7-day) rolling average of doses** given for Two Rivers Health District. ⁷
 - The line represents a rolling weekly average of the number of doses received by residents of TRPHD



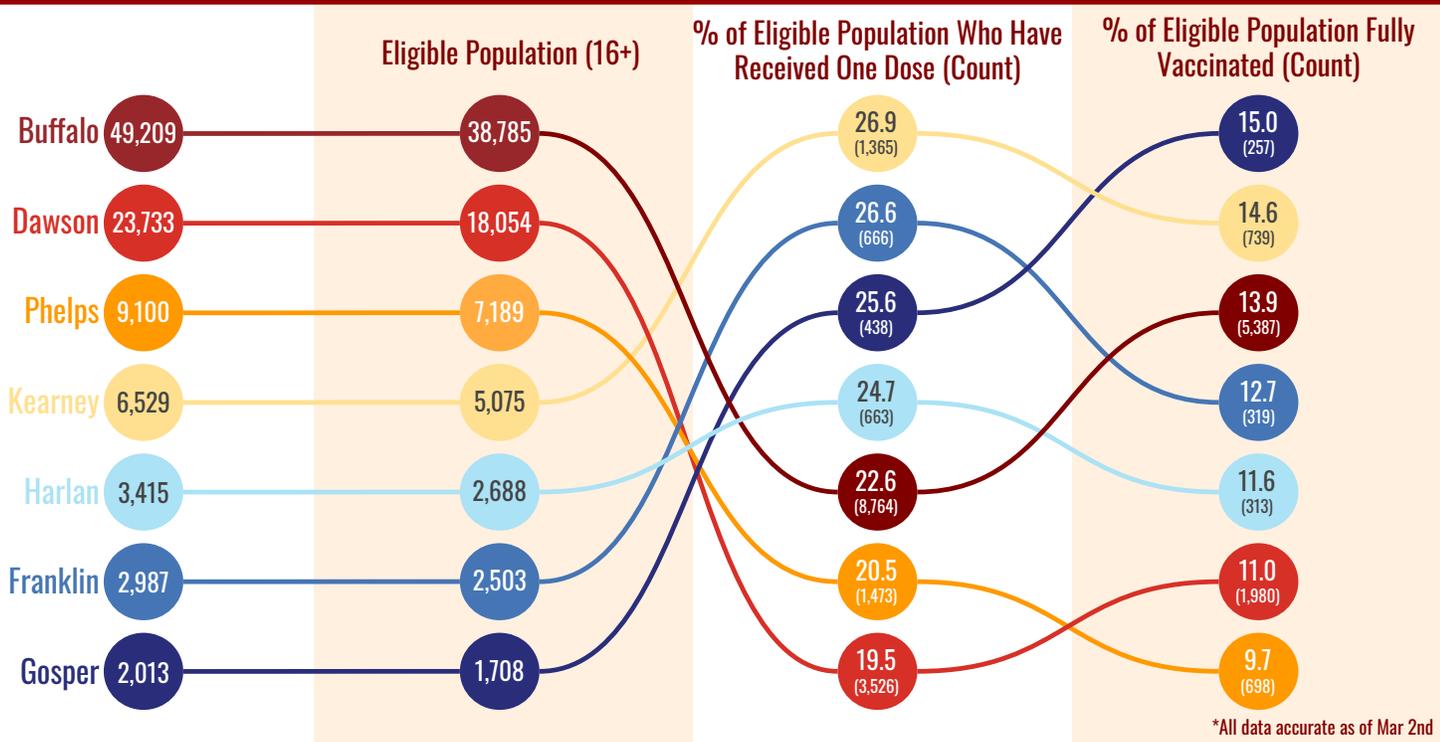
⁶ Total doses per day = doses of Pfizer/ Moderna COVID-19 vaccine administered that day (1st and 2nd)

⁷ 7-day rolling average of doses given = (sum of previous six days and the current days' doses) divided by seven



- The graphic below describes the **persons vaccinated by county** ⁸ for all 7 counties in Two Rivers Health District. Data covers **Dec 15 , 2020 - March 2, 2021**.
- The **graphic** describes all persons who have received one or two doses ⁹ by date. We describe vaccine recipients as a proportion of the eligible population in the county (16+ years). Data is from the 2019 ACS survey. ¹⁰
 - Each colored circle corresponds to residents of Buffalo, Dawson, Franklin, Gosper, Harlan, Kearney and Phelps counties.
 - The hierarchy of circles represents the relative position relative to other counties. Counties are arranged in descending order from top to bottom.

Vaccinations of Eligible Population in TRPHD



⁸ Persons fully vaccinated = Those who received two doses of the Pfizer/ Moderna COVID-19 vaccine.

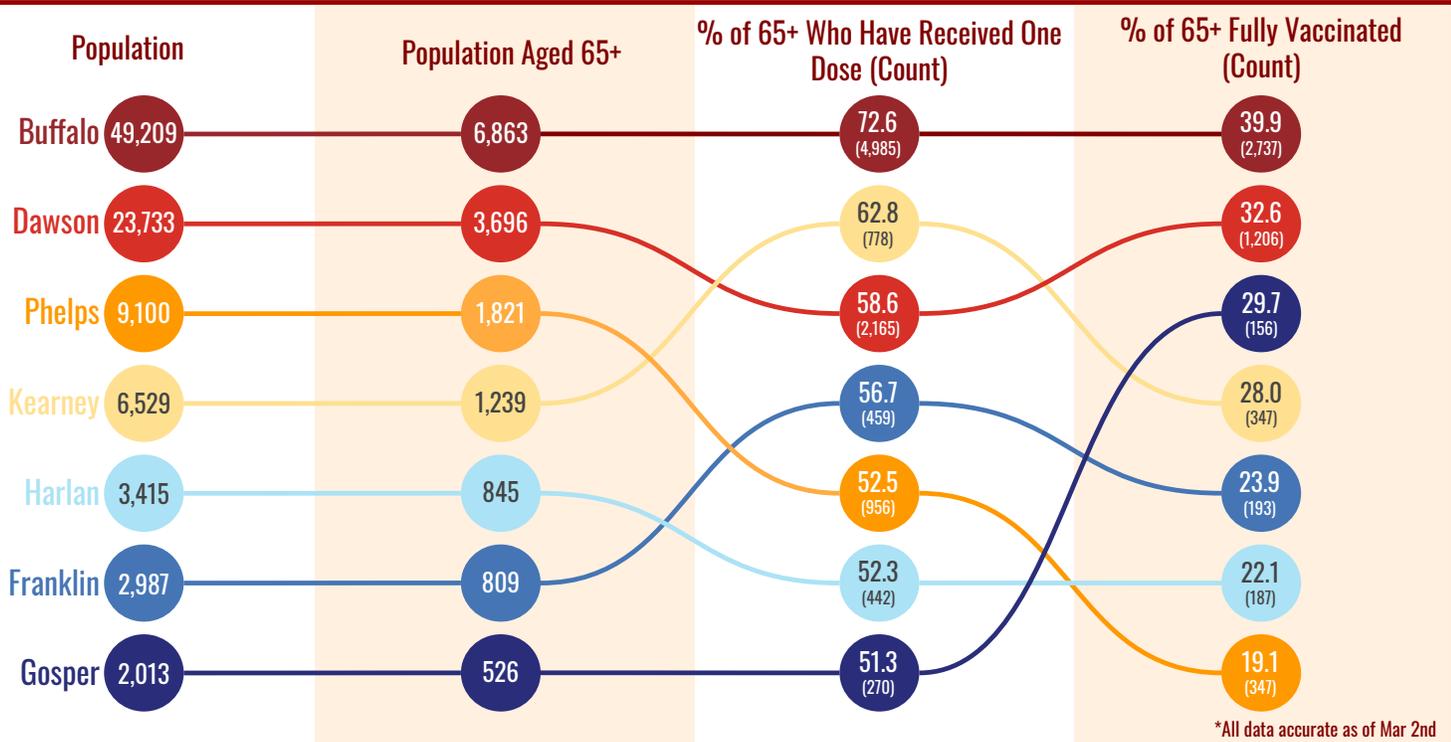
⁹ Total (Cumulative) persons fully vaccinated = All residents who have received both doses of vaccine.

¹⁰ Please see appendix 1 for information on data sources



- The graphic below describes the **persons aged 65+ years vaccinated** ¹¹ in all 7 counties in Two Rivers Health District. Data covers **Dec 15 , 2020 - March 2, 2021**.
- The **graphic** describes all persons aged 65+ years who have received one or two doses by date. We describe vaccine recipients as a proportion of persons aged **65 years and over** in the county (2019 ACS data)¹²
 - Each colored circle corresponds to residents of Buffalo, Dawson, Franklin, Gosper, Harlan, Kearney and Phelps counties.
 - The hierarchy of circles represents the relative position relative to other counties. Counties are arranged in descending order from top to bottom.

Vaccinations of 65+ in TRPHD



¹¹ Persons fully vaccinated = Those who received two doses of the Pfizer/ Moderna COVID-19 vaccine.

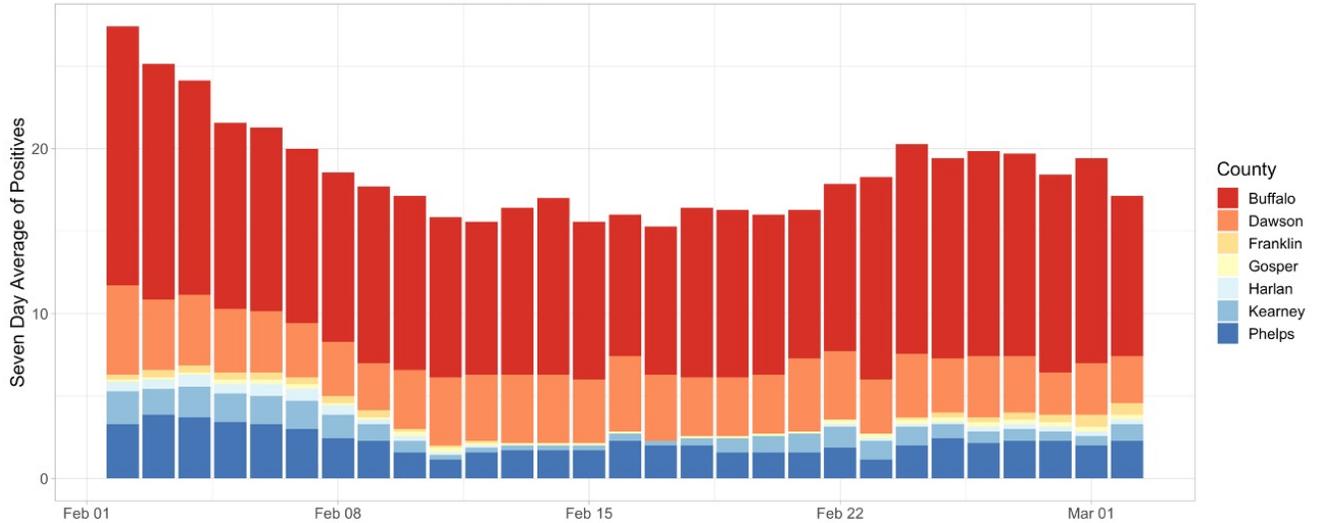
¹² Please see appendix 1 for information on data sources



- The following bar graph describes the 7-day rolling averages of COVID-19 cases by **county** for the past four weeks (Feb 2 - Mar 2).
- The second graph describes the same data per 100,000 population.¹³ 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 2nd to March 2nd



Information Updated as of 3/2 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 2nd to March 2nd



Information Updated as of 3/2 at 8 p.m.

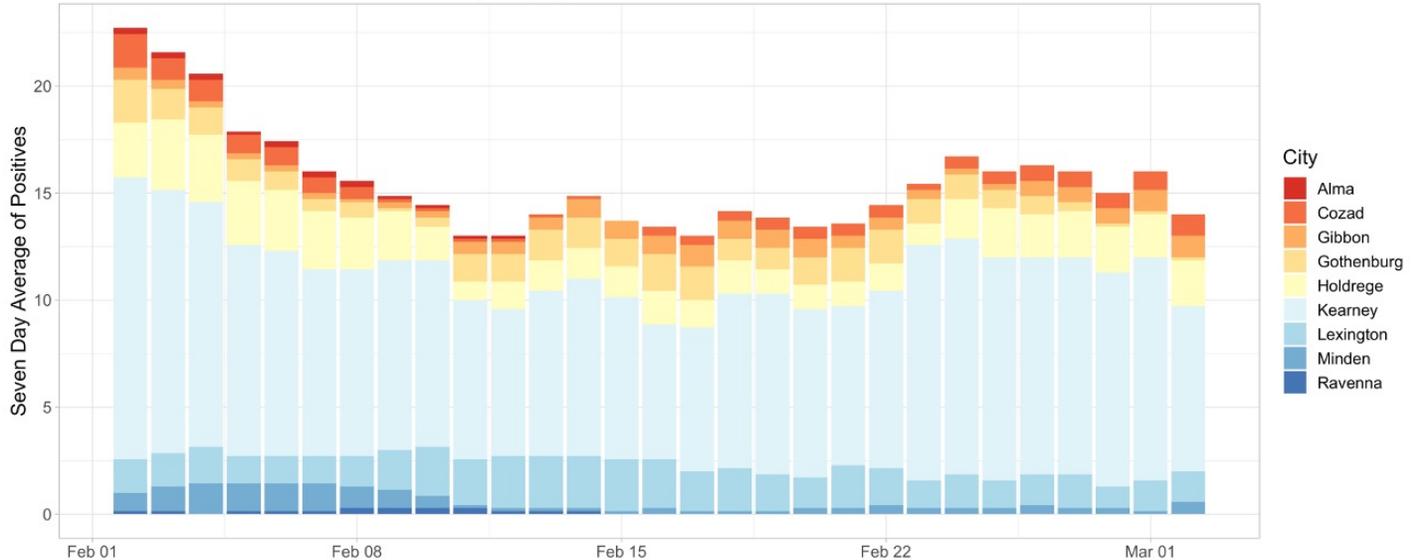
¹³ Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)



- The following bar graphs describes the 7-day rolling averages by city for the past four weeks (Feb 2 - Mar 2) 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

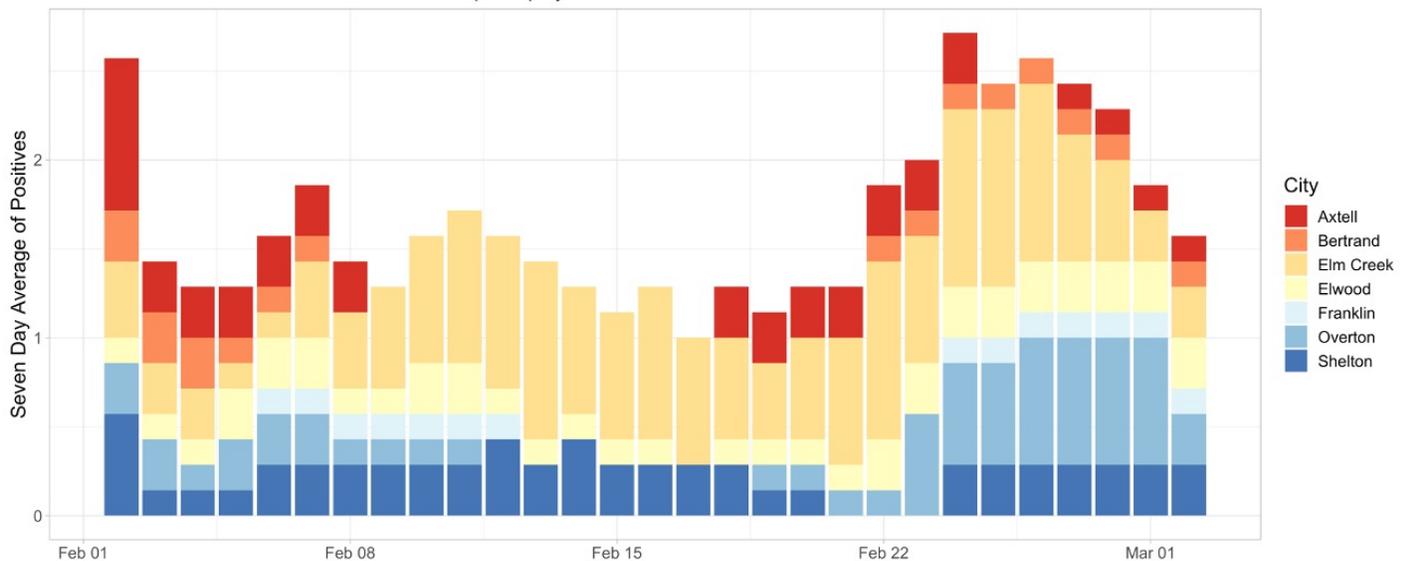
Graph displays data from Feb 2nd to March 2nd



Information Updated as of 3/2 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 2nd to March 2nd



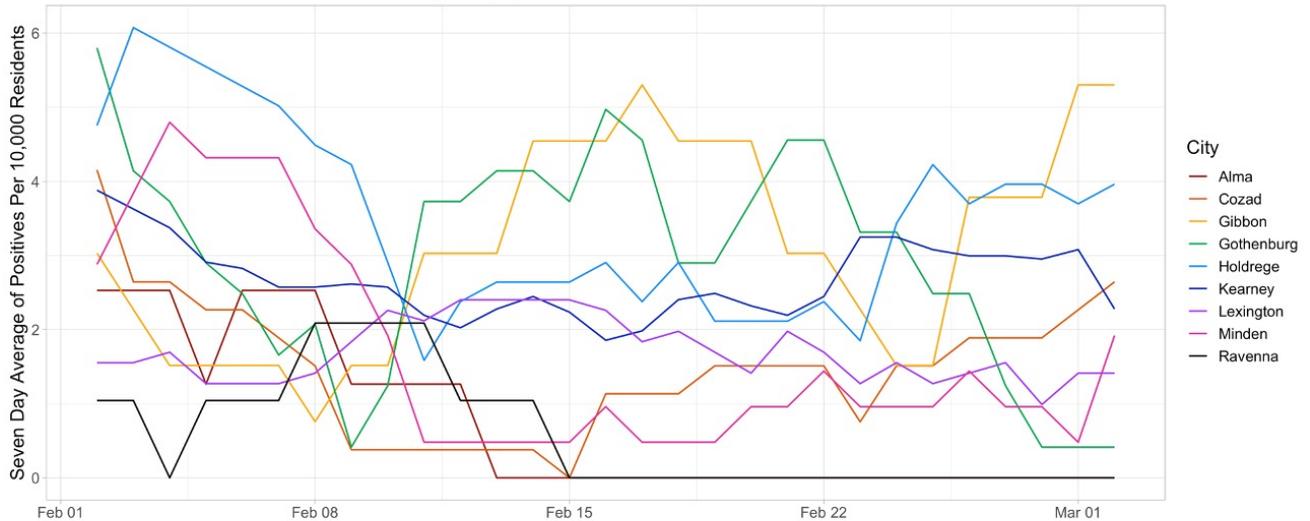
Information Updated as of 3/2 at 8 p.m.



- 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 2 – Mar 2).¹⁴
- 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 2nd to March 2nd



Information Updated as of 3/2 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 2nd to March 2nd



Information Updated as of 3/2 at 8 p.m.

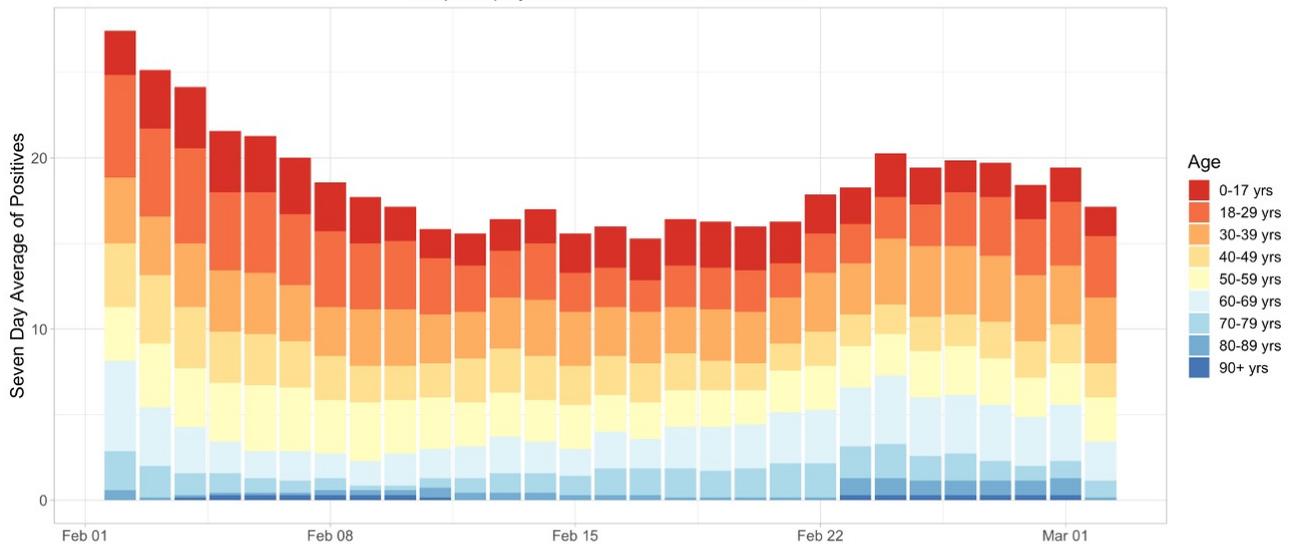
¹⁴ Please note: When comparing cities, we describe rates per 10,000 population. This is roughly equal to the total population of Lexington (~10,000)



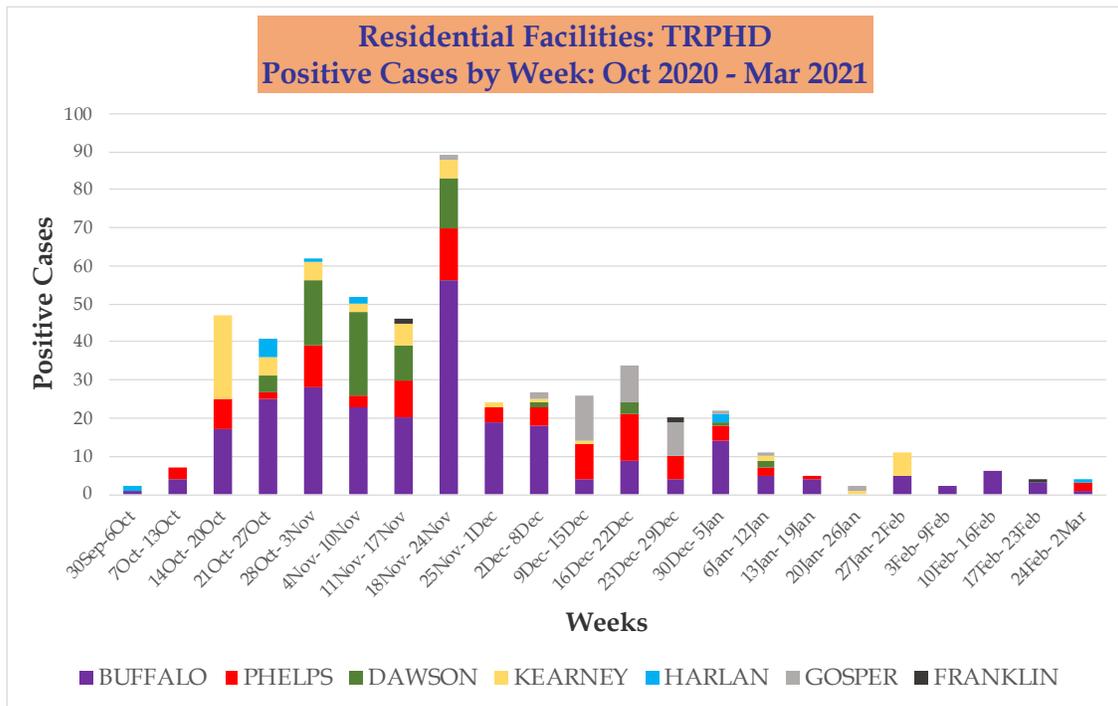
- The first graph below describes the **7-day rolling average** of cases from **Feb 2 – Mar 2** by age. The height of the graph corresponds to total cases and the thickness of each colored band corresponds to each age group.
- The second graph shows the distribution of cases per week in **residential facilities** in the district, broken up by county (**Sep 30 – Mar 2**). 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 2nd to March 2nd



Information Updated as of 3/2 at 8 p.m.



Weekly summary



- Test positivity rates have risen in Franklin and Phelps in Two Rivers Health Department, while other counties have remained steady. Residential facilities in Buffalo and Phelps counties have reported new cases.
- Testing rates have fallen across all counties. Increase in incident COVID cases among residents aged 60 years and over is concerning.
- Less than a third of ICU beds and half of all medical/surgical beds across the district are currently available, although COVID-related admissions account for less than 8% of all occupied beds; (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
- Over 9600 residents of TRPHD have been fully vaccinated as of March 2, representing 12.8% of the eligible population (16+ years). This is the highest proportion of persons vaccinated in any health district in Nebraska to date.
- More than a third of seniors aged 65 years and more in TRPHD have been fully vaccinated. However, this proportion shows wide variation between counties; while almost 40% of seniors in Buffalo county are fully vaccinated, this proportion is less than 20% in Phelps county.

To conclude, COVID test positivity rates have risen in two counties in the last week, and incident cases among seniors have increased across the district. COVID-related admissions currently account for less than 8% of all medical/ surgical beds in the district. Over 9600 residents of TRPHD (12.8% of eligible population) have been fully vaccinated as of March 2, the highest proportion among health districts in Nebraska. 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.