



## Holdrege Urban Area - COVID Status Report 16 Oct 2020

### **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 urban areas are Holdrege (~5439 people), Lexington (~10,024 people), and Kearney (~33,835 people), meaning that over half of the residents of TRPHD live in three urban areas, and over a third live in Kearney city alone.

### **Methods & Definitions**

To better understand the course of the COVID-19 pandemic in Kearney, Lexington and Holdrege, we created 'urban areas' that included both the city and its surrounding towns. We included all towns within 20 miles of Kearney city, 15 miles of Lexington and 10 miles of Holdrege within each city's urban area.

Thus "Holdrege area" includes Holdrege city, Loomis and Funk.

"Kearney area" includes Kearney city as well as Elm Creek, Pleasanton, Amherst, Riverdale, Gibbon, Shelton and Axtell.

For presenting data, we selected 3 time frames:

- March 19/ April 1 - Oct 13 (From the first recorded COVID case in TRPHD to current)
- July 01 - Oct 13 (From the beginning of second sustained period of increase in daily case counts to current)
- Sep 16 - Oct 13 (Previous 4 weeks)

Data is presented as 7-day rolling averages, and as absolute counts in case of cumulative cases



In the second edition of this document, we will look at the overall course of the COVID-19 pandemic in TRPHD, identify two distinct phases and focus on the second phase, largely driven by the continuing rise in newly detected cases in Kearney area. Analyzing data from July 01 – October 13, we will see the progression of cases across all 7 counties in TRPHD. Then we will focus on the past 4 weeks, looking at cases in all major cities in the Franklin, Gosper, Harlan, Kearney and Phelps counties. Lastly, we will look at the age-wise distribution of cases in Holdrege area to understand the spread of the pandemic in Holdrege city.

## Overview

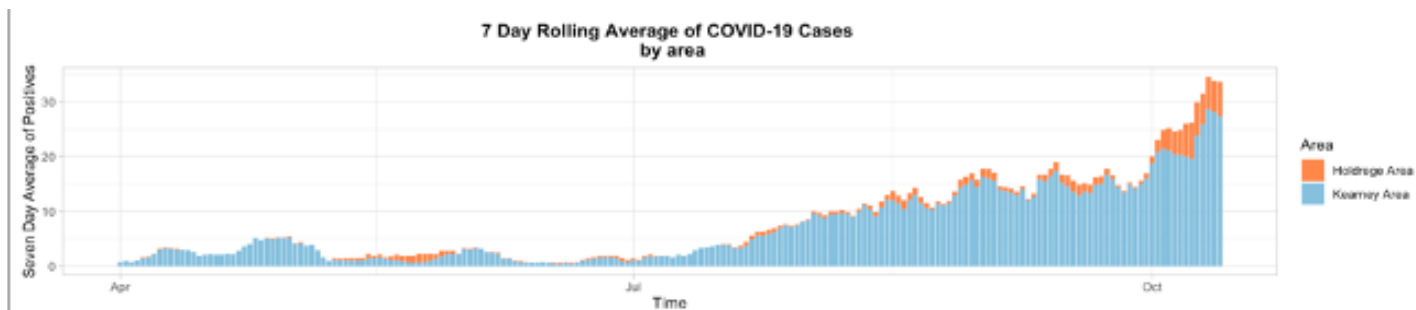
- Figure 1 (a) describes the COVID-19 pandemic for all counties in TRPHD from March 19 2020 to October 13. Figure 1 (b) describes the cases in Holdrege and Kearney areas from April 1 – October 13. The 7-day rolling average of cases crossed 50 in the district last week, surpassing the previous highest number recorded in May.
- Figure 2 describes 7-day rolling average of cases in all counties from Jul 1 – Oct 13 (15 weeks). Figure 3 describes the 7-day rolling average of cases in Phelps county during the same period. Also shown is the cumulative cases in Phelps county during this period.
- Figure 4(a) describes 7-day rolling average of cases in selected cities in Franklin, Gosper, Harlan, Kearney and Phelps counties from September 16 to October 13 (4 weeks). Figure 4(a) describes the same data, presented per 100,000 residents. Holdrege city is shown in light blue on both graphs.
- Figure 5 describes the 7-day rolling average of positive cases in Holdrege area from Sep 16 – Oct 13, further broken up by age group
- Over 86% of all COVID cases in Holdrege area were recorded after July 1. Holdrege urban area accounts for over 82% of all cases reported in Phelps county since July 1, a majority of those recorded in the past month



**Fig 1(a) (below) describes the 7-day rolling average of all COVID-19 cases in TRPHD from March 1- Oct 13, 2020**

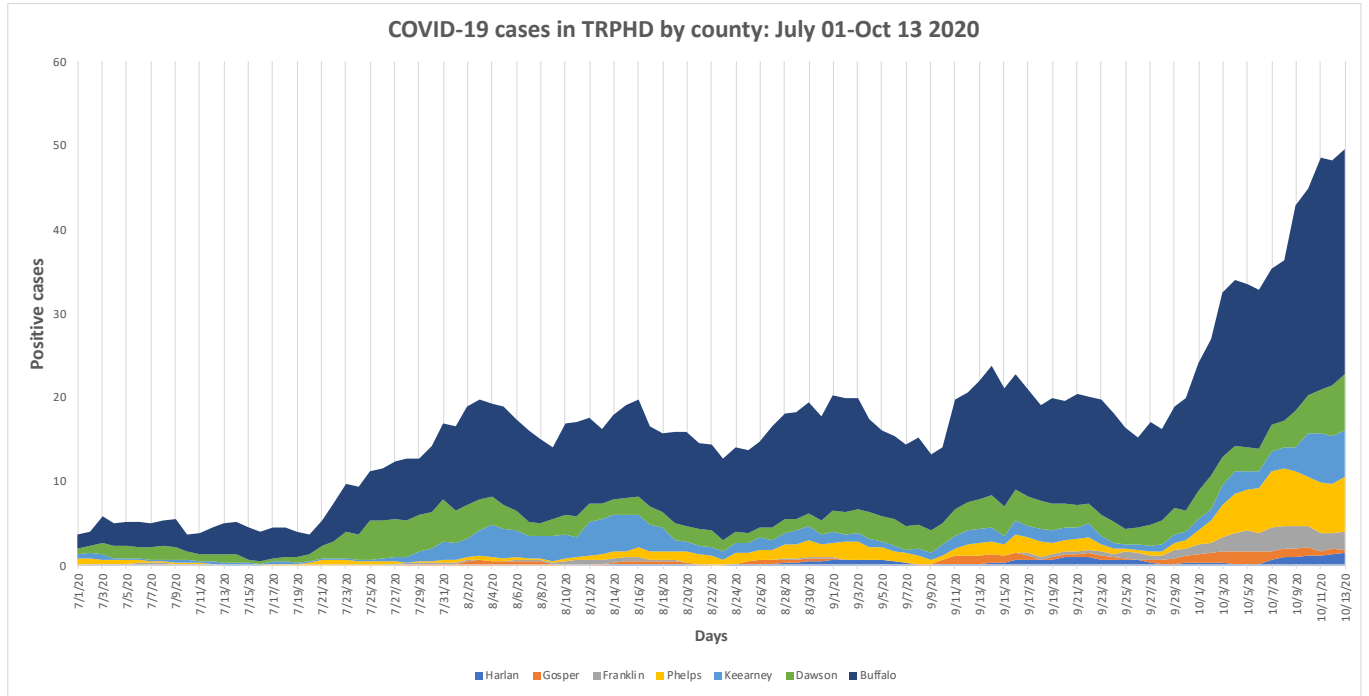


**Fig 1(b) (below) describes the 7-day rolling average of all COVID-19 cases in Kearney and Holdrege areas from April 1- Oct 13, 2020**

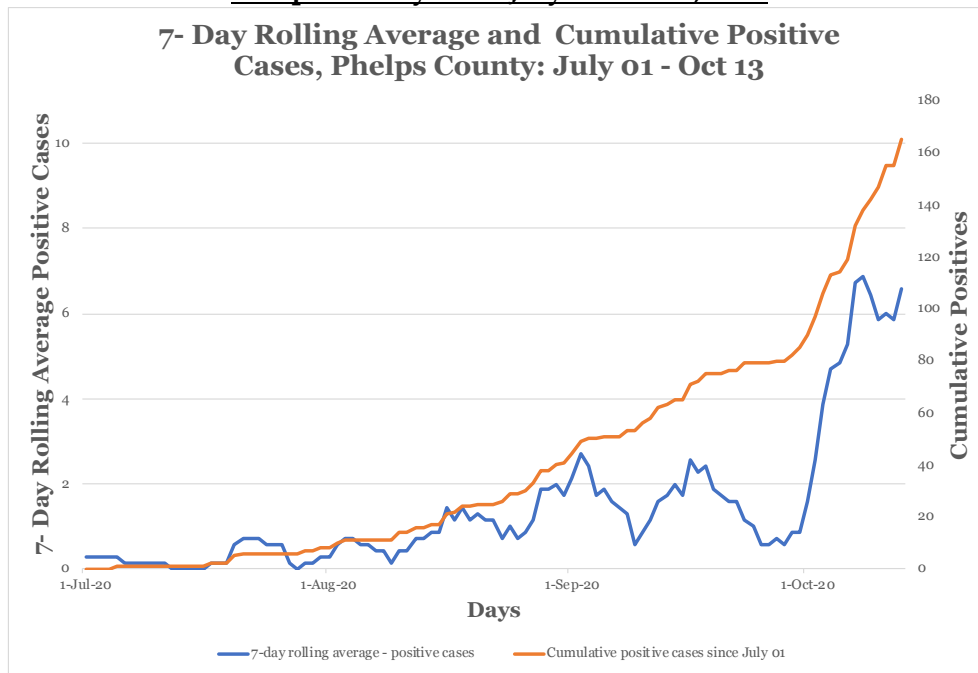




**Fig 2 (below) describes the 7-day rolling average of COVID-19 cases in all counties in TRPHD from July 1 - Oct 13, 2020**

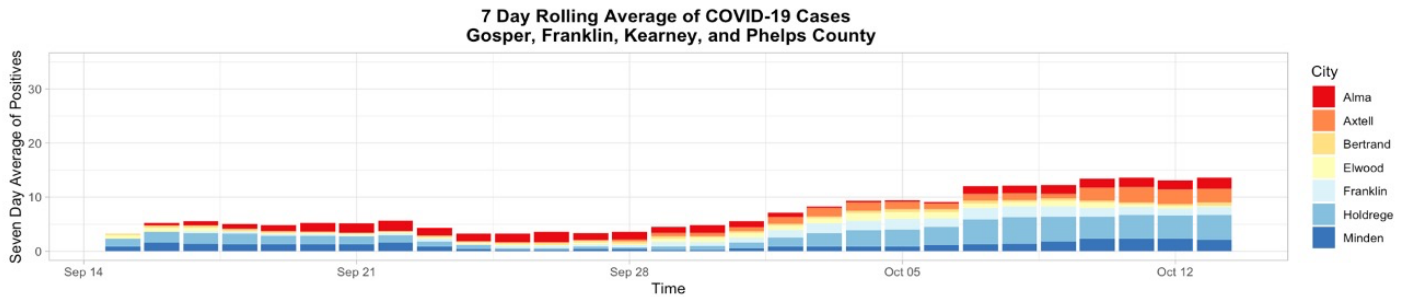


**Fig 3 (below) describes the cumulative cases and 7-day rolling average of COVID-19 cases in Phelps County from July 1 - Oct 13, 2020**

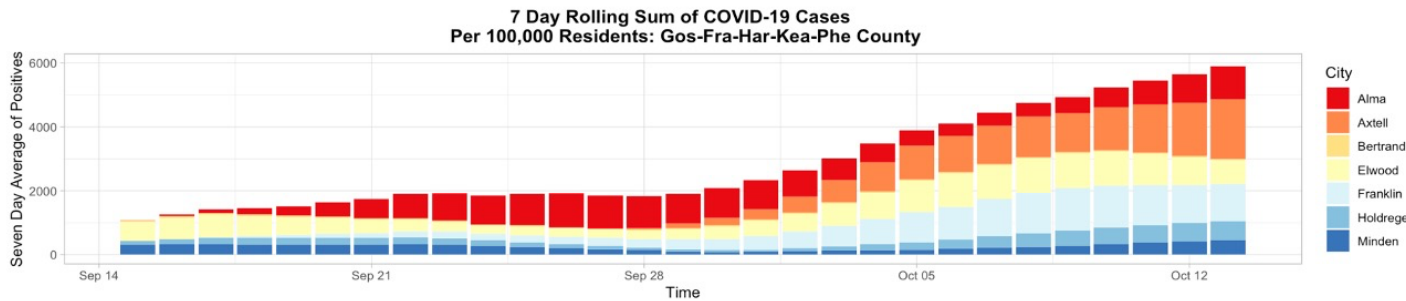




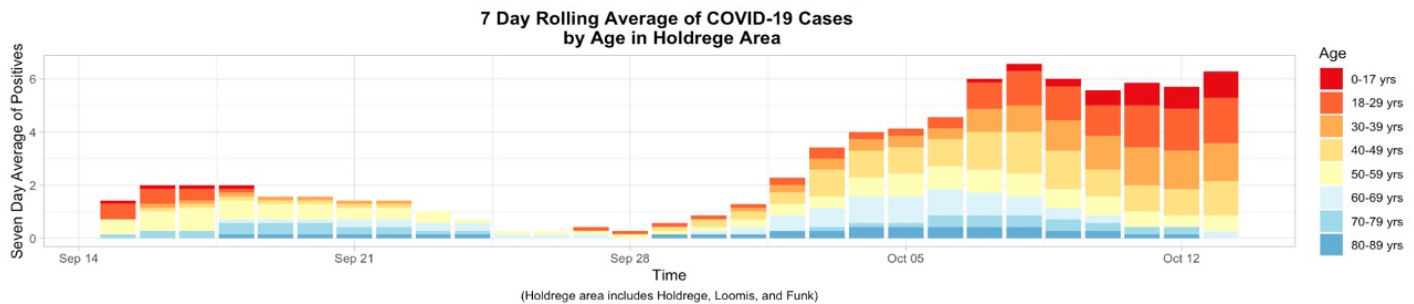
**Fig 4 (a) (below) describes the 7-day rolling average of COVID cases in all cities in Fra/Gos/Har/Kea/Phe counties from Sep 16- Oct 13, 2020**



**Fig 4 (b) (below) describes the 7-day rolling average of COVID cases (per 100,000 population) in all cities in Fra/Gos/Har/Kea/Phe counties from Sep 16- Oct 13, 2020**



**Fig 5 (below) describes the 7-day rolling average of COVID cases in Holdrege area by age from Sep 16 - Oct 13, 2020**





## Weekly Summary Report

From figure 1(a) and 1(b), some broad trends are noticeable:

- There was a brief outbreak of cases in Phelps county in late May-June, but the more recent increase in cases has been more sustained and widespread
- The outbreak in Holdrege as compared to the Kearney urban area shows the size of the recent outbreak in Holdrege as compared to Kearney, which has been largely driving the COVID-19 pandemic in TRPHD since July.

From figures 2 & 3, it is clear that cases in TRPHD have been rising sharply since July.

- While the outbreak was initially driven by cases in Buffalo county, more recent case increases have been driven by outbreaks in other counties in the district. Phelps county has seen a dramatic rise in cases over the past two weeks.
- The cumulative case count in Phelps county has risen steadily since July, but the increase has been extremely rapid over the past few weeks

In figures 4-5, we take a closer look at Holdrege city and the Holdrege urban area

- Recent increases in case counts in Holdrege city have coincided in a rise in absolute cases in other smaller cities in Phelps and surrounding counties. Franklin, Minden and Axtell show rising case rates over the past two weeks. None of these cities have seen a sustained outbreak like Holdrege, however.
- Although more persons aged 40-49 and 60-69 in Holdrege area tested positive initially, currently the highest incidence seems to be among 20-29 year olds. Previous patterns of disease spread in Kearney city seem to predict a likely reinfection of older age groups in Holdrege from younger residents of the city.
- ***In summary, Holdrege city and Holdrege urban area have seen a sharp increase in COVID-19 cases in the past two weeks. The disease incidence seems to be shifting from mostly older people to 18-39 year olds. Although some part of the sharp increase in absolute number of cases in Holdrege and Phelps over the past week may be explained by delayed data resolution, the increase over the last two weeks represents a dramatic shift in course of disease progression in Holdrege. Higher incidence among 18-29 year olds is reason for stressing the need for social distancing and masking practices, given the high mobility and diverse occupations of this age group.***