



# UNDERSTANDING TRENDS OVER TIME

## *Interpreting County Health Trend Graphs*

Examining changes in Health Outcomes over time can provide an overall sense of community progress toward health. Trends in Health Factors can inform specific health programs and may reflect the impact of local efforts.

For each measure with trend data available, a detailed trend graph can be viewed by clicking on the graph icons in the county snapshot. Each graph icon is color-coded to communicate the direction of the trend:



The county is value is trending worse for this measure



The county is value shows no significant trend



The county is value is trending better for this measure



Additional information is needed to interpret the trend for this measure



Trend graph available, no interpretation calculated

The Annual Data Release includes data from over 30 different sources, each with unique methods for data collection and processing which impact the feasibility and reliability of comparisons over time. Our Health Snapshots provide trend graphs where possible and meaningful.

### **Trend data is currently available for 12**

#### **Select measures:**

- Premature Death
- Alcohol-impaired Driving Deaths
- Sexually Transmitted Infections
- Uninsured
- Primary Care Physicians
- Dentists
- Preventable Hospital Stays
- Mammography Screening
- Flu Vaccinations
- Unemployment
- Children in Poverty
- Air Pollution

### **Trend data is currently available for 3**

#### **Additional measures:**

- Uninsured Adults
- Uninsured Children
- School Funding Adequacy



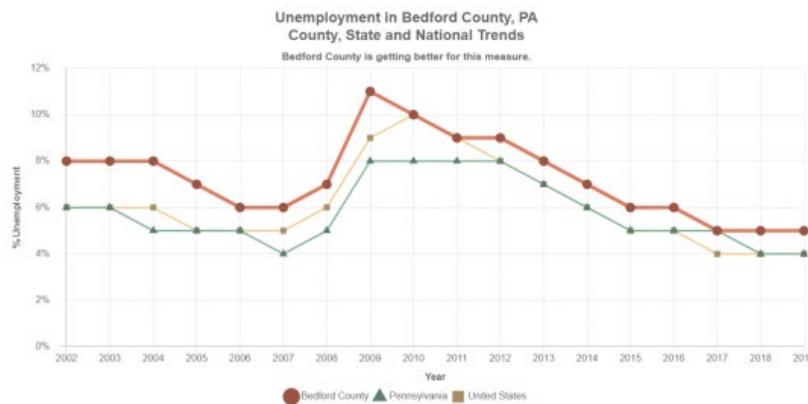
## Interpreting Trend Graphs

Trend graphs can be used to examine progress over time and can be found on the Health Snapshots.

When you look at the trend graphs, ask yourself:

1. Is the county value increasing, decreasing or staying the same over time?
2. Is the county trend better, worse or similar to the state trend?
3. Is the county trend better, worse or similar to the national trend?
4. What worldwide, national or local events occurred during this time period that may have impacted the measure?

The example trend graphs (below) show different relationships among county, state, and national level data. We conduct linear regressions using all years of data shown in the graph to calculate whether a trend is decreasing, increasing, or stable.



### Decreasing (improving) trend – similar to state and national trends

**Interpretation:** In Bedford County, PA, Unemployment decreased between the whole period of 2002 to 2019. There was a spike in Unemployment that began in 2008. However, Unemployment continued to fall steadily after 2009.

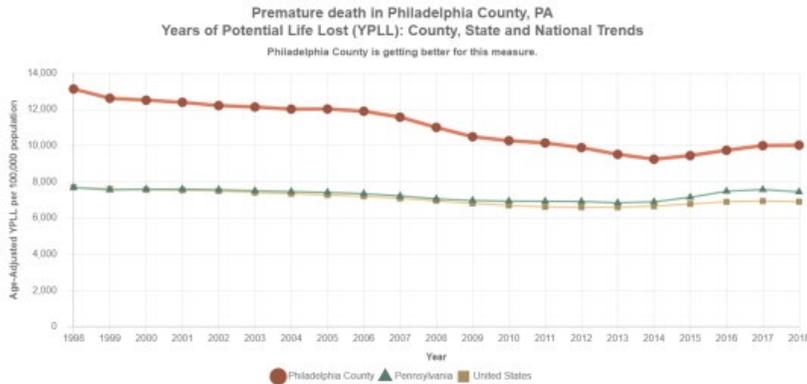
**Compare to the state and national trend:** The changes in Bedford County's trend line are similar to the changes in the state and national trend lines. This allows us to infer that changes in the Unemployment rate are due to larger state or national changes, rather than to changes in unique local conditions.



**Decreasing (improving) trend – faster improvement than state and national trends**

**Interpretation:** In Philadelphia County, PA, Premature Death decreased significantly over the whole period of 1998 to 2018. The trend is relatively linear although improvement has slowed since 2014.

**Compare to the state and national trend:** In 1998, Premature Death in Philadelphia County was much higher than the state and national trends. During this period, Philadelphia County’s Premature Death rate has decreased while the state and national trends have remained mostly unchanged. A slight increase in Premature Death starting in 2014 was experienced Pennsylvania.

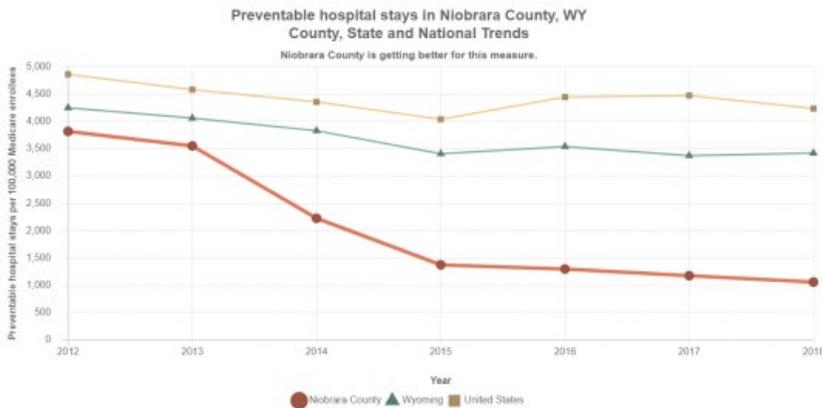


Notes: Each year represents a 3-year average around the middle year (e.g. 2015 is the middle year of 2014-2016).

**Decreasing (improving) trend – improving faster than state and national trends**

**Interpretation:** In Niobrara County, WY, Preventable Hospital Stays decreased between 2012 and 2018. The improvement appeared to accelerate most between 2013 and 2015, and continues.

**Compare to the state and national trend:** Niobrara County is improving faster than the rest of Wyoming or U.S. This allows us to infer that changes in Preventable Hospital Stays are due to some change within Niobrara County itself - not due to larger state or national changes.

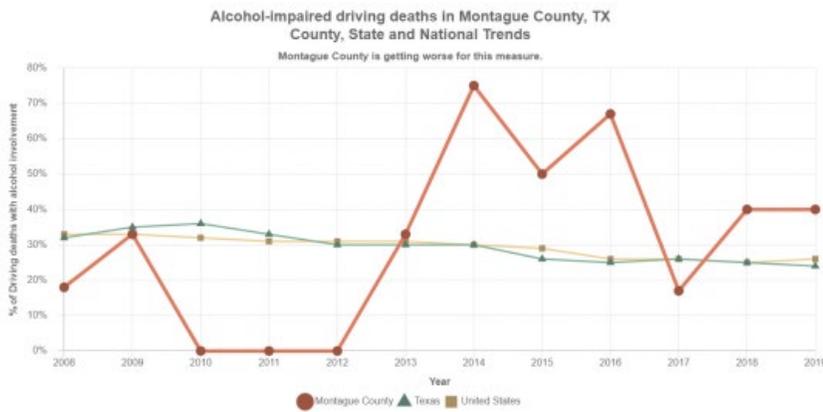




**Increasing (worsening) trend (with lots of uncertainty) - not significantly different from state or national trend**

**Interpretation:** In Montague County, TX, Alcohol-Impaired Driving Deaths increased over the period between 2008 and 2019. The county experienced a large amount of variation in Alcohol-Impaired Driving Deaths year-to-year during this period, most likely due to this being a smaller county with a smaller number of total deaths.

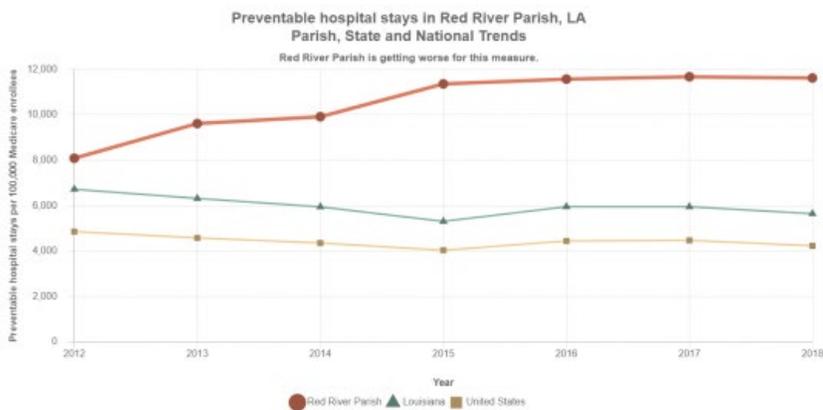
**Compare to the state and national trend:** It is difficult to determine if Montague County is doing worse than the state of Texas or the nation. Montague County is small and has smaller numbers of deaths. As a result, smaller changes in the number of alcohol-impaired driving deaths can cause big changes in the %. This causes uncertainty in the % from year to year.

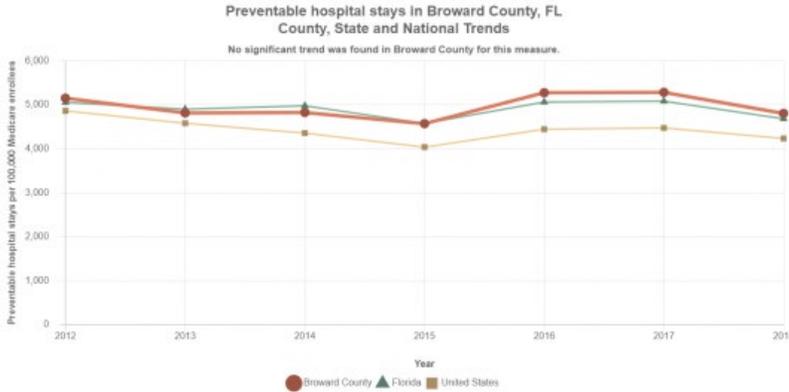


**Increasing (worsening) trend – significantly different from state and national trends**

**Interpretation:** In Red River Parish, LA, Preventable Hospital Stays increased between 2012 and 2018. The rate was increasing when CHR&R began sharing this data in 2012 and continued to get worse until 2015. In 2015, Preventable Hospital Stays appears to stop increasing.

**Compare to the state and national trend:** Red River Parish is experiencing an increase in Preventable Hospital Stays. This trend is significantly worse than state and national trends. Red River Parish started with among the worst rates of preventable hospitalizations in Louisiana, and the rate has gotten worse (moving further from the state and national trends in an increasing trend). The average rate in Louisiana and the U.S. has improved. This suggests that something in Red River Parish is causing sustained and worsening problems with preventable hospital stays.

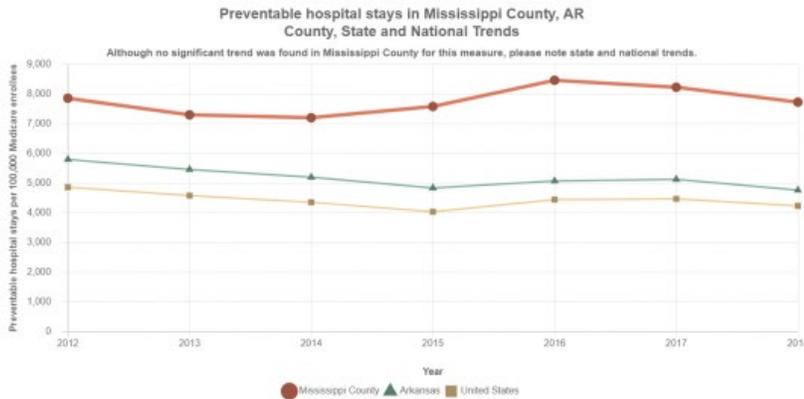




**Stable trend – similar to state and national trends**

**Interpretation:** In Broward County, FL, there was no significant change in Preventable Hospital Stays from 2012 to 2018.

**Compare to the state and national trend:** Broward County's rate did not change. The rate for Florida and for the U.S. also did not change. Broward County is not higher or lower than Florida. Broward County appears to be average, and not changing.



**Stable trend – significantly different from state and national trends**

**Interpretation:** In Mississippi County, AR, there was no significant change in Preventable Hospital Stays from 2012 to 2018.

**Compare to the state and national trend:** The rate for Arkansas and for the U.S. also did not change during this period. However, Mississippi County started off, and remained, higher than the state and national rates. This graph shows a relatively stable trend in Preventable Hospital Stays for Mississippi County. However, this trend is significantly worse than the state and national trends.