

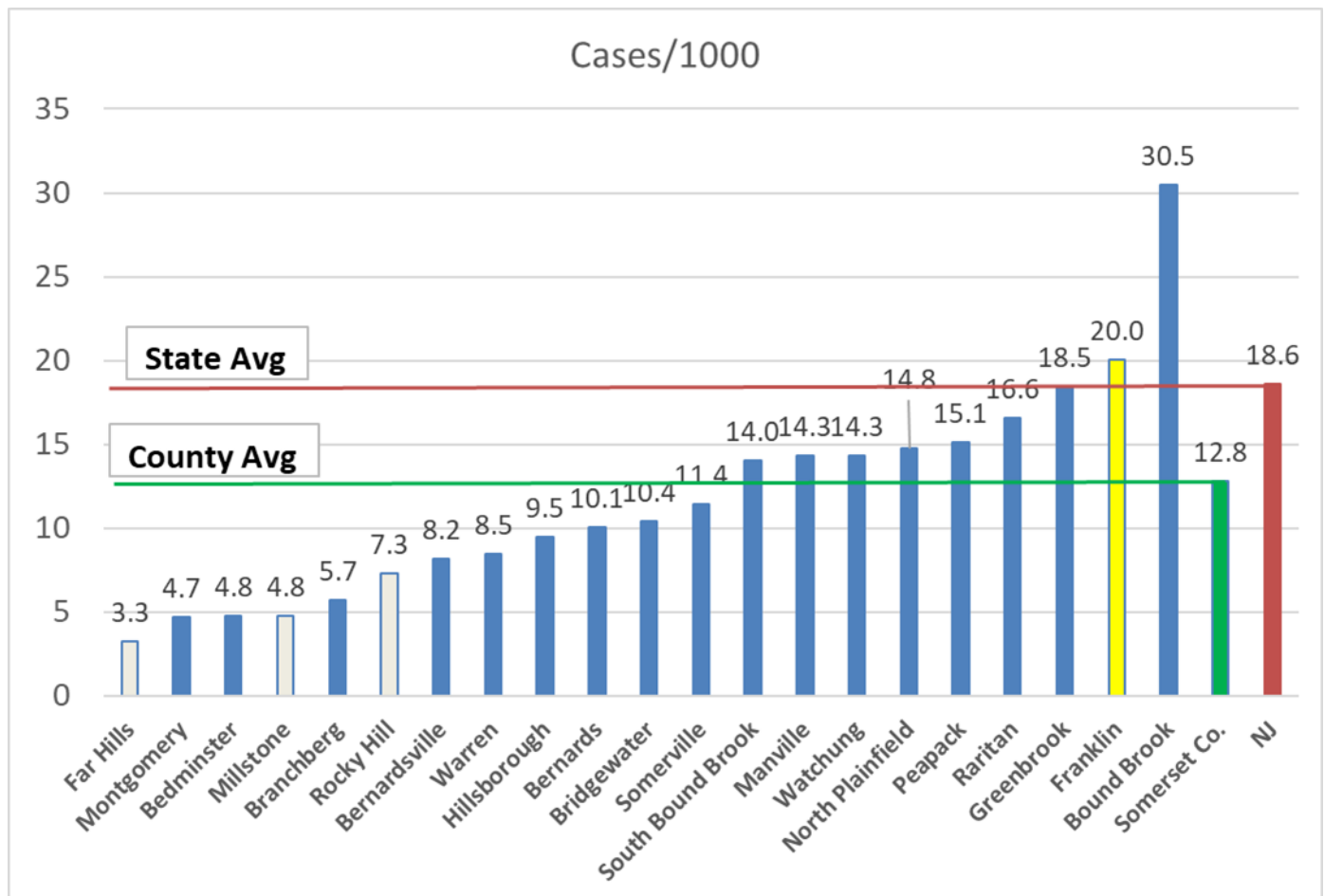
A 9th Look at the Comparison of Franklin to Other Municipalities in Somerset County

There are a lot of cases in Franklin, but we are also the largest town in Somerset Co. so we need to see if Franklin has more than is expected for its size. I first looked at this on [April 5th](#) and then again on [April 16th](#), [April 19th](#), [April 25th](#), [May 3rd](#), [May 9th](#), [May 14th](#) and [May 25th](#).

You should read my prior post, [Numbers and Uncertainty](#), to put all the statistics in perspective.

I used the data from the County web site on 6/10/2020 to correlate the number of cases vs population. $R^2=0.8$ indicating the relationship of population to the number of cases is well correlated.

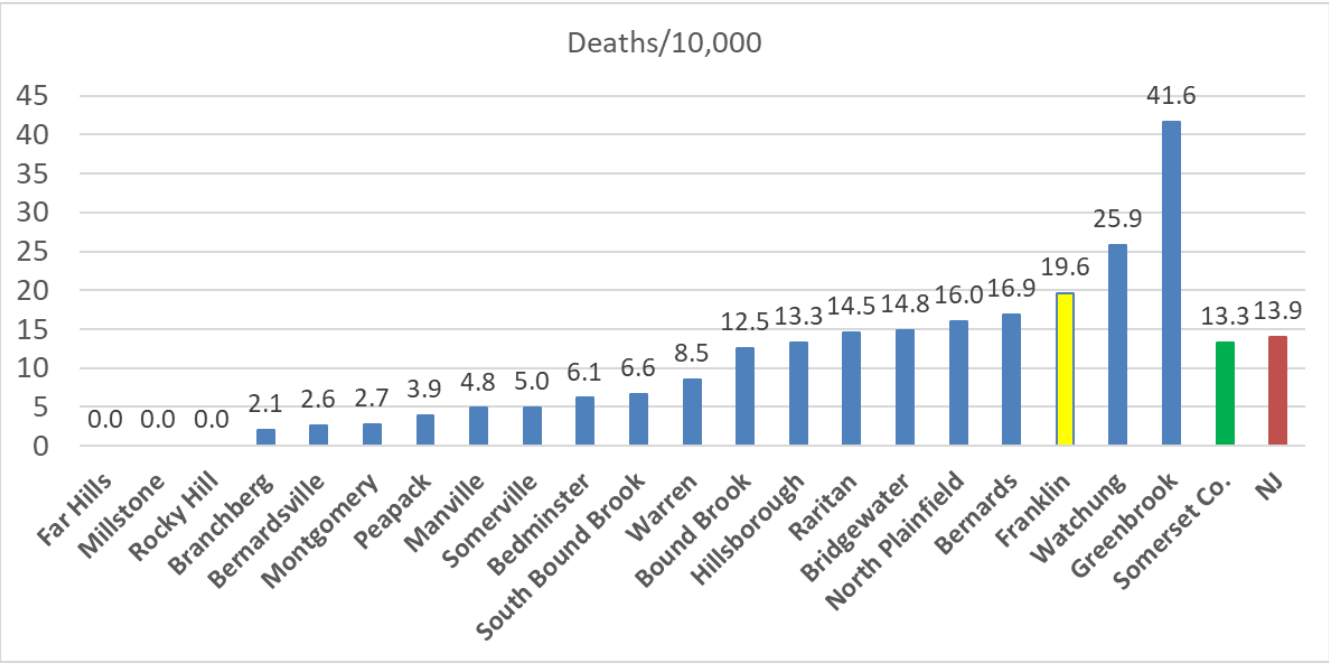
Looking at the number of cases per 1000 residents, you get the bar graph below. Franklin is yellow. The county is green. Towns with fewer than 1000 people are blank because small numbers make calculations less meaningful. Franklin is again in the 89th percentile so one more calculation tells us if it is statistically meaningful.



Things are considered abnormal or an outlier if it lies more than 2 standard deviations from the mean. **Franklin's cases per 1000 is 1.18 standard deviations above the mean. Thus, statistically Franklin is not an outlier.** That doesn't mean the high numbers aren't important it just means they are not extreme relative to our population size. Bound Brook is greater than 2 standard deviations above the mean.

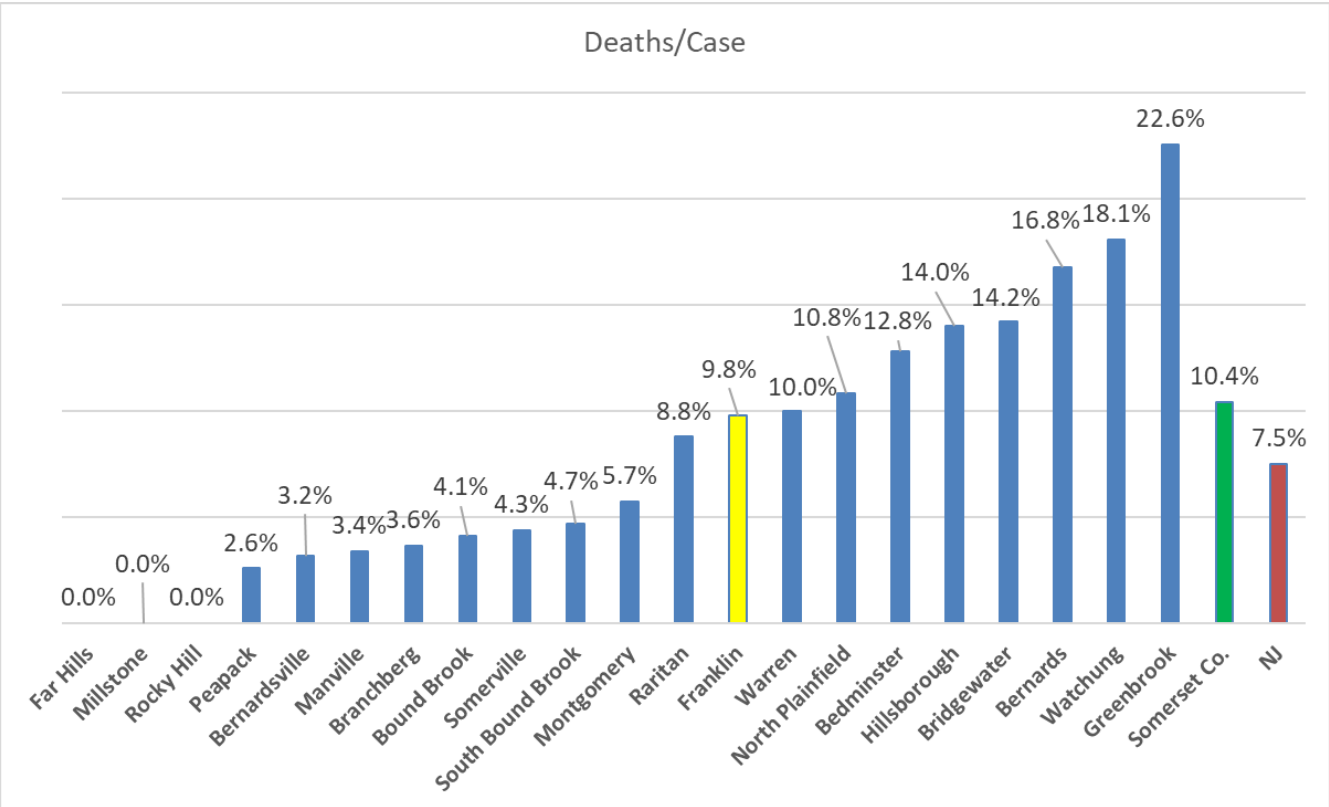
I also looked at deaths. The numbers are smaller, so I worked on deaths per 10,000 residents. $R^2=0.86$.

We are in the 84th percentile and 0.77 standard deviations above the mean, so not an outlier. Green Brook is above 3 standard deviations above the mean. They have a significant LTC facility issue.



I then looked at the number of cases vs population density. R^2 was 0.006 so the correlation is not meaningful within Somerset Co.

I looked at the death rate or deaths per cases.



Every death is horrible. Our death rate is lower than the county average but higher than the state's.

Just because we are not two standard deviations above the mean doesn't indicate everything is ok. I'm not blowing this off at all. We remain at the high end. That's important. So I stick to my mantra, "Assume everyone is infected so social distancing is required." And, "You may be a carrier so social distancing is required so you don't infect others."

It is the best tool we have. One for all. PK