Our test positivity rate is based on a 7-day rolling average. Timing of reporting overall lab results versus positives, repeat testing of individuals, duplicate entries and lack of reporting by some labs make the data imprecise and more appropriate or useful for trending.

Equation: Test positivity % =\[
\frac{\text{Number of Positive Tests Reported to KDPH over previous seven days}}{\text{Number of Total Tests Reported to KDPH over previous seven days}}\] * 100

There are a number of ways that positivity rates could be calculated based on different available numerators and denominators. Kentucky DPH uses the numerator and denominator we believe to be most comparable, e.g. the total number of COVID-19 positive tests in Kentucky residents reported by laboratories testing KY residents divided by the total number of COVID-19 (SARS-CoV-2) tests conducted on Kentucky residents reported by those same labs. Both the positive tests and total tests suffer from the problem of having repeat tests reported in those totals – in other words, some people are tested more than once because they might be tested multiple times to be readmitted to a long-term care facility, or they might be tested regularly as a requirement for a work situation, etc. Another problem is that all labs don’t report regularly, so we are including only those that have reported, both for positive tests and total tested, at a given point in time. This might underestimate both the total positives and total tested at any point we take it, but shouldn’t affect the positivity rate dramatically.

If we were instead to use the total number of actual COVID-19 case patients as our numerator and divide by the total number of tests reported, that would underestimate the positivity rate because the duplicates would remain in the denominator, over-inflating it. Because of the way the data is reported, there is no good way to de-duplicate the overall testing data to include only the number of people tested, rather than the number of tests done.