TN Department of Health

COVID-19
Regional Rate Mapping FAQs

Do cases include both confirmed and probable cases?
Yes.

What is a case rate and how is it calculated?

- A case rate is the number of COVID-19 cases in an area divided by the total population of that area.
- In these maps, the numerator is the number of cases (both confirmed and probable) living in a ZIP Code. The denominator is the estimated population of the ZIP Code.
- This fraction is then multiplied by 100,000 to show the number of cases in the ZIP Code for every 100,000 people. A case rate of 2.0 would mean that there were 2 cases of COVID-19 for every 100,000 people living in the ZIP Code. If the ZIP Code had a population of 50,000, it would have 1 case (2/100,000 rate x 50,000 population = 1 case).

What is a testing rate and how is it calculated?

- A testing rate is the number of COVID-19 tests done for residents of an area divided by the population of that area.
- In these maps, the numerator is the total number of PCR tests (positive and negative) completed for people living in a ZIP Code. The denominator is the estimated population of the ZIP Code.
- This fraction is then multiplied by 100 to show the number of PCR tests completed in the ZIP Code for every 100 people. A testing rate of 2.0 would mean that there were 2 COVID-19 PCR tests done for every 100 people living in the ZIP Code. If the ZIP Code had a population of 5,000, it would have 100 COVID-19 PCR tests done for people living there (2/100 rate x 5,000 population = 100 tests).

How are the breakpoints determined for these maps?
The colors in these maps are divided into 5 equal groups, or quintiles. Each color on the map represents one fifth, or 20%, of the ZIP codes in the region. If a region had 10 ZIP Codes, the 2 ZIP Codes with the lowest case or testing rates would be the lightest color, and the 2 ZIP Codes with the highest case or testing rates would be the darkest color:

Top 20% of ZIP codes
High 20% of ZIP codes
Middle 20% of ZIP codes
Low 20% of ZIP codes
Bottom 20% of ZIP codes

How can the testing rate be greater than 100 for a ZIP Code?
There are two reasons why the testing rate may be greater than 100 for a ZIP Code.

- If many individuals living in a ZIP Code have been tested more than once, it is possible that the number of tests completed in a ZIP Code can truly exceed the number of people that live in the ZIP Code.
- The population of these ZIP Codes is from 2018 projected population estimates for Tennessee. It is possible that more people actually live in a ZIP Code than what has been estimated.

What is a PCR test?
PCR (Polymerase chain reaction) tests have been used for many years to diagnose a variety of infectious diseases, including COVID-19. These PCR tests look for SARS-CoV-2, the virus that causes COVID-19, in a person's test sample (such as a nasal swab). It is used to find current or recent infection. Someone who tests positive in a PCR test is a confirmed COVID-19 case.

Are antibody tests included in the testing rates?
No, these numbers only show the testing volume for PCR tests, which look for current or recent infection.

Are there any cases or PCR tests that are not included in these rates?
Because these rates are mapped by ZIP Code, any case reports or lab results that were missing a ZIP Code, or had a ZIP Code that was entered incorrectly, could not be included.

There is a ZIP Code in my region that I don't recognize. Why is it included in my region?
Not all ZIP Codes follow county boundaries. Some ZIP Codes are located in multiple counties. If any part of a ZIP Code lies within the boundaries of the counties in the region, then it will be included in the map for that region. The rates in these maps are based on the estimated populations of each ZIP Code, so the inclusion of a ZIP Code in this map does not affect the rates of any other ZIP Code.

How are ZIP Codes handled that cross regions?
Some ZIP Codes are located in multiple counties and may cross public health region boundaries as well. A ZIP Code will be shown in every regional map in which it lies.