



DEPARTMENT OF PUBLIC HEALTH CITY OF CHICAGO

UPCOMING CHANGE TO POSITIVITY RATE MEASUREMENT USED BY CDPH TO MONITOR CHICAGO COVID-19

The Chicago Department of Public Health tracks many different metrics to understand the transmission of COVID-19 in Chicago. As the epidemic changes, there are some metrics that make sense to start tracking and others that become less informative. For example, in phases of the epidemic where the number of new daily cases is rapidly growing, city officials often speak about the 'doubling time' of COVID-19 cases. This is helpful to understand when we begin "bending the curve" to slow the transmission of COVID-19.

For the past several months, city officials have talked often about two different kinds of positivity rates. These two metrics are "test positivity rate" and "people positivity rate".

- "Test positivity rate" is the number of COVID-19 tests that have come back positive in a given time period, divided by the total number of daily tests performed over that same time period. These numbers include all diagnostic test results (PCR only) reported to CDPH through electronic lab reporting regardless of whether they are among repeated tests among the same individual. This number is informative because it helps us understand the growth of new cases as it relates to the growth in testing – if cases are increasing and tests are increasing, but test positivity is going down, some of that growth in new cases is likely driven by increased testing. But if cases are rising, and testing is increasing, and the test positivity rate is going higher, it suggests the outbreak may be growing, and signals a need for more testing and intervention. However, as access to testing has expanded, some people such as those who live in group settings, university campuses, or have frequent risk of exposure are getting tested regularly. This can make it seem like many people are getting tested, when in fact it may only be a portion of people in a geographic area or a subgroup that are getting tested repeatedly many times. This effect can mask efforts to understand where testing may need to be expanded or what groups may be more or less impacted than others.
- "Person positivity rate" is the number of unique individuals test positive for COVID-19 for the first time, divided by the total number of unique individuals who test positive or negative for COVID-19 for the first time. This number is informative because it helps us better understand the growth or decrease in a particular zipcode and/or a population subgroup (e.g. gender, race/ethnicity, age group) regardless of the level of repeated testing in that group. As access to testing grows, repeated testing becomes common or routine (among university students, large employers, healthcare professionals, etc.) and COVID-19 transmission continues, person-positivity becomes less meaningful. It can be heavily influenced by a relatively small number of positive test results as the proportion of the total population ever tested grows and repeat negative tests are not counted. As the outbreak enters a prolonged phase, it becomes more important to account for all of the new and repeated testing in a population. Thus, the person-positivity rate becomes a less accurate and meaningful metric.

In order to present the full extent of the epidemic most accurately at this current phase, CDPH is replacing "person positivity rate" with "test positivity rate" on its COVID-19 dashboard and all other citywide, zipcode and subgroup-level reporting consistent with current Illinois Department of Public Health methods. We are committed to continuing to evolve measurement to always accurately communicate the current state of COVID-19 in Chicago. For more information about how CDPH uses epidemiological data to inform COVID-19 response in Chicago, please visit Dr. Allison Arwady's regular Facebook Live show, ASK DR ARWADY, on Chicago Mayor's Office Facebook page or visit the 'Latest Data' tab on the City of Chicago's COVID-19 website <https://www.chicago.gov/city/en/sites/covid-19/home.html>.