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STAR ANALYSIS

COVID-19 numbers Ontario is using to reopen the economy provide inaccurate picture of disease's spread, Star analysis shows

By **Kenyon Wallace** Investigative Reporter

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One of the key pieces of data used by the province to determine when and how we should reopen the economy has been providing an inaccurate picture of how COVID-19 is spreading, a Star analysis has found.

Until late last week, Public Health Ontario had been reporting daily that the number of cases of coronavirus where the source of transmission was unknown was around 35 to 40 per cent of overall reported cases.

Then, last Friday, that number dropped abruptly to just below 13 per cent of overall cases. In other words, on May 21, the government and public were told there were 8,471 cases of COVID-19 where officials had no information about origin. On May 22, they were told officials did in fact have source data for 5,309 of those cases.

It turns out the cases had been miscategorized in Public Health Ontario's daily summaries that provide information on new and cumulative cases of COVID-19.

"If the way the information was presented was not classified properly it would not give you the full sense of what transmission looks like broadly," said Todd Coleman, an epidemiologist and assistant professor in health sciences at Wilfrid Laurier University.

In each of Public Health Ontario's daily summaries, sources of exposure to the virus are reported in four categories: "Travel," "Outbreak-associated and close contact of a confirmed case," "Sporadic community transmission" and "Information missing or unknown." The data is culled from Ontario's integrated Public Health Information System (iPHIS), into which local public health units enter case data.

Cases in the sporadic community transmission category are those where officials don't know how people were exposed.

On May 21, there were 8,471 cases in that category. The next day, it was down to 3,162, a drop of 5,309 cases.

In an interview with the Star, Dr. Jessica Hopkins, medical director of health protection with Public Health Ontario, explained that the agency had decided to reclassify the cases because officials did in fact know they were associated with outbreaks.

"When you have an outbreak, you actually know where people are getting the disease from. They're getting it from essentially a close contact in the outbreak," said Hopkins. "And so we realized that it would be more accurate to categorize the people who were part of an outbreak into the outbreak or close contact category."

When asked why this reclassification was made several months into the pandemic, Public Health Ontario said in an email that as the pandemic evolves, "the information needed to help inform provincial and local decision-makers is also evolving."

"Public Health Ontario is working with the ministry and public health units to see where and how data inputted from public health units can be re-categorized and reanalyzed to provide more specific data that will aid the province and health units in the response," the email said.

The agency explained that when an outbreak occurs at a workplace, family gathering or another place where people can congregate, for example, there is an identified link and source to all the cases.

"It's therefore appropriate to reclassify cases linked to an outbreak with close contacts of cases who also have known links as opposed to sporadic community transmission cases where the exposure is unknown."

Coleman said now isn't the time to start changing the definitions of categories and lumping different numbers together "because then you can't identify long-term trends."

"Reclassifying it and making decisions based on that data could lead to a less accurate response for containment, control and prevention," he said.

Ashleigh Tuite, an infectious disease epidemiologist at the Dalla Lana School of Public Health, said the public should care about the way the data is categorized because "we want to make decisions based on the best available information."

"At the end of the day, what's going to get us out of this, in terms of reducing our reliance on physical distancing, is having a really clear understanding of where people are getting infected, who's at risk," she said. "Ideally, we would have more information on the outbreak-associated cases, like where they're getting infected and what are their risk factors so that people can protect themselves and make appropriate decisions."

Colin Furness, an infection control epidemiologist and assistant professor at the University of Toronto's faculty of information, said he isn't too concerned with the change in classification of the 5,300 cases because it means we have some idea about where those cases originated.

"In other words, we don't have the smoking gun, we don't know exactly which person you got it from, but we can associate you with an infection event," he said.

"To me, the really burning question is, what proportion of cases do we have to conclude that we have no idea how it spread? That's what we should be afraid of."

According to the latest Public Health Ontario data, there are still some 8,800 cases in Ontario (or 33 per cent of the total reported cases) for which officials have no idea about origin or have missing or pending information.

"The underlying thing here is Ontario is really bad at record keeping," he said. "It's really embarrassing."

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