

Now that 14 days have passed since Christmas — the maximum incubation period for the coronavirus — the Star analyzed public health and cellphone mobility data to understand what happened during this single, consequential week before the province locked down.

A shift in Ontario's epidemic

In the weeks after Christmas, a significant shift occurred in Ontario's epidemic. Previously, Toronto, Peel Region and York Region made up 70 or 80 per cent of the Ontario's cases; on Thursday, however, they accounted for just 54 per cent.

This is "concerning," Dr. David Williams, Ontario's chief medical officer of health, said in a press conference Thursday. "That means a lot of areas outside of those (regions) have gone up extensively."

When comparing the week before lockdown and the week before New Year's Eve, Ontario's case rate per 100,000 people jumped by 23 per cent, Williams said. And public health data suggests the holidays were a particularly consequential period for many public health units outside the GTA.

In late November, Lambton was **the only public health unit** in southwestern Ontario to remain in the province's green or "prevent" zone. But as of Jan. 8, the region of roughly 132,000 people had the third-highest infection rate in the entire province, according to the Star's count.

Cases in the Sarnia-area health unit began rising in mid-December. But when the holidays hit, a lot of people were on the move — in the week before Boxing Day, Lambton had one of the province's highest mobility rates, with 70 per cent of people "out and about," according to cellphone mobility data collected by marketing firm Environics Analytics.

(The data set shows anonymized location data for the percentage of people over age 15 who were "out and about" over a certain time period, defined as moving 500 metres or more beyond their home postal codes. Environics says the data is privacy-compliant, adjusted to correct for under-sampling, and aggregated to the postal code level.)

Mobility rates tend to be higher in more rural areas where people typically travel greater distances, and mobility doesn't tell us whether people actually gathered. But since Christmas, Lambton has seen the province's biggest increase in infection rates (176 active cases per 100,000 people as of Jan. 7) and a surge in test positivity.