

Endemic, not over: looking ahead to a new COVID era

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After large waves of SARS-CoV-2 this summer, experts predict a relatively “quiet” fall.

Hybrid immunity from widespread infections and vaccination has transformed SARS-CoV-2 into a “manageable endemic respiratory virus,” said Mel Kradjen of the B.C. Centre for Disease Control’s public health laboratory in a seminar presented by Canada’s COVID-19 immunity task force.

The next three months will “likely be quiet from a COVID perspective,” although early winter “may be different” as immunity wanes again.

More than 60% of Canadians have infection-acquired antibodies, according to serology data presented by the immunity task force.

However, older people remain vulnerable and should receive additional immunizations, Kradjen said. While infections increased across all age groups during the Omicron era, just 40% of people over 60 have protective antibodies from infection versus 73% of younger people.

Hybrid immunity generates a strong immune response, but SARS-CoV-2 remains a very dangerous infection that can cause exacerbated inflammatory responses that can last for months, said Charu Kaushic, scientific director of the institute of infections and immunity at the Canadian Institutes for Health Research.

What does endemic mean?

While the “boat has sailed” on eliminating SARS-CoV-2, it’s still unclear what kind of endemicity the virus will establish, said Kaushic.

Endemic means that a virus is continually present and somewhat predictable — not that it’s harmless or that precautions to prevent infections are unnecessary.

“It frustrates me when policy-makers invoke the word endemic as an excuse to do little or nothing,” wrote Aris Katzourakis in *Nature* earlier this year. Misunderstanding and misuse of the term “encourage a misplaced complacency,” he warned.

Recent pronouncements by the World Health Organization (WHO) that the end of the pandemic is in sight, and by United States President Joe Biden, who declared the pandemic over, sparked controversy, with #CovidIsNotOver trending on Twitter.

“We’ve just had by far the worst summer of the pandemic. Twice as many COVID deaths in Canada in summer 2022 as in summer 2021. In Waterloo region, already as many COVID deaths by September 2022 as in all of 2021,” tweeted T. Ryan Gregory, a professor of evolutionary biology at the University of Guelph.

The United States alone has recorded more than 223 000 COVID-19 deaths so far this year — many times the country’s annual flu toll of roughly 35 000 deaths.

Meanwhile, many countries are far from meeting global targets on vaccination coverage, testing rates, and access to treatments and protective equipment.

“Further variants and returning waves of infection can be expected as current immunity wanes, so dismantling basic controls and even advertising the end of the pandemic is premature, and likely to be harmful when restrictions become necessary again,” warned the Lancet COVID-19 Commission in a scathing report.

According to the commission, the pandemic response to date has been a “massive global failure,” not least because the WHO has been “slow to advocate policy responses commensurate with the actual dangers of the virus.”

Following this critique, WHO director-general Tedros Adhanom Ghebreyesus clarified that COVID-19 remains a global health emergency requiring ongoing attention and diligence.

“I have said that the pandemic is not over, but the end is in sight. Both are true,” Tedros said. “Being able to see the end does not mean we’re at the end.”

He added that 10 000 people dying every week is still too many preventable deaths.

Hybrid immunity is a mixed blessing

Deaths aren’t the only factor to consider, either.

The recent growth in hybrid immunity represents a “decidedly mixed blessing,” according to David Naylor, who co-chairs Canada’s COVID immunity task force.

Widespread infections may boost immunity, but also increase the number of people with post-COVID symptoms and the risk of new variants emerging. And repeated infections bring additional risks.

One preprint study focusing on U.S. veterans found that reinfection increased the risk of death, as well as “demand for medical care and potentially long-term health damages.”

When people downplay the dangers of reinfection, they seldom account for “elevated mortality due to shortages in health care resources including hospitals and ICUs,” the authors noted.

According to Kaushic, booster vaccinations remain “really important because, regardless of the circulating variant, in general, boosters are very good at protecting against severe infection.”

“Now’s the time for us to start refining who gets what vaccine at what intervals

and what kinds of measures we have to take going forward,” Kaushic said.

No major new variants on the horizon

Looking at previous waves can help to predict the future course of the pandemic.

SARS-CoV-2 changes about “once every two weeks,” said Sally Otto, an evolutionary biologist at the University of British Columbia and co-lead of CoVaRR-Net’s computational biology and modelling team.

The Omicron variant BA.5 has dominated longer than anyone might have predicted from epidemic models, Otto said. BA.4.6 and BA.2.75 have shown some slight growth recently, “but we’re not seeing a major new variant on the horizon at this point.”

“Nothing is really out-competing any of the other strains by a major amount,” at least for the time being, she said.

As immunity wanes later this year, Canada may see a resurgence of the first Omicron strains BA.1 and BA.2.

“Unless there’s a major uptick in vaccination rates, the prediction even without new variants is [more] waves this next three to four months,” Otto said.

The next challenge: flu season

The return of other respiratory diseases as pandemic precautions relax may be “quite harsh,” Kradjen said. Looking to the southern hemisphere, Australia’s 2022 influenza season has been more severe than the five-year average.

According to Kradjen, continuing measures like masking and avoiding indoor activities could take pressure off health systems.

“The question is not whether it’s just a wave of COVID, but do you have a wave of COVID plus influenza or RSV?” he said. “The immediate challenge for us all is to plan for and against a severe influenza season with vaccination.”

Diana Duong, CMAJ

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