COVID-19: PHAC Modelling Group

Public Health Agency of Canada | Agence de la santé publique du Canada

SEPTEMBER 15, 2022
AD HOC REPORT

1 EXECUTIVE SUMMARY AND CONTEXT

This is an ad hoc report, dated September 15, 2022 of recent modelling studies conducted by the PHAC Modelling Group.

The Agent-based model and *The SEIR compartment model* were both used to explore the impact of timing, uptake and age prioritisation of booster campaigns in 2022 on a fall/winter COVID-19 wave. Outputs were similar for both models. A significant fall/winter wave may occur due to a combination of waning of post-infection and post-vaccination immunity, and increased contact rates as the population moves to more indoor activities and schools and universities re-open. In the simulations, starting booster campaigns (to increase third and fourth doses) in mid-July or early September significantly reduced the fall wave of hospital admissions. However, starting booster campaigns in mid-October had a minimal impact on hospital admissions as it was after the fall wave was already underway. Similar simulations and analyses were presented in the June 30, 2022 Modelling Report, but did not account for possible impacts of a summer wave caused by the BA.4 and BA.5 Omicron variants. The simulations have been updated to account for the dominance of BA.5 that occurred over the summer, as well as incorporating more recent data to account for the current Canadian context. Regardless of these updates, the findings of the simulations and analyses are consistent with those presented in June 2022.