COVID-19: PHAC Modelling Group

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

JUNE 30, 2022
AD HOC REPORT

1 EXECUTIVE SUMMARY AND CONTEXT

This is an ad hoc report, dated June 30, 2022 of recent modelling studies conducted by the PHAC Modelling Group on summer/fall 2022 booster doses and a potential resurgence of COVID-19 in the fall/winter.

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 open again. Booster campaigns (increasing 3rd and 4th doses) that started 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, in the simulations, the fall wave was already underway. Increased uptake of boosters by younger age groups also reduced the wave in simulations in which the booster campaigns started in July or September. Prioritization of older age groups for boosters had a minimal impact on the wave. These simulations do not account for possible impacts of a summer wave caused by the BA.4 and BA.5 Omicron variants and further modelling is underway to explore this.