



Impact of the COVID-19 pandemic on routine immunization programs

Immunize Canada-CANVax Webinar Series
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Outline

1. Timeline of public health restrictions
2. Recommendations regarding routine vaccine delivery
3. Infant immunization coverage (2019 vs. 2020)
4. School vaccine coverage
5. Strategies for catch-up

Learning Objectives

By the end of this session, participants will be able to:

1. Understand the extent to which routine vaccine coverage (infant and school vaccines) declined during the pandemic compared to pre-pandemic period.
2. Understand whether those missed getting vaccinated during the early pandemic were caught up later during the pandemic.
3. Understand the strategies adopted by the province for catch-up.

The start of the COVID-19 pandemic



December 2019

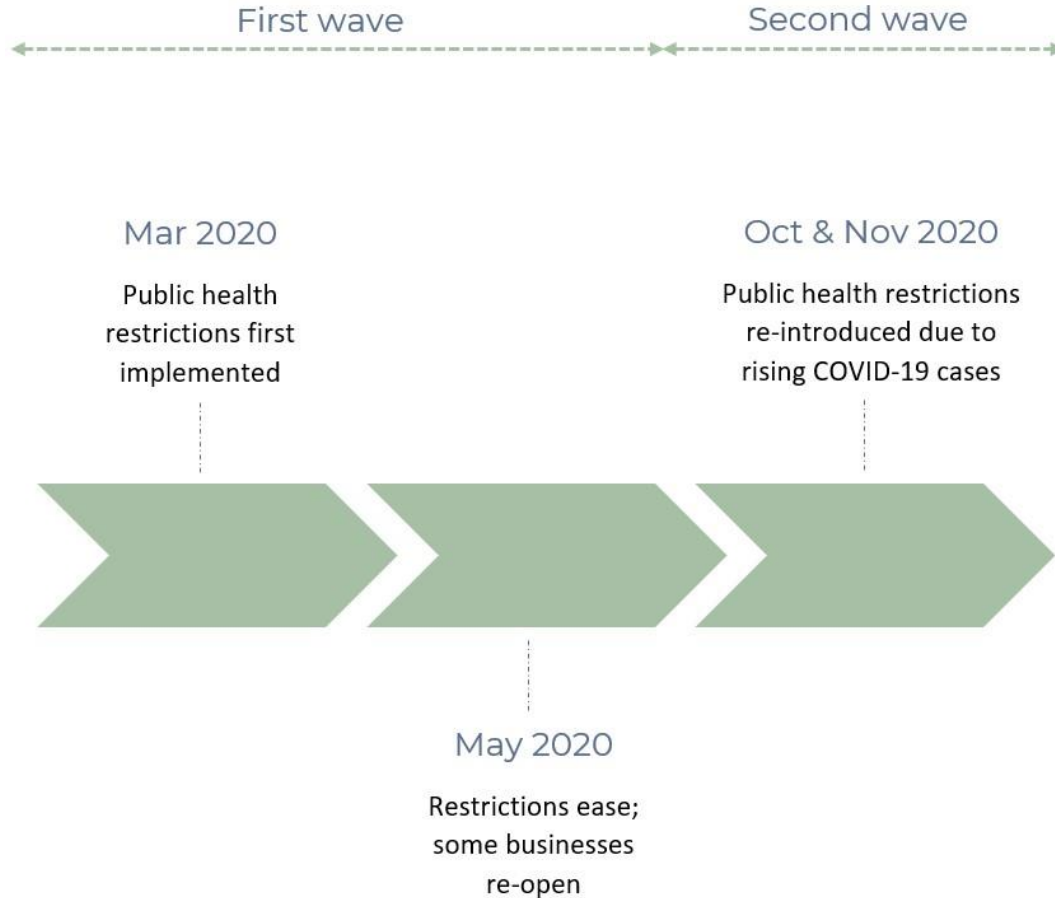


March 11, 2020



March 17, 2020

Timeline of public health restrictions in Alberta: 2020



Recommendations for routine immunizations during the pandemic

Infants and toddlers

- Prioritize primary immunization series with some modifications to immunization services

School-aged vaccines

- Can be deferred until schools re-open or full health services are available

The COVImm Project

**Vaccination in a pandemic:
The impact on routine
vaccinations & COVID-19
vaccine acceptance**



Team:

Researchers from 6
provinces

Knowledge users:

- NACI Secretariat
- Provincial public health officials in AB, QC, & BC

Research team members:

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Alberta Health

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B.C. Centre for Disease Control

A multi-method national study that incorporates data from four complementary approaches:

1. A pan-Canadian environmental scan of public health leaders and vaccine policy/program documents
2. Two cross-sectional pan-Canadian surveys of the public and healthcare providers
3. Interviews with members of equity-seeking groups
4. Analysis of routine vaccine coverage data in three provinces



Impact of the pandemic on infant vaccination coverage

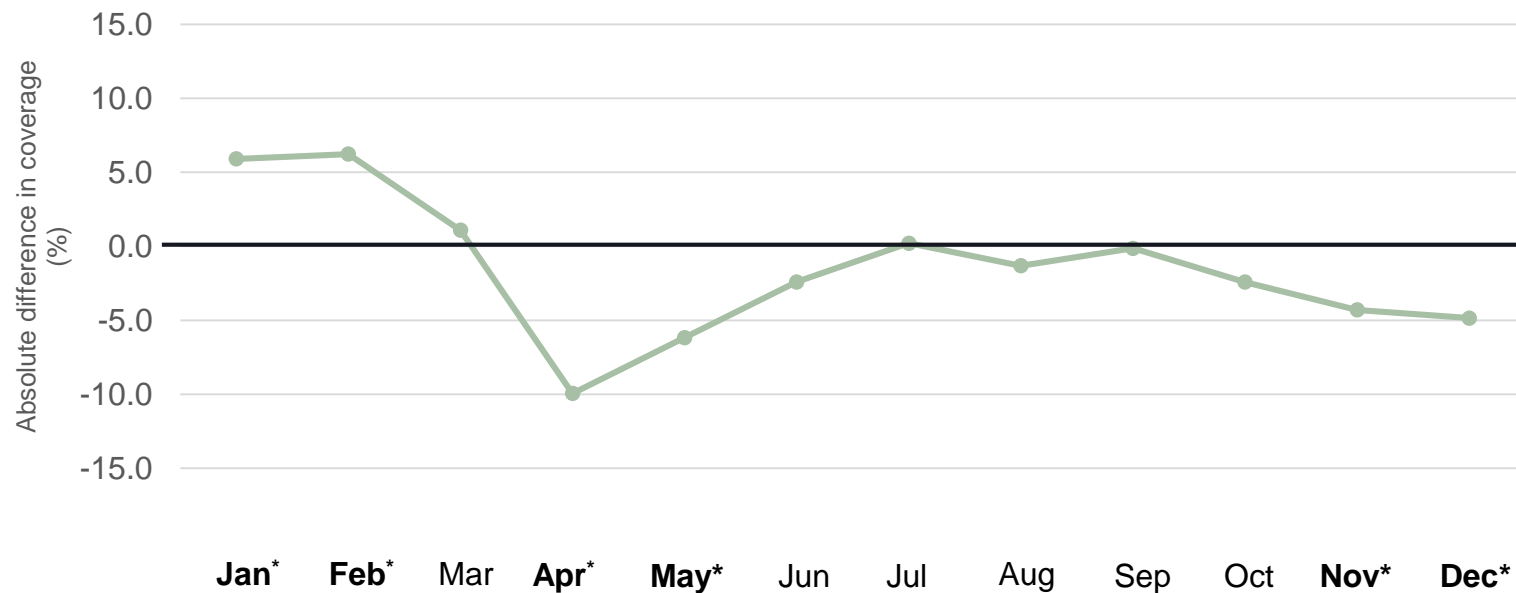
Infant immunization schedule in Alberta

Vaccine	Number and timing of doses
Measles, mumps, rubella ± varicella vaccine (MMR/MMRV)	1 dose: 12 months
Rotavirus	3 doses: 1st dose: 2 months 2nd dose: 4 months 3rd dose: 6 months
Pertussis-containing vaccine (DTaP-IPV-Hib-HB or DTaP-IPV-Hib)	4 doses: 1st dose: 2 months 2nd dose: 4 months 3rd dose: 6 months 4th dose: 18 months

Methods

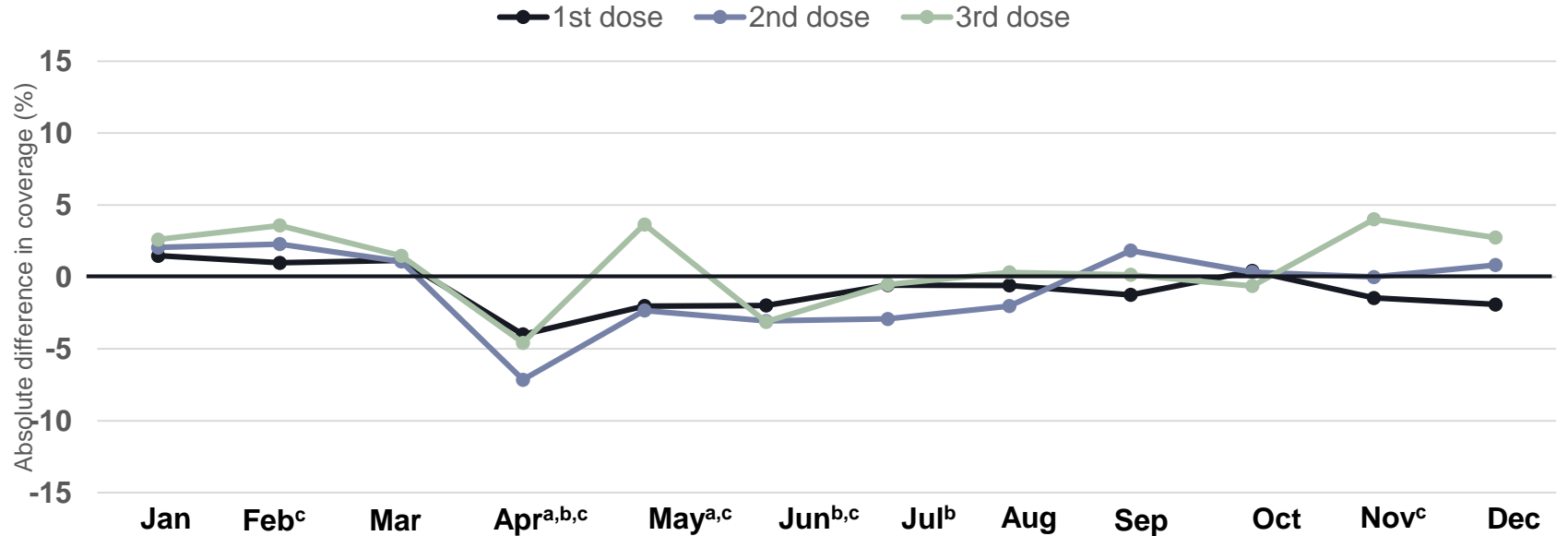
- The impact of the COVID-19 pandemic on vaccine coverage was examined using administrative data available from MoH Alberta.
- Vaccine coverage was defined as the proportion of age-eligible children who were vaccinated by 30 or 31 days following the due date (28 or 29 days following February due dates)
- We measured the impact using two measures
 - a. Monthly coverage
 - b. Cumulative coverage
- Differences in monthly vaccine coverage (2020 minus 2019) was calculated to compare coverage between two periods
- 95% confidence intervals (CI) for binomial proportions calculated and overlap examined

Difference in monthly coverage: measles (2020 minus 2019)



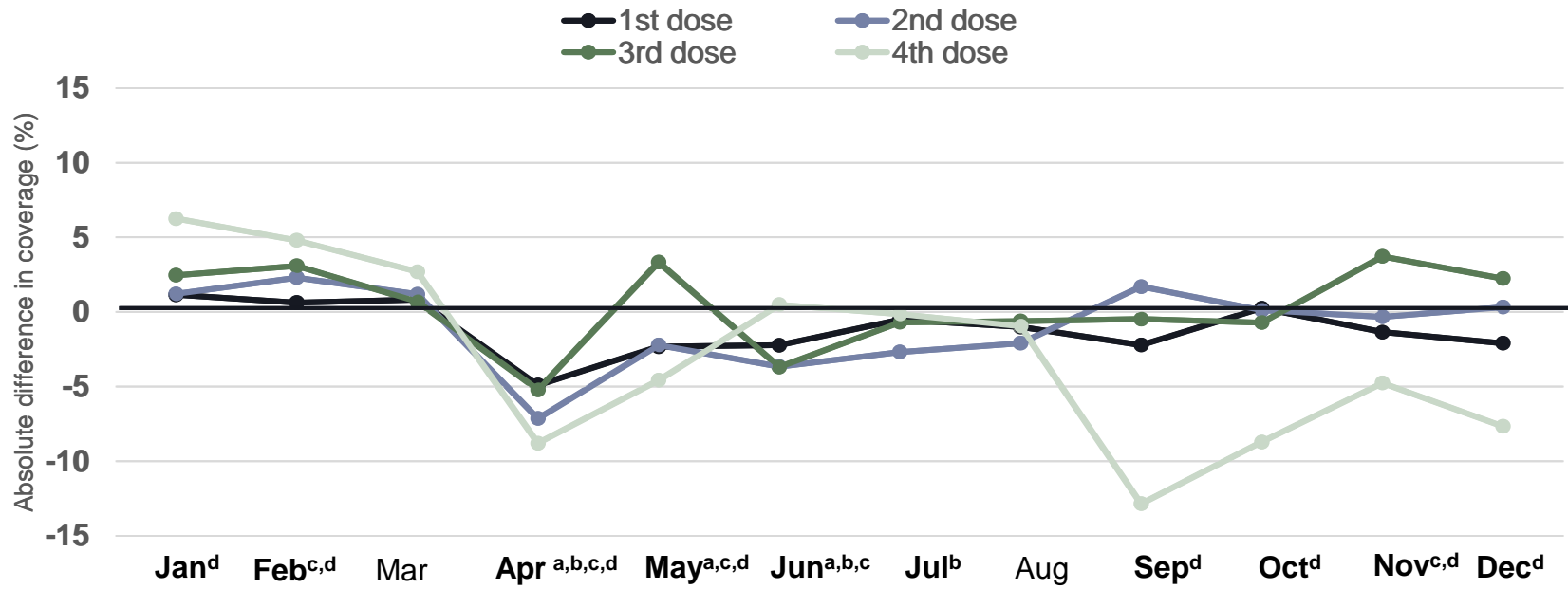
*Significant difference

Difference in monthly coverage: rotavirus vaccine (2020 minus 2019)



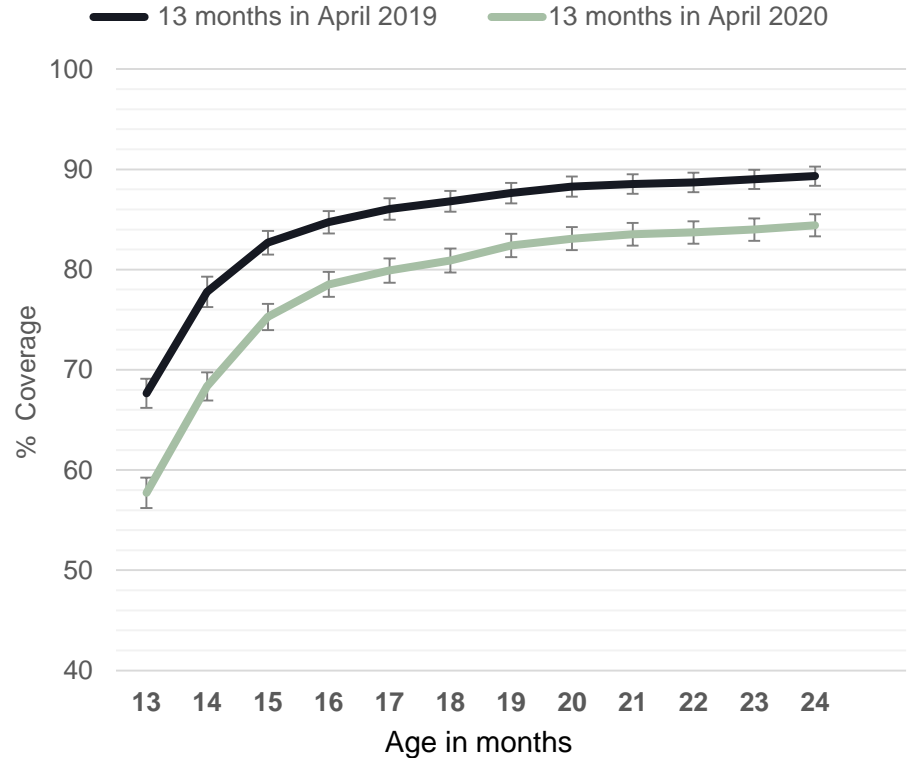
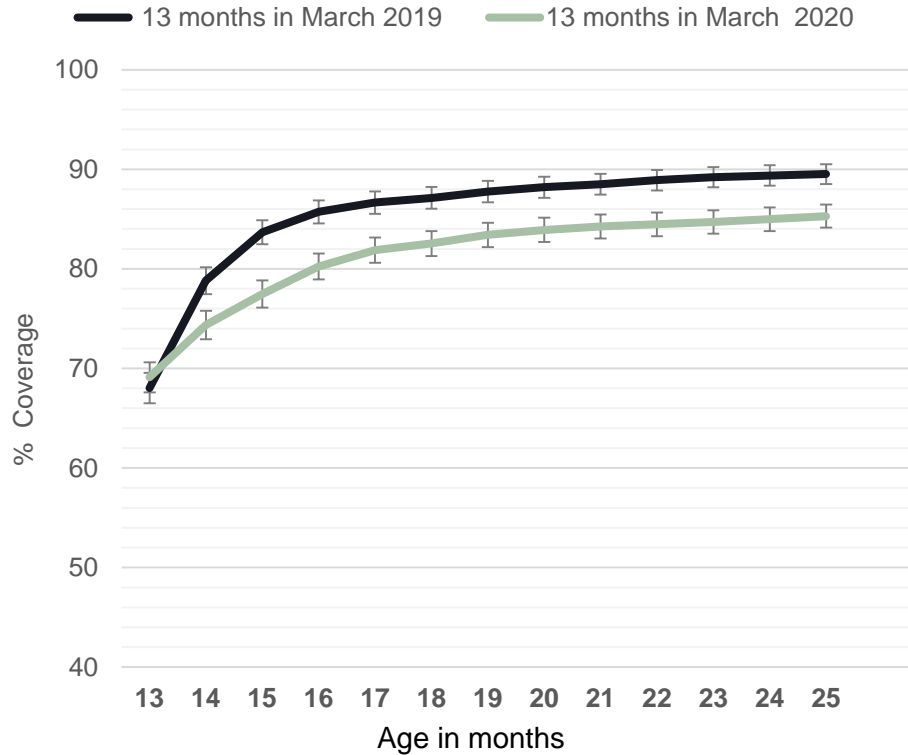
^aSignificant difference for first dose
^bSignificant difference for second dose
^cSignificant difference for third dose

Difference in monthly coverage: pertussis-containing vaccine (2020 minus 2019)

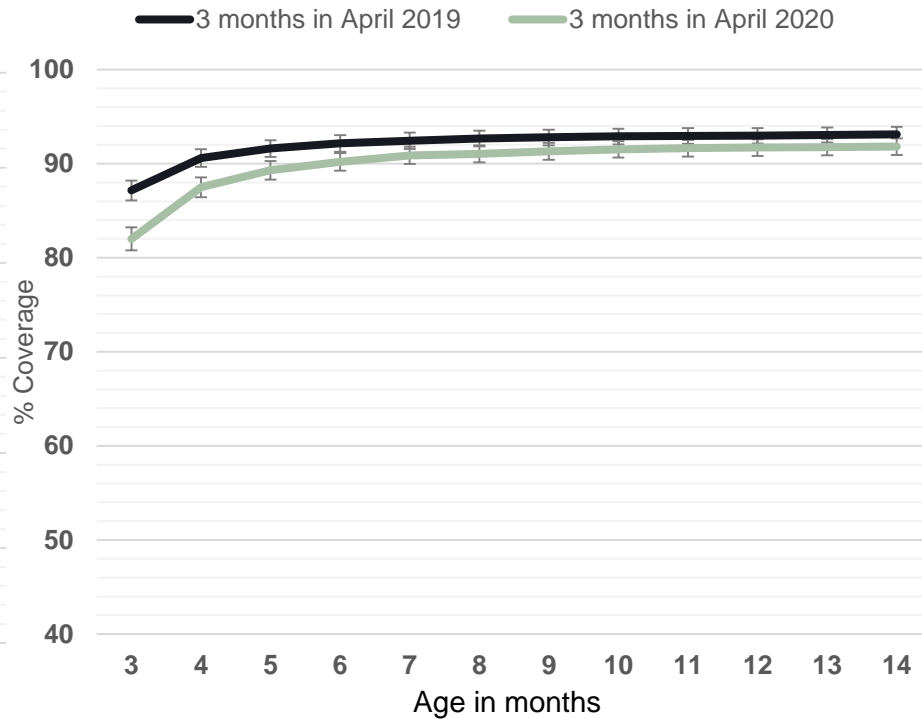
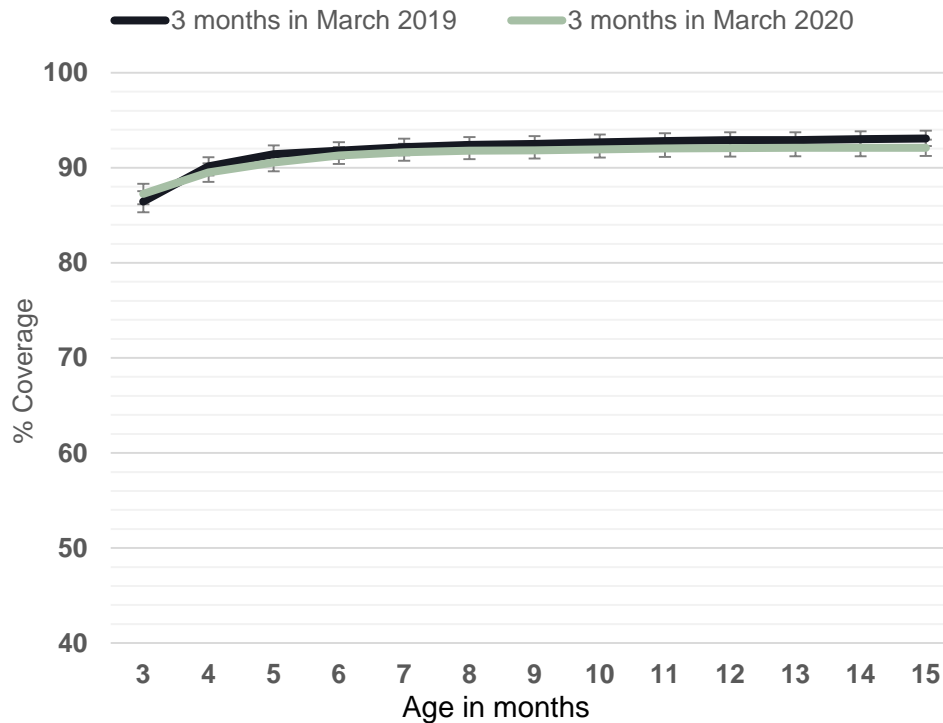


^aSignificant difference for first dose
^bSignificant difference for second dose
^cSignificant difference for third dose
^dSignificant difference for fourth dose

Cumulative coverage: measles

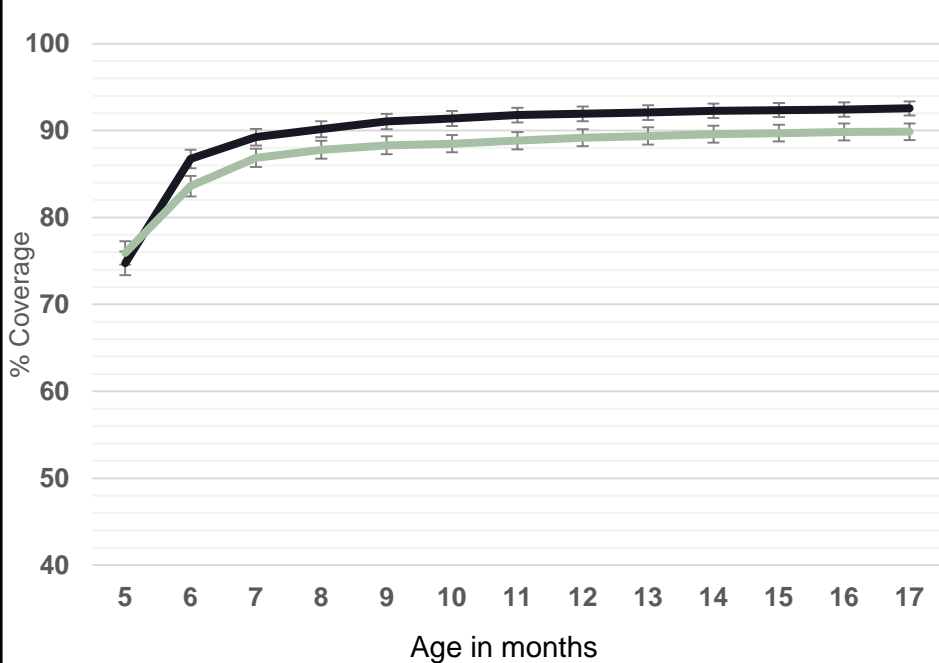


Cumulative coverage: pertussis-containing vaccine (first dose)

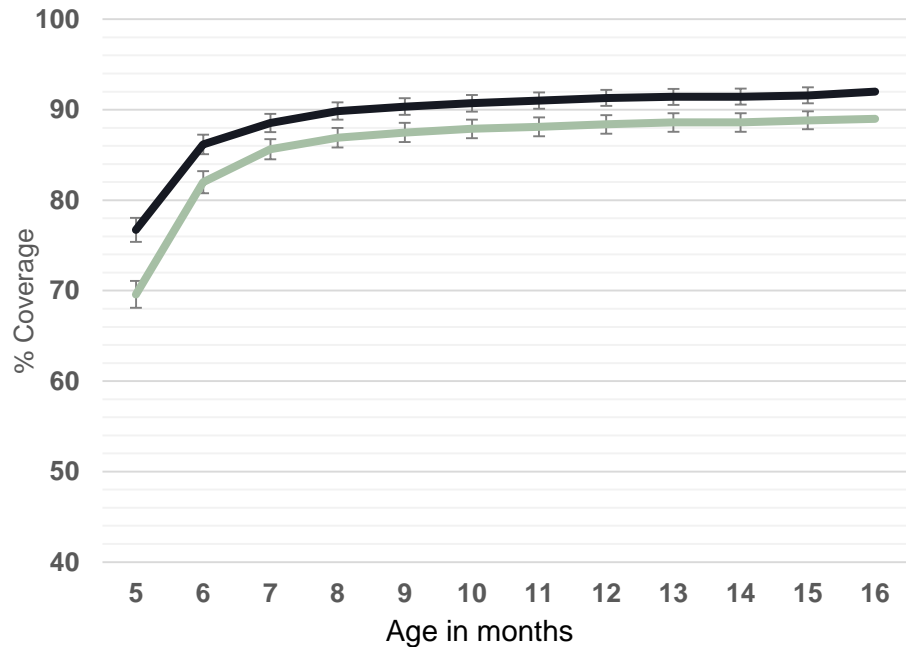


Cumulative coverage: pertussis-containing vaccine (second dose)

Five months in March 2019 Five months in March 2020



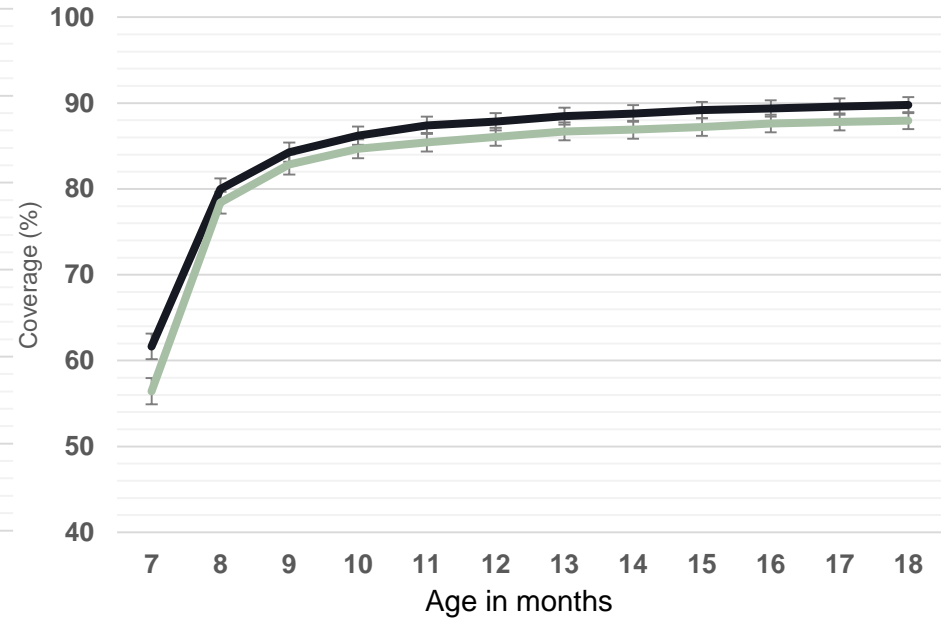
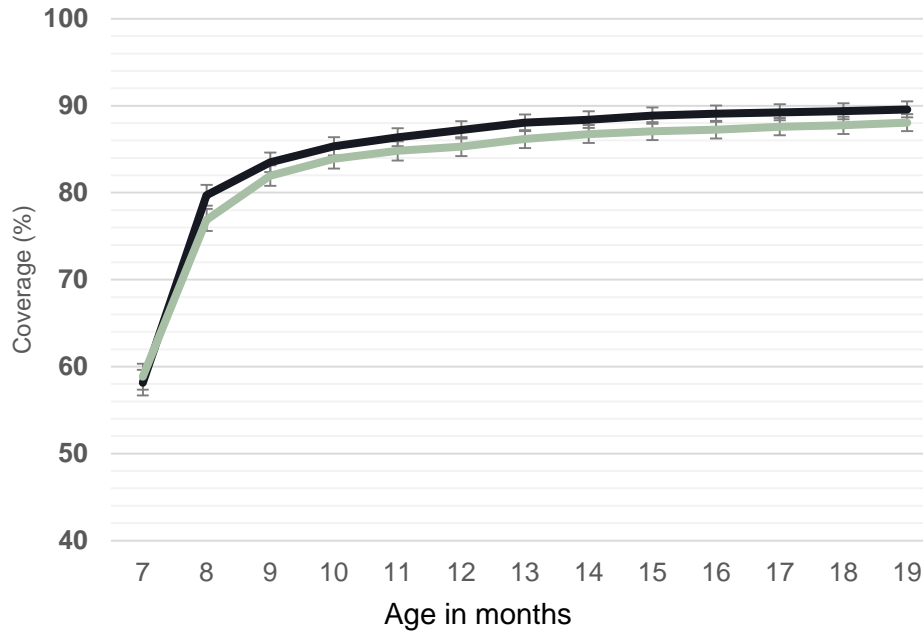
Five months in April 2019 Five months in April 2020



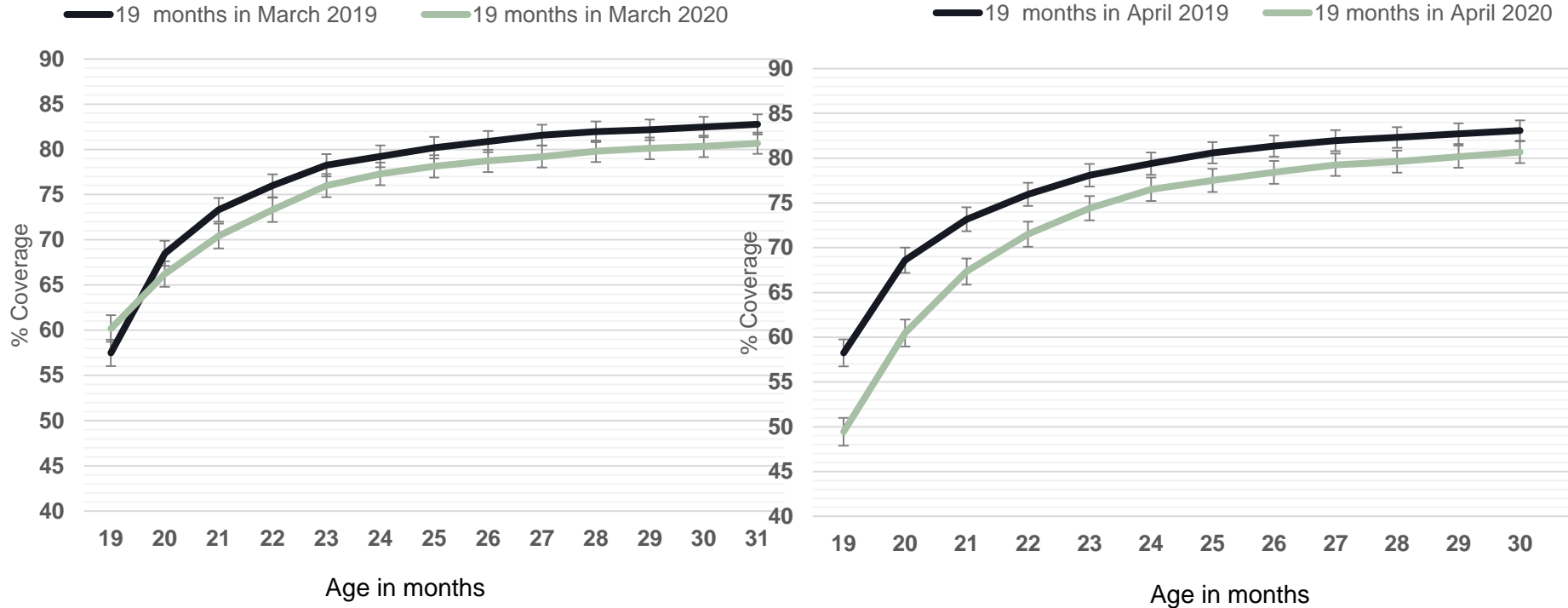
Cumulative coverage: pertussis-containing vaccine (third dose)

Seven months in March 2019 Seven months in March 2020

Seven months in April 2019 Seven months in April 2020



Cumulative coverage: pertussis-containing vaccine (fourth dose)

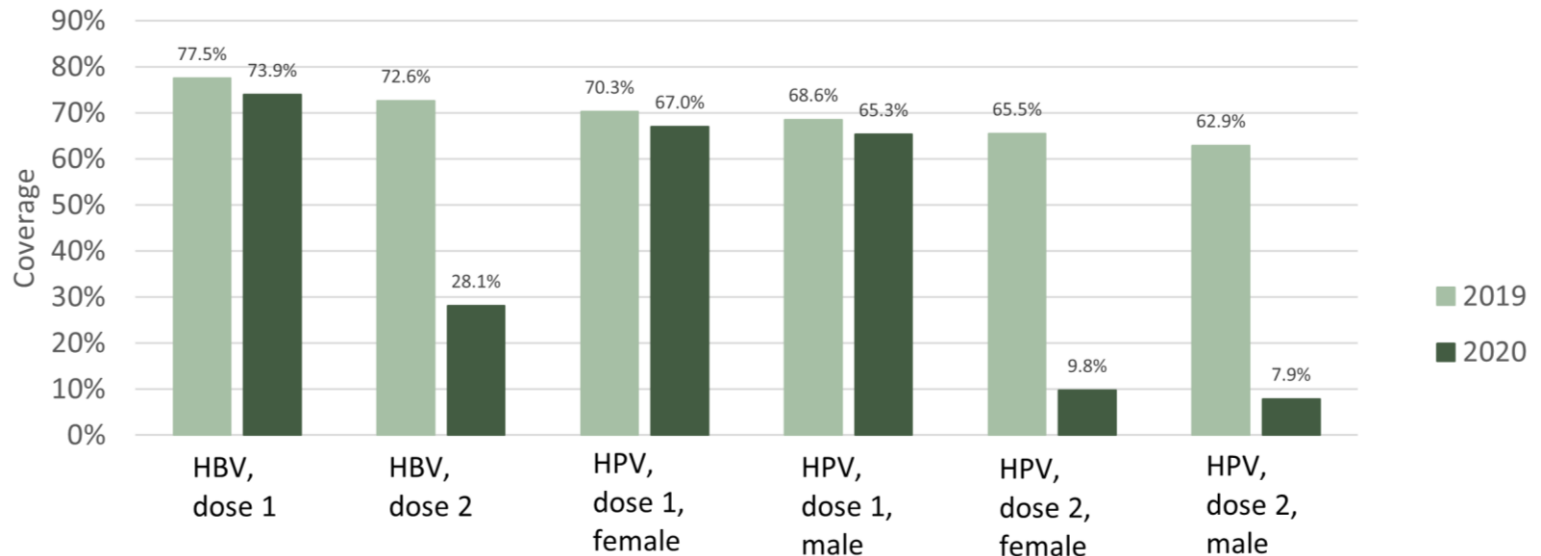


What has been the impact of the COVID-19 pandemic on school vaccine uptake?



COVID-19 impact on school vaccine uptake in Alberta: Age 12 years

School immunization coverage in Alberta, 2019 and 2020

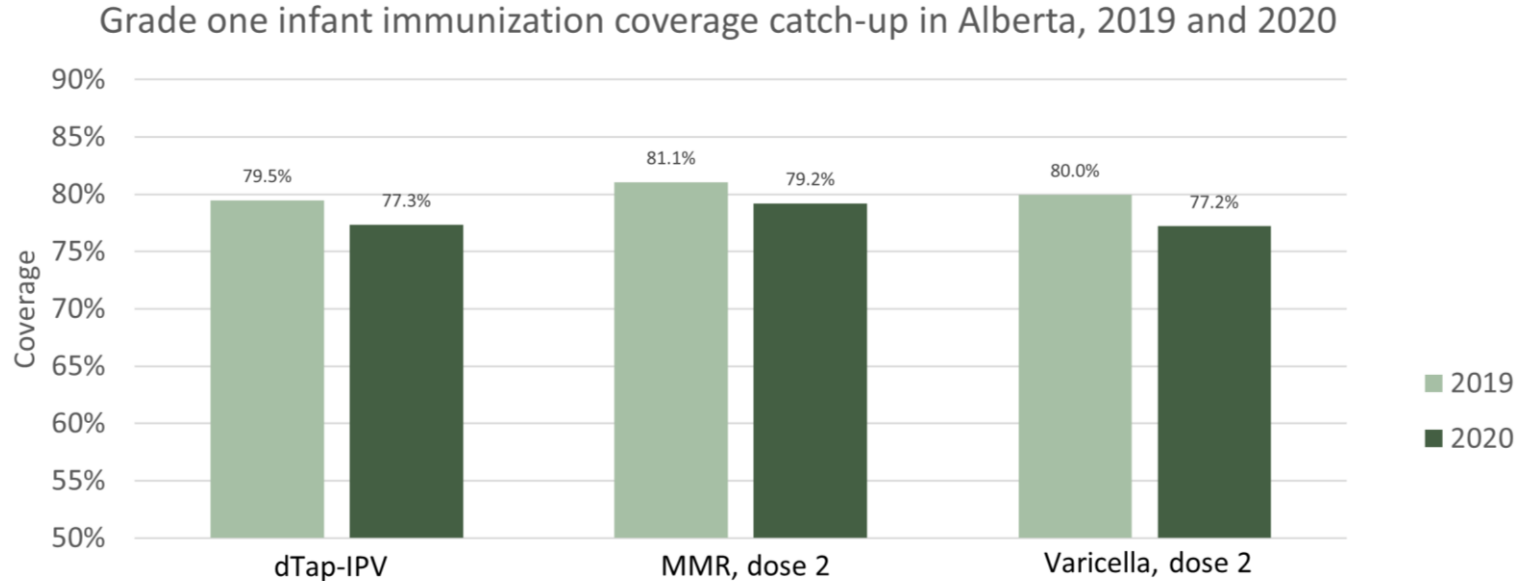


Notes.

Received by age 12.

Data source: Alberta Government, Interactive Health Data Application, June 2021.

COVID-19 impact on school vaccine uptake in Alberta: Age 7 years



Notes.

Received by age 7.

Data source: Alberta Government, Interactive Health Data Application, June 2021.

Strategies for catch-up in Alberta



Strategies for catch-up

Infant vaccines:

- After initial reduction of vaccine service delivery at the start of the pandemic, many community health centers were contacting parents of 6-month-old children to get them vaccinated before they aged out of rotavirus vaccine eligibility
- Timely catch-up strategies are now needed



2019-20 school immunization catch-up in Alberta: 2020-21 school year

- Catch-up offered through the regular school-based program, in schools
- Extra clinics held at public health centres and other sites
- Catch-up for 2019-20 school cohort was prioritized
- Catch-up not yet complete



What happened with the 2020-21 school immunization program in Alberta

- School-based program continued to be offered in schools, depending on whether outbreaks of COVID-19 were present
- Parents could take students to public health clinics to be immunized
- Grade 9 vaccines were prioritized
- Nurses came on alternate days to catch-up some missed students when possible



Future catch-up plans for the school immunization program in Alberta

- Some zones held mass catch-up clinics throughout the summer of 2021
- Will push to complete 2019-20 catch-up this fall and continue with catch-up for the 2020-21 cohort
- For the 2020-21 cohort, planning to catch-up missed doses in grades 1-3 first, followed by grades 6-8



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- Ali Assi, COVImm Project Coordinator
- The entire COVImm study team



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