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Title: The impact of OHIP+ universal pharmacare on prescription drug use and costs among children and youth under 25 years in Ontario: a time-series analysis
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Reviewer 1
General comments (author response in bold)

1. The initial OHIP+ was implemented in January 2018 and its modification in April 2019 excluded private drug plan holders and those eligible for Ontario Drug benefit program. How does the authors separate the intertwined effects using interrupted time series analysis?
Generally, we used interrupted time series (ITS) study design to model our study with 3 groups with a control group as ITS has more flexibility and can accommodate ITS extensions to analyse multiple interventions with a control group where we differenced the outcomes between interventions and control group and modelled the difference as a single ITS thus separating the intertwined effects pre-post OHIP+ and its modification.

2. The study looked at the universal pharmacare on prescription drug use costs among children and youth <25 years of age given the reasons of children and youth are vulnerable population and younger adults are mostly disadvantaged in coverage. How about the senior population (i.e., > 65 years) without private drug plan or insurance?
This is an excellent point, and the topic of a future study. We were unable to acquire data for the senior population (i.e., > 65 years) without private drug plan or insurance with the limited budget available. Our study generally focused on the impacts of OHIP+ on youth under 25 years but did not set out to assess impacts of OHIP+ on the senior population.

3. The authors stated no sensitivity analysis was conducted. It will be interesting to look at the senior population affected by 2 policy intervention as sensitivity analysis
This is an important comment to note, and we will consider looking at the senior population affected by the 2-policy intervention as sensitivity analysis in our future study when we are able to access the data, we were unable to conduct this interesting analysis due to lack of data for the senior population with the limited budget available as our study generally did not set out to assess impacts of OHIP+ on the senior population.

4. The secondary analysis looked at asthma and diabetes medication prescription for the population under 25 years of age. What is the prevalence of asthma and diabetes in that population compared to senior population (i.e., >65 years)?
This is a great point, and the prevalence of asthma and diabetes for the population under 25 years of age compared to the senior population (i.e., > 65 years) can be considered in the future analysis when we have access to the senior population data.

Reviewer 2
General comments (author response in bold)

1. The main comment relates to the novelty and significance of this work. While this study provides foundational work examining public coverage of prescriptions in Canada, it would be more impactful if these data were linked to outcomes such as adherence to prescribed medications, clinical outcomes, and healthcare resource utilization. The main finding that more covered prescriptions were filled when OHIP+ was implemented and decreased with changes to coverage is intuitive.

This is an excellent point, and the topic of a future study. While we were unable to conduct an assessment linking to outcomes such as adherence to prescribed medications, clinical outcomes, and healthcare resource utilization due to lack of access to data from NPDUIS, as we were unable to acquire data on clinical outcomes with the limited budget available from IQVIA, our findings still quantify the effects of OHIP+ universal pharmacare and provide a clear picture to health care planners on the likely cost of implementing universal pharmacare. Therefore, public plans across Canada can use these data with their current utilization data to estimate for their population the probable cost of providing first-dollar coverage for prescription drugs for children and youth. Similarly, the study findings are useful for informing national debate in Canada about a national pharmacare program that would enhance equitable access to medications.

2. What was the rationale for using British Columbia as a comparator?

Specifically, we have included this point in the methods section of the setting and policy intervention on page 4, paragraph 2 to capture the point. "We used the province of British Columbia (BC) as a non-equivalent control jurisdiction, as it had comparable coverage for youth and children and social assistance programs during the study period".

3. What was the rationale for the sub-analysis of diabetes and asthma groups?

This is an important point, we have included more information on the rationale for the sub-analysis of diabetes and asthma and updated the introduction section on page number 3-4, paragraph 2 to capture revision. "The secondary objective was to use the same metrics to assess prescription medications among the two most common chronic conditions (asthma and diabetes) affecting children and youth in Canada according to the public health agency of Canada."

4. While interrupted time series seems like an appropriate choice, more rationale could be provided. There are other study designs that could have been used.

This is a good point, we have now included more information about the rationale of using interrupted time series study design as opposed to others and updated the methods section under design on page number 4, paragraph 1 to capture the revision. "We used an interrupted time series (ITS) design to estimate changes in the number of publicly covered prescriptions and plan expenditures. It is a rigorous and commonly used method to examine the longitudinal effects of introducing new programs and policies including changes in outcomes of interest while controlling for pre-existing trends[17-30]."

5. Since technically this study had 3 groups, I am not sure considering It a time series analysis is the most appropriate terminology – it could have been treated as non-continuous and categorical instead

Generally, we used interrupted time series (ITS) study design and terminology for our study with 3 groups with a control group as its more flexible and can

accommodate ITS extensions to analyse multiple interventions with a control group with the potential of differencing the outcomes between interventions and control group and model the difference as a single ITS which is the most appropriate choice for our study instead of using non-continuous and categorical terminology.