

Canada COVID-19 epidemic models situation report No 41 - 2022-04-01

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**Combine and visualize international periodically updated estimates of COVID-19 pandemic
at the country level, countries with subnational level estimates
Canada**

Based on uptake 20220325 in <https://github.com/pourmalek/CovidVisualizedCountry>
Study update dates in uptake 20220401
DELP 20220328, IHME 20220322, IMPE 20220131, SRIV 20220401

Note that the latest available update of IMPE (20220131) is more than 2 months old as of 20220401.

Summary 20220401:

Reported cases and deaths are on the increase at Canada's national and provincial levels. ***This might signify a new surge – the 7th wave at the national level.***

Saskatchewan's reporting of COVID-19 deaths and cases was interrupted recently. It seems that Nova Scotia is experiencing the same problem in reporting. In recent weeks, the official reports of daily deaths from Canada to the World Health Organization indicate that the Ministry of Health of Canada thought twice. They said they did not have that many deaths they had reported before, i.e., reports of negative numbers of daily deaths.

International and periodically updated models' predictions are divergent about the current and the next surges. IMPE model is functionally next to retirement: their latest predictions as of 2022-04-01 dates back to 2022-01-31.

The latest update of the [PHAC-McMaster model](#) dates back to 2022-02-18 as of 2022-04-01.

[Canada's government "Update on COVID-19 in Canada: Epidemiology and Preparedness, April 1, 2022"](#) does not contain any quantitative predictions for the future of the epidemic in Canada. They have two narrative scenarios for future, named "Realistic Scenario: Ongoing transmission with intermittent waves" and "Worst-case Scenario: Emergence of an immune evasive and severe VOC". These two scenarios might be summarized as bad and worse.

The ongoing seeable and sizable decrease in mask use is not well-captured by the models. For instance, graph (9) "Canada National Daily mask use, IHME, 2020 on" shows the IHME model's assumption that the population mask use level of early March 2022 (e.g., 66% at the national

level) will continue at the same value until July 1st. However, there has been a considerable decrease in mask use in March after provincial governments released the mask mandates. This untrue assumption is among the reasons why the reported cases and deaths do not follow the trajectories predicted by the models.

Premature release of mandates for using masks and physical distancing serves the political and economic purposes of the governments, not the public health and survival needs of the populations.

The **strengths and weaknesses** of the international and periodically updated COVID-19 pandemic models are discussed [here](#).

DELP: [model by Massachusetts Institute of Technology, Cambridge](#)

IHME: [model by Institute for Health Metrics and Evaluation, Seattle](#)

IMPE: [model by Imperial College, London](#)

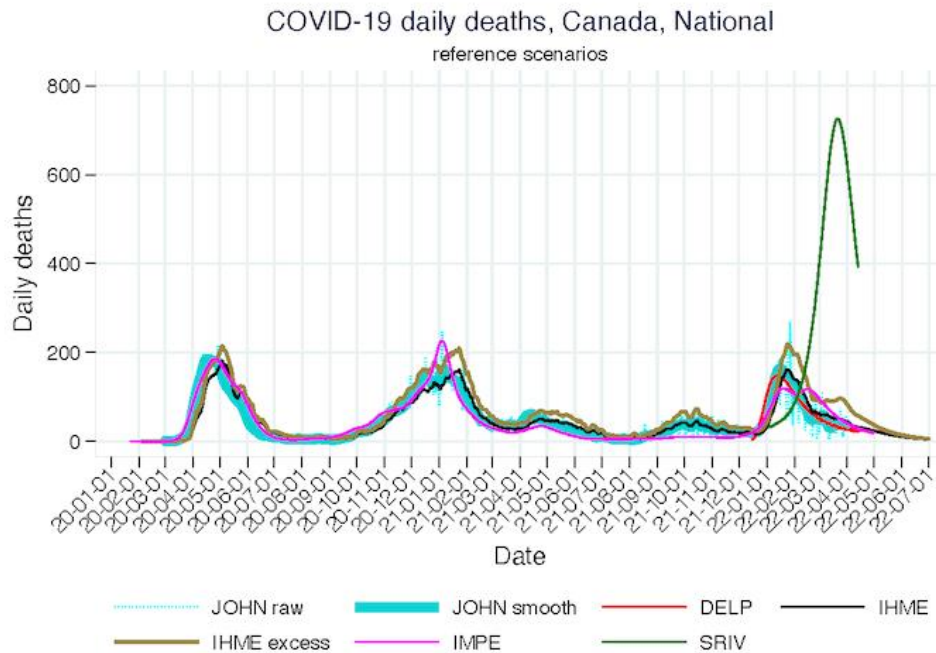
SRIV: [model by Srivastava, Ajitesh, University of Southern California, Los Angeles](#)

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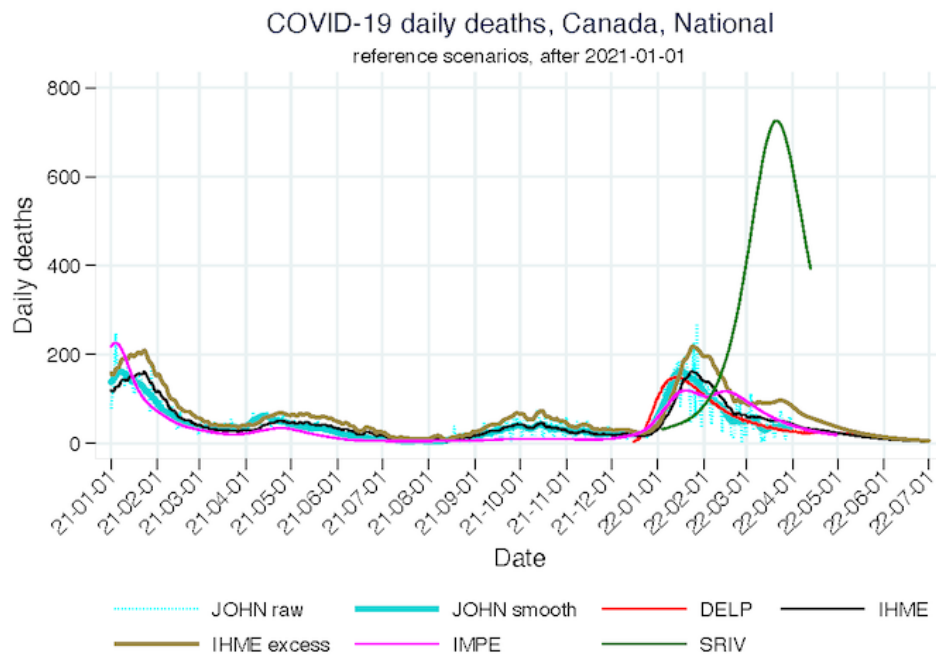
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Selected graphs - Canada, National

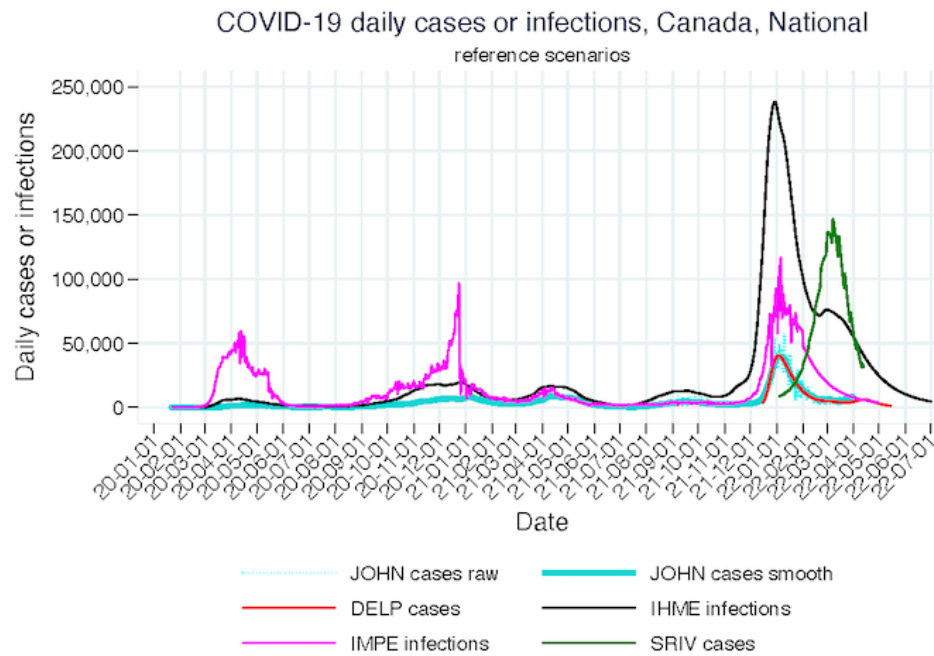
(1) Canada [Daily deaths, Reference scenarios, 2020 on](#)



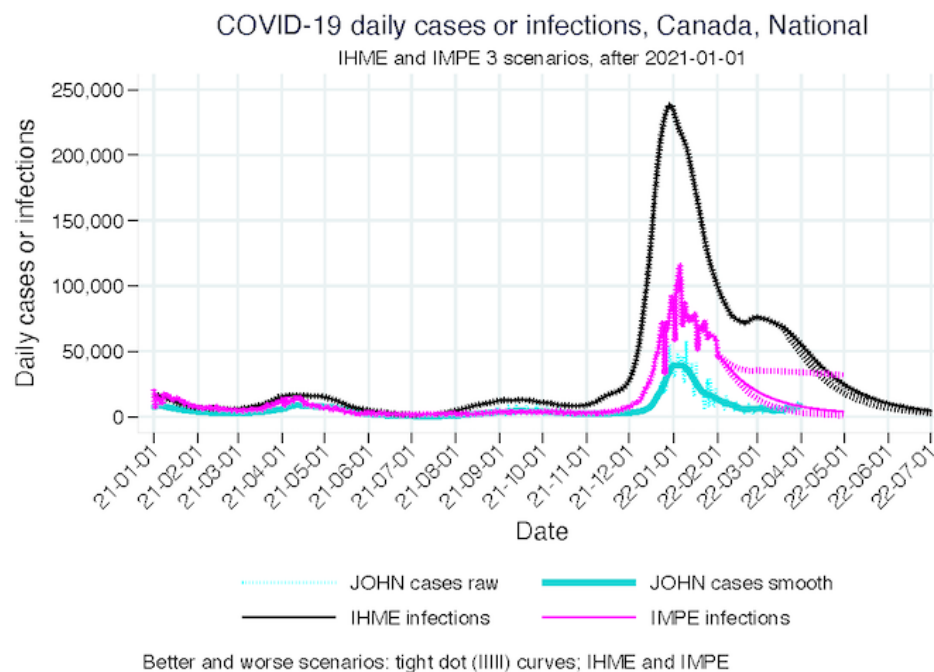
(2) Canada National [Daily deaths, All scenarios, 2021 on](#)



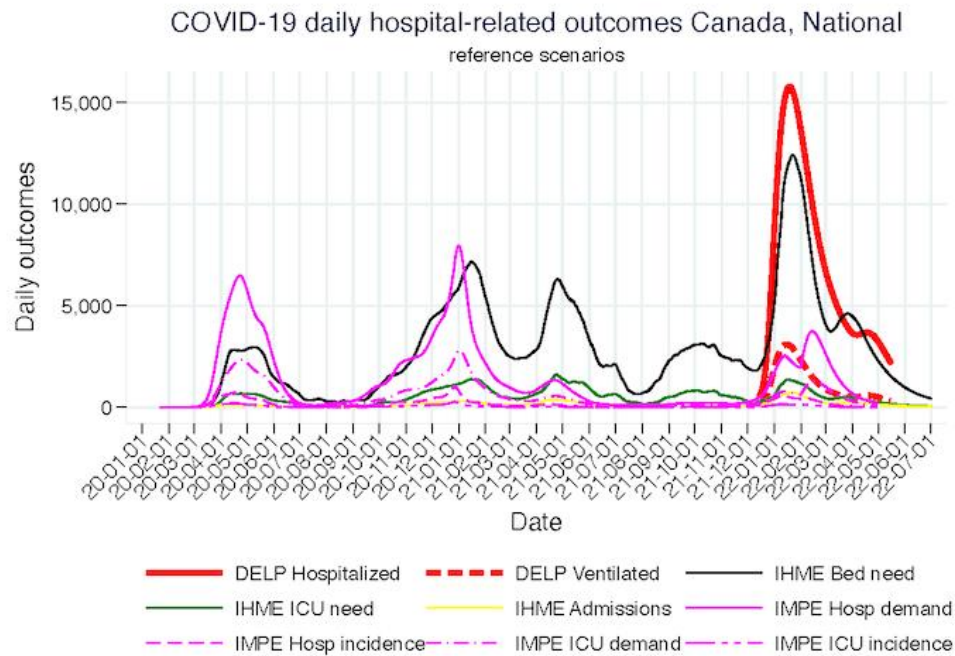
(3) Canada National [Daily cases or infections, Reference scenarios, 2020 on](#)



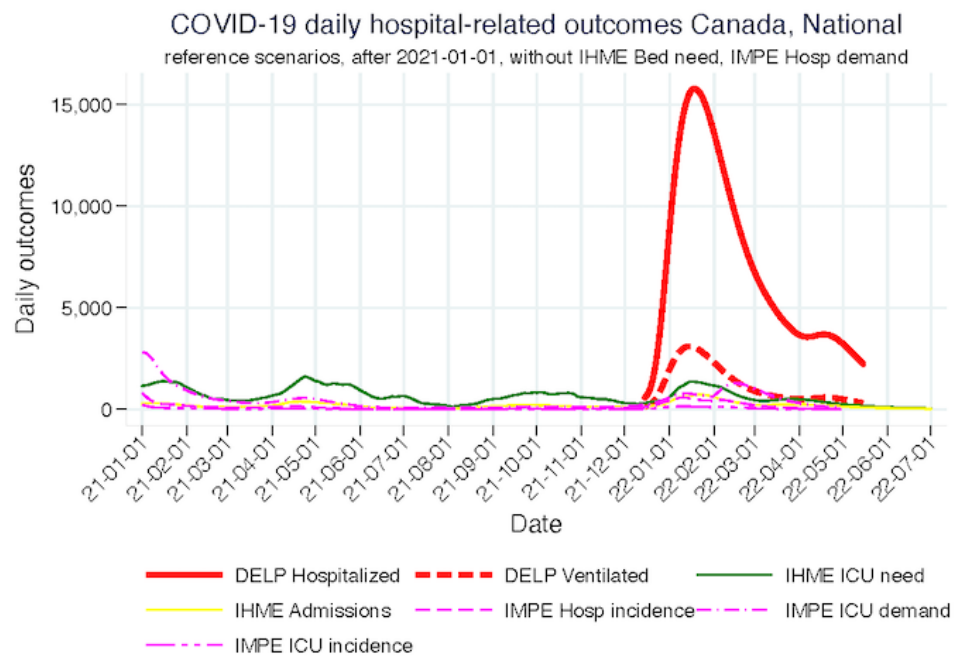
(4) Canada National [Daily cases or infections, All scenarios, 2021 on](#)



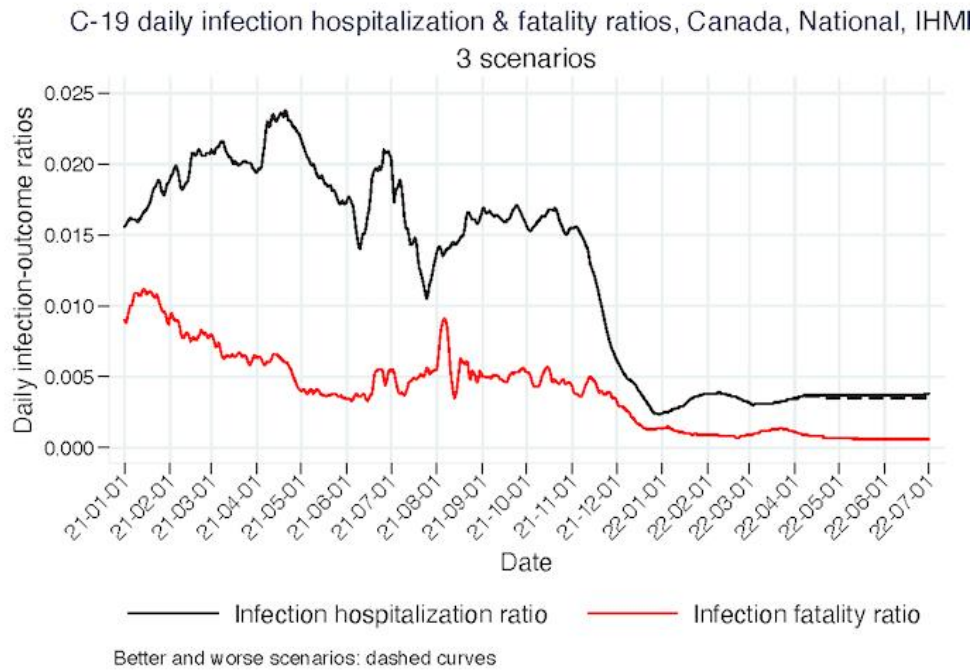
(5) Canada National [Daily hospital-related outcomes, Reference scenarios, 2020 on](#)



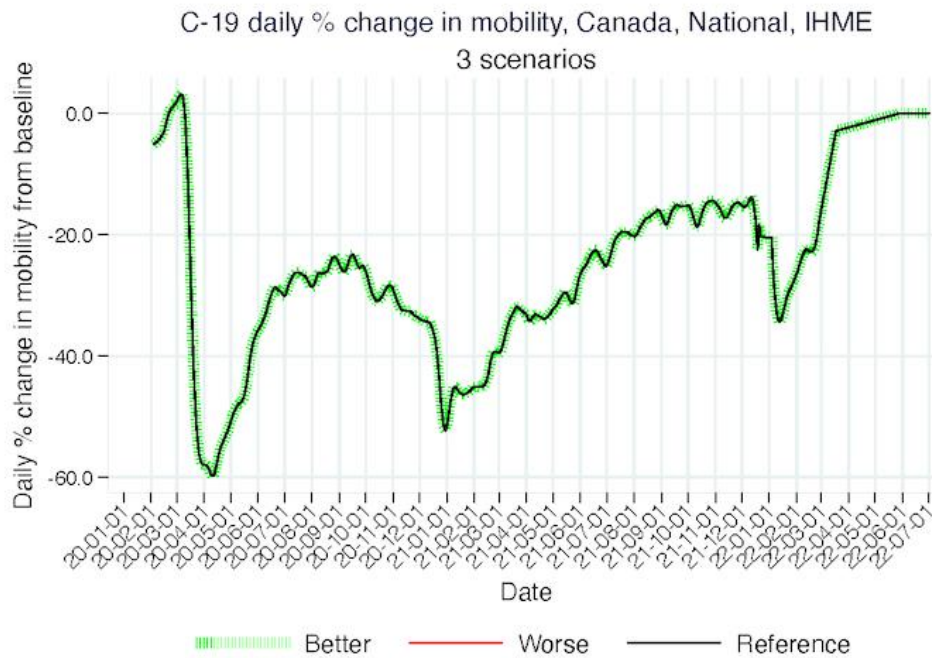
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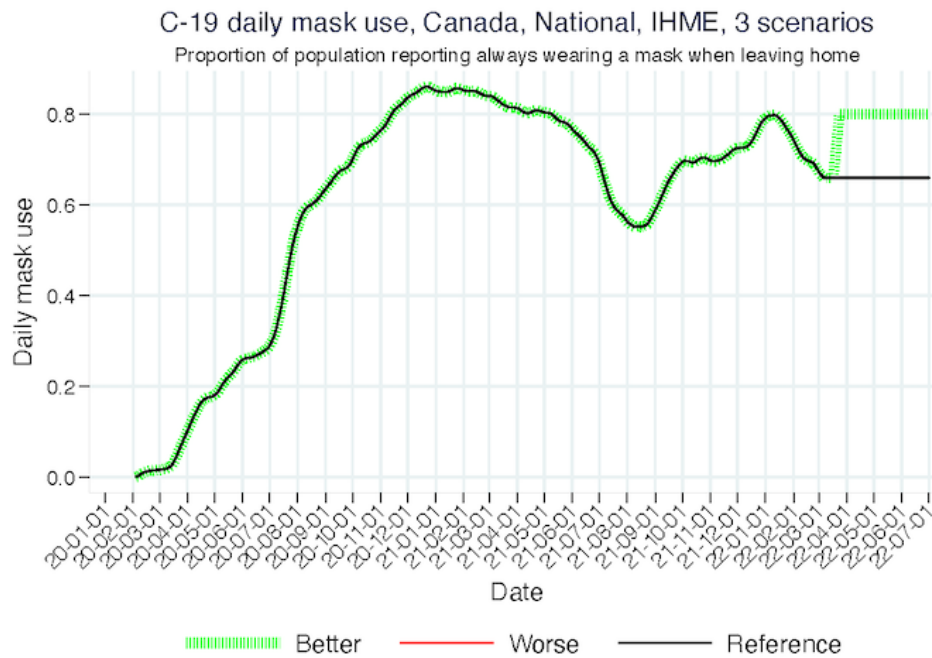
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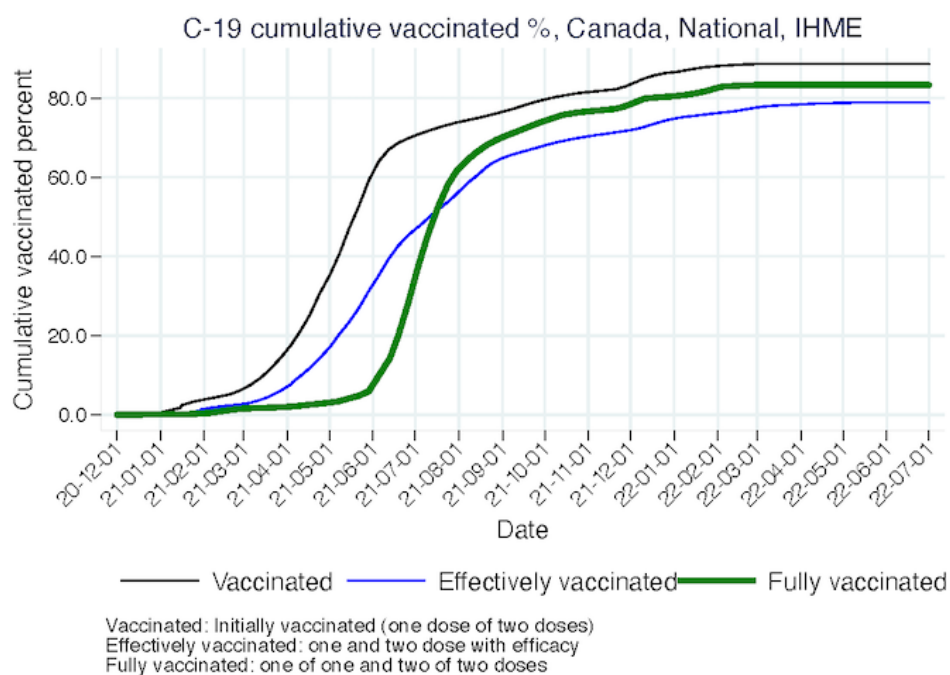
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(9) Canada National [Daily mask use, IHME, 2020 on](#)



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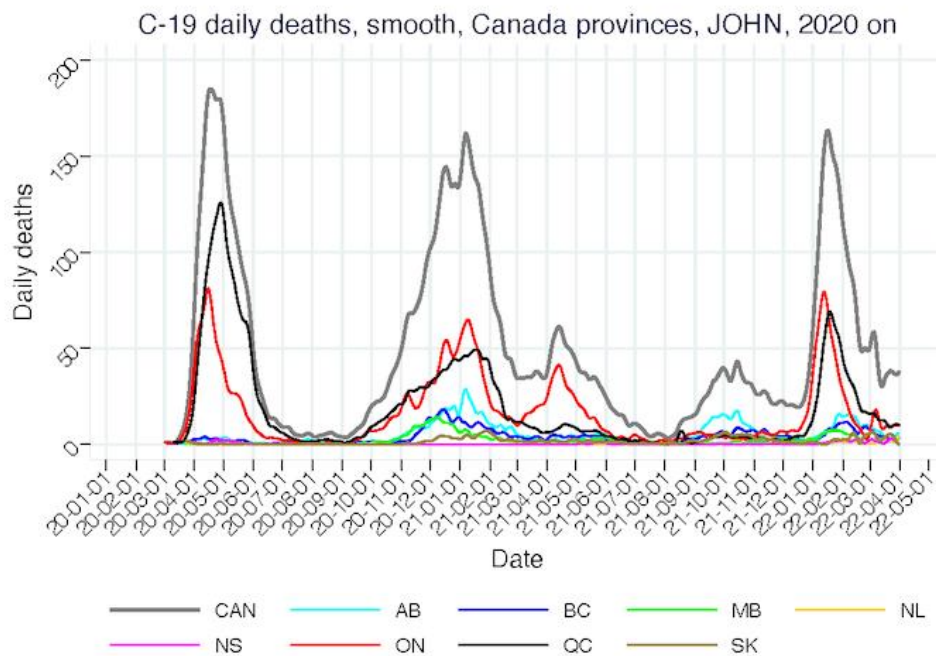


Selected graphs - Canada, Provinces together

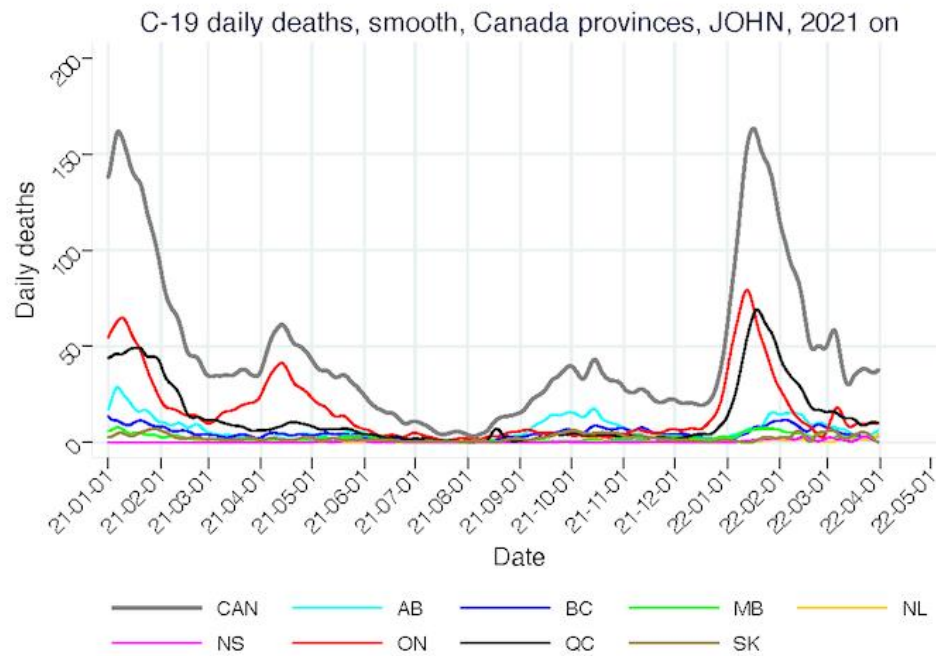
(a) Official reports to WHO, via JOHN || (b) Models: IHME

(a) Official reports to WHO, via JOHN

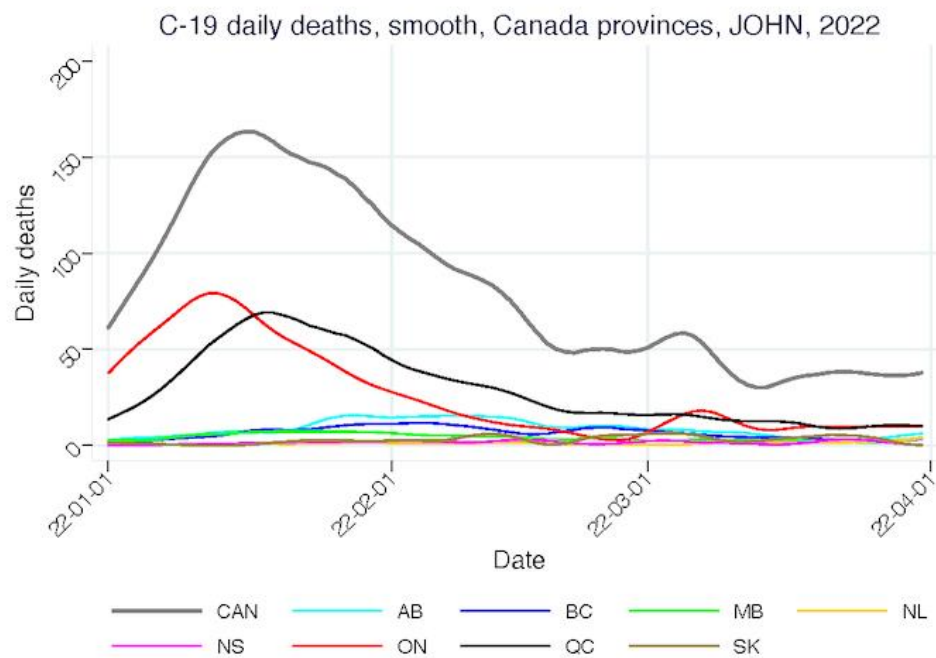
(1) Canada Provinces [Daily reported deaths, JOHN, 2020 on](#)



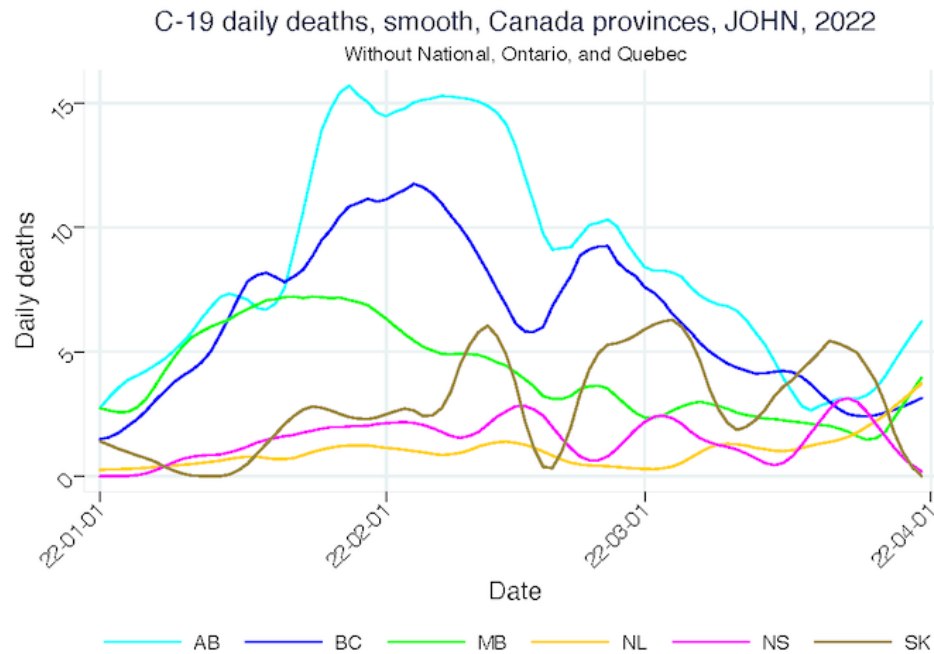
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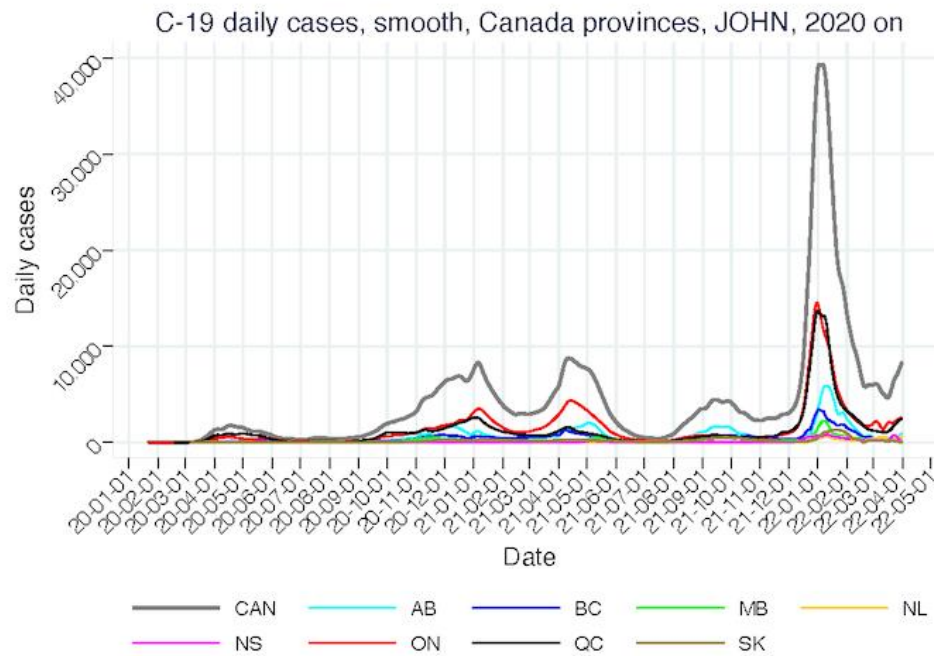
(3) Canada Provinces [Daily reported deaths, JOHN, 2022](#)



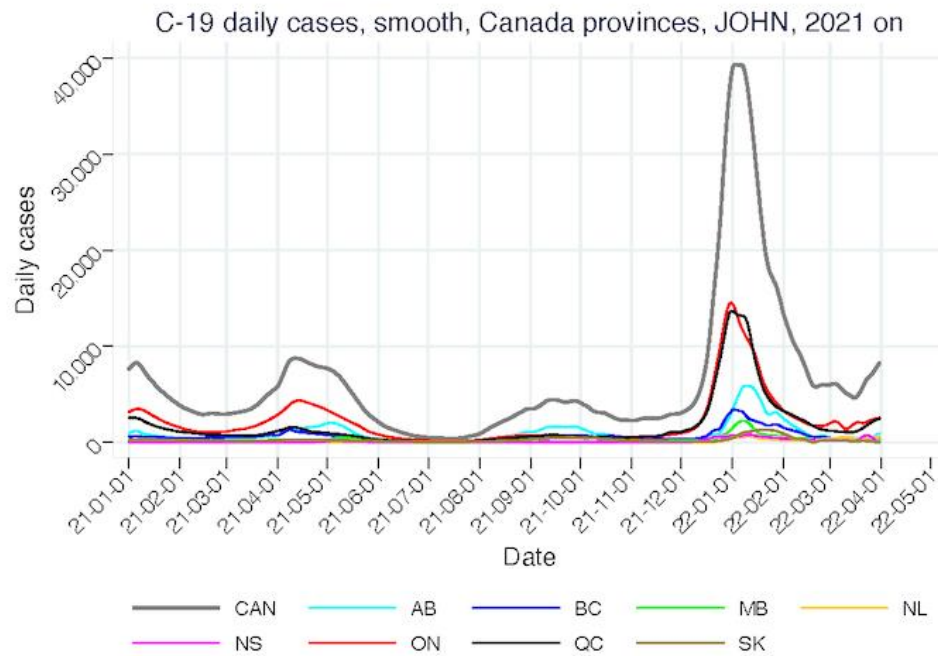
(4) Canada Provinces [Daily reported deaths, without National, Ontario, and Quebec, JOHN, 2022](#)



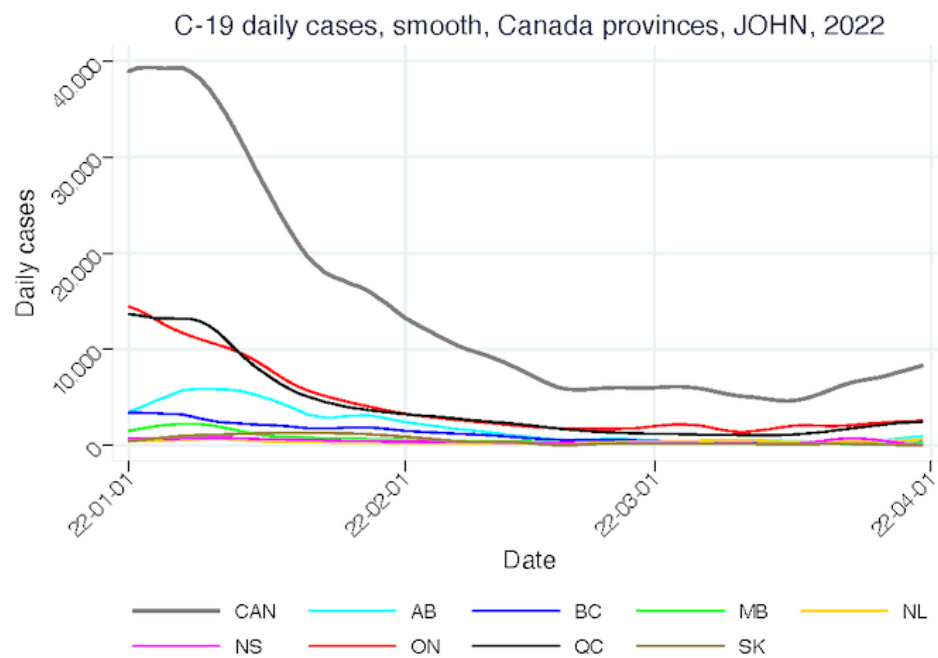
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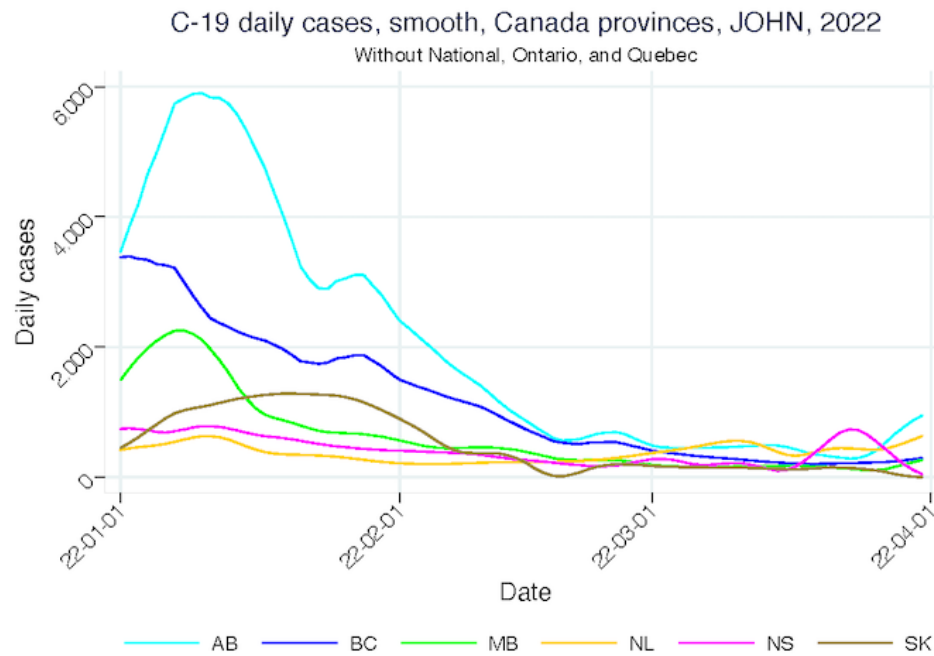
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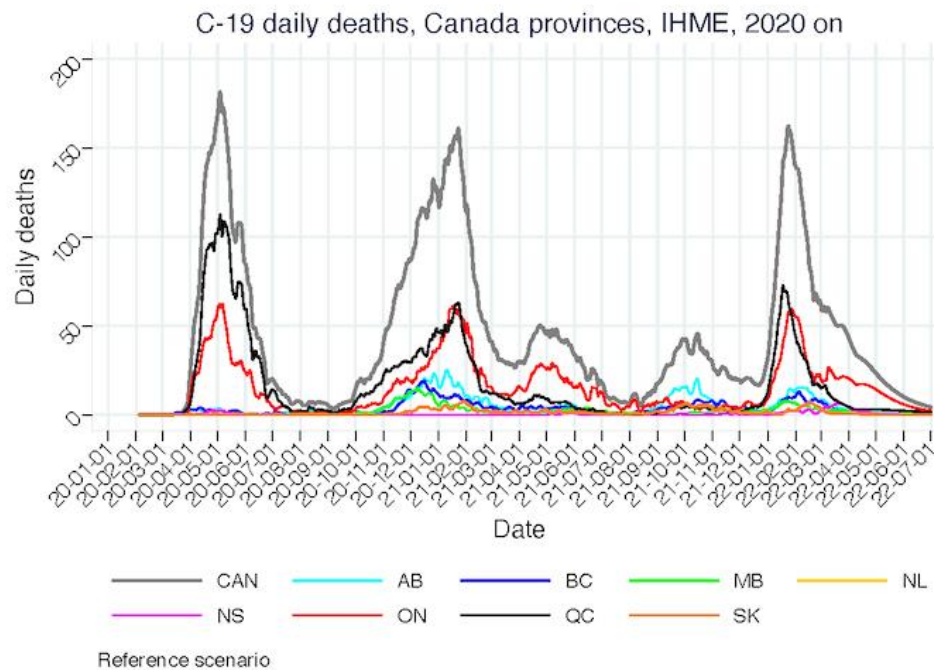


(8) Canada Provinces [Daily reported cases, without National, Ontario, and Quebec, JOHN, 2022](#)

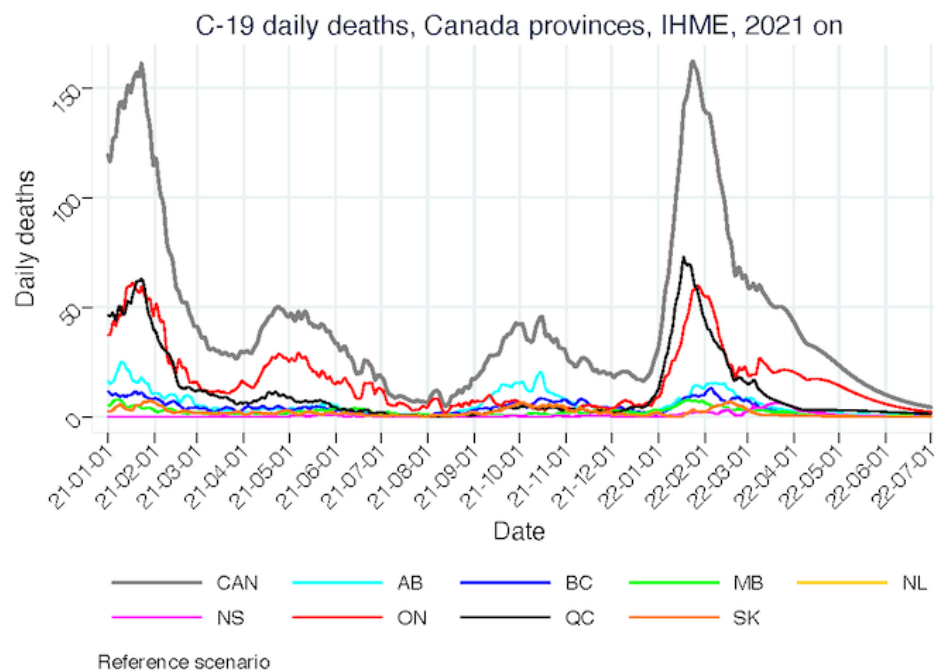


(b) Models: IHME

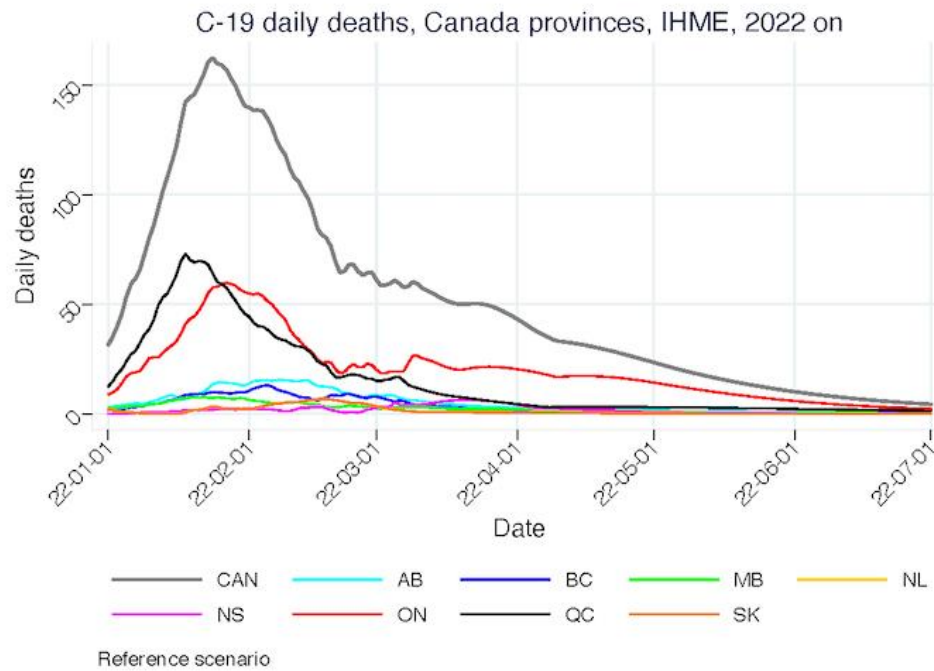
(9) Canada Provinces [Daily deaths, Reference scenario, IHME, 2020 on](#)



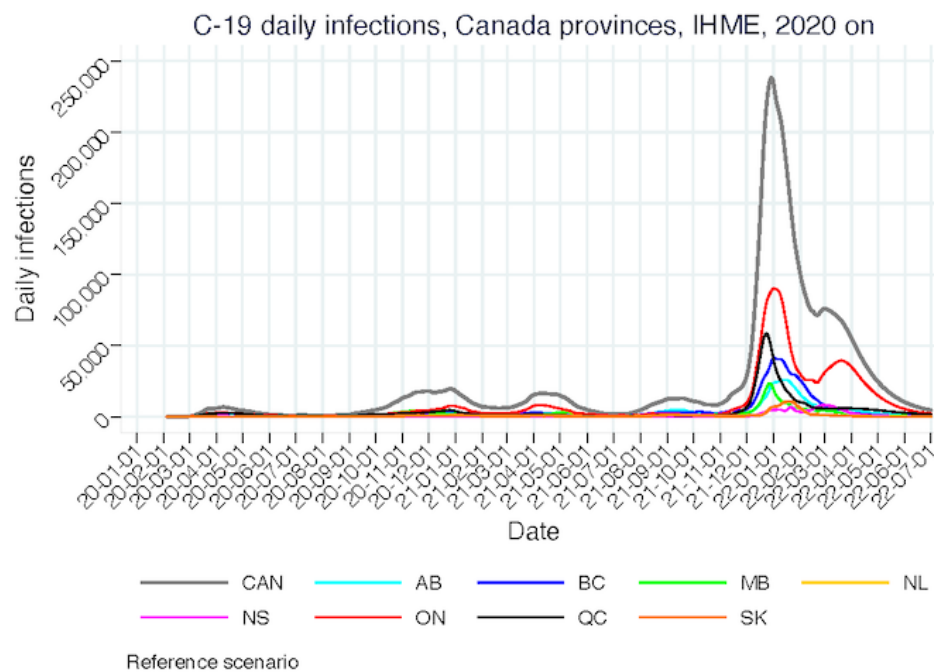
(10) Canada Provinces [Daily deaths, Reference scenario, IHME, 2021 on](#)



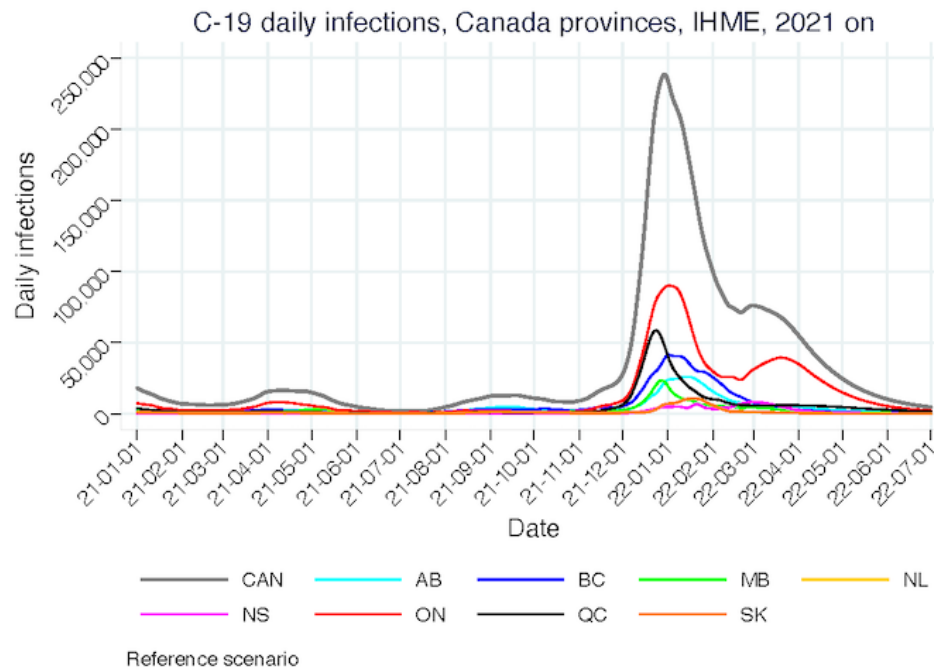
(11) Canada Provinces [Daily deaths, Reference scenario, IHME, 2022](#)



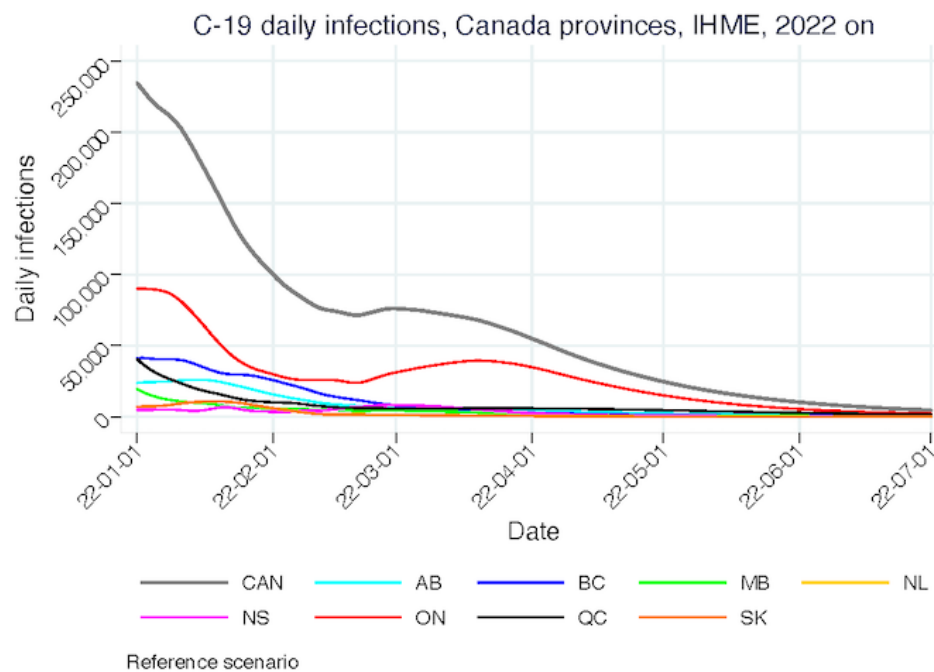
(12) Canada Provinces [Daily infections, Reference scenario, IHME, 2020 on](#)



(13) Canada Provinces [Daily infections, Reference scenario, IHME, 2021 on](#)

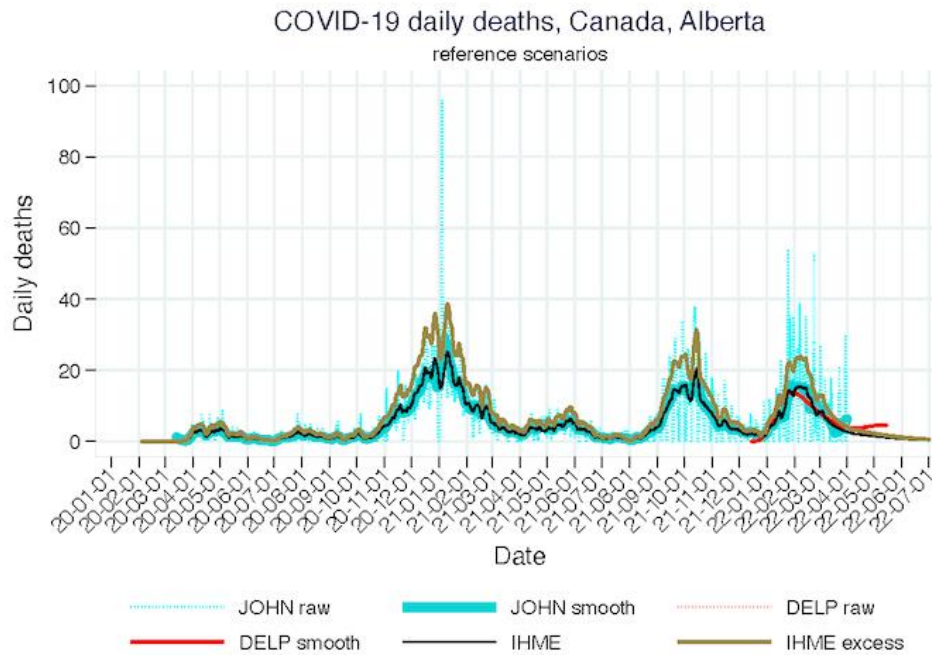


(14) Canada Provinces [Daily infections, Reference scenario, IHME, 2022](#)

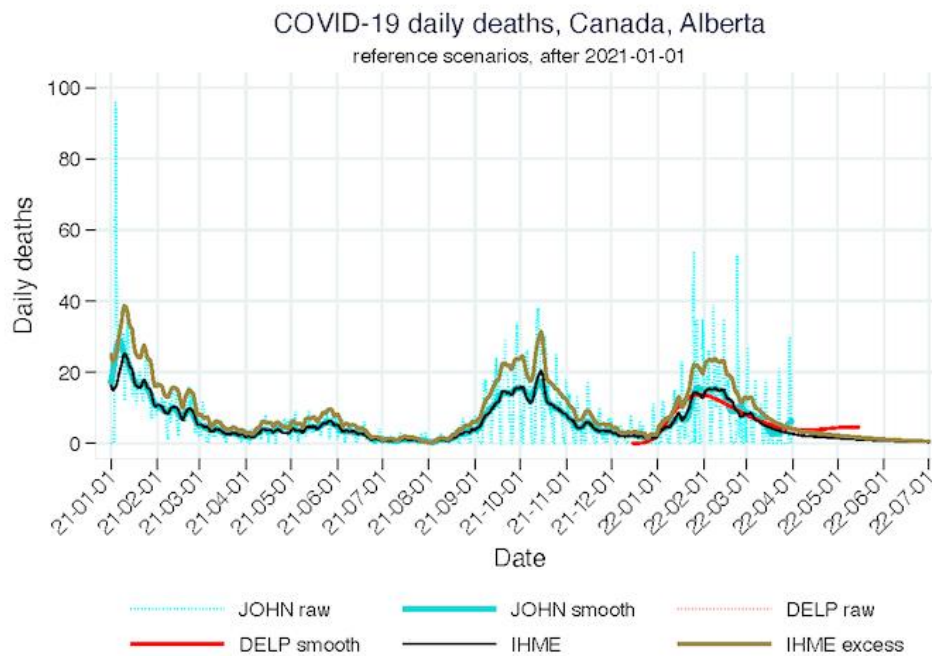


Selected graphs - Alberta

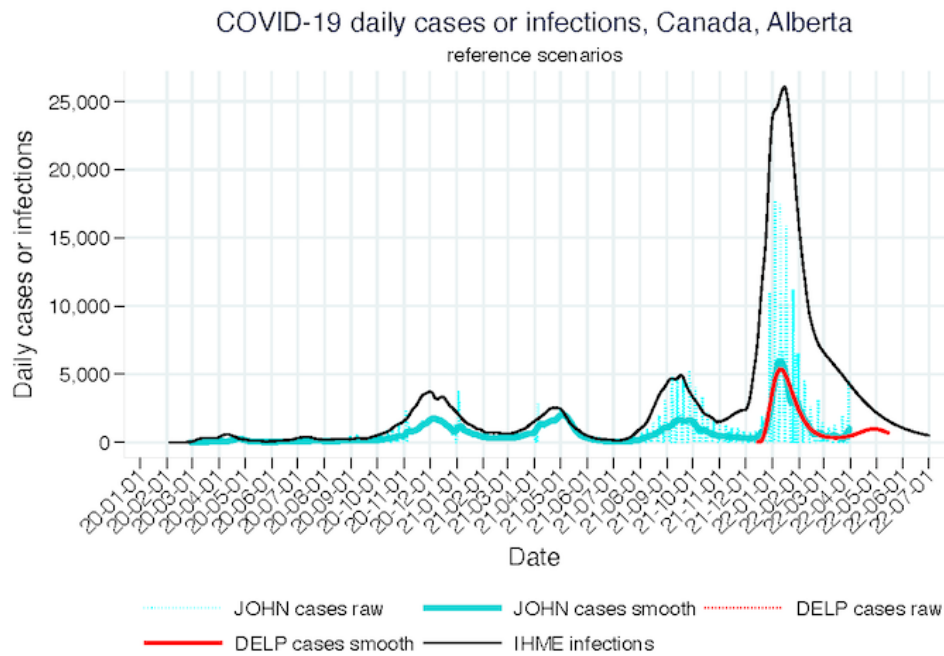
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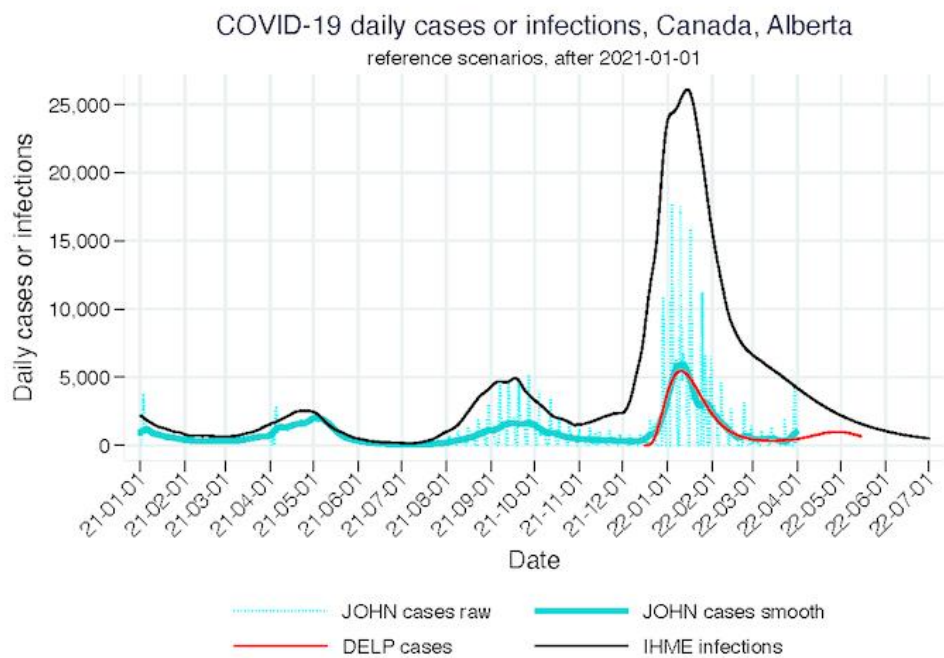
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(3) Alberta [Daily cases or infections, Reference scenario, 2020 on](#)

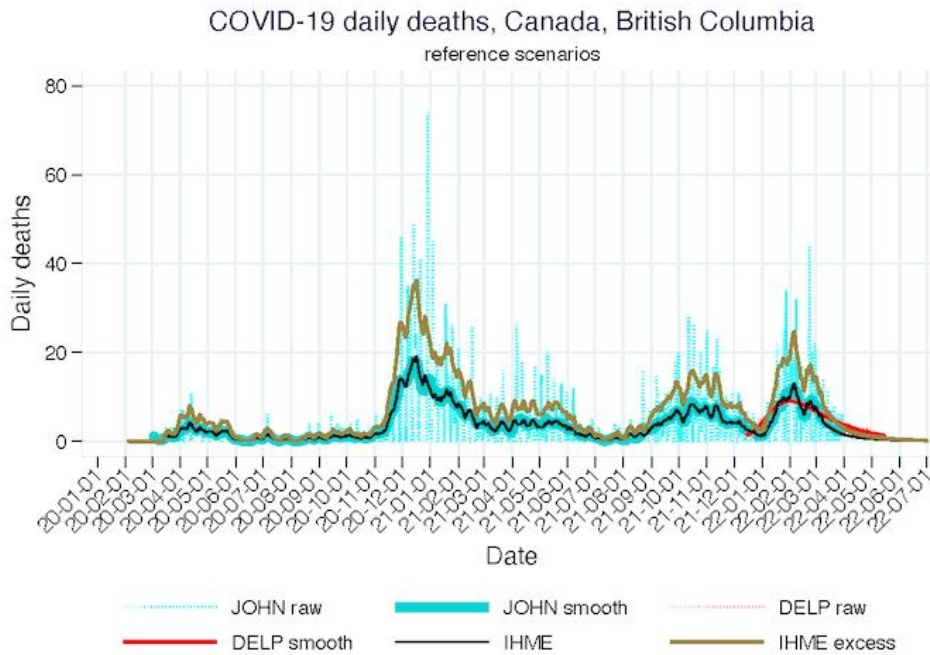


(4) Alberta [Daily cases or infections, Reference scenario, 2021 on](#)

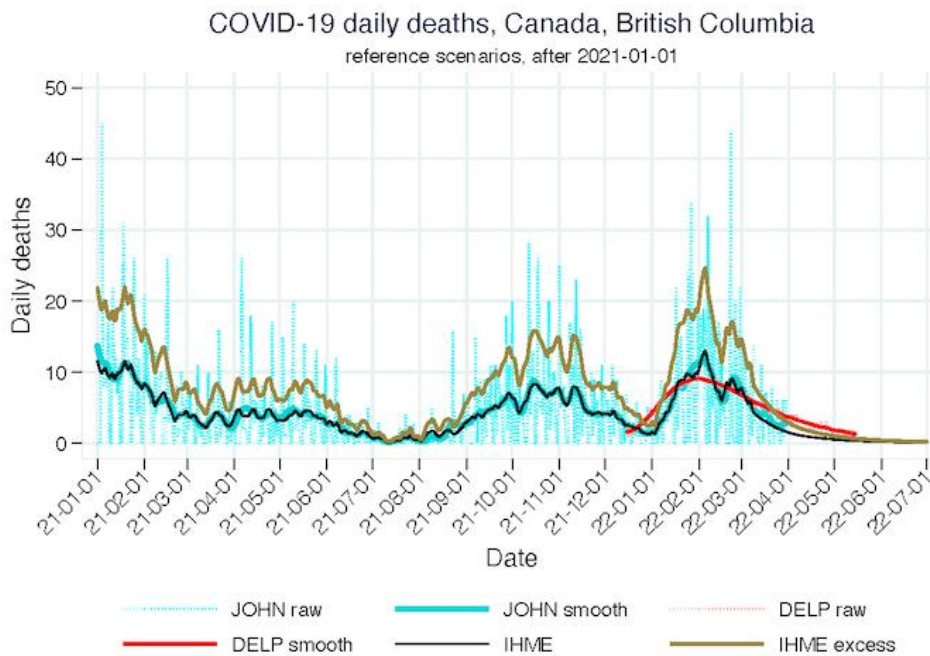


Selected graphs - British Columbia

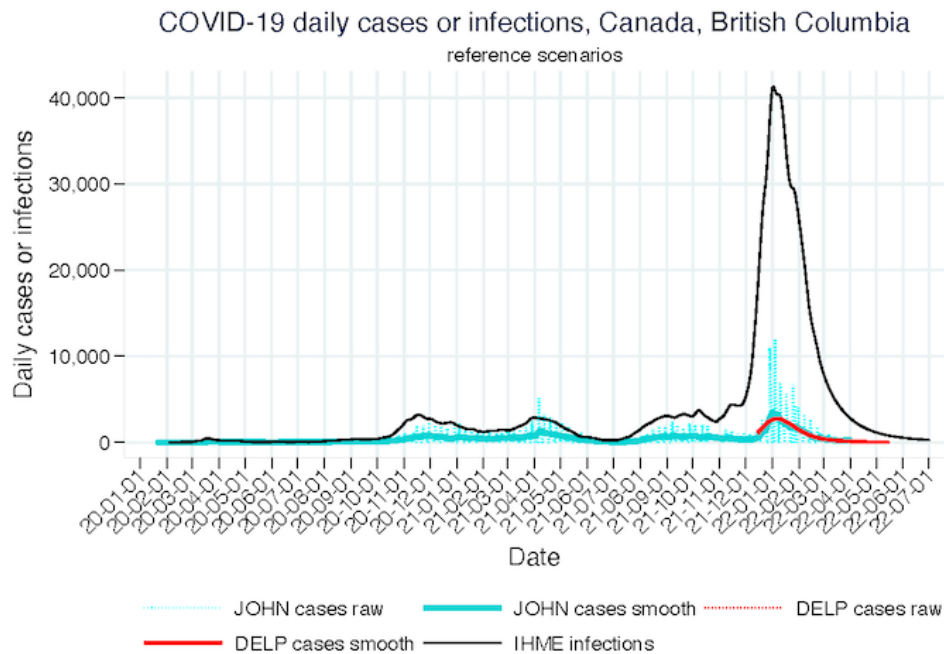
(1) British Columbia [Daily deaths, Reference scenario, 2020 on](#)



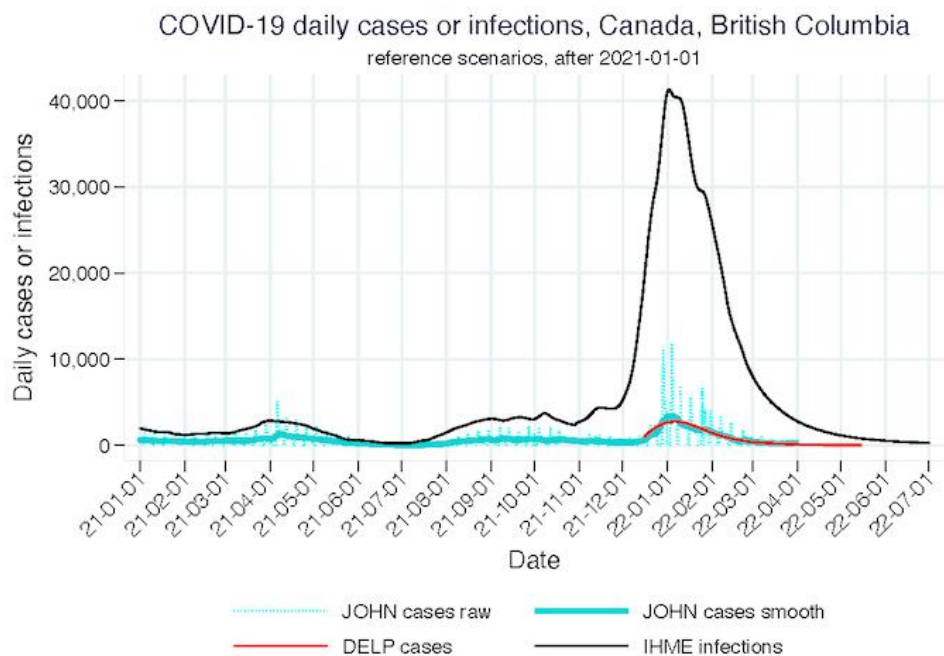
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(3) British Columbia [Daily cases or infections, Reference scenario, 2020 on](#)

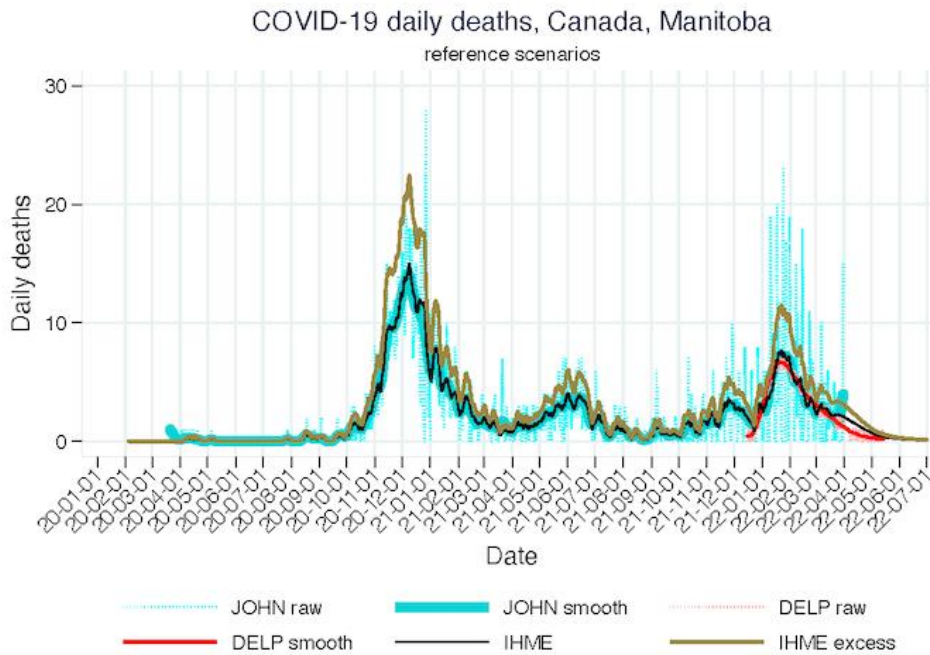


(4) British Columbia [Daily cases or infections, Reference scenario, 2021 on](#)

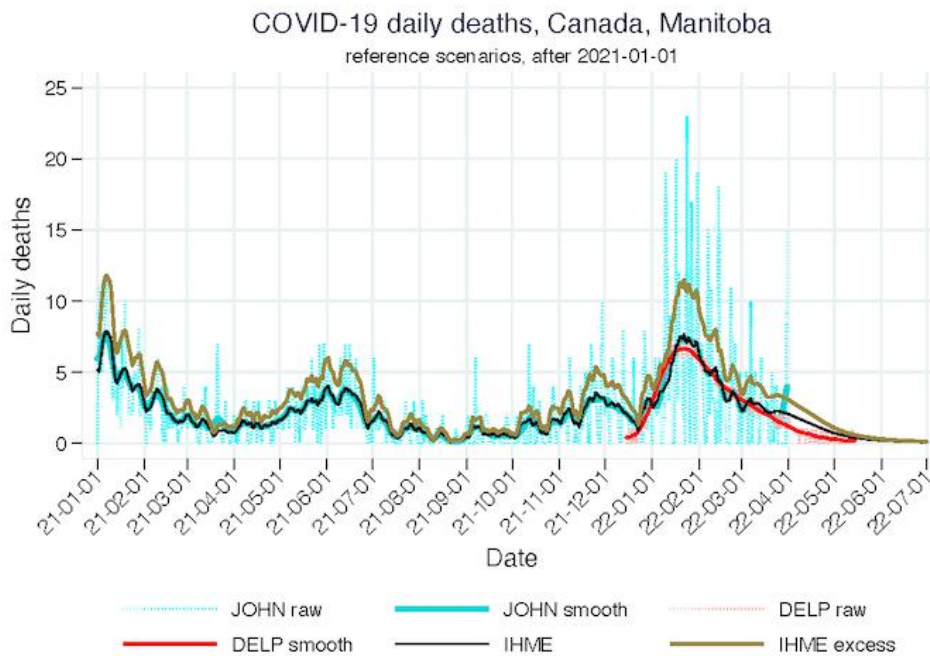


Selected graphs - Manitoba

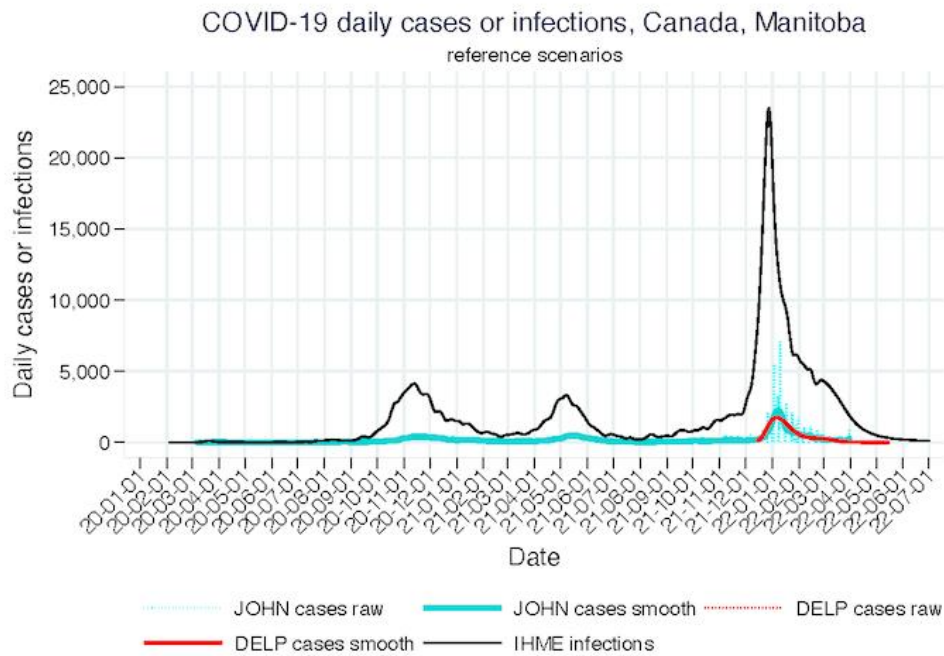
(1) Manitoba [Daily deaths, Reference scenario, 2020 on](#)



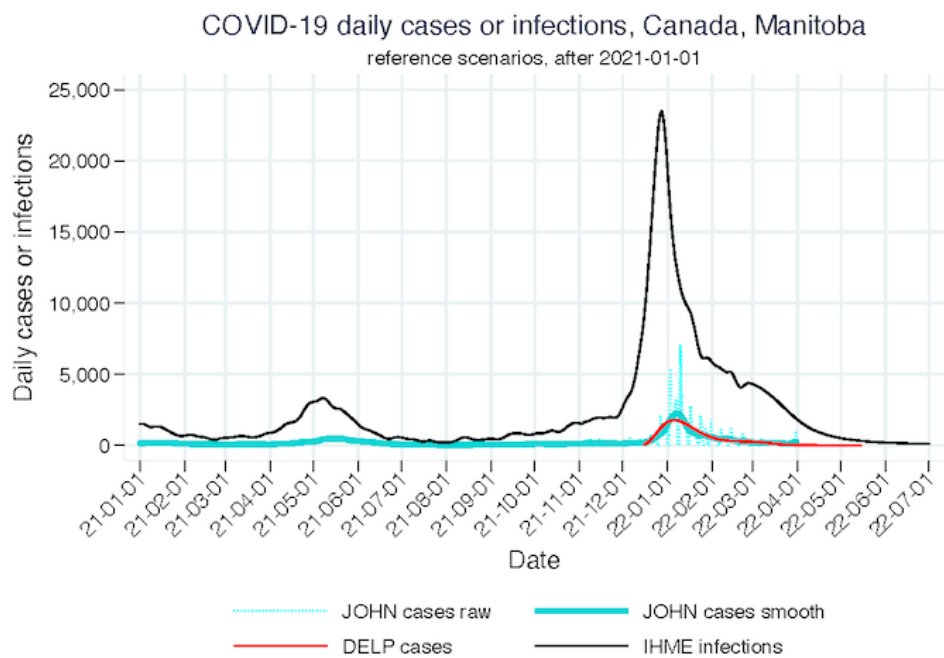
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(3) Manitoba [Daily cases or infections, Reference scenario, 2020 on](#)

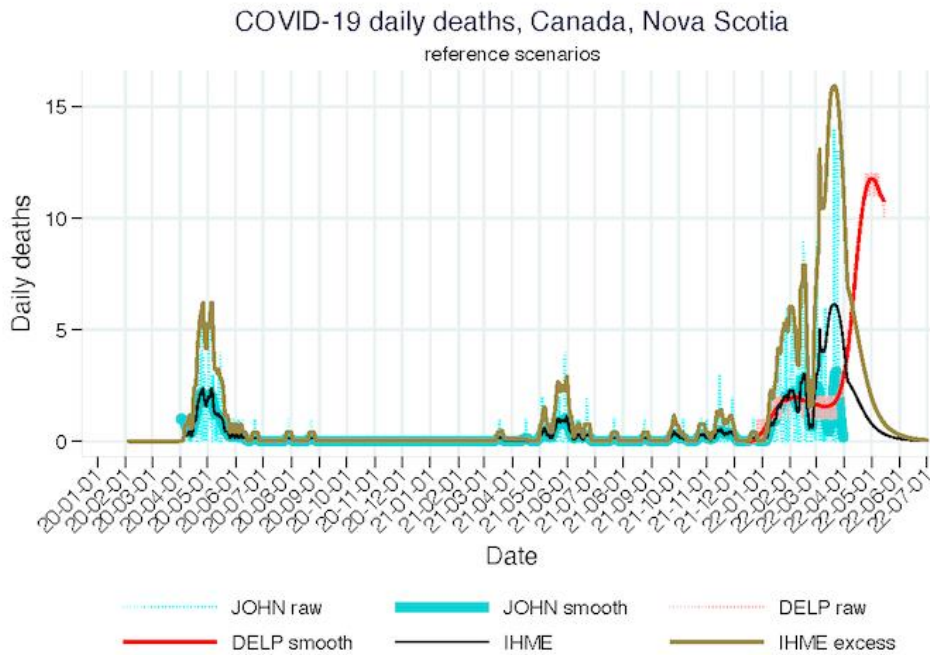


(4) Manitoba [Daily cases or infections, Reference scenario, 2021 on](#)

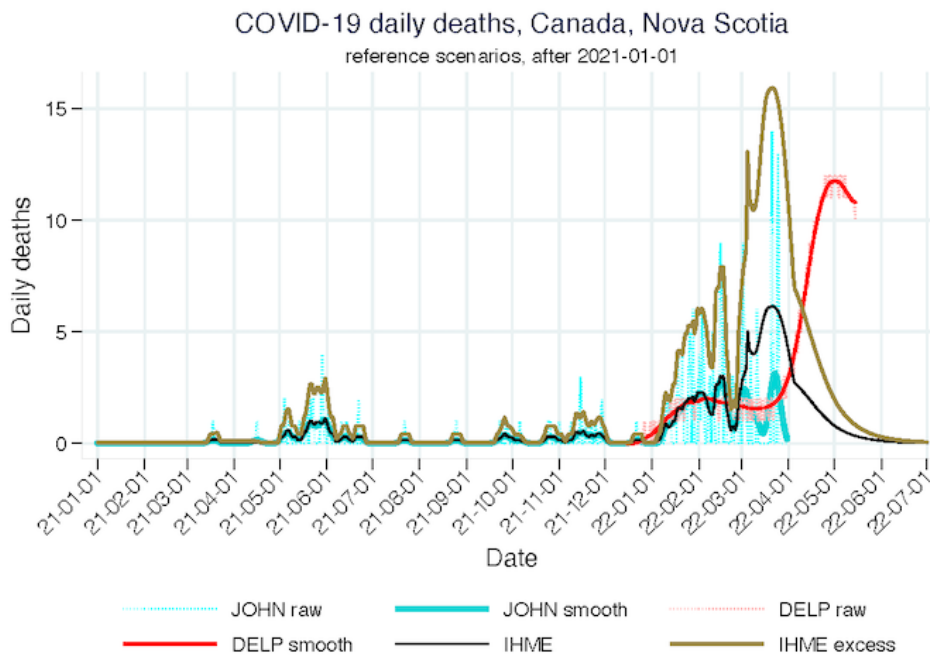


Selected graphs - Nova Scotia

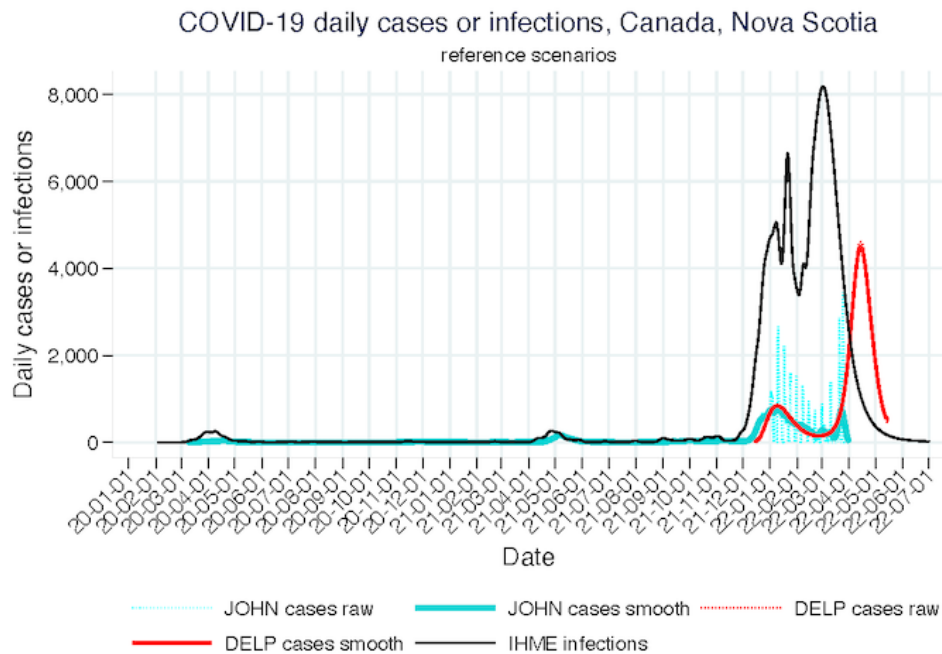
(1) Nova Scotia [Daily deaths, Reference scenario, 2020 on](#)



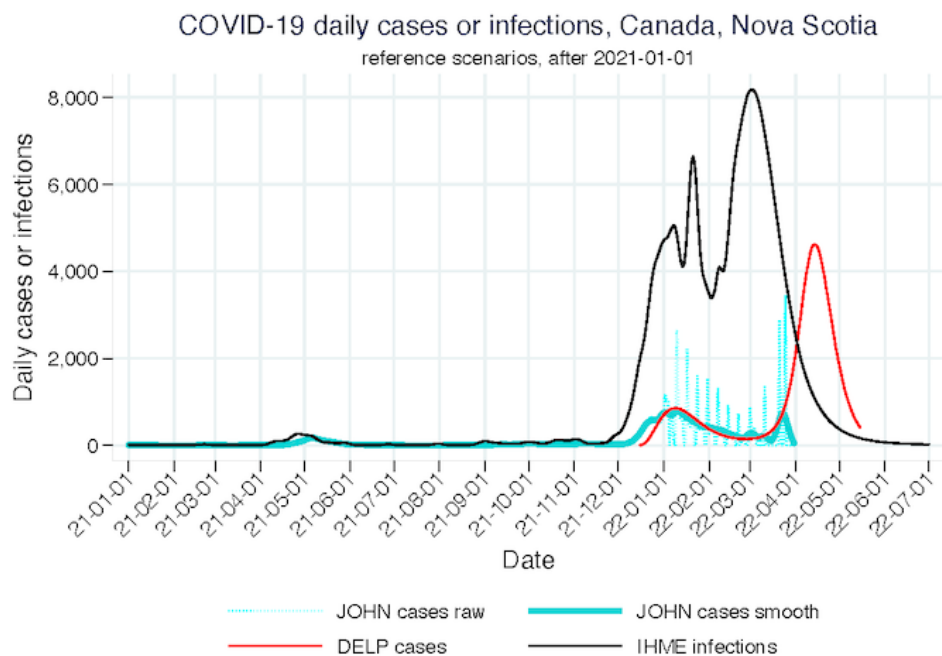
(2) Nova Scotia [Daily deaths, Reference scenario, 2021 on](#)



(3) Nova Scotia [Daily cases or infections, Reference scenario, 2020 on](#)

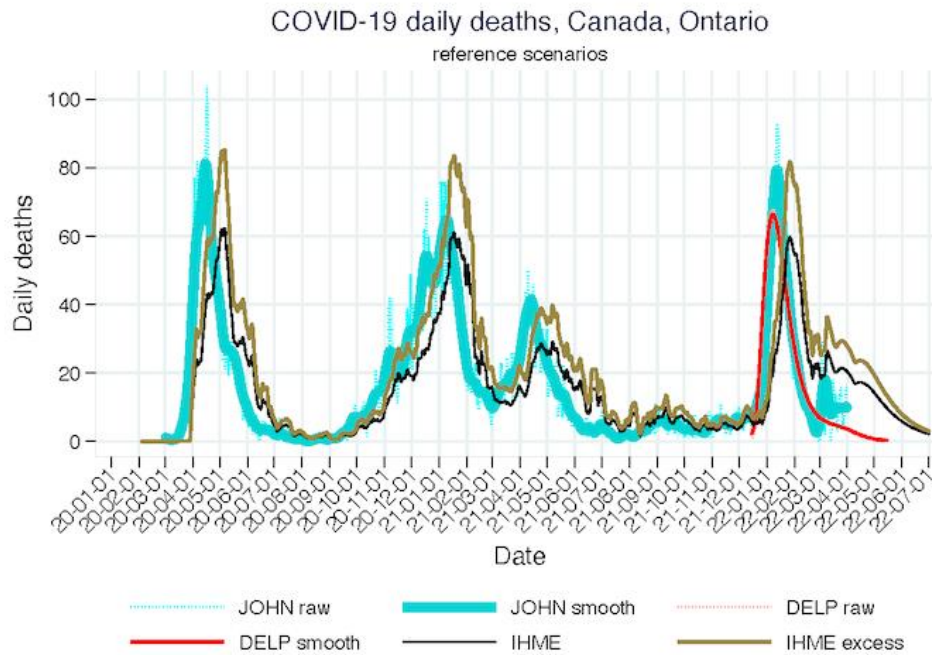


(4) Nova Scotia [Daily cases or infections, Reference scenario, 2021 on](#)

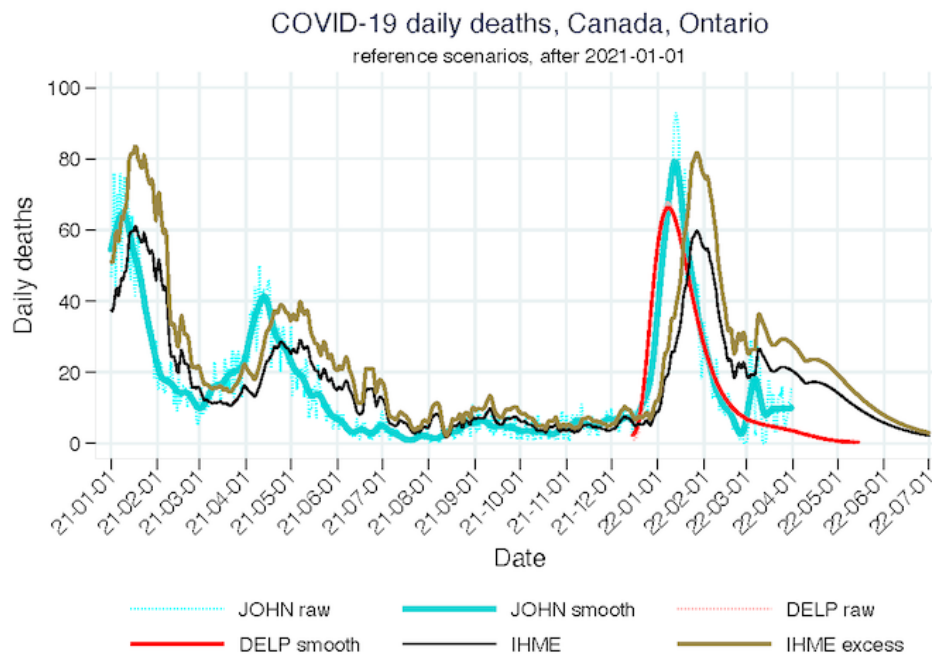


Selected graphs - Ontario

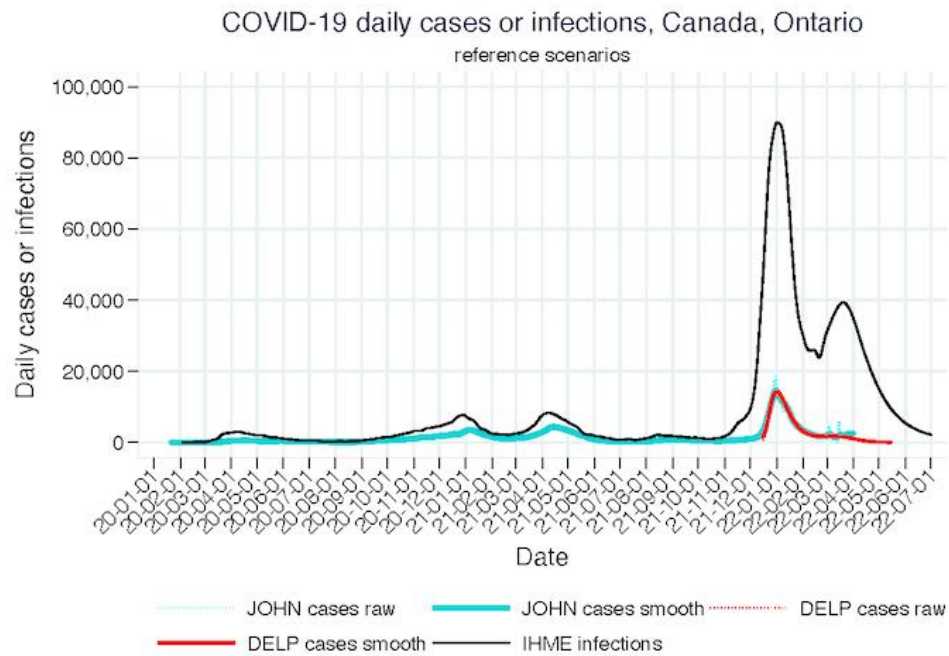
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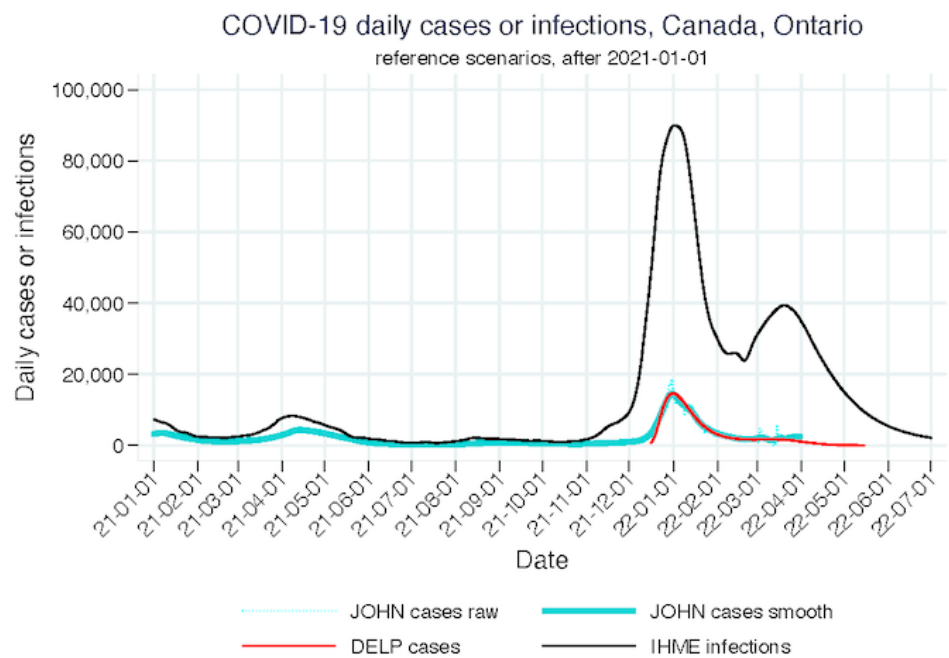
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(3) Ontario [Daily cases or infections, Reference scenario, 2020 on](#)

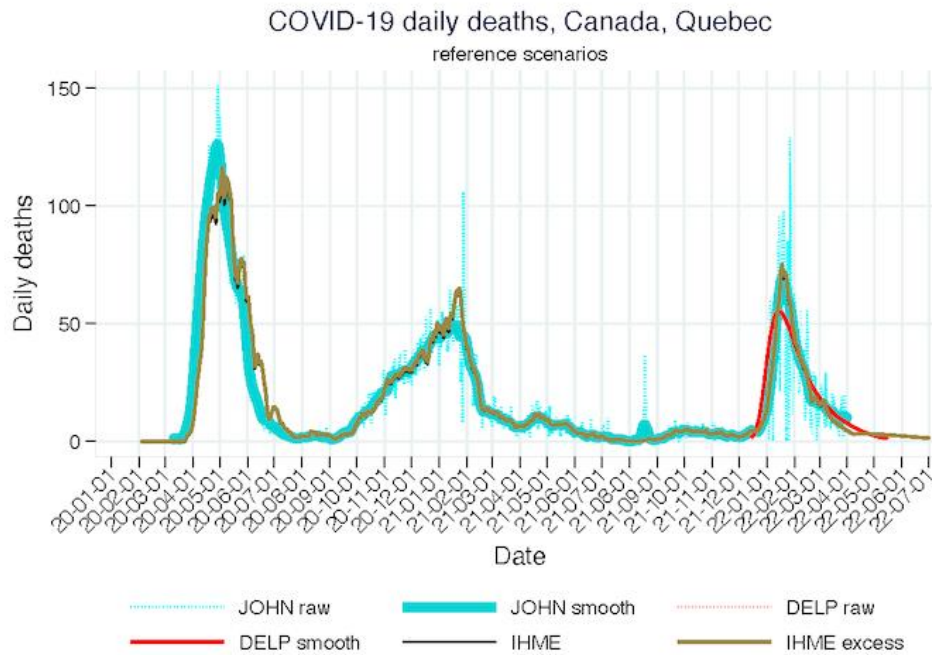


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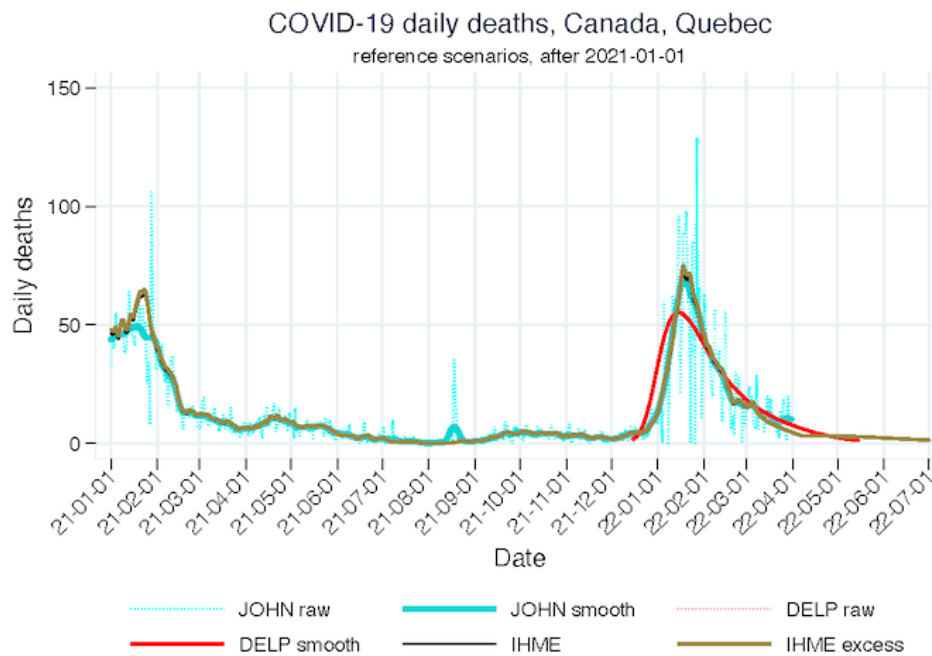


Selected graphs - Quebec

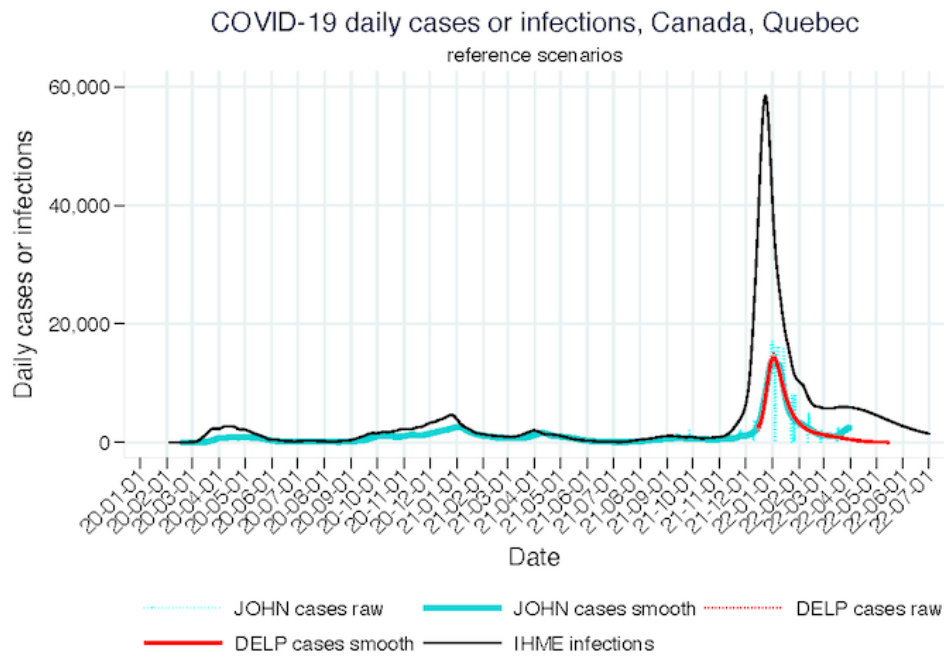
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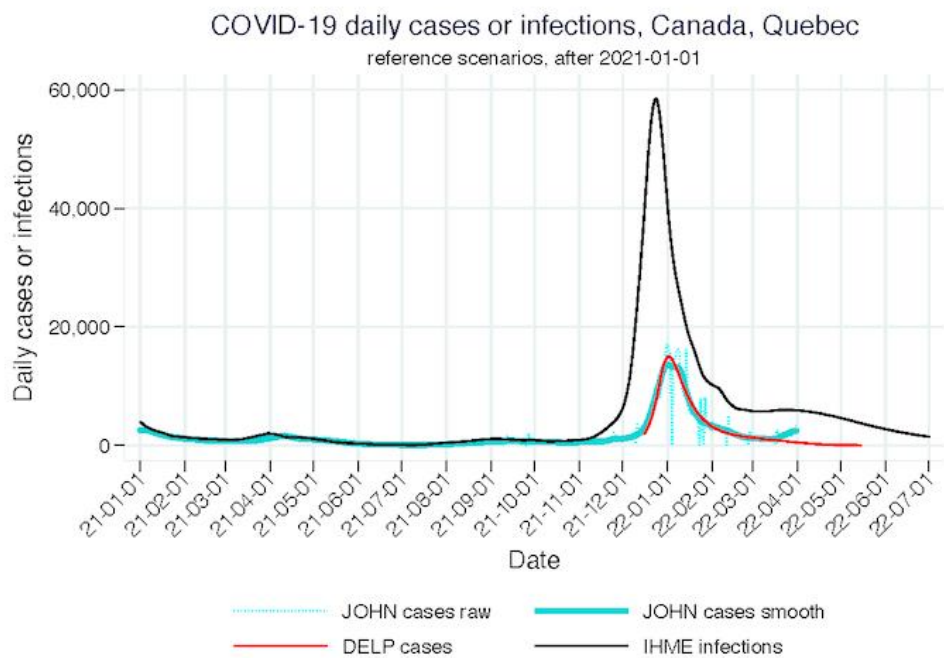
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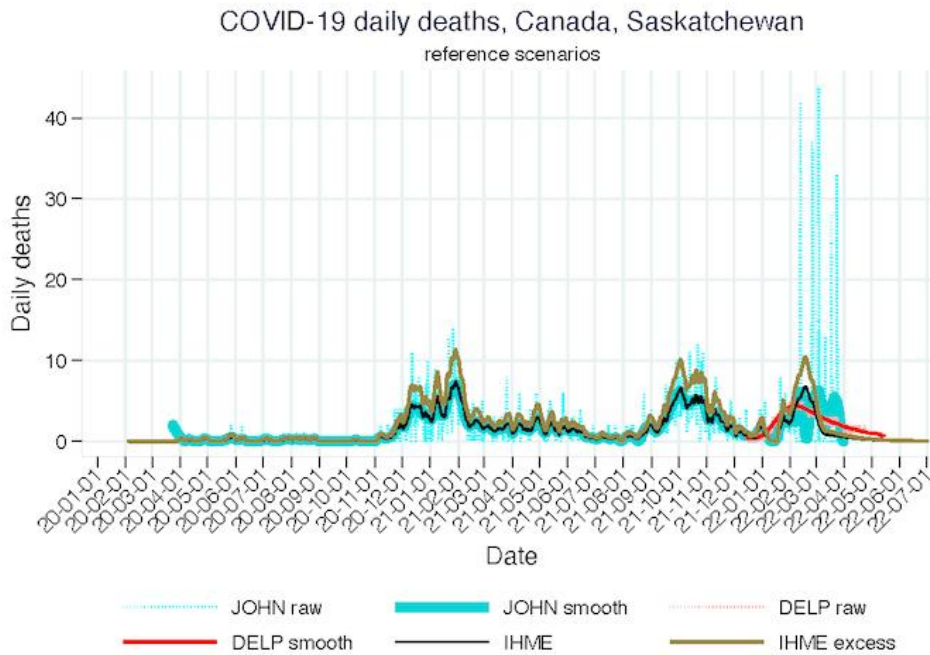


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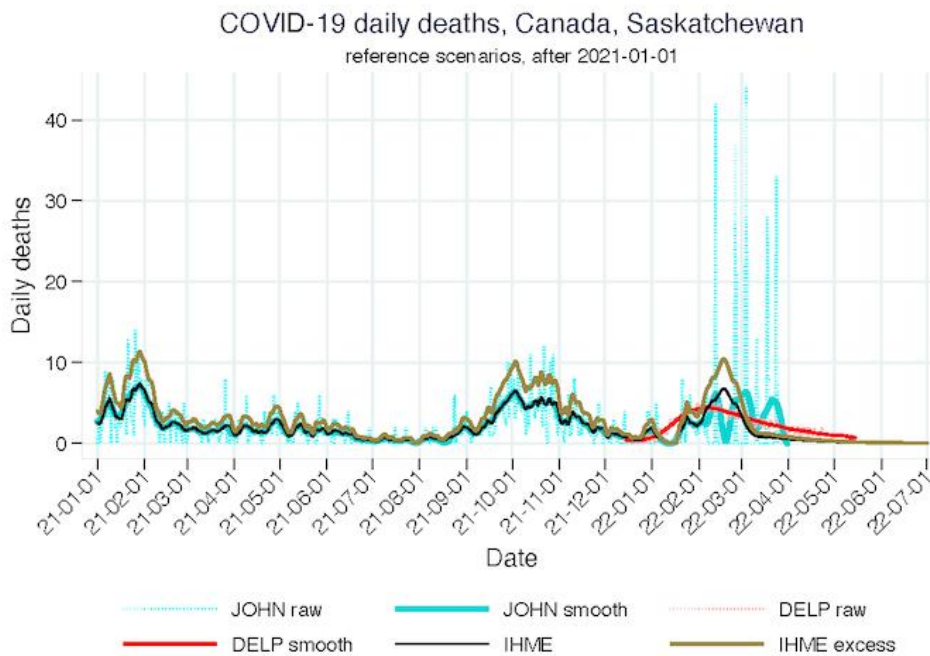


Selected graphs - Saskatchewan

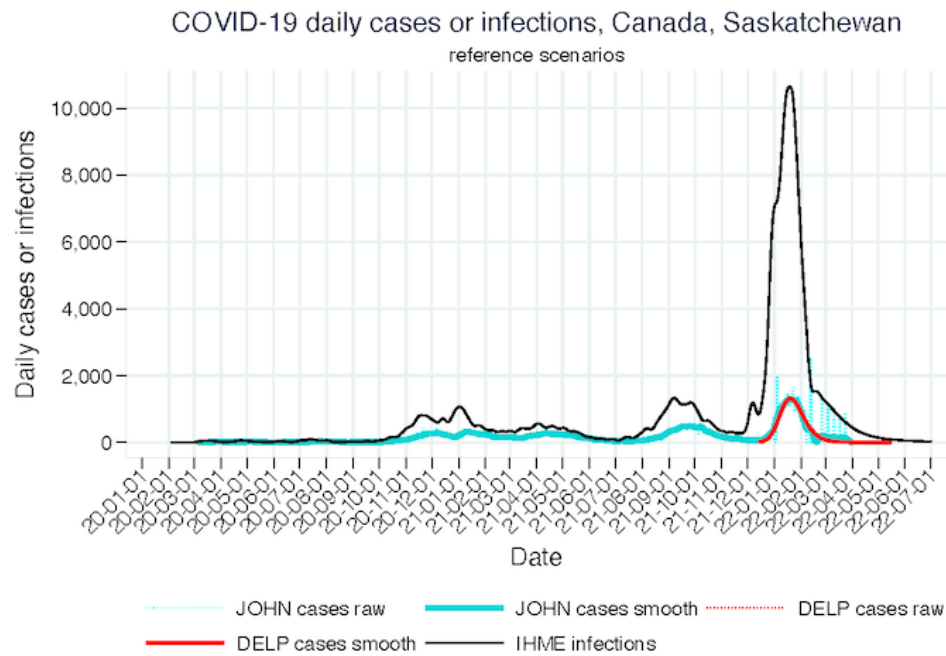
(1) Saskatchewan [Daily deaths, Reference scenario, 2020 on](#)



(2) Saskatchewan [Daily deaths, Reference scenario, 2021 on](#)



(3) Saskatchewan [Daily cases or infections, Reference scenario, 2020 on](#)



(4) Saskatchewan [Daily cases or infections, Reference scenario, 2021 on](#)

