#### Canada COVID-19 epidemic models situation report No 55 - 2022-07-15

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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

See <a href="https://github.com/pourmalek/CovidVisualizedCountry">https://github.com/pourmalek/CovidVisualizedCountry</a>

#### Study update dates in uptake 20220715

DELP 20220618, IHME 20220610, IMPE 20220703, SRIV 20220715

Days old: DELP 28, IHME 36, IMPE 13, SRIV 0

The latest IMPE update 20220703 was released on 20220711.

#### **Summary 20220715:**

Ontario reported all-time-high 1,153 COVID-19 deaths on 14 Jul 2022, resulting in Ontario smoothed daily deaths of 240 and Canada smoothed daily deaths of 270 on 15 Jul 2022.

DELP: <u>model by Massachusetts Institute of Technology, Cambridge</u>
IHME: <u>model by Institute for Health Metrics and Evaluation, Seattle</u>

IMPE: model by Imperial College, London

SRIV: model by Srivastava, Aiitesh, University of Southern California, Los Angeles

Journal article for this work:

Pourmalek F. CovidVisualized: Visualized compilation of international updated models' estimates of COVID-19 pandemic at global and country levels. *BMC Res Notes*. 2022 Apr 9;15(1):136. doi: 10.1186/s13104-022-06020-4. PMID: 35397567.

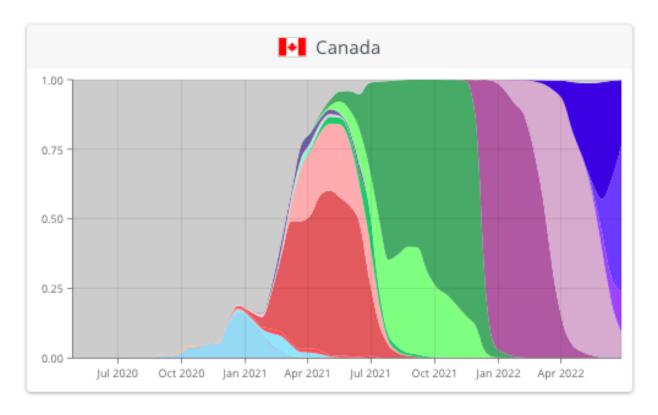
Publisher | | PubMed | | PDF

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# **Selected graphs - Canada, National**

## (000) Canada Variants composition, Ending 11 July 2022, CoVariants by Emma B. Hodcroft



Legend (Number sequenced and Frequency as of 20220717):

27 Jun 2022 - 1	1 Jul 2022	
Variant	Num seq	Freq
22B (Omicron)	403	0.53
22C (Omicron)	178	0.23
22A (Omicron)	111	0.15
21L (Omicron)	71	0.09
others	1	0.00
S:677P.Pelican		-
S:677H.Robin1		-
21K (Omicron)		-
■ 21J (Delta)		
21I (Delta)		-
= 21H (Mu)		-
21G (Lambda)	-	-
■ 21D (Eta)		-
21C (Epsilon)		-
21B (Kappa)		
<pre>21A (Delta)</pre>		-
<pre>20J (Gamma, V3)</pre>		-
<pre>20I (Alpha, V1)</pre>		-
20H (Beta, V2)		-
= 20E (EU1)		-
20C/S:80Y		
20B/S:732A		-
20A/S:98F		
20A/S:439K		
20A/S:126A		
20A.EU2		-
Total	764	1.00

## Mapping of variants nomenclature schemes

Nextstrain Clade	Pango Lineage	WHO Label 🗷	Other
20I (Alpha, V1)	B.1.1.7 🗈	α Alpha	VOC 202012/01
20H (Beta, V2)	B.1.351 🕑	β Beta	501Y.V2
20J (Gamma, V3)	P.1 🗷	γ Gamma	
21A (Delta)	B.1.617.2 🗷	δ Delta	
21I (Delta)		δ Delta	
21J (Delta)		δ Delta	
21B (Kappa)	B.1.617.1 🗷	к Карра	
21C (Epsilon)	B.1.427 , B.1.429	ε Epsilon	CAL.20C
21D (Eta)	B.1.525 🕑	η Eta	
21F (Iota)	B.1.526	ι Iota	(Part of Pango lineage)
21G (Lambda)	C.37	λ Lambda	
21H (Mu)	B.1.621	μ Mu	
21K (Omicron)	BA.1 💌	o Omicron	
21L (Omicron)	BA.2 🗈	o Omicron	
22A (Omicron)	BA.4 💌	o Omicron	
22B (Omicron)	BA.5 ≥	o Omicron	
22C (Omicron)	BA.2.12.1 🗈	o Omicron	
20E (EU1)	B.1.177		EU1
20B/ S: 732 A	B.1.1.519		
20A/ S: 126 A	B.1.620		
20A . EU2	B.1.160		
20A/ S: 439 K	B.1.258		
20A/ S: 98 F	B.1.221		
20C/ 5: 80 Y	B.1.367		
20B/ 5: 626 S	B.1.1.277		
20B/ 5: 1122 L	B.1.1.302		

## https://covariants.org

CoVariants uses the Nextstrain naming system for variants (here).

WHO variants nomenclature scheme (<u>here</u>).

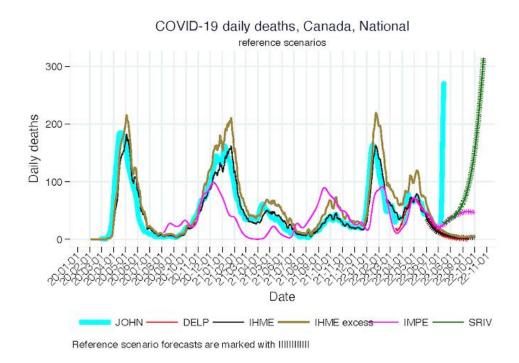
SOURCE CITATION: Emma B. Hodcroft. 2021. "CoVariants: SARS-CoV-2 Mutations and Variants of Interest." <a href="https://covariants.org/">https://covariants.org/</a>

SOURCE WEB PAGE: <a href="https://covariants.org/per-country">https://covariants.org/per-country</a>

DATE ACCESED: 20220717

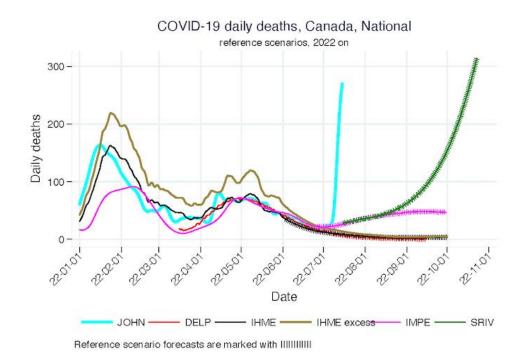
SOURCE LICENSE: This CoVariants code and work is licensed under a <u>GNU Affero General Public</u> <u>License (AGPL)</u>. You can view this license <u>here</u>

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

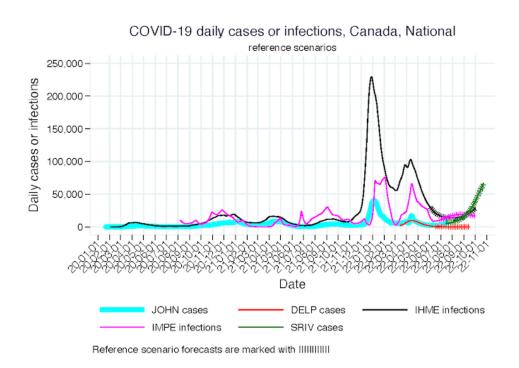


(2) Canada National Daily deaths, All scenarios, 2021 on

#### (2b) Canada National Daily deaths, All scenarios, 2022 on

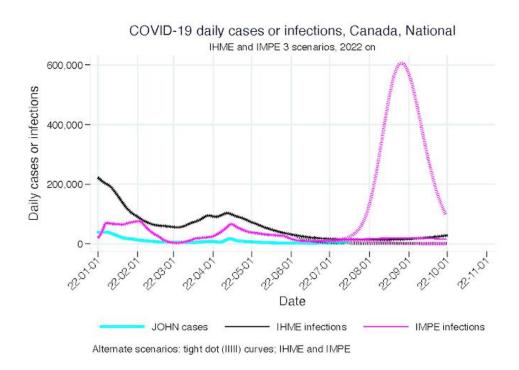


#### (3) Canada National Daily cases or infections, Reference scenarios, 2020 on



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

(4b) Canada National Daily cases or infections, All scenarios, 2022 on

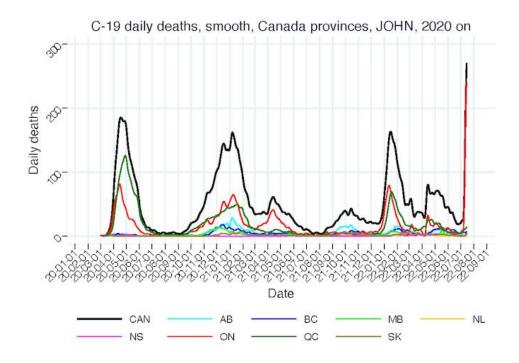


- (5) Canada National Daily hospital-related outcomes, Reference scenarios, 2020 on
- (6) Canada National <u>Daily hospital-related outcomes</u>, <u>without IHME Bed need</u>, <u>Reference scenarios</u>, <u>2021 on</u>
- (7) Canada National <u>Daily Infection hospitalization and fatality ratios</u>, <u>Reference scenario</u>, <u>IHME</u>, 2021 on

- (8) Canada National Daily percent change in mobility, IHME, 2020 on
- (9) Canada National Daily mask use, IHME, 2020 on
- (10) Canada National Percent cumulative vaccinated, IHME, 2020 on

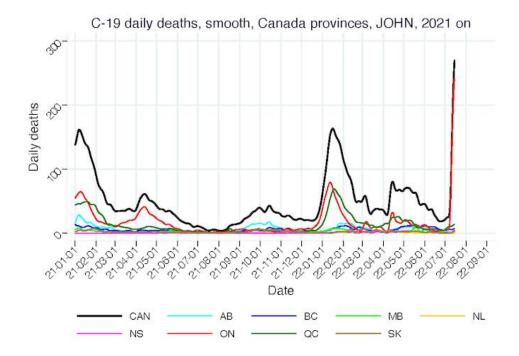
# **Selected graphs - Canada, Provinces together**

- (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

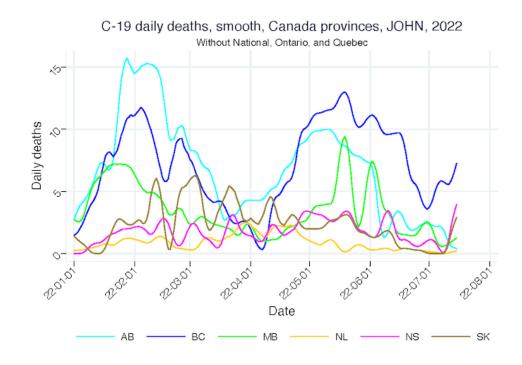


(2) Canada Provinces Daily reported deaths, JOHN, 2021 on

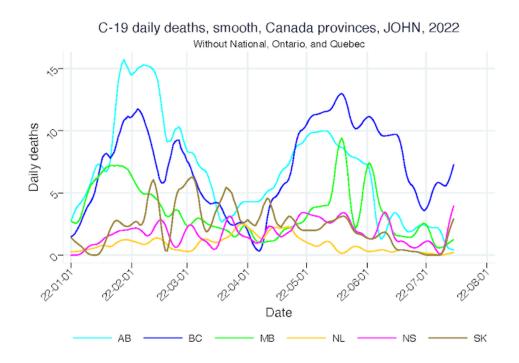
#### (3) Canada Provinces Daily reported deaths, JOHN, 2022



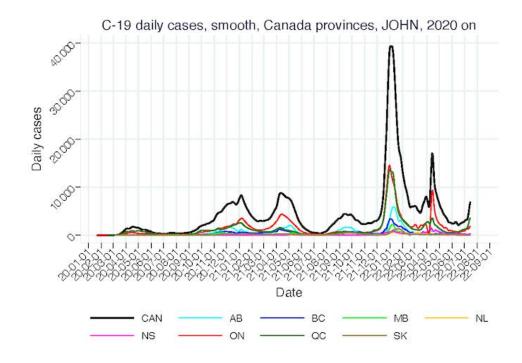
# (4) Canada Provinces <u>Daily reported deaths</u>, <u>without National</u>, <u>Ontario</u>, <u>and Quebec</u>, <u>JOHN</u>, 2022



# (4b) Canada Provinces <u>Daily reported deaths</u>, <u>without National</u>, <u>Ontario</u>, <u>and Quebec</u>, <u>JOHN</u>, <u>2022 June on</u>

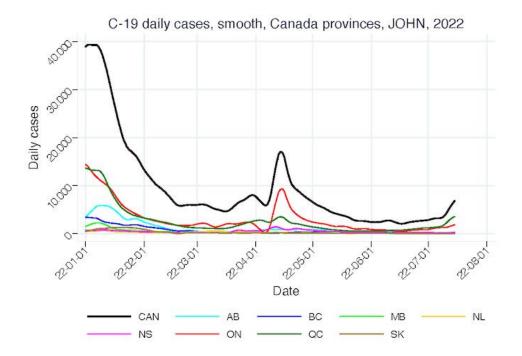


#### (5) Canada Provinces Daily reported cases, JOHN, 2020 on



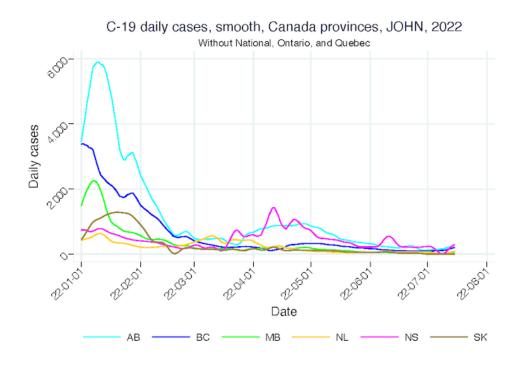
(6) Canada Provinces Daily reported cases, JOHN, 2021 on

### (7) Canada Provinces Daily reported cases, JOHN, 2022



(8) Canada Provinces <u>Daily reported cases</u>, <u>without National</u>, <u>Ontario</u>, <u>and Quebec</u>, <u>JOHN</u>, <u>2022</u> book

# (8b) Canada Provinces <u>Daily reported cases</u>, <u>without National</u>, <u>Ontario</u>, <u>and Quebec</u>, <u>JOHN</u>, 2022 June on



- (b) Models: IHME
- (9) Canada Provinces <u>Daily deaths, Reference scenario, IHME, 2020 on</u>

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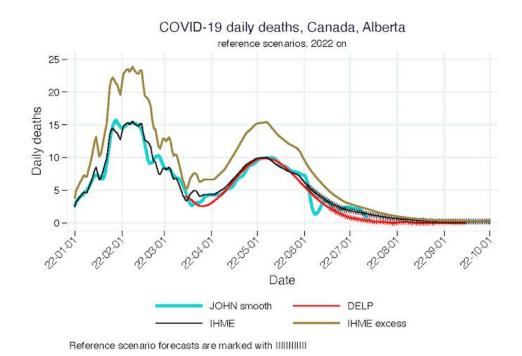
- (10) Canada Provinces Daily deaths, Reference scenario, IHME, 2021 on
- (11) Canada Provinces Daily deaths, Reference scenario, IHME, 2022

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(12) Canada Provinces <u>Daily infections</u>, <u>Reference scenario</u>, <u>IHME</u>, <u>2020 on</u>
 (13) Canada Provinces <u>Daily infections</u>, <u>Reference scenario</u>, <u>IHME</u>, <u>2021 on</u>
 (14) Canada Provinces <u>Daily infections</u>, <u>Reference scenario</u>, <u>IHME</u>, <u>2022</u>

# Selected graphs - Alberta

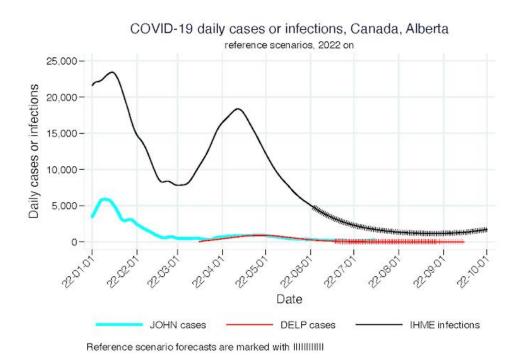
- (1) Alberta Daily deaths, Reference scenario, 2020 on
- (2) Alberta Daily deaths, Reference scenario, 2021 on
- (2b) Alberta Daily deaths, Reference scenario, 2022 on, with JOHN raw
- (2c) Alberta Daily deaths, Reference scenario, 2022 on, without JOHN raw



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

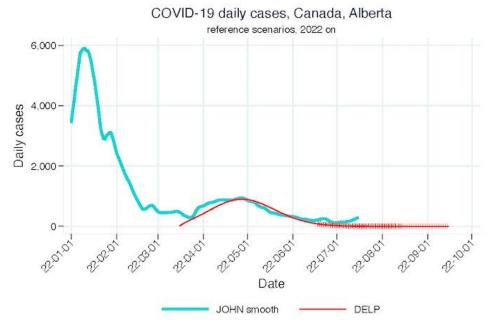
### (4) Alberta Daily cases or infections, Reference scenario, 2021 on

### (4b) Alberta Daily cases or infections, Reference scenario, 2022 on



(4c) Alberta Daily cases, Reference scenario, 2022 on, with JOHN raw

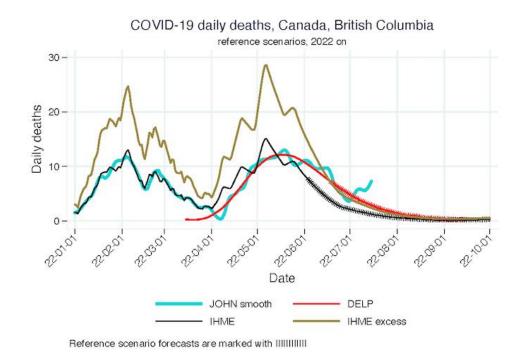
### (4d) Alberta Daily cases, Reference scenario, 2022 on, without JOHN raw



Reference scenario forecasts are marked with IIIIIIIIIII

# **Selected graphs - British Columbia**

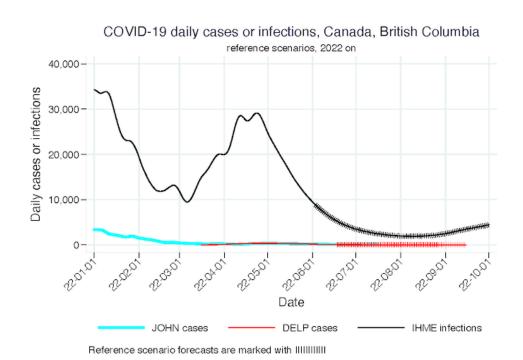
- (1) British Columbia Daily deaths, Reference scenario, 2020 on
- (2) British Columbia Daily deaths, Reference scenario, 2021 on
- (2b) British Columbia Daily deaths, Reference scenario, 2022 on, with JOHN raw
- (2c) British Columbia Daily deaths, Reference scenario, 2022 on, without JOHN raw



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

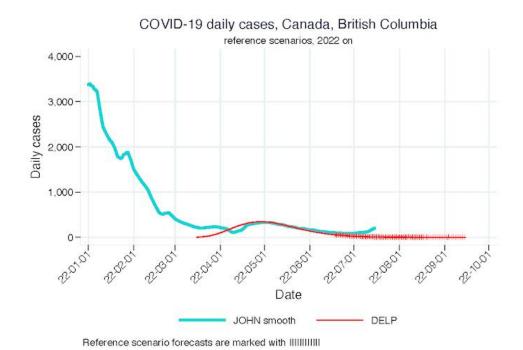
(4) British Columbia Daily cases or infections, Reference scenario, 2021 on

### (4b) British Columbia Daily cases or infections, Reference scenario, 2022 on



(4c) British Columbia Daily cases, Reference scenario, 2022 on with JOHN raw

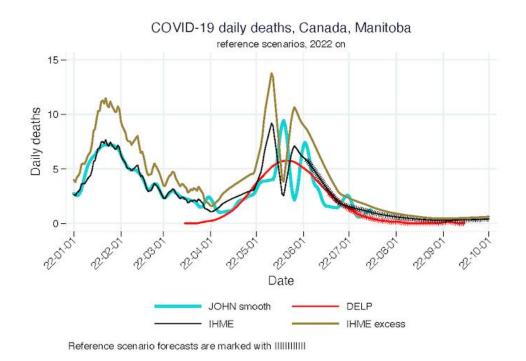
(4d) British Columbia Daily cases, Reference scenario, 2022 on, without JOHN raw



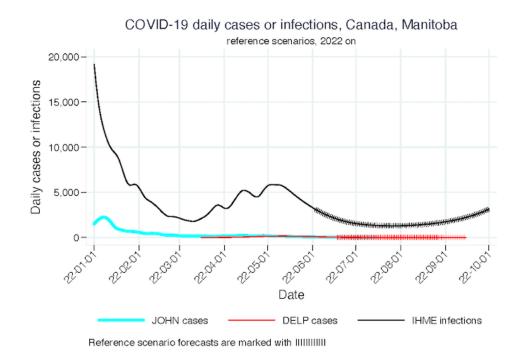
# Selected graphs - Manitoba

- (1) Manitoba Daily deaths, Reference scenario, 2020 on
- (2) Manitoba Daily deaths, Reference scenario, 2021 on
- (2b) Manitoba Daily deaths, Reference scenario, 2022 on, with JOHN raw

### (2c) Manitoba Daily deaths, Reference scenario, 2022 on, without JOHN raw

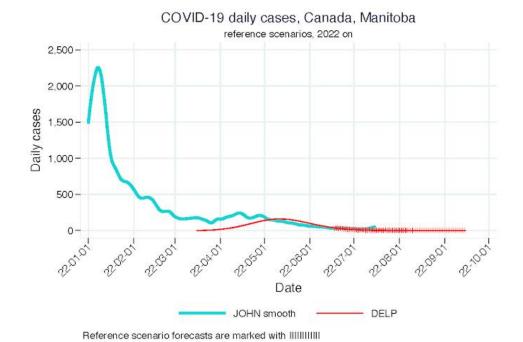


- (3) Manitoba Daily cases or infections, Reference scenario, 2020 on
- (4) Manitoba Daily cases or infections, Reference scenario, 2021 on
- (4b) Manitoba Daily cases or infections, Reference scenario, 2022 on



(4c) Manitoba Daily cases, Reference scenario, 2022 on, with JOHN raw

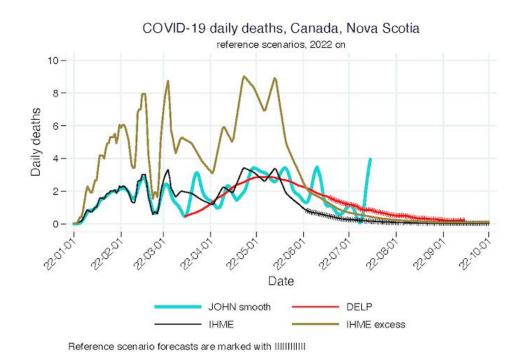
(4d) Manitoba Daily cases, Reference scenario, 2022 on, without JOHN raw



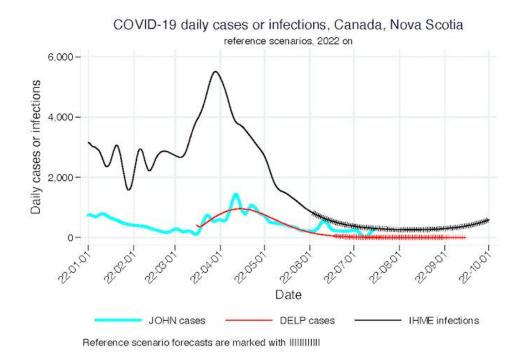
# **Selected graphs - Nova Scotia**

- (1) Nova Scotia Daily deaths, Reference scenario, 2020 on
- (2) Nova Scotia Daily deaths, Reference scenario, 2021 on
- (2b) Nova Scotia Daily deaths, Reference scenario, 2022 on, with JOHN raw

#### (2c) Nova Scotia Daily deaths, Reference scenario, 2022 on, without JOHN raw

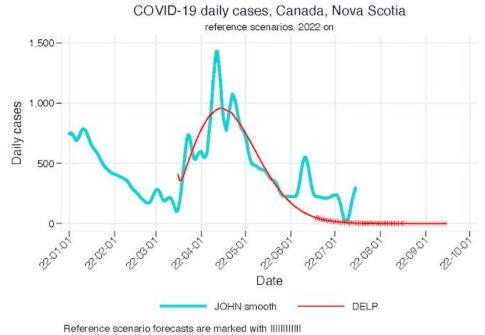


- (3) Nova Scotia Daily cases or infections, Reference scenario, 2020 on
- (4) Nova Scotia Daily cases or infections, Reference scenario, 2021 on
- (4b) Nova Scotia Daily cases or infections, Reference scenario, 2022 on



(4c) Nova Scotia Daily cases, Reference scenario, 2022 on, with JOHN raw

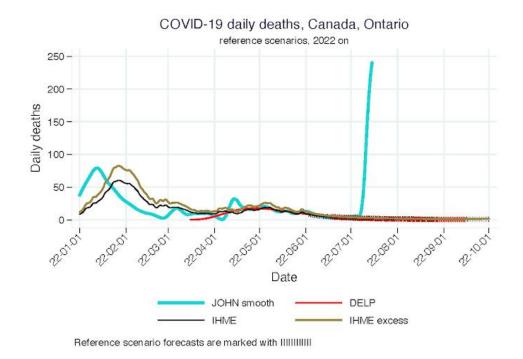
(4d) Nova Scotia Daily cases, Reference scenario, 2022 on, without JOHN raw



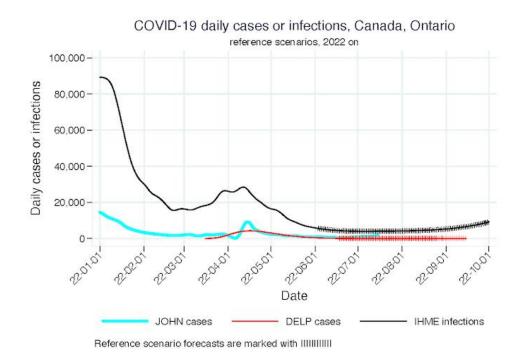
# **Selected graphs - Ontario**

- (1) Ontario Daily deaths, Reference scenario, 2020 on
- (2) Ontario Daily deaths, Reference scenario, 2021 on
- (2b) Ontario Daily deaths, Reference scenario, 2022 on, with JOHN raw

#### (2c) Ontario Daily deaths, Reference scenario, 2022 on, without JOHN raw

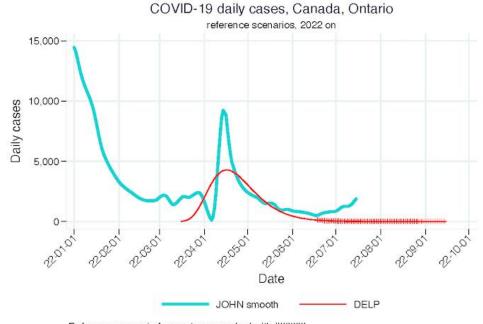


- (3) Ontario Daily cases or infections, Reference scenario, 2020 on
- (4) Ontario Daily cases or infections, Reference scenario, 2021 on
- (4b) Ontario Daily cases or infections, Reference scenario, 2022 on



(4c) Ontario Daily cases, Reference scenario, 2022 on, with JOHN raw

(4d) Ontario Daily cases, Reference scenario, 2022 on, without JOHN raw

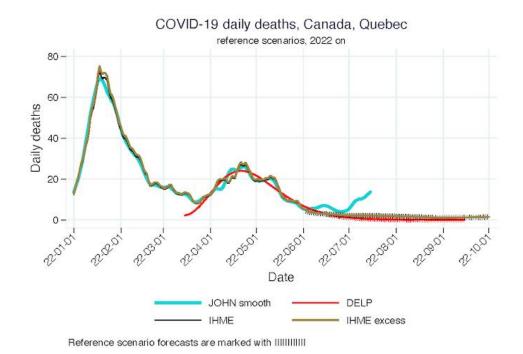


#### Reference scenario forecasts are marked with IIIIIIIIIII

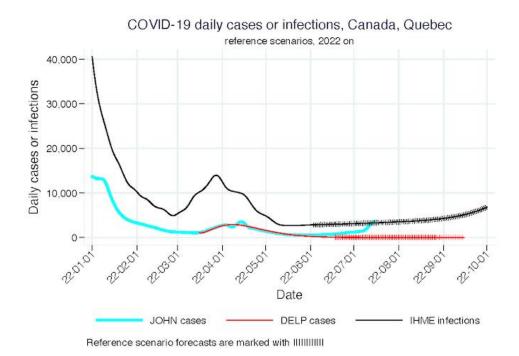
# **Selected graphs - Quebec**

- (1) Quebec Daily deaths, Reference scenario, 2020 on
- (2) Quebec Daily deaths, Reference scenario, 2021 on
- (2b) Quebec Daily deaths, Reference scenario, 2022 on, with JOHN raw

#### (2c) Quebec Daily deaths, Reference scenario, 2022 on, without JOHN raw

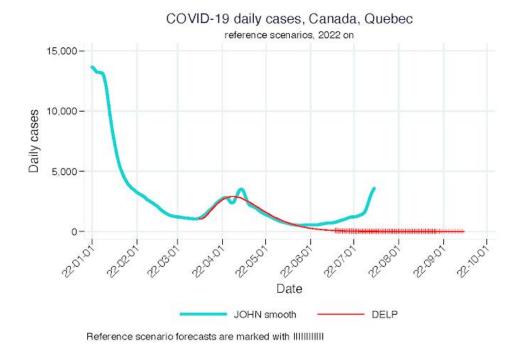


- (3) Quebec Daily cases or infections, Reference scenario, 2020 on
- (4) Quebec Daily cases or infections, Reference scenario, 2021 on
- (4b) Quebec Daily cases or infections, Reference scenario, 2022 on



(4c) Quebec Daily cases, Reference scenario, 2022 on, with JOHN raw

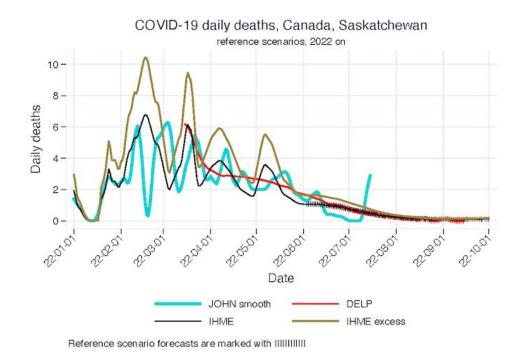
(4d) Quebec Daily cases, Reference scenario, 2022 on, without JOHN raw



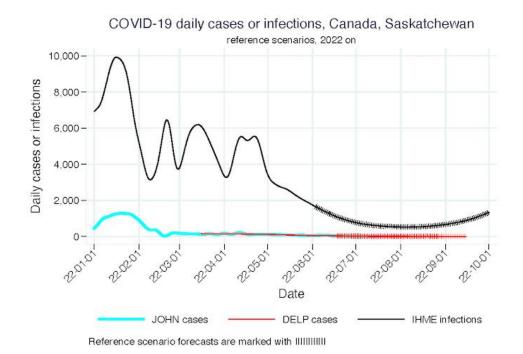
# Selected graphs - Saskatchewan

- (1) Saskatchewan Daily deaths, Reference scenario, 2020 on
- (2) Saskatchewan Daily deaths, Reference scenario, 2021 on
- (2b) Saskatchewan Daily deaths, Reference scenario, 2022 on, with JOHN raw

#### (2c) Saskatchewan Daily deaths, Reference scenario, 2022 on, without JOHN raw

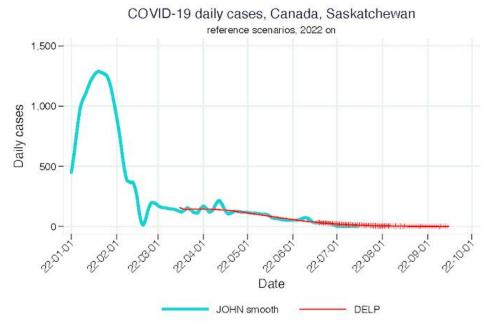


- (3) Saskatchewan Daily cases or infections, Reference scenario, 2020 on
- (4) Saskatchewan <u>Daily cases or infections</u>, <u>Reference scenario</u>, <u>2021 on</u>
- (4b) Saskatchewan Daily cases or infections, Reference scenario, 2022 on



(4c) Saskatchewan Daily cases, Reference scenario, 2022 on, with JOHN raw

(4d) Saskatchewan Daily cases, Reference scenario, 2022 on, without JOHN raw



Reference scenario forecasts are marked with IIIIIIIIIII