Global and regional COVID-19 epidemic models situation report No 51 – 2022-07-01

Farshad Pourmalek MD PhD

Former lecturer, University of British Columbia, Vancouver | <u>UBC SPPH</u> | <u>ORCID</u> | <u>PubMed</u> pourmalek_farshad@yahoo.com

Combine and visualize international periodically updated estimates of COVID-19 pandemic at the global level and for six WHO regions

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

See https://github.com/pourmalek/CovidVisualizedGlobal

Study update dates in uptake 20220701

DELP 20220618, IHME 20220610, No IMPE 20220530, SRIV 20220701

Days old: DELP 14, IHME 22, IMPE 33, SRIV 0

The latest IMPE update 20220530 was released on 20220624. Not included.

WE KNOW THAT AMONG THE COMING PANDEMICS IS THE SPREAD OF SEVERAL EPIDEMICS OF MORTALITY AND MORBIDITY DUE TO LOW OR ABSENT FOOD INTAKE, CONCENTRATED IN MIDDLE EAST, NORTH AFRICA, AND SUBSAHARAN AFRICA.

DON'T WE KNOW?

Summary 20220701:

Predicted daily deaths:

The IHME model (update 20220610) had predicted declining global daily deaths through October first. The SRIV model (update 20220701) predicts unprecedented rise in global daily deaths from July to October 1, reaching more than 15,000 per day on October 1, 2022.

Predicted daily infections and cases:

The IHME model (update 20220610) predicted declining global daily infections from early June (8.7 million) to early September 2022 (5.5 million) and rise from early September to October first, 2022 (6.5 million).

The SRIV model (update 20220701) predicts increase in global daily cases from July 1st (about one million) to more than 4 million in mid-September, and then decline through October 1, 2022 (to less than 4 million). The SRIV model predicts peak of daily cases in WHO regions at different heights during August and September 2022.

The DELP model (update 20220618) had predicted peak of cases and deaths in the African region (AFR) at about late August to early September 2022.

Officially reported daily deaths:

Officially reported daily deaths have been stagnating since mid-June 2022 in most WHO regions, but they are increasing since early June in Americas, with and without Canada and United States.

Officially reported daily cases:

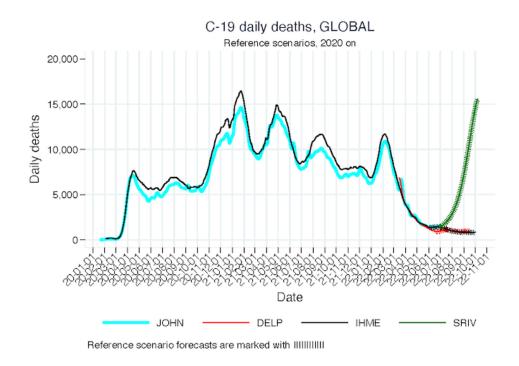
Officially reported daily cases have increased since early June 2022 at the global level, and in all regions. Largest increase has been in the European region (from < 150,000 to > 400,000).

Table of Graphs

Study update dates in uptake 20220701	
Summary 20220701:	2
Selected graphs - Global	2
Selected graphs - Regions together	
Selected graphs - African region (AFRO)	
Selected graphs – Americas region (AMRO)	
Selected graphs – Americas region, Canada and United States (AMR1)	
Selected graphs – Americas region, without Canada and United States (AMR2)	27
Selected graphs – Eastern Mediterranean region (EMRO)	30
Selected graphs – European region (EURO)	33
Selected graphs – South-East Asian region (SEARO)	
Selected graphs – Western Pacific region (WPRO)	

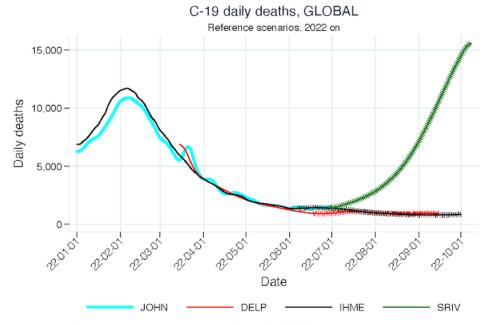
Selected graphs - Global

(1) Global Daily deaths, reference scenarios, 2020 on



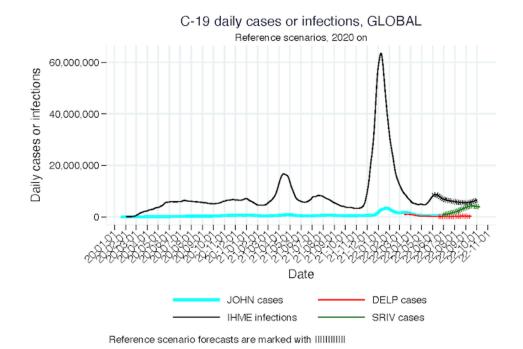
- (1b) Global Daily deaths, reference scenarios, with excess mortality, 2020 on
- (2) Global Daily deaths, reference scenarios, 2021 on
- (3) Global Daily deaths, 3 scenarios, 2021 on
- (3b) Global Daily deaths, 3 scenarios, 2021 on, IHME

(3d) Global Daily deaths, reference scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

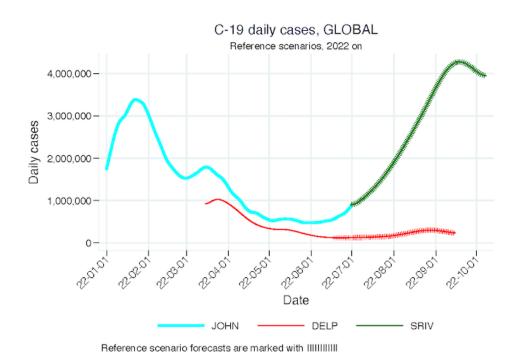
(4) Global Daily cases or infections, reference scenarios, 2020 on



Page 5 of 41

(6) Global Daily cases or infections, 3 scenarios, 2021 on

(6b) Global Daily cases, 2022 on



(6c) Global Daily estimated infections IHME to reported cases JOHN, main scenarios, 2021 on

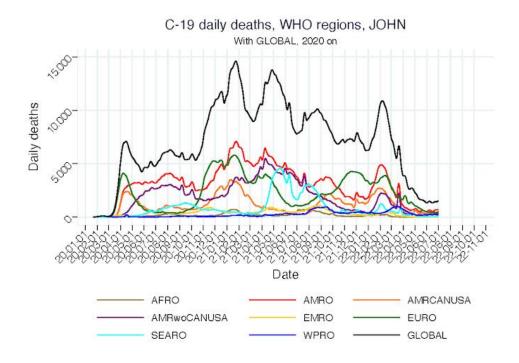
(7) Global Hospital-related outcomes, 2020 on

(8) Global Hospital-related outcomes, 2021 on, without IHME Bed need

(9) Global Daily deaths estimated to reported, reference scenarios, 2020 on
(11) Global Daily Infection outcomes ratios, 2 scenarios, 2020 on, IHME
(11b) Global Daily Infection -detection and -hospitalizations ratios, 2 scenarios, 2020 on, IHME
(12) Global Daily mobility, 2 scenarios, 2020 on, IHME
(13) Global Daily mask use, 2 scenarios, 2020 on, IHME

Selected graphs - Regions together

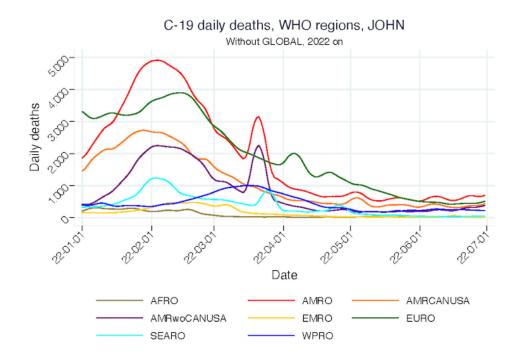
(0a) Regions together Daily deaths, with GLOBAL, 2020 on, JOHN



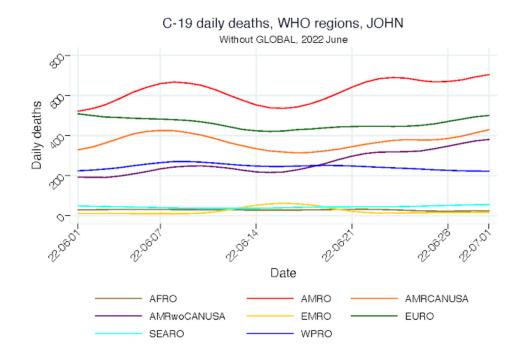
(0b) Regions together Daily deaths, without GLOBAL, 2020 on, JOHN

(Oc) Regions together Daily deaths, with GLOBAL, 2022 on, JOHN

(0d) Regions together Daily deaths, without GLOBAL, 2022 on, JOHN

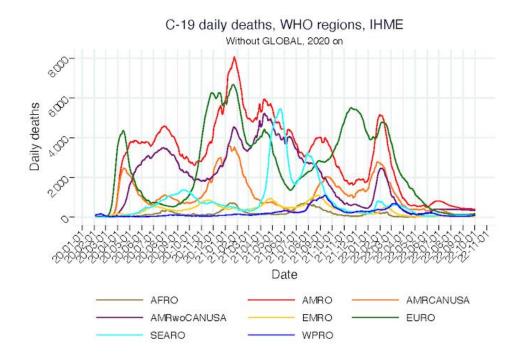


(0e) Regions together Daily deaths, without GLOBAL, 2022 June, JOHN

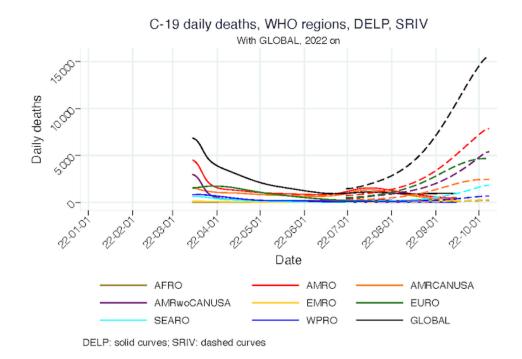


(1) Regions together Daily deaths, with GLOBAL, 2020 on, IHME

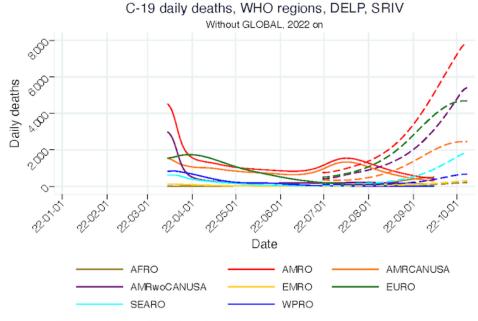
(2) Regions together Daily deaths, without GLOBAL, 2020 on, IHME



(3) Regions together Daily deaths, with GLOBAL, 2022 on, DELP, SRIV



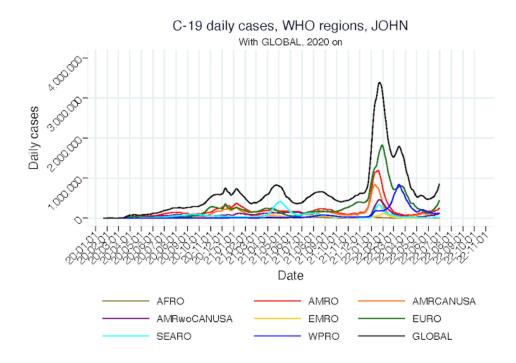
(4) Regions together Daily deaths, without GLOBAL, 2022 on, DELP, SRIV



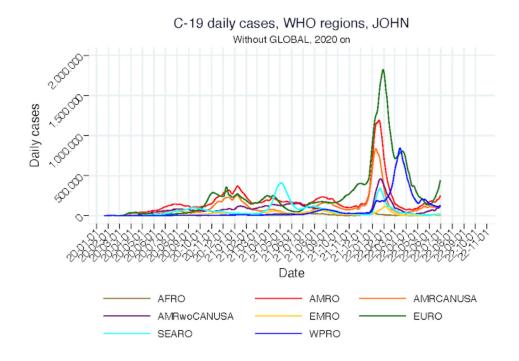
DELP: solid curves; SRIV: dashed curves

- (5) Regions together Daily excess deaths, with GLOBAL, 2020 on, IHME
- (6) Regions together Daily excess deaths, without GLOBAL, 2020 on, IHME

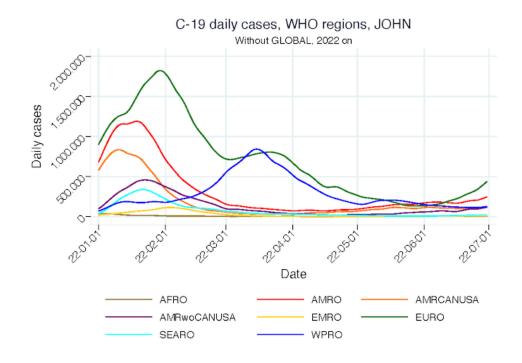
(00a) Regions together Daily cases, with GLOBAL, 2020 on, JOHN



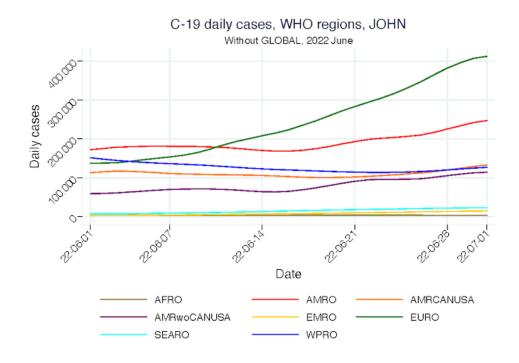
(00b) Regions together Daily cases, without GLOBAL, 2020 on, JOHN



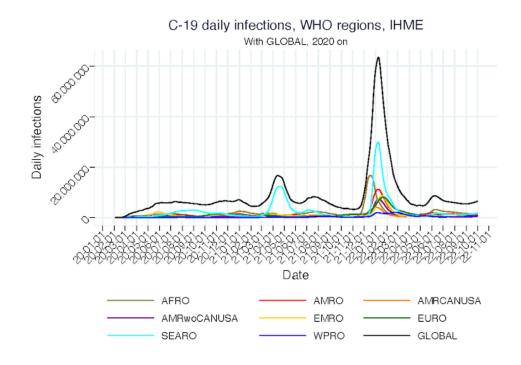
(00c) Regions together Daily cases, without GLOBAL, 2022 on, JOHN



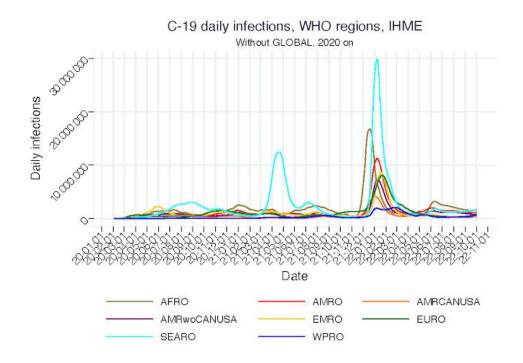
(00d) Regions together Daily cases, without GLOBAL, 2022 June, JOHN



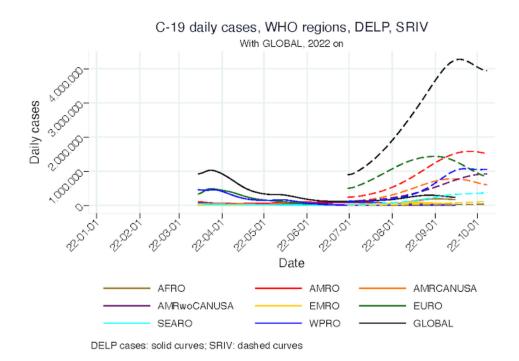
(7) Regions together Daily infections, with GLOBAL, 2020 on, IHME



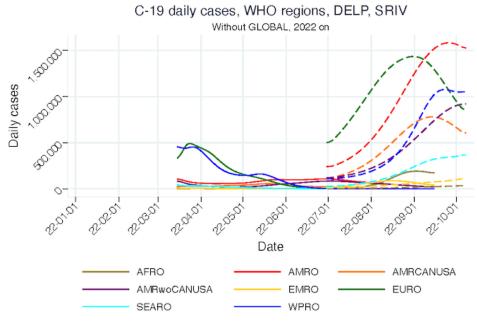
(8) Regions together Daily infections, without GLOBAL, 2020 on, IHME



(9) Regions together Daily cases, with GLOBAL, 2022 on, DELP, SRIV



(10) Regions together Daily cases, without GLOBAL, 2022 on, DELP, SRIV



DELP cases: solid curves; SRIV: dashed curves

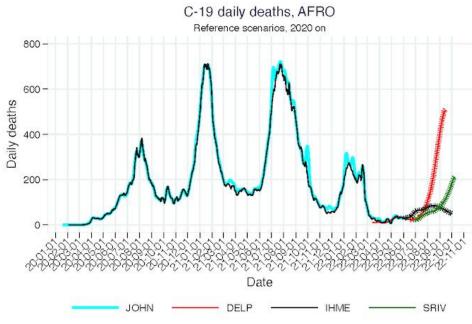
- (11) Regions together Total deaths, with GLOBAL, 2020 on, IHME
- (12) Regions together Total deaths, without GLOBAL, 2020 on, IHME
- (13) Regions together Total deaths, with GLOBAL, 2022 on, DELP, SRIV
- (14) Regions together Total deaths, without GLOBAL, DELP, SRIV

- (15) Regions together <u>Total excess deaths</u>, with <u>GLOBAL</u>, <u>2020 on</u>, <u>IHME</u>(16) Regions together <u>Total excess deaths</u>, without <u>GLOBAL</u>, <u>2020 on</u>, <u>IHME</u>
- (17) Regions together Total infections, with GLOBAL, 2020 on, IHME
- (18) Regions together <u>Total infections</u>, without GLOBAL, 2020 on, IHME
- (19) Regions together Total cases, with GLOBAL, 2022 on, DELP, SRIV
- (20) Regions together Total cases, without GLOBAL, 2022 on, DELP, SRIV

•

Selected graphs - African region (AFRO)

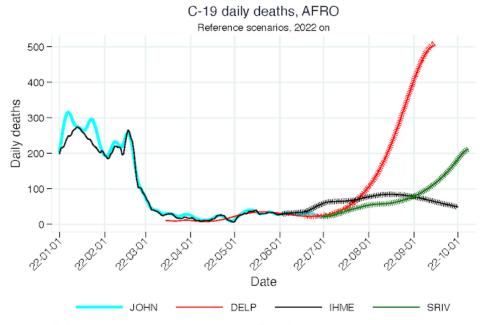
(1) African region Daily deaths, reference scenarios, 2020 on



Reference scenario forecasts are marked with IIIIIIIIIII

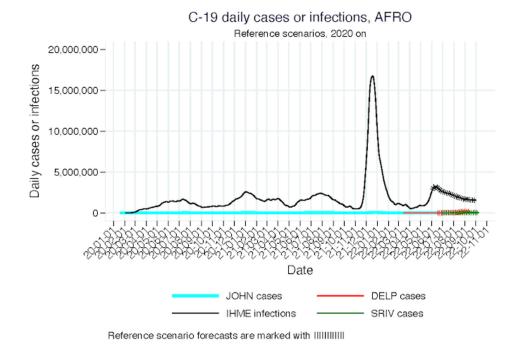
(3) African region Daily deaths, 3 scenarios, 2021 on

(3b) African region Daily deaths, reference scenarios, 2022 on



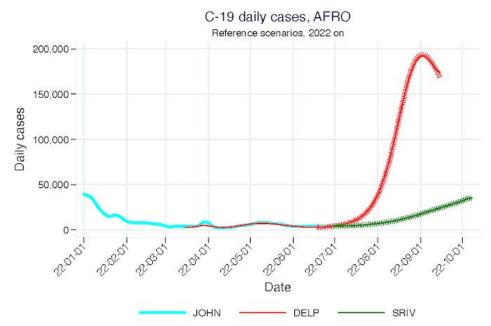
Reference scenario forecasts are marked with IIIIIIIIIII

(4) African region Daily cases or infections, reference scenarios, 2020 on



(6) African region Daily cases or infections, 3 scenarios, 2021 on

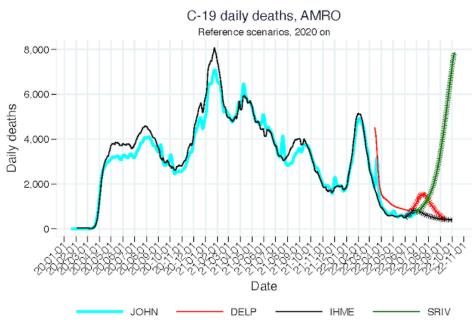
(6b) African region Daily cases or infections, reference scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

Selected graphs – Americas region (AMRO)

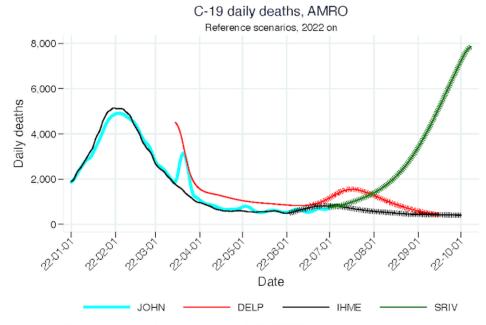
(1) Americas region Daily deaths, reference scenarios, 2020 on



Reference scenario forecasts are marked with IIIIIIIIIII

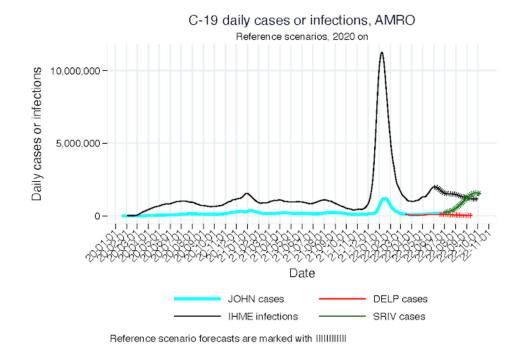
(3) Americas region Daily deaths, 3 scenarios, 2021 on

(3b) Americas region Daily deaths, reference scenarios, 2022 on



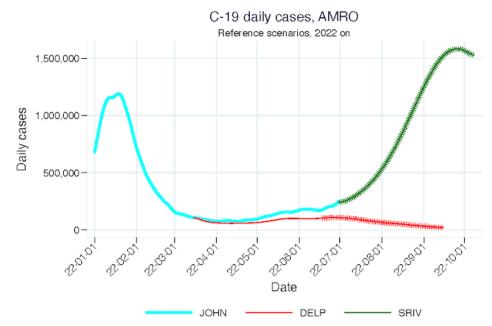
Reference scenario forecasts are marked with IIIIIIIIIII

(4) Americas region Daily cases or infections, reference scenarios, 2020 on



(6) Americas region <u>Daily cases or infections</u>, 3 scenarios, 2021 on

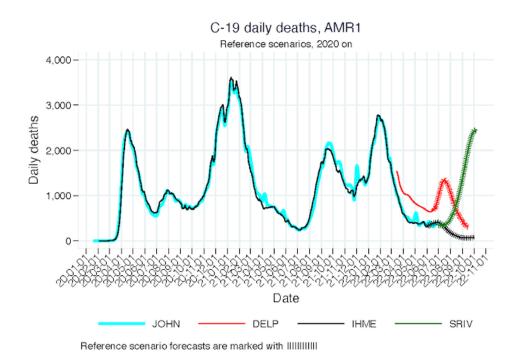
(6b) Americas region Daily reference, 3 scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

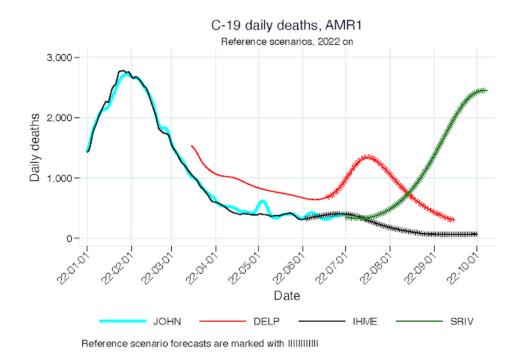
Selected graphs – Americas region, Canada and United States (AMR1)

(1) Americas region, Canada and United States Daily deaths, reference scenarios, 2020 on

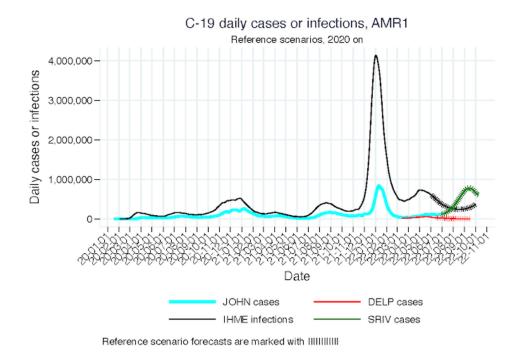


(3) Americas region, Canada and United States Daily deaths, 3 scenarios, 2021 on

(3b) Americas region, Canada and United States Daily deaths, reference scenarios, 2022 on

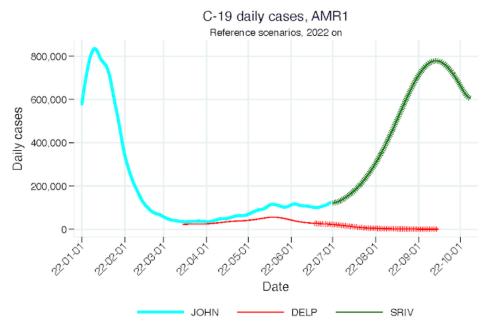


(4) Americas region, Canada and United States <u>Daily cases or infections, reference scenarios, 2020 on</u>



(6) Americas region, Canada and United States Daily cases or infections, 3 scenarios, 2021 on

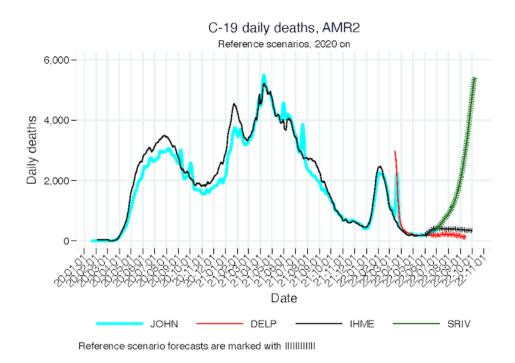
(6b) Americas region, Canada and United States <u>Daily cases or infections, reference scenarios, 2022 on</u>



Reference scenario forecasts are marked with IIIIIIIIIII

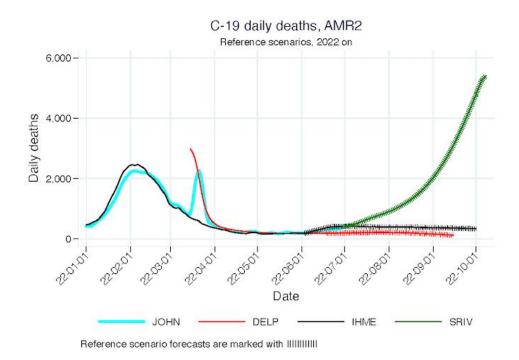
Selected graphs – Americas region, without Canada and United States (AMR2)

(1) Americas region, without Canada and United States <u>Daily deaths, reference scenarios, 2020</u> on

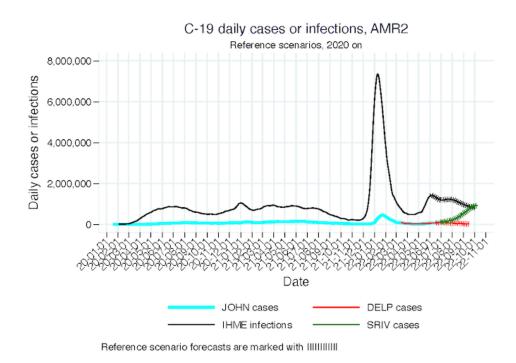


(3) Americas region, without Canada and United States Daily deaths, 3 scenarios, 2021 on

(3b) Americas region, without Canada and United States <u>Daily deaths, reference scenarios, 2022</u> on

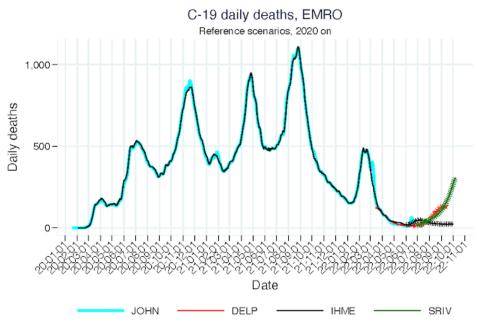


(4) Americas region, without Canada and United States <u>Daily cases or infections, reference scenarios, 2020 on</u>



(6) Americas region, without Canada and United States <u>Daily cases or infections</u>, <u>3 scenarios</u>, <u>2021 on</u>

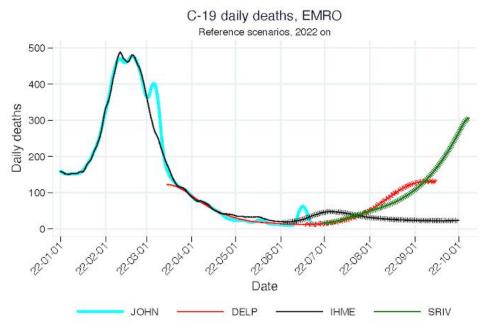
(6b) Americas region, without Canada and United States <u>Daily cases or infections, reference</u> scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

Selected graphs – Eastern Mediterranean region (EMRO)

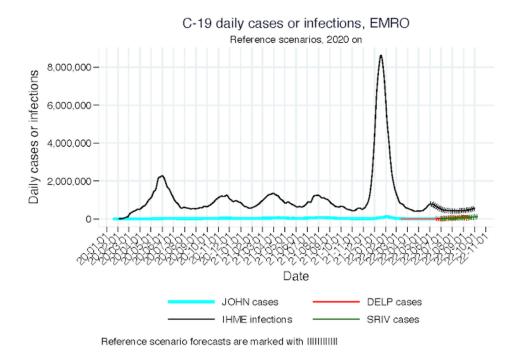
(1) Eastern Mediterranean region <u>Daily deaths, reference scenarios, 2020 on</u>



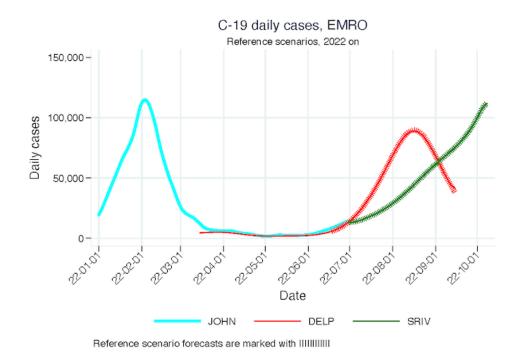
Reference scenario forecasts are marked with IIIIIIIIIII

(3) Eastern Mediterranean region Daily deaths, 3 scenarios, 2021 on

(3b) Eastern Mediterranean region Daily deaths, reference scenarios, 2022 on

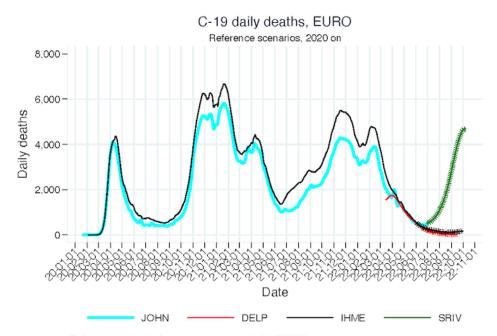


(4) Eastern Mediterranean region Daily cases or infections, reference scenarios, 2020 on



(6) Eastern Mediterranean region Daily cases or infections, 3 scenarios, 2021 on

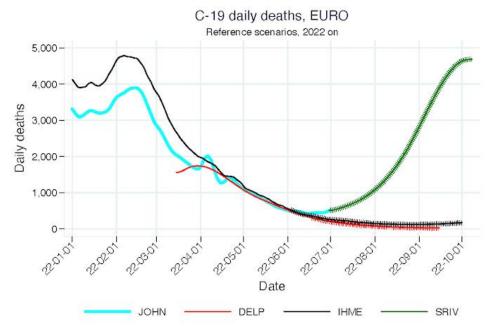
(6b) Eastern Mediterranean region Daily cases or infections, reference scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

Selected graphs – European region (EURO)

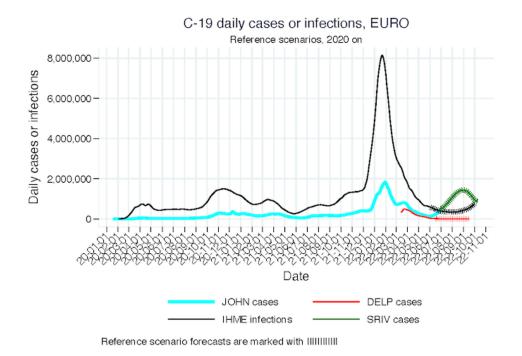
(1) European region Daily deaths, reference scenarios, 2020 on



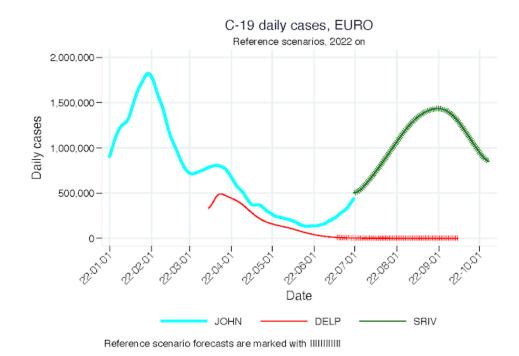
Reference scenario forecasts are marked with IIIIIIIIIII

(3) European region Daily deaths, 3 scenarios, 2021 on

(3b) European region Daily deaths, reference scenarios, 2022 on

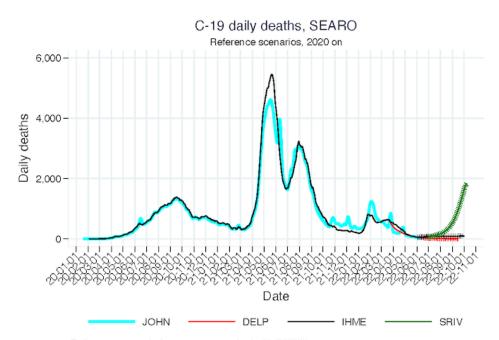


(4) European region Daily cases or infections, reference scenarios, 2020 on



(6) European region <u>Daily cases or infections</u>, 3 scenarios, 2021 on

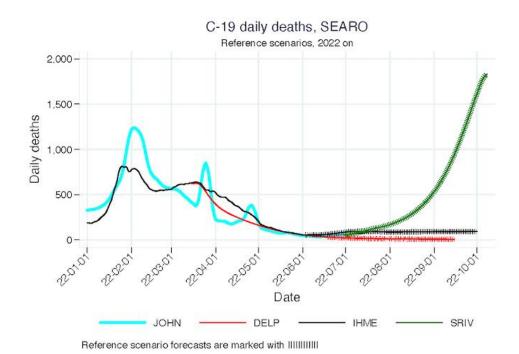
(6b) European region Daily cases or infections, reference scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

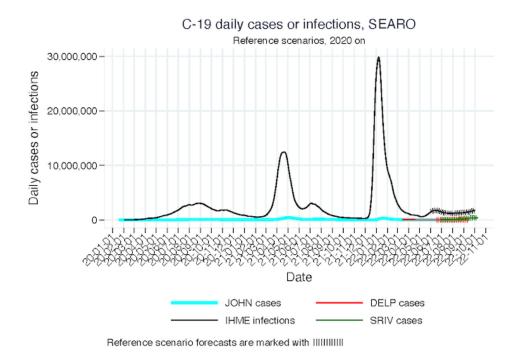
Selected graphs – South-East Asian region (SEARO)

(1) South-East Asian region Daily deaths, reference scenarios, 2020 on

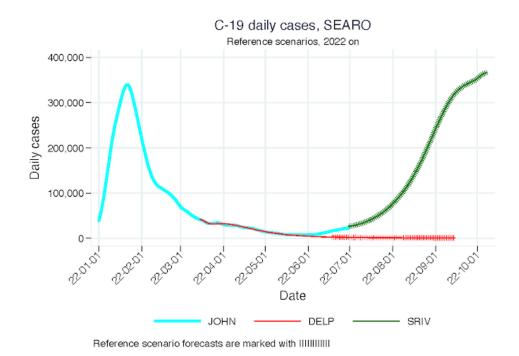


(3) South-East Asian region Daily deaths, 3 scenarios, 2021 on

(3b) South-East Asian region Daily deaths, reference scenarios, 2022 on

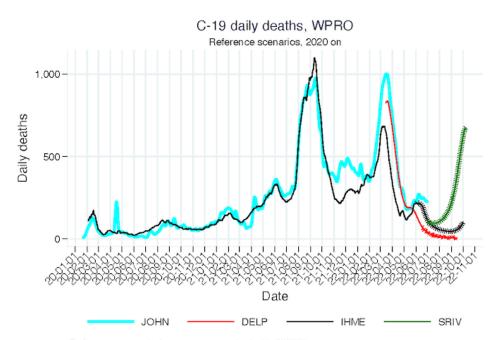


(4) South-East Asian region Daily cases or infections, reference scenarios, 2020 on



(6) South-East Asian region Daily cases or infections, 3 scenarios, 2021 on

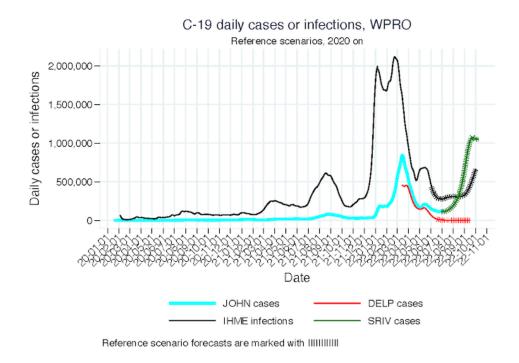
(6b) South-East Asian region Daily cases or infections, reference scenarios, 2022 on



Reference scenario forecasts are marked with IIIIIIIIIII

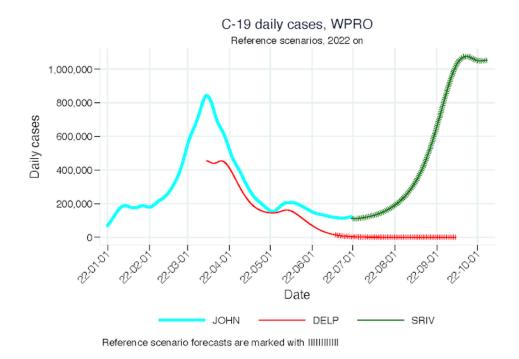
Selected graphs – Western Pacific region (WPRO)

(1) Western Pacific region Daily deaths, reference scenarios, 2020 on



- (3) Western Pacific region Daily deaths, 3 scenarios, 2021 on
- (3b) Western Pacific region Daily deaths, reference scenarios, 2022 on

(4) Western Pacific region Daily cases or infections, reference scenarios, 2020 on



(6) Western Pacific region <u>Daily cases or infections</u>, <u>3 scenarios</u>, <u>2021 on</u>

(6b) Western Pacific region <u>Daily cases or infections, reference scenarios, 2022 on</u>

