Estimation of SARS-CoV-2 infections and deaths among Rohingya refugees, Kutupalong-Balukhali camps, Bangladesh

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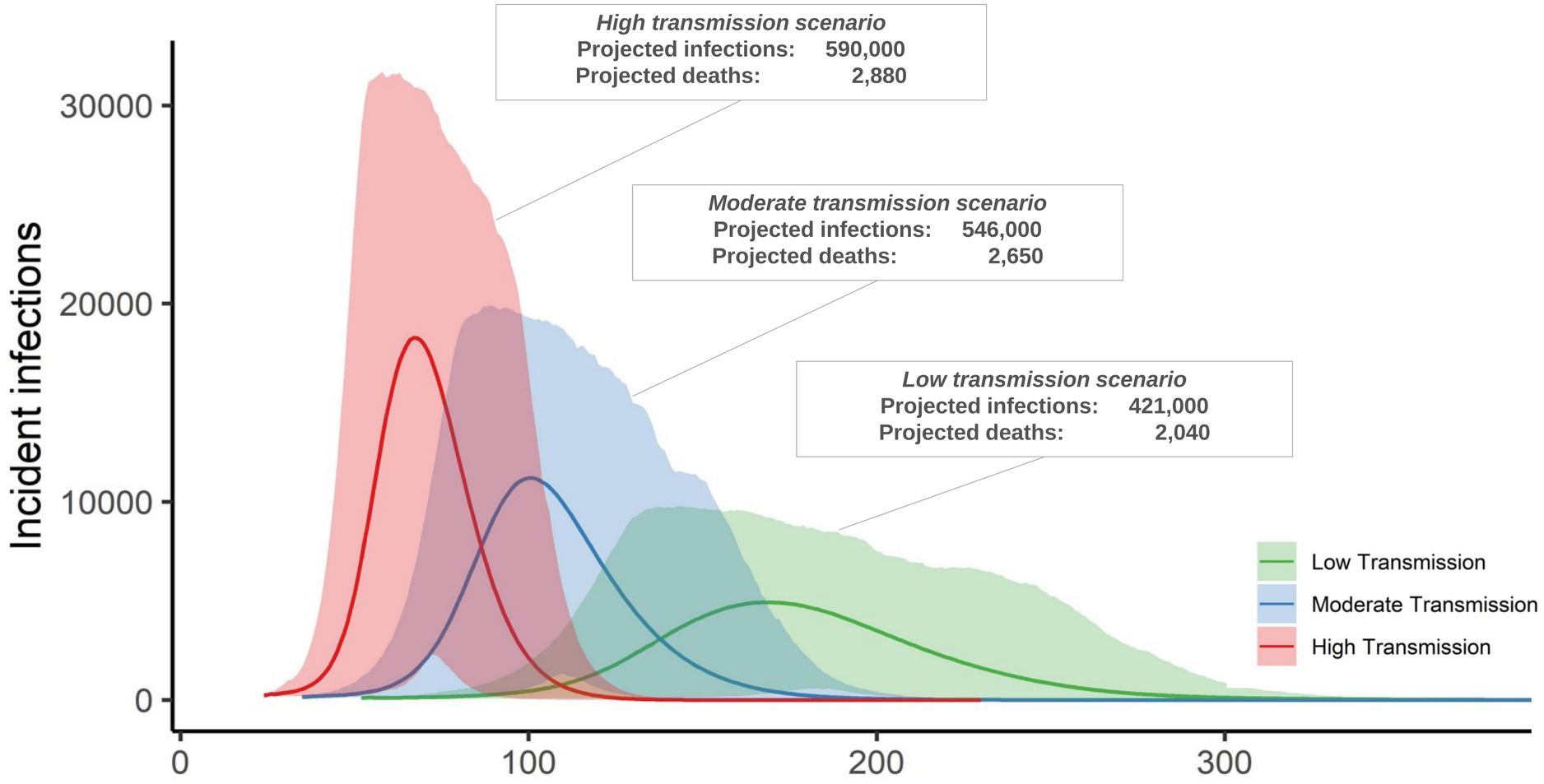
COVID-19 Risk to Rohingya Refugees

Almost a million Rohingya refugees from Burma are living in camps in Bangladesh Credit: Mohammad Ponir Hossain/Reuters, 2018

- *High potential for transmission*
- *Low capacity to treat*
- *Limited control feasibility*

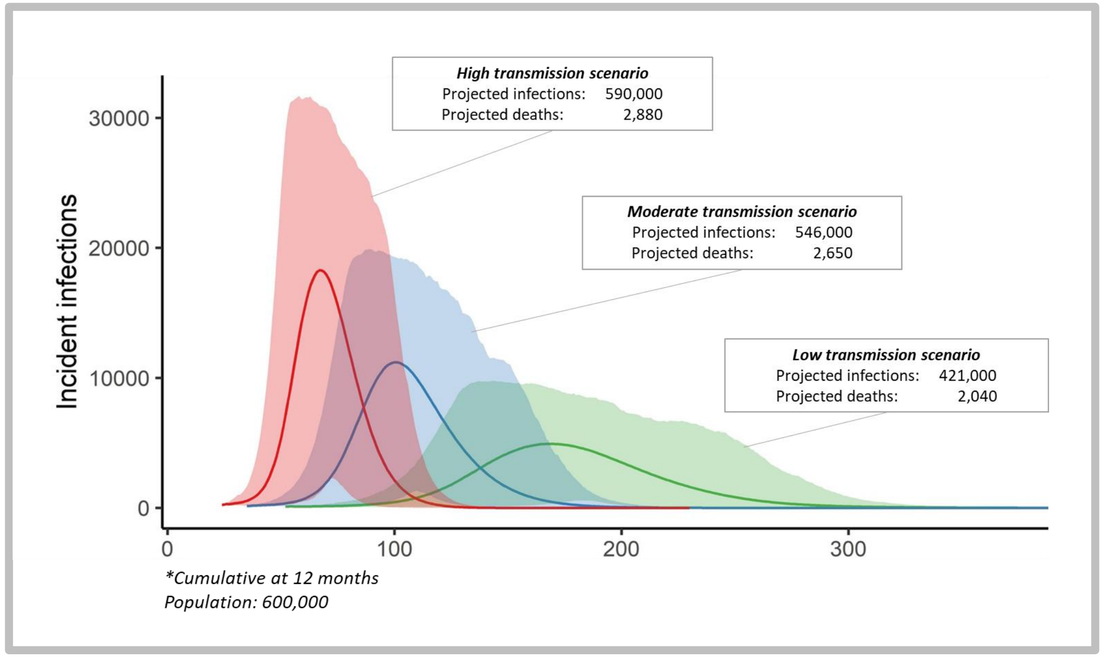
Kutupalong-Balukhali:
High Potential for Transmission



***Cumulative at 12 months**
Population: 600,000

Truelove et al, 2020, *PLOS Med*

Empirical data contrasts dramatically with estimated impact



VS

Reported

Date	16 August 2020	14 March 2021
Cases	111	426
Deaths	7	10

Was the pandemic controlled or missed?

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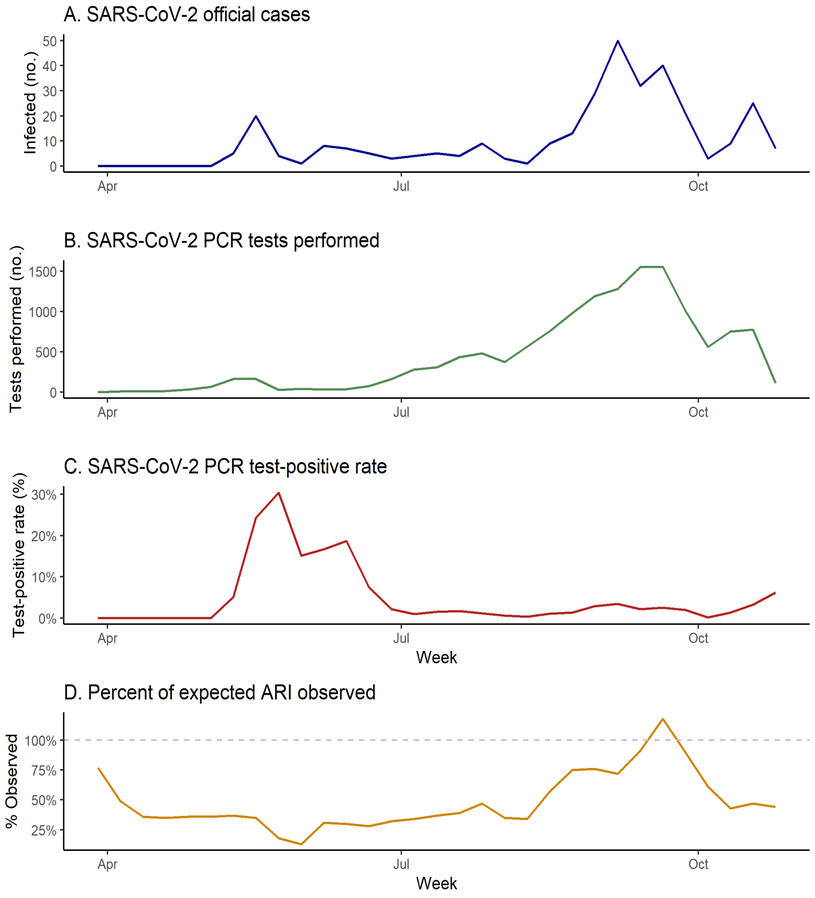
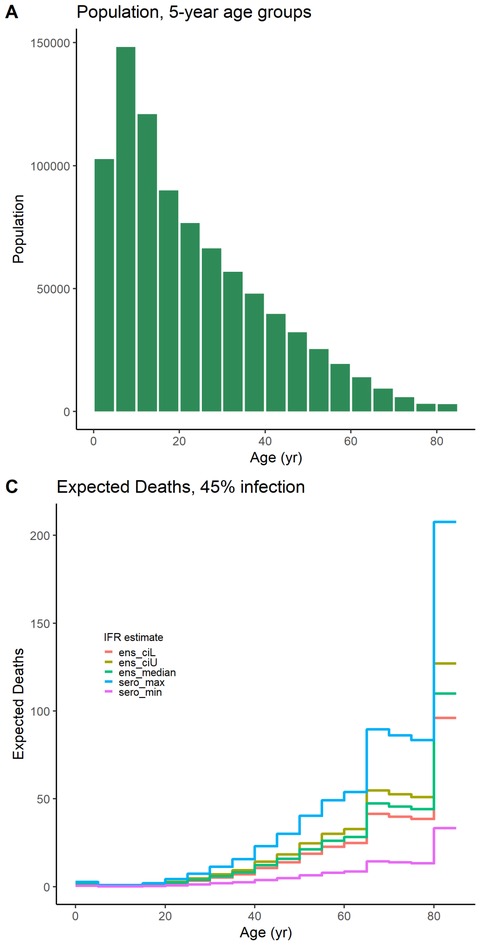
source: https://cxb-epi.netlify.app/post/covid-19-dashboard/

What can the different pieces of data tell us?

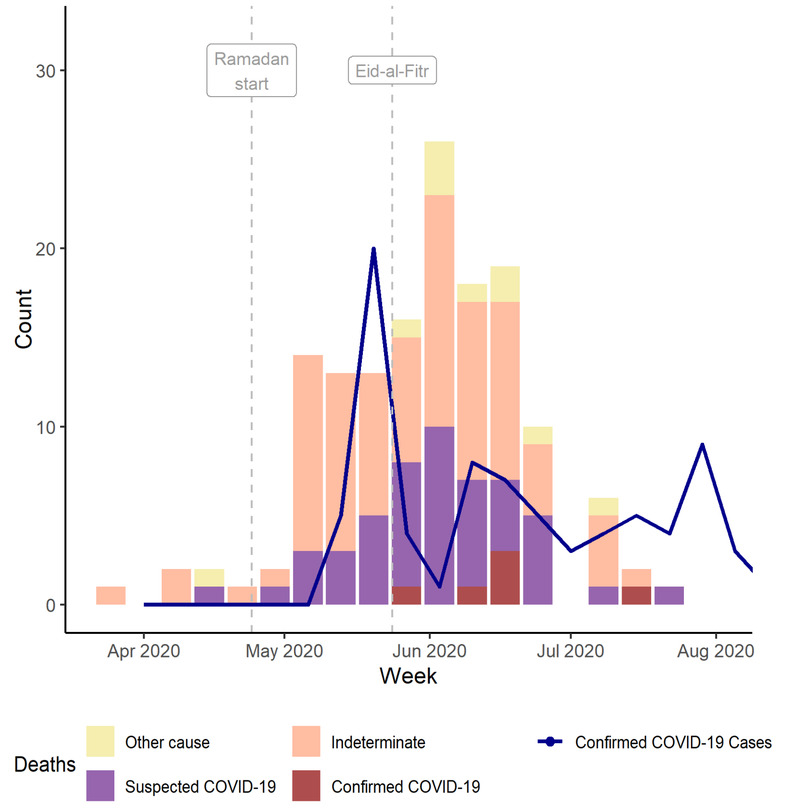
Official data



Expected outcome rates



Unofficial data



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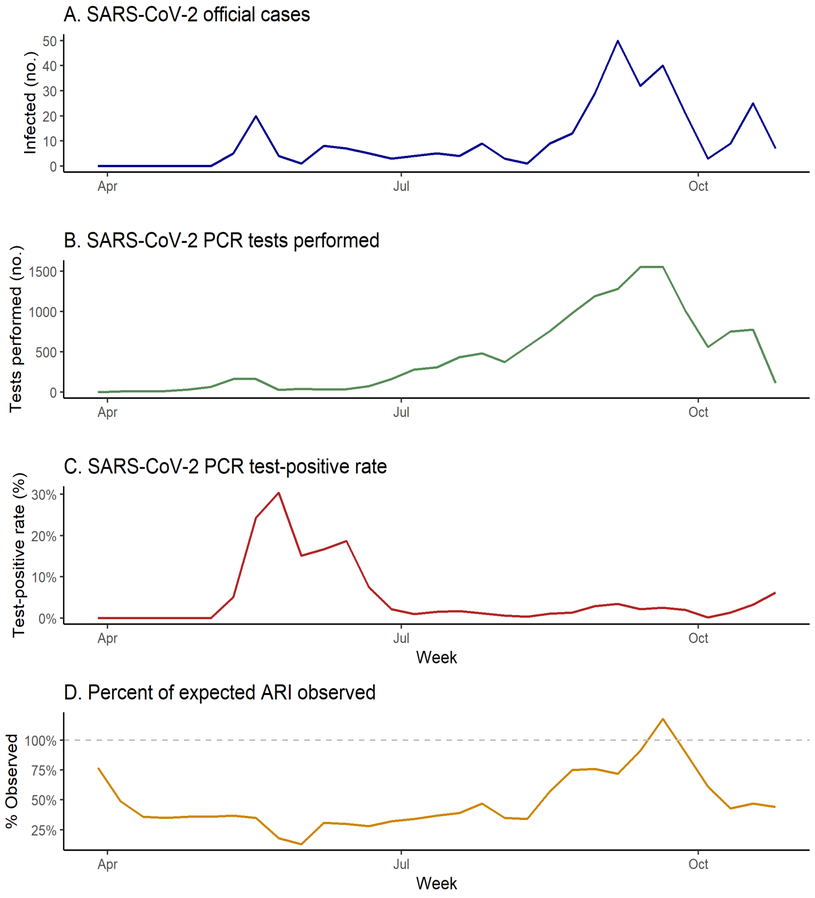

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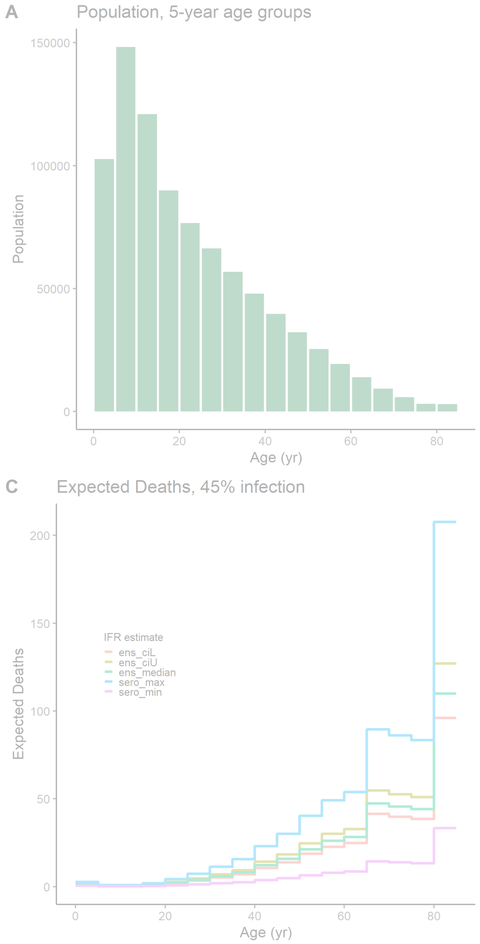

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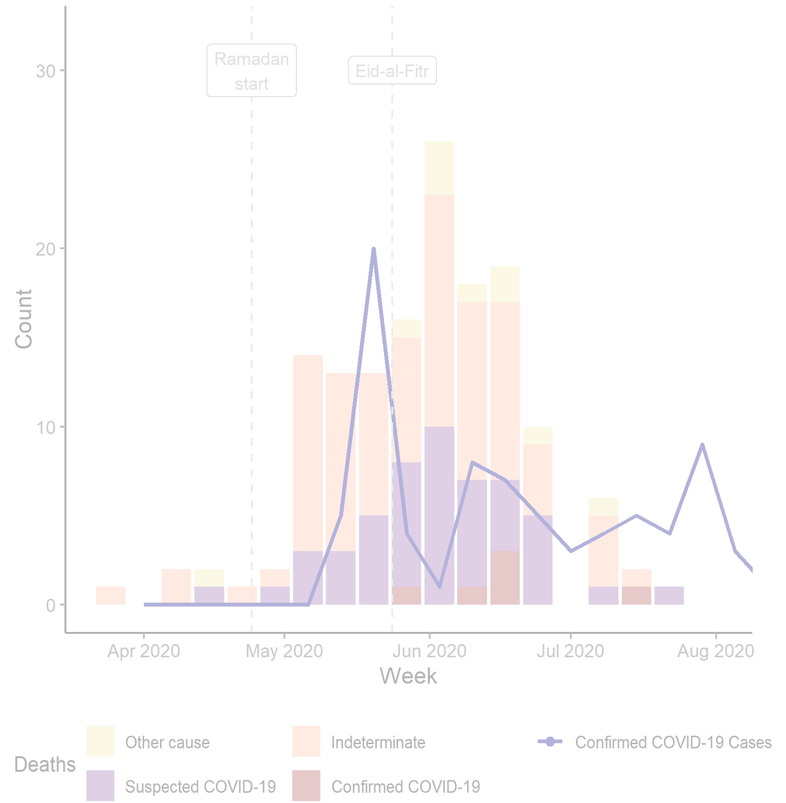

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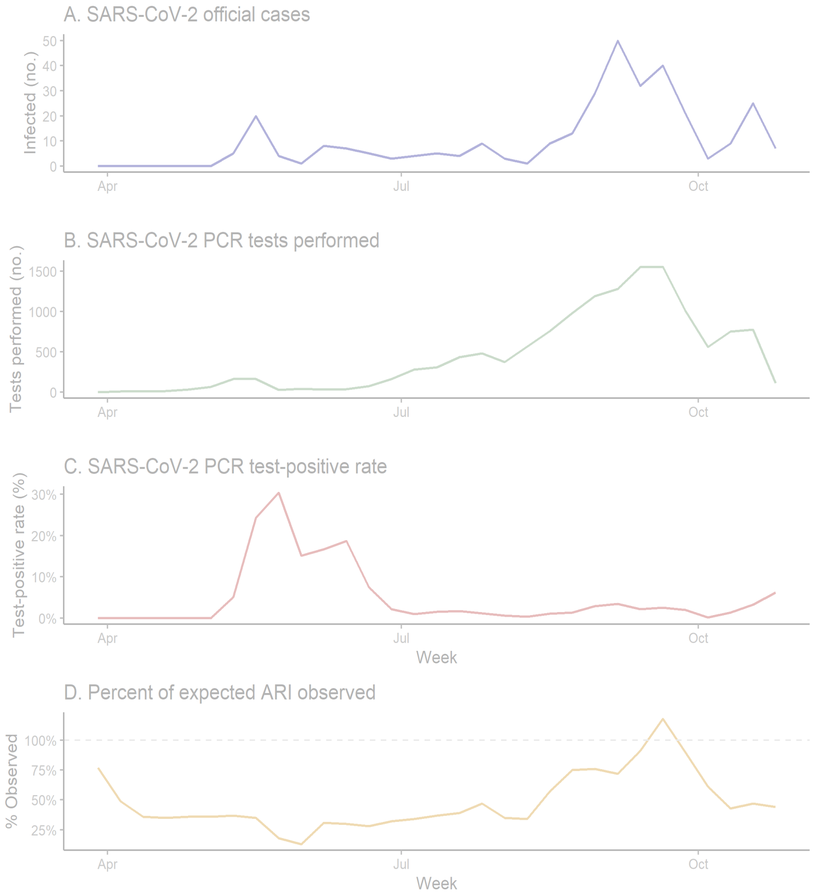

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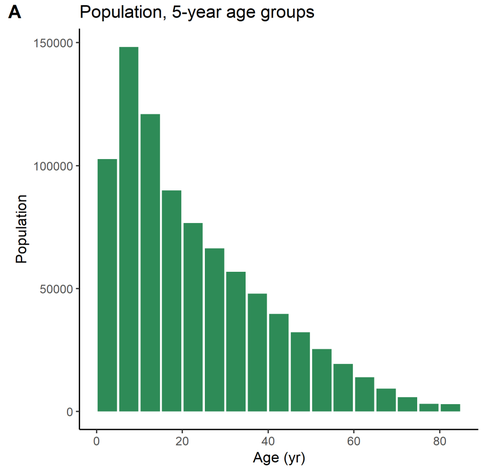

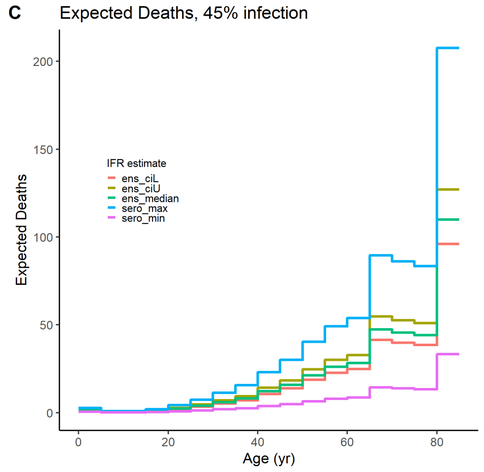

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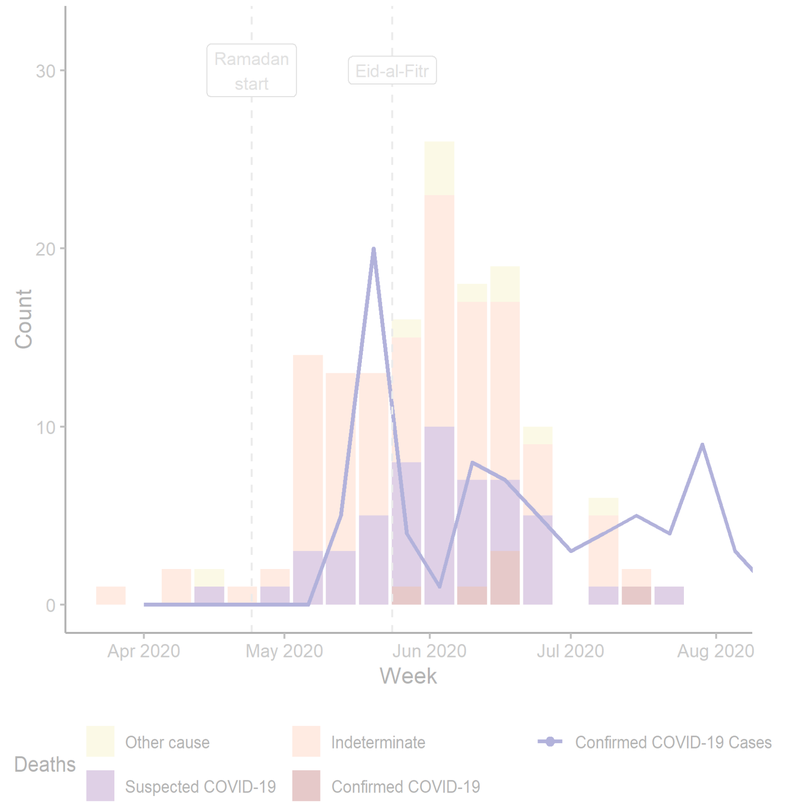

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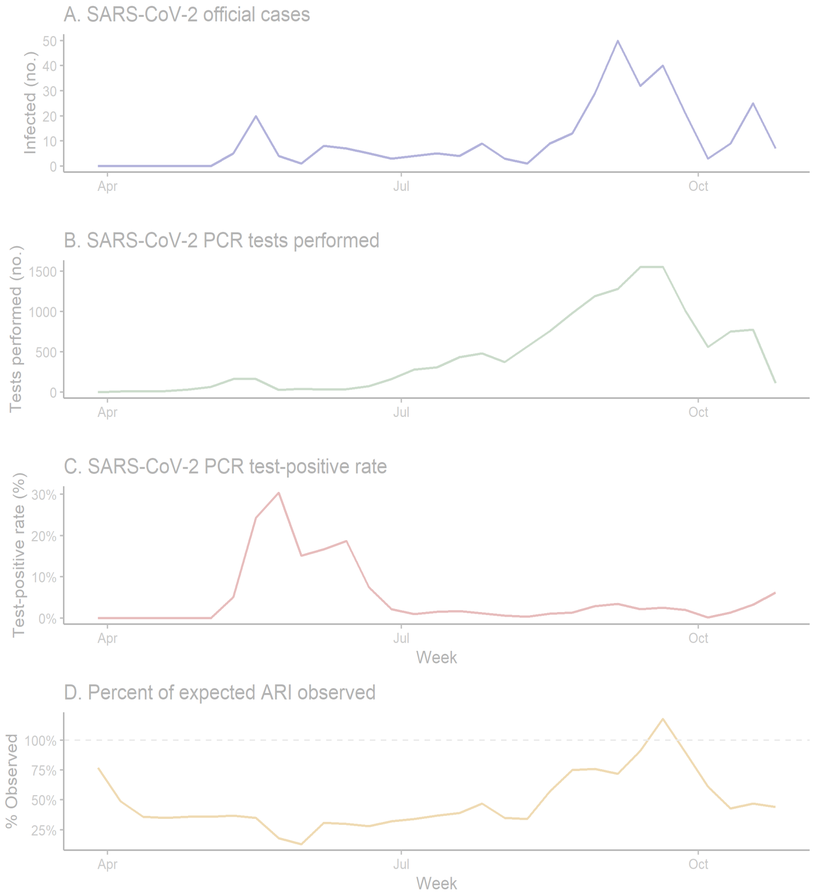

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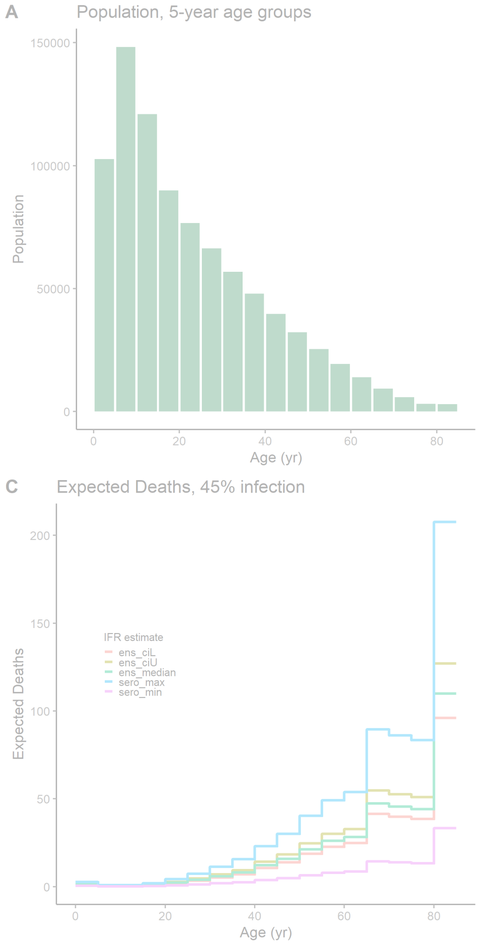

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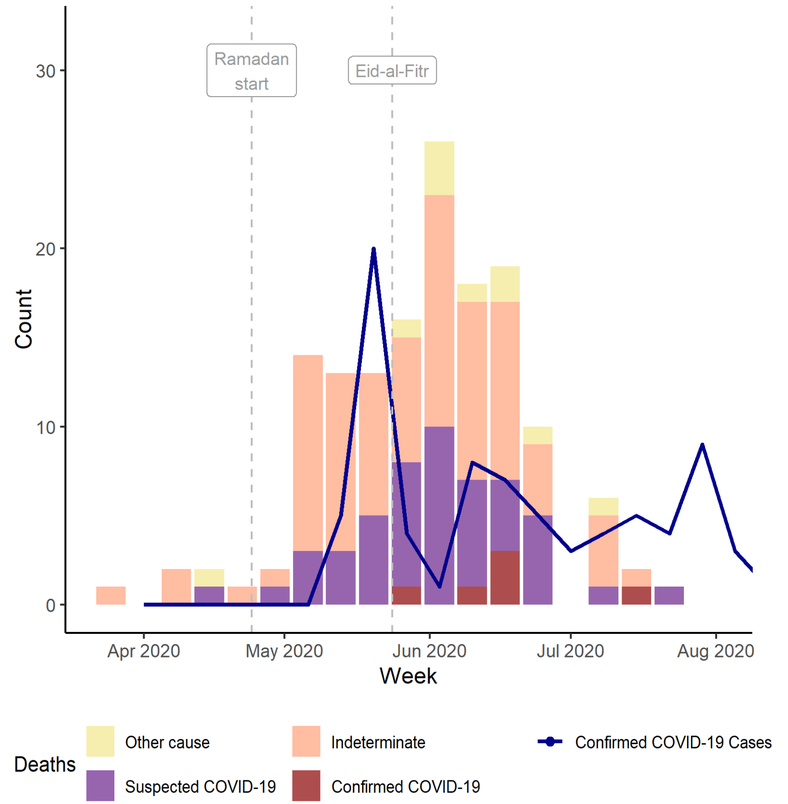

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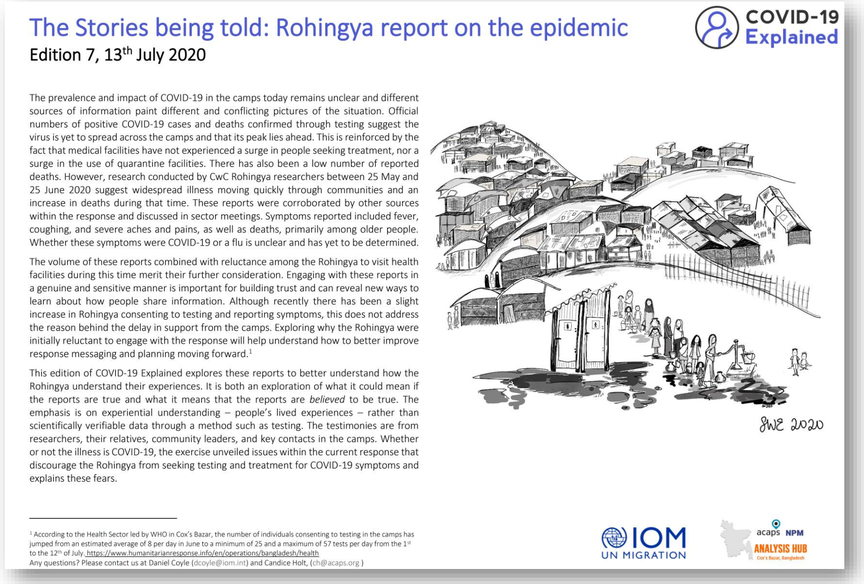
Suspected COVID-19 Deaths *IOM survey*



The Stories being told: Rohingya report on the epidemic

COVID-19 Explained

Edition 7, 13th July 2020

The prevalence and impact of COVID-19 in the camps today remains unclear and different sources of information paint different and conflicting pictures of the situation. Official numbers of positive COVID-19 cases and deaths confirmed through testing suggest the virus is yet to spread across the camps and that its peak lies ahead. This is reinforced by the fact that medical facilities have not experienced a surge in people seeking treatment, nor a surge in the use of quarantine facilities. There has also been a low number of reported deaths. However, research conducted by CwC Rohingya researchers between 25 May and 25 June 2020 suggest widespread illness moving quickly through communities and an increase in deaths during that time. These reports were corroborated by other sources within the response and discussed in sector meetings. Symptoms reported included fever, coughing, and severe aches and pains, as well as deaths, primarily among older people. Whether these symptoms were COVID-19 or a flu is unclear and has yet to be determined.

The volume of these reports combined with reluctance among the Rohingya to visit health facilities during this time merit their further consideration. Engaging with these reports in a genuine and sensitive manner is important for building trust and can reveal new ways to learn about how people share information. Although recently there has been a slight increase in Rohingya consenting to testing and reporting symptoms, this does not address the reason behind the delay in support from the camps. Exploring why the Rohingya were initially reluctant to engage with the response will help understand how to better improve response messaging and planning moving forward.[1]

This edition of COVID-19 Explained explores these reports to better understand how the Rohingya understand their experiences. It is both an exploration of what it could mean if the reports are true and what it means that the reports are *believed* to be true. The emphasis is on experiential understanding – people's lived experiences – rather than scientifically verifiable data through a method such as testing. The testimonies are from researchers, their relatives, community leaders, and key contacts in the camps. Whether or not the illness is COVID-19, the exercise unveiled issues within the current response that discourage the Rohingya from seeking testing and treatment for COVID-19 symptoms and explains these fears.

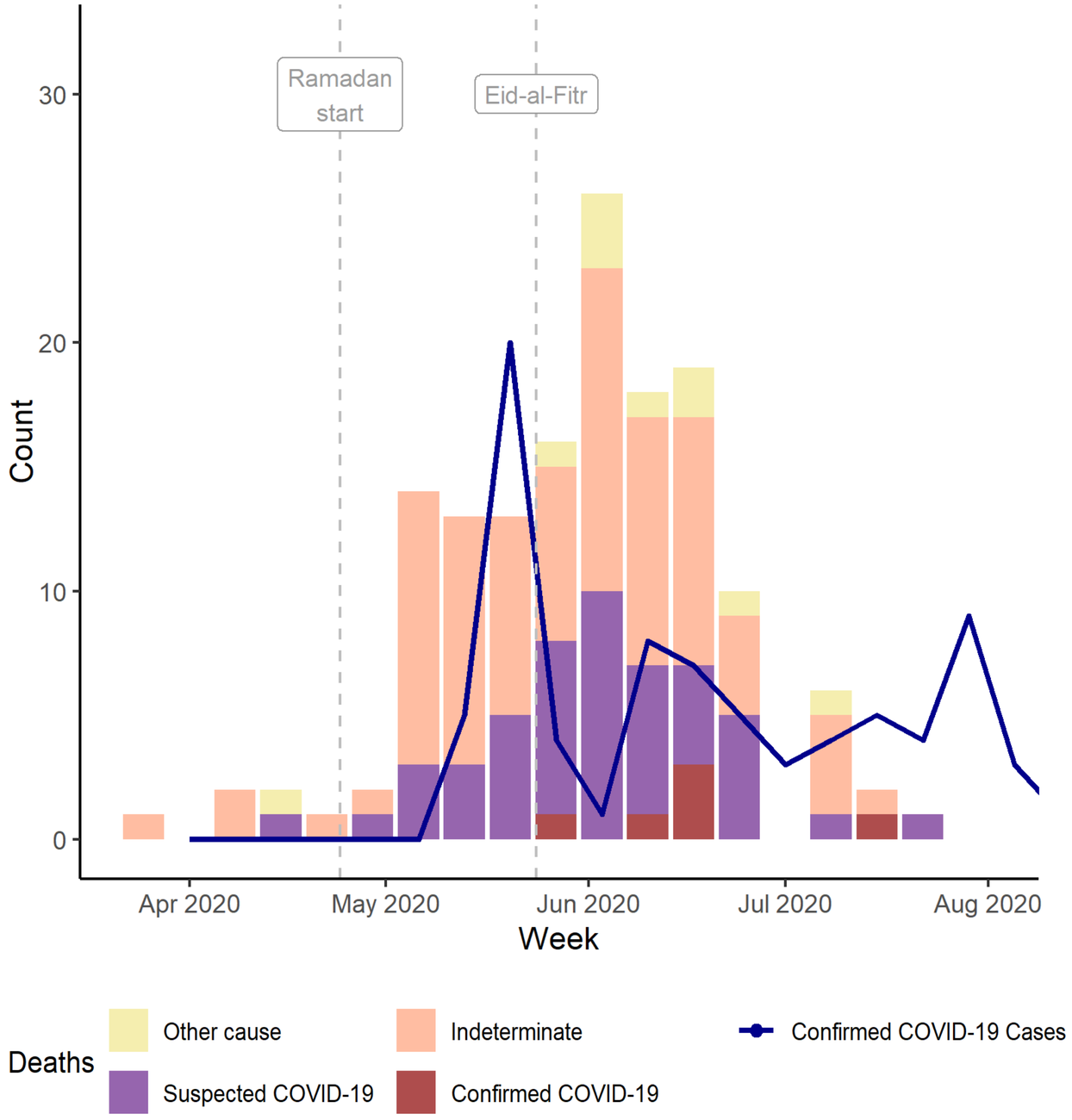
[1] According to the Health Sector led by WHO in Cox's Bazar, the number of individuals consenting to testing in the camps has jumped from an estimated average of 8 per day in June to a minimum of 25 and a maximum of 57 tests per day from the 1st to the 12th of July. https://www.humanitarianresponse.info/en/operations/bangladesh/health

Any questions? Please contact us at Daniel Coyle (dcoyle@iom.int) and Candice Holt, (ch@acaps.org)

IOM UN MIGRATION

acaps NPM ANALYSIS HUB Cox's Bazar, Bangladesh

Figure 1. Confirmed and suspected COVID-19 cases and deaths among the Rohingya Refugees in Cox's Bazar, Bangladesh. (A) PCR-positive COVID-19 cases and deaths. (B) Survey-captured deaths (ACAPS) and PCR-positive COVID-19-related deaths, and overlap in time with the PCR-positive COVID-19 cases during [date range]. (C) Camp of residence of survey-captured and PCR-positive deaths.



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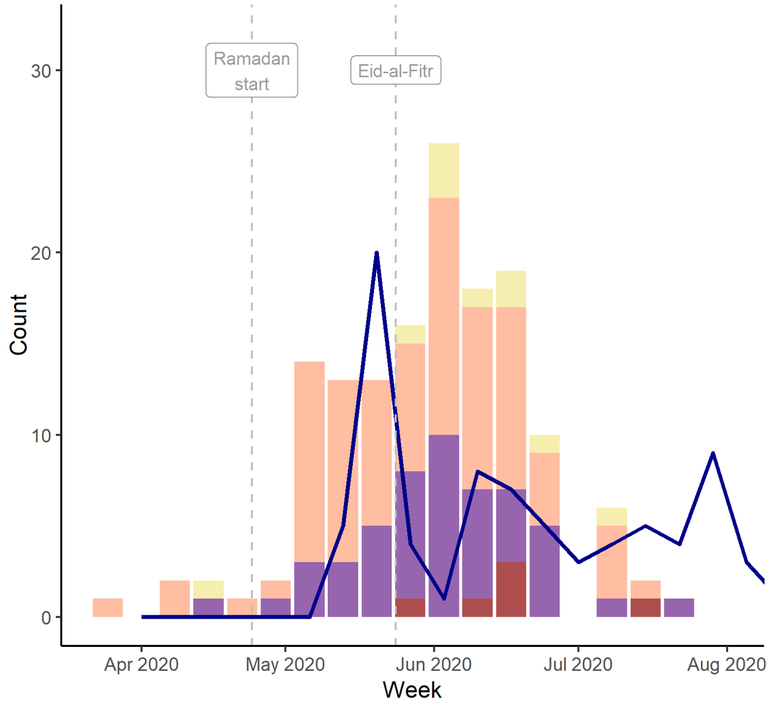
Inference from other data sources

- Hypothesis 1:
  - ***No major outbreak*** has occurred;
  - Reported case counts are **proportional to true infections** in the population
  - **Testing** availability and access has been **high and constant**

- Hypothesis 2:
  - Reported case counts are a **reflection of care seeking**, not true infections
  - **Testing** availability, access, and willingness has been **high and constant**
  - **Care seeking has varied** dramatically

- Hypothesis 3:
  - Reported cases counts are a **reflection of care seeking and testing access/willingness**
  - **Testing** availability, access, and willingness has **varied**
  - **Care seeking has varied** dramatically

Estimated COVID-19 deaths and estimated infections from IOM survey, Rohingya refugees, Kutupalong-Balukhali, March – July 2020



Death criteria	N*	Estimated IFR *median (95% CI)*	Estimated Infections *median (95% CI)*	Percent Infected *median (95% CI)*
Confirmed	6	0.00096 (.00084-.00112)	6,220 (5,370-7,135)	0.7% (0.6-0.8%)
Confirmed + Suspected	52		53,907 (46,540-61,841)	6.2% (5.4-7.1%)
Confirmed + Weighted Suspected	370		383,568 (331,151-440,021)	44.3% (38.2-50.8%)

**Deaths occurring during March - July 2020*

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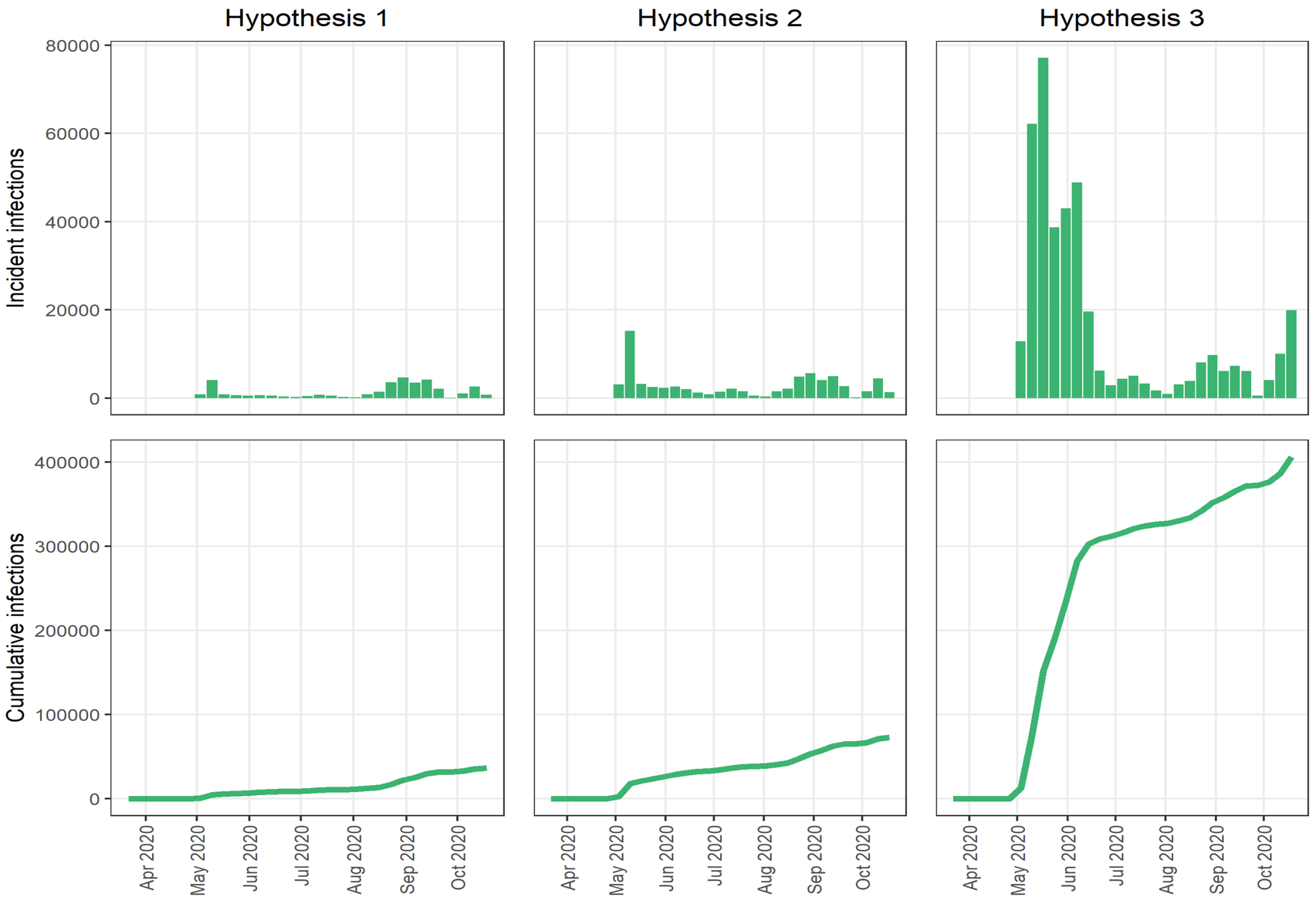
Inferred COVID-19 infections



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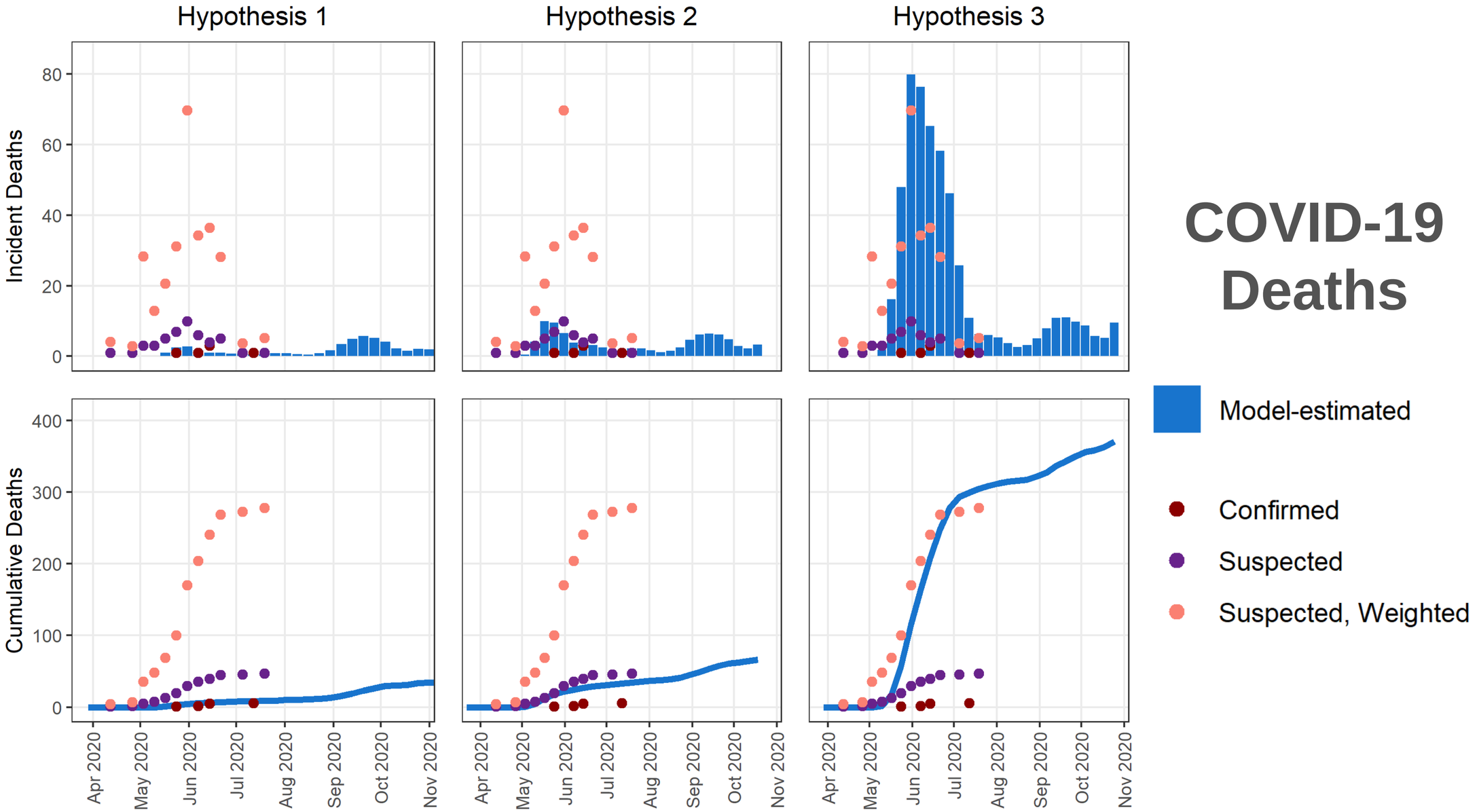
SCIENTIFIC DAYS

Inferred COVID-19 deaths



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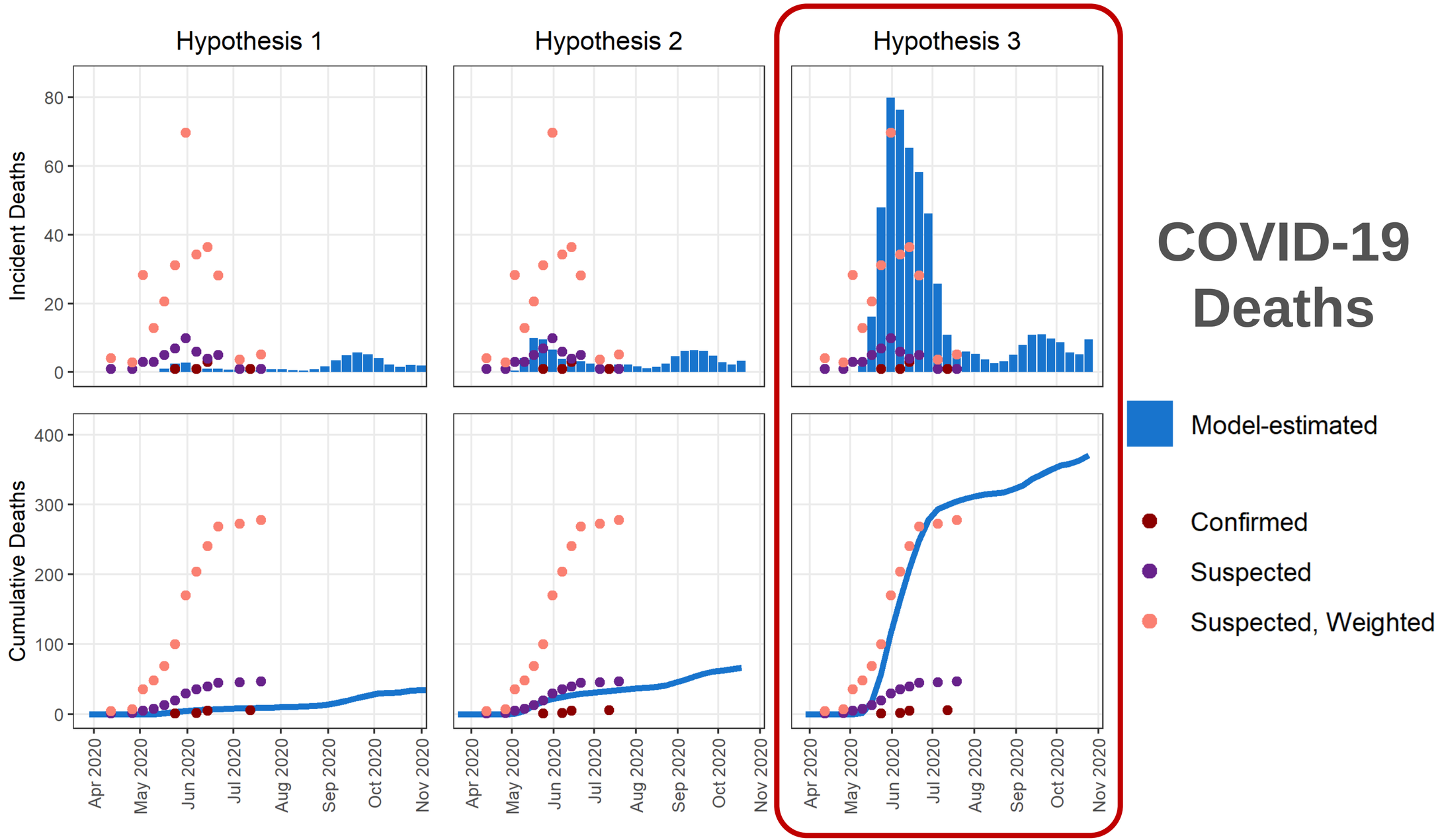

Conclusions and Implications

- ***Large-scale*** SARS-CoV-2 outbreak among Rohingya ***early*** in the Pandemic likely.
- Need to revise our view of ***non-standard data*** (i.e., unofficial or qualitative).
- ***Multi-data*** and ***mixed-methods*** approaches are needed
- Enhanced efforts to establish and maintain ***population-directed*** quantitative and qualitative surveillance systems in vulnerable populations (i.e., surveillance conducted by Rohingya among Rohingya)

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Johns Hopkins Center for Humanitarian Health

- Paul Spiegel
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- Sonia Hedge
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- Lori Neihaus
- Justin Lessler

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- Julianna Smith
- Philipp Ducros

IOM

- Daniel Coyle
- Rohingya researchers

UNHCR

UNOCHA

Save the Children

WHO

Johns Hopkins International Vaccine Access Center

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