

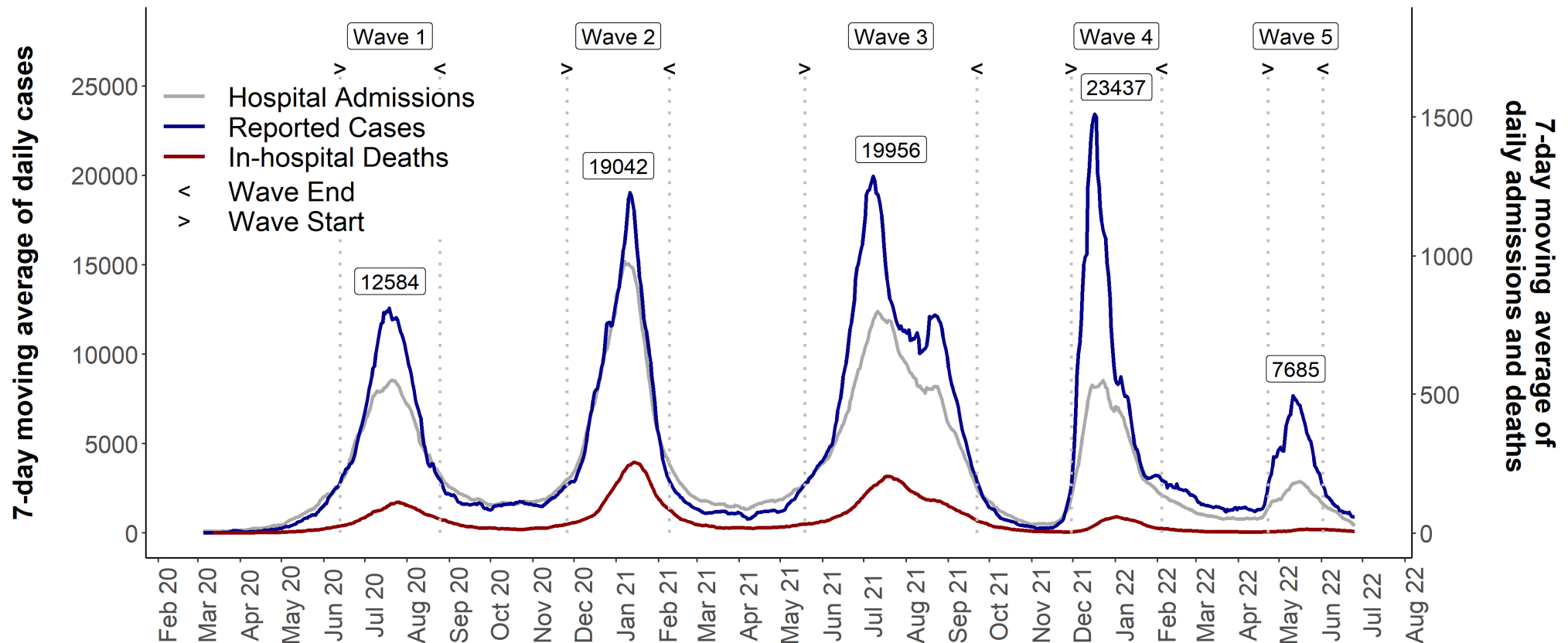


COVID-19 UPDATES

27 June 2022

SARS-CoV-2 cases, deaths and admissions in South Africa

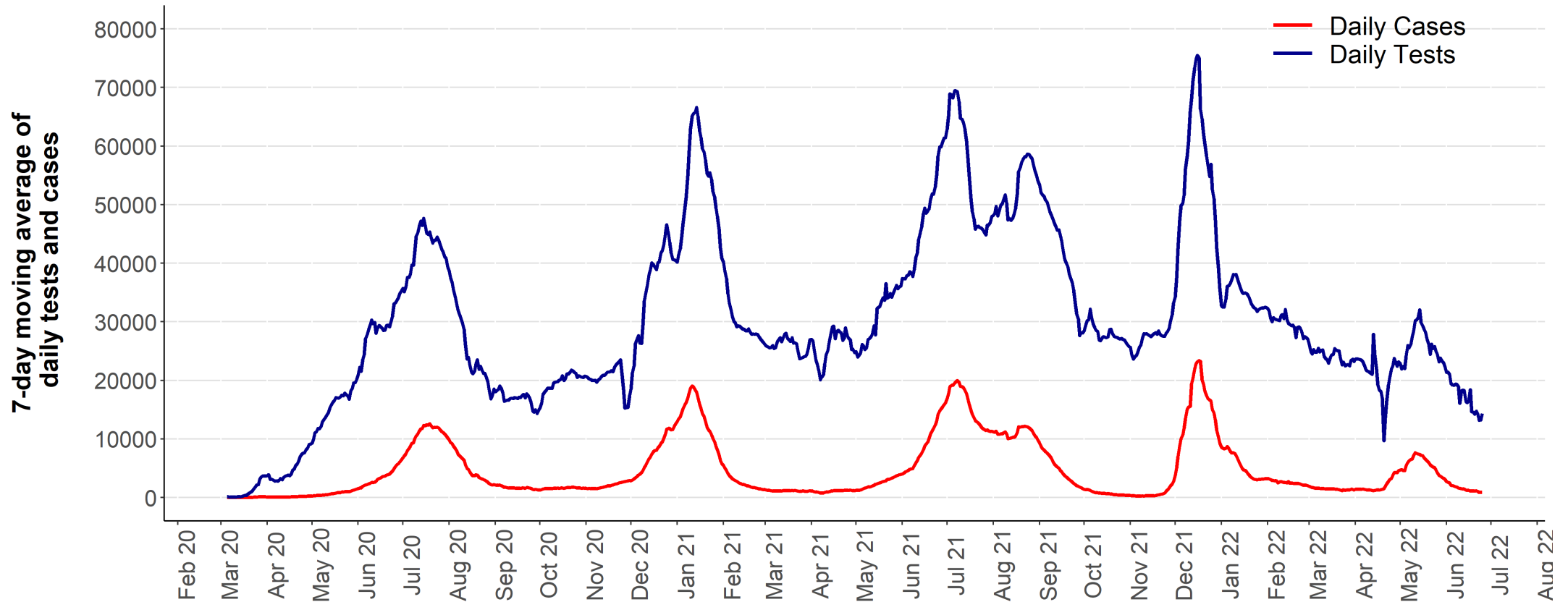
7-day moving average up to 25 June 2022



Source of hospital admissions data: Lucille Blumberg, Richard Welch and Waasila Jassat - DATCOV, NICD

SARS-CoV-2 tests and cases in South Africa

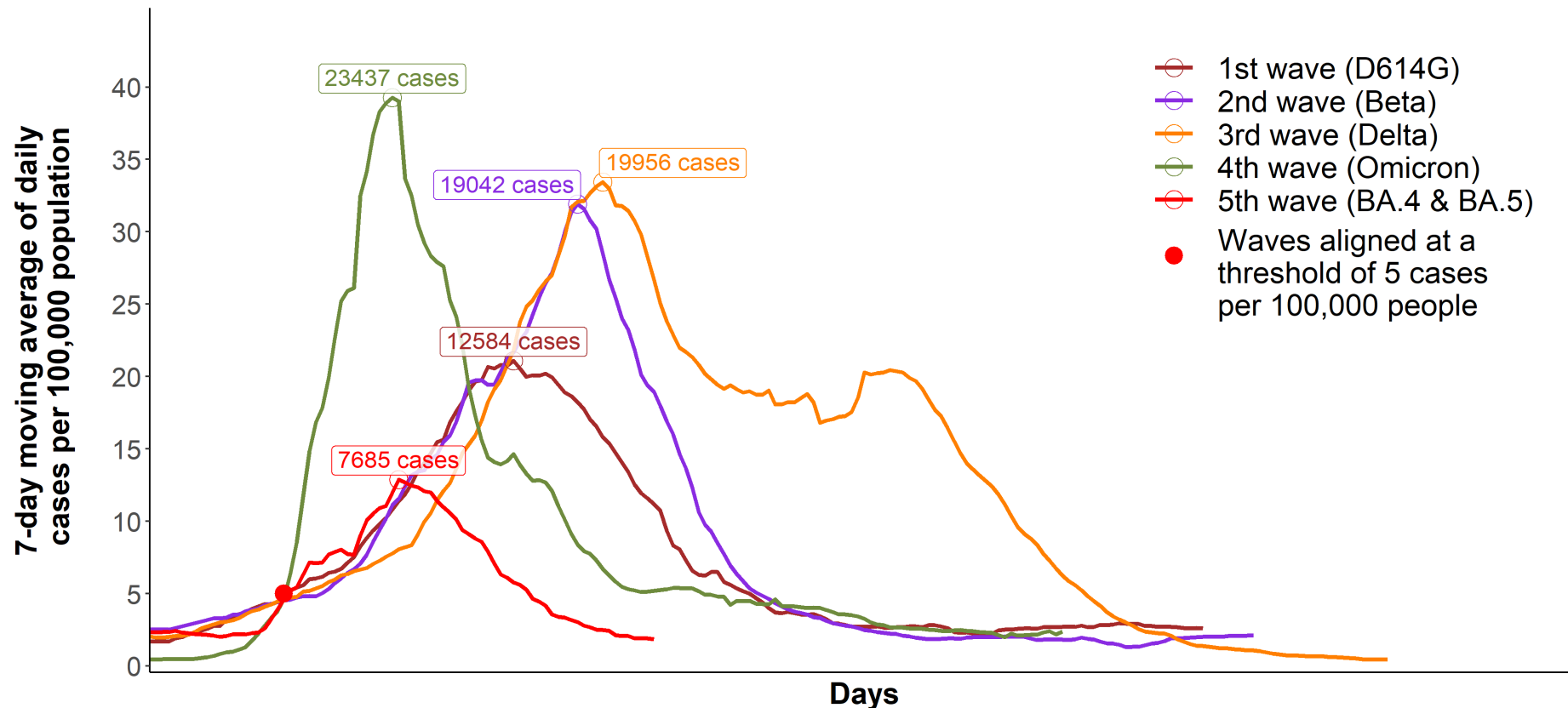
7-day moving average
up to 25 June 2022



Data Source: Department of Health

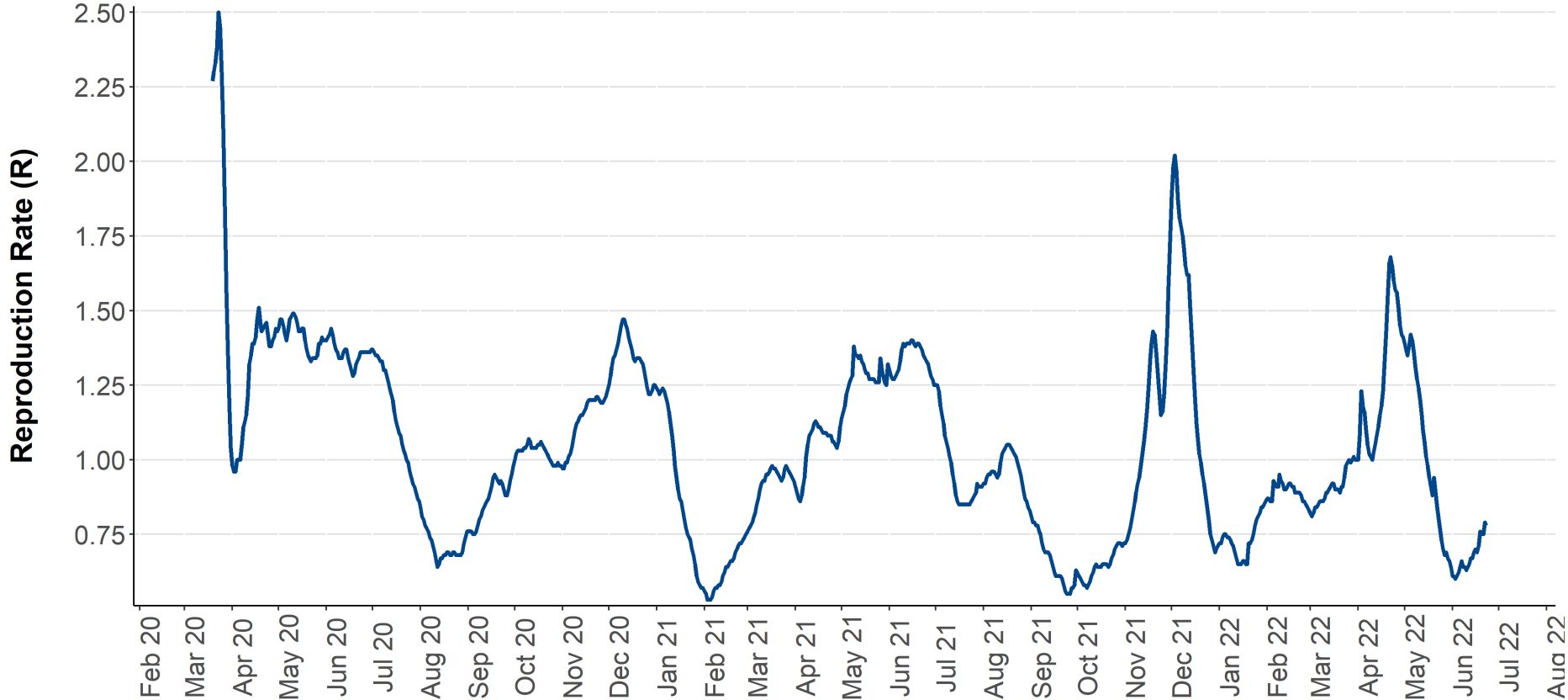
SARS-CoV-2 cases waves in South Africa

7-day moving average cases per 100,000 population
up to 25 June 2022



Estimated effective reproduction rate (R) of SARS-CoV-2 in South Africa

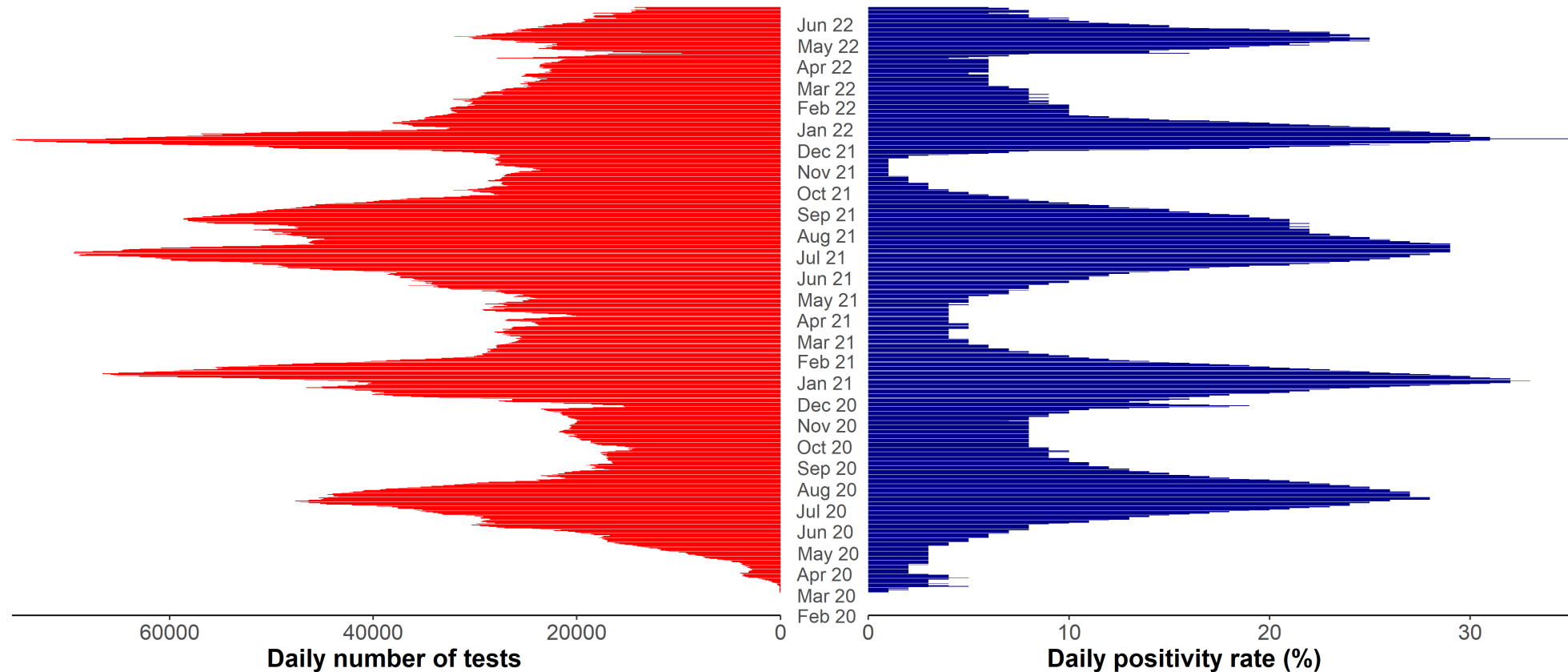
up to 23 June 2022



Data source: Our World in Data

SARS-CoV-2 tests and proportion of positive tests in South Africa

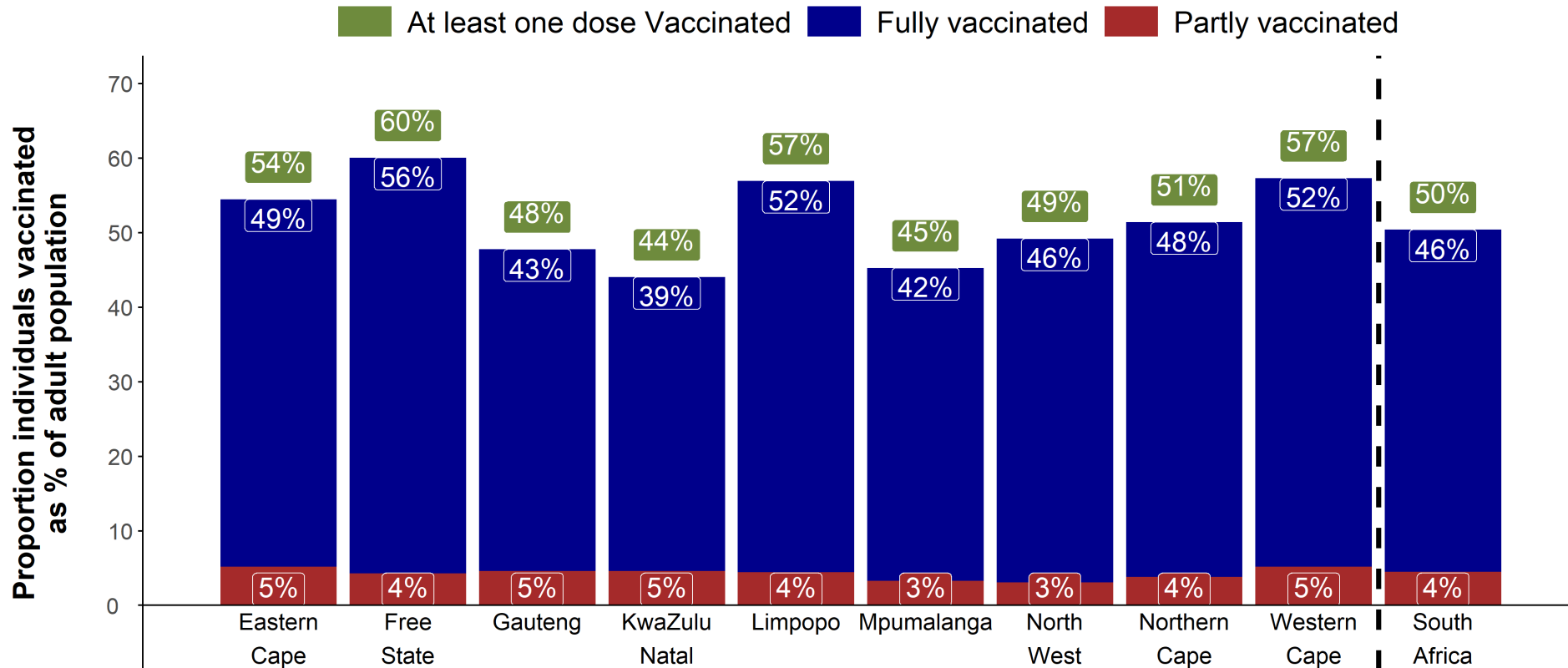
Daily average
up to 25 June 2022



Data source: Department of Health

Proportion of individuals vaccinated

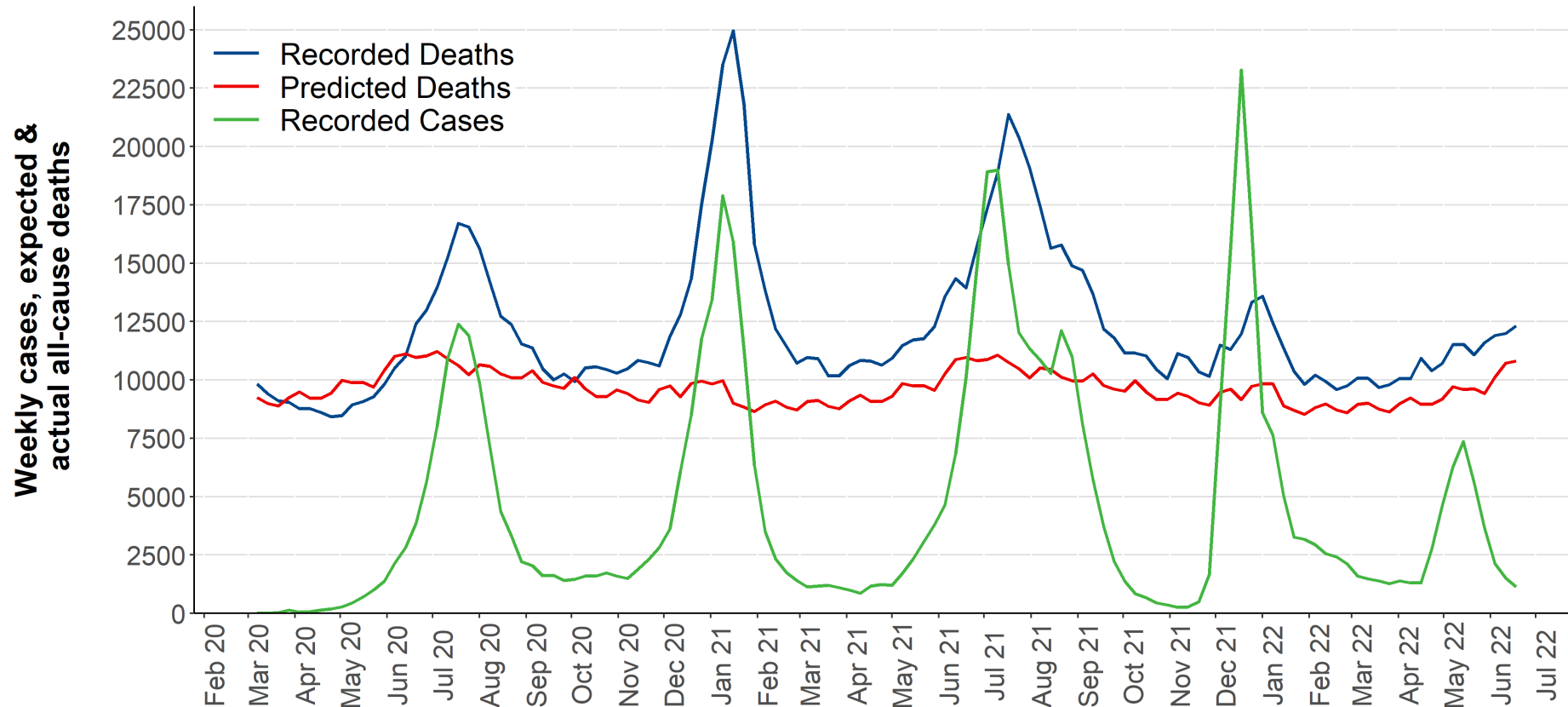
% of adult population
up to 25 June 2022



Data source: Department of Health

Expected & actual all-cause deaths during SARS-CoV-2

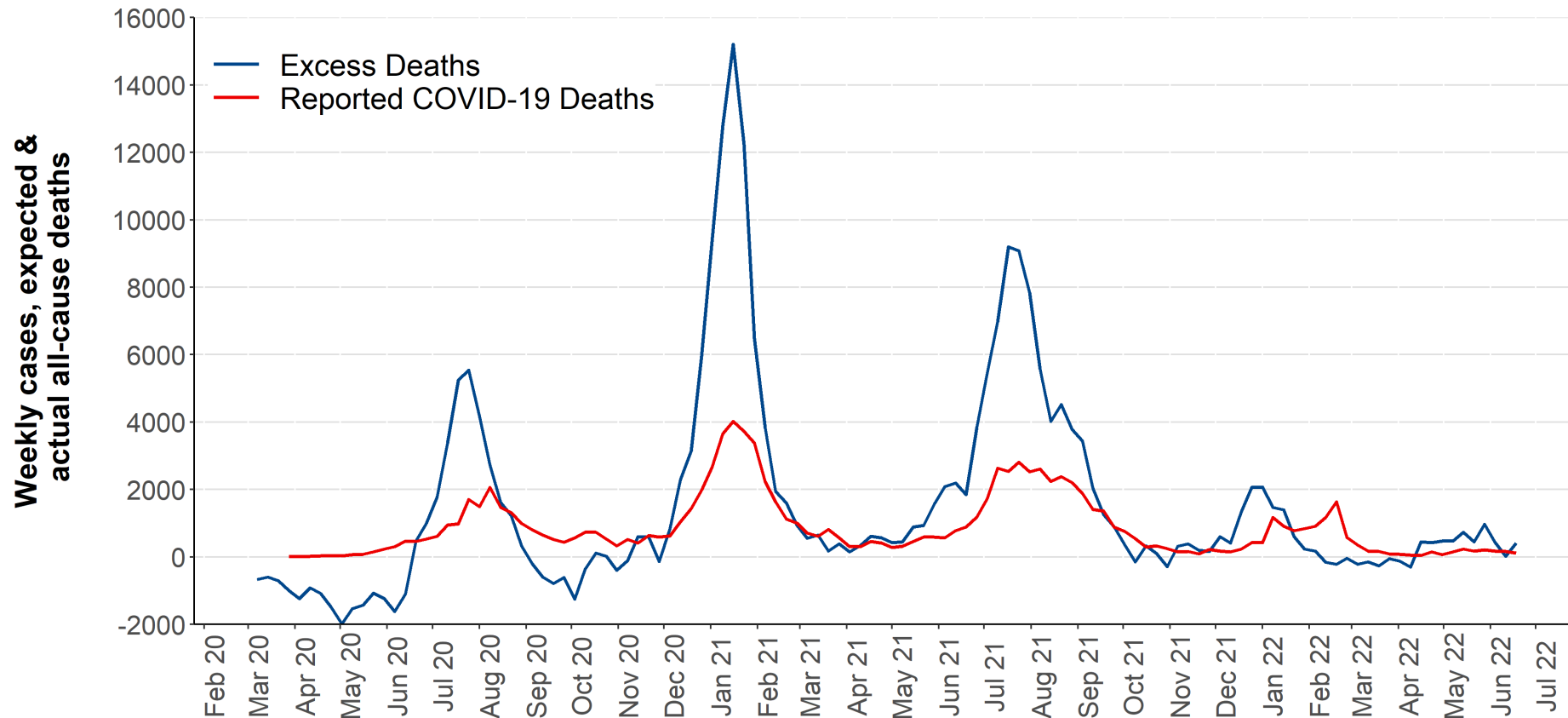
Weekly deaths up to 18 June 2022



Data source: Bradshaw et al.; SAMRC

Weekly excess all cause deaths & reported SARS-CoV-2 deaths

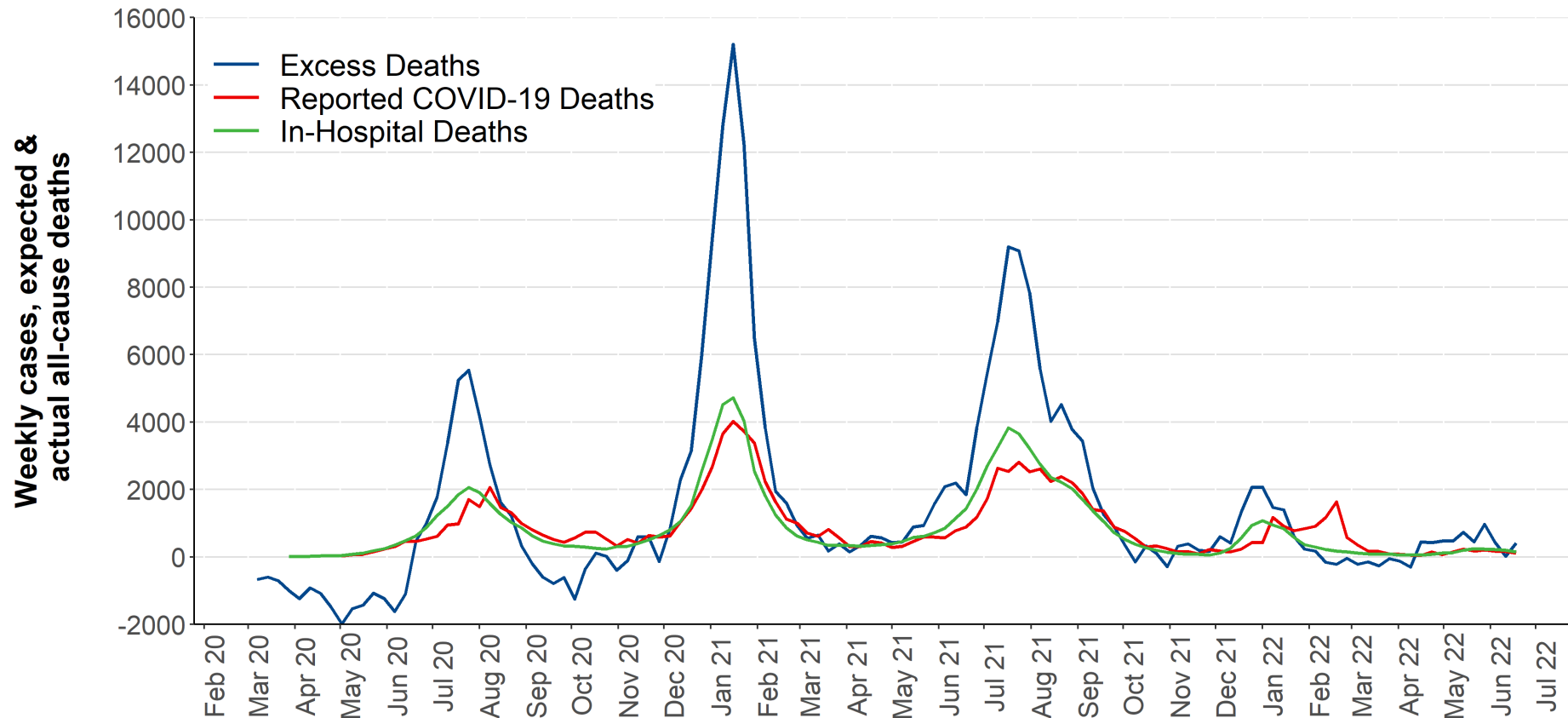
Weekly deaths up to 18 June 2022



Data source: Bradshaw et al.; SAMRC

Weekly excess all cause deaths & reported SARS-CoV-2 deaths

Weekly deaths up to 18 June 2022

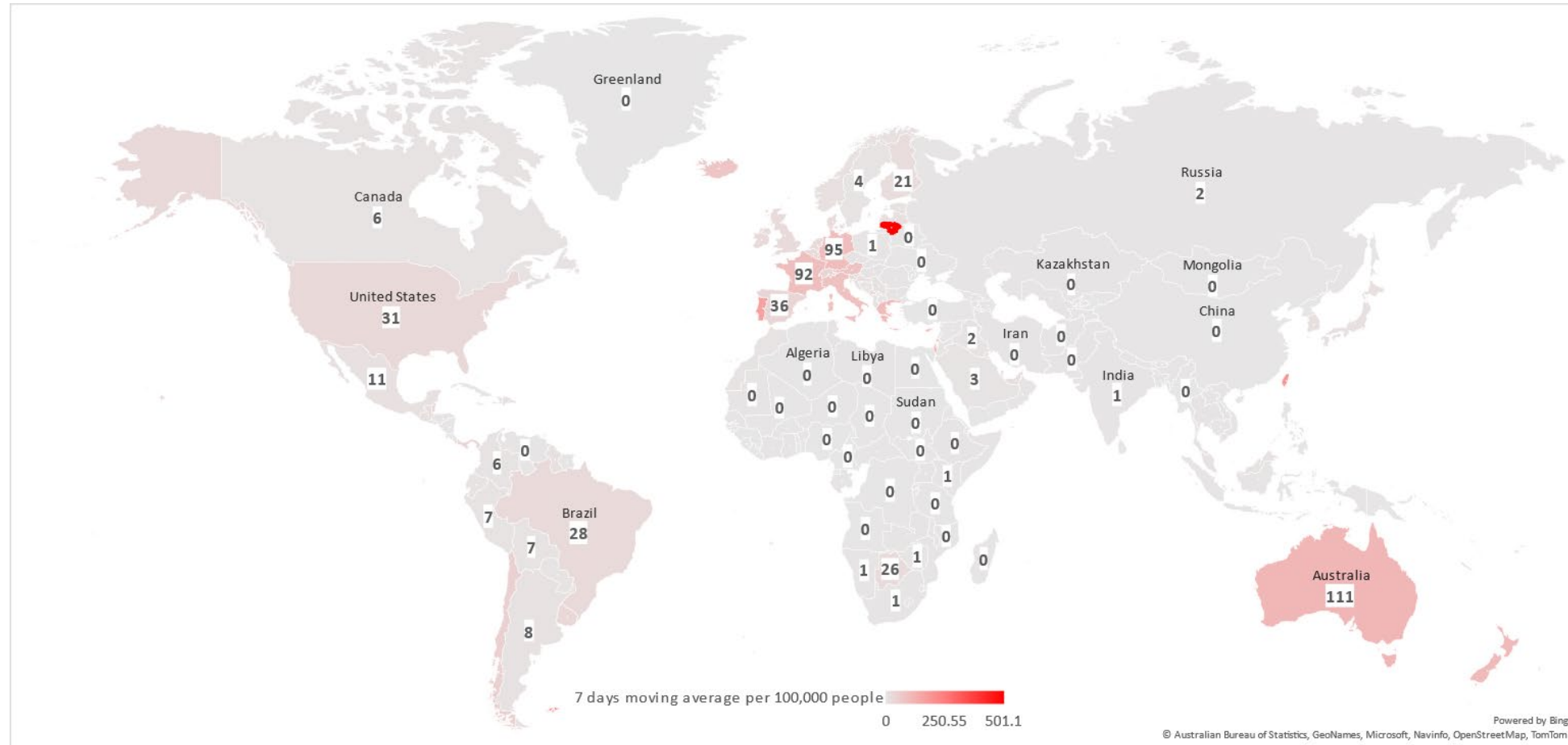


Data source: Bradshaw et al.; SAMRC

Global epidemiology: Reported cases by country, region and the world

Global COVID-19 epidemic

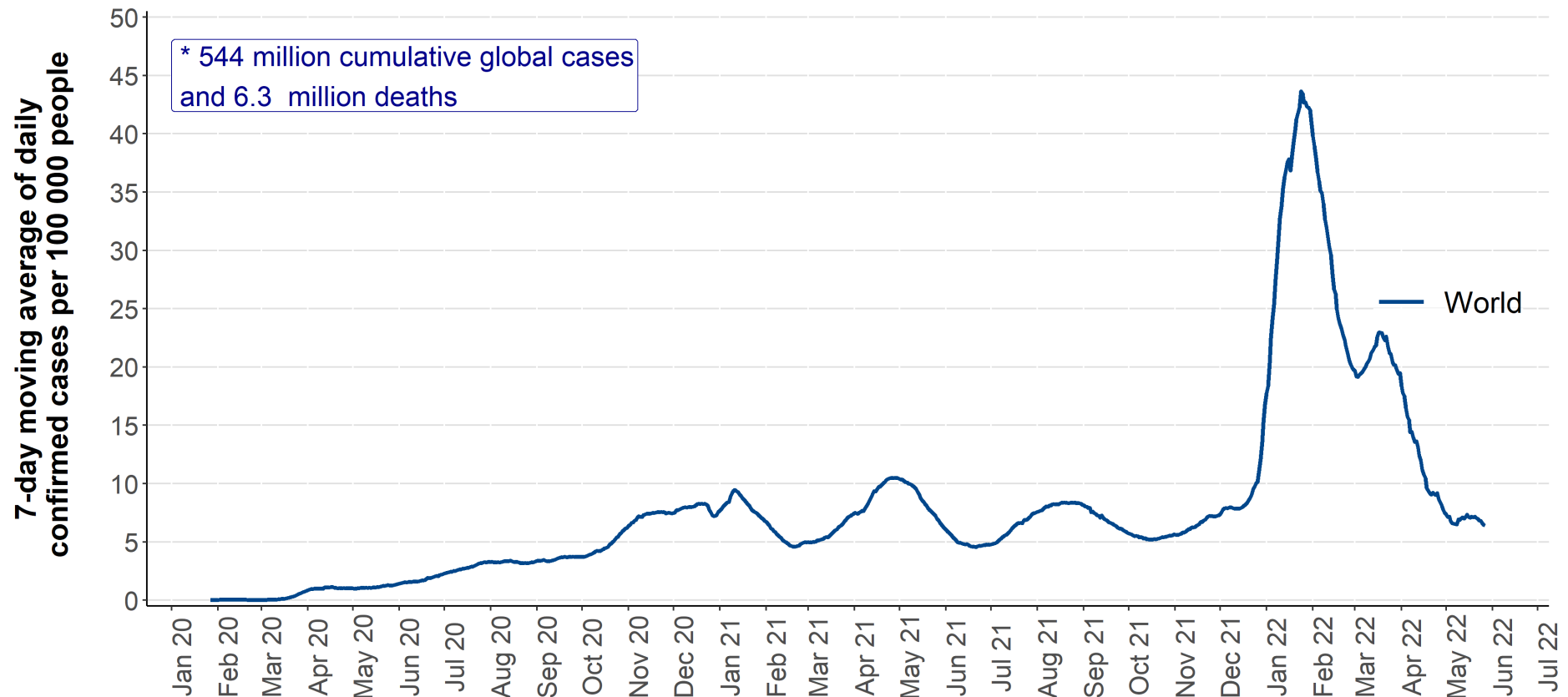
up to 25 June 2022



Data source: Our World in Data

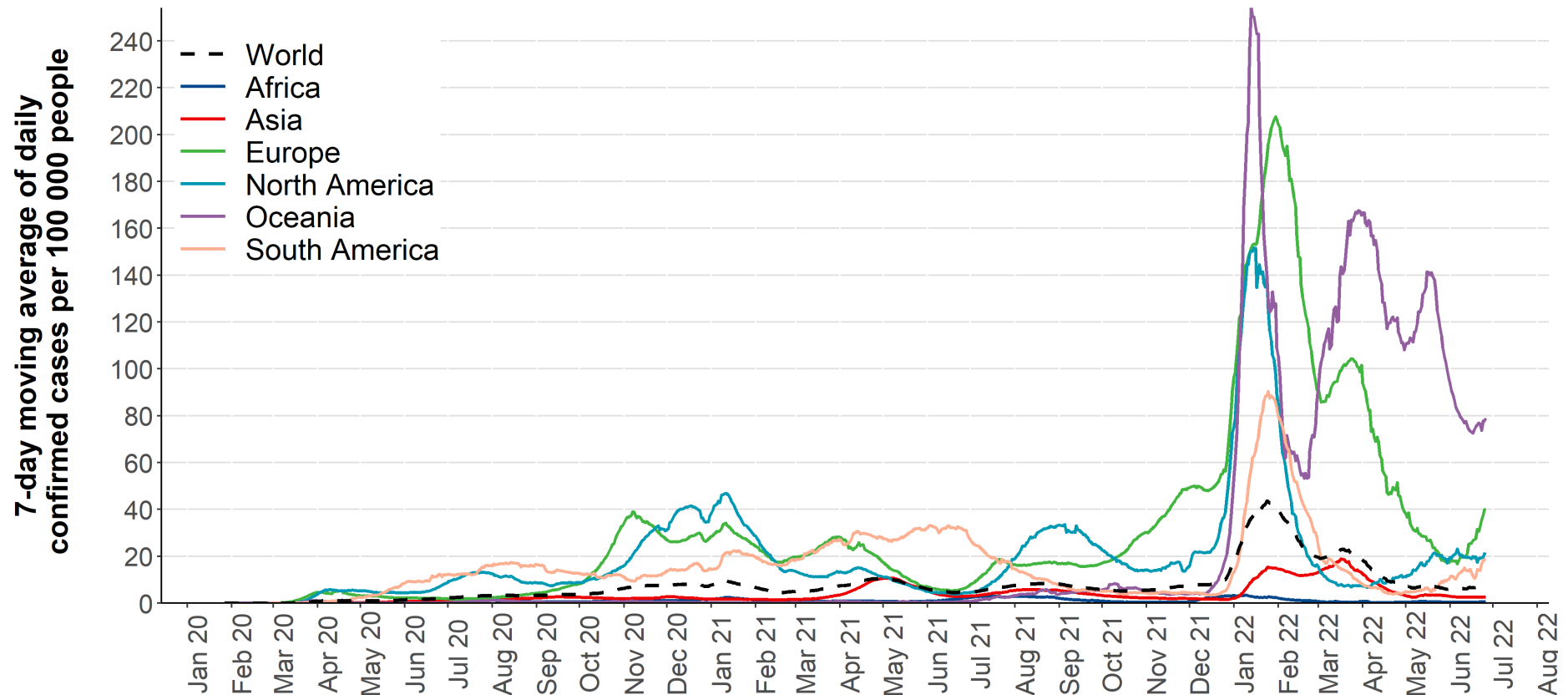
Global SARS-CoV-2 cases: Trends

7-day moving average
up to 25 June 2022



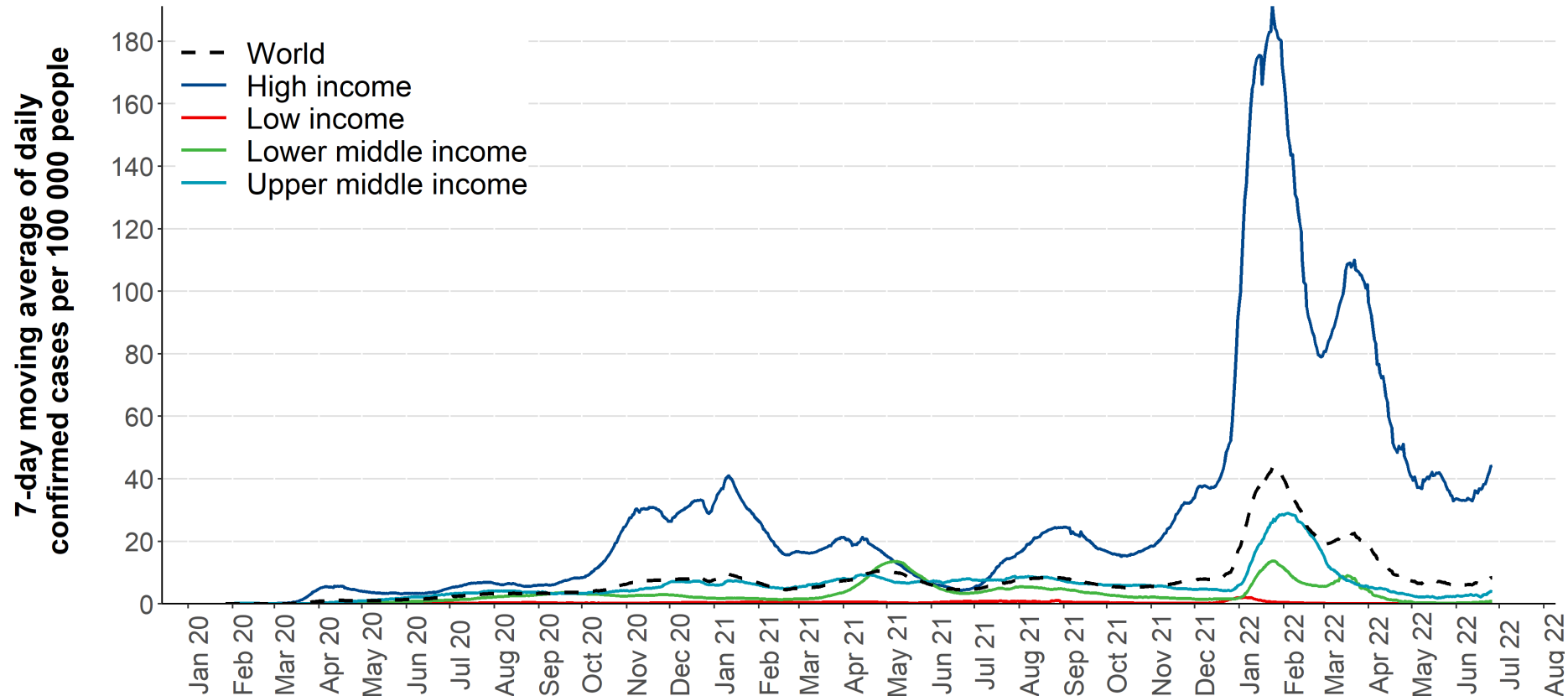
SARS-CoV-2 cases stratified by continents showing the waves

7-day moving average
up to 25 June 2022



SARS-CoV-2 cases stratified by country income level

7-day moving average
up to 25 June 2022



Omicron sub-variants have ↑ immune escape

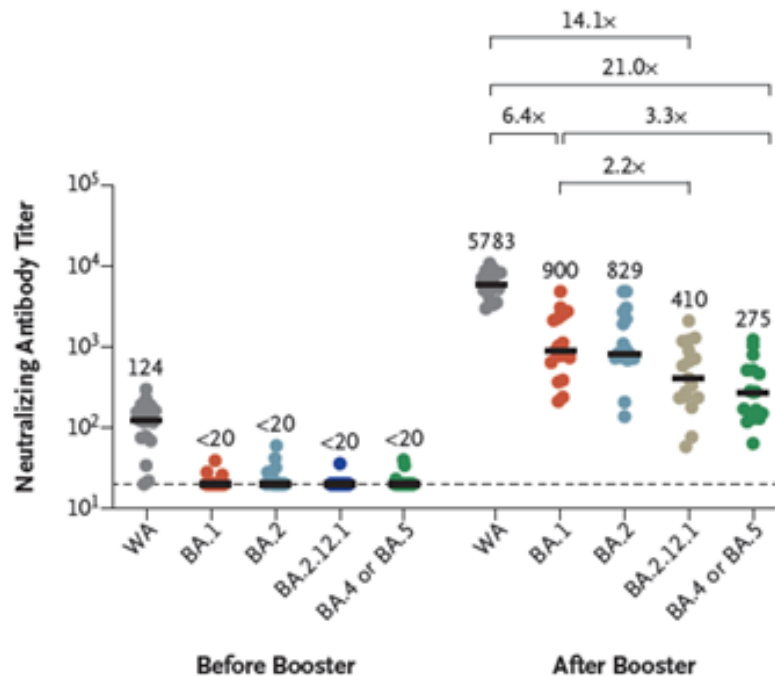


The NEW ENGLAND
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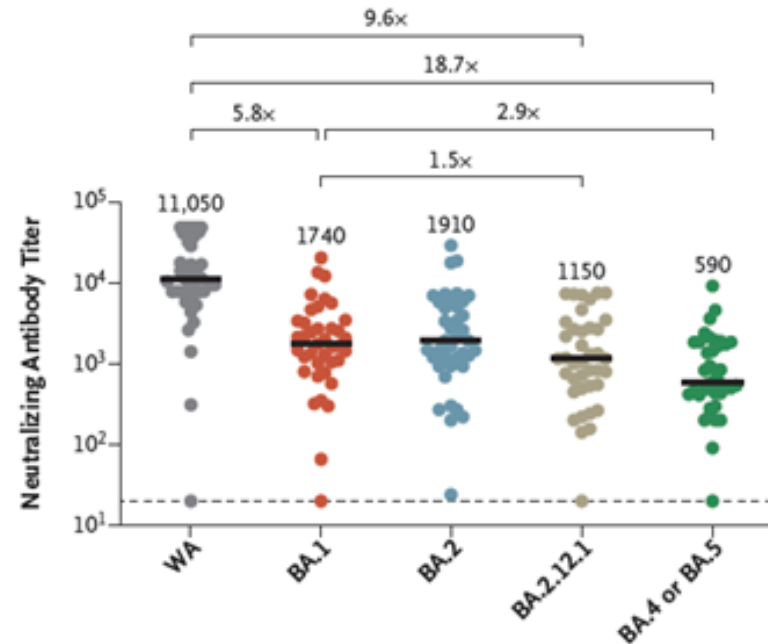
Neutralization Escape by SARS-CoV-2 Omicron Subvariants BA.2.12.1, BA.4, and BA.5

Nicole P. Hachmann, Jessica Miller, Ai-ris Y. Collier, John D. Ventura, Jingyou Yu, Marjorie Rowe, Esther A. Bondzie, Olivia Powers, Nehalee Surve, Kevin Hall, Dan H. Barouch

27 Vaccinated Participants before and after Booster Dose



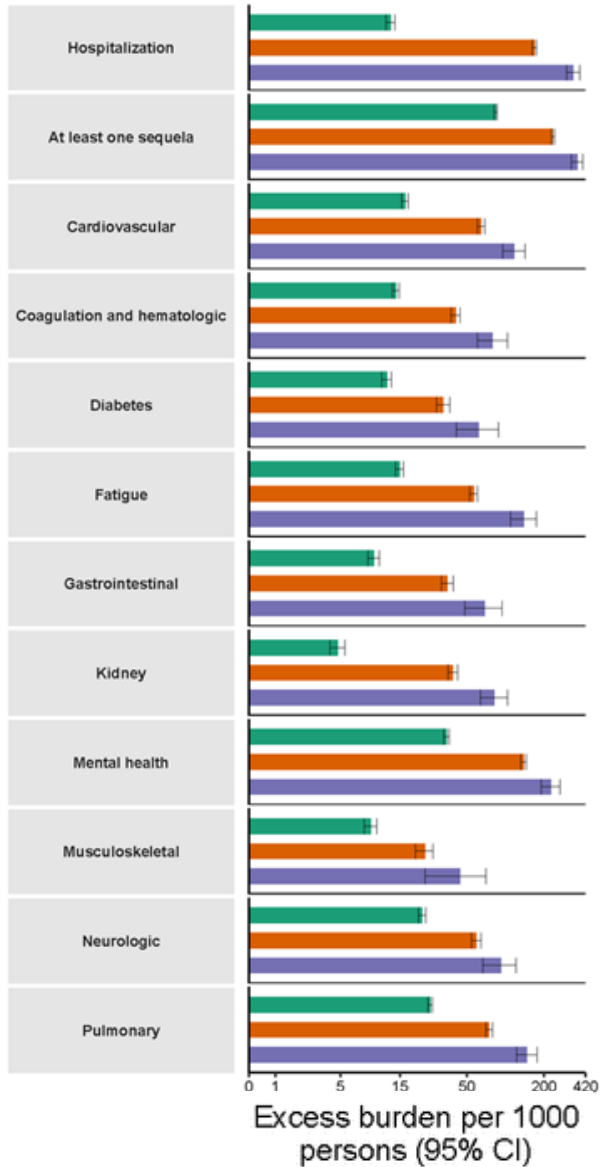
27 Infected Participants with BA.1 or BA.2 Subvariant 29 days earlier



- BA.2.12.1, BA.4, and BA.5 subvariants substantially escape neutralizing antibodies induced by both vaccination and infection
- SARS-CoV-2 omicron variant has continued to evolve with increasing neutralization escape

Reinfection is not harmless!

■ 1 infection ■ 2 infections ■ 3 or more infections



nature
portfolio

Preprint

Outcomes of SARS-CoV-2 Reinfection

Ziyad Al-Aly, Benjamin Bowe, Yan Xie

- Cohort
 - 257,427 people with 1st infection
 - 38,926 people with reinfection
 - 5,396,855 non-infected people
- Reinfection increases risk of all-cause mortality, hospitalization and adverse health outcomes (pulmonary and extrapulmonary organs)

Figure: Cumulative risk & burden of sequelae in people with 1, 2 and 3 or more SARS-CoV-2 infections compared to non-infected controls

COVID-19 vaccination averted 63% of deaths in year 1

THE LANCET
Infectious Diseases

Global impact of the first year of COVID-19 vaccination:
a mathematical modelling study

Oliver J Watson, Gregory Barnsley*, Jaspreet Toor, Alexandra B Hogan, Peter Winskill, Azra C Ghani*

- **Vaccination → ↓19.8 million COVID-19 deaths** (based on excess mortality)
- **63% fewer Covid-19 deaths than expected in year 1 of vaccination**
- **Could have had additional 45% deaths averted in low-income countries if COVAX 20% target had been met**
- **Could have averted additional 111% deaths in low-income countries had the 40% target set by WHO been met**

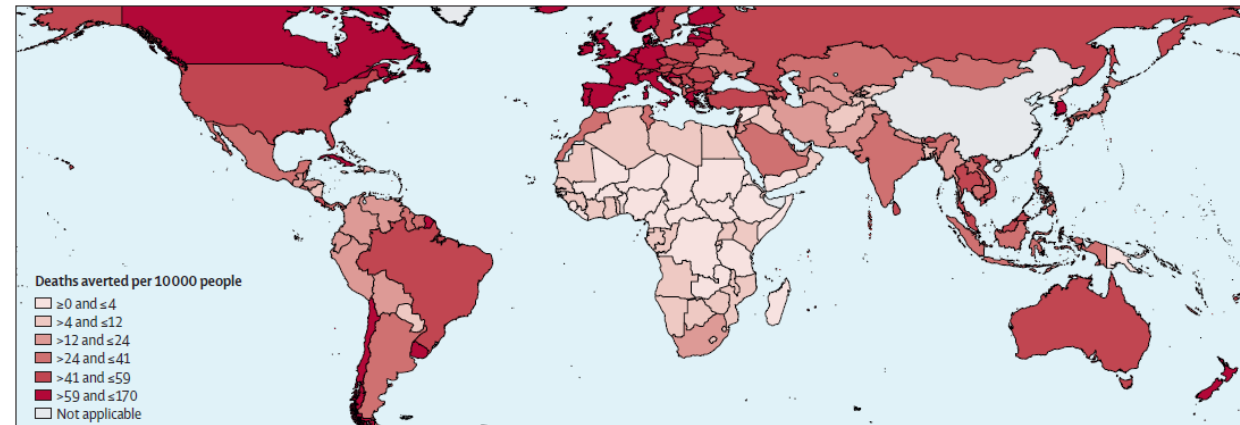


Figure. Median deaths averted by vaccinations per 10 000 people by country in the first year of COVID-19 vaccination