COVID-19 Monitor

COVID-19 cases, testing, vaccines, hospitalisations and deaths 26 May 2022

Table 1: NSW key indicators, as at 22 May 2022*

Key indicators	Date: 22 May (change from: 15 May)
7-day average daily COVID-19 cases, week to 22 May	**9,878** (-870)
Growth factor for cases	0.99
7-day average daily COVID-19 deaths, week to 22 May	**6** (-2)
COVID-19 patients under the care of NSW Health, as at 22 May	**3,130** (-245)
COVID-19 patients in hospital, as at 22 May	**1,236** (-201)
Percentage who were unvaccinated	23.2%
Percentage with two doses	21.7%
Percentage with three or more doses	53.2%
COVID-19 patients in intensive care units (ICUs), as at 22 May	**35** (-30)
Percentage who were unvaccinated	42.9%
Percentage with two doses	2.9%
Percentage with three or more doses	54.3%
Percentage of total occupied adult ICU beds with COVID-19 patients	6.3% (-4.9%)
Rates per million	
7-day average daily COVID-19 cases, week to 22 May	1,173.9 (-103.4)
COVID-19 patients under the care of NSW Health, as at 22 May	372.0
COVID-19 patients in hospital, as at 22 May	146.9
Hospital rate among unvaccinated / two or more doses vaccinated population (aged 12+)	679.0 / 143.9
COVID-19 patients in ICU, as at 22 May	4.2
ICU rate among unvaccinated / two or more doses vaccinated population (aged 12+)	44.7 / 3.5
COVID-19 vaccination, as at 22 May	
Percentage of population aged 16+ with two or more doses	**94.9%**
Percentage of population aged 12 to 15 years with two or more doses	**79.4%**
Percentage of total population with two or more doses	**83.3%**

*See NSW key indicators: notes and sources at the end of this document.

International reflections

- COVID-19 cases are increasing in the United States. [1]
- COVID infections have fallen again to one in 50 people in the United Kingdom - down 14% from the week before. [2]
- COVID cases are rising in the United States, including among children. The CDC has now recommended a vaccine booster for children aged five to 11. [3]
- Shanghai has reopened a small part of their subway system after nearly two months of strict lockdown closure. Commuters must scan their body temperature at the entrance and show negative results of PCR tests taken within 48 hours. [4]

Table 2: Summary of public health, healthcare and vaccination measures (select countries, Canadian provinces and NSW), as at 22 May 2022*

	7-day average confirmed cases	7-day average confirmed cases (per million)	7-day average deaths (per million)	% total population with two or more doses	COVID-19 patients in hospital	COVID-19 patients in hospital (per million)	COVID-19 patients in ICU	COVID-19 patients in ICU (per million)
NSW	9,878	1,173.9	0.7	83.3%	1,236	146.9	35	4.2
Australia	49,602	1,923.4	1.7	83.7%	2,912	112.9	106	4.1
Belgium	4,602	395.6	1.2	78.6%	1,408	121.0	105	9.0
Canada	3,732	98.0	1.7	82.4%	5,602	147.2	364	9.6
Ontario	1,578	106.5	0.8	82.2%	1,248	84.2	163	11.0
Quebec	701	81.5	1.8	83.2%	1,599	185.8	48	5.6
Denmark	637	109.6	0.6	82.5%	383	65.9	13	2.2
Israel	1,988	214.0	0.5	66.1%	333	35.8	54	5.8
Japan	34,948	277.3	0.3	80.9%	9,256	73.4	487	3.9
Singapore	3,911	663.3	0.3	91.4%	305	51.7	4	0.7
United Kingdom	8,457	124.0	1.5	73.1%	6,729	98.7	194	2.8
United States	113,730	341.6	1.0	66.5%	20,231	60.8	2,237	6.7

*See Summary of public health: notes and sources at the end of this document.

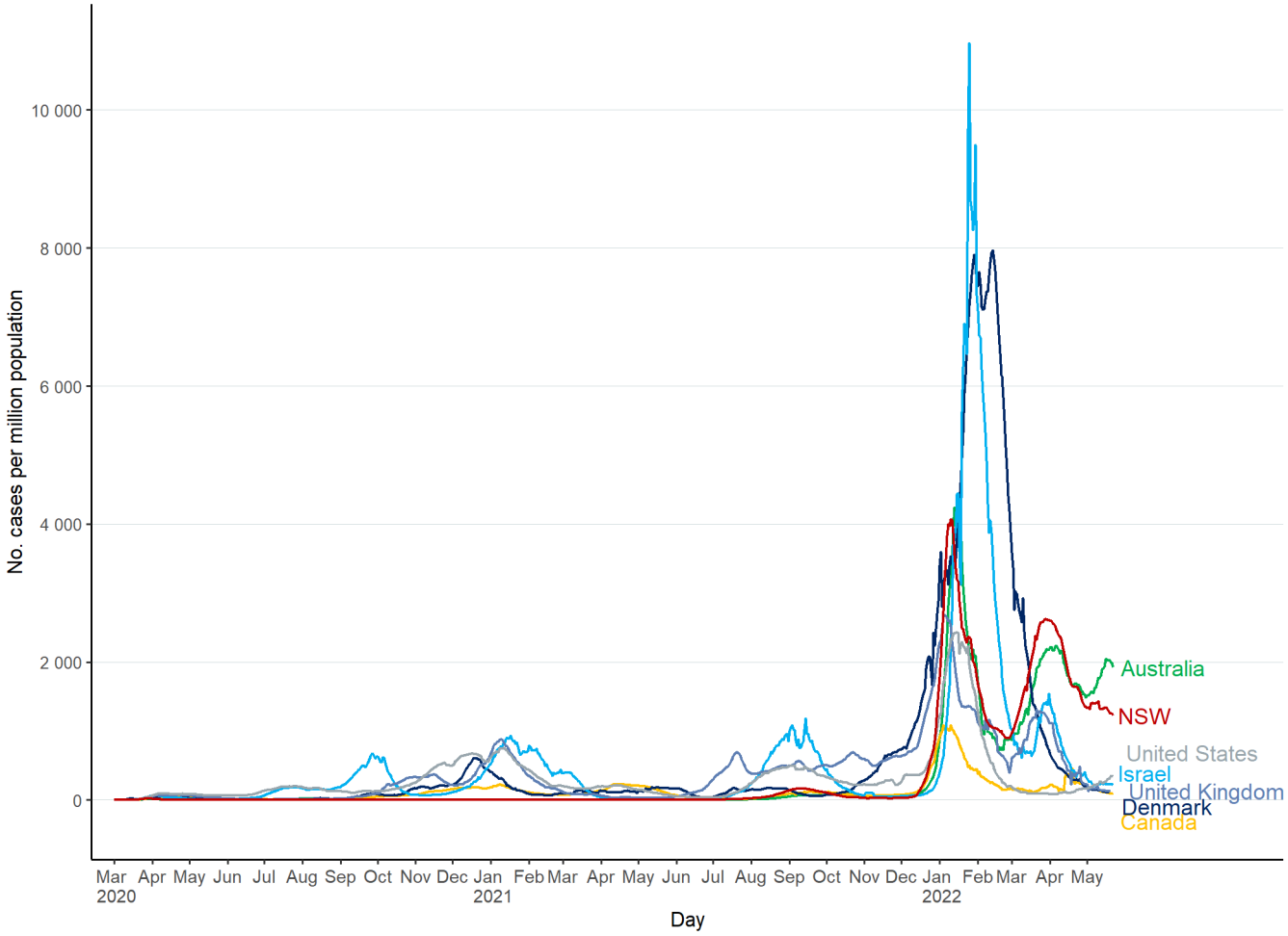
Cell colouring has been applied according to the following criteria:

- For 7-day average cases per million, rates over 1,000 per million are highlighted in red, and the lowest three rates highlighted in green.
- For 7-day average deaths per million, rates over 4.0 per million are highlighted in red, and rates under 0.5 per million are highlighted in green.
- For percentage of total population with two or more doses, percentages greater than or equal to 80% are highlighted in green.
- For patients in hospital per million, rates over 150 per million are highlighted in red, and the lowest three rates highlighted in green.
- For patients in ICU per million, rates over 10 per million are highlighted in red, and the lowest three rates highlighted in green.

COVID-19 daily rates of confirmed cases

Figure 1 shows the daily rate per million population (rolling seven-day average) of confirmed COVID-19 cases in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from March 2020 to May 2022.

Figure 1: Daily rates of COVID-19 cases (select countries and NSW), March 2020 – May 2022

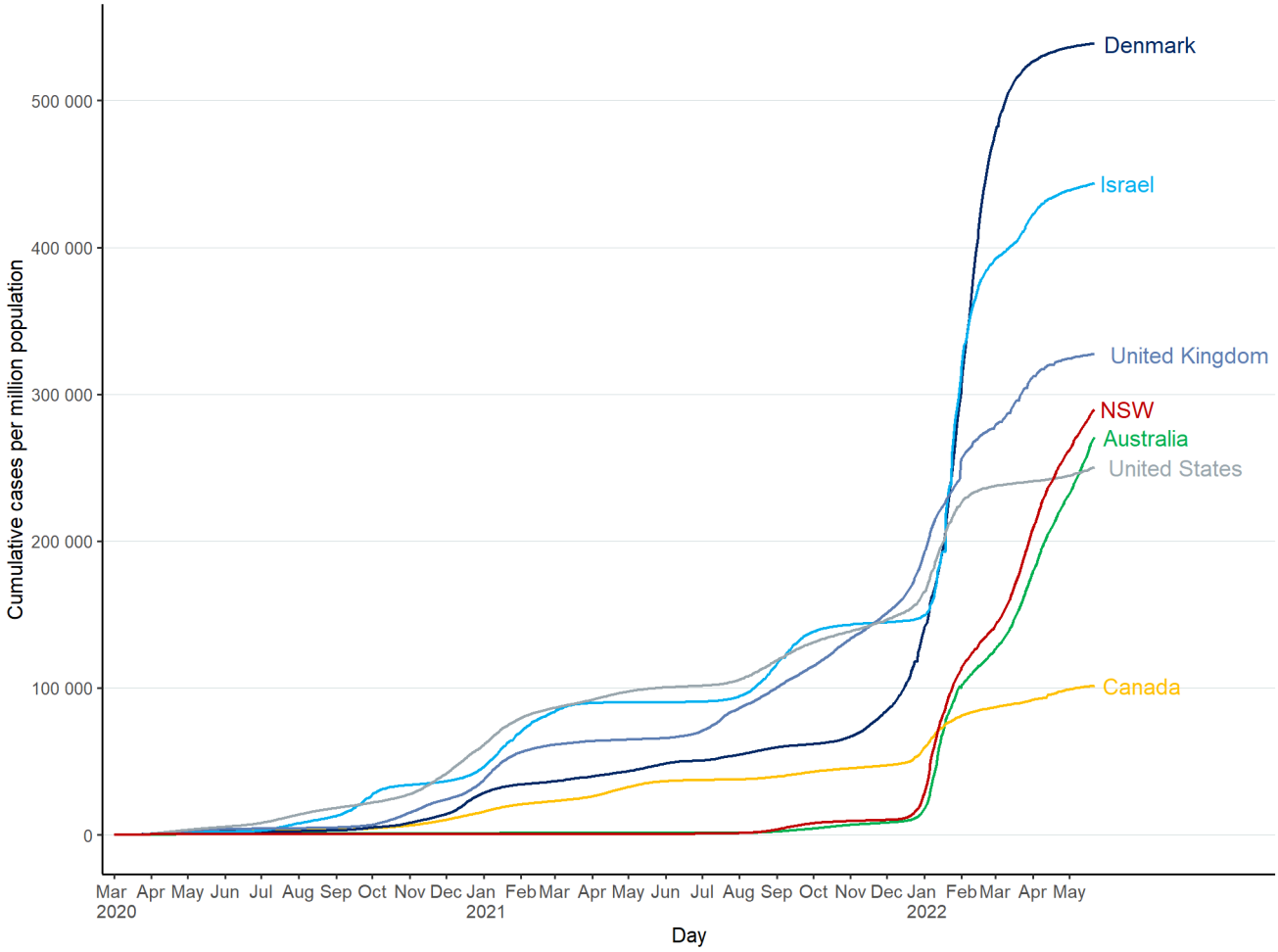


Note: See COVID-19 daily rates: notes and sources at the end of this document.

COVID-19 cumulative confirmed cases

Figure 2 shows the cumulative rate per million population of confirmed COVID-19 cases in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from March 2020 to May 2022.

Figure 2: Cumulative confirmed COVID-19 cases per million population, (select countries and NSW), March 2020 – May 2022

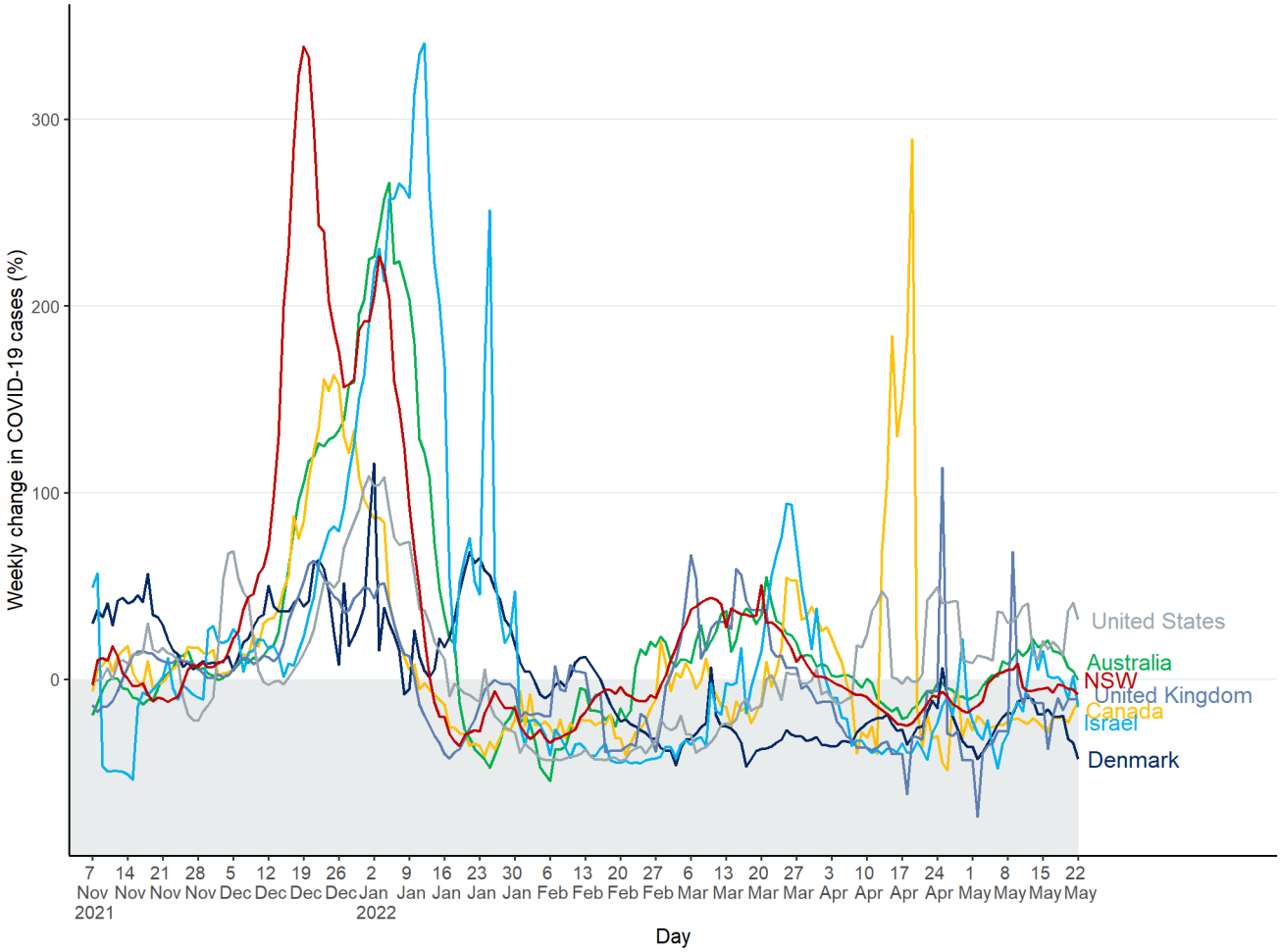


Note: See COVID-19 daily rates: notes and sources at the end of this document.

Weekly change in COVID-19 confirmed cases

Figure 3 shows the weekly percentage change of COVID-19 cases for NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from November 2021 to May 2022. The weekly change of COVID-19 cases on any given day is measured as the percentage change in the number of confirmed cases in the last seven days, compared with the number in the previous seven days.

Figure 3: Weekly change in COVID-19 cases (select countries and NSW), November 2021 – May 2022

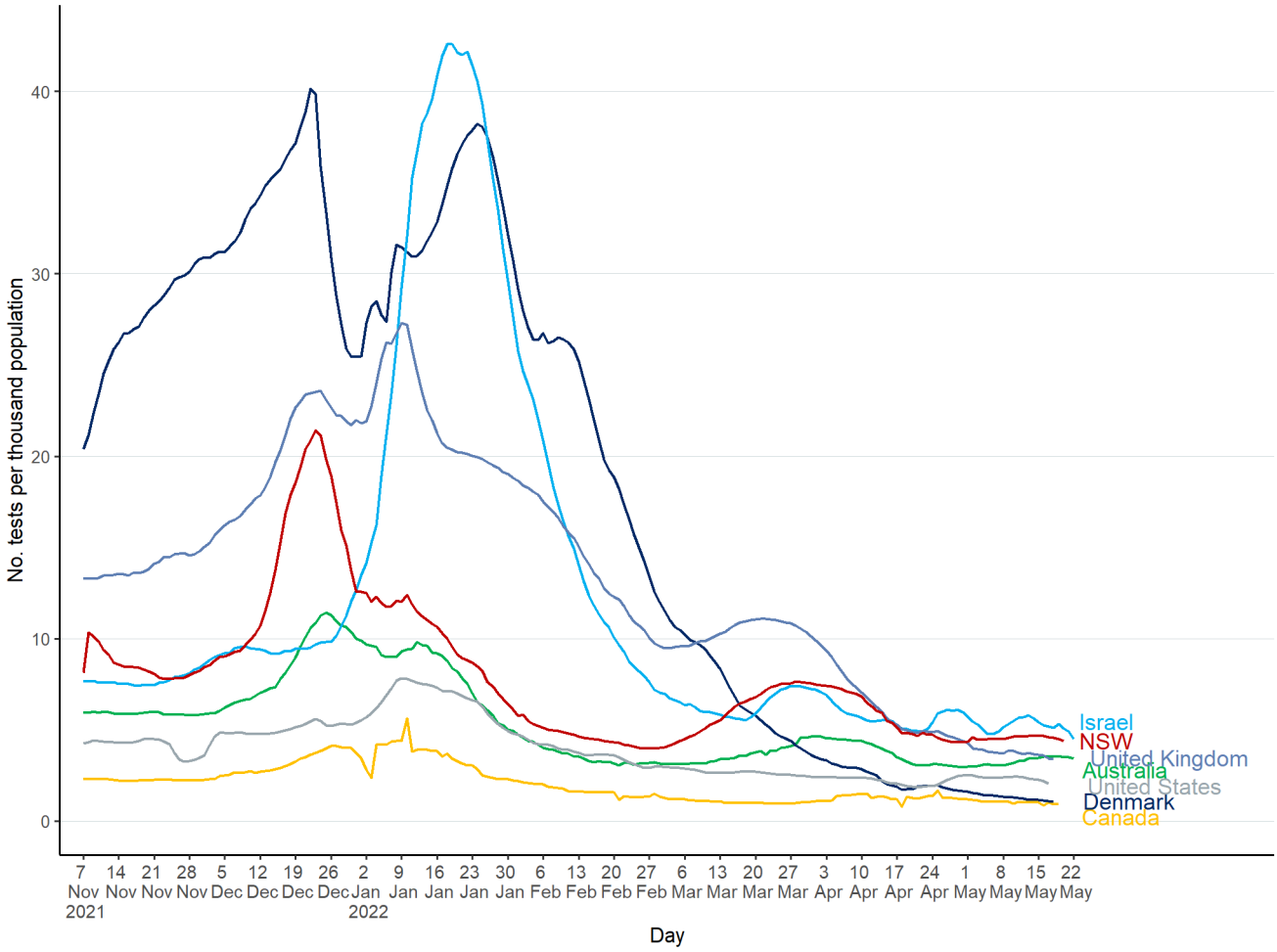


Note: See COVID-19 daily rates: notes and sources at the end of this document. Data anomaly occurred in Canada around mid-April; interpretation and comparison should be done with caution.

COVID-19 daily testing rates

Figure 4 shows the daily rate per thousand population (rolling seven-day average) of COVID-19 tests in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from November 2021 to May 2022.

Figure 4: Daily rates of COVID-19 tests (select countries and NSW), November 2021 – May 2022

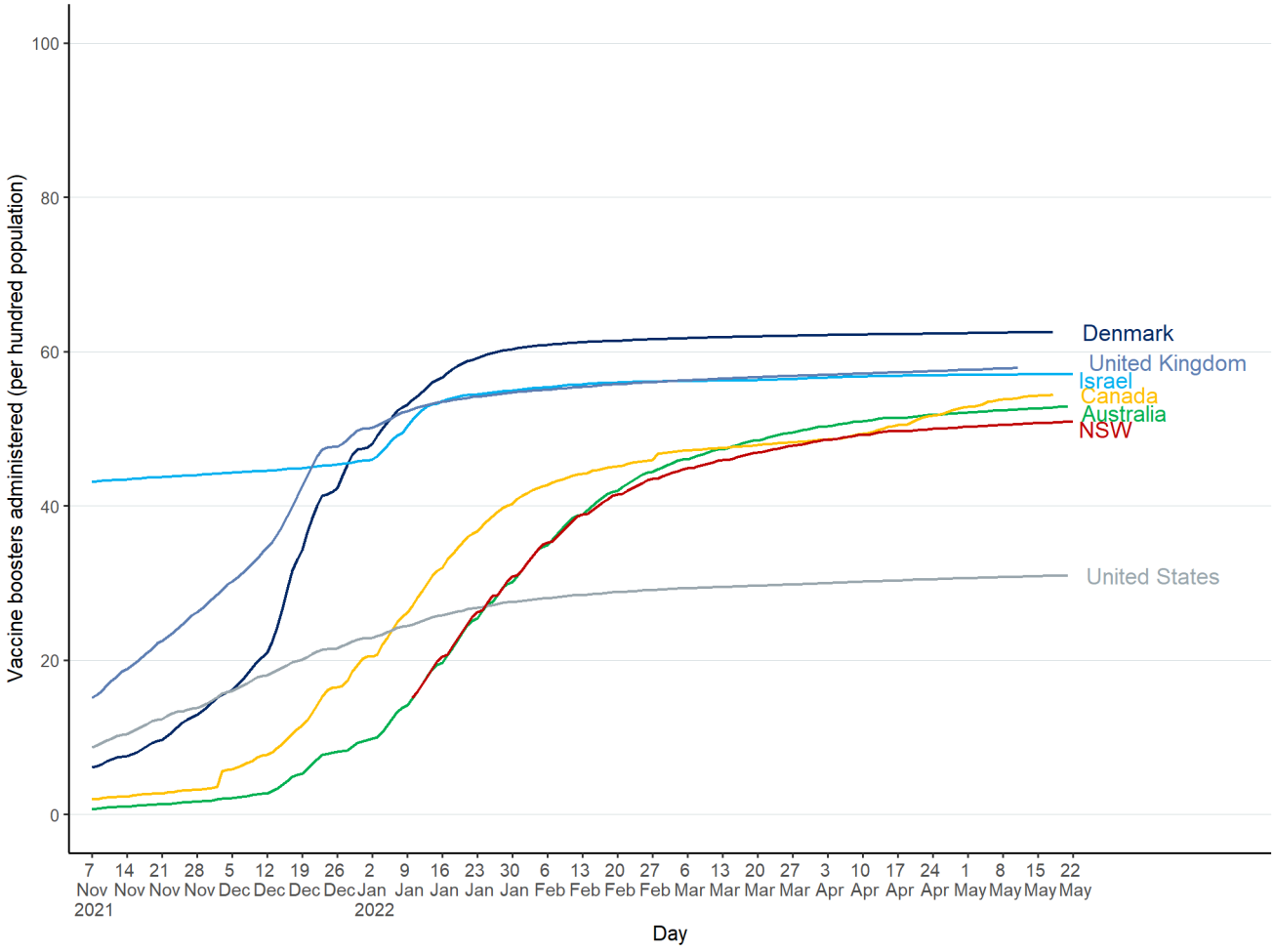


Note: See COVID-19 daily rates: notes and sources at the end of this document.

COVID-19 vaccine boosters

Figure 5 shows the total number of COVID-19 vaccine booster doses administered per hundred population in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from November 2021 to May 2022. Booster doses are defined as doses administered in addition to the original vaccination protocol of two doses.

Figure 5: Number of COVID-19 vaccine boosters administered (select countries), November 2021 – May 2022

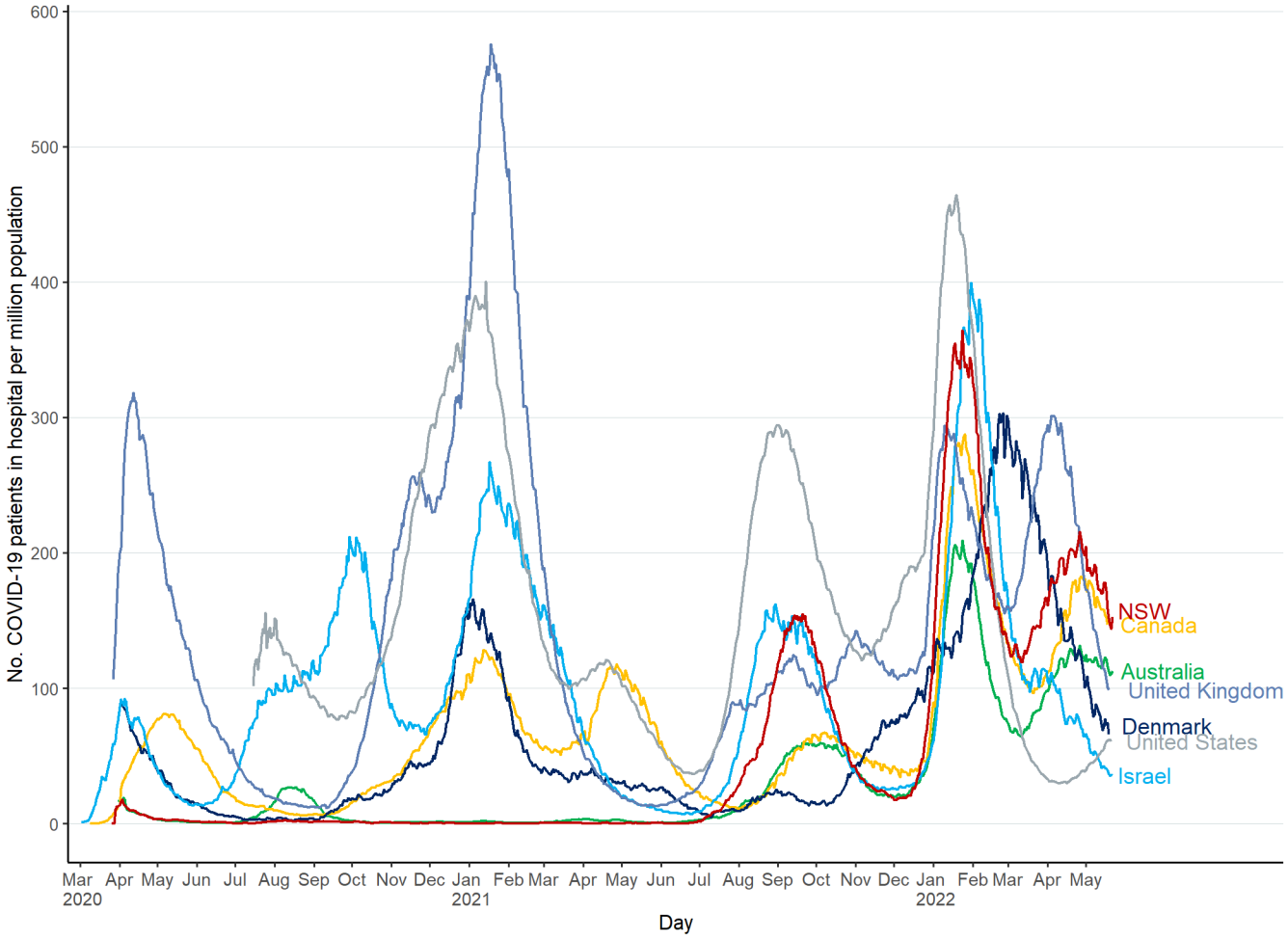


Note: See COVID-19 daily rates: notes and sources at the end of this document.

COVID-19 patients in hospital

Figure 6 shows the daily number of COVID-19 patients in hospital per million population in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from March 2020 to May 2022.

Figure 6: Number of COVID-19 patients in hospital (select countries and NSW), March 2020 – May 2022

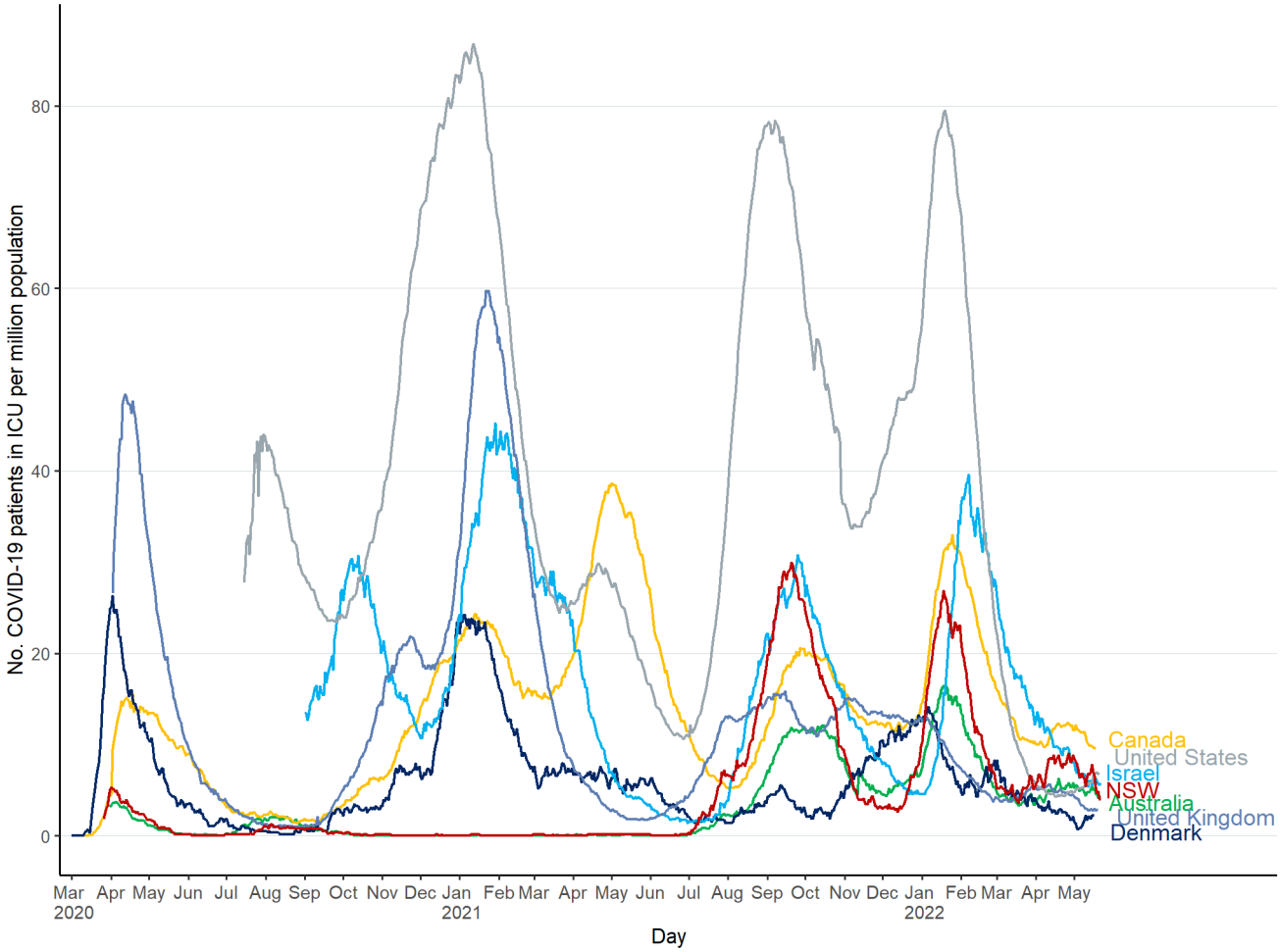


Note: See COVID-19 daily rates: notes and sources at the end of this document.

COVID-19 patients in intensive care units

Figure 7 shows the daily number of COVID-19 patients in intensive care units (ICUs) per million population in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from March 2020 to May 2022.

Figure 7: Number of COVID-19 patients in intensive care units (select countries and NSW), March 2020 – May 2022

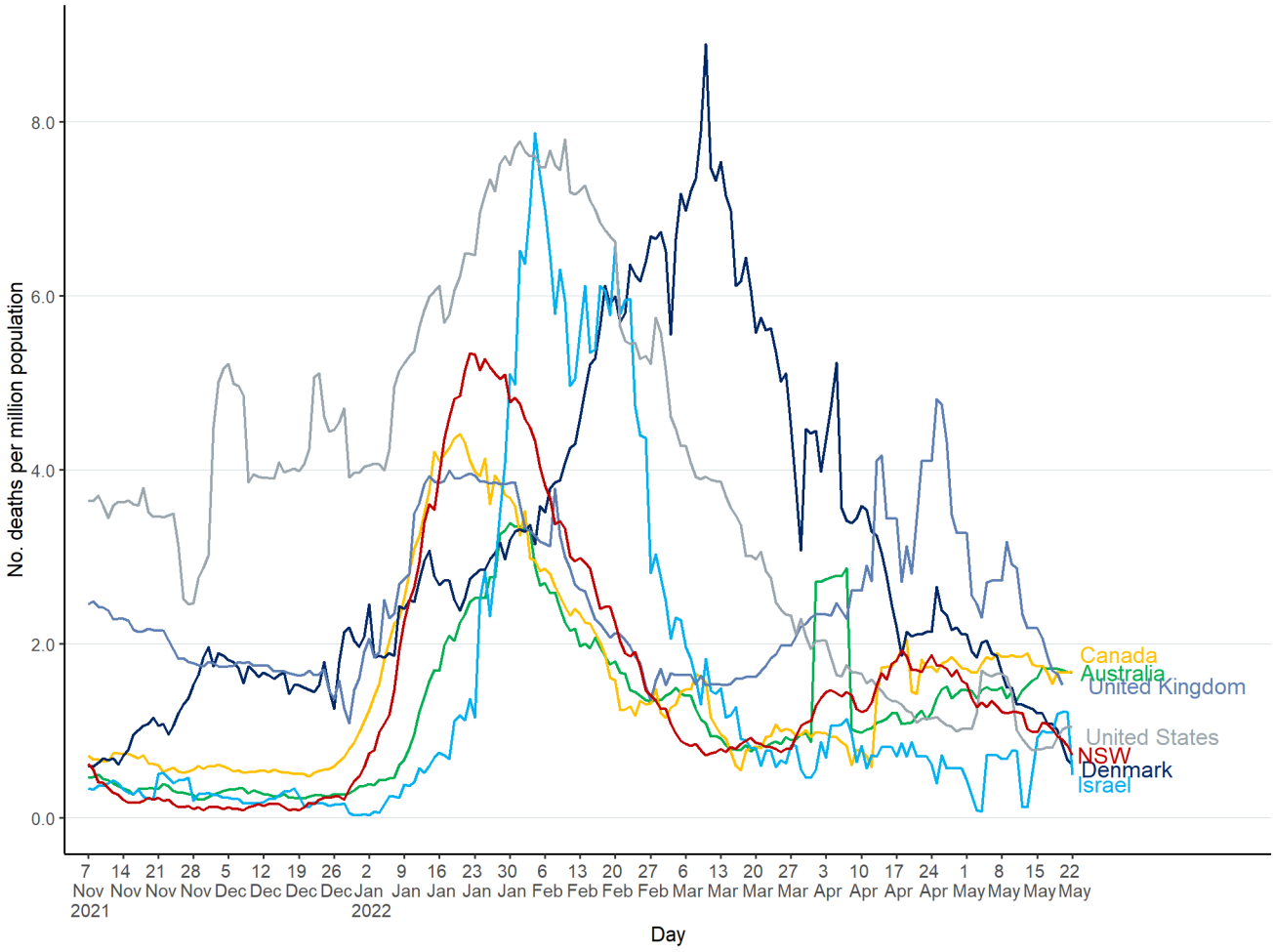


Note: See COVID-19 daily rates: notes and sources at the end of this document.

COVID-19 daily mortality rates

Figure 8 shows the daily mortality rate per million population (rolling seven-day average) in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from November 2021 to May 2022.

Figure 8: Daily mortality rates (select countries and NSW), November 2021 – May 2022

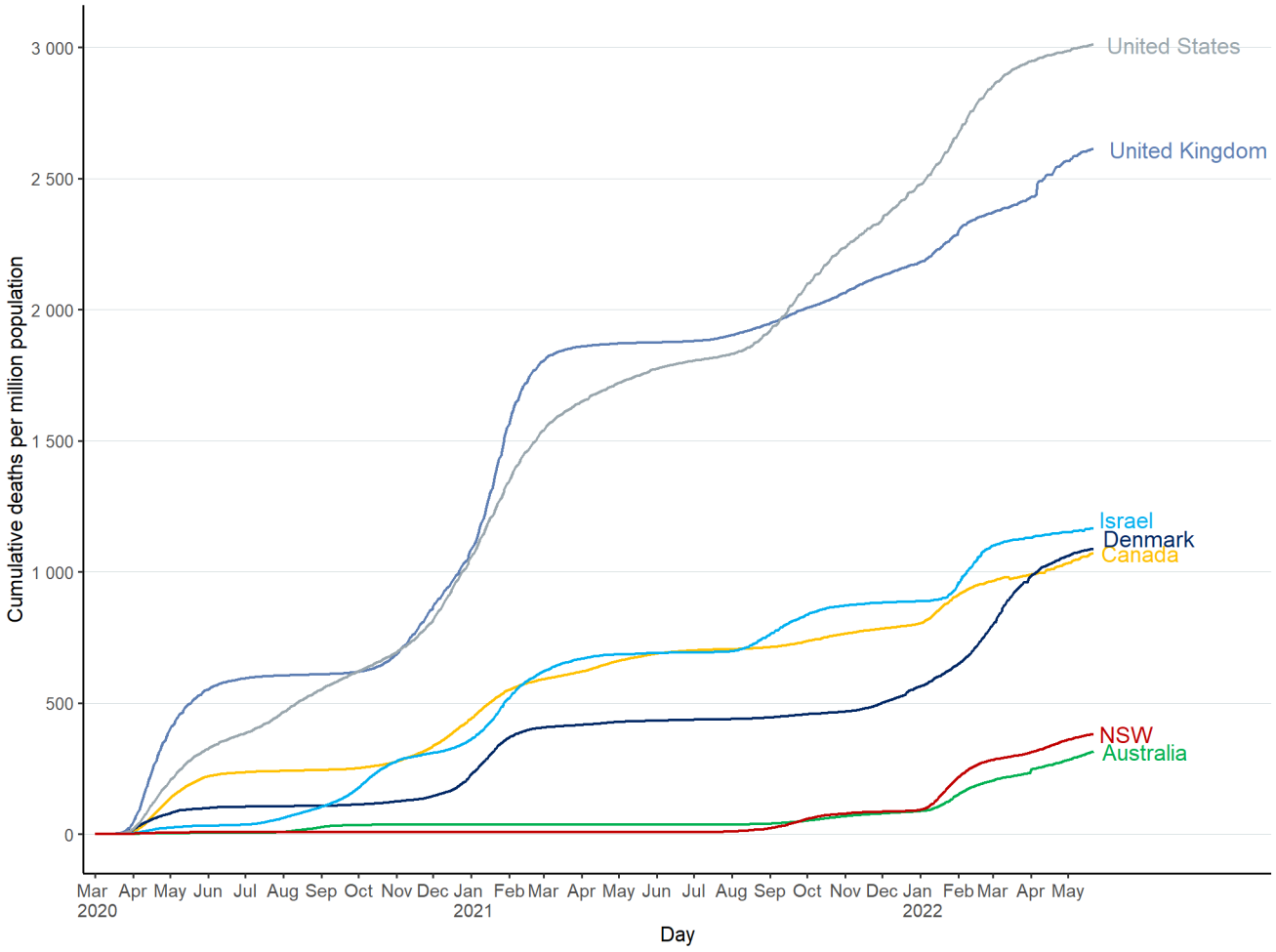


Note: See COVID-19 daily rates: notes and sources at the end of this document. Following a review conducted within NSW of historical death records (from January 2020 to April 2022), Australia found an additional 331 deaths related to COVID-19. This resulted in the artificial spike seen in deaths for Australia. Internally-sourced deaths data for NSW is calculated based on date of death (versus date of reporting) therefore the newly-reported deaths are distributed across the time series.

COVID-19 cumulative mortality rates

Figure 9 shows the cumulative mortality rate per million population in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from March 2020 to May 2022.

Figure 9: Cumulative mortality rates (select countries and NSW), March 2020 – May 2022

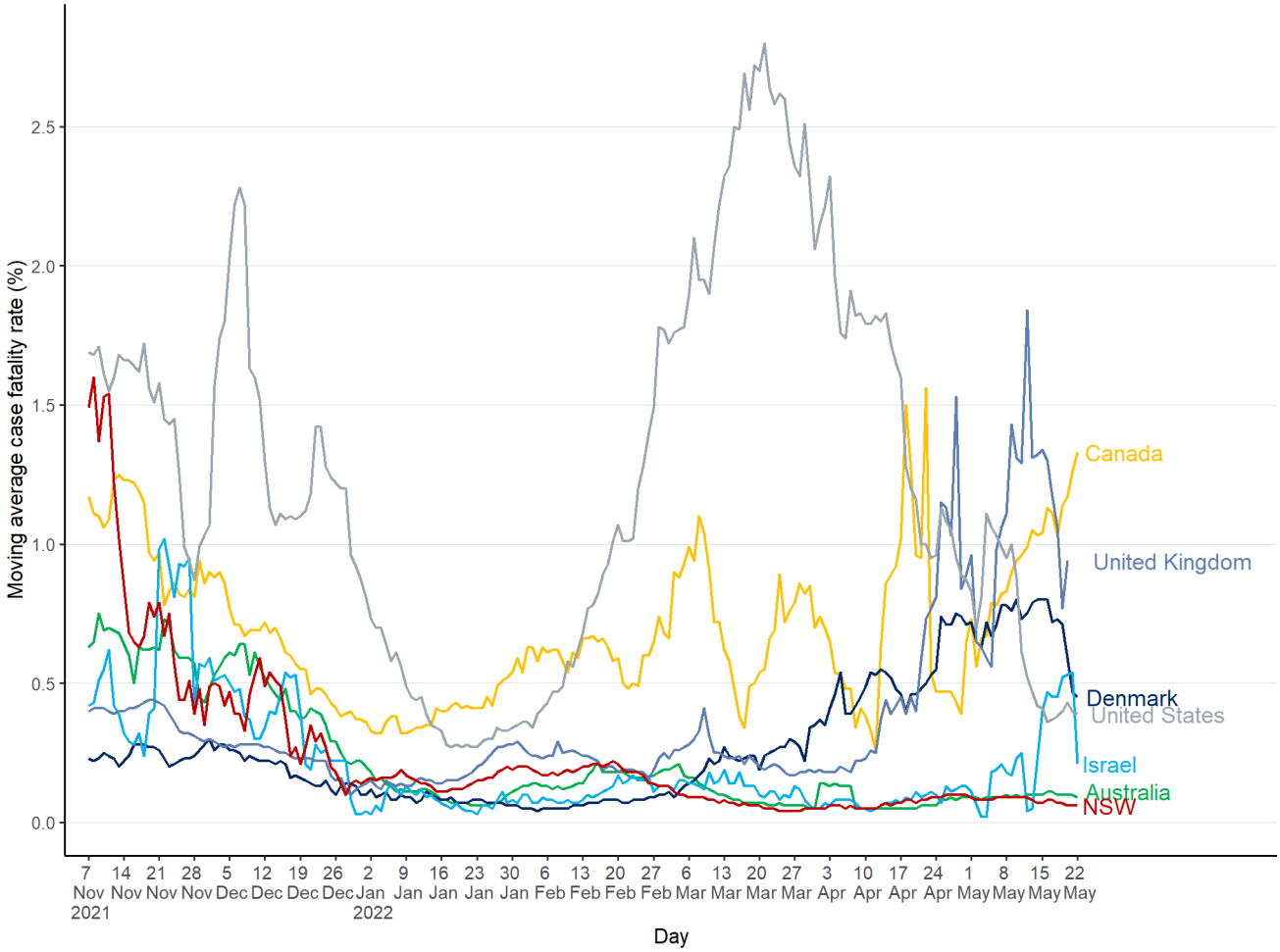


Note: See COVID-19 daily rates: notes and sources at the end of this document.

Case fatality rate for COVID-19

Figure 10 shows the case fatality rate (moving average) of COVID-19 in NSW, Australia, United Kingdom, United States, Canada, Denmark and Israel, from November 2021 to May 2022. The moving average case fatality rate on any given day is calculated as the ratio between the seven-day average number of confirmed deaths and the seven-day average number of confirmed cases 10 days earlier.

Figure 10: Case fatality rate of COVID-19 (select countries and NSW), November 2021 – May 2022



Note: See COVID-19 daily rates: notes and sources at the end of this document. Data anomaly occurred in Canada around mid-April and in United Kingdom around early May; interpretation and comparison should be done with caution.

NSW key indicators

Notes

Data are presented for all indicators as at 22 May 2022 (previous week, 15 May 2022).

Cases identified via rapid antigen tests (RATs) are included from 21 January 2022 onwards; comparisons with historical data should be made with care.

Average daily confirmed cases and average daily deaths are based on a seven-day average.

For any given day, the growth factor for COVID-19 cases is a ratio of cases notified in the seven days ending that day, to the cases notified in the seven days ending the day before.

Patients in hospital include cases on the ward and in ICUs.

Vaccination rates for the total population are estimated using the number of second doses available through public sources. This figure may be underestimated by up to 1% from that reported elsewhere due to differences in timing of reporting.

Estimated per million population rates for all indicators, other than vaccination, are calculated using population estimates at 30 June 2021. For vaccination, population estimates at 30 June 2020 are used. This is based on the Australian Bureau of Statistics estimated resident population and population projections, based on data from the NSW Department of Planning, Industry and Environment. [5]

The rate of hospitalisation and ICU admission (per million) among the unvaccinated population is calculated as the number of unvaccinated COVID-19 cases in hospital against the estimated total number of the unvaccinated population. The rate of hospitalisation and ICU admission (per million) among the vaccinated population is calculated as the number of COVID-19 cases in hospital who have received two or more vaccine doses, against the estimated total number of the population with two or more doses. Rolling seven-day average was applied. Rates were age-standardised to NSW 2021 population estimates.

Sources

New cases for NSW sourced from NSW Health via Notifiable Conditions Information Management System; accessed 24 May 2022. [6]

Vaccination data sourced from Australian Government Department of Health vaccination numbers and statistics; accessed 24 May 2022. [7]

Data for hospital capacity, admissions and proportion of vaccinated cases are sourced from NSW Health via the Patient Flow Portal and taken from a 7pm snapshot, 22 May 2022; accessed 24 May 2022. [8]

Summary of public health, healthcare and vaccination measures (select countries, Canadian provinces and NSW)

Notes

Data are presented for all indicators as at 22 May 2022. If unavailable, the latest available data are shown.

Data on confirmed COVID-19 cases may include both cases identified via PCR tests and cases identified via RATs, depending on differences in reporting procedures in the selected locations. For NSW, cases identified via RATs are included from 21 January 2022 onwards. Comparisons with historical data should be made with care.

Average daily confirmed cases and average daily deaths are based on a seven-day average.

Proportions for the population with two or more doses are based on the full population.

For NSW, estimated per million population rates for all indicators (except vaccination) are calculated using population estimates at 30 June 2021. For vaccination, population estimates at 30 June 2020 are used. This is based on the Australian Bureau of Statistics estimated resident population and population projections, based on data from the NSW Department of Planning, Industry and Environment. [5]

Patients in hospital include both cases on the ward and in ICUs.

Sources

New cases for selected countries sourced from Our World in Data.[1] New cases for NSW sourced from NSW Health via the Notifiable Conditions Information Management System. [6] New cases for Ontario and Quebec sourced from COVID-19 Tracker Canada.[9] New cases for Singapore sourced from Singapore Government.[10] All accessed 24 May 2022.

COVID-19 deaths for selected countries sourced from Our World in Data.[1] COVID-19 deaths for NSW sourced from NSW Health via the Notifiable Conditions Information Management System. [6] COVID-19 deaths for Ontario and Quebec sourced from COVID-19 Tracker Canada.[9] All accessed 24 May 2022.

Vaccination data for selected countries sourced from Our World in Data.[1] Vaccination data for NSW sourced from Australian Government Department of Health vaccination numbers and statistics.[7] Vaccination data for Ontario and Quebec sourced from COVID-19 Tracker Canada.[9] All accessed 24 May 2022.

Data on the number of COVID-19 patients in hospital and ICUs sourced on 24 May 2022 from the following:

- Our World in Data for all countries[1]
- NSW Health via the Patient Flow Portal for NSW, taken from a 7pm snapshot on 22 May 2022[8]
- COVID-19 Tracker Canada for Ontario and Quebec[9]
- Singapore Government for Singapore[10]

COVID-19 daily rates of cases, tests, vaccination, hospitalisations and deaths

Notes

Limited testing and delayed reporting likely result in the actual number of confirmed cases being underestimated.

Data on confirmed COVID-19 cases may include both cases identified via PCR tests and cases identified via RATs, depending on differences in reporting procedures in the selected locations. For NSW, cases identified via RATs are included from 21 January 2022 onwards. These numbers do not include an additional 180,433 RAT-positive cases reported prior to this as the data were unavailable in the sources used for this report. Comparisons with historical data should be made with care.

Data on COVID-19 tests may include both PCR tests and RATs, depending on differences in reporting procedures in the selected locations. NSW testing rates include positive and negative PCR tests, and all positive RATs only.

Challenges in the attribution of the cause of death means the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19. A review of historical death records (from January 2020 to April 2022) conducted within NSW, Australia, found an additional 331 COVID-19-related deaths. This resulted in the artificial spike seen in deaths for Australia. Internally sourced deaths data for NSW is calculated based on date of death (versus date of reporting), therefore the newly reported deaths are distributed across the time series.

Patients in hospital include cases on the ward and in ICUs.

Data for some countries may appear unstable at times (e.g. over the Christmas and New Year period) due to reasons such as reduced testing and unavailability of accurate data from the various countries.

Sources

Cases, tests and deaths data for selected countries sourced from Our World in Data.[1] Cases, tests and deaths data for NSW sourced from NSW Health via the Notifiable Conditions Information Management System.[6] Both accessed 24 May 2022.

Vaccination data for selected countries sourced from Our World in Data.[1] Vaccination data for NSW sourced from COVID Live, which verifies data against Australian state and territory government health departments.[11] Both accessed 24 May 2022.

Hospital and ICU data for selected countries sourced from Our World in Data.[1] Hospital and ICU data for NSW sourced from NSW Health via the Patient Flow Portal.[8] Both accessed 24 May 2022.

Method

The NSW Health COVID-19 Critical Intelligence Unit maintains living evidence tables on SARS-CoV-2 variants and COVID-19 vaccines.[12, 13] To inform this brief, a review of the daily evidence digest and Google searches are undertaken weekly.

Countries were chosen based on contemporary relevance with regards to the variables of interest in the NSW and Australian context (cases, variants, vaccines, and patient outcomes).

This will be the final issue of the COVID-19 Monitor published by the Agency for Clinical Innovation. Previous editions will remain accessible through the NSW Health COVID-19 Critical Intelligence Unit website.

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