COVID-19 Results Briefing

Cyprus

January 14, 2022

This document contains summary information on the latest projections from the IHME model on COVID-19 in Cyprus. The model was run on January 12, 2022, with data through January 10, 2022.

Current situation

- Daily infections in the last week increased to 24,500 per day on average compared to 23,000 the week before (Figure 1.1). Daily hospital census in the last week (through January 10) increased to 890 per day on average compared to 430 the week before.
- Daily reported cases in the last week increased to 4,800 per day on average compared to 3,300 the week before (Figure 2.1).
- Reported deaths due to COVID-19 in the last week increased to 3 per day on average compared to 2 the week before (Figure 3.1).
- Total deaths due to COVID-19 in the last week increased to 3 per day on average compared to 2 the week before (Figure 3.1). This makes COVID-19 the number 2 cause of death in Cyprus this week (Table 1). Estimated total daily deaths due to COVID-19 in the past week were 1 times larger than the reported number of deaths.
- The daily rate of reported deaths due to COVID-19 is greater than 4 per million in 15 countries and no subnationals. (Figure 4.1).
- The daily rate of reported deaths due to COVID-19 is greater than 4 per million in 25 countries and no subnationals. (Figure 4.2).
- We estimate that 49% of people in Cyprus have been infected at least once as of January 10 (Figure 6.1). Effective R, computed using cases, hospitalizations, and deaths, is greater than 1 in 44 countries and 52 subnational locations in the region. Effective R in Cyprus was 1.2 on December 30 (Figure 7.1).
- The infection-detection rate in Cyprus was close to 27% on January 10 (Figure 8.1).
- Based on the GISAID and various national databases, combined with our variant spread model, we estimate the current prevalence of variants of concern (Figure 9.1-Figure 9.5). We estimate that the Alpha variant is circulating in one country and 0 subnational locations, that the Beta variant is circulating in 0 countries and 0 subnational locations, that the Delta variant is circulating in 47 countries and 0 subnational locations, that the Gamma variant is circulating in one country and 0 subnational locations and that the Omicron variant is circulating in 48 countries and 0 subnational locations.

Trends in drivers of transmission

- Mobility last week was 8% lower than the pre-COVID-19 baseline (Figure 11.1). Mobility was lower than 30% of baseline in no locations.
- As of January 10, in the COVID-19 Trends and Impact Survey, 36% of people self-report that they always wore a mask when leaving their home compared to 36% last week (Figure 13.1).
- There were 6338 diagnostic tests per 100,000 people on January 10 (Figure 15.1).
- As of January 10, 22 countries and no subnationals have reached 70% or more of the population who have received at least one vaccine dose and 15 countries and no subnationals have reached 70% or more of the proportion of the population who are fully vaccinated (Figure 17.1). 51% of people in Cyprus have received at least one vaccine dose and 48% are fully vaccinated.
- In Cyprus, 66.3% of the population that is 12 years and older say they would accept or would probably accept a vaccine for COVID-19. Note that vaccine acceptance is calculated using survey data from the 18+ population. This is up by 0.2 percentage points from last week. The proportion of the population who are open to receiving a COVID-19 vaccine ranges from 45% in Republic of Moldova to 100% in Malta, Netherlands (Figure 19.1).
- In our current reference scenario, we expect that 669,900 people will be vaccinated with at least one dose.
dose by May 1 (Figure 20.1). We expect that 48% of the population will be fully vaccinated by May 1.

**Projections**

**Infections**
- Daily estimated infections in the **reference scenario**, which represents what we think is most likely to happen, will decline to 50 on May 1, 2022 (Figure 21.1).
- Daily estimated infections in the **80% mask coverage scenario** will decline to 30 on May 1, 2022 (Figure 21.1).
- Daily estimated infections in the **third dose scenario** will decline to 40 on May 1, 2022 (Figure 21.1).
- Daily estimated infections in the **reduced vaccine hesitancy scenario** will decline to 50 on May 1, 2022 (Figure 21.1).

**Cases**
- Daily cases in the **reference scenario** will rise to 6,160 by January 19, 2022 (Figure 21.2).
- Daily cases in the **80% mask coverage scenario** will rise to 6,160 by January 19, 2022 (Figure 21.2).
- Daily cases in the **third dose scenario** will rise to 6,160 by January 19, 2022 (Figure 21.2).
- Daily cases in the **reduced vaccine hesitancy scenario** will rise to 6,150 by January 19, 2022 (Figure 21.2).

**Hospitalizations**
- Daily hospital census in the **reference scenario** will rise to 1,460 by January 23, 2022 (Figure 21.3).
- Daily hospital census in the **80% mask coverage scenario** will rise to 1,450 by January 23, 2022 (Figure 21.3).
- Daily hospital census in the **third dose scenario** will rise to 1,460 by January 23, 2022 (Figure 21.3).
- Daily hospital census in the **reduced vaccine hesitancy scenario** will rise to 1,440 by January 23, 2022 (Figure 21.3).

**Deaths**
- In our **reference scenario**, our model projects 880 cumulative reported deaths due to COVID-19 on May 1. This represents 210 additional deaths from January 10 to May 1. Daily reported COVID-19 deaths in the **reference scenario** will rise to 10 by January 17, 2022 (Figure 21.4).
- Under our **reference scenario**, our model projects 890 cumulative total deaths due to COVID-19 on May 1. This represents 210 additional deaths from January 10 to May 1 (Figure 24.2).
- In our **80% mask coverage scenario**, our model projects 870 cumulative reported deaths due to COVID-19 on May 1. This represents 190 additional deaths from January 10 to May 1. Daily reported COVID-19 deaths in the **80% mask coverage scenario** will rise to 10 by January 17, 2022 (Figure 21.4).
- In our **third dose scenario**, our model projects 880 cumulative reported deaths due to COVID-19 on May 1. This represents 210 additional deaths from January 10 to May 1. Daily reported COVID-19 deaths in the **third dose scenario** will rise to 10 by January 17, 2022 (Figure 21.4).
- In our **reduced vaccine hesitancy scenario**, our model projects 880 cumulative reported deaths due to COVID-19 on May 1. This represents 200 additional deaths from January 10 to May 1. Daily reported COVID-19 deaths in the **reduced vaccine hesitancy scenario** will rise to 10 by January 17, 2022 (Figure 21.4).
- Figure 22.1 compares our reference scenario forecasts to other publicly archived models. Forecasts are widely divergent.
• At some point from January through May 1, 41 countries will have high or extreme stress on hospital beds (Figure 23.1). At some point from January through May 1, 51 countries will have high or extreme stress on intensive care unit (ICU) capacity (Figure 24.1).
Model updates

In this week’s update, we have modified the model to allow the incubation time to vary by variant. For Omicron, we assume it is distributed between 1 and 4 days, skewed toward 1 day. For all other variants, we assume it is 3 to 5 days, skewed toward 3 days.
Figure 1.1. Daily COVID-19 hospital census and estimated infections

Figure 2.1. Reported daily COVID-19 cases, moving average
Table 1. Ranking of total deaths due to COVID-19 among the leading causes of mortality this week, assuming uniform deaths of non-COVID causes throughout the year.

<table>
<thead>
<tr>
<th>Cause name</th>
<th>Weekly deaths</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic heart disease</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>COVID-19</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Stroke</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Tracheal, bronchus, and lung cancer</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Alzheimer’s disease and other dementias</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Colon and rectum cancer</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

Figure 3.1. Smoothed trend estimate of reported daily COVID-19 deaths (blue) and total daily deaths due to COVID-19 (orange).
Cyprus

Daily COVID-19 death rate per 1 million on January 10, 2022

Figure 4.1 Daily reported COVID-19 death rate per 1 million

Figure 4.2 Daily total COVID-19 death rate per 1 million
Cumulative COVID-19 deaths per 100,000 on January 10, 2022

Figure 5.1 Reported cumulative COVID-19 deaths per 100,000

Figure 5.2 Total cumulative COVID-19 deaths per 100,000
Figure 6.1. Estimated percent of the population infected with COVID-19 on January 10, 2022

Figure 7.1. Mean effective R on December 30, 2021. Effective R less than 1 means that transmission should decline, all other things being held the same. The estimate of effective R is based on the combined analysis of deaths, case reporting, and hospitalizations where available. Current reported cases reflect infections 11-13 days prior, so estimates of effective R can only be made for the recent past.
Figure 8.1. Percent of estimated COVID-19 infections detected. This is estimated as the ratio of reported daily COVID-19 cases to estimated daily COVID-19 infections based on the SEIR disease transmission model. Due to measurement errors in cases and testing rates, the infection-detection rate can exceed 100% at particular points in time.
Estimated percent of circulating SARS-CoV-2 for primary variant families on January 10, 2022

Figure 9.1 Estimated percent of new infections that are Alpha variant

Figure 9.2 Estimated percent of new infections that are Beta variant
Figure 9.3 Estimated percent of new infections that are Delta variant

Figure 9.4 Estimated percent of new infections that are Gamma variant
Figure 9.5 Estimated percent of new infections that are Omicron variant

- 0%
- 1−9%
- 10−24%
- 25−49%
- 50−74%
- 75−89%
- 90−100%
Figure 10.1. Infection-fatality rate on January 10, 2022. This is estimated as the ratio of COVID-19 deaths to estimated daily COVID-19 infections.
### Critical drivers

**Table 2. Current mandate implementation**

*Not all locations are measured at the subnational level.*
Figure 11.1. Trend in mobility as measured through smartphone app use, compared to January 2020 baseline.
Figure 12.1. Mobility level as measured through smartphone app use, compared to January 2020 baseline (percent) on January 10, 2022.
Figure 13.1. Trend in the proportion of the population reporting always wearing a mask when leaving home

Figure 14.1. Proportion of the population reporting always wearing a mask when leaving home on January 10, 2022
**Figure 15.1.** Trend in COVID-19 diagnostic tests per 100,000 people

**Figure 16.1.** COVID-19 diagnostic tests per 100,000 people on January 10, 2022
### Table 3. Estimates of vaccine effectiveness for specific vaccines used in the model at preventing severe disease and infection. We use data from clinical trials directly, where available, and make estimates otherwise. More information can be found on our website.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Ancestral</th>
<th>Alpha</th>
<th>Beta</th>
<th>Gamma</th>
<th>Delta</th>
<th>Omicron</th>
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<tbody>
<tr>
<td></td>
<td>Severe</td>
<td>Severe</td>
<td>Infection</td>
<td>Severe</td>
<td>Infection</td>
<td>Severe</td>
</tr>
<tr>
<td>AstraZeneca</td>
<td>94%</td>
<td>63%</td>
<td>94%</td>
<td>63%</td>
<td>94%</td>
<td>69%</td>
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<tr>
<td>CanSino</td>
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<td>62%</td>
<td>66%</td>
<td>62%</td>
<td>64%</td>
<td>61%</td>
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<tr>
<td>CoronaVac</td>
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<td>47%</td>
<td>50%</td>
<td>47%</td>
<td>49%</td>
<td>46%</td>
</tr>
<tr>
<td>Covaxin</td>
<td>78%</td>
<td>73%</td>
<td>78%</td>
<td>73%</td>
<td>76%</td>
<td>72%</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>86%</td>
<td>72%</td>
<td>86%</td>
<td>72%</td>
<td>76%</td>
<td>64%</td>
</tr>
<tr>
<td>Moderna</td>
<td>97%</td>
<td>92%</td>
<td>97%</td>
<td>92%</td>
<td>97%</td>
<td>91%</td>
</tr>
<tr>
<td>Novavax</td>
<td>89%</td>
<td>83%</td>
<td>89%</td>
<td>83%</td>
<td>86%</td>
<td>82%</td>
</tr>
<tr>
<td>Pfizer/BioNTech</td>
<td>95%</td>
<td>86%</td>
<td>95%</td>
<td>86%</td>
<td>95%</td>
<td>84%</td>
</tr>
<tr>
<td>Sinopharm</td>
<td>73%</td>
<td>68%</td>
<td>73%</td>
<td>68%</td>
<td>71%</td>
<td>67%</td>
</tr>
<tr>
<td>Sputnik-V</td>
<td>92%</td>
<td>85%</td>
<td>92%</td>
<td>85%</td>
<td>89%</td>
<td>85%</td>
</tr>
<tr>
<td>Other vaccines</td>
<td>75%</td>
<td>70%</td>
<td>75%</td>
<td>70%</td>
<td>73%</td>
<td>69%</td>
</tr>
<tr>
<td>Other vaccines (mRNA)</td>
<td>91%</td>
<td>86%</td>
<td>91%</td>
<td>86%</td>
<td>88%</td>
<td>85%</td>
</tr>
</tbody>
</table>
Percent of the population having received at least one dose (17.1) and fully vaccinated against SARS-CoV-2 (17.2) by January 10, 2022

Figure 17.1 Percent of the population having received one dose of a COVID-19 vaccine

Figure 17.2 Percent of the population fully vaccinated against SARS-CoV-2
Figure 18.1. Trend in the estimated proportion of the population that is 12 years and older that has been vaccinated or would probably or definitely receive the COVID-19 vaccine if available. Note that vaccine acceptance is calculated using survey data from the 18+ population.

Figure 19.1. Estimated proportion of the population that is 12 years and older that has been vaccinated or would probably or definitely receive the COVID-19 vaccine if available. Note that vaccine acceptance is calculated using survey data from the 18+ population.
Figure 20.1. Percent of people who receive at least one dose of a COVID-19 vaccine and those who are fully vaccinated.
Projections and scenarios

We produce 4 scenarios when projecting COVID-19. The reference scenario is our forecast of what we think is most likely to happen:

- Vaccines are distributed at the expected pace. Brand- and variant-specific vaccine efficacy is updated using the latest available information from peer-reviewed publications and other reports.
- Future mask use is the mean of mask use over the last 7 days.
- Mobility increases as vaccine coverage increases.
- Omicron variant spreads according to our flight and local spread model.

- 80% of those who have had two doses of vaccine (or one dose for Johnson & Johnson) receive a third dose at 6 months after their second dose.

The 80% mask use scenario makes all the same assumptions as the reference scenario but assumes all locations reach 80% mask use within 7 days. If a location currently has higher than 80% use, mask use remains at the current level.

The third dose scenario is the same as the reference scenario but assumes that 100% of those who have received two doses of vaccine will get a third dose at 6 months.

The reduced vaccine hesitancy scenario assumes that those in each location who respond on surveys that they probably will not receive a vaccine are persuaded or mandated to receive a vaccine.
Figure 21.1. Daily COVID-19 infections until May 01, 2022 for 4 scenarios

Figure 21.2. Daily COVID-19 reported cases until May 01, 2022 for 4 scenarios
Figure 21.3. Daily COVID-19 hospital census until May 01, 2022 for 4 scenarios

Figure 21.4 Reported daily COVID-19 deaths per 100,000
Figure 21.5 Total daily COVID-19 deaths per 100,000
Figure 22.1. Comparison of reference model projections with other COVID modeling groups. For this comparison, we are including projections of daily COVID-19 deaths from other modeling groups when available, last model update in brackets: Delphi from the Massachusetts Institute of Technology (Delphi) [January 13, 2022], Imperial College London (Imperial) [December 26, 2021], the SI-KJalpha model from the University of Southern California (SIKJalpha) [January 13, 2022]. Daily deaths from other modeling groups are smoothed to remove inconsistencies with rounding. Regional values are aggregates from available locations in that region.
**Figure 23.1.** The estimated inpatient hospital usage is shown over time. The percent of hospital beds occupied by COVID-19 patients is color-coded based on observed quantiles of the maximum proportion of beds occupied by COVID-19 patients. Less than 5% is considered *low stress*, 5-9% is considered *moderate stress*, 10-19% is considered *high stress*, and 20% or greater is considered *extreme stress*. 

All hospital beds

Stress level

- Low
- Moderate
- High
- Extreme


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Figure 24.1. The estimated intensive care unit (ICU) usage is shown over time. The percent of ICU beds occupied by COVID-19 patients is color-coded based on observed quantiles of the maximum proportion of ICU beds occupied by COVID-19 patients. Less than 10% is considered low stress, 10-29% is considered moderate stress, 30-59% is considered high stress, and 60% or greater is considered extreme stress.
Cyprus

More information

Data sources:
Mask use and vaccine confidence data are from the The Delphi Group at Carnegie Mellon University and University of Maryland COVID-19 Trends and Impact Surveys, in partnership with Facebook. Mask use data are also from Premise, the Kaiser Family Foundation, and the YouGov COVID-19 Behaviour Tracker survey.

Genetic sequence and metadata are primarily from the GISAID Initiative. Further details available on the COVID-19 model FAQ page.

A note of thanks:
We wish to warmly acknowledge the support of these and others who have made our COVID-19 estimation efforts possible.

More information:
For all COVID-19 resources at IHME, visit http://www.healthdata.org/covid.

To download our most recent results, visit our Data downloads page.