

Has Spain reached herd immunity?

Spain was one of the countries hit earliest and hardest by the COVID-19 pandemic, introducing a hard lockdown as the novel virus swept through the nation in March–April, 2020. Since that first lockdown, however, the country has largely fared better than many of its European neighbours—most Spanish regions have even been able to keep parts of the hospitality sector open, during the daytime at least, even through a sharp surge of COVID cases during the winter of 2020–21.

While Europe's other largest countries, such as the UK, Italy, France, and even Germany, returned to harder lockdowns, Spanish residents were able to hold on to parts of normality, without universal stay-at-home mandates. Leisure activities, including gyms, were able to mostly remain open in Spain.

Although Spain, similar to the rest of the EU, had a relatively slow start to its vaccination campaign in early 2021, the country accelerated its efforts and has now overtaken countries, such as the UK and the USA, that had made better progress earlier on. More than 80% of Spain's population is now fully vaccinated against COVID-19, and experts are beginning to believe the country is on the cusp of reaching something that barely seemed possible even weeks ago—herd immunity.

"We still don't know the exact proportion of the population that needs to be immune to reach herd immunity for SARS-CoV-2, as we need to better understand the duration and protection of transmission generated from both vaccination and previous COVID-19 infection", explains Jesús Rodríguez Baño, head of infectious diseases at the Virgen de la Macarena Hospital in Seville, Spain. "However, the situation in Spain might provide some clues: after leaving behind most of the control measures in the population, the infection rate (and particularly the hospital admission

rate) has been going down, and this is the opposite of what happened in previous waves; the only plausible explanation is the very high rate of vaccination in the country."

Data from the Spanish Ministry of Health showed that, as of Oct 21, 2021, the 14-day cumulative rate of new infections was 43 per 100 000, down two thirds from its level at the same point in September. Even more encouraging are the decreasing rates among children and adolescents—in the 12–19 year age group (in which more than 80% are now fully vaccinated) the rate of infection fell from 154 to 30 per 100 000 across the same month-long period, and even in under-12s, yet to have any vaccine approved, the rate has dropped from 150 to 54 per 100 000. Although Spain's individual regions are in charge of their own COVID-related restrictions, regional health chiefs are so encouraged by the positive progress in the pandemic that many are now talking openly about ending the requirement for school children to wear facemasks in the classroom.

Rodríguez Baño is hopeful that winter 2021–22 in Spain will be something much more normal than experienced last year. "However, we must be prudent in our predictions. The third booster dose is already being administered in high-risk groups here in Spain, and we must still see whether a third dose (or a yearly dose) is needed for everyone. Also, new variants might cause problems."

Elsewhere in Europe, the picture is mixed at the time of writing. The UK, which opened up all businesses and removed all legally binding COVID restrictions in July, 2021, has seen daily case rates between 30 000 and 40 000 since then, and in the week beginning Oct 18, this number has crept up towards 50 000, although has now begun to fall slightly again. The UK's 14-day cumulative incidence is at 753 per 100 000 population, around

20 times that of Spain. Some 68% of the total population and around half of children aged 12–15 years have been fully vaccinated. At the time of writing, one in 10 children in this age group was estimated to be currently infected with COVID-19. The UK Government has not yet brought back COVID restrictions as high case numbers are not currently resulting in large increases in hospitalisations or deaths. Reports suggest that the government has received modelling estimates indicating cases are about to fall sharply without additional intervention, though it is not clear why. The medical community remains cautious and would like some control measures reintroduced, such as facemasks indoors and returning to working from home where possible.

In early September, 2021, Denmark decided to suddenly lift all COVID restrictions, with its government saying the time had come to accept that the population must now live with COVID-19 like any other endemic disease. COVID is no longer considered a critical threat to society. To date, this strategy seems to have been largely effective, although daily new infections nationwide have approximately doubled from their low level of around 300 per day in late September to more than 700 per day in late October. In late September, Norway also announced a similar strategy to Denmark, removing all restrictions, including those relating to travel. As yet, the country has seen no sharp increases in cases. Denmark (at 76%) and Norway (69%) both have lower proportions of their populations vaccinated than Spain.

With winter closing in on Europe, the next few weeks and months will be crucial in finding out how successful each country's individual strategy has been in attempting to bring COVID-19 under control.

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