



The BMJ

Cite this as: *BMJ* 2024;384:q125<http://dx.doi.org/10.1136/bmj.q125>

Published: 17 January 2024

# Covid-19: Vaccines have saved at least 1.4 million lives in Europe, WHO reports

Gareth Iacobucci

Vaccination against covid-19 has reduced deaths in Europe by at least 57% and saved at least 1.4 million lives, the World Health Organization has estimated.

A preprint study by researchers from WHO/Europe reports that the known death toll from covid of 2.5 million in the WHO European Region could have been as high as four million without vaccines.<sup>1</sup> The analysis of data from 34 countries also found that over 90% of lives saved were in people over 60.

Discussing the findings at a press briefing on 16 January, Hans Kluge, WHO regional director for Europe, said, "Today there are 1.4 million people in our region, most of them elderly, who are around to enjoy life with their loved ones because they took the vital decision to be vaccinated against covid-19. This is the power of vaccines. The evidence is irrefutable."

The researchers used covid mortality and vaccine uptake data reported by 34 countries and vaccine effectiveness data from literature to calculate the percentage reduction in expected and reported deaths. They calculated that, from December 2020 to March 2023, vaccines reduced deaths by 57% in 70-79-year olds and by 54% in 60-69 year olds. Mortality was reduced by 52% in the 50-59 age group. The age group that benefited the most from vaccination was the over 80s, whose expected covid mortality reduced by 62% overall.

## Variation between countries

The report includes country specific data showing that nations that implemented early vaccination programmes covering large parts of their population, such as Belgium, Denmark, Iceland, Ireland, Israel, Malta, the Netherlands, and the UK, saw the greatest benefit in the overall number of lives saved through vaccination.

Israel saw the biggest benefits in all age groups, with a 75% reduction in mortality, followed by Malta (72%) and Iceland (71%). The smallest benefits were reported in Ukraine (15%), Romania (20%), and Kosovo (21%).

Marc-Alain Widdowson, WHO/Europe team lead for world health emergencies, told the briefing that other factors such as the variable number of elderly people in each country may also have affected the findings, but he said that the timing and coverage of vaccination were "the two main critical factors . . . Countries that vaccinated early and vaccinated at high levels were likely to see much higher deaths averted than countries who were vaccinating a bit later."

The study found that covid vaccination had saved most lives during the period of the omicron variant

from December 2021 to April 2023, with 700 000 deaths prevented.

Widdowson added, "What we are seeing in this report is the effect of repeated booster vaccinations. This reiterates WHO's message that people, particularly at-risk groups, need to get boosted annually."

## Flu surge

At the briefing WHO officials also provided an update on the latest prevalence of respiratory infections in Europe. Kluge said that in the past two weeks the European region had reported 58% more hospital admissions for influenza and 21% more intensive care admissions than in the previous two weeks, with over 65s and very young patients most affected. "Health systems should be ready to see a likely surge in influenza cases over the coming weeks," he said.

In addition to covid and flu, WHO said that respiratory syncytial virus (RSV) and other pathogens such as mycoplasma and measles had caused increased hospital admissions among children. Kluge added, "We are concerned about reports of localised pressures on hospitals and overcrowding in emergency rooms, due to a confluence of circulating respiratory viruses."

Although covid infection rates are broadly decreasing throughout the region, WHO warned that this could change, noting the unpredictability of the SARS-CoV-2 virus and the emergence of the new variant of interest known as JN.1.<sup>2</sup>

Kluge expressed concern that many countries had stopped or reduced their covid reporting to WHO. "I cannot stress enough how important continued covid-19 surveillance is, alongside other circulating respiratory viruses," he said. "Surveillance remains our first line of defence."

1 Mesle M, Brown J, Mook P, et al. Estimated number of lives directly saved by covid-19 vaccination programs in the WHO European Region, December 2020 to March 2023. *medRxiv* 2024 Jan 13 [preprint]. doi: 10.1101/2024.01.12.24301206. <https://www.medrxiv.org/content/10.1101/2024.01.12.24301206v1>

2 Looi MK. Covid-19: WHO adds JN.1 as new variant of interest. *BMJ* 2023;383: doi: 10.1136/bmj.p2975 pmid: 38128957

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