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NEWS ANALYSIS

Covid and flu: what do the numbers tell us about morbidity and deaths?

Much confusion has been seen in the UK media about the effects on mortality of flu and covid-19. **Gareth Iacobucci** separates fact from fiction

Gareth Iacobucci

Are there more deaths from flu than from covid?

Data from the Office for National Statistics show that in England and Wales the number of deaths from influenza was 1598 in 2018 and 1223 in 2019.¹ This is way below the annual deaths from covid-19, which at the current rate of around 800 deaths a week in England and Wales equates to more than 40 000 a year.²

Disagreements have emerged on social media because some commentators have quoted much higher figures for annual deaths from flu.³ The reason for the discrepancy, as highlighted by the health systems researcher Dan Goyal,⁴ is that flu and pneumonia deaths are often reported together, including by the ONS itself. When pneumonia deaths are included with flu, the number would be 29 516 in 2018 and 26 398 in 2019. This is obviously closer to covid death numbers, though still less, according to current trends.

Covid mortality data have also been the subject of debate. Through the pandemic some datasets, including Public Health England's, have included all deaths from any cause within 28 days of a positive covid test. Some sceptics have argued that this approach has overestimated the number of people dying from covid-19. But as *The BMJ's* columnist David Oliver and the expert statistician David Spiegelhalter have pointed out,^{5,6} this approach has probably under-recognised the real number of deaths from covid-19, because of an initial absence of testing back in spring 2020, and because people who survived more than 28 days before dying from covid will not have been included. The ONS's data, considered the most accurate, are based on cases where covid 19 is mentioned on death certificates. As Spiegelhalter has highlighted, 90% of death certificates where covid-19 is recorded identify it as the primary, underlying cause of death.

Which is more dangerous, flu or covid?

Research published in *The BMJ* last December,⁷ which was based on an analysis of US Department of Veterans Affairs data on more than 3600 patients admitted to hospital with covid-19, found that, when compared with seasonal flu, covid was associated with an increased risk of extrapulmonary organ dysfunction, death, and increased health resource use, such as a fivefold higher risk of admission to intensive care and longer stays in hospital. Deaths

from covid-19 were most pronounced in people over 75 with chronic kidney disease or dementia and in black people with obesity, diabetes, or chronic kidney disease.

The Centers for Disease Control and Prevention estimated that in the US there were 1.8 deaths from flu per 100 000 population between 1999 and 2019.⁸ The estimated death rate from covid was 217.54 per 100 000 in the US and 206.73 per 100 000 in the UK.⁹

The global figure for the covid-19 death rate is estimated at 279 per 100 000 population.¹⁰

In the UK the Health Foundation has articulated the difference in impact between flu and covid in terms of life years. "In a bad flu year on average around 30 000 people in the UK die from flu and pneumonia, with a loss of around 250 000 life years. This is a sixth of the life years lost to covid-19," it noted.¹¹

Does getting flu with covid "double the risk of death"?

This statistic was quoted by Jenny Harries, chief executive of the UK Health Security Agency (one of the agencies that replaced Public Health England), in a recent interview.¹² The claim is supported by research from Public Health England, published in August 2021 in the *International Journal of Epidemiology*,¹³ which found that patients with SARS-CoV-2 and influenza virus coinfection were around twice as likely to die (odds ratio 2.27 (95% confidence interval 1.23 to 4.19)) than people with SARS-CoV-2 alone.

What are the vaccine uptake rates in the UK?

Last winter (2020-21) 80.9% of people aged over 65 in England had the flu vaccine,¹⁴ up from 72.4% the year before, which meant that for the first time since 2005-06 England met the 75% target set by the World Health Organization. The increased uptake came after the government expanded its NHS flu vaccination programme to patients aged 50-64 who were not in a clinical risk group during the covid-19 pandemic. Uptake also rose among under 65s at risk (from 44.9% to 53%) and 2-3 year old children (from 43.8% to 56.7%) but fell among pregnant women (from 43.7% to 43.6%). Uptake in the new cohort of people aged 50-64 years and not in a clinical risk group was 35.2%.

This year, England's flu programme is aiming to reach 85% uptake among over 65s and 75% among eligible under 65s,¹⁵ with the government emphasising the

importance of double protection against flu and covid while both viruses circulate.¹⁶ The NHS has expanded the flu vaccine programme to an extra five million people, including secondary school children up to year 11, amid warnings that there could be a 50% rise in cases of flu this year, and additional stock is being made available from early November.¹⁷

Deputy chief medical officer Jonathan Van-Tam said, “Not many people got flu last year because of covid-19 restrictions, so there isn’t as much natural immunity in our communities as usual. We will see flu circulate this winter; it might be higher than usual, and that makes it a significant public health concern.”

In terms of covid vaccination 85.6% of over 12s in the UK have had their first dose and 78.6% have had both doses. Ninety per cent of people aged 65 or older have had both doses. But uptake is lower among younger adults. For example, only 17% of 16-17 year olds, 55% of 18-24 year olds, 56% of 25-29 year olds, and 60% of 30-34 year olds are fully vaccinated. And only 12.1% of 12-15 year olds so far have had their first dose.¹⁸

Is it recommended to have both vaccines together?

Results from the ComFluCOV study have shown that administering a flu vaccine at the same time as a second dose of a covid-19 vaccine is safe.¹⁹ Guidance from the UK Joint Committee on Vaccination and Immunisation says that the vaccines can be offered together “where operationally expedient” but advises that the covid-19 booster vaccine programme “should not disrupt or delay deployment of the annual influenza vaccination programme.”²⁰ It advises general practices to offer the covid and flu vaccines as soon as patients are eligible rather than delaying to wait for deliveries of either vaccine so as to administer both at the same time. There is no evidence that having both jabs in the same arm makes them any less effective, but many people having both together are choosing different arms to reduce soreness.

What do covid rates look like in the UK now?

The UK currently has the highest incidence of covid in western Europe. On 13 October it recorded 42 776 new cases,²¹ much higher than the 1120 in France, 1277 in Spain, 1561 in Italy, and 4872 in Germany. Yet despite the high case rates the UK government seems intent on pursuing a “vaccines only” policy and is showing no inclination to revisit its decision to remove, in July, the vast majority of protective measures, including mandatory face coverings and social distancing. In fact, it is talking about removing more restrictions, including infection control measures in general practices,²² and is continuing to encourage more people to return to their offices to work. Many medical experts are concerned about the government’s stance as the country heads into winter. In the *Guardian* last week Christina Pagel, director of University College London’s Clinical Operational Research Unit, and Martin McKee, professor of European public health at the London School of Hygiene and Tropical Medicine, jointly wrote, “England, not for the first time, is the odd one out in Europe.”²³

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