

COVID-19 longevity impact briefing

Weekly update 2021 – 52



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COVID-19 – Waves of Infection

The UK has seen three main waves of infection, hospitalisation and death through the COVID-19 pandemic to date, with a third wave currently in progress.

The first wave started in March 2020, with significant numbers of deaths starting to be seen towards the end of the month. Following lockdown and other interventions, the outbreak was brought under control and infection remained at a low level through the summer.

The second wave of infection started in September 2020 and lasted significantly longer than the first, with death rates starting to increase in October and peaking around December / January.

The third wave of infection started in July 2021, following the easing of lockdown measures and spurred on firstly by the Delta variant and now the Omicron variant. However, numbers of deaths during this third wave have remained relatively low compared to the first two waves of infection as result of the effectiveness of the vaccination program.

The principal measure that we have used throughout the pandemic has been excess deaths, rather than tracking COVID-19 death measures directly. On this measure, the features of the three waves have been quite different.

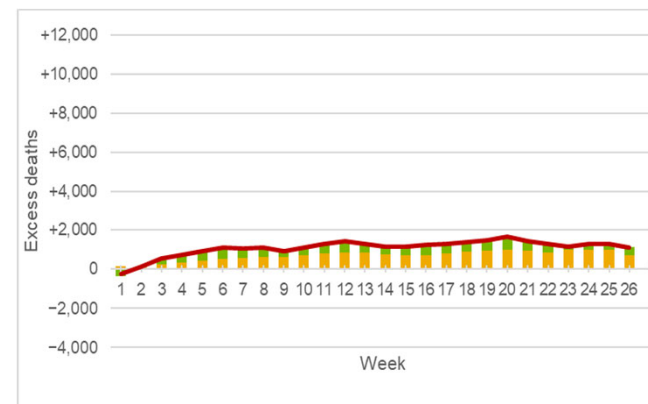
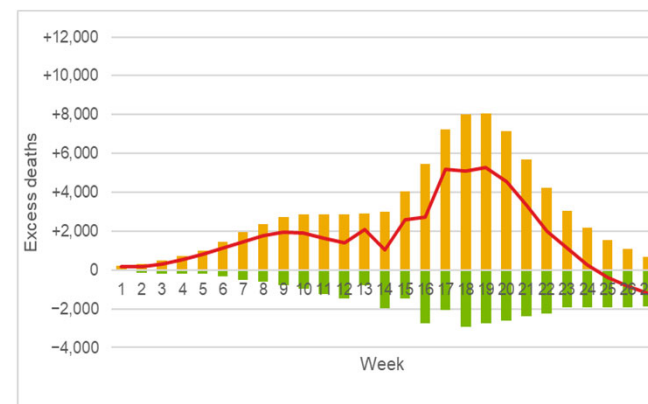
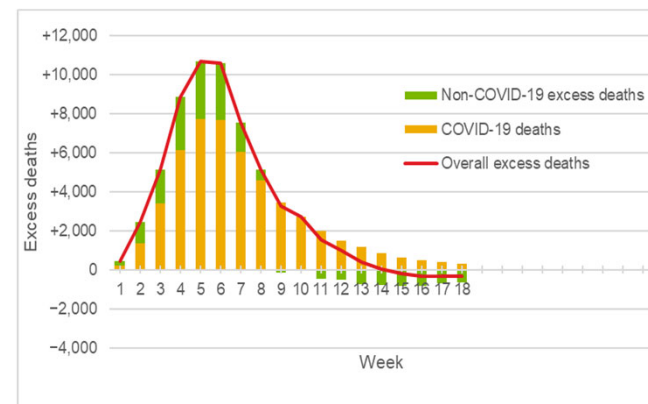
The first wave saw excess deaths at a much higher level than COVID-19 deaths. This is likely to be because many deaths, particularly of individuals in care homes, were COVID-19 related but not recorded as such.

The second wave saw similar numbers of COVID-19 deaths but fewer excess deaths; indeed, non-COVID-19 deaths in all weeks were lower than the baseline level. This was likely to be due to:

- other infectious diseases such as flu not circulating to the same extent as usual.
- frailty - some (but by no means all) deaths in the first wave were people who might have died relatively soon afterwards

The third wave has shown relatively low numbers of both COVID-19 and non-COVID-19 excess deaths compared to the first two waves of infection.

The graphs show the three-week average excess deaths compared to the 2017-19 average.



England and Wales Mortality in 2021

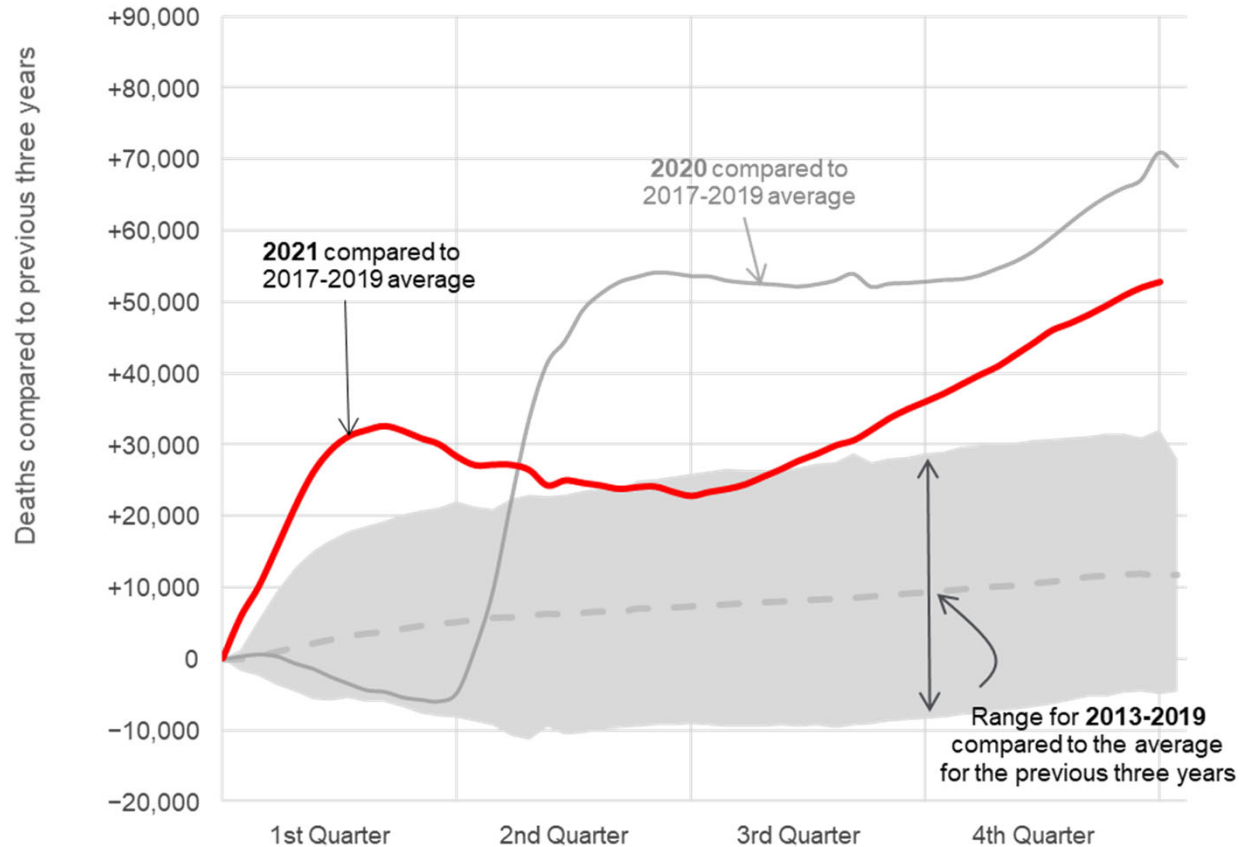
2020 started with three months of light mortality, before we saw the first wave of COVID-19 deaths start to come through in March.

2021 started with excess deaths compared to previous years as the second wave continued in the early part of the year.

COVID-19 cases reduced over the first half of the year to low levels in May. However, we then experienced a third wave of infection in the COVID-19 pandemic in the UK, driven initially by the Delta variant and the end of lockdown measures in July and more recently by the Omicron variant.

Overall, this has contributed to **53,000** additional deaths in total over the year compared with the 2017-2019 average.

Given the proportion of the population that is now vaccinated and the effectiveness of the vaccines and boosters against hospitalisation and death, this third wave has not led to the same levels of mortality as previous waves, although they are still above historic averages.



Source: ONS

Vaccination

The UK Government's stated aim was to provide first doses of a vaccine to individuals in their first four priority groups, by 15 February 2021. This target was achieved, covering first doses for an estimated 14.6 million people.

It's estimated that almost 90% of excess deaths in the first wave were individuals in the first four groups – and the effective vaccination rollout has therefore had a significant impact on mortality.

The subsequent target was for the first nine priority groups to have received a first dose by 15 April 2021. This target was also achieved, covering a total of 31.8 million people.

The last target was for the remaining adult population to receive a first dose by the end of July. By that date, 46.8 million first doses had been administered (approximately 90% of the population).

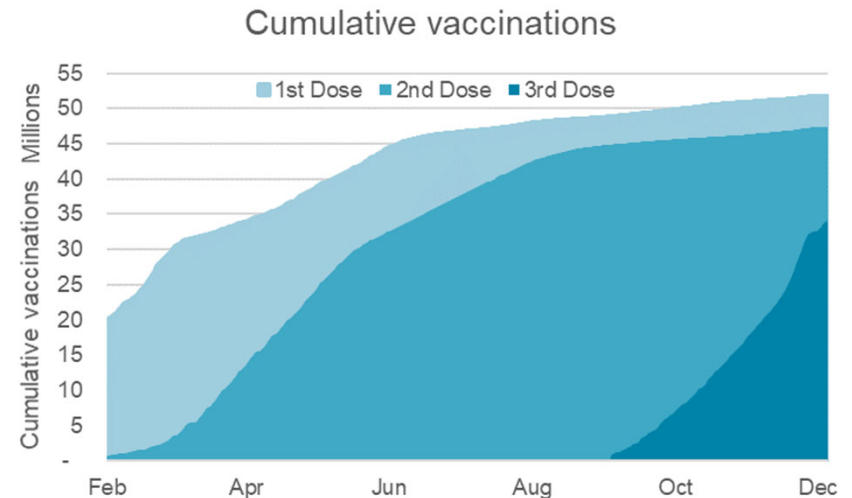
In July 2021, the vaccination roll-out was extended to include young people aged 16-18 years and, in September 2021, this was further extended to include all young people aged 12 years and over. As at 31 December 2021, **51.8 million first doses** had been administered overall.

Whilst first doses should give some protection against infection and serious disease, for most of the vaccines full effectiveness is not achieved until an individual has received two doses. As at 31 December 2021, **47.4 million second doses** had been administered.

The booster vaccination program began in the autumn. In light of the threat posed by the Omicron variant, on 12 December the government announced a new target for its booster program: every eligible adult over 18 should receive a third dose by the end of December 2021. As at 31 December, **34.1 million third doses** had been administered.

The child vaccination and vaccination booster programs have likely helped to dampen the severity of the current third wave.

UK vaccination tracker



The vaccination priority groups 1-4 represent the individuals in the population who are likely to be most susceptible to COVID-19 infection:

- Care home residents and their carers
- Frontline medical staff
- Clinically extremely vulnerable individuals
- Those aged over 70

Groups 5-9 are categorised as:

- Those aged over 50
- High-risk adults aged over 16

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