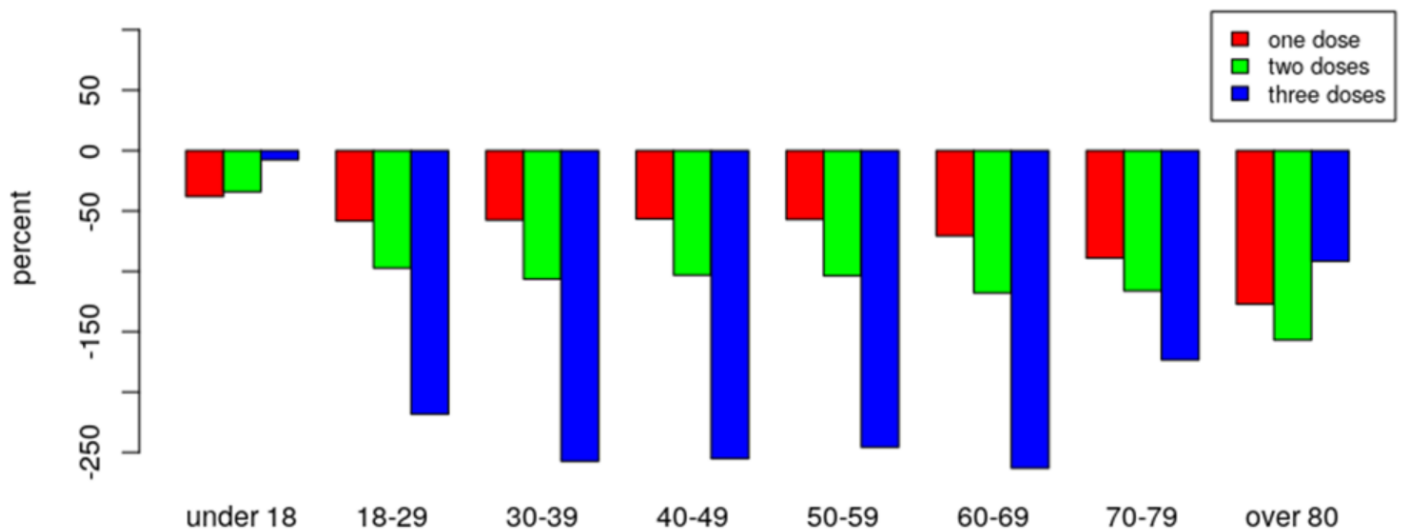


THE DAILY SCEPTIC

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Infection Rates Higher in Triple Vaccinated Than in Unvaccinated Across All Age Groups, UKHSA Data Show

**Estimate of vaccine effectiveness against infection (unadjusted)
from UKHSA Vaccine Surveillance Report for Week 10, 2022**

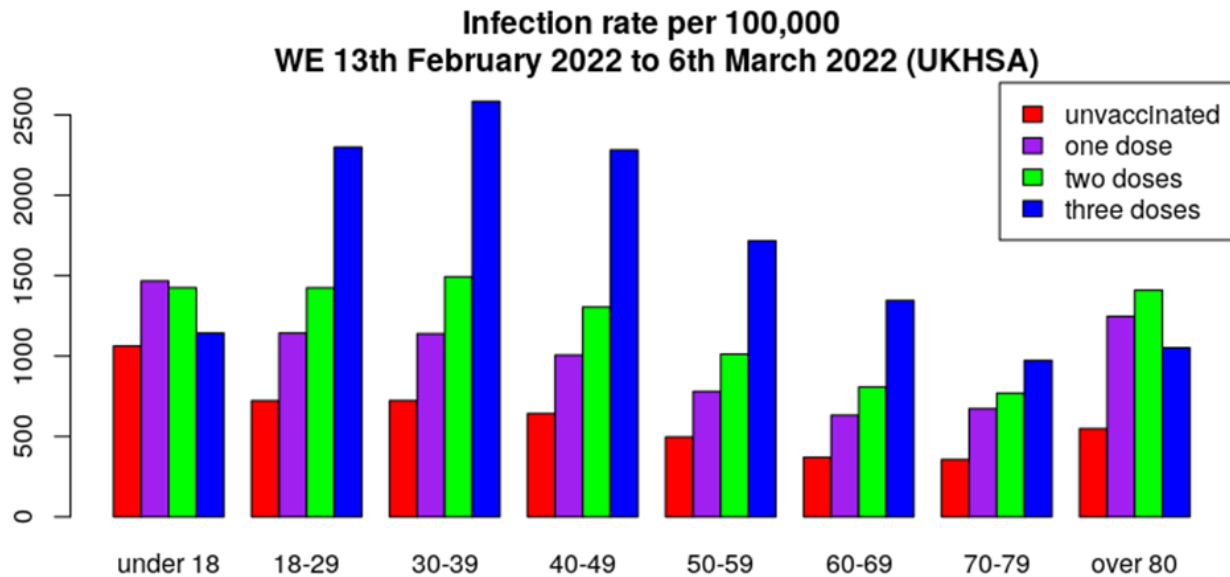


The [UKHSA Vaccine Surveillance Report](#) from week 10 is out. Rather than go on and on about the details in the numbers, perhaps it would be easier just to say that the vaccine performance appears to have declined [even further](#).

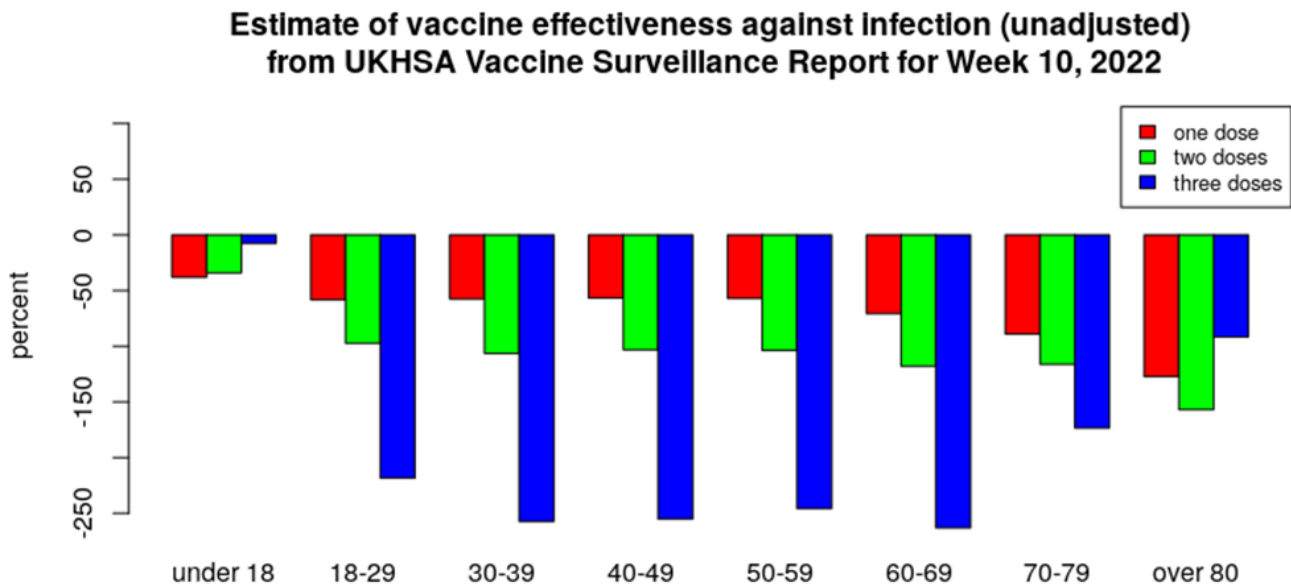
Well, perhaps I'll delve a bit more into the details, but I'll omit the endless graphs for this week and only summarise the current position, and use the space to discuss some other points in the data. For methodological details and discussion of limitations, see [last week's post](#).

Infections

Although the official data from the Government's Covid website suggest that we're seeing the signs of a resurgence in cases, because of the delayed nature of the UKHSA reporting this isn't yet visible in its data; this week sees another reduction in cases across the board (although this reduction is barely noticeable in the triple vaccinated over 60).

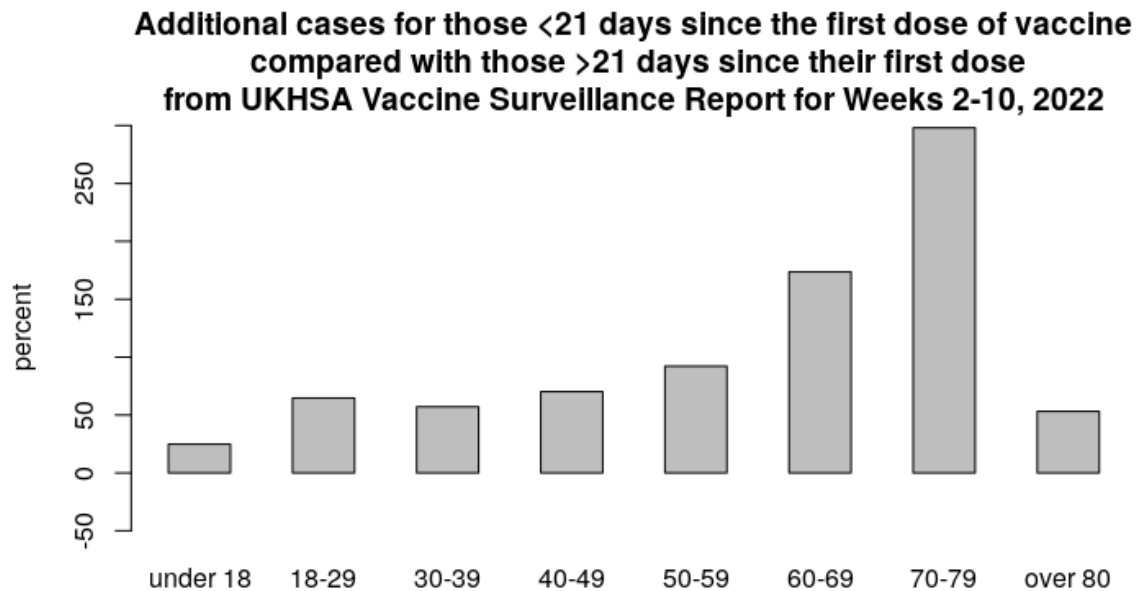


This translates into rather poor vaccine effectiveness across all ages (note that it has now dipped below zero for the third dose for those aged under 18, so no VE values are now positive):



I imagine that next week’s data will show a slight increase in infections.

Last week I noted that the UKHSA does offer some data on infections within 21 days of the first dose and after 21 days. There are relatively few people getting their first dose these days and the week by week figures are a bit too variable to offer insight, but we can report the average relative difference in infection rates for first dose individuals, comparing infections occurring within 21 days of vaccination and infections occurring after 21 days for those still on their first dose:



There do appear to be more cases within 21 days of the first dose of vaccine, compared with those that had been vaccinated for longer. However, a note of caution – it isn't clear who these people are. I suspect that in the age range from 18 to 60 there will be a significant number of healthcare workers, seduced into taking their first dose of vaccine to comply with Nadhim Zahawi's proclamations – these individuals would have had a higher exposure to Covid than the general population and thus might be expected to have a higher infection rate. On the other hand, the [UKHSA is very eager to tell us](#) that:

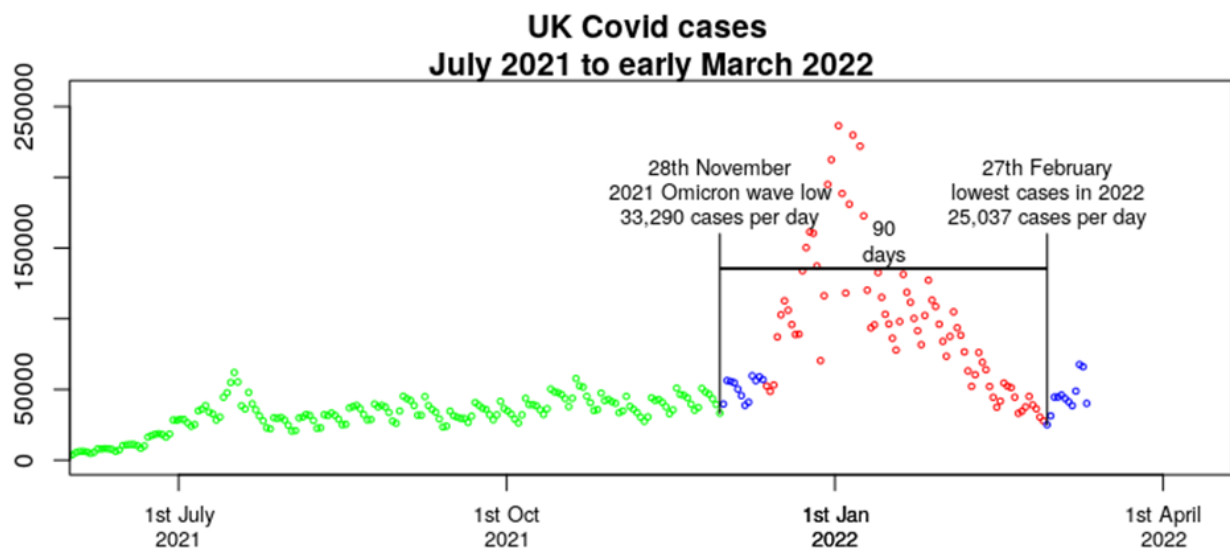
People who have never been vaccinated are more likely to have caught COVID-19 in the weeks or months before the period of the cases covered in the report. This gives them some natural immunity to the virus which may have contributed to a lower case rate in the past few weeks.

In other words, the UKHSA suggests that the type of person that was unvaccinated up until very recently but has just chosen to take the jab is more likely to have natural immunity and thus should have a lower rate of infection than those vaccinated earlier in the vaccination programme; the data presented above suggest otherwise – or maybe the UKHSA are correct and the increased risk during the less-than-21 day period is even worse than suggested in the above charts.

Finally, I have one note of caution on these infection figures – and this caution should extend into the UKHSA data on hospitalisations and deaths as well. The UKHSA is very keen to define what constitutes a ‘case’: cases start at the first positive test, and after that the individual has got 28 days to become hospitalised and up to 60 days to die. If he or she falls beyond this period then the case or death is not considered ‘Covid’. What’s more, the UKHSA has a rather intriguing definition of what happens after that 28-day period – quoting from its [Flu and Covid infection report](#): “It is important to consider reinfections in the context of first infections and there is a 90-day delay before people with a first infection can become eligible for reinfection.”

I love that phrase, *eligible for reinfection* – that could only come from a Government official. I’m afraid to inform the UKHSA that, like Canute’s officials and the tides, the powers of officialdom don’t extend to viruses and the human immune system – Covid will reinfect individuals when the time is right and certainly won’t be influenced by their 90 day exclusion period.

I note this because of what we’re seeing in [Covid infections data in the U.K.](#):



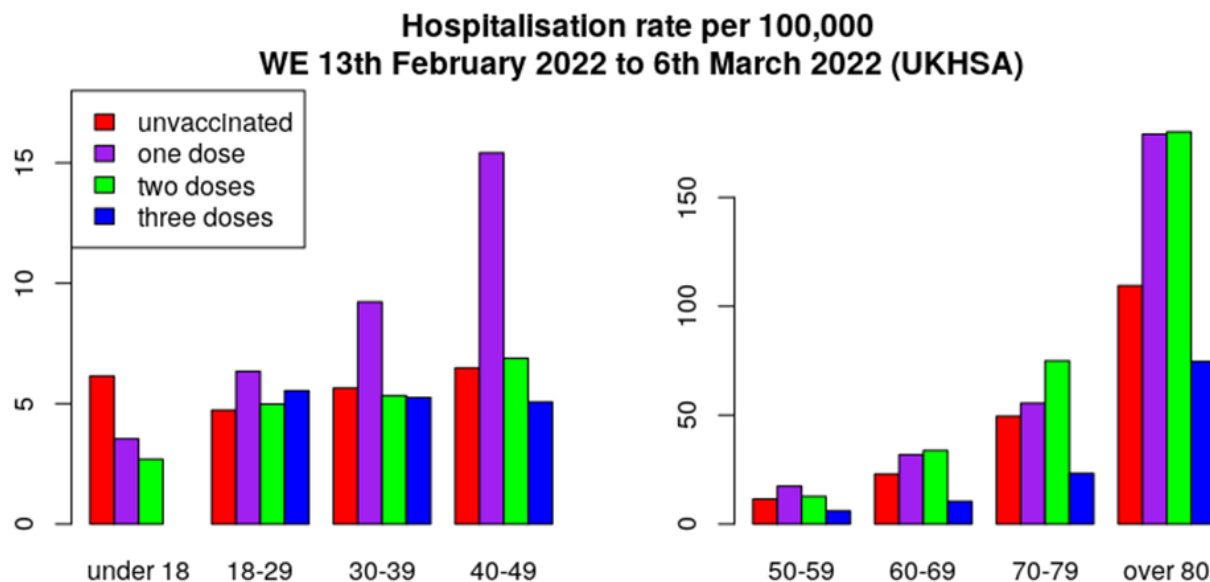
I’ve colour-coded the different areas of the graph above. The most recent data (blue, on the far right) show cases increasing, with the low in cases for this year occurring around February 27th. Prior to this we had this past winter’s Omicron wave (red), but exactly 90 days before the recent low was another low in cases (around November 28th), which marked the approximate point where the Omicron wave started in the U.K. I have also marked in blue the data points from the start of the Omicron wave which are now *eligible for reinfection*. I suggest that the rapid reduction in cases seen during January and February was in part a statistical illusion caused by the UKHSA not allowing any cases in those already infected in the Omicron wave from being counted, either because of a single prolonged infection or because of reinfection. (It was also in part a result of a sharp drop in [testing](#).)

When viewed in conjunction with the data presented [last week](#) from the ONS (no 90 day limit) and the Zoe Symptom Tracker (we don't know how its algorithm works, but it's showing that infections levels have remained high since Christmas) it very much suggests that the 90 day rule used by UKHSA has contributed to the illusion of recovery from the Omicron wave.

The big question that remains is whether there the vaccination status of an individual would have any impact on their likelihood of reinfection – if we do see a substantial increase in cases over the coming weeks then we might find hints to the answer to that question.

Hospitalisation

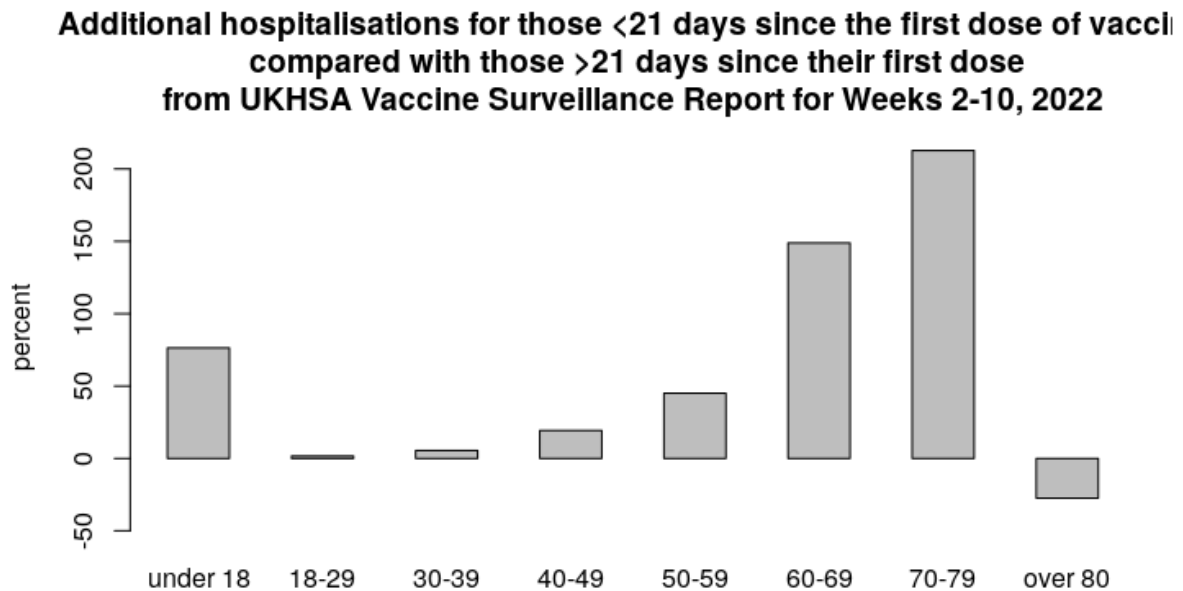
The increase in hospitalisations that can be seen on the official U.K. Covid dashboard is also not yet visible on the UKHSA data. Nevertheless, the hospitalisations data continue to show that the vaccines offer little protection against hospitalisation for the younger age groups:



For those aged over 60 the full three doses appear to offer *some* protection against hospitalisation, although the data continue to show that the vaccines increase the risk of hospitalisation for those with one or two doses only.

It isn't clear if the hospitalisations data also use the same 90 days eligibility criterion to be allowed to be a Covid reinfection (I suspect that it does).

Again, we can compare the relative rate of hospitalisations in those given their first dose of vaccine within the previous 21 days with those only having one dose but for longer than 21 days:

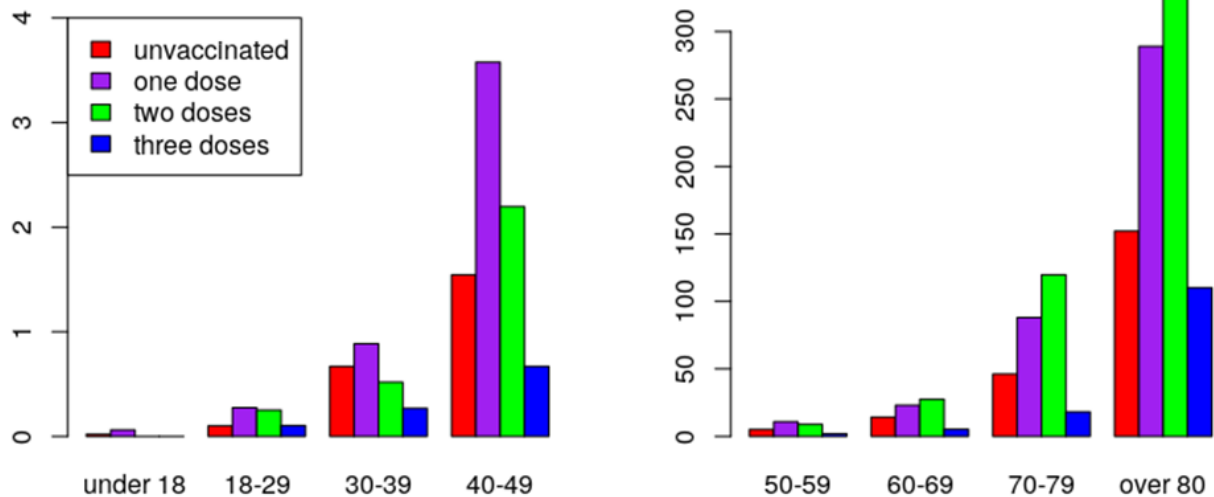


Here we see a much more mixed-bag compared with the relative rates of infections presented earlier. The data certainly suggest that there might be an increased risk of hospitalisation immediately after vaccination for older age groups, but thankfully there doesn't appear to be an increased risk of hospitalisation in those aged 18-40. It is unclear why there are increased hospitalisations in those aged under 18 and over 40. However, I remain puzzled as to what type of person chooses to take their first dose of vaccine after all this time, and I'd like to have more information about average morbidities in those that have recently received their first dose.

Mortality

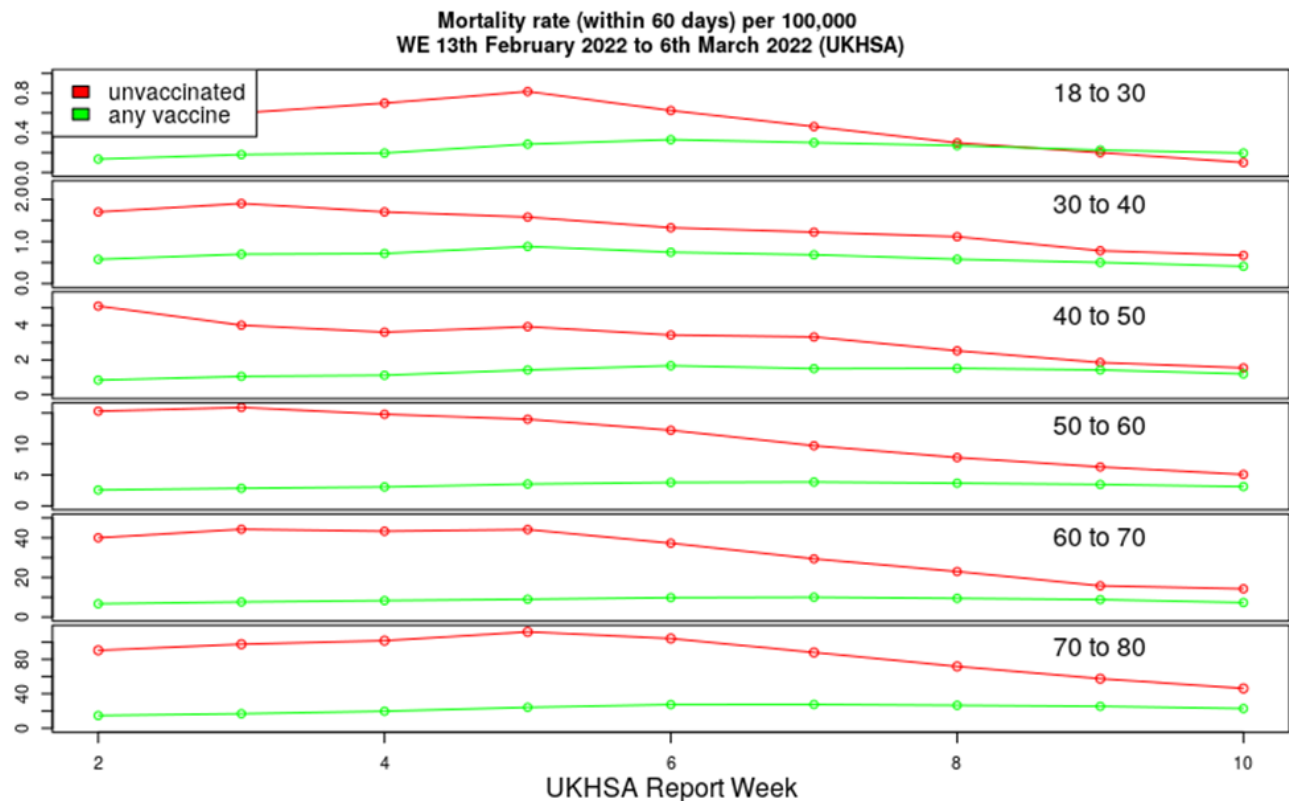
The deaths data for week 10 continue to show deaths falling, and, unlike infections and hospitalisations, we're also not seeing an uptick in deaths in the official data. I hope we don't see deaths rise but *hope* doesn't always work out.

Mortality rate (within 60 days) per 100,000
WE 13th February 2022 to 6th March 2022 (UKHSA)



We again see a small reduction in mortality rate in those triple-vaccinated, with higher mortality rates in those only having one or two doses of vaccine. I think that it is important to note that mortality rates are very low in those aged under 60-70, regardless of vaccination status.

The difference in mortality rates by dose looks suspicious; as mentioned in [previous weeks' reports](#), I believe that there are differences in the proportion of individuals very close to death between those that have received one, two or three doses of vaccine. I also believe that the unvaccinated group contained a small number of these very ill individuals but that they have (sadly) died and thus the unvaccinated group is now more broadly representative of the general population. Because of this I believe that it is useful to consider mortality rates for the unvaccinated versus those that have received any vaccine dose.



The red curves above suggest that there were still residual deaths due to Delta variant early in the year, but now that Delta has been displaced by Omicron the Covid death rate in the unvaccinated is now close to that of the vaccinated (green curve). The change in mortality rates over the last nine Vaccine Surveillance Reports, comparing the unvaccinated with those having taken any vaccine, is strongly suggestive that the vaccines now offer little net protection against death for the Omicron variant.

Presentation of the mortality rate for those given their first dose of vaccine was not possible; there are so few people receiving their first dose these days and the number of deaths is too low, even in older age groups, to allow meaningful analysis.

Other news

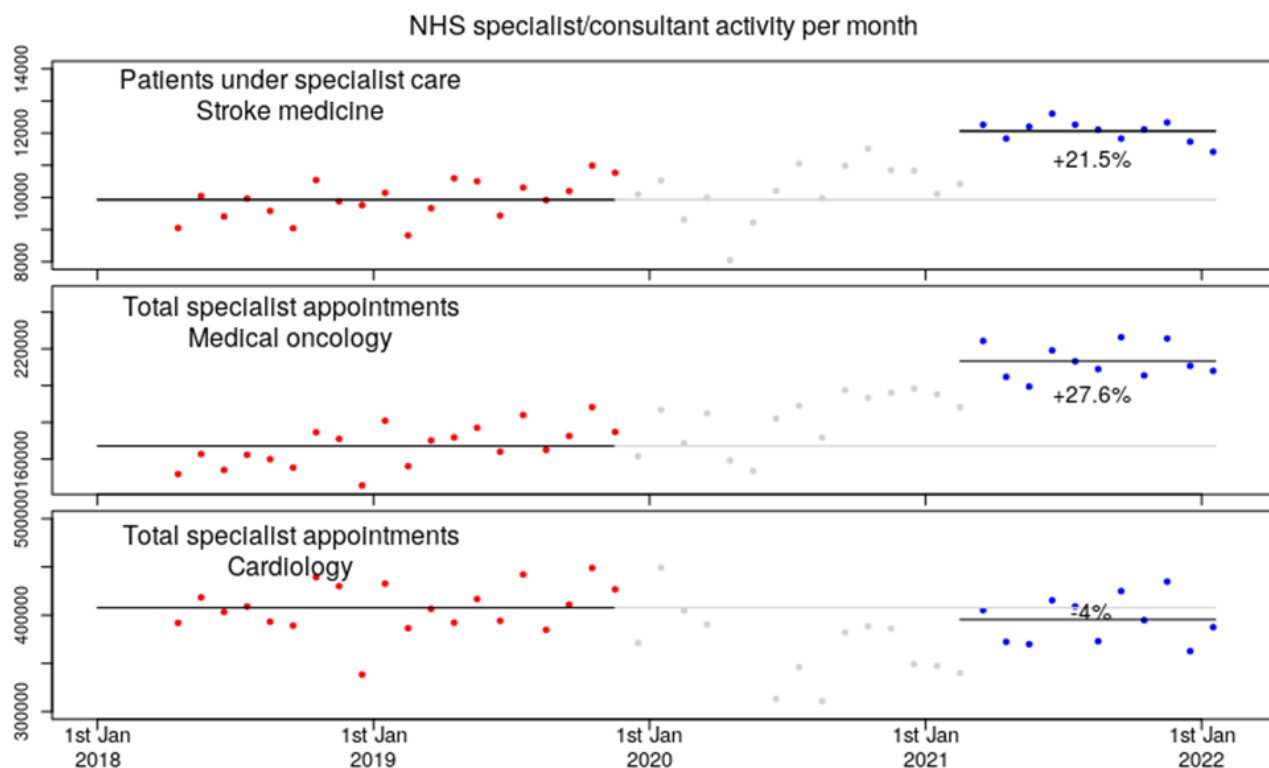
Last week saw the release of the latest data on [specialist consultant activity in NHS hospitals](#). These datasets contain huge amounts of information, but arranged in a complex format that makes analysis difficult at a casual level – it is unfortunate that the NHS don't present its data in a format that is easier for the general public to browse.

I've selected three different specialist areas to discuss today:

- Stroke medicine – This should give an indication of any changes in the rate of strokes in the U.K.

- Medical oncology – This relates to cancer consultation and treatment that doesn't involve radiotherapy.
- Cardiology – This is an 'obvious choice' given that our authorities have reluctantly accepted that the vaccines create a risk of heart problems.

I'll present the data in graphical form, with the timescale covering the full range made available to us from the NHS, from early 2018 to January 2022. To aid interpretation, I've colour coded each data point; red for the pre-Covid period, grey for the Covid period pre-vaccine and blue for the post-vaccine period. I've also included lines to indicate the pre-Covid and vaccine-period averages, and the percentage change between the pre-Covid and post-vaccine period.



The data are concerning. There appears to be a 21% increase in hospital activity regarding strokes in the post-vaccine period and a 27.6% increase in cancer specialist activity. We don't have data on why these increases are occurring; they could be due to Covid itself, lockdown, the vaccines or be completely unrelated to Covid (*climate change* has become a popular ~~excuse~~ reason for all sorts of medical problems in the past few months). We'd know more if the NHS released data on hospital consultant activity by patient age-range and vaccination status, but I fear that this is unlikely to ever be seen – our authorities appear very keen not to release additional data on anything that might show their Covid response (vaccines or lockdown) to have caused harm.

The big surprise in the data above is the cardiac consultant activity – we see a small decline in activity in the post-vaccine period, compared with the pre-Covid period. I note a few important

points about this particular aspect of the data:

- Even with a confirmed risk of myocarditis from the vaccines there's no visible change in the hospital statistics. This shows how difficult it can be to identify problems with medical treatments just by waiting to see if anyone notices that there's a problem.
- If there's no visible change in cardiac consultations even though there is a known risk of myocarditis from the vaccines, exactly how large might the real stroke or cancer risk be?
- It might be that the cardiology data are complicated by sheer numbers – very high numbers of people over the age of 70 or so will have some interaction with a cardiac specialist at some point, so an increase in heart attacks as such might be drowned out by these more regular consultations. By contrast, stroke and cancer specialists are only seen in the event of a stroke or cancer diagnosis.

I could put together a more comprehensive analysis of these data if people are interested.

Amanuensis is an ex-academic and senior Government scientist. He blogs at [Bartram's Folly](#).

This post has been updated: the graphs comparing rates before and after 21 days after first vaccination have been updated to take into account time of exposure, and the text under the hospitalisation chart amended accordingly.

By [Amanuensis](#) / 13 March 2022 • 12.17

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