PANDEMIC UPDATE: MD ON EXCESS DEATHS AND VACCINES

English excess

EXCESS deaths generally go up in time as the population increases and ages, so age standardised mortality rates (ASMRs), which allow fairer comparisons between countries and within them, are used to account for this. The Office for National Statistics (ONS) data excludes 2020 as a comparator year as excess deaths from Covid were so high, and has compared 2022 to the average of 2021 and 2016-2019. Based on this, excess deaths in England were 6.3 percent above average for 2022, but ASMRs were 0.7 percent *below* average. Looking at the pattern over the year, ASMRs were strongly negative in January and February 2022 (-15.9 percent -13.4 percent) and most positive in August and December (7.5 percent; 9.4 percent).

Causes of English deaths

THE peaks in ASMR could be explained by the heatwave (August) and the flu season (December), combined with NHS pressures causing difficulties accessing healthcare, particularly in an emergency. Random fluctuations happen too. As for causes given on death certificates, in December 2022 the leading cause of excess death in England was influenza and pneumonia, at 574 excess deaths (26.2 percent above average). For 2022 overall, the leading cause of excess deaths was symptoms, signs, and ill-defined conditions (which includes "old age" and "frailty"), with 4,756 excess deaths (36.9 percent above average). As for vaccine-related deaths, ONS data show just 52 deaths in England and Wales where Covid-19 vaccines were the underlying cause between March 2020 and December 2022. More than 150m vaccine doses were administered in that time. This doesn't mean ONS data is perfect or vaccine-related deaths haven't been missed, but we'd need to be missing a *lot* of them for vaccines to be causing significant excess deaths. Or maybe they're not.

Global excesses

GLOBAL datal also fails to nail mRNA vaccines as a cause of significant excess deaths.

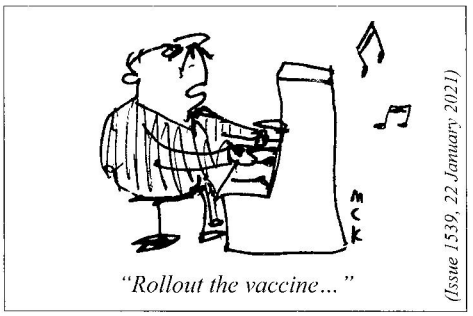
1. In the official data from every country I can find, since the start of mRNA vaccination the unvaccinated have had higher excess death rates *per capita* than the vaccinated. Excess deaths rose significantly with pandemic waves prior to vaccination, and aggregate mortality rates fell significantly in most countries after vaccines were rolled out. This strongly suggests mRNA vaccination greatly reduced excess deaths overall. As vaccines were often rolled out by age, you can track the likely benefits in each age cohort.

2. Many countries have had higher excess deaths recently, leading to the hypothesis that over-vaccination with mRNA boosters might be behind it. But not all the highly mRNA vaccinated countries have a higher age-standardised excess of death. Some do, some don't. Some booster campaigns are followed by excesses deaths but not all. If mRNA vaccines were causing excess deaths, you would expect high excess deaths in all highly vaccinated countries and after all mRNA booster rollouts.

3. In countries with high excess deaths and high mRNA vaccine uptake, there are usually other plausible explanations (eg Covid or flu waves, health system pressures, heatwaves, cold winters).

Trial benefits

THE vaccines have been extensively studied. A comprehensive Cochrane review of all evidence available from 41 randomised controlled trials (RCTs) of Covid-19 vaccines up to November 2021 concluded that most protect against



"Rollout the vaccine..."

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infection and severe or critical illness caused by the virus. It also concluded: "There is probably little or no difference between most vaccines and placebo for serious adverse events." RCTs provide the fairest comparisons but their smaller size means rarer side effects may not be picked up and they only give you evidence for the period under study, so real world data are needed too.

The New Zealand experiment

THE *Economist* publishes cumulative excess deaths per 100,000 of the population since a country's first 50 Covid deaths. New Zealand is currently doing best on -1, Britain is on 322. Both are highly mRNA vaccinated. Whatever is driving the difference in excess deaths, it doesn't appear to be the vaccines. Top of the death table is Bulgaria on 1,102. It has the lowest rate of Covid vaccination in the EU.

New Zealand pursued a zero Covid policy while getting its population vaccinated. When the vaccines were given, there was no SARS-CoV-2 circulating to confuse the picture. During the initial roll-out, excess deaths did not go up and there was no indicator of widespread vaccine harm.

When highly transmissible Omicron came, New Zealand and Hong Kong had to abandon their zero Covid policies. New Zealand had achieved very high mRNA vaccine uptake, with only 2 percent of the over-80s unvaccinated. Hong Kong had an issue with vaccine hesitancy among elderly people – 66 percent of the over-80s were unvaccinated. Those who were vaccinated mainly had the less effective Chinese Sinovac, a non-mRNA vaccine.

The comparison when Omicron hit was stark, with a case fatality rate (CFR) of 4.7 percent in Hong Kong and just 0.1 percent in New Zealand. Omicron, it turns out, was only milder if you had vaccine protection. Hong Kong's CFR with Omicron was higher than England's pre-vaccine peak. Hong Kong set a new global record for seven-day average Covid deaths per million, over two years into the pandemic and nearly three times the initial peak in Italy. Omicron was only "milder" if you had vaccine protection. But the vaccines don't provide full protection.

New Zealand has had some excess deaths recently, but that is far more likely to be due to letting the virus in than using the vaccines. Modelling by Imperial College London estimated that 19.8m Covid-19 deaths worldwide were prevented in the first year of vaccination. But many couldn't be prevented.

Vaccine waning

SOME vaccines are more effective than others. Smallpox is often fatal and the vaccine is highly effective but I don't bother having an annual booster because smallpox has been eradicated (thanks to the vaccine).

The SARS-CoV-2 virus was never likely to be eradicated because of its ability to mutate, and there comes a point where so many people have been vaccinated and have protection from infection, that further boosters may add a lot of cost for little extra benefit and could even do more harm than good. Hence the UK and Denmark won't offer boosters to the fit under 50s, unless an unpleasant variant emerges. But cardiologist Aseem Malhotra and MP Andrew Bridgen want all vaccination suspended now. Why?

The risks

1. THE Cochrane review found no serious risks in 41 RCTs but a reanalysis of Pfizer and Moderna clinical trials used for FDA (US Food and Drug Administration) approval and published in *Vaccine* found a risk of "serious adverse events (SAEs)" of 1 in 800. However, this high rate of early SAEs was not observed in, say, New Zealand's vaccine roll out.

2. If you compare 2022 just to 2019, there appears to be a significant increase in excess cardiac deaths in middle-aged people. This could be because:

- The repeated overstimulation with mRNA boosters is causing immune-mediated cardiac arrests;
- Lots of people did not have high blood pressure or high cholesterol diagnosed during the pandemic;
- Normal numbers of people are having cardiac arrests but the ambulances aren't getting their fast enough;
- Covid significantly raises cardiovascular risks long term;
- Many high-risk people have been put off protective boosters and had repeated infections;
- 2019 was a low year for cardiac deaths so the comparative rise in 2022 could be random

Heart damage?

THUS far, the most serious side effect picked up for mRNA vaccines in real world data is myocarditis, which Scandinavian research found is not only rare but much less likely to cause heart failure and death than the myocarditis you can get with Covid (*BMJ Medicine*). In one trial, patients with heart failure were more likely to survive if they were fully vaccinated and boosted vs unvaccinated. (*Journal of Heart Failure*).

Even if some immune-mediated cardiovascular deaths are triggered by exposure to the spike protein, you get exposed to far more spike protein from infection than vaccination. If you're genetically susceptible, the virus is far riskier than the vaccine.

MD agrees with Malhotra that vaccines, like all drugs, should be voluntary, used wisely and with informed consent. Drug companies should make all data for trials for drugs used in humans available, perhaps at secure sites where bona fide researchers can access it, and other researchers can see what they're doing. Transparency is key.

It's perfectly legitimate to question mRNA vaccines, but if you deliver your verdict with a confidence that belies the uncertainty of the evidence, you risk doing far more harm than good. People are put off vaccines that could save their life. Bridgen's deleted tweet describing mRNA vaccines as "the worst crime against humanity since the Holocaust" got his Tory party whip removed but his Twitter followership flourished.

If Malhotra and Bridgen are right, we're doomed: 13.27 billion vaccine doses have been given globally, mainly mRNA, so we could all be ticking time bombs for early cardiac death. But as my pathology lecturer used to say: "Every life ends with a cardiac arrest. You just have to figure out why." Covid still accounted for 35,000 UK deaths in 2022, is back on the rise and still causing harm. The good news is that excess deaths in the UK were down to just 2 percent in the week ending 27 January, coinciding with the waning of the flu season and improvements in emergency response times. Maybe it wasn't the vaccines after all.