

# Twitter Thread by John Burn-Murdoch

**John Burn-Murdoch**

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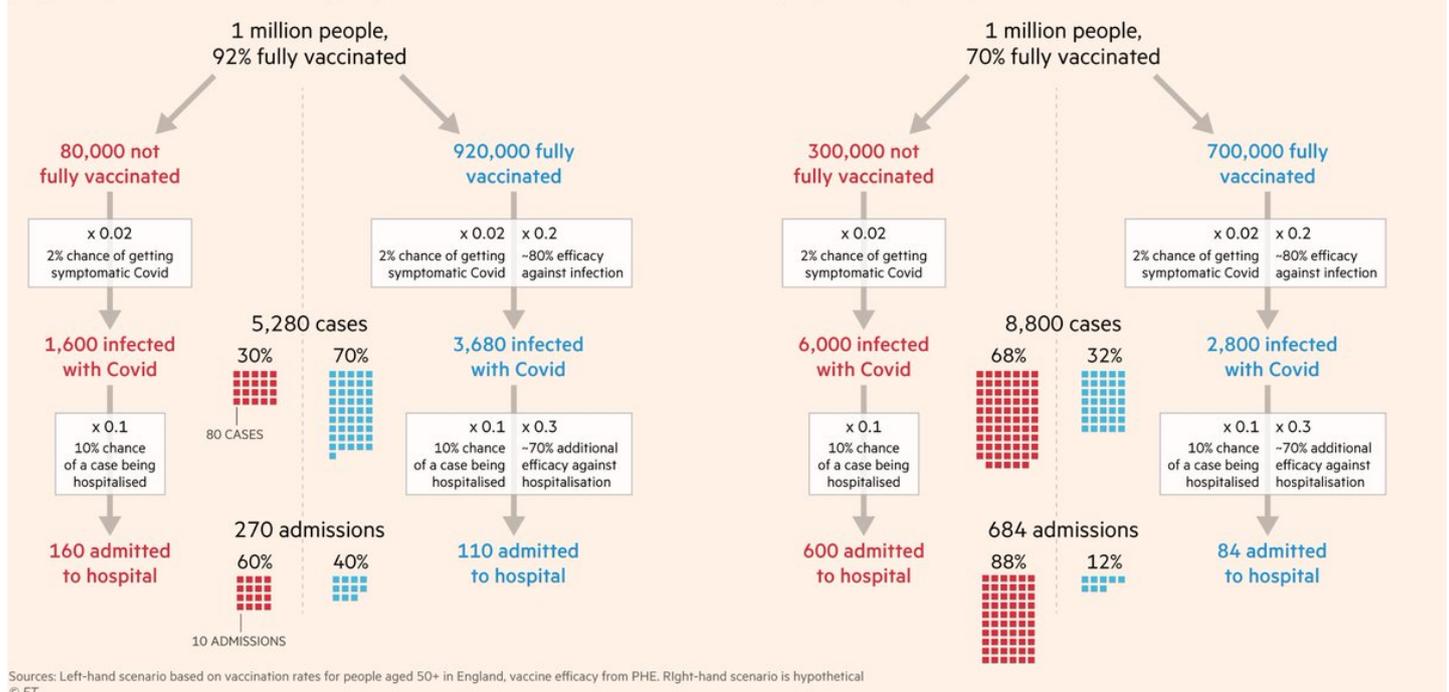
**NEW: people worry when they hear "40% of hospitalisations are fully vaxxed", but this chart shows that's actually good news.**

**The more people you vaccinate, the higher their share of hospitalisations, but the *\*total\** number in hospital is a fraction of what it would otherwise be**

Why a high proportion of double-jabbed people among hospitalisations does not mean the vaccines are failing

When a **very high share of people are fully vaccinated**, a large share of cases and hospitalisations will be double-jabbed people despite the vaccines working very well

When a **lower share are fully vaccinated**, the double-jabbed are a smaller share of cases and hospitalisations, but far more people end up in hospital overall



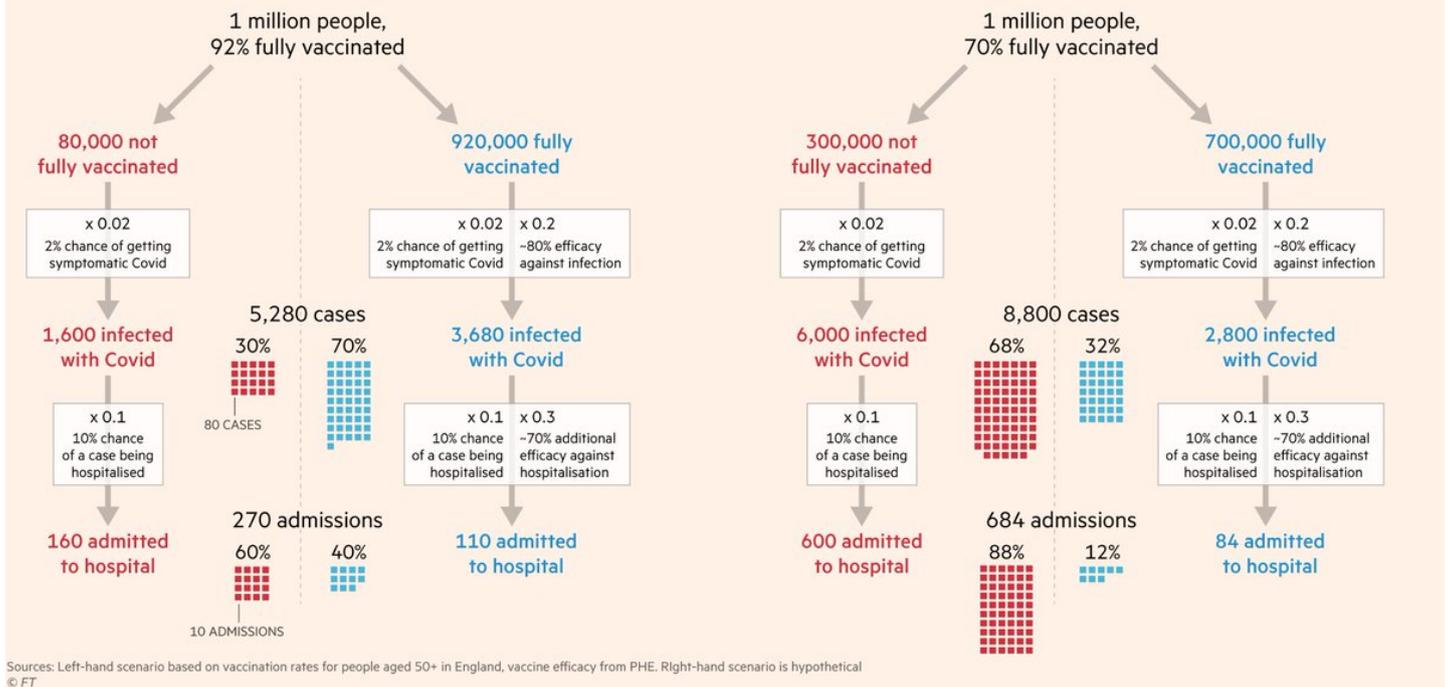
If fewer people are fully vaccinated, a smaller share of hospitalisations will be fully-vaxxed too, but this is not a good thing:

Overall there will be a lot more people in hospital because far more of the population is unprotected.

## Why a high proportion of double-jabbed people among hospitalisations does not mean the vaccines are failing

When a **very high share of people are fully vaccinated**, a large share of cases and hospitalisations will be double-jabbed people despite the vaccines working very well

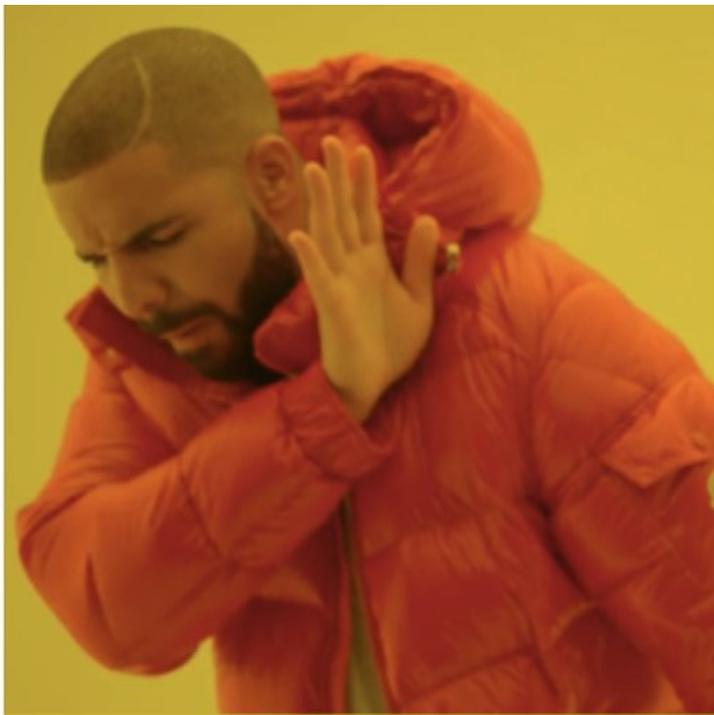
When a **lower share are fully vaccinated**, the double-jabbed are a smaller share of cases and hospitalisations, but far more people end up in hospital overall



In other words: if you want to know whether the vaccination program is working, don't focus on whether the fully vaccinated make up 40% or 12% of hospitalisations.

Focus on whether the hospitalisation rate is 270 per million or 684 per million.

And since this is Twitter, I've prepared the same thing in meme form



What share  
of hospitalisations  
are fully  
vaxxed people?



What share  
of all  
people end up  
in hospital?

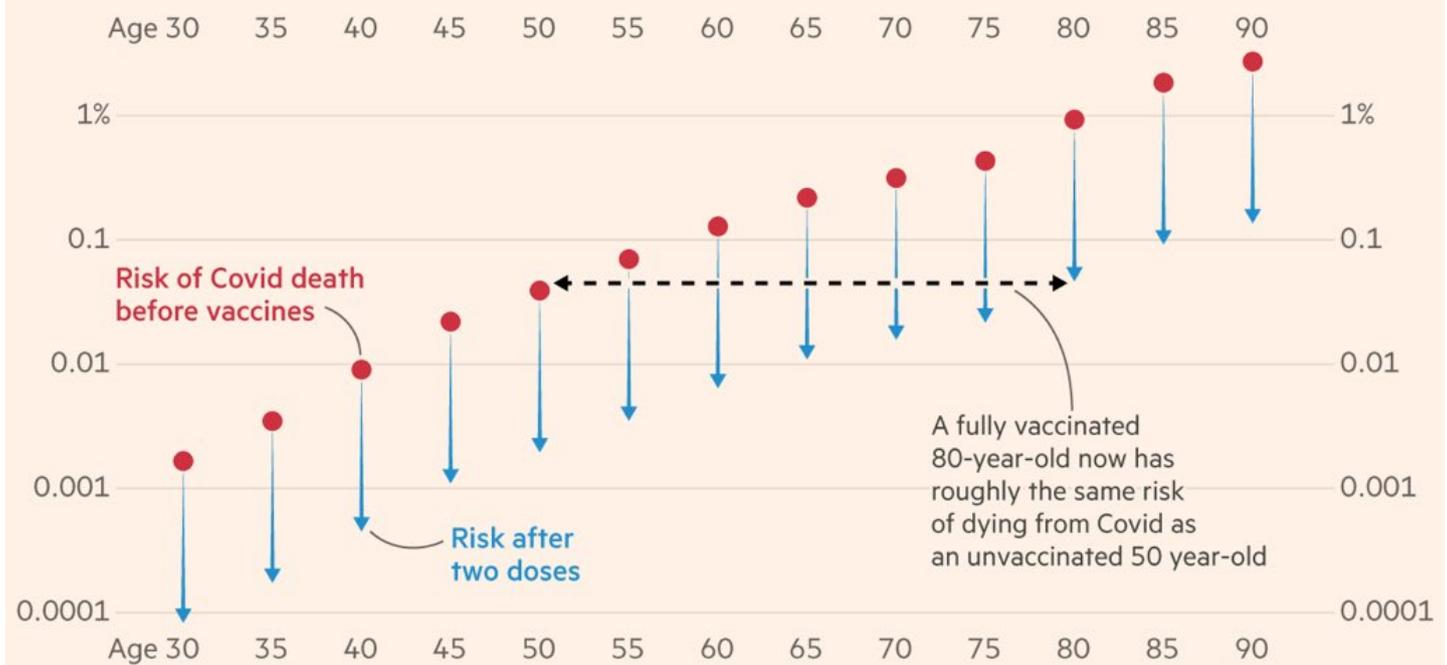
But back to charts:

All the data we have suggests vaccines are working remarkably well. Far beyond what had been hoped for a year ago.

For example, a fully-vaxxed 80-year-old now has the same risk of dying from Covid as an unvaxxed 50-year-old. That's an enormous drop in risk!

# Vaccines have made Covid-19 far less lethal. A fully-vaccinated 80-year-old now has the same mortality risk as an unvaccinated 50-year-old

Risk of catching and dying from Covid\* (log scale), by age group, before and after full vaccination



\*Risk is the population fatality rate, e.g before vaccines roughly 1% of all 80-year-olds in England had died from Covid

Source: FT analysis of data from Public Health England

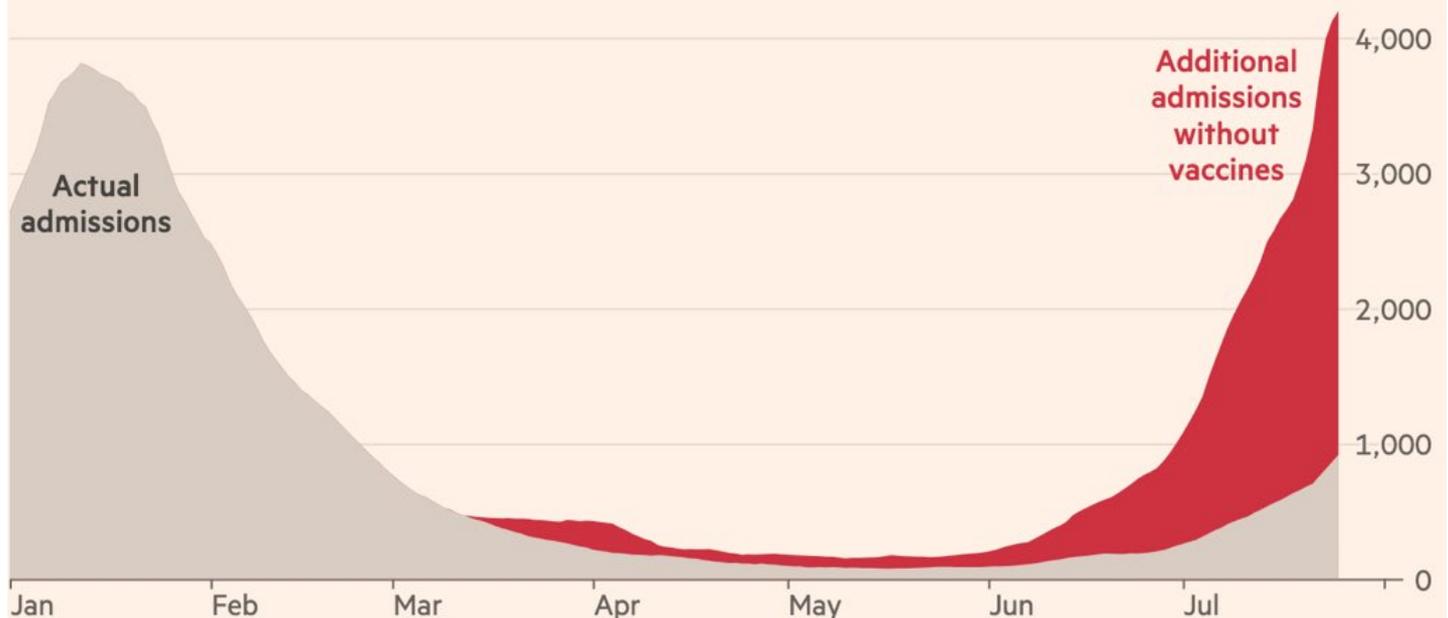
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And we can see the game-changing impact of vaccinations clearly in the English hospitalisation data.

If it weren't for vaccines, more Covid patients would have been admitted to hospital yesterday than at the height of the winter peak. Instead we're 75% below it.

## Without vaccines, England's daily Covid hospital admissions would already be above the winter peak

Daily admissions of Covid-positive patients in England, **actual** vs **without vaccines\***



\*Admissions modelled based on a counterfactual where the age profile of cases and the age-specific risk of hospital admission after becoming a case are fixed at their January levels (in reality, vaccines have made the age profile younger and hospitalisation risk lower)  
Source: FT analysis of UK government Covid-19 dashboard and PHE surveillance reports

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Here's the full story from [@mroliverbarnes](#) and me <https://t.co/FKhU0diMY0>

...which features other excellent lines like this from [@anthonybmasters](#), who has a brilliant seatbelt analogy for vaccines

About two-thirds of people who die on UK roads are wearing a seatbelt, but this is a consequence of usage rates of nearly 99 per cent, Masters said. He added that the same logic applied to severe disease and death in highly vaccinated populations.