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Longevity & Mortality Webinar Series 2022

Further impacts of COVID-19

Matthew Edwards, Willis Towers Watson
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25 July 2022

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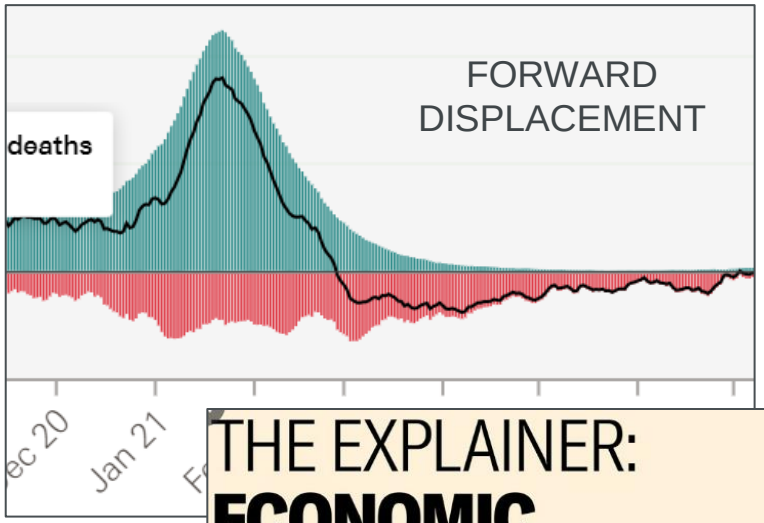
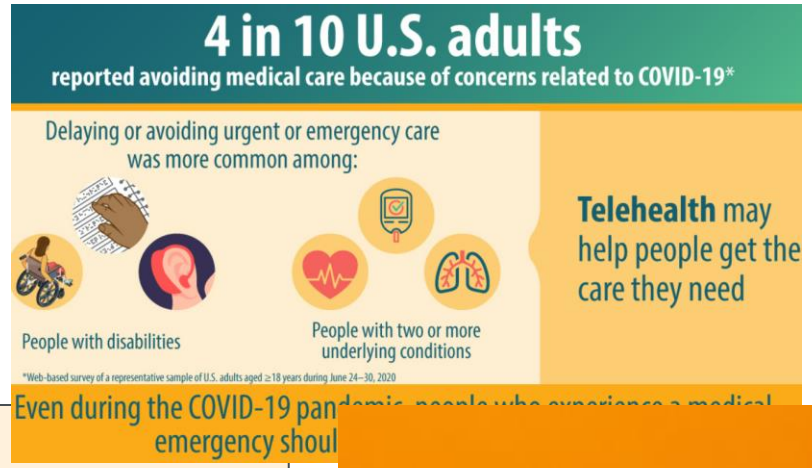
Endemic COVID

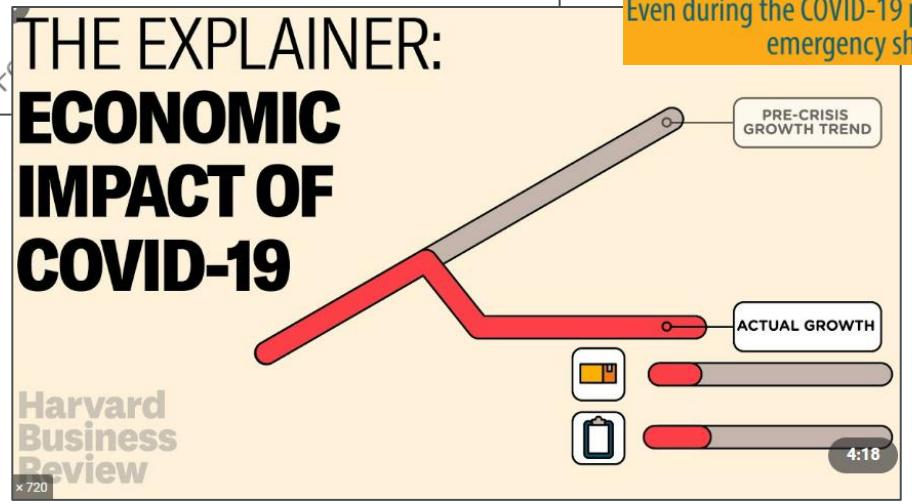
Matthew Edwards

25 July 2022

Future mortality & morbidity impacts of the pandemic







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Endemic COVID-19 may be the biggest effect

World view

COVID-19: endemic doesn't mean harmless

Rosy assumptions endanger public health – policymakers must act now to shape the years to come.

The word 'endemic' has become one of the most misused of the pandemic. And many of the errant assumptions made encourage a misplaced complacency. It doesn't mean that COVID-19 will come to a natural end.

To an epidemiologist, an endemic infection is one in which overall rates are static – not rising, not falling. More precisely, it means that the proportion of people who can get sick balances out the 'basic reproduction number' of the virus, the number of individuals that an infected individual would infect, assuming a population in which everyone could get sick. Yes, common colds are endemic. So are Lassa fever, malaria and polio. So was smallpox, until vaccines stamped it out.

"It frustrates me when policymakers invoke the word endemic as an excuse."

Nature **601**, 485 (2022); *https://doi.org/10.1038/d41586-022-00155-x*

At present, we have no useful references in 'the literature' on likely endemic COVID-19 impacts – but a range of opinion pieces all leaning in the same direction

What sort of approach to quantify the impact?

- **Post-vax COVID-19 mortality**
- **Vaccine waning**
- **Non-vax % of population**

→ **Adjust for country and SE profile** →

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SAGE / SPI-M views

Guidance
COVID-19 Response: Living with COVID-19
Updated 6 May 2022

Viral Evolution Scenarios (10 February 2022)

- Referenced in the UK Govt's 'Living with COVID-19'
- Four scenarios considered as a way of looking at COVID-19 impacts in terms of transmissibility, immune escape, and severity (intrinsic and realised)
- eg the 'central pessimistic' view is:

> **In the next 12-18 months:** Emergence of a new variant of concern results in a large wave of infections, potentially at short notice and out of Autumn/Winter. However, severe disease and mortality remain concentrated in certain groups (and lower than pre-vaccination), e.g. unvaccinated, vulnerable and elderly.

https://www.gov.uk/government/publications/covid-19-response-living-with-covid-19/covid-19-response-living-with-covid-19

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054323/S1513_Viral_Evolution_Scenarios.pdf

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‘Calibrating’ Endemic COVID-19

- We have found it useful to think about endemic COVID-19 as a ‘multiple’ of normal seasonal influenza mortality
- Broadly similar age relationship
- This also highlights the key question of how Endemic COVID-19 and normal flu are likely to interact:
  - There may be an adverse interaction (eg from biological perspective, and from health service strain during the winter)
  - There may be a benign interaction (eg fear of endemic COVID-19 leads to greater flu vaccine uptake, and of course the point about ‘competing’ causes of death)
  - Or may be broadly neutral
- *Overall view?*

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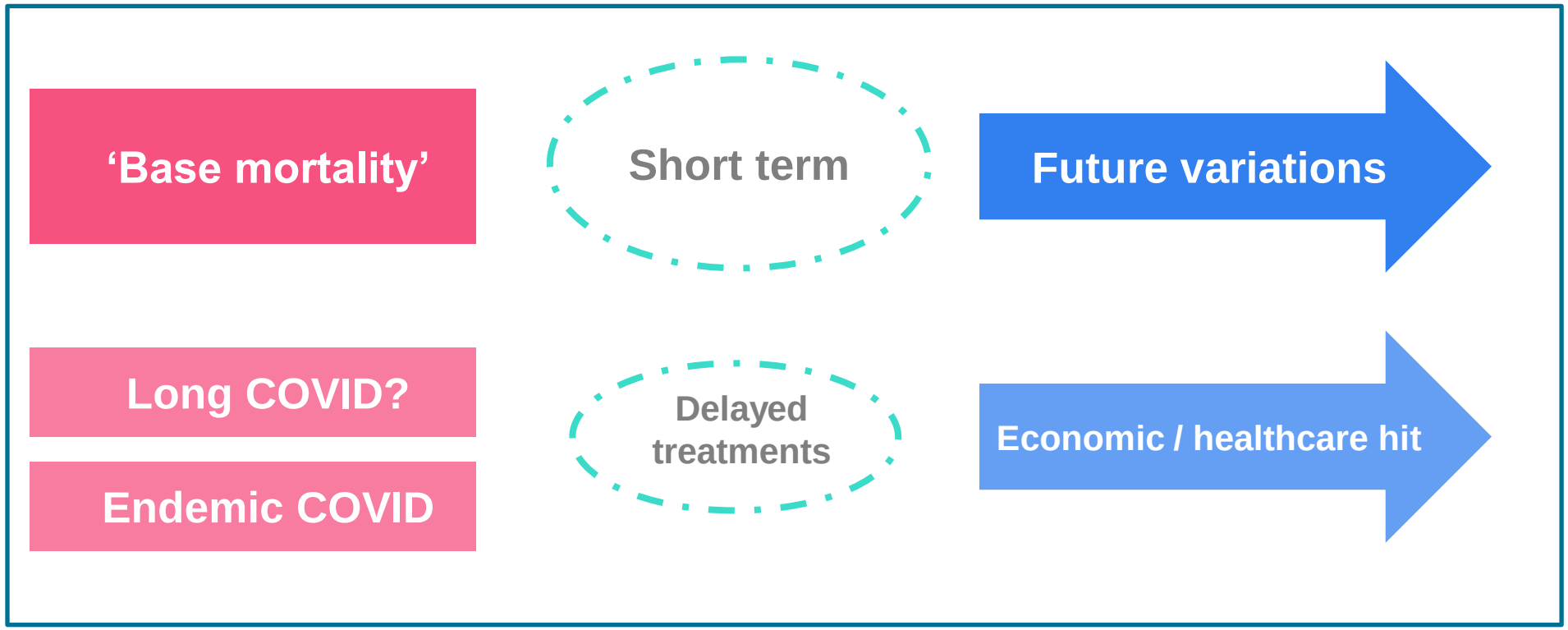
How to structure these impacts?



Consistency across areas

Framework allows consistent approach in future years

Consistency across mortality and morbidity (CI, health)

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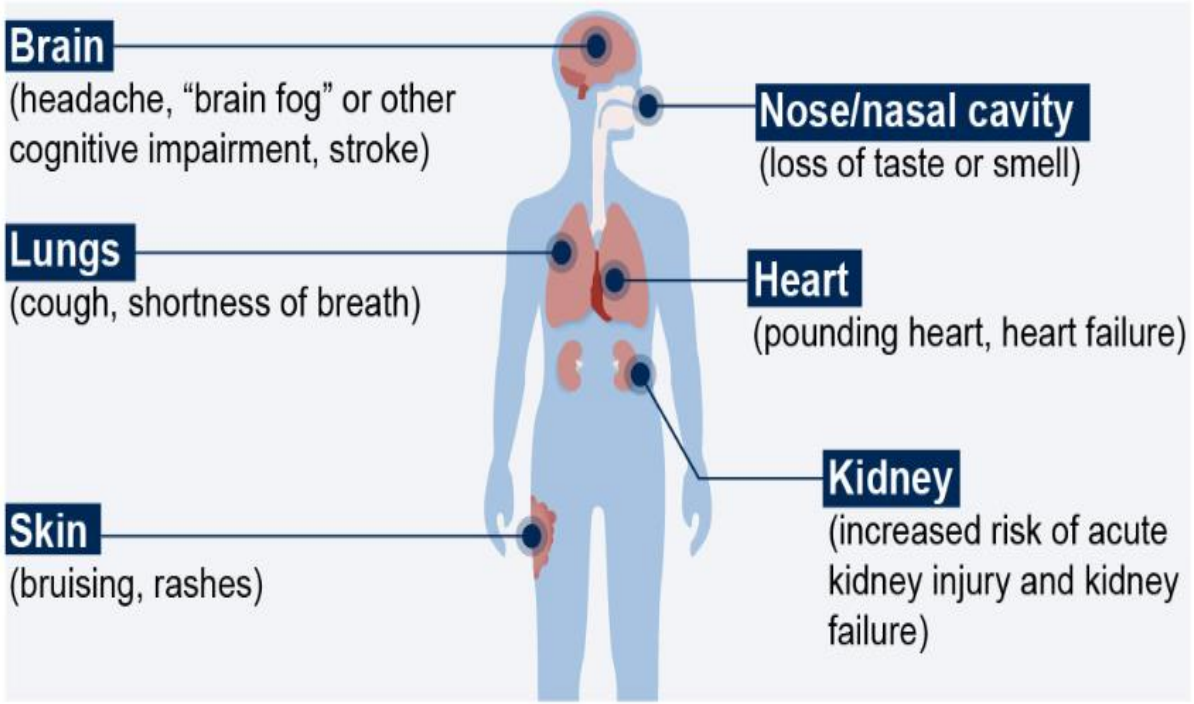
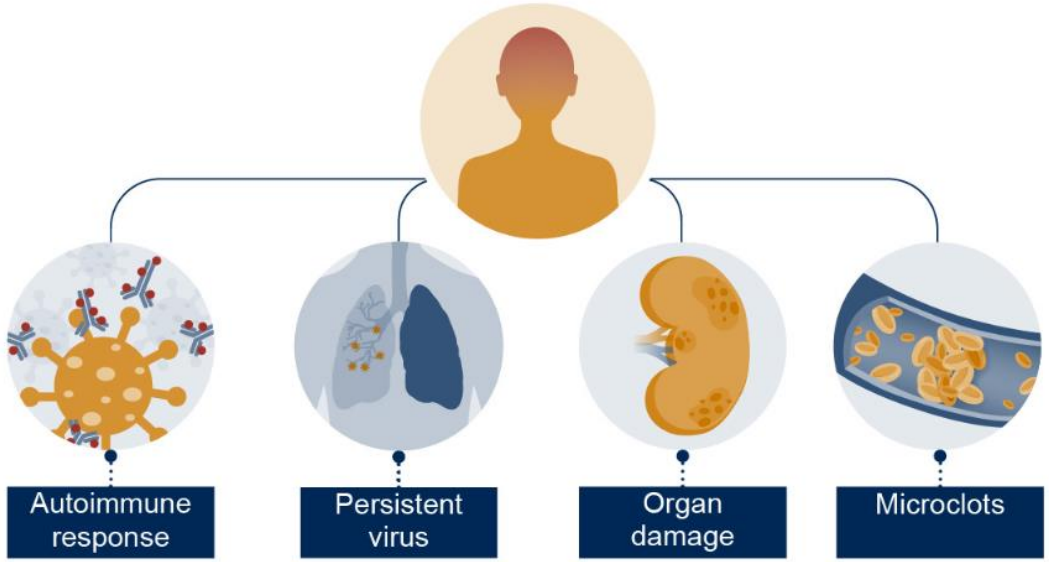
Long COVID

Dan Ryan

25 July 2022

Systemic effects of Long COVID





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Source: GAO

US prevalence of symptoms in Long COVID

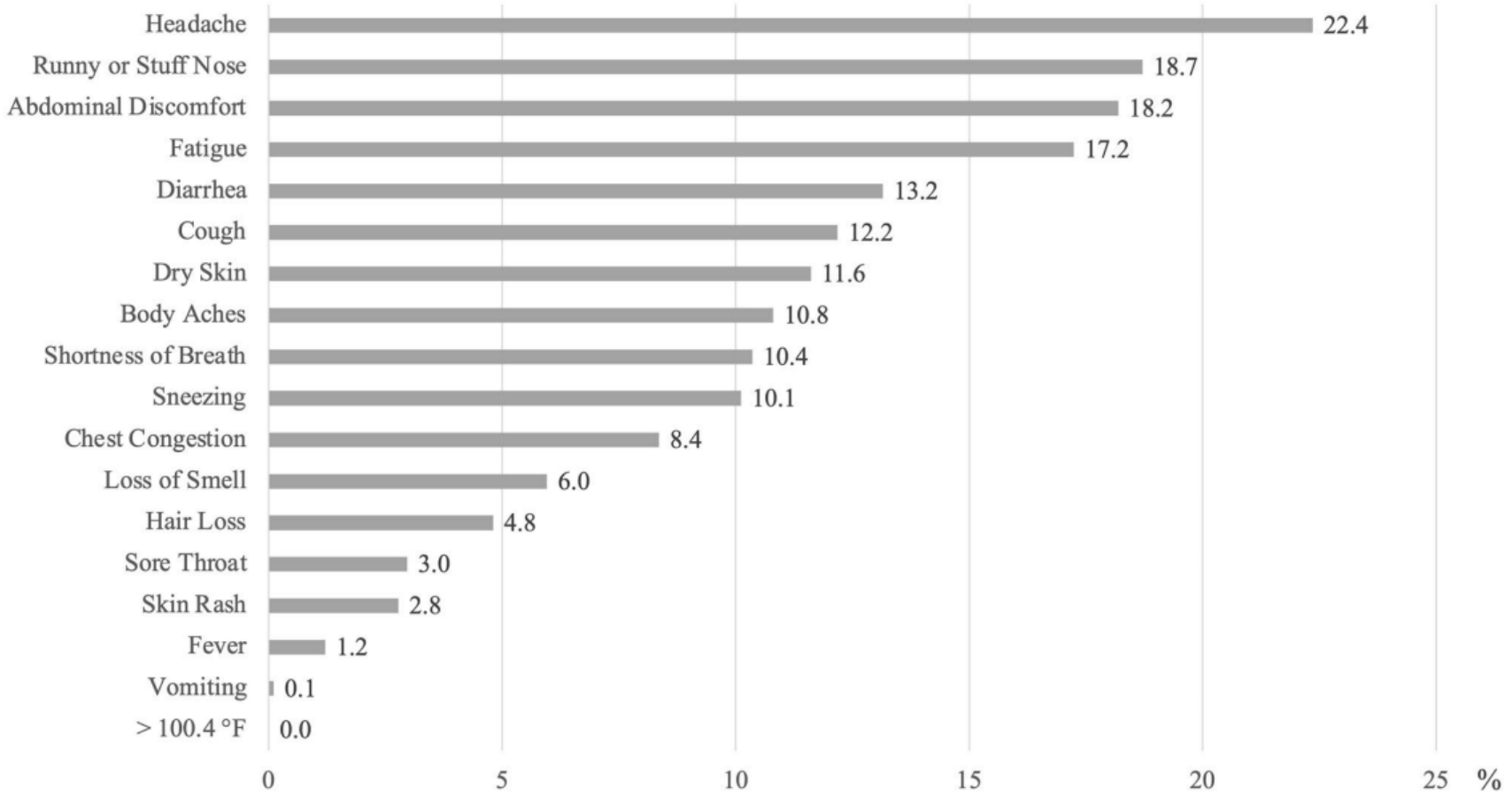

Figure 3. Prevalence of new-onset persistent COVID symptoms among those with long COVID 12 weeks after infection.

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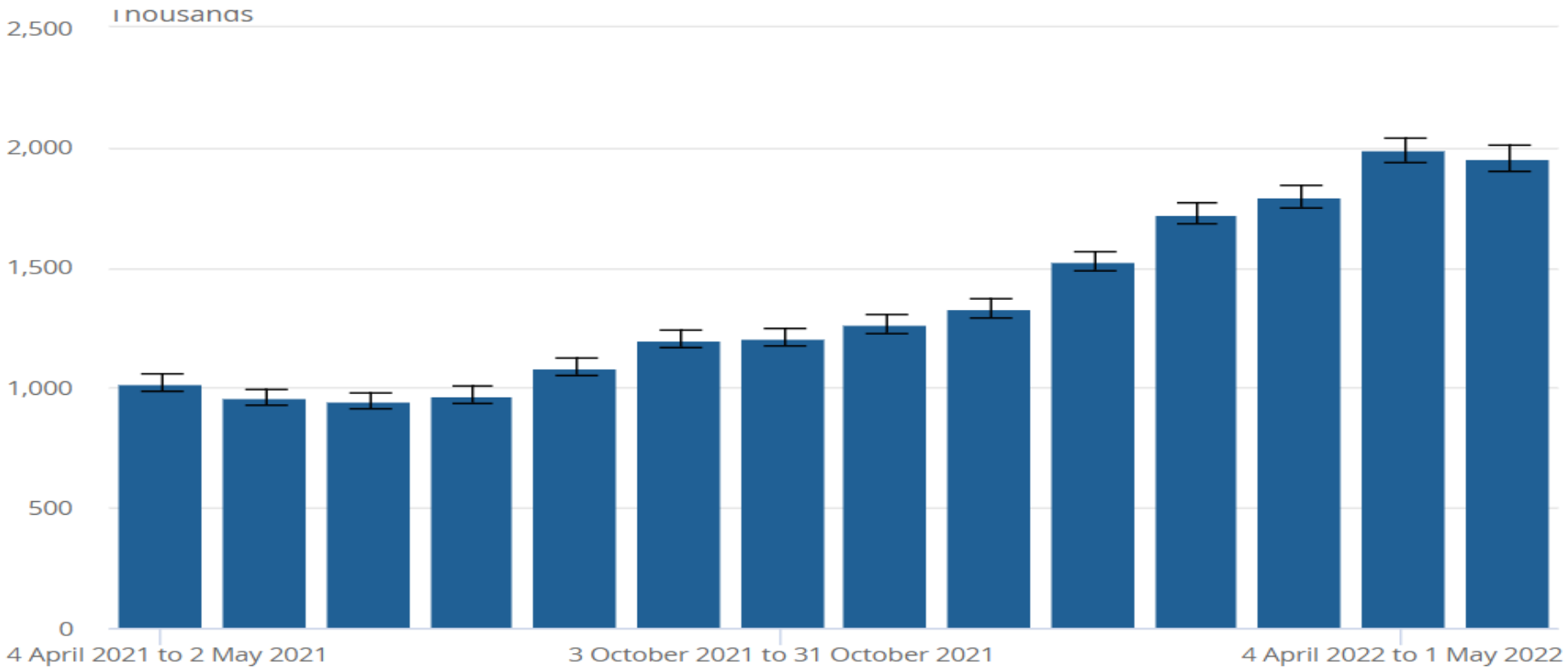
Source: Long COVID and symptom trajectory amongst Americans

UK prevalence of Long COVID

Estimated number of people living in private households with self-reported long COVID of any duration, UK: four-week periods ending 2 May 2021 to 4 June 2022



Any symptoms:
4 wks+ : 2.0m
12 wks+ : 1.4m
12 mths+ : 0.9m

Reduces activities a lot:
12 wks+ : 0.3m
12mnths+: 0.2m

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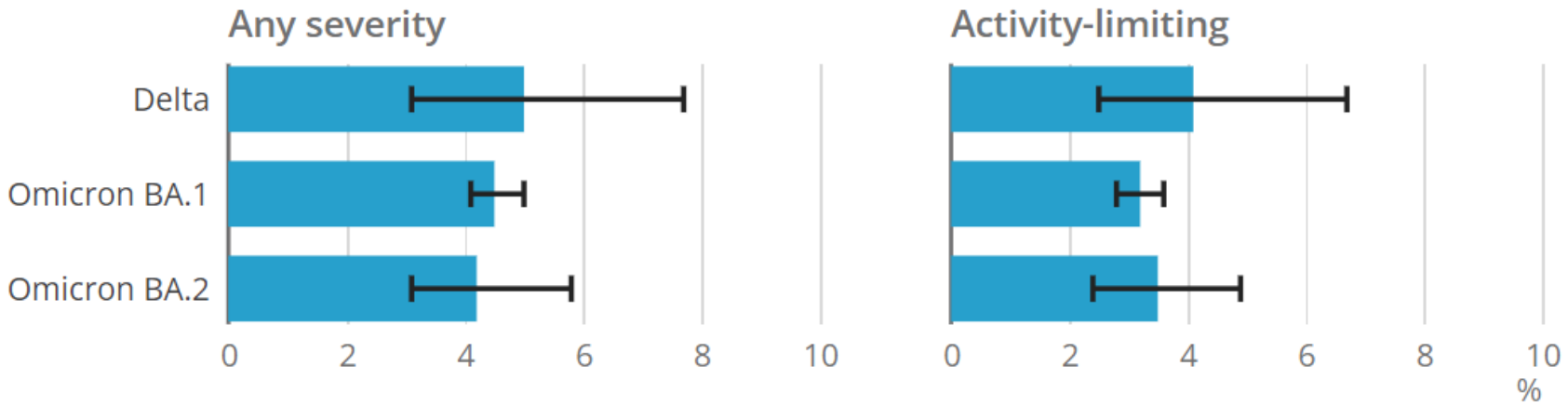
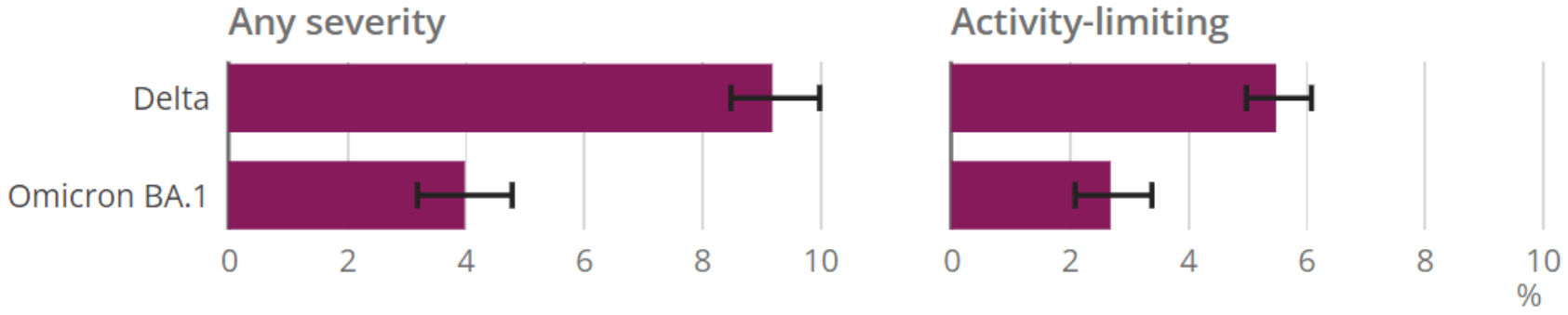
Source: Self-reported Long COVID in UK, COVID-19 vaccination and Long COVID

UK prevalence of Long COVID & effect of vaccine

Triple-vaccinated



Double-vaccinated



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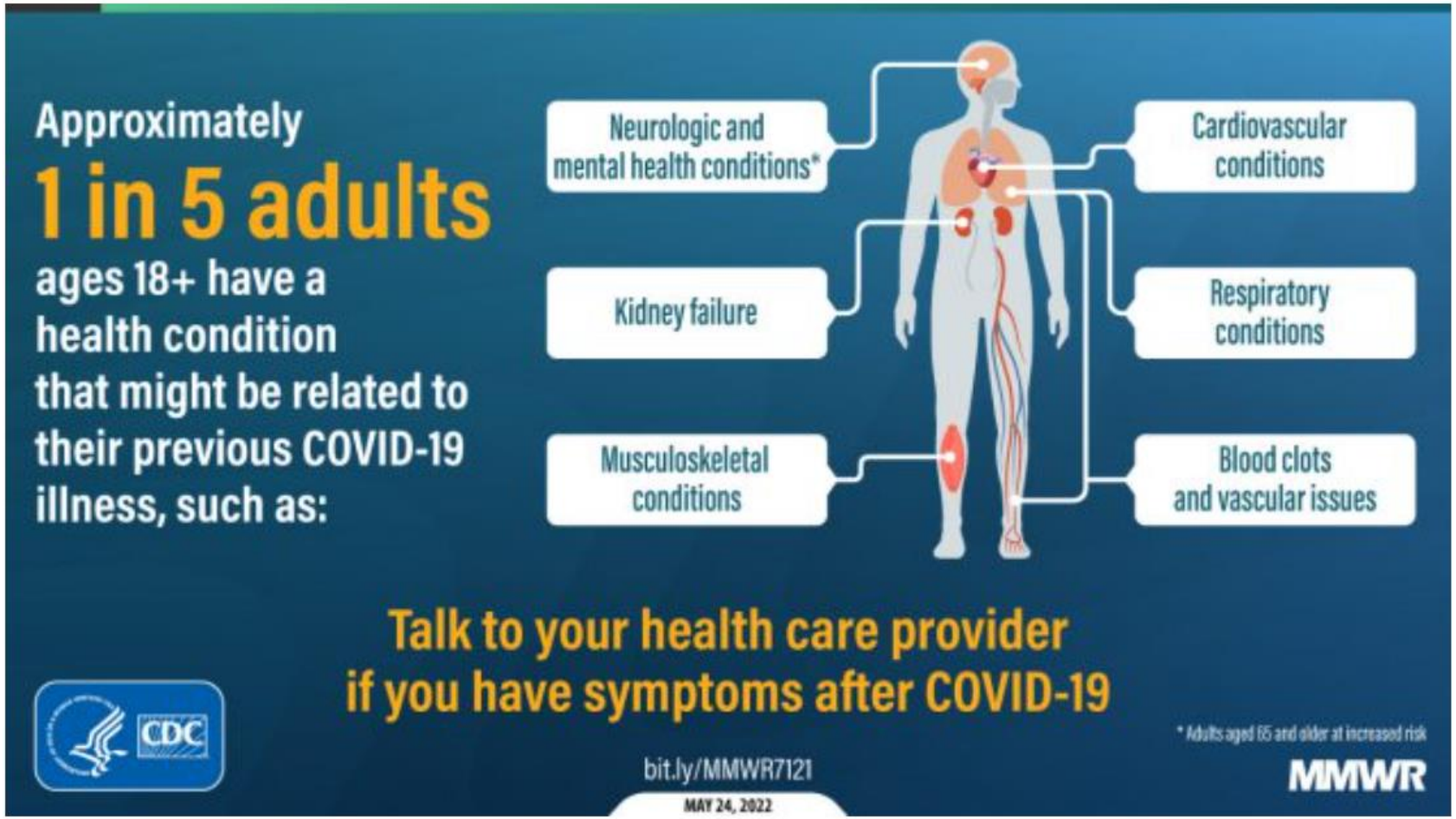
Source: Self-reported Long COVID after infection with different variants in the UK

US risk of post-COVID conditions
(Mar ‘20 – Nov ‘21)



Source: CDC Morbidity and Mortality Weekly Report

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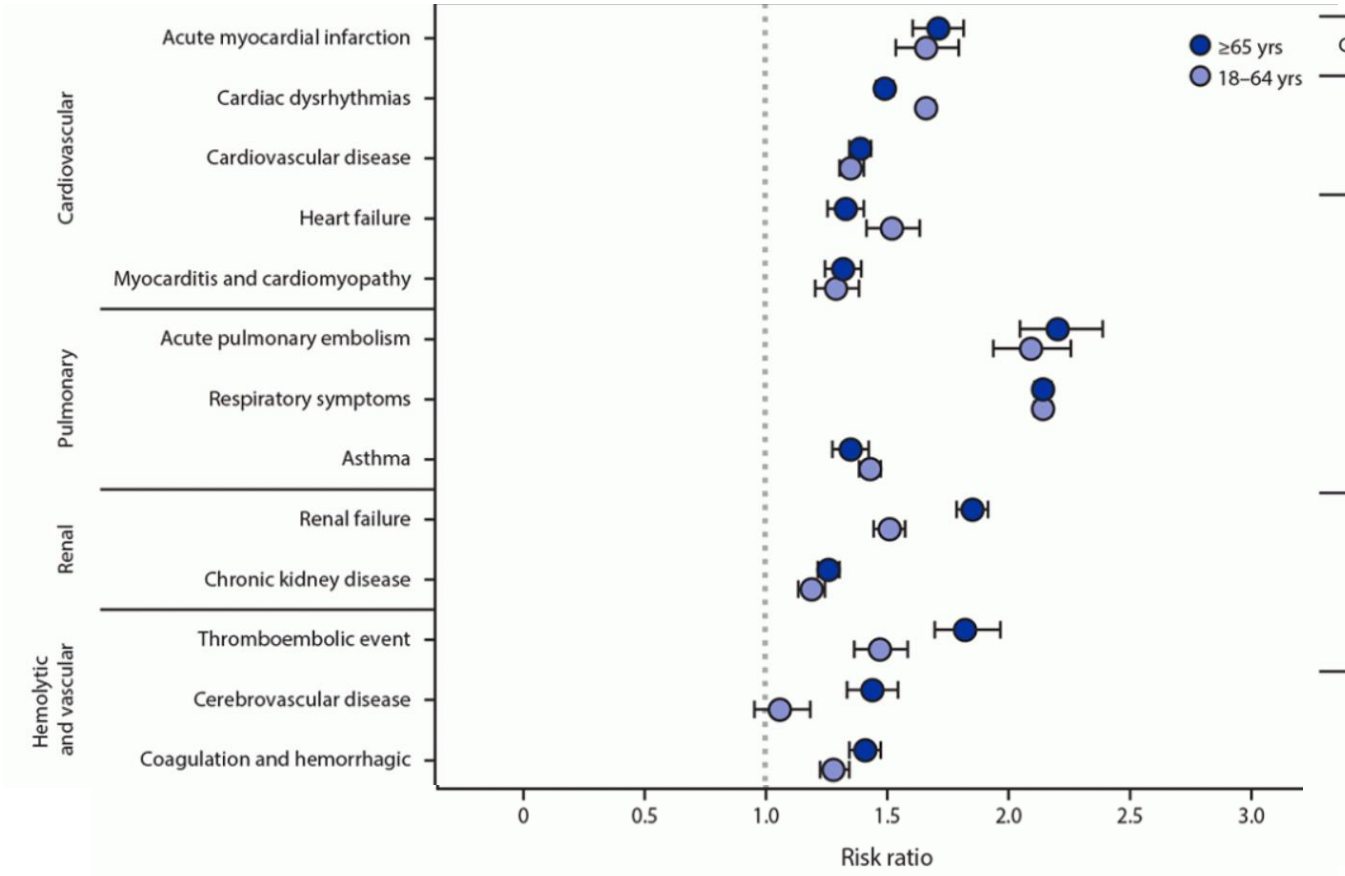

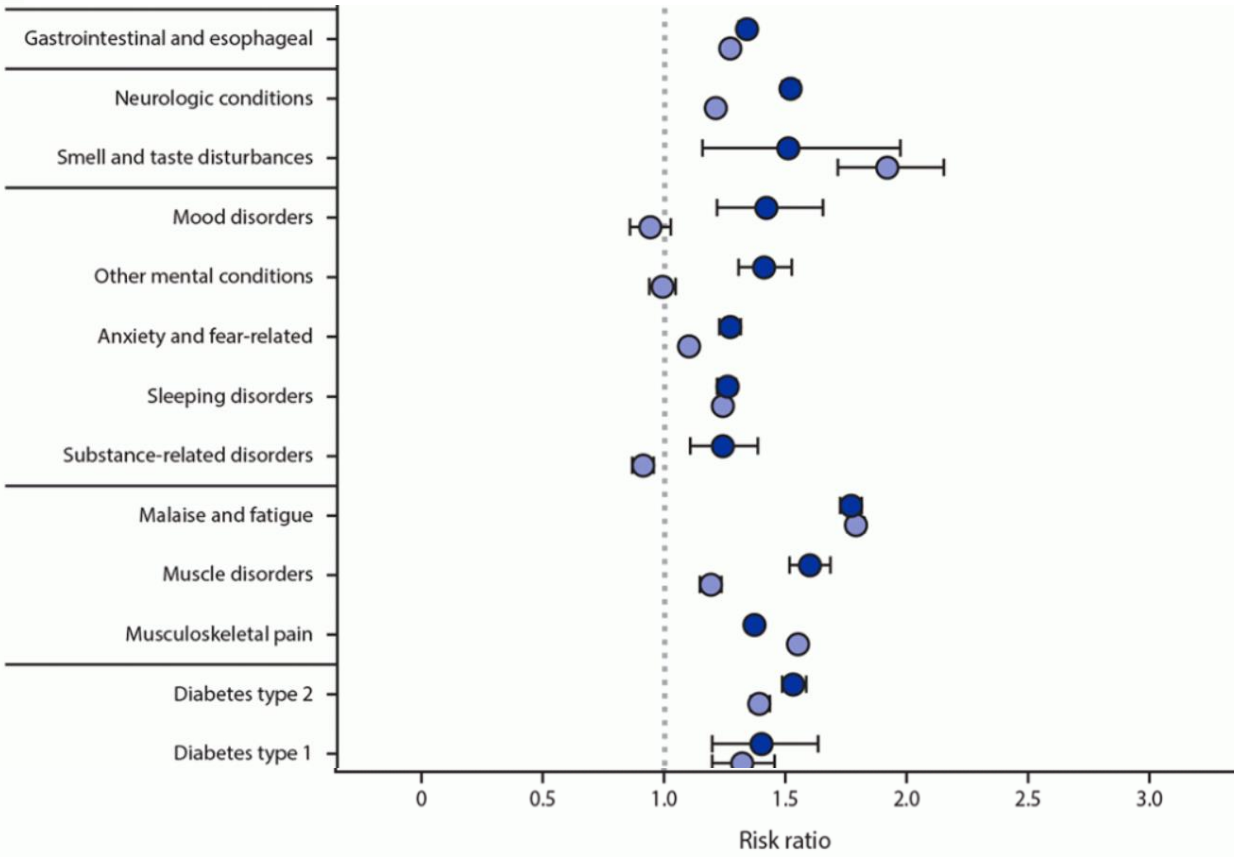

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Source: CDC Morbidity and Mortality Weekly Report

Increasing levels of PIP since COVID pandemic

Source: Personal Independence Payment – official statistics to April 2022

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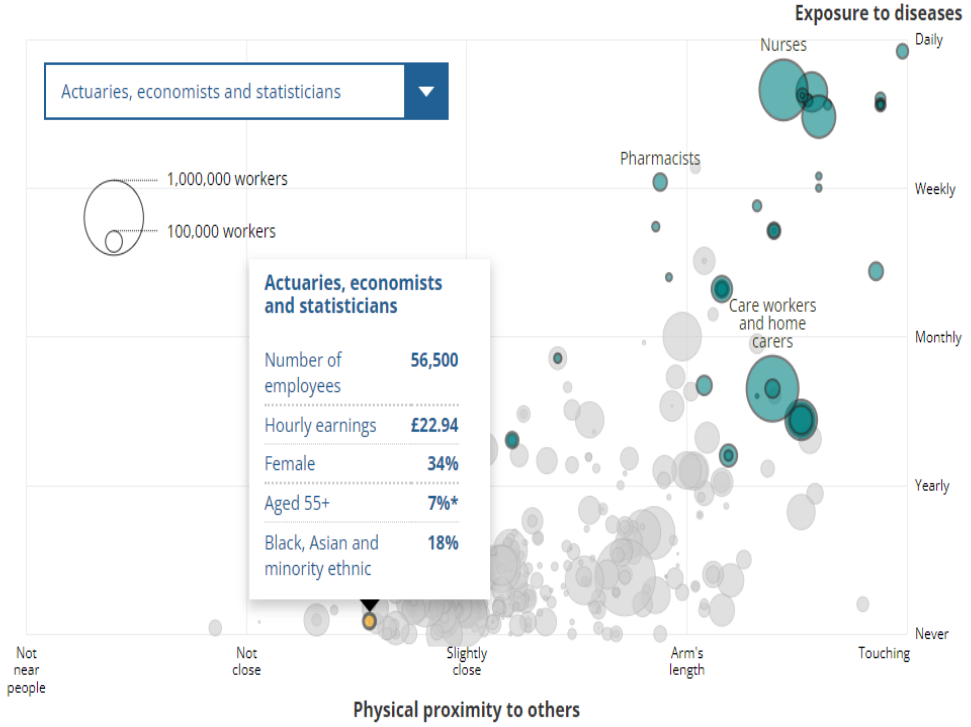
Why insured claims may be lower

- Self-reported vs evaluation process
- Belief in having COVID-19 vs. negative serology
  - study of 22823 adults in France testing for antibodies
- Lower occupational exposure
- Lower likelihood of co-morbidities and better access to healthcare
- Higher likelihood of vaccination
  - triple vaccinated at Dec 2021 – IMD1 65.3% vs IMD5 80.7%



Source: ONET - US Department of Labor, Annual Population Survey and Annual Survey of Hours and Earnings - Office for National Statistics

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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

Very happy to answer any further questions you may have after the event. Please contact us at:

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Dan Ryan *dan.ryan@coios.health*

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