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# Thank Goodness it's not Friday

Adele Groyer, John Roberts, Matt Fletcher  
of the COVID-19 Actuaries Response Group

# Thank Goodness it's not Friday

- Background to the COVID-19 Actuaries Response Group (ARG)
- Pandemic Themes
- 2022 Hot Topics
- Re-use of the ARG Concept



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# Introduction to the ARG



15 volunteers from the profession

Established in March by Stuart McDonald, Matthew Edwards and Nicola Oliver with the active support of Tan Suee Chieh.

We have produced:-

- Over 100 bulletins
- Over 50 shorter blogs
- 67 Friday Reports
- Plus much more from individual accounts



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# Introduction to the ARG – Different Ways of Working

- Accelerated Timescales – days not weeks or months
- Response to media even faster.
- Less technical than much actuarial output
- Often single author
- All group output peer reviewed, but not individual work
- Communication tailored to audience



Promotion of output of ARG and CMI, as well as individual work on Twitter

Objective and trusted

Engage with professionals eg media, UKHSA, ONS.

Call out disinformation

Less formal but remain professional!



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# Introduction to the ARG – Twitter Coverage



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# Introduction to the ARG – Media Connections

BBC



**Vicki Young** @BBCVickiYoung  
BBC Deputy Political Editor. Follow @BBCPolitics.bbc.co.uk/news/politics  
London Joined July 2010  
1,197 Following 62.1K Followers



**Fergus Walsh** @BBCFergusWalsh  
Medical Editor for the BBC  
London bbc.co.uk/ferguswalsh Joined May 2010  
404 Following 84K Followers



**Jim Reed** @jim\_reed  
BBC health reporter. Was at #VictoriaLIVE, #thefoxnight, #newsbeat. Dad to three small screaming children. DMs open or email me on jim.reed@bbc.co.uk  
London bbc.co.uk/news Joined March 2008  
2,285 Following 5,206 Followers



**BBC Katharine Da Costa** @KatharineDC  
Senior reporter @BBCSouthNews, former BBC News health reporter email Katharine.dacosta@bbc.co.uk  
Oxford/London bbc.co.uk Joined February 2012  
1,903 Following 1,894 Followers

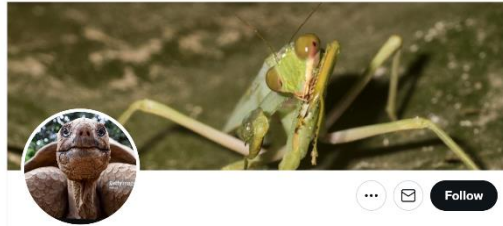


**Fraser Nelson** @FraserNelson  
Editor of The Spectator, @telegraph columnist. Also on board of Centre for Social Justice. Try a month of The Spectator free [spectator.co.uk/editor](https://spectator.co.uk/editor)  
London, via Nairn offers.spectator.co.uk Joined February 2010  
2,567 Following 284.9K Followers



**Ed Conway** @EdConwaySky  
Numbers guy. Likes charts. Occasionally spotted on @SkyNews & @TheTimes. Books: [edmundconway.com/books/](https://edmundconway.com/books/) DMs open. Email: ed.conway@sky.uk  
Deep in a spreadsheet edmundconway.com Joined July 2007  
1,096 Following 151.5K Followers

THE TIMES



**Tom Whipple** @whippetom  
Science at The Times - Tweets in personal capacity. My book: [amazon.co.uk/Get-Ahead-PHYS...](https://amazon.co.uk/Get-Ahead-PHYS...)  
Joined March 2009  
2,449 Following 26.7K Followers

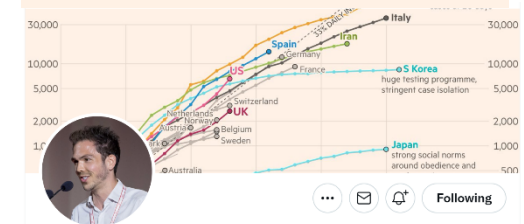
sky news

The Telegraph



**Paul Nuki** @PaulNuki  
Senior editor Global Health Security and campaigns @Telegraph.  
London telegraph.co.uk/global-health-... Born July 3  
Joined May 2009  
2,517 Following 12.1K Followers

FINANCIAL TIMES



**John Burn-Murdoch** @jburnmurdoch  
Stories, stats & scatterplots for @FinancialTimes | Mainly Covid for now | Visiting senior fellow @LSEdataScience | [john.burn-murdoch@ft.com](mailto:john.burn-murdoch@ft.com) | #dataviz  
Doncaster London ft.com/jbm Joined June 2009  
4,829 Following 448.3K Followers

THE Sun

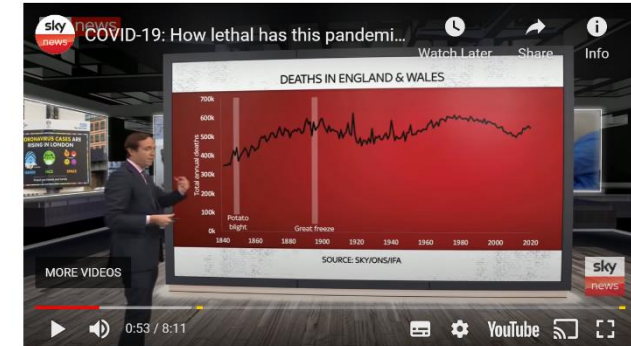


**Vanessa Chalmers** @VanessaChalmers  
Health reporter at The Sun. Previously MailOnline and Healthista. Found either in the gym or eating cake 🍰  
London thesun.co.uk/author/vanessa... Born June 19  
Joined December 2012  
1,375 Following 1,075 Followers



The IFoA Conference 2022

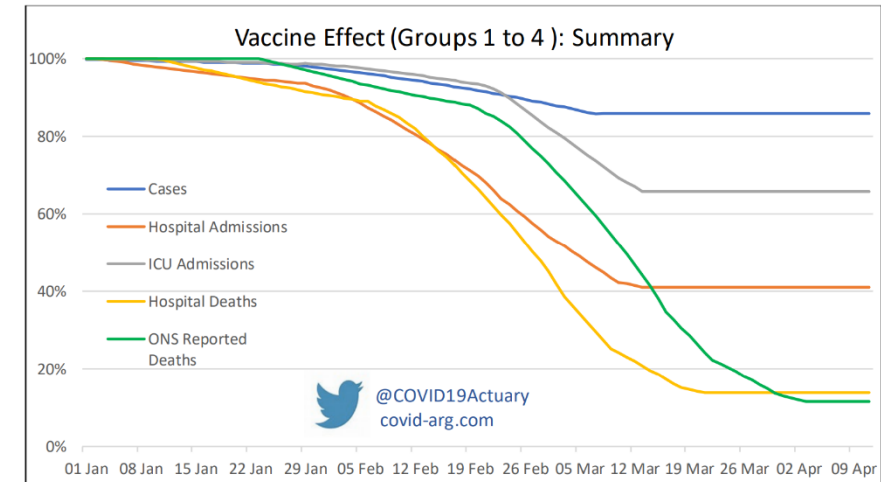
# Introduction to the ARG – Media Exposure



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# Introduction to the ARG – Vaccine Insight

Vaccination Group		COVID deaths	Cumulative % of total COVID deaths	Additional Population	Vaccinations to prevent one death
1	residents in a care home for older adults	22,800	36%	0.5m	20
	their carers	<100	36%	0.5m*	
2	everyone aged 80 and over	18,900	66%	3.0m	160
	frontline health and social care workers	900	68%	2.5m	
3	everyone aged 75 and over	6,300	78%	2.2m	350
4	everyone aged 70 and over	5,600	86%	3.3m	600
	clinically extremely vulnerable	1,000	88%	1.4m	
5	everyone aged 65 and over	3,100	93%	3.3m	1,000
6	age 16-64 with underlying health conditions; at higher risk	600	94%		
7	everyone aged 60 and over	2,000	97%	3.8m	2,000
8	everyone aged 55 and over	900	98%	4.4m	4,000
9	everyone aged 50 and over	500	99%	4.7m	8,000
10	All the rest	600	100%	37m	47,000
		63,200	*Assume 1:1 ratio for carers		



BLOGS MEDIA

## Booster Rollout Needs a Boost

John Roberts 7 months ago 47 views 3 min read

England's booster rollout is failing to keep pace with the rollout of first and second vaccine doses. This means that a large and growing population have not yet received their booster, despite receiving their second dose more than six months ago.

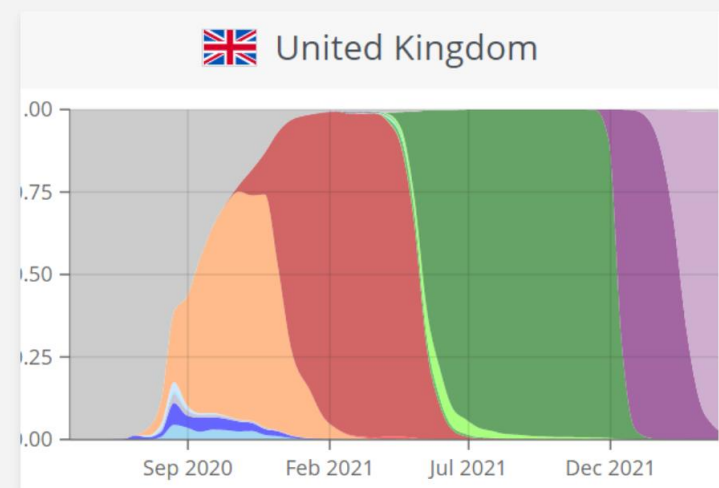
In the month since the booster rollout started, 3.7 million\* third doses have been given, as recorded in today's [daily update from NHS England](#).

But if we look back six months, 8.5 million had already received their second dose. So 4.8 million are eligible but are yet to receive their booster, a number which has been growing.



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# Introduction to the ARG – Friday Report

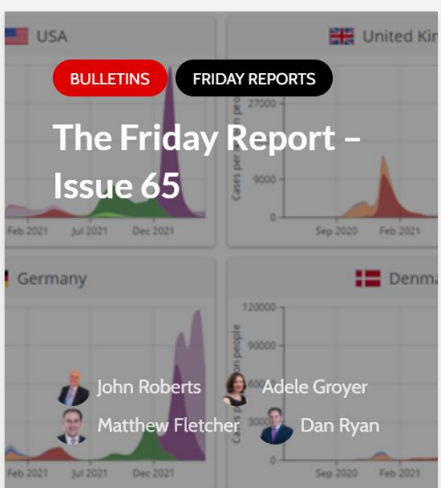


BULLETINS FRIDAY REPORTS

## The Friday Report – Issue 66

The Friday Report is our regular fortnightly update with a summary of the key papers and analyses that we've looked at recently. In Friday Report 66 we look at: Vaccine progress – boosters for the old, first...

John Roberts Adele Groyer Matthew Fletcher  
659 views

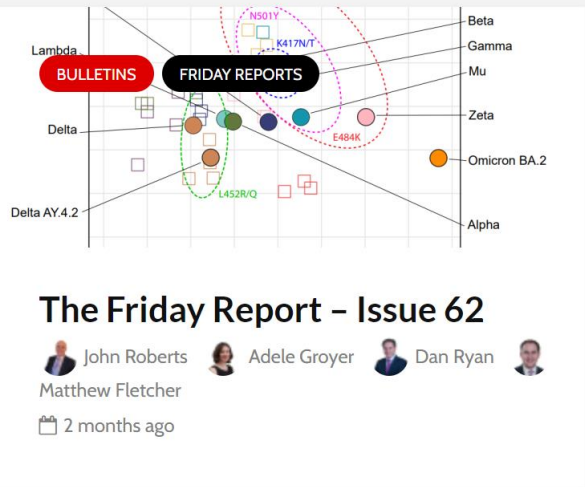


BULLETINS FRIDAY REPORTS

## The Friday Report – Issue 64

The Friday Report is our regular fortnightly update with a summary of the key papers and analyses that we've...

John Roberts Adele Groyer  
Matthew Fletcher Dan Ryan



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# Pandemic Themes: Issues 1-10

- **Issue 1**      3 April 2020

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%						
Modelling	25%						
Data	23%						
Vaccines	2%						
Variants	0%						
Other	5%						



## The Friday Report - Issue 1

By Matt Fletcher and Nicola Oliver for

**COVID-19 Actuaries Response Group - Learn. Share. Educate. Influence.**

Every week, more is written on COVID-19 than any individual could possibly read. Collectively, the COVID-19 Actuaries Response Group read more about the outbreak than most, so we've decided each Friday to provide you with a curated list of the key papers and articles that we've looked at recently.

As this is the first issue of the Friday Report, we will cover the key papers and articles that we've read since the group was formed – future reports will cover only new information that we've picked up in that week.

Though we will try to be thorough, it won't be possible for us to cover everything that comes out - if there's anything that we've missed, that you think really should have made the cut, please let us know and we'll consider it for the next Friday Report.



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# Pandemic Themes: Issues 11-20

- Issue 20 4 September 2020

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%					
Modelling	25%	24%					
Data	23%	23%					
Vaccines	2%	6%					
Variants	0%	0%					
Other	5%	1%					

Type and level of group activity	Low occupancy			High occupancy		
	Outdoors and well ventilated	Indoors and well ventilated	Poorly ventilated	Outdoors and well ventilated	Indoors and well ventilated	Poorly ventilated
<b>Wearing face coverings, contact for short time</b>						
Silent	Low	Low	Low	Low	Low	Medium
Speaking	Low	Low	Low	Low	Low	Medium
Shouting, singing	Low	Low	Medium	Medium	Medium	High
<b>Wearing face coverings, contact for prolonged time</b>						
Silent	Low	Low	Medium	Low	Medium	High
Speaking	Low	Low	Medium	Medium	Medium	High
Shouting, singing	Low	Medium	High	Medium	High	High
<b>No face coverings, contact for short time</b>						
Silent	Low	Low	Medium	Medium	Medium	High
Speaking	Low	Medium	Medium	Medium	High	High
Shouting, singing	Medium	Medium	High	High	High	High
<b>No face coverings, contact for prolonged time</b>						
Silent	Low	Medium	High	Medium	High	High
Speaking	Medium	Medium	High	High	High	High
Shouting, singing	Medium	High	High	High	High	High

**Risk of transmission**  
 Low Medium High  
 \* Borderline case that is highly dependent on quantitative definitions of distancing, number of individuals, and time of exposure

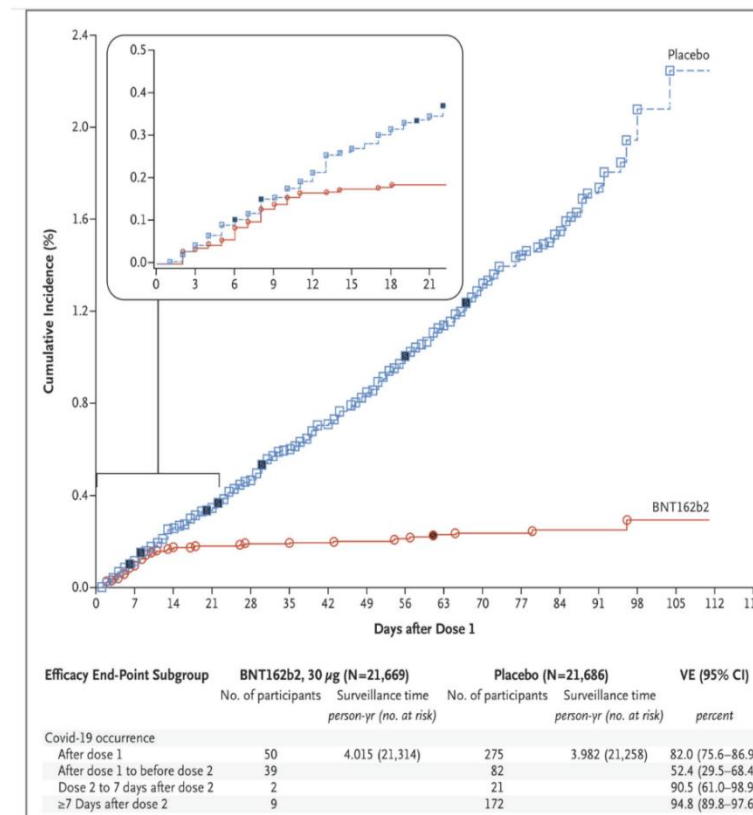


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# Pandemic Themes: Issues 21-30

- Issue 30**      27 November 2020

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%	50%				
Modelling	25%	24%	16%				
Data	23%	23%	20%				
Vaccines	2%	6%	10%				
Variants	0%	0%	0%				
Other	5%	1%	4%				

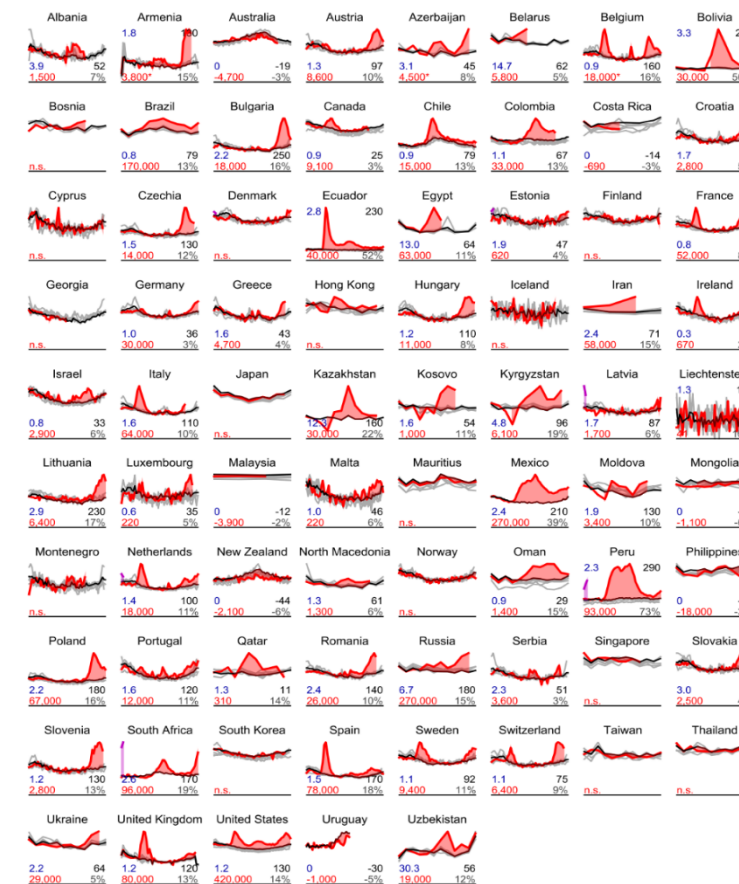


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# Pandemic Themes: Issues 31-40

- Issue 35 5 February 2021

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%	50%	21%			
Modelling	25%	24%	16%	11%			
Data	23%	23%	20%	24%			
Vaccines	2%	6%	10%	35%			
Variants	0%	0%	0%	6%			
Other	5%	1%	4%	3%			

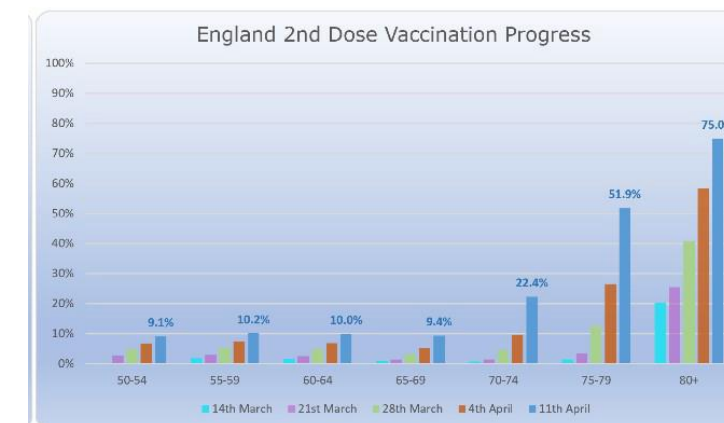
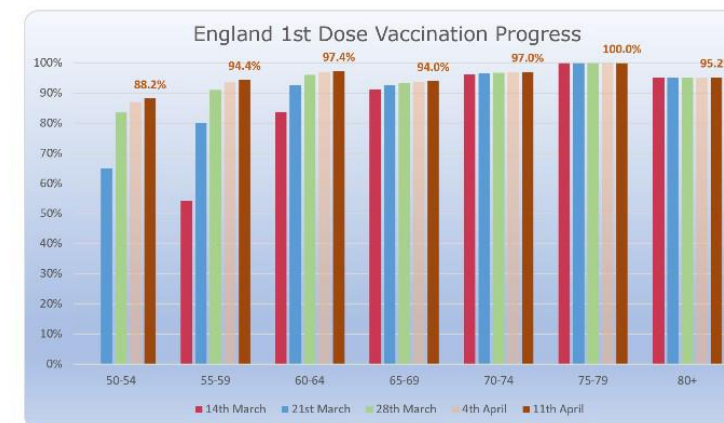


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# Pandemic Themes: Issues 41-50

- Issue 41 16 April 2021

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%	50%	21%	22%		
Modelling	25%	24%	16%	11%	5%		
Data	23%	23%	20%	24%	24%		
Vaccines	2%	6%	10%	35%	31%		
Variants	0%	0%	0%	6%	13%		
Other	5%	1%	4%	3%	4%		

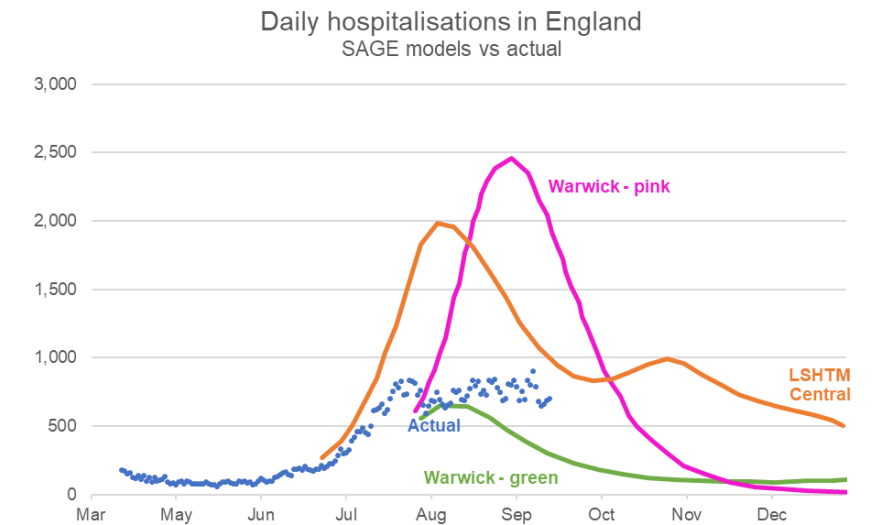


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# Pandemic Themes: Issues 51-60

- Issue 51** 17 September 2021

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%	50%	21%	22%	31%	
Modelling	25%	24%	16%	11%	5%	3%	
Data	23%	23%	20%	24%	24%	19%	
Vaccines	2%	6%	10%	35%	31%	35%	
Variants	0%	0%	0%	6%	13%	8%	
Other	5%	1%	4%	3%	4%	3%	



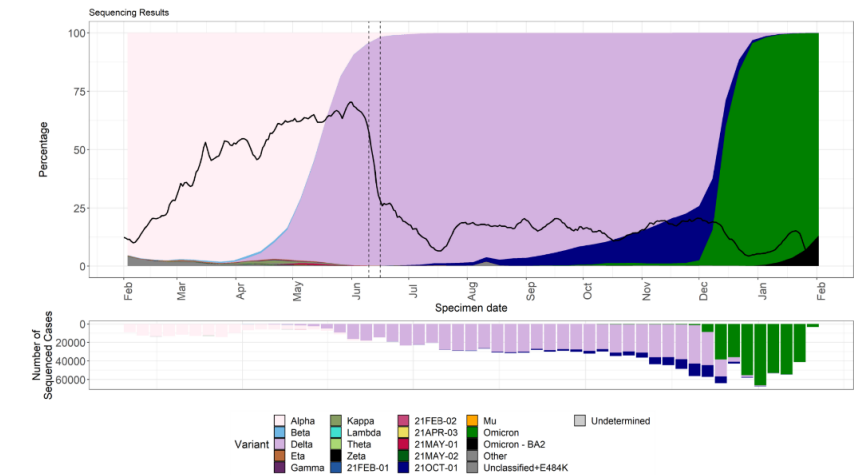
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# Pandemic Themes: Issues 60+

- Issue 60 21 January 2022

Topic	1-10	11-20	21-30	31-40	41-50	51-60	61+
Clinical / Medical	46%	46%	50%	21%	22%	31%	41%
Modelling	25%	24%	16%	11%	5%	3%	0%
Data	23%	23%	20%	24%	24%	19%	19%
Vaccines	2%	6%	10%	35%	31%	35%	18%
Variants	0%	0%	0%	6%	13%	8%	19%
Other	5%	1%	4%	3%	4%	3%	3%

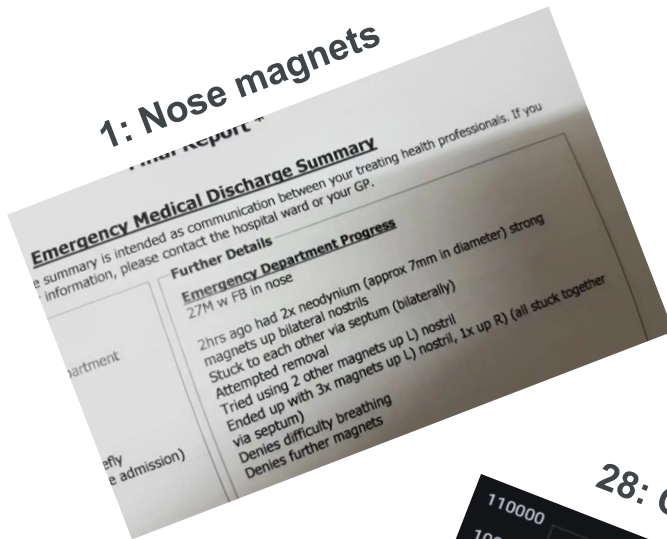
Figure 2. Variant prevalence of available sequenced cases for England from 1 February 2021 as of 7 February 2022  
(Find accessible data used in this graph in [underlying data](#).)



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# And Finally...

## 1: Nose magnets



## 35: Flying haggis



## 28: Online chess



## 59: Elon Musk



## 39: Stochastic parrots



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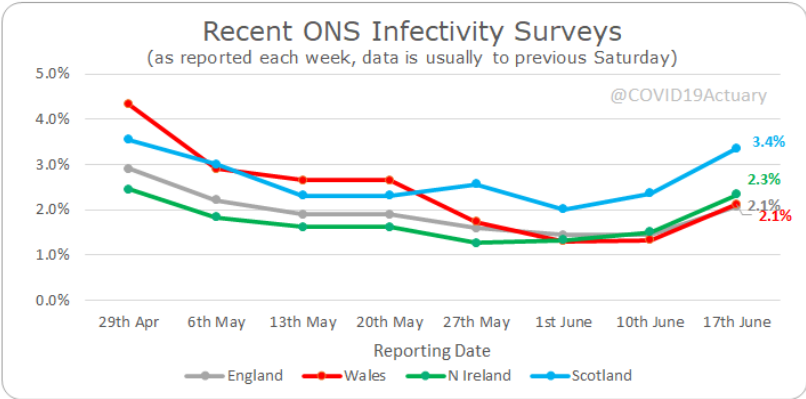


# Hot Topics

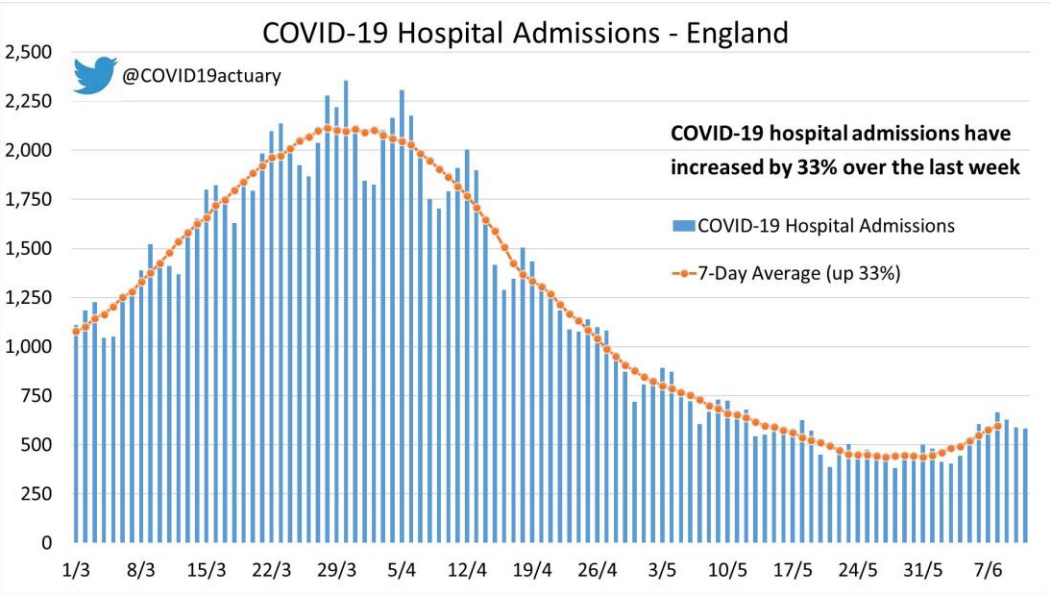


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# Current data



	Report Issued							
	29th Apr	6th May	13th May	20th May	27th May	1st June	10th June	17th June
England	2.9%	2.2%	1.9%	1.9%	1.6%	1.4%	1.5%	2.1%
Wales	4.3%	2.9%	2.7%	2.7%	1.7%	1.3%	1.3%	2.1%
N Ireland	2.5%	1.8%	1.6%	1.6%	1.3%	1.3%	1.5%	2.3%
Scotland	3.6%	3.0%	2.3%	2.3%	2.6%	2.0%	2.4%	3.4%

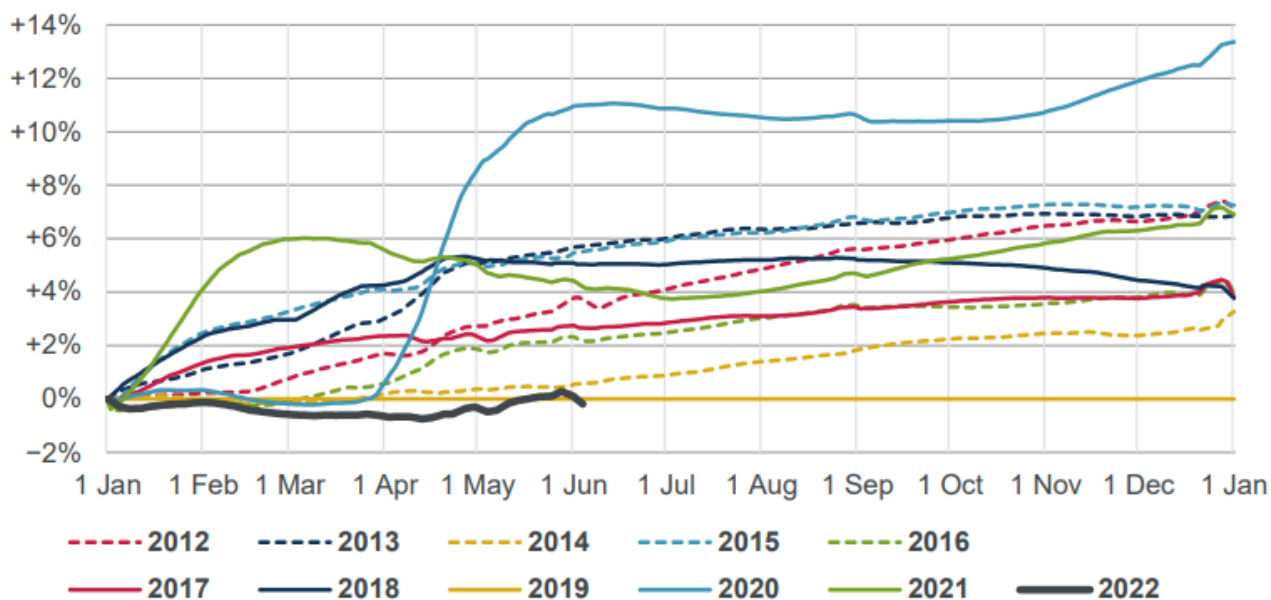


# Current data

**Table 2: Cumulative excess deaths**

	England & Wales	United Kingdom
From the start of the pandemic (29 Feb 2020 to 3 June 2022)	108,400	121,000
From week 1 of 2022 (1 Jan 2022 to 3 June 2022)	100	600

**Chart 3: Cumulative standardised mortality rate compared to 2019**



Source: CMI Mortality Monitor



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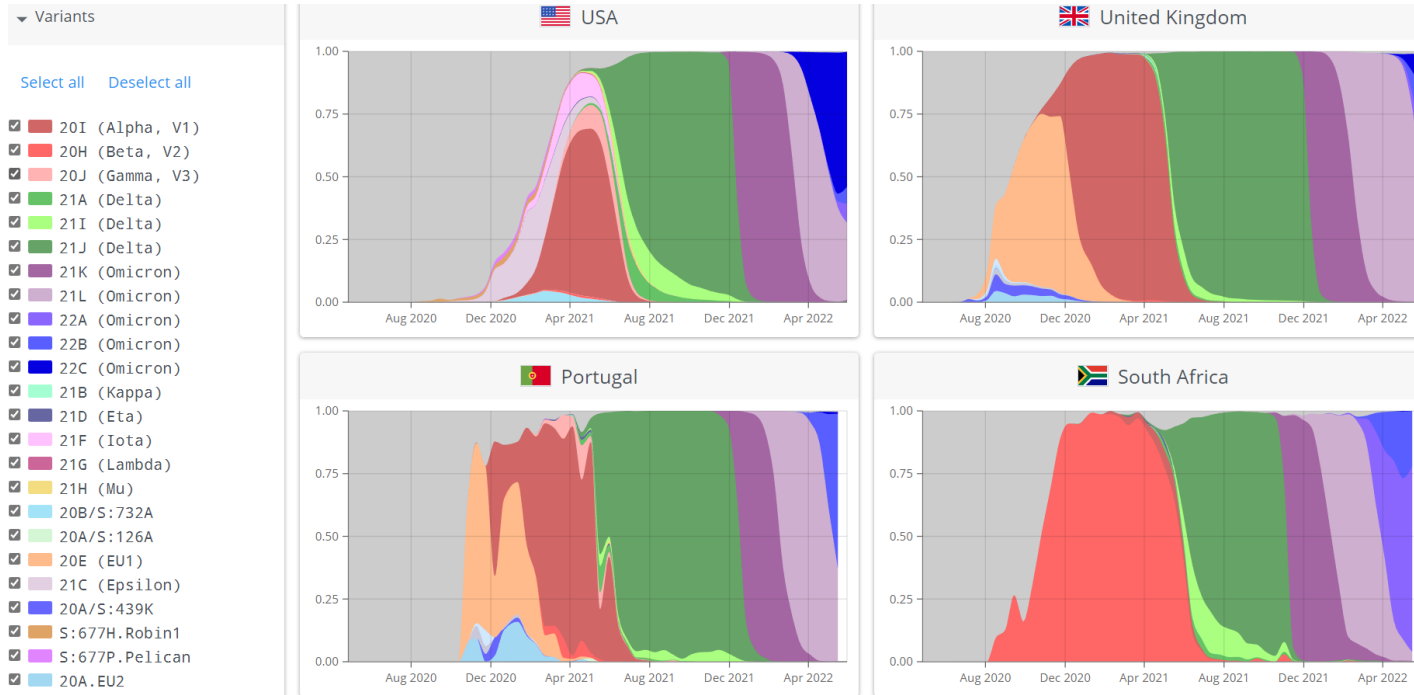
# Hot Topics in 2022

- New Variants
  - Endemic Covid
- Long Covid
- Vaccinations
- Treatments
- General healthcare capacity
- Post hoc policy analyses
- Exit strategies for maximum suppression countries
- Risk of and preparedness for future pandemics



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# New variants



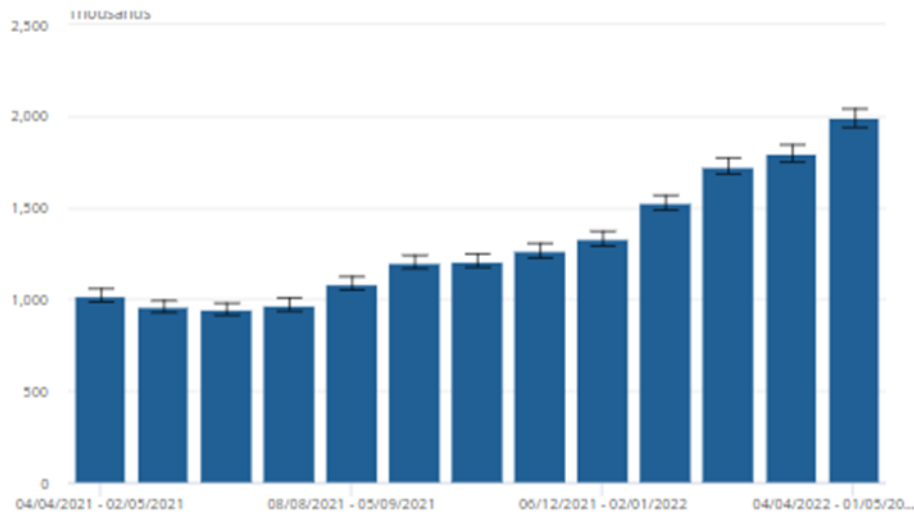
- Immune escape
- Transmissibility
- Severity
- Treatment susceptibility

Source:  
Estimated Cases by Variant  
CoVariants.org

# Long COVID

Figure 1: 2.0 million people were experiencing self-reported long COVID as of 1 May 2022

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 1 May 2022



Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey (CIS)

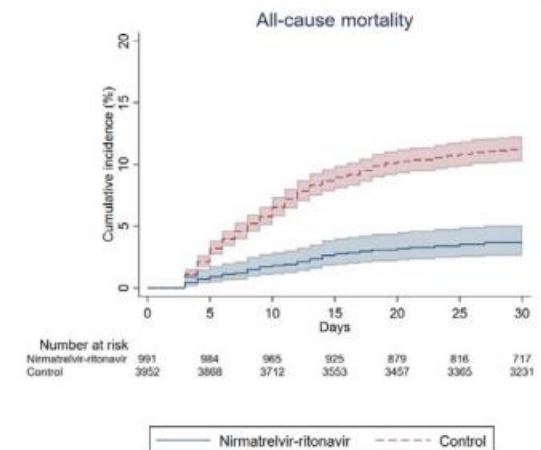
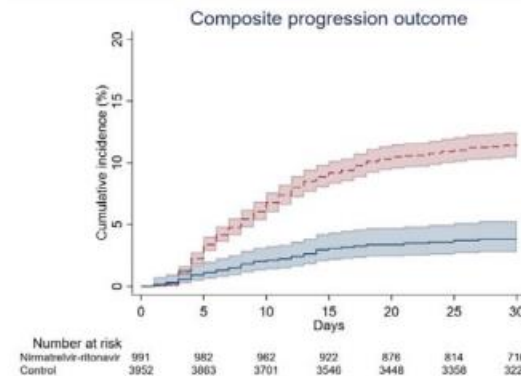
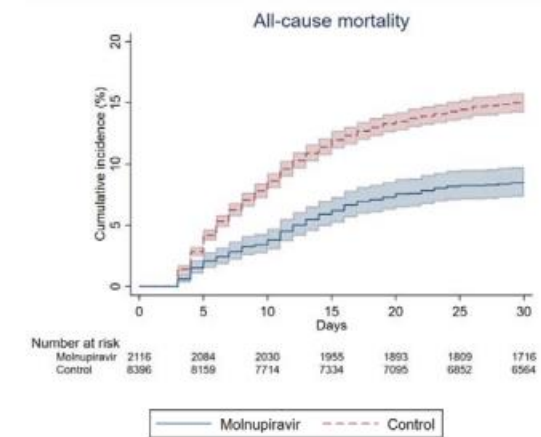
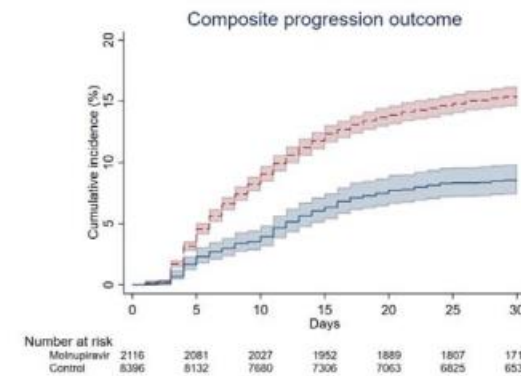
- Prevalence
- Case definition
- Mechanism
- Impacts on healthcare
- Impacts on workforce
- Treatments
- Insights for other post-viral syndromes
- Insurance underwriting and claims



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# Treatments

- Anti-virals
- Monoclonal antibodies
- Others?



Source: Real-world effectiveness of molnupiravir and nirmatrelvir/ritonavir among COVID-19 inpatients during Hong Kong's Omicron BA.2 wave: an observational study ([medrxiv.org](https://medrxiv.org))



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# Vaccinations

- Autumn vaccination plans
  - UK JCVI prioritising:
    - Ages 65+
    - Care home residents and staff
    - Frontline Health and Care workers
    - Clinical risk groups
  - Germany considering Omicron-specific vaccination

Independent report

## **Joint Committee on Vaccination and Immunisation (JCVI) interim statement on the COVID-19 vaccination programme for autumn 2022**

Published 20 May 2022



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# General healthcare capacity

## Ambulance wait times endangering patients, doctors say

By Jim Reed and The BBC Data Journalism Team  
Health reporter

🕒 12 May

News > Health

### Hidden A&E figures revealed as thousands a day forced to wait 12 hours or more

**Exclusive** A&E departments 'crippled' by 'huge' trolley waits as patients come to harm, doctors warn

Rebecca Thomas Health Correspondent • Wednesday 13 April 2022 21:03 •

### Hospital under pressure as doctors struggle to discharge patients due to lack of social care

It has had to cancel surgical procedures because of lack of beds

SHARE    2 COMMENTS

By [Corey Bedford](#) & Claire Harrison  
13:35, 7 APR 2022

NEWS



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 INDEPENDENT PREMIUM

### NHS waiting list hits record high with 6.4m patients yet to have routine treatment

'Long waits for emergency care, previously only seen in the depths of winter, are now commonplace,' says expert

Rebecca Thomas Health Correspondent • Thursday 12 •  Comments



# Post-hoc policy analyses

- Excess deaths likely to be a key metric to compare countries
- Excess death measurement is difficult
- Correlation with non pharmaceutical intervention stringency is complex



COVID-19 Actuaries Response Group

850,000

2011 12 13 14 15 16 17 18 19 20 2021

BLOGS

## WHO Excess Deaths

Jon Palin 2 weeks ago 3,188 views 6 min read

f t r e l n w

Note: An [update](#) to this blog is now available. We discuss concerns with the actual deaths used by the WHO as well as the issue with estimated expected deaths discussed here.

The World Health Organisation (WHO) [recently reported](#) 14.9 million excess deaths associated with the COVID-19 pandemic in 2020 and 2021. We have reviewed the WHO calculations and while the global total is broadly consistent with calculations by other organisations, we have concerns over the figures for some countries.



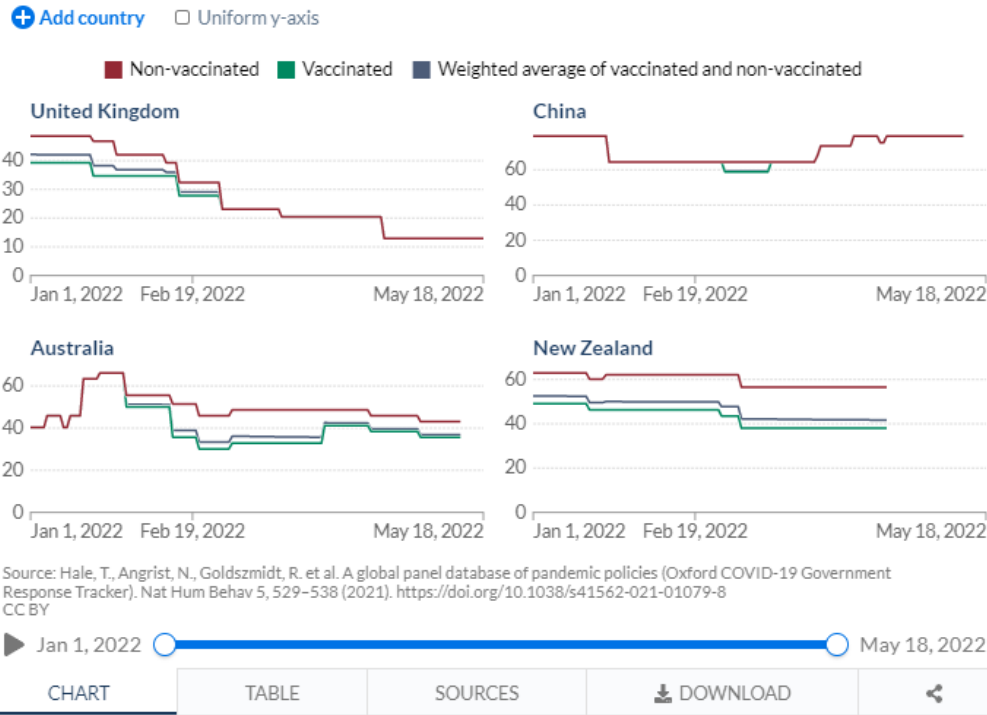
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# Exit strategies for maximum suppression countries

## Stringency Index

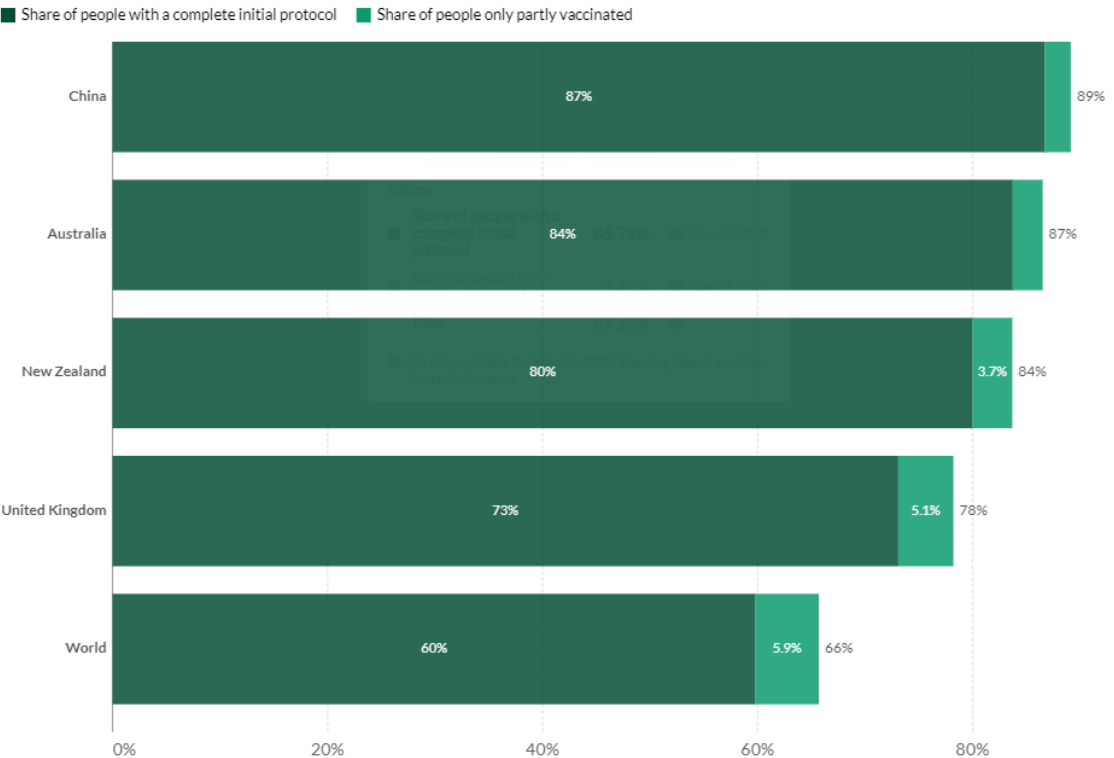
### COVID-19: Stringency Index

The stringency index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest).



Related: [What is the COVID-19 Stringency Index?](#)

### Share of people vaccinated against COVID-19, May 21, 2022



Source: Official data collated by Our World in Data  
Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

Dec 13, 2020 May 21, 2022

PERITIA RATIO

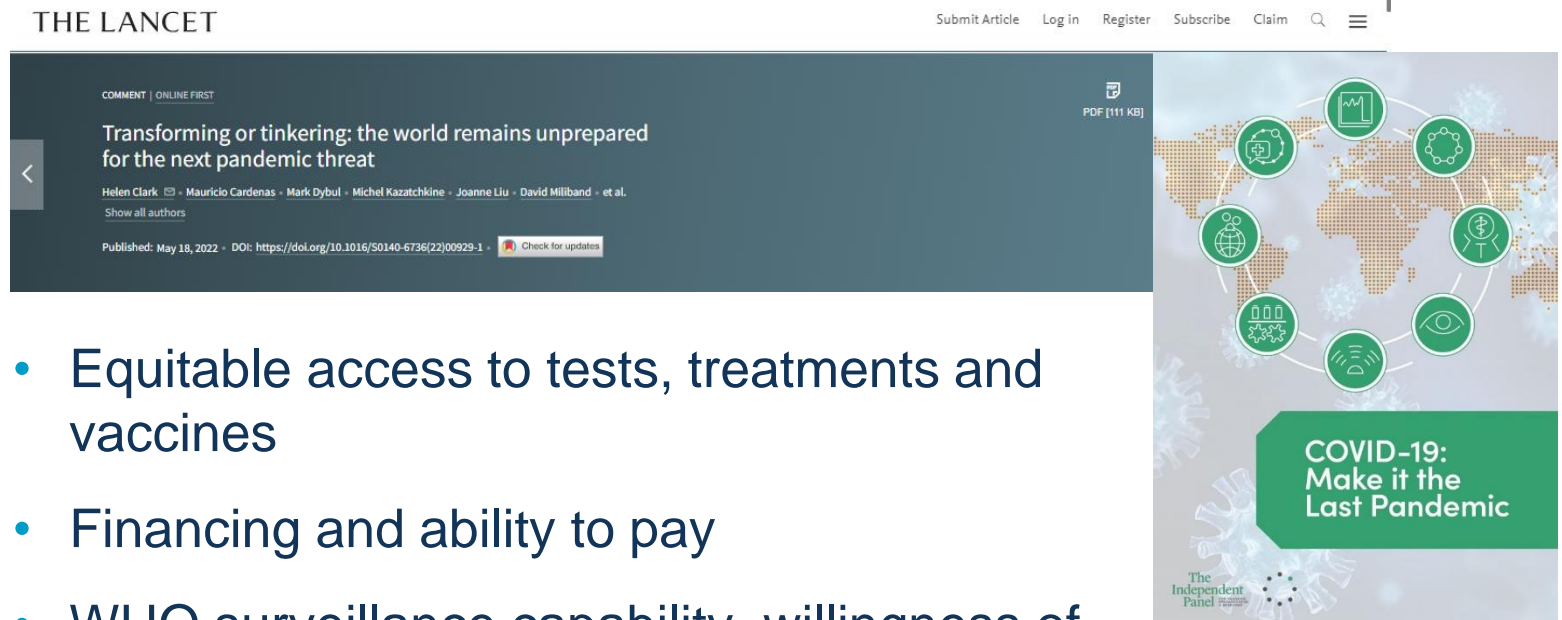
# Risk of and preparedness for future pandemics



An unusual spread of the virus known as monkeypox has generated a fair amount of panic in recent days, as over 100 cases were found across the globe - namely in the US, Europe, and the Middle East. It is easy to understand the panic, after all, over two years and multiple variants of the COVID-19 pandemic later, everyone is more cautious than they were before.



But scientists and health experts have overwhelmingly said that while it is good to be cautious and alert, there is no need to panic and that the situation now is in no way similar to the start of the COVID-19 pandemic back in early 2020.



- Equitable access to tests, treatments and vaccines
- Financing and ability to pay
- WHO surveillance capability, willingness of members to implement recommendations
- Political leadership
- Review of Covid-19 preparedness and investment for future preparedness



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# Discussion – can we re-use the ARG concept?



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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 presenters.



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