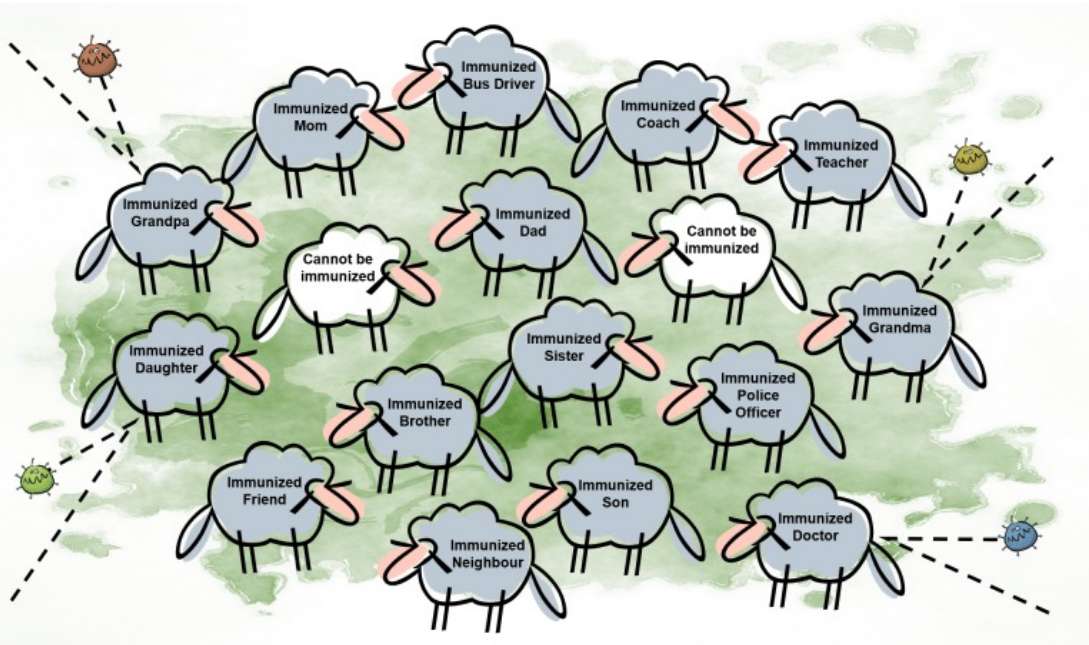




# Herd Immunity

# What is herd immunity?



- Herd immunity occurs when enough people acquire immunity to the virus that it starts to run out of susceptible people to infect.
- As a result, the whole community becomes protected — not just those who are immune.
- Herd immunity does not mean that the virus has completely disappeared, only that it can no longer infect a critical mass of people and become an epidemic again.
- Herd immunity is not an exact science, as an individual's susceptibility to infection varies depending on many factors, including their health, age, contacts within a community, immune system status etc.

# Herd Immunity: definitions

- It is calculated using the reproductive number ( $R_0$ ), which is the estimated number of new infections that may occur from one infected person.
- $R_0 = 1$  means that one person who is infected is expected to infect one other person. If  $R_0$  is  $<1$  this indicates that cases are declining, while  $R_0 >1$  suggests cases increasing.
- The herd immunity threshold (HIT) is the proportion of a population that needs to be immune for herd immunity to occur.
- It is calculated with the equation:  $HIT = 1 - 1/R_0$ , i.e. the more people who become infected by each infected individual, the higher the proportion of the population that needs to be immune to reach herd immunity.
- However, the HIT varies from disease to disease; the more contagious a disease is, the greater the proportion of the population that needs to be immune to the disease to stop its spread.

# Initial UK approach to COVID (13 March 2020)

- From the Guardian: **‘Sir Patrick Vallance**, England’s chief scientific adviser, has **defended the government’s approach to tackling the coronavirus, saying it could have the benefit of creating “herd immunity” across the population...**allowing immunity to build up among the population.’
- “...because the vast majority of people get a mild illness, to build up some kind of herd immunity so more people are immune to this disease and we reduce the transmission, at the same time we protect those who are most vulnerable to it.”
- **“If you suppress something very, very hard (i.e. with lockdown), when you release those measures it bounces back and it bounces back at the wrong time** (i.e. during the winter when the NHS is overstretched).”
- This approach was in accordance with the 2 March letter from 800 Yale scientists warning that the crackdowns, shutdowns, travel restrictions, sweeping closures and work restrictions could be counterproductive and not produce the intended results.

# 17 March 2020: the UK COVID U-turn



- But then **Matt Hancock** (the then Health Secretary) on the BBC's Andrew Marr Show and said: "**Herd immunity is not our policy. It's not our goal.**"
- He repeated this point in the House of Commons the next day.
- **The U-turn seemed to be due to the Imperial College modelling**, published on 16 March 2020.
- The BBC reported 'Change course or a quarter of a million people will die in a "catastrophic epidemic" of coronavirus'.

(<https://www.youtube.com/watch?v=2XRc389TvG8>;  
<https://www.bbc.co.uk/news/health-51915302>)

# But there were objections to the government U turn

- Authored by Professors Sunetra Gupta, Carl Heneghan and Karol Sikora, an **Open Letter to Boris Johnson** pointed out that **‘the existing pandemic policy was inconsistent with the known risk profile of COVID-19 and should be reconsidered.’**
- **The apparent objective of suppression** until a vaccine becomes available was **‘increasingly unfeasible...and is leading to significant harm across all age groups, which likely offset any benefits.’**
- **‘Instead, more targeted measures that protect the most vulnerable, whilst not adversely impacting those not at risk, are more supportable.’**

Rachel Nicoll PhD, 2024

*Sunetra Gupta, Carl Heneghan & Karol Sikora*  
**Boris must urgently rethink his Covid strategy**

21 September 2020, 10:54am



Getty Images

<https://www.spectator.co.uk/article/boris-needs-to-rethink-his-covid-strategy/>





# But at the COVID Enquiry, everyone denied that herd immunity had ever been UK policy

- Patrick Vallance could not deny that he had ever mentioned herd immunity but he said that he regretted using **the phrase, that it was misunderstood to imply a wish to allow the virus to spread unchecked through the population** (<https://www.theguardian.com/uk-news/2023/nov/21/uk-covid-inquiry-patrick-vallance-herd-immunity-regret>).
- **Chris Whitty apparently told ministers in 2020: “Stop discussing herd immunity – you don’t understand it”** (<https://www.opendemocracy.net/en/tagged/misinformation/>)
- **He branded herd immunity a “dangerous” and “clearly ridiculous” policy** (<https://news.sky.com/story/sir-chris-whitty-says-covid-herd-immunity-was-clearly-ridiculous-and-dangerous-policy-13013527>).

[theguardian.com/uk-news/2023/nov/22/herd-immunity-was-never-uk-policy-](https://www.theguardian.com/uk-news/2023/nov/22/herd-immunity-was-never-uk-policy-chris-whitty-tells-covid-inquiry)

## Herd immunity was never UK policy, Chris Whitty tells Covid inquiry

Chief medical officer for England says ministers caused confusion by even debating the idea

● **UK politics live - latest updates**



📷 The chief medical officer for England, Sir Chris Whitty, arriving to give evidence to the Covid inquiry on Tuesday. Photograph: Neil Hall/EPA

<https://www.theguardian.com/uk-news/2023/nov/22/herd-immunity-was-never-uk-policy-chris-whitty-tells-covid-inquiry>

# Great Barrington Declaration: October 2020

- In the Massachusetts town of Great Barrington, on 4 October 2020, a declaration was signed, which became known as the Great Barrington Declaration.
- Its co-signatories were:
  - Professor Sunetra Gupta (Oxford), an epidemiologist specialising in immunology, vaccine development and mathematical modelling of infectious diseases
  - Professor Martin Kulldorff (Harvard), a biostatistician and epidemiologist
  - Professor Jay Battacharya (Stanford), a public health expert focusing on infectious diseases and vulnerable populations and a health economist







# The main message of the Great Barrington Declaration

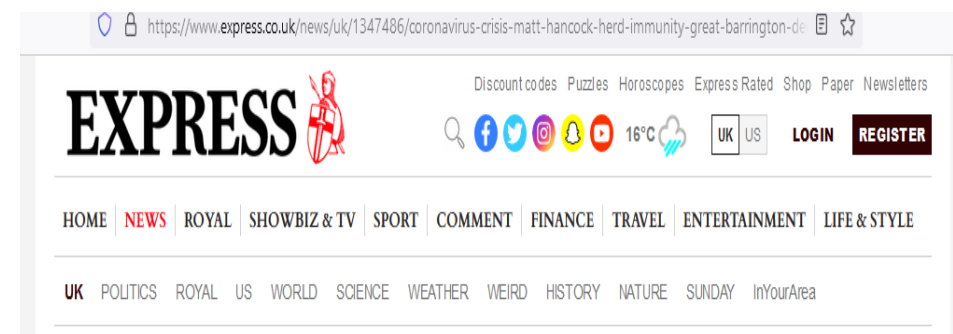
- The co-authors noted that **‘Current lockdown policies are producing devastating effects on short and long-term public health. Keeping these measures in place until a vaccine is available will cause irreparable damage, with the underprivileged disproportionately harmed.’**
- They point out that **vulnerability to death from COVID-19 is more than a thousand-fold higher in the old and infirm than the young, leading to their proposal of ‘focused protection’ for the elderly and vulnerable.**
- **The Declaration was given its own website and others were invited to sign** (<https://gbdeclaration.org/>).
- As at early January 2024, signatories included: 16,109 medical and public health scientists, 47,658 medical practitioners and 875,099 concerned citizens.
- **As Jeffrey Tucker commented: ‘...(the Great Barrington Declaration) caused a global frenzy of fury not because it said anything new. It was merely a pithy restatement of basic public-health principles’.** (<https://brownstone.org/articles/a-deeper-dive-into-the-cdc-reversal/>)



# So did our Health Secretary seize on the Great Barrington Declaration as a way out of lockdown?

- ‘Speaking in the Commons, **Mr Hancock criticised the so-called Great Barrington Declaration....**
- ‘Mr Hancock said: "It says that if enough people get COVID, we will reach herd immunity. This is not true....**Herd immunity is a flawed goal without a vaccine, even if we could get to it, which we can't.**”
- But Professors Martin Kulldorff and Jay Bhattacharya issued a blistering response, accusing Mr Hancock of making inaccurate statements about herd immunity and the Great Barrington Declaration and urging him to **"improve his pandemic job performance"**.
- **"...it is shocking that the Health Secretary does not have a basic understanding of infectious disease epidemiology."**

Rachel Nicoll PhD, 2024



## You don't know what you're doing! Virus experts **TEAR APART** Hancock in brutal letter

MATT HANCOCK has been accused of "not having a basic understanding of infectious diseases" after he warned herd immunity to COVID-19 was a "flawed goal".

<https://www.express.co.uk/news/uk/1347486/coronavirus-crisis-matt-hancock-herd-immunity-great-barrington-declaration-lockdown>

# The US response: The Great Barrington Declaration is “nonsense” and “dangerous”!

- Francis Collins, then the director of the US National Institutes of Health (NIH), called it the work of **‘three fringe epidemiologists’** in an email to Fauci and other high-ranking colleagues.
- Media posts started talking about ‘survival of the youngest and fittest’ and Fauci described the Declaration as “nonsense” and “dangerous.”
- The Lancet published a rebuttal statement known as the John Snow Memorandum (a tribute to the epidemiologist who discovered that contaminated London water was the source of a cholera outbreak in 1854).
- **In addition, 80 researchers in an open letter in the Lancet said ‘The concept of ending the Covid pandemic through herd immunity is “a dangerous fallacy unsupported by scientific evidence”.** ‘The suggestion that the way out is by protecting the vulnerable and allowing the virus to transmit among those less at risk is flawed, they say. “Uncontrolled transmission in younger people risks significant morbidity and mortality across the whole population.”
- **“There is no evidence that immunity after recovering from Covid-19 lasts...people who are vulnerable would be at risk for the indefinite future and cannot be kept safe.”**

(<https://brownstone.org/articles/focused-protection-jay-bhattacharya-sunetra-gupta-and-martin-kulldorff/>; Alwan NA, et al. Scientific consensus on the COVID-19 pandemic: we need to act now. Lancet. 2020 Oct 31;396(10260):e71-e72)



# The most vulnerable: instead of focused protection, they suffered focused neglect and isolation

- **As we have already seen**, many care home residents contracted COVID from the hospital in-patients moved into care homes.
- ONS data showed that **deaths among care home residents to early June 2020 amounted to 47% of the total and there was a considerably higher mortality risk than prior to the pandemic**, which may have been aided by DNR orders and midazolam.
- Amnesty International reported that care homes may have **denied residents 'rights to private and family life and may have violated their right not to be subjected to inhuman or degrading treatment.'**
- The Joint Committee on Human Rights pointed out that **blanket visiting bans were contrary to the rights of both patients and their families under the European Convention on Human Rights and NHS England guidance.**
- Studies reported **feelings of isolation and fear and a 77% risk of death from any cause among those who do not see friends or family.**



# Shortly after the dissemination of the Great Barrington Declaration, the WHO changed its definition of Herd Immunity

The image displays two side-by-side screenshots of the World Health Organization's (WHO) website, illustrating a change in the definition of herd immunity for COVID-19. Both screenshots feature the WHO logo and a navigation menu.

**Left Screenshot (dated 9 June 2020):**  
The page title is "Coronavirus disease (COVID-19): Serology". The question is "What is herd immunity?". The definition states: "Herd immunity is the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection. This means that even people who haven't been infected, or in whom an infection hasn't triggered an immune response, they are protected because people around them who are immune can act as buffers between them and an infected person. The threshold for establishing herd immunity for COVID-19 is not yet clear."

**Right Screenshot (dated 13 November 2020):**  
The page title is "Coronavirus disease (COVID-19): Serology, antibodies and immunity". The question is "What is herd immunity?". The definition states: "'Herd immunity', also known as 'population immunity', is a concept used for vaccination, in which a population can be protected from a certain virus if a threshold of vaccination is reached. Herd immunity is achieved by protecting people from a virus, not by exposing them to it. Read the Director-General's 12 October media briefing speech for more detail."





# WHO definition of Herd Immunity: what's different?

- In June 2020, the definition was **'Herd immunity is the indirect protection...that happens when a population is immune either through vaccination or immunity developed through previous infection'**.
- In October 2020, the Great Barrington Declaration came out.
- In November 2020, the WHO website said **'Herd immunity...is a concept used for vaccination, in which a population can be protected...if a threshold of vaccination is reached...Herd immunity is achieved by protecting people from a virus, not by exposing them to it'**.
- Professor Jay Bhattacharya, co-author of The Great Barrington Declaration, stated that the new WHO definition of 'herd immunity' does not describe the biological reality.
- Jeffrey Tucker, American Institute for Economic Research and founder of The Brownstone Institute claimed the WHO had 'literally changed the science in a Soviet-like way'.
- **There was widespread outcry at this, causing the WHO to revert to the original definition of herd immunity on their website.**

(<https://www.who.int/news-room/questions-and-answers/item/herd-immunity-lockdowns-and-covid-19>;  
<https://www.lifesitenews.com/news/who-changes-its-definition-of-herd-immunity-making-widespread-vaccination-essential/>; <https://www.aier.org/article/who-deletes-naturally-acquired-immunity-from-its-website/>;  
<https://www.who.int/news-room/questions-and-answers/item/herd-immunity-lockdowns-and-covid-19>)

# Herd immunity: summary

- Initially, the government and scientific advisors appeared to be trying for herd immunity.
- After the publication of the Imperial College modelling, there was a U-turn by the government and scientific advisors, who then denied that herd immunity had ever been a policy.
- Objections to the U-turn from doctors and scientists were ignored.
- The Great Barrington Declaration advocated ‘focused protection for the vulnerable’ as the existing policies of lockdown etc were having ‘devastating effects on short and long-term public health’. This was strongly criticised in the UK and US.
- Yet instead of focused protection for the elderly and infirm in care homes, they suffered focused neglect and isolation.



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