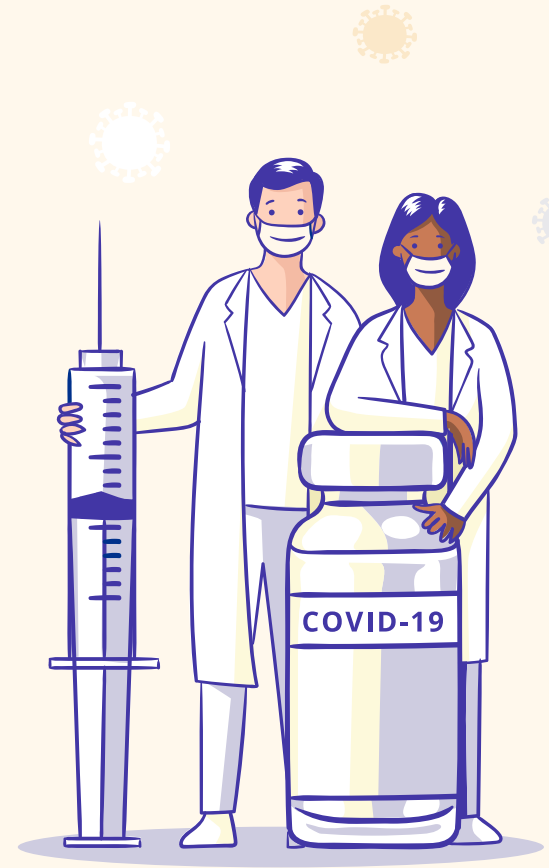


# The History of the Anti-Vaccination Movement

18<sup>th</sup> Century – Today



# Smallpox Vaccine



- Invented by Edward Jenner in 1796 – Britain
- Smallpox was the first disease to be eradicated by vaccination
- Smallpox was highly contagious and deadly all over the world



Edward Jenner administering his first smallpox vaccine in 1796, using pus from a cowpox sore

# Smallpox Vaccine Controversies

## Religion

- 18<sup>th</sup>/19<sup>th</sup> century Britain was extremely religious
- Vaccination was blasphemous – cows were inferior
- Distrust of divine providence

# Smallpox Vaccine Controversies

## Safety

- Vaccination was new and unsterile
- People might turn into cows
- "Cow-mania"

## Depictions of Rowley and Moseley's theories



H. Humphrey/Henry Barton Jacobs Collection, Institute of the History of Medicine, Johns Hopkins University



Thornton, Robert John, "Vaccinae vindicia; or, defence of vaccination," July 2 1806.

# Smallpox Vaccine Controversies

## Morality + Philosophy

- Objection to the 1853 UK Vaccination Act
  - All infants were to be vaccinated in the first 3 months
- Loss of freedom and autonomy
- Beginning of the organised anti-vaccination movement
- Anti-Compulsory Vaccination League

Anti-Vaccination pamphlet portraying that vaccination would cause death (London, late 19<sup>th</sup> century)



The Historical Medical Library of the College of Physicians of Philadelphia



# MMR Vaccine



Hilleman's daughter receiving the mumps vaccine he developed before MMR

- Invented by Maurice Hilleman in 1971
- Combined measles, mumps and rubella vaccine
- Measles – extremely contagious
- Vaccination is crucial to prevent outbreaks

# The Modern Anti-Vaccination Movement



Andrew Wakefield

## New evidence revives fears over safety of MMR vaccine

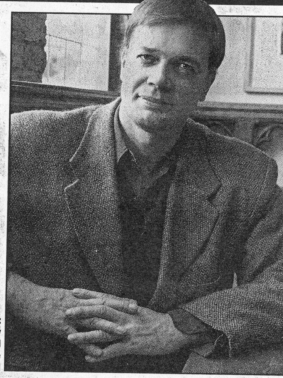
THE safety of the MMR jab was again called into question last night after doctors unveiled new evidence linking it to autism and bowel disease. Tests carried out on 12 children with autism and gut disorders

By Rachel Ellis

MEDICAL CORRESPONDENT

and with all the published studies that have come from our investigations, parents must at the very least

SINGLE PLEA: Dr Andrew Wakefield wants separate jobs offered




## Ban three-in-one jab urge doctors after new fears





# The Modern Anti-Vaccination Movement

- Wakefield's study was published in 1998, during the new growth of the internet
  - Misinformation was very accessible
  - 2004 survey in Rotorua district: 21% of doctors were unsure about the link between MMR vaccine and autism/Crohn's disease
- 

# Consequences of Wakefield's Study

THE LANCET Log in 🔍

COMMENT | VOLUME 375, ISSUE 9713, P445, FEBRUARY 06, 2010

## Retraction—Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

The Editors of The Lancet

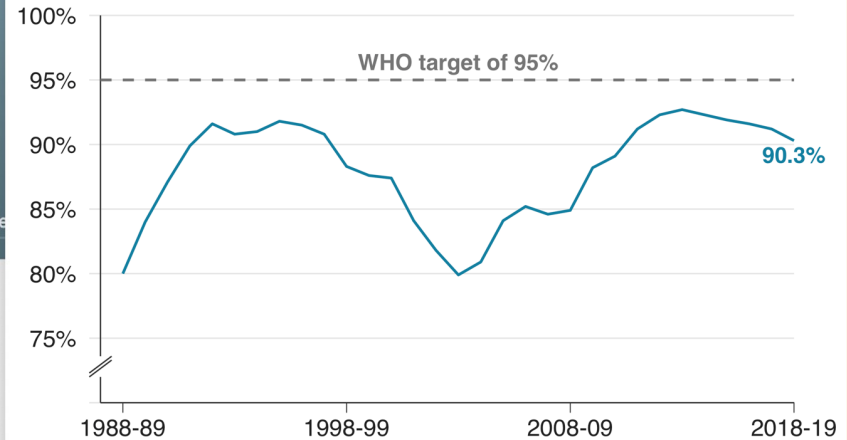
Published: February 06, 2010 • DOI: [https://doi.org/10.1016/S0140-6736\(10\)60175-4](https://doi.org/10.1016/S0140-6736(10)60175-4)

PlumX Me

Following the judgment of the UK General Medical Council's Fitness to Practise Panel on Jan 28, 2010, it has become clear that several elements of the 1998 paper by Wakefield et al<sup>1</sup> are incorrect, contrary to the findings of an earlier investigation.<sup>2</sup> In particular, the claims in the original paper that children were “consecutively referred” and that investigations were “approved” by the local ethics committee have been proven to be false. Therefore we fully retract this paper from the published record.

## MMR first dose coverage is falling in England

% of children who completed first dose of vaccine at 24 months



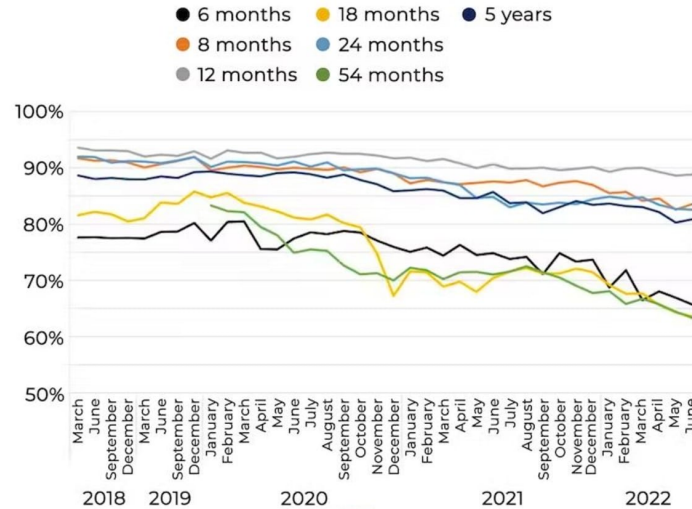
Source: Cover of Vaccination Evaluated Rapidly, Public Health England



Wakefield, AJ, SH Murch, A Anthony, J Linnell, DM Casson, M Malik, M Berelowitz, et al. “Retracted: Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children.” *The Lancet* 351, no. 9103 (February 6, 2010): 637–41. [https://doi.org/10.1016/S0140-6736\(97\)11096-0](https://doi.org/10.1016/S0140-6736(97)11096-0).

## Immunisation coverage has been declining in recent years

Childhood immunisation coverage, by milestone age, 2018 to 2021, New Zealand.



NZ Ministry of Health, CC BY-ND

RNZ/Ministry of Health, 2022.

# COVID-19 Vaccine







- Anti-vaccination rhetoric became much more widespread – not just limited to children safety
- Conspiracy theories
- Side effects
- Government mandates
- Scepticism about COVID-19



# Common Myths

## The COVID-19 Vaccine...

- Affects fertility/pregnancy
  - Changes DNA
  - Contains tracking devices or microchips
  - Was rushed and unsafe
- 
- 
- 
- 

# The Role of the Internet and Social Media



BBC

- Smallpox vaccine propaganda was spread by pamphlets and protests
- The internet was non-existent until the 1990s; it became relevant in the MMR-autism scandal
- Played a huge role in the spread and preservation of misinformation
- The use of social media makes the COVID-19 anti-vax response unique
- Misinformation has become much more targeted and unavoidable



# How the Movements Compare

## Smallpox

- Lower-middle and working class activists, often religious
- Scepticism about state intervention, and the vaccine's safety/purity
- Came shortly after the British Chartist movement – democracy was a foremost concern

## MMR

- Middle class activists
- Scepticism about the science
- Individualism – advocacy for making personal choices
- Unique as it was triggered by a specific person/study

## COVID-19

- Middle class activists
- Similar to smallpox – major government and anti-mandate concerns
- Also questioned science and promoted liberalism
- A culmination of the historical reasons for vaccine hesitancy

# Informing Next Steps

Fearmongering is one of the biggest issues that needs to be addressed



Evidence-based advocacy and education is the most important tool in combating anti-vaccination rhetoric

