



The Opposition to Vaccines

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Background

The Anti-Vaccination Movement has been prevalent ever since the invention of the smallpox vaccine. The movement encourages people to refuse vaccinations against common illnesses, which can lead to spikes in previously controlled diseases. The Anti-Vaccination movement has caused regressions and setbacks in modern medicine by ignoring scientific studies proving vaccine efficacy and leads to health risks for vulnerable populations.

What are Vaccines?

Vaccines are used to strengthen the human body's immunity. They contain antigens that allow for the production of plasma cells as a response to secrete specific antibodies. These responses are then translated to memory cells, which allows the body to protect itself in the future if exposed to the specific illness.

Early and Modern-Day Vaccines

- The smallpox vaccine was invented by Edward Jenner in 1796
- Polio vaccine invented in 1955
- Development of Measles Mumps Rubella (MMR) vaccine in 1971
- COVID-19 vaccine developed in late 2020 and early 2021
- Three types: Pfizer-BioNTech, Moderna, and Johnson & Johnson

The Anti-Vaccination Movement

The Anti-Vaccination Movement refers to the spread of the belief that vaccines are actually harmful to the human body rather than beneficial. Those who are part of the movement encourage people to refuse vaccinations for themselves and their children.

The two vaccinations that those who are part of the Anti-Vaccination Movement encourage people to refuse because of the concern surrounding them are the COVID-19 vaccine and the MMR vaccine.

Reasons for the prevalence of the Anti-Vaccination Movement include religious reasons, the spread of misinformation, conspiracy theories, and the use of social media.

The efficacy of vaccinations can be demonstrated through the decreasing prevalence of diseases. Decreasing vaccination rates can result in outbreaks of previously controlled diseases. Encouraging the refusal of vaccines can be seen as a regression in modern medicine, and does not align with the scientific evidence in support of vaccines.

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COVID-19 STATE VACCINE TRACKER

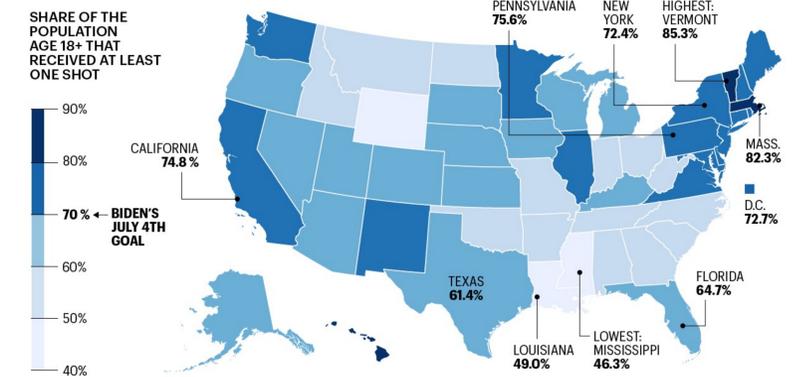


Figure 1. Fry, E., & Rapp, R. (2021). American won't make Biden's July 4 COVID vaccine goal. See which states will. *Fortune*.

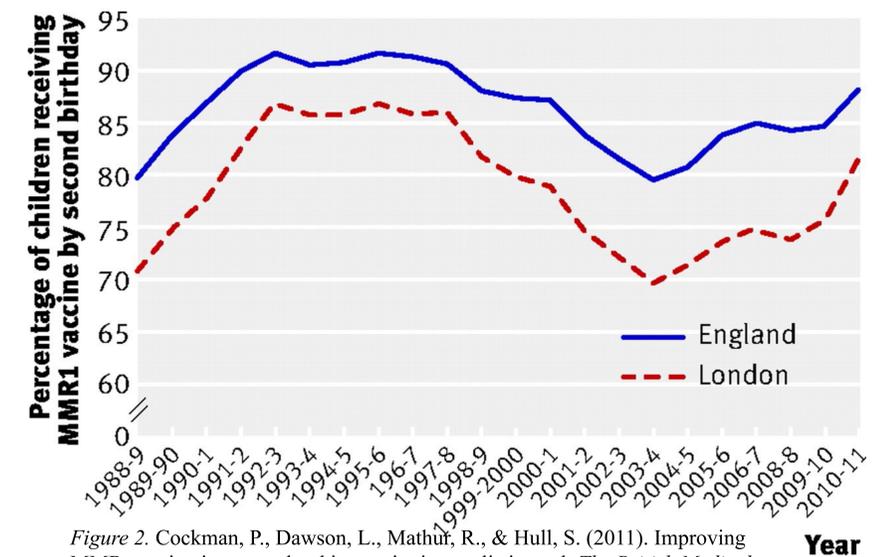


Figure 2. Cockman, P., Dawson, L., Mathur, R., & Hull, S. (2011). Improving MMR vaccination rates: herd immunity is a realistic goal. *The British Medical Journal*.