



A History of Hesitancy

A brief overview of vaccine hesitancy
and the anti-vaccination movement
in the United States

Timeline

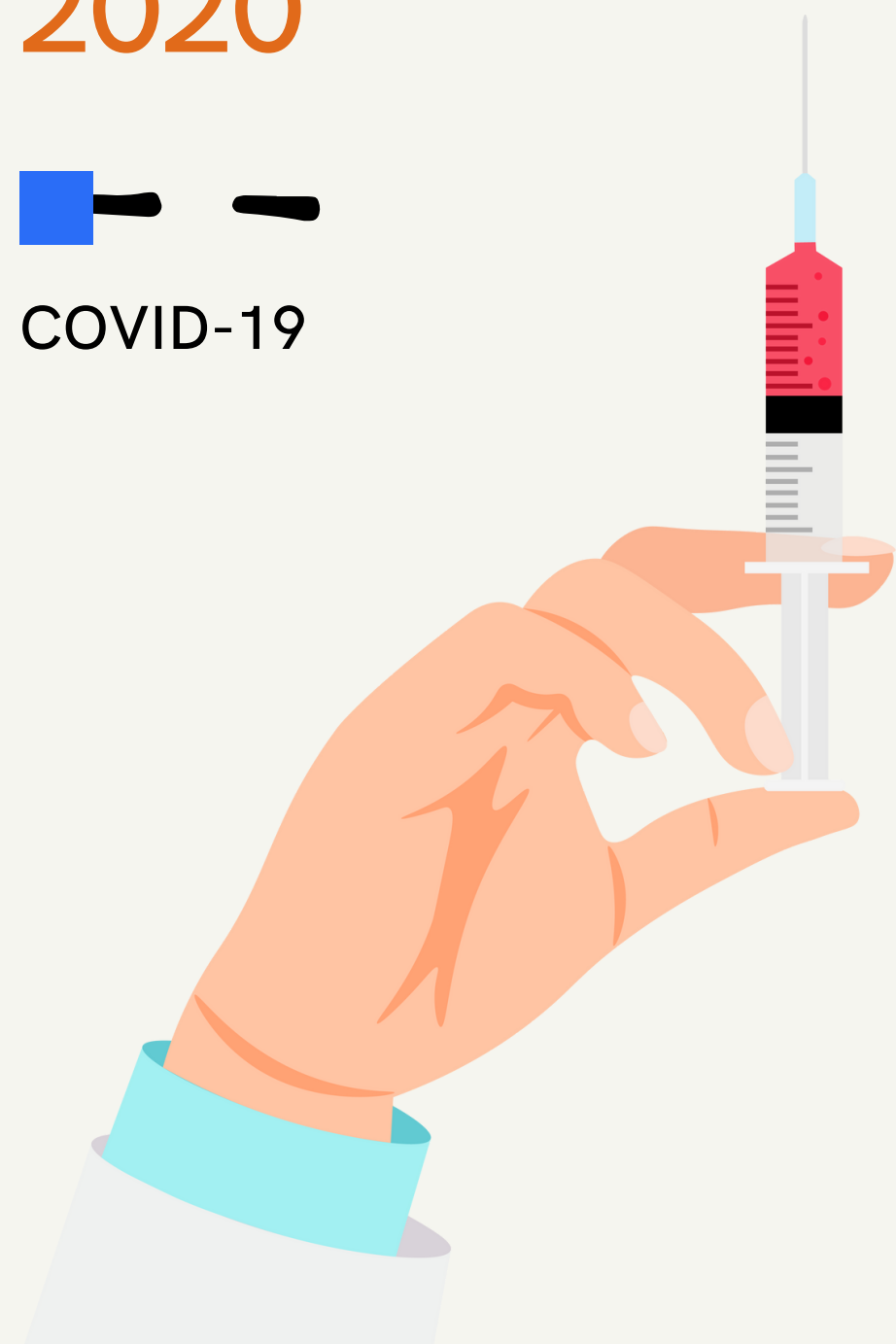
1860

1970

1990

2010

2020



Britain, 1853



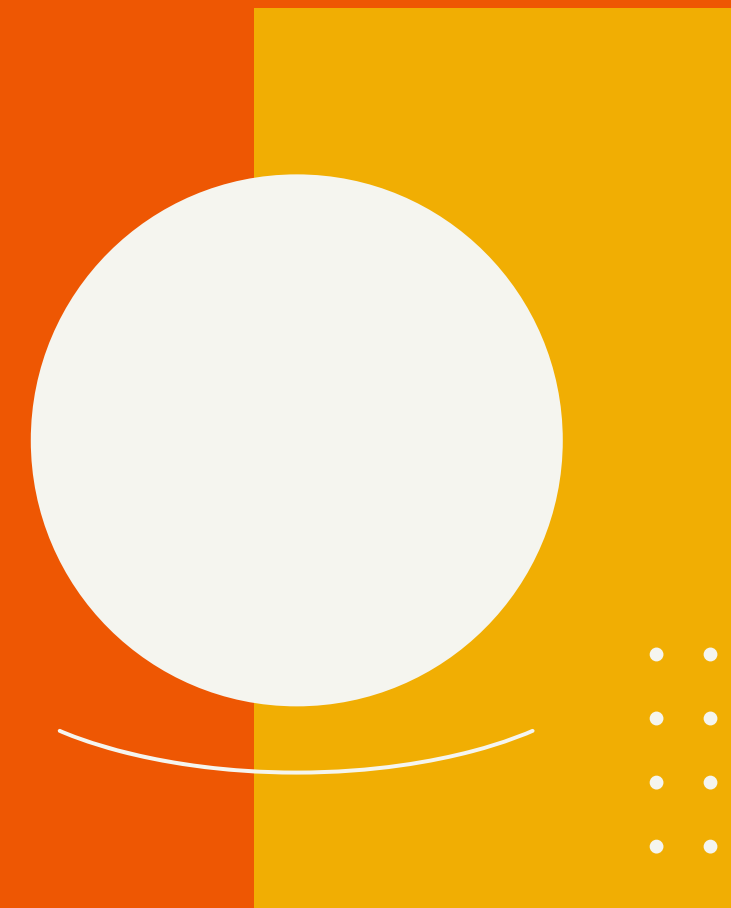
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The United States' antivaccination movement originates across the Atlantic. The first antivaccination movement was a response to the British government's strict enforcement of the Vaccination Act of 1853 following a smallpox outbreak in 1863. This act made the smallpox vaccine mandatory for children in Britain.

The National Anti-vaccination Foundation was founded in 1866. In Leicester alone, as many as 6,000 individuals were prosecuted for violating the Vaccination Act by not vaccinating their children in the 1870s. This culminated in large protests in Leicester in 1885, involving the burning of effigies of Edward Jenner, the creator of the smallpox vaccine.

Porter & Porter, 1988

Williamson, 1984



Parents were concerned about the safety of the smallpox vaccine, and their fears were not unwarranted, as some severe adverse effects were being reported. Initially, the vaccination effort was directed by government officials. It wasn't until 1858 that medical oversight was instituted, and quality control measures were implemented. Even with the extra precautions and improvements in education for the people giving the vaccine, problems still arose that hurt public confidence.

In 1871 evidence emerged that two cases of syphilis had been transmitted via a needle, which also led to concerns about vaccine administration.



Porter & Porter, 1988
Williamson, 1984

In response to the smallpox epidemic of 1898-1904, United States public officials required the smallpox vaccine in schools, factories, and railroads. Public resistance to the mandate was driven mostly by the working class, who were hit hardest by non-compliance fines. They felt this legislation was government overreach. Anti-vaccination groups were formed in response to the legislation.

However, these anti-vaccine movements dwindled as successful vaccination campaigns eradicated smallpox in the US and Britain.

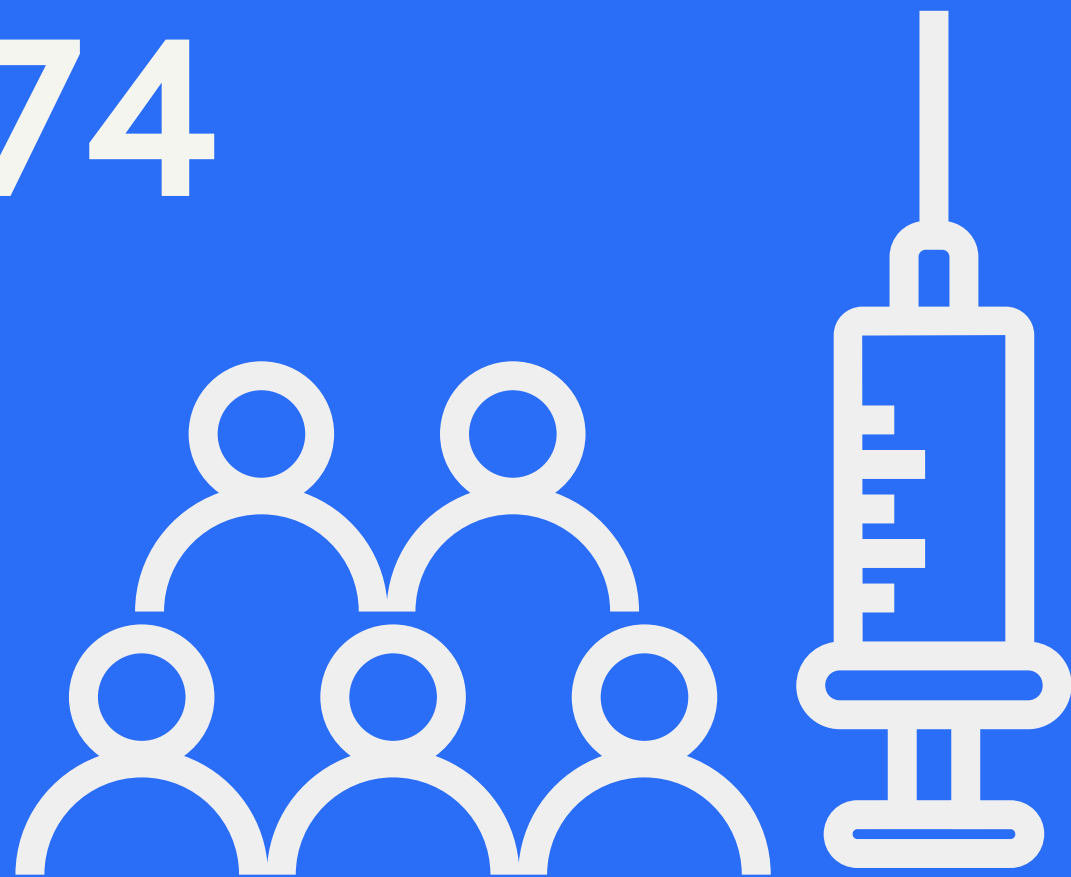
Porter & Porter, 1988

Williamson, 1984

NPR, 2011

***"...from the standpoint of free citizenship no government should forcibly inflict on any individual enjoying all other rights of the nation, a disease [vaccine] loathsome in its origin, and not free from danger to life, and with, at all events, impairment of bodily health, at least of a temporary nature."
- Boston's Anti-Compulsory Vaccination League***

DTP Vaccine Pushback, 1974



Anti-vaccination movements laid 6
fairly dormant until 1974. Then, a
paper was published by the Great
Ormond Street Hospital for Sick
Children in London. This paper
alleged a connection between
neurological damage in children
and the pertussis element of the
Diphtheria, Pertussis, and Tetanus
(DTP) vaccine. Though the vaccine
was linked to rare febrile
convulsions, further research found
no link between neurological
damage and the DTP vaccine.

Kulenkampff, 1974

Fanget, 2020

Scottish epidemiologist Gordon Stewart continued to push this disproven association between neurological disease and the DTP vaccine into the public eye, culminating in his appearance in the documentary *DTP: Vaccine Roulette*. In the USA in 1982, the notorious anti-vaccine advocacy organization Dissatisfied Parents Together was founded. Now rebranded as the National Vaccine Information Center, they still push anti-vaccine rhetoric, misinformation, and legislation today.



Kulenkampff, 1974
Fanget, 2020

The anti-vaccine movement resulting⁷ from the DTP pushback borrowed language and ideas from the concurrent environmentalist movement. To quote Barbra Loe Fisher, a founder of Dissatisfied Parents Together:

"Just as we have polluted our environment with manmade chemicals, we may well be polluting ourselves with a myriad of man-made vaccines in our quest to eradicate all disease and infection from the earth."

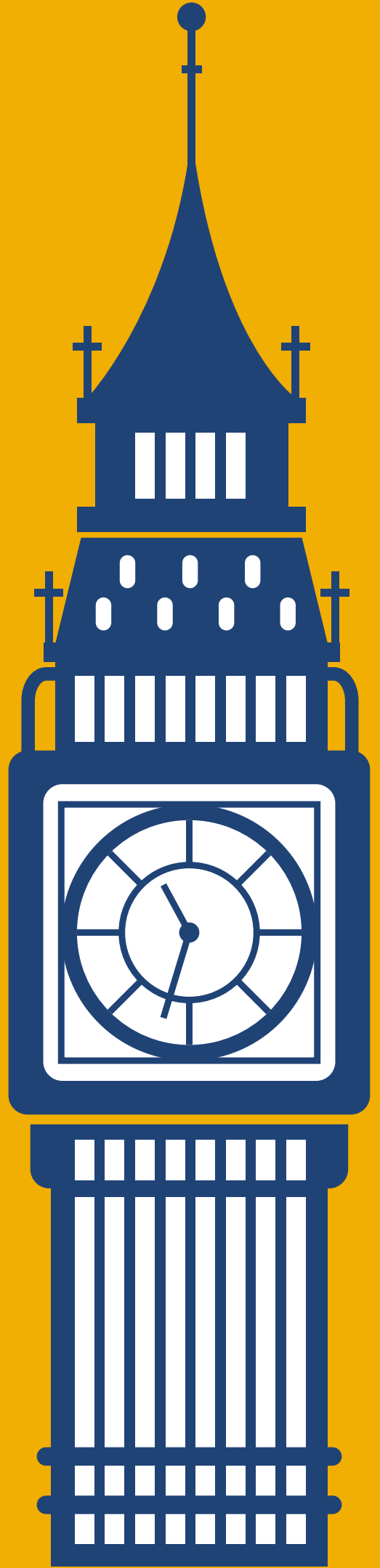
Following the narrative that vaccines were harmful, several lawsuits were filed against vaccine manufacturers by parents who believed their child was injured by a vaccine. Despite a lack of scientific evidence proving the vaccine caused harm, it was also challenging to prove it *didn't* cause harm. These expensive lawsuits made vaccine manufacturers reluctant to continue producing and developing vaccines, which has obvious public health implications.

In response to the lawsuits, the US government passed the National Childhood Vaccine Injury Act of 1986. This act established the Vaccine Adverse Event Reporting System (VAERS) to track potential vaccine side effects and created the National Vaccine Injury Compensation Program to compensate those potentially injured by a vaccine. This program took the financial pressure off vaccine manufacturers, keeping the development and production of vaccines financially viable while still compensating families who may have been injured by a vaccine.

Kulenkampff, 1974

Fanget, 2020

CDC



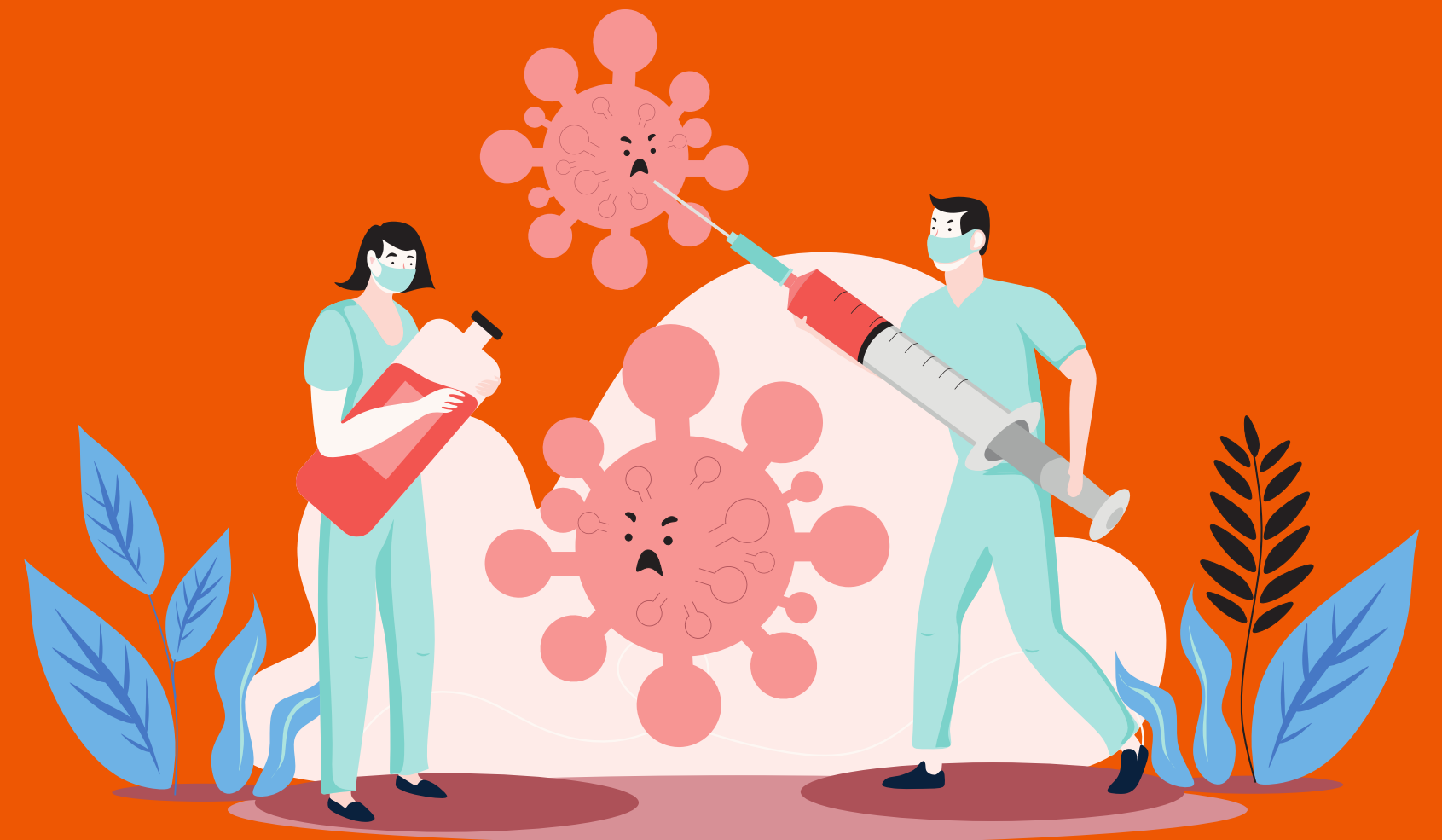
Wakefield & Autism, 1998

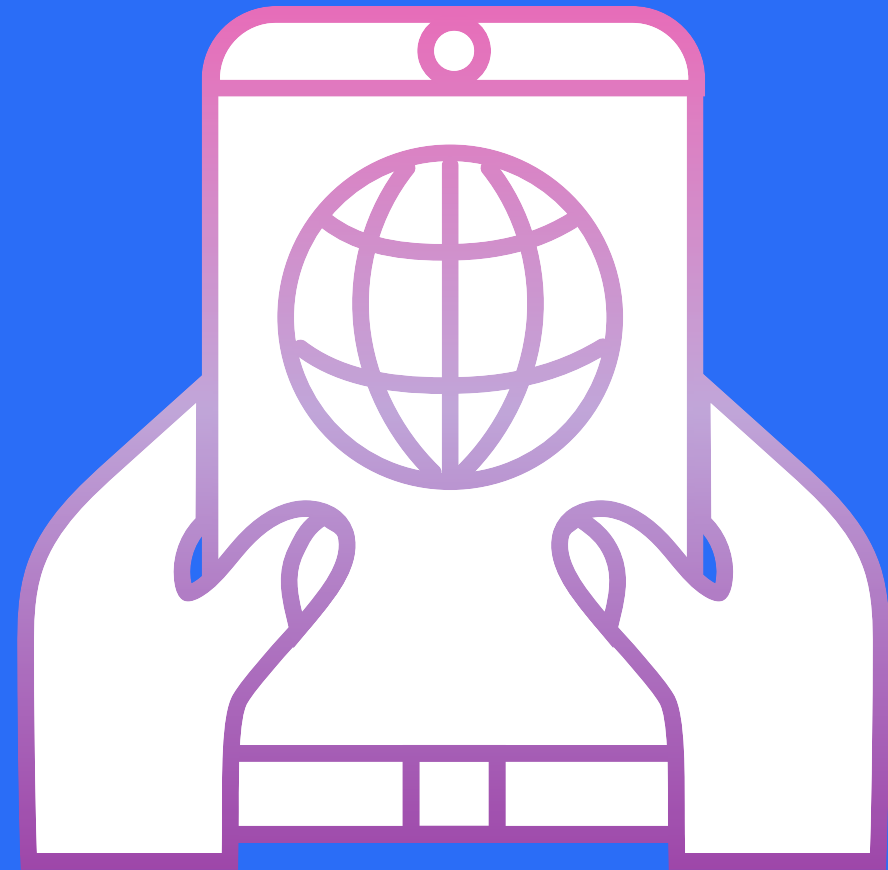
Colins, n.d.
Dyer, 2017
Katta, 2012

A rumor associating vaccines to neurological disease in the 1970s paved the way for the widespread claim linking autism to childhood vaccination. This now-debunked claim became mainstream in Britain in 1998, after disgraced former doctor Andrew Wakefield published a study alleging autism and gastrointestinal disorders were caused by the measles portion of the MMR vaccine. The British media highly publicized Wakefield's paper, even though the study had significant problems, ranging from mislabeling subjects to Wakefield's own conflict of interest: Wakefield was simultaneously filing a patent for an alternative MMR vaccine. Follow-up research could not recreate his findings, but the damage was already done. The rumor solidified, and a space for public debate on vaccination was created.

After losing his medical license, Wakefield moved to Texas. Today, he continues to speak publicly and spread misinformation about vaccines. His actions are not without harmful consequences. For example, Wakefield gave talks to concerned members of the Somali community in Minneapolis from 2010-2011. Consequently, vaccination rates in the Somali community dropped from 92% in 2009 to 42% in 2014. In 2017, Minnesota would go on to have its biggest measles outbreak in 30 years. The hesitancy he instilled in this community is still around today.

Colins, n.d.
Dyer, 2017
Katta, 2012
Sun, 2017



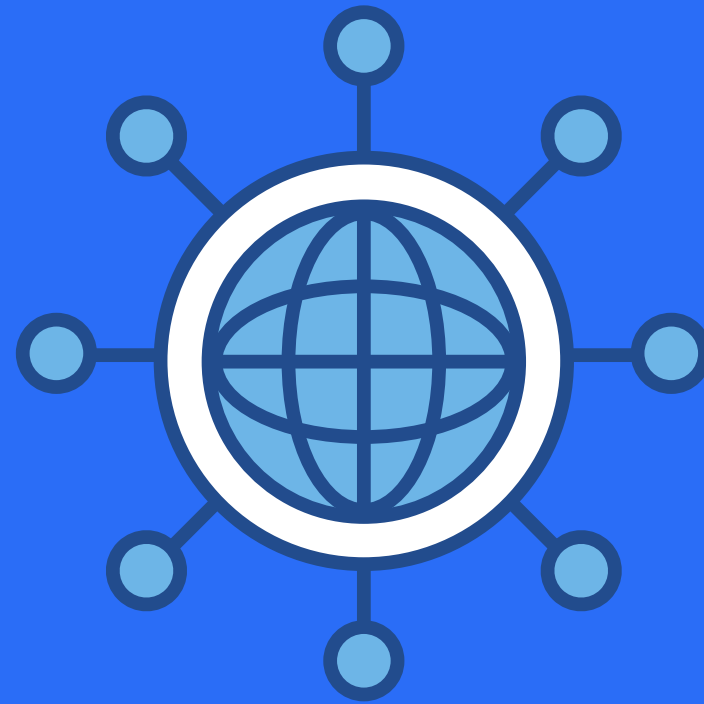


Jenny McCarthy & the Internet, 2008

One of the most prominent faces of ¹¹ the anti-vaccine movement in recent history is Jenny McCarthy, an American celebrity who wrote a book about her son, whom she believes became autistic due to vaccinations. In 2008, McCarthy, in interviews on shows like *Oprah* and *The Larry King Show*, purported that she trusts her “mommy instinct,” does her own research online, and is not “anti-vaccine, but pro-vaccine safety.”

Kulenkampff, 1974
Fanget, 2020

McCarthy, and those she resonates with, emphasize the value of lived experience, individual decision-making, and the ability to create your own expertise with the data available to you online.



McCarthy promotes the narrative that the Centers for Disease Control and Prevention (CDC) and pro-vaccination organizations are ignoring the experiences and concerns of parents, encouraging distrust of the medical establishment. She instead calls for parents to make vaccine-by-vaccine risk assessments for their children's safety.

Gottlieb, 2016

Kata, 2012

Challenges in the Social Media Landscape

It is incredibly simple to create and widely disseminate correct and incorrect information in the internet age. Sites like Twitter, Facebook, and YouTube are awash with often contradictory vaccine content, and it can be challenging to sort valid information from misinformation and disinformation.

13

Claims that you cannot trust the establishment and you should do your own research take advantage of our social media landscape. Using cherry-picked data, scare tactics, and emotion-packed verbiage, anti-vaccine rhetoric often appears just as valid and perhaps even more compelling and digestible to the reader as pro-vaccination rhetoric.

Gottlieb, 2016
Kata, 2012

Vaccine hesitancy as a political movement is often reflective of anxieties of the time. In the 1890s, working-class anxiety over government restrictions on bodily autonomy drove anti-vaccination rhetoric. In the 1970s and '80s, increasing concerns over autism and the effects of toxins on the body and environment became mainstream. In the 2000s, personal mistrust of the medical establishment and a push towards more individualized patient care became dominant.



Antivaccination Rhetoric: A Reflection of the Time



Today, 2020s

The use of social media has played a dominant role in the spread of today's anti-vaccination movement, which the COVID-19 pandemic has fueled. In the 2020s, anti-vaccination movements appear alongside rising political divides in the United States and growing mistrust in medical and public health experts. However, this modern movement is shaped by anti-vaccination movements that came before. Understanding vaccine hesitancy and anti-vaccination movements within their cultural and historical context is one key element to curb the spread of misinformation and build trust in science.

References & Resources

- Colins, E. (n.d.). Vaccination Resistance in Historical Perspective | The American Historian. 12 Retrieved December 3, 2021, from <https://www.oah.org/tah/issues/2015/august/vaccination-resistance/>
- Dyer, O. (2017). Measles outbreak in Somali American community follows anti-vaccine talks —ProQuest. Retrieved December 3, 2021, from <https://www.proquest.com/openview/a01d62cb0d443cf764d5551c986b28b1/1?pq-origsite=gscholar&cbl=2043523>
- Fanglet, N. (2020). Pertussis: A tale of two vaccines. Retrieved December 3, 2021, from <https://www.nature.com/articles/d42859-020-00013-8>
- Gangarosa, E., Galazka, A., Wolfe, C., Phillips, L., Miller, E., Chen, R., & Gangarosa, R. (1998). Impact of anti-vaccine movements on pertussis control: The untold story. *The Lancet*, 351(9099), 356–361. [https://doi.org/10.1016/S0140-6736\(97\)04334-1](https://doi.org/10.1016/S0140-6736(97)04334-1)
- Gottlieb, S. D. (2016). Vaccine resistances reconsidered: Vaccine skeptics and the Jenny McCarthy effect. *BioSocieties*, 11(2), 152–174. <https://doi.org/10.1057/biosoc.2015.30>

- History of Anti-vaccination Movements | History of Vaccines. (n.d.). Retrieved December 3, 2021, from <https://www.historyofvaccines.org/content/articles/history-anti-vaccination-movements>
- International Notes Pertussis—England and Wales. (n.d.). Retrieved December 3, 2021, from <https://www.cdc.gov/mmwr/preview/mmwrhtml/00001197.htm>
- Kata, A. (2012). Anti-vaccine activists, Web 2.0, and the postmodern paradigm – An overview of tactics and tropes used online by the anti-vaccination movement. *Special Issue: The Role of Internet Use in Vaccination Decisions*, 30(25), 3778–3789. <https://doi.org/10.1016/j.vaccine.2011.11.112>
- Kulenkampff, M., Schwartzman, J. S., & Wilson, J. (1974). Neurological complications of pertussis inoculation. *Archives of Disease in Childhood*, 49(1), 46–49.
- Porter, D., & Porter, R. (1988). The politics of prevention: Anti-vaccinationism and public health in nineteenth-century England. *Medical History*, 32(3), 231–252.
- Reich, J. A. (2018). When the Personal is Political —And Infectious. *Contexts*, 17(3), 34–39. <https://doi.org/10.1177/1536504218792524>

- U.S. Vaccine Safety—Overview, History, and How It Works | CDC. (2020, September 9). <https://www.cdc.gov/vaccinesafety/ensuringsafety/history/index.html>
- Kulenkampff, M., Schwartzman, J. S., & Wilson, J. (1974). Neurological complications of pertussis inoculation. *Archives of Disease in Childhood*, 49(1), 46–49.
- Pertussis: A tale of two vaccines. (n.d.). Retrieved December 3, 2021, from <https://www.nature.com/articles/d42859-020-00013-8>
- Porter, D., & Porter, R. (1988). The politics of prevention: Anti-vaccinationism and public health in nineteenth-century England. *Medical History*, 32(3), 231–252.
- Reich, J. A. (2018). When the Personal is Political —And Infectious. *Contexts*, 17(3), 34–39. <https://doi.org/10.1177/1536504218792524>
- U.S. Vaccine Safety—Overview, History, and How It Works | CDC. (2020, September 9). <https://www.cdc.gov/vaccinesafety/ensuringsafety/history/index.html>
- Vaccination Resistance in Historical Perspective | The American Historian. (n.d.). Retrieved December 3, 2021, from <https://www.oah.org/tah/issues/2015/august/vaccination-resistance/>