The Charletan's Manifesto: How Misinformation Spreads

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I. How to Manufacture a Scandal

Child abuse, falsified medical documentation, and millions of dollars in hush-money: even decades later, the legacy of one man's infamous campaign against the MMR vaccine continues to shape the current public health landscape. In 1998, then-doctor Andrew Wakefield released his article *Ileal-lymphoid-nodular hyperplasia*, non-specific colitis, and pervasive developmental disorder in children in the prestigious British medical journal *The Lancet*. Even in the most compelling of cases, a single scientific study is rarely enough to break headlines. With a sample size of 12, circumstantial evidence relying on parent's recollection of events that occurred up to a decade earlier, and the invention of a new disease that could not be detected through any existing diagnostic means, Wakefield's study didn't seem equipped to shake a pillar of modern medicine such as vaccination.

However, Wakefield was not just a scientist; he was an excellent marketer. Immediately following the publishing of his article, he held a large press conference to announce his findings to the public. His name tore through British press, with journalists and talk show hosts uncritically regurgitating the claims he made in his conference (and the press release following it) as fact (Dobson 2003). Furthermore, they gave him a platform to belabor these points through countless interviews in the subsequent months. This kind of media coverage is uncommon for any study, no matter how controversial, exciting, or seemingly news-worthy it may be.

Wakefield's central assertion was that he had discovered a novel bowel disease in the guts of children with autism. This new disease, which Wakefield dubbed "autistic enterocolitis," was put forth as the cause of autism in these children. In his article from *The Lancet*, Wakefield asserted that this new disease was brought on after exposure to the MMR (measles, mumps, and rubella) vaccination, writing that "Onset of behavioral symptoms was associated, by the parents,

with measles, mumps, and rubella vaccination" (Wakefield et al., 1998). To tie MMR vaccination to autism was a leap that had never been explored (or even suggested) in existing scientific literature. Now Wakefield, neither an immunologist nor a neurologist, fervently tied MMR vaccination to the onset of autism in children through a bowel disease that he himself invented.

Despite the fact that his claim flew in the face of decades of biomedical research, scientific consensus, and global public health practice, Wakefield's message spread like wildfire. As the singular member of the scientific community calling into question the safety of the MMR vaccine, Wakefield painted himself as an anti-institutional figure standing up for "parental rights." His central claim was that his research had uncovered a new link between the MMR immunization and autism, and that he "could no longer support the MMR vaccine" ("Controversy Over Vaccine Research" 2009). This message was one that he repeated in dozens of interviews, press conferences, and even a press release following the publication of his study. He called for the "immediate halt" of any use of the MMR immunization on children, a point he belabored in countless interviews

What is important to note is that at this time, Wakefield was not staking out a position against immunizations. In fact, Wakefield took great care to note in each of his interviews that he "Would continue to vigorously support the use of spaced out single vaccines" ("Controversy Over Vaccine Research" 2009), and that his only concern was with the MMR vaccine specifically. Explicitly stating that he was "Not anti-vaccination," Wakefield called for parents to give their children separate shots for measles, mumps, and rubella rather than receiving the polyvalent MMR vaccine.

The results of Wakefield's work and the press surrounding it were felt immediately. MMR vaccination rates plummeted, with some parents opting to immunize their children separately for each virus as Wakefield recommended, and others refusing to vaccinate their children at all. In the following years, the UK saw spikes in measles cases for the first time in decades ("Measles Notifications and Deaths in England and Wales: 1940 to 2020" 2022). At a time when death by transmittable disease was at an all-time low, Wakfield's claim that MMR was tied to autism shook one of the pillars of public health to its core.

After the initial drop-off in MMR vaccination, public trust in vaccines did not begin to trend towards normal again until years later, when investigative journalist Brian Deer comprehensively debunked Wakefield's work as illegitimate, exposing a horrifying array of fraud, deceit, greed, and child endangerment all hidden behind the facade of health and safety (Deer 2004). However, even decades after Wakefield's work has been comprehensively debunked and years of robust experimentation had demonstrated clearly that there was no link between autism and MMR or any other vaccination (Taylor et al. 2014), the effects of his campaign of misinformation are still felt today. As the COVID-19 vaccine was being developed and administered, the majority of anti-vaccination and vaccine-hesitant parents cited a fear of autism as the driving reason behind their aversion to vaccinating their children (Cataldi et al., 2021).

So how was this possible? Without science, fact, or truth on his side, Andrew Wakefield needed something else: a clever, deceptive, and brutally effective rhetorical strategy. This was never a debate to be won on scientific grounds; decades of research consistently demonstrated the safety and efficacy of this vaccination. However, Wakefield knew this to be true. As such, he did not engage his audience with scientific terms. In his countless interviews, Wakefield made

vaccination an issue of parental choice, personal freedom, and child safety. Furthermore, he was able to frame his opposition as the blind followers of an authoritarian institution, while portraying himself as a truth-telling fighter for freedom. By taking advantage of a scientifically illiterate public, existing traces of distrust in government and medicine, and the growing population of vulnerable parents to children with special needs, Wakefield crafted one of the most effective and dangerous campaigns ever seen in medicine or science. In this essay, I will examine the rhetorical environment in which Wakefield made his claims, perform a rhetorical analysis on the countless interviews given by Wakefield himself, and examine many of the ways that public health systems have been forced to respond by these claims for the last several decades.

II. The Height of Confidence in Public Health

Trust in vaccination had been high throughout the 20th century following a series of successful vaccination campaigns which curbed or outright eradicated a number of deadly viruses. ("Achievements in Public Health, 1900-1999 Impact of Vaccines Universally Recommended for Children -- United States, 1990-1998" 1998). Many older individuals had watched during their own lifetimes as the widespread implementation of vaccines curbed many of these deadly diseases such as polio, measles, and mumps. A few decades earlier, smallpox had been eradicated completely from the planet, the first (and only) time this has ever happened in history with a virus that infects humans ("Smallpox" 2017). Very few asserted that vaccinations were ineffective or dangerous, and even fewer people tied immunization to autism. Fringe organizations with a few dozen members, such as JABS (Justice Awareness and Basic Support), were the only ones asserting a connection between vaccination and autism, and even they did not identify as an anti-vaccination organization, but rather a group of concerned parents calling for

answers to their questions about childhood autism (Fletcher 1999). At this point, there was essentially no mainstream aversion to immunizations. In fact, it was this high degree of trust in vaccinations that made for a particularly scandalous and shocking story when Wakefield published his article.

With news sources reporting the discovery of a new gastro-intestinal disease which linked autism to vaccinations from a seemingly trustworthy scientific study, many British families were shocked. Members of the press began covering this article as it was presented: a matter of scientific fact, observed through independent research performed by reputable experts. A lack of critical examination of this article and a lack of scientific literacy among British media personnel led to Wakefield being painted as a whistleblowing white knight, championing parent's voices. Inevitably, this led to a decrease in vaccination rates of children, which then resulted in an increase in measles cases throughout the country (Benecke and DeYoung 2019).

In his article, it is clear that Wakefield is not operating from a standpoint of a genuine search for scientific truth. In his discussion section of the paper, Wakefield writes "We did not prove an association between measles, mumps, and rubella vaccine and the syndrome described. Virological studies are underway that may help to resolve this issue. (Wakefield et al. 1998)" In the foundational paper of the anti-vaccination movement, Wakefield acknowledges that his study did not conclusively provide evidence for an association between MMR and autism. However, to Wakefield, a lack of evidence is nothing but an "issues" that further research is going on to "resolve." Even in a scientific paper, Wakefield's cunning attempts at manipulation begin to appear. Scientists do not perform further studies to "resolve" the fact that there is no evidence for their claims; they seek and follow truth, wherever the evidence points. However, Wakefield was no scientist, he was simply a charlatan dressed up as one.

Despite the clearly shaky ground that Wakefield's scientific claims stood on, his message was still incredibly effective. His target audience was not the scientifically-literate readership of *The Lancet*. His target audience was the overwhelmed single mother of an autistic child, desperate to better understand her child's condition, but lacking the scientific literacy to see through Wakefield's lies. This combination of poor scientific literacy and widespread, uncritical media coverage allowed Wakefield's dangerous claims to spread like a virus.

III. How to Shatter a Nation's Trust in Public Health

Wakefield's article gave the small, existing anti-vaccination movement the scientific backing to go mainstream, and the British media gave him the exposure to galvanize a global audience into opposing the vaccination. However, this strong reaction was not his desired response. In his many interviews, Wakefield was very careful to note that he was not anti-vaccination, he was simply against the combined MMR vaccine. ("Controversy Over Vaccine Research" 2009). He advocated for splitting the vaccines into three individual shots, immunizing children for each virus separately rather than in one combined dose. In the countless interviews he gave in the months following his article and initial press conference, he repeatedly made the claim that he was "not anti-vaccination" but rather that he "would continue to vigorously support the use of single vaccines, spaced out" ("Controversy Over Vaccine Research" 2009). To Wakefield, vaccines were not the problem, but the polyvalent MMR vaccine needed to be split up into separate immunizations for measles, mumps, and rubella.

Producing legitimate scientific data to support this assertion was something that no one (including Wakefield) had been able to do. However, it is important to remember who Wakefield's target audience is: scared parents. Typically, these are not doctors or biochemists, but rather concerned individuals who only want to do the best by their child. While much of

scientific rhetoric focuses on the language of biostatistics, with nothing ever being definitively "proven" or "disproven," it can often feel cold, sterile, and distant. Wakefield took the opposite approach. Despite not having any data, he did make large-scale objective claims, and spoke explicitly to parental rights and child safety as his priorities. In one interview discussing his initial study, Wakefield asserted that "This does not prove an association between the vaccination and disorder, but we have an obligation as doctors and scientists to faithfully report what the parents have told to us."

Here was Wakefield's magic: he was not a distant academic or a faceless scientist. He was a well-spoken, well-dressed doctor who came across as an empathetic ally to parents. His rhetoric focused on "listening to the parents" and "defending parental choice." He was able to dismiss his critics as "corporate entities" that "cared more about money than child safety" ("Controversy Over Vaccine Research" 2009). This kind of rhetoric may not be effective at moving the needle at the institutional level, however it is incredibly effective in the court of public opinion. CDC policy is not determined by emotions, and is meant to be as data-driven and objective as possible; the opinions of concerned parents are much more susceptible to a charismatic, well-spoken individual painting himself as a brave truth-teller being silenced by conveniently unnamed "corporate institutions."

One might wonder what would compel Wakefield to selflessly campaign so hard against a foundational pillar of public health, knowing that he was throwing away his chances at ever being taken seriously in medicine again. Was it possible that he was truly a devoted scientist who was single-handedly fighting the battle for our children's health against a heartless, corrupt institution? Indeed, it would be easy for someone to wonder if Wakefield himself stood to gain

anything from the rapidly declining levels of trust in the existing MMR vaccine, and the increased demand for individual immunizations for these diseases.

What Wakefield failed to disclose in all of his interviews about parental freedom and corporate greed was that months before publishing his initial report, Wakefield had filed a patent for a separate measles vaccination (Wakefield 1998). An invention that was absolutely redundant given the widespread use and success of the MMR vaccine, Wakefield knew what he needed to do in order to make this product succeed: slash trust in the MMR vaccine, paint himself as an ally to parents in the fight for medical autonomy, then swoop in with the solution to the very problem he invented himself. This incredibly complex act had to be perfectly timed, with his study releasing just months before the UK was set to stop importing single vaccinations for measles. It had to be perfectly disseminated, with Wakefield landing on the evening news on every TV in the country. Most importantly, it had to be perfectly executed, with every concerned mother watching at home with a child on her knee fearing that she could "make her child autistic" if she did not follow this one man's advice.

With this in mind, it makes sense why he so carefully and vehemently denied any "anti-vaccination" label at the time. Of course he pushed for separate immunizations for children, how else could he sell his product? Before the MMR scare, there was no market for a solo vaccine for any of the three viruses. All that Wakefield needed to do was brew enough suspicion in the MMR vaccine to allow his own product to flourish. His patent alone would never have succeeded. However, with his report and the subsequent media coverage, Wakefield put himself in a position to gain a tremendous amount of money from a public health scare that he engineered himself.

Wakefield painted himself as a warrior for parent's voices in the face of an impersonal medical establishment that refused to hear them and their concerns. He treated parents' opinions and concerns as objective scientific evidence, both in his paper and in his subsequent interviews. This was a crucial rhetorical tool of his. Lacking both the evidence for and explanation of the relationship between vaccination and autism, Wakefield couldn't point to any scientific data to tie the two together. Instead he was "simply listening to the parents" of autistic children who noticed "onset of symptoms... after measles, mumps, and rubella immunization (Wakefield et al. 1998).

Wakefield was not just trying to fight for parents' of autistic children to have their voices heard, he also advocated for "parents' choice" in their childrens' medical decisions. As mentioned above, Wakefield did not want to start an anti-vaccination movement, at the time rejecting the label fervently. After all, he would struggle to sell his measles vaccination to a group of parents entirely refusing to vaccinate their children. Thus, he needed to find a way to direct parents away from the MMR vaccine and towards his single measles vaccine without upsetting their trust in vaccinations as a whole.

With no scientific grounds to stand on, Wakefield instead sewed the necessary seeds of doubt by using the language of "choice." While he could not promise that separate immunizations do not cause autism the way that the MMR vaccination does, he asserted that parents should at least be able to choose what kind of healthcare their children receive. Perhaps this is why his work found a permanent home in America, where rhetoric of freedom, choice, and individualism may prove more effective than in Europe. Unfortunately for Wakefield, this position proved to be too nuanced for his supporters; Many parents went on to oppose any immunization whatsoever, refusing to vaccinate their children with MMR or any other vaccines.

In the years following Wakefield's published paper, a number of outbreaks of preventable diseases, such as measles, swept through Great Britain after decades of the disease trending downwards ("Measles Notifications and Deaths in England and Wales: 1940 to 2020" 2022). Wakefield later moved to the US, where he continued pushing anti-vaccination propaganda, resulting in an explosion of the anti-vaccination movement. His initial rejection of the label "anti-vaccination" and firm support in immunization quickly disappeared as soon as it became clear that the more extreme, fully anti-vaccination position was much more popular than he had anticipated. Wakefield's study and his careful subsequent manipulation of the press effectively painted him as a champion of individual rights and health who was being persecuted by the medical establishment. Irresponsible reporting from the British media caused these claims to be regurgitated to millions of British parents, many of whom refused to vaccinate their children against preventable illness.

IV. Forcing Public Health to be on the Defensive

Even after Wakefield lost his medical license and was exposed as a fraud, he was far too media savvy to stop there. He moved to America, where he realized he needed to alter his message. In the US, the target audience for Wakefield's message proved much more conspiratorial than their counterparts across the pond (Buncombe 2018). Gone were the days of a suspicious doctor suggesting individual vaccinations over the combined MMR. Now, Wakefield decries any and all immunizations as government control and a plot by pharmaceutical companies and world health organizations. He often finds himself in league with other so-called conspiracy theorists; Wakefield now regularly speaks at conventions alongside flat-Earthers and extraterrestrial-believers.

However, unlike many of the more absurd and comical conspiracy theorists he now finds himself in league with, Wakefield and his ideas have serious ramifications on society. The vehement flat Earther might come across as strange or ridiculous, but their beliefs do not pose a legitimate threat to anyone's health or safety. Vaccine hesitancy and anti-vaccination attitudes have caused outbreaks of diseases which had previously been trending downwards for the better part of a century, and continue to be a road black to better collective health for people all around the globe.

The diabolically brilliant media campaign that Wakefield ran for so long did tremendous damage to public trust in vaccines and other public health measures. One needs to look no further than the COVID-19 pandemic to see the ramifications of Wakefield's work in undermining vaccine trust. Despite the collective collaborative effort of nearly every scientific mind in the biomedical science community, many people still were highly resistant not only to vaccination, but to other standard health protocols such as masking, social distancing, and even testing. Countries with high trust in vaccinations found themselves far better-equipped to handle the COVID-19 pandemic, while countries with lower vaccination rates suffered far more hospitalizations, long-term effects, and death (Johnson 2023).

Ultimately, public health officials are now forced to be on the defensive (Morabia 2022). The assumption made by many is that organizations like the CDC and WHO are wrong, and that these organizations are not truly acting with the people's best interest at heart. Much of the pro-vaccination rhetoric of the last several years has stressed the safety and effectiveness of the COVID-19 vaccine (Ihlen et al. 2021). Before 1998, these were not traits that were in question. When the polio vaccine first became available, Americans were lining up to receive their dose, excited to play their part in protecting and defending their nation; American scientific

achievements were viewed as a proud badge for American patriots to support and engage in (Brink 2021). This high level of scientific trust equipped the public to rapidly quash a deadly epidemic once vaccines were made widely available, with this public effort serving as a unifying force in society, not a dividing one.

Wakefield's influence looms over every public vaccine campaign of the last 2 decades, and will continue to do so for the foreseeable future. It is hard to calculate the total cost in human life and suffering brought about by this article and the recklessness with which it was reported. Hopefully in the coming years, public health conversations can benefit from the newfound scientific vocabulary so many individuals have picked up over the last few years as a stepping stone towards a higher degree of widespread scientific literacy. Such action could shepherd society back towards a state of higher trust in the scientific community, restoring the damage done by Wakefield and so many others.

Many assert that this has already happened for the British. Fascinatingly, Great Britain led the world in COVID-19 vaccine-readiness, regularly reporting lower levels of vaccine-hesitancy surrounding the vaccine than many other western countries such as France, the US, and Germany (Piper 2021). Many attribute this to their experience and familiarity with sorting through anti-vaccination rhetoric, preparing them for a situation such as a pandemic where mass-trust in vaccination is hugely helpful. At every stage of the pandemic since the vaccine has been available, the United Kingdom has been one of the most vaccinated countries on the planet, regularly having more than 10% higher rates of vaccinated adults than the United States (Schraer and Horton 2021).

V. What Effective Vaccine Communication Looks Like

This brings us to the present. In the midst of the COVID-19 pandemic, vaccination is one of the biggest determining factors in a patient's rates of hospitalization and death (Xu et al., 2021). Countless organizations have deployed vaccination campaigns aimed at building public trust in the novel vaccine and getting more people immunized. These organizations ranged from local governments to celebrities to clergy to politicians to large corporations, all of whom were working towards the common goal of vaccinating more people.

With a myriad of vaccine messaging, public health officials became incredibly interested in what makes an effective vaccination campaign. In an increasingly interconnected world, the efforts to make an educational campaign against a pandemic virus needed to be interdisciplinary. Sociologists, marketers, public health officials, governments, and many others all converged to bring the skills and knowledge of their respective fields in order to make effective vaccine communication. While there are a number of factors that determine a vaccine campaign's effectiveness, one common theme that quickly emerged was these messages proved most effective when tweaked to be most specific to a target audience, often through regionalization with respect to cultural or social identities and practices (Wood et al. 2021). Such localization to a specific group allows the communicators to address specific concerns or fears, while appealing to distinct cultural or social values in order to achieve the desired result.

One such piece of vaccine communication comes from the Autism Society of America.

The ASA is an organization founded in 1965 with the intent to raise awareness for the challenges faced by people with autism. The ASA and their founders have played a significant role in developing our modern understanding of autism, through research, public awareness, and support for autistic people and their families. One of their founders, Dr. Bernard Rimland, is regarded as

a pioneer in the field of autism research (Edelson 2022). In 1964, Rimland released his book *Infantile Autism*, where he argues that autism has a genetic or biomedical basis. This theory flew in the face of the prevailing hypothesis at the time, which stated that autism is brought on by emotional neglect from parents, the so-called "cold mother hypothesis" (Edelson 2022).

Despite the immense contributions that Dr. Rimland made to the field of autism as a whole, even he was not right about everything. He strongly supported Wakefield's initial claims tying the MMR immunization to autism (Casey 2006). Dr. Rimland himself published an article entitled "Vaccines and Autism," the first sentence of which is "Vaccinations may be one of the triggers for autism" (Bernard and Woody 2002). This article was retracted in 2018, a staggering 16 years after its release, and 8 years after Wakefield's article was retracted (Carlson 2018).

Rimland's anti-vaccination views no doubt impacted the stances taken by the ASA.

During the height of the anti-vaccination movement, the ASA as an organization actually supported Wakefield's claims that autism is linked to vaccinations. Despite the fact that Rimland left the ASA in 1967 to found the Autism Research Institute, he remained an important voice in the development of autism research as a whole, and his views carried significant weight for the ASA and many other autism organizations (Carey 2006). As a founder of the ASA and the ARI, and the researcher who revolutionized our understanding of the topic, he is taken seriously as a respected authority on autism. His assertions on the connection between vaccination and autism carried significant weight, especially to the organization he helped to found.

However, the ASA has had quite the change of heart regarding vaccination. In December of 2020, they posted a statement of support for the COVID-19 vaccines, advocating for the prioritization of the Autism and I/DD (Intellectual/ developmental disorders) communities as the COVID-19 vaccines were rolled out (The Autism Society of America and National Disability

Organizations Encourage the Autism and I/DD Community to be Prioritized for COVID-19

Vaccination). In their 1000 word statement, they "applaud the global scientific and medical community" for their work in developing a vaccine in response to the pandemic. They point out the increased risk of complications from COVID-19 for people with autism, and "urge the autism community to be vaccinated as distribution becomes possible." The statement is thorough and well-cited, with links to the official websites of the FDA, Moderna, Pfizer, and many other established and respected scientific authorities. The statement even ends with a works cited for each of the facts and figures cited, showing a rich appeal to their reader's sense of logic.

Of special interest is their list of benefits for the COVID-19 vaccination. They list the usual things that many pieces of vaccine communication often point to, such as the lowered risk of death or complications. Additionally, they go out of their way to state that the vaccine is not only effective, but also safe and has gone through a rigorous set of safety evaluations throughout development. However, the most effective portion of this artifact is their final section. It is worth noting that this statement is not simply the ASA putting their seal of approval on the COVID-19 vaccine. Rather, they are advocating for the autism and I/DD communities to be prioritized during vaccine roll-out.

Much of the article is devoted to listing the ways in which autistic people specifically benefit from being vaccinated themselves. The ASA is essentially finishing their argument by saying "Yes, vaccination is important for everyone, so you should all get vaccinated. However, it is of even more importance that those with autism get vaccinated as quickly as possible, and here is why." They include a bulleted list of reasons with ways in which autistic people in particular benefit from the vaccine, including a return to in-person educational routines, resuming therapies and in-person support groups, and the reimplementation of respite services for caretakers. The

talking points of a safe and effective vaccine are universally applicable; the ASA makes clear that in addition to these benefits, the decision of autistic people and their caretaker's to vaccinate is of particular importance.

For all that is present in the article, there is one thing that is curiously absent: any mention of a link between vaccines and autism. In fact, in all the research done for this project, not one organization formally responded to the claim that vaccines cause autism. Even the CDC's page responding to common myths and misconceptions about the vaccine doesn't respond to it (Myths and Facts about the COVID-19 Vaccine). This article addresses concerns about microchips, fertility, toxin shedding, and even becoming magnetic as a result of vaccination, yet there is no reference made to autism. By not including any reference to the scandal drummed up by Wakefield, the ASA is sending a loud and clear message: this viewpoint is so absurd, ridiculous, and offensive that it is not worth addressing.

If the ASA alone is not a reliable enough source for some skeptics, they also list 20 additional organizations for those with autism and other behavioral disorders that are advocating for the prioritization of autistic people during vaccine rollout. This list includes well-known institutions such as the National Association of Councils on Developmental Disabilities, American Association on Intellectual and Developmental Disabilities, and the Autism Science Foundation. This serves as an appeal to authority, with the most well-known and trusted authorities on autism uniting to advocate for the vaccine.

VI. Implications: Changed Minds and Vaccine Communication

The ASA is an especially interesting case which illuminates the current state of vaccine discourse. Firstly, the ASA represents a hopeful future wherein scientific literacy and truth reign over conspiracy and fear mongering. Oftentimes, those with fringe or conspiratorial views are

seen as "too far gone" to reach. It is a well-documented fact that when presented with evidence that a person's beliefs are wrong, they are often unwilling to change their minds (Kolbert 2017). This is especially true with those who are wrong in conspiratorial ways, especially those with anti-vaccination beliefs (Collier 2017). However, the ASA represents an optimistic alternative to this disheartening view on public discourse. This story shows how an influential organization can admit their mistakes, change their views, and advocate in favor of the very thing they once condemned.

Secondly, it serves as an exceptional example of specific, localized vaccine communication. No community has been more misrepresented, misappropriated, and demonized by the anti-vaccination movement than the autism community. The ASA is certainly aware of how sensitive this subject is to people with autism and their caretakers. They know exactly the correct appeals to make, balancing arguments for the specific benefits to autistic people with reassurances of the vaccine's safety and effectiveness on the whole. Their statement is written using strong, affirmative, and exact language accompanied by strong and thorough citations. Overall, this serves as a case study in how to advocate for the COVID-19 vaccine.

Finally, it serves as a manifesto of the autism community's stance on vaccinations, signed by the 20 most prolific autism advocacy organizations around the globe. Many of these organizations once supported Wakefield's dangerous lies, and have since quietly removed all evidence of this from their websites, brochures, and official statements. There has never been an organic opportunity for the entire autism community to emphatically make a claim on this subject. With the COVID-19 pandemic bringing vaccine hesitancy, misinformation, and conspiracy theories to the forefront of social discourse, it was the perfect opportunity for the

foremost authorities on autism to emphatically stand with science and fact over fear mongering and lies.

What may seem like another stuffy statement of support encouraging the COVID-19 vaccine is an important glimpse into a 20 year battle for the soul of public health. While the modern wave of anti-vaccination and vaccine hesitancy focuses more on questions of infertility, microchips, and DNA modification, the movement began with a simple lie: the MMR vaccine causes autism. From there, the anti-vaccination movement has mutated and evolved into what it is today. This statement from the ASA serves as an important group of stakeholders making a strong stance in favor of vaccination, and even going so far as to assert that autistic people in particular should be prioritized for vaccination.

A world in which Andrew Wakefield had never been so successful would be significantly better equipped to handle a pandemic virus. However, with the work being done by organizations like the ASA, hopefully some of the damage done by Wakefield and the anti-vaccination movement can be lessened. They serve as not only good vaccine communicators and activists, but also an example that minds can be changed by facts and reason. If more respected organizations used this model of vaccine communication, a number of anti-vaccine and vaccine hesitant people could be reached with rhetoric that is specific to their values and concerns. Perhaps this is the way to defeat the anti-vaccination movement: simple, localized communication from trusted sources delivered earnestly to a relevant population.

Works Cited

- "Achievements in Public Health, 1900-1999 Impact of Vaccines Universally Recommended for Children -- United States, 1990-1998." Centers for Disease Control and Prevention,

 Centers for Disease Control and Prevention.
- Benecke, Olivia, and Sarah Elizabeth DeYoung. "Anti-Vaccine Decision-Making and Measles Resurgence in the United States." Global Pediatric Health vol. 6.
- Brink, Susan. "Can't Help Falling in Love with a Vaccine: How Polio Campaign Beat Vaccine Hesitancy." NPR, NPR, 3 May 2021.
- Buncombe, Andrew. "How a Disgraced British Doctor Has Reinvented Himself in Anti-Vaxxer

 Trump's America with Deadly Consequences." The Independent, Independent Digital

 News and Media, 4 May 2018.
- Carey, Benedict. "Bernard Rimland, 78, Scientist Who Revised View of Autism, Dies." The New York Times, The New York Times, 28 Nov. 2006,
- Carlson, Robert. "16 Year Old 'Vaccines Cause Autism' Paper Withdrawn, Finally." Precision Vaccinations, 21 Oct. 2018.
- Cataldi, Jessica; O'Leary, Sean T. "Parental vaccine hesitancy: scope, causes, and potential responses," Current Opinion in Infectious Diseases: October 2021 Volume 34 -

Issue 5 - p 519-526 doi: 10.1097/QCO.0000000000000774

Collier, R. "Facts not enough to change minds about health myths," Canadian Medical Association Journal, Volume 189, Issue 46, Page 1430. November 20, 2017.

"Controversy Over Vaccine Research." YouTube, CBS, 7 Oct. 2009.

Deer, Brian. "MMR - What They Didn't Tell You." Brian Deer Investigations, 2004.

Dobson, Roger. "Media misled the public over the MMR vaccine, study says." British MedicalJournal, 2003, vol. 326, 7399: 1107. doi:10.1136/bmj.326.7399.1107-a

Edelson, Stephen. "Autism Research: Standing on the Shoulders of Giants." Autism Research
Institute, 21 Feb. 2022.

Fletcher, Jackie. "Justice, Awareness & Support." About Jabs | Justice, Awareness & Basic Support, 1999.

Edelson, Stephen. "Bernard Rimland's 'Infantile Autism': The Book That Changed Autism."

Autism Research Institute, 13 Jan. 2022,

Johnson, Amelia, G. COVID-19 Incidence and Mortality Among Unvaccinated and Vaccinated Persons Aged ≥12 Years by Receipt of Bivalent Booster Doses and Time Since Vaccination — 24 U.S. Jurisdictions, October 3, 2021–December 24, 2022. Centers for Disease Control and Prevention, 10 February 2023.

- Ihlen, Oyvind, Margalit Toledano, & Sine Norholm Just. "Using Rhetorical Situations to

 Examine and Improve Vaccination Communication." Frontiers in Communication, 30

 June 2021.
- Kolbert, Elizabeth, and Maria Konnikova. "Why Facts Don't Change Our Minds." The New Yorker, 20 Feb. 2017.
- "Measles Notifications and Deaths in England and Wales: 1940 to 2020." UK Health Security Agency, GOV.UK, 21 Jan. 2022.
- Morabia, Alfredo. "In Defense of Public Health." American Journal of Public Health. 2022

 Feb;112(2):189. doi: 10.2105/AJPH.2021.306644. PMID: 35080938; PMCID:

 PMC8802585.
- "Myths and Facts about Covid-19 Vaccines." Centers for Disease Control and Prevention,

 Centers for Disease Control and Prevention.
- Piper, Kelsey. "Why Getting Vaccinated for Covid-19 Is More Popular in the UK than in the US." Vox, 5 May 2021.
- Rimland, Bernard, McGinnis, Woody RETRACTED: Vaccines and Autism, Laboratory Medicine, Volume 33, Issue 9, September 2002, Pages 708–717.
- Schraer, Rachel, and Jake Horton. "New Omicron Variant: Are Low Vaccination Rates in South

Africa a Factor?" BBC News, 3 Dec. 2021.

"Smallpox." Centers for Disease Control and Prevention, 12 July 2017.

- Wakefield, Andrew. "Pharmaceutical Composition for Treatment of MMR Virus Mediated

 Disease Comprising a Transfer Factor Obtained from the Dialysis of Virus-Specific

 Lymphocytes." 12 Sep 1998.
- Wood S, Pate MA, Schulman K. Novel strategies to support global promotion of COVID-19 vaccination. BMJ Global Health 2021;6:e006066. doi:10.1136/bmjgh-2021-006066
- Xu S, Huang R, Sy LS, et al. COVID-19 Vaccination and Non–COVID-19 Mortality Risk —

 Seven Integrated Health Care Organizations, United States, December 14, 2020–July 31,

 2021. MMWR Morb Mortal Wkly Rep 2021;70:1520–1524.