The Smallpox Story: The Disturbing Account of the Vaccine That Started It All

by [Daniel Plonix](#) (June 2020)

Edward Jenner Administering the First Smallpox Vaccination, Gaston Melingue, 1879

This article is an adaptation from the forthcoming book, The Earth Hearing.

For at least a few centuries smallpox has had a presence in Europe, exerting a notable toll.

In the late eighteenth century, a physician by the name of John Haygarth uncovered the chain of transmission of the virus: how it passes from one person to another, the proximity threshold, and the conditions conducive to its spread.

Subsequently, he came up with a protocol, which he put to the test in 1778. Among other things, no one was to enter an afflicted house; no one who showed signs of infection would visit public places; no item suspected of being contaminated should leave the premises; and everything was to be carefully washed and scrubbed after the illness abated. Fourteen families adhered to his protocol and spread no disease. The smallpox they carried was contained.

With the success of this test case, he put together, in 1793, a monograph containing a detailed blueprint to ‘exterminate smallpox from Great Britain.’ The plan entailed an extensive network of public health inspectors who were to enforce case isolations.

His scheme was widely read and discussed, with some clergymen implementing his protocol and getting positive results. Other voices of medical professionals joined his.

In Leipzig, Germany, Dr. Faust agreed with Haygarth that smallpox was not an unavoidable evil, but something that can and ought to be eradicated. He outlined a plan for the construction of an isolation ward in each town, and as soon as any person is infected, he should be placed in it. He opined that if these measures were set in place, then within a handful of years smallpox would be a thing of the past.

History was about to be made; a systematic, continent-wide isolation and early notification scheme would have effectively broken the lines of transmission of the disease and may have put an end to it in a matter of years or decades. But then something else grabbed the imagination of the Western world with a promise of perfect and everlasting immunity.

As a consequence, numerous people were to needlessly die in the century to come.

In order to understand what transpired next, we need to go back a few decades.

The universal belief was that whoever had once contracted smallpox, never suffers a second attack. In addition, it was found that there was a way one can contract the disease in a mild form. When you put those two things together, you arrive at the rationale for inoculation. Namely, the deliberate introduction of small amounts of infectious material from smallpox vesicles into the skin of healthy subjects. The intent was to induce a mild smallpox, which would result in immunity to the more severe, naturally-acquired disease.

Occasionally, people died of inoculation, but many were willing to play the odds. The practice gained popularity in Great Britain around 1738 and really took off in 1765.

But not all was well. It became evident that while the

inoculated may stand less chance of experiencing the disease in a severe form, the practice had inadvertently been introducing the small pox into towns and villages previously free from it. The problem was that those inoculated proved contagious, as they carried the virus with full potency. Mass inoculations were likely to have caused a net increase in death from smallpox in Great Britain.

Contagion was a problem looking for a solution.

Tales of people who avoided contracting smallpox through their acquisition of the non-contagious *cow pox* were commonplace in farming communities. Several individuals deliberately inoculated themselves or a few others with the cow pox. One of them was a physician by the name of Jenner. He inoculated a few people and then made some far-reaching claims. This got some attention. In 1799, Dr. Woodville and Dr. Pearson decided to put this age-old notion to the test.

The two doctors inoculated a few hundred people with cow pox that, as it turned out later, was contaminated with smallpox. Woodville and Pearson proceeded to ship out their microbial cocktail to other physicians, and the number of test cases rose to about two thousand.

The big question was whether the new, cow pox based inoculation would ward off smallpox.

Now we are getting to the peculiar part of the story.

The physicians did not care to wait for the possible reaction from a naturally occurring smallpox. Instead, after administering the cow pox cocktail, they had the subjects come back at a later date and receive the conventional smallpox inoculation to see if the subjects resisted it.

The smallpox inoculation that followed the cow pox inoculation produced for the most part the same effects as it always did. Some cases had a single pustule—pocks with pus in them—some had eruptions of numerous pustules, and some had a local inflammation.

Subsequently, a surgeon at the Manchester Infirmary who partook in the clinical trial, congratulated mankind on the success of the novel cow pox inoculation. He wasn't the only one.

As I noted earlier, the subjects rarely succumbed—that is, die—from smallpox inoculations, notably in the milder procedure used after 1765. The cow pox inoculation they had administered prior did not affect different outcomes in the smallpox inoculation applied afterward. All that many of the physicians described were simply the symptoms one expects from smallpox inoculation.

At best, this clinical trial proved nothing, one way or another. At worst, the trial proved the cow pox inoculation had no effect of any kind. At any rate, given the fact most of the cow pox inoculation was contaminated with the smallpox virus, the most charitable thing that can be said is that a

haze of uncertainty surrounds this pivotal study.

This is how it came to be that history recorded that a perfect antidote and security against the smallpox was produced, an inoculation that is not contagious and provides a lifetime of protection.

In July 1800, the *Testimonial in Favour of the New Inoculation* was proverbially nailed to the door of a church. Signed by a few dozen prominent physicians in London, it hailed the new inoculation and promised sure and everlasting protection from smallpox.

The *Testimonial* had a great effect on the public mind; to the majority it proved irresistible. And the chief author of the *Testimonial* dared to defy the whole world to produce a single instance of a person who had had any experience of the disease who was not a staunch defender of the novel inoculation. The coup was over; the new cow pox inoculation, henceforth to be known as vaccination, reigned supreme from this point on.

It didn’t take long for the first reports to emerge of small-pox fatalities of those previously vaccinated. But by then it was too late to stem the tide.

Physicians started claiming there were genuine and spurious vaccines. You see, if the patient should die of inflammation of the puncture, they might conclude the material administered via the vaccine was not genuine. Others maintained that the good or ill success of the vaccine depended on the period in

which it was given. New books, new instructions, have seemingly appeared every month. And the milder cases of smallpox were classified away as chicken pox, horse pock, or flea bites.

In the decades to come, parents protested against the lack of apparent effectiveness coupled with possible serious complications. They were paying too high premiums for the insurance, as one of them said. And in India and Ceylon, families with vaccines forced on their children employed every means possible to rub out the vaccine, suck it out, or cauterize the area where it was administered.

Widespread mortality from smallpox in vaccinated London generated outcries that the unvaccinated were the culprit. And in 1853, the government made smallpox vaccination compulsory. Reluctant mothers were compelled to the Vaccination Stations under threats of summons and fines. Schools have been inspected in search of unvaccinated children. Consequently, by 1870, the population had the highest vaccination rates ever.

Shortly afterward, a smallpox pandemic swept through, resulting in tens of thousands of dead people, many of whom were vaccinated. It was the deadliest smallpox pandemic in living memory.

This was the last straw for many parents, asking in record numbers whether improved sanitation, good food, and quarantines were not, in fact, the best ways to deal with smallpox. Things came to a head in the city of Leicester on March 23, 1885 with a massive anti-vaccine rally. There were

delegates of anti-vaccination leagues from about forty towns from throughout the United Kingdom.

In the years leading to this demonstration, the vaccination rate of newborns in Leicester declined perceptibly, and by 1891, it had dwindled close to zero. This was when another smallpox epidemic engulfed the United Kingdom.

For many, this was the moment of truth when the city and the world were to find out whether the low rate of vaccination in Leicester is to be an epidemic ‘keg powder,’ as many predicted. There was a fear Leicester would be ‘decimated.’ The epidemic was to run like ‘wildfire, unchecked.’ They were ‘in for it,’ as one medical officer confided.

The plague died out in 1894, the proverbial smoke cleared, and the results were in. Only 19 people per 10,000 living contracted the disease in Leicester. That compared to 63 per 10,000 in Dewsbury, 123 in Warrington, 192 in Sheffield, and on the far end of the spectrum with nil isolation and identification measures was Gloucester with 399 afflicted per 10,000 living.

In fact, for Leicester, full-blown smallpox epidemics were a thing of the past. When a few were infected, the town was ready for it. With the report of a case, a phone call was made, and the smallpox van hastened and picked up the infected person and rushed him to an isolated, smallpox ward. All those connected to the contaminated house were placed for two weeks in a designated, comfortable quarantined house. In the meantime, the house of the afflicted was fumigated, and the

bedding was disinfected and subjected to a special hot air procedure.

Elsewhere vaccination continued unabated; the practitioners were as confident in their beliefs as ever. In New Jersey, the exit doors in a factory will be shut one April day, and hundreds of female employees will be vaccinated by force. In Lead, South Dakota, police and city physicians rounded up miners and had them vaccinated against their will.

When it is all said and done, was the smallpox vaccine effective?

We need to unpack this question.

During the 1871 pandemic in the German state of Bavaria, where for decades almost everyone was vaccinated, they had 30,742 cases of smallpox, of whom 29,429 had been vaccinated. Not only every smallpox outbreak included a very large number of vaccinated people, but the percentage of those vaccinated has tracked the percentage of those who contracted the disease.

Put another way, it does not appear the vaccinated had lower chances of contracting the disease. Indeed, in Warrington, with a bit more than 90 percent vaccinated population, 90 percent of those contracting the disease in the 1892 epidemic had been vaccinated. Moreover, a high vaccination rate did not appear to confer any herd immunity.

Smallpox did not necessarily attack the unvaccinated first and from them spread to the vaccinated. In the 1870 Cologne epidemic, 173 vaccinated people contracted smallpox before the first unvaccinated one did. In the 1870 epidemic in Bonn, 42 vaccinated contracted the disease before an unvaccinated one did. And in Liegnitz in 1871, the first 224 of those infected were vaccinated.

Lastly, the chance of transmitting smallpox to another person is the same whether or not it expressed in a milder form in the first person. In other words, the severity of the disease in one person is not correlated to how it manifested in the person whom he contracted it from.

With transmission unhampered by vaccines, there is no way the vaccine could have ever been a candidate for eradicating smallpox or even for reducing the number of those infected.

That vaccination was the key to eradicate smallpox was axiomatic. But they did have to explain away some of those numbers. They came up with the idea that the power of immunity waned, and they talked about the need to re-vaccinate, as a testifying physician declared in front of the German Vaccination Commission of 1884. This brings us to the situation in Germany four years later. A fever hospital in Strasburg, Germany, summer 1888 accommodated two thousand soldiers in this building. Each of whom was administered the vaccine four months prior, receiving a vaccine shot for the third time, at that. The *USS Jamestown* had an outbreak in 1864. Every seventh crew member contracted smallpox. Yet, the entire crew had been vaccinated two years prior.

In all those respects the vaccine has been as effective as administering snake oil, which is to say, none at all. This brings me to the point, the only point, that is of possible merit. Were vaccinated people more likely to experience the disease in a milder form? This would be indicated by lower mortality rates among those who contracted the disease and had been previously vaccinated. As it turned out, perhaps yes.

Out of the combined 1,263 people over the age of 10 who contracted the disease in several cities in England during the 1892 epidemic, the rate of mortality of the vaccinated was 4 percent, while the rate of mortality of those unvaccinated was 20 percent. A fact that was never brought up by the anti-vaccine advocates—being as dogmatic as their counterparts.

That being said, the recorded mortality rates of the vaccinated and unvaccinated are probably skewed.

To be declared vaccinated was not a matter of medical records but of displaying a vaccination scar. In the worst instances, in those patients liable to die, the pocks frequently obscured it, and hospital staff classified those people as unvaccinated. That not only raised the mortality rate of those counted as unvaccinated, but at the same time lowered the reported fatalities of the vaccinated. In addition, a higher proportion of those unvaccinated had a weaker immune system and therefore were more inclined to succumb.

A certain segment of the population was unvaccinated expressly owing to serious medical conditions. Moreover, a disproportionate number of indigent people—tramps and

paupers—were unvaccinated and often had higher mortality rates whether because of lack of food, or ailments, and thus, either way, their health was poorer to begin with.

Lastly, let me make one point about the category of those under the age of ten, which I otherwise do not care to discuss due to complicating factors. Some children died on account of the vaccine itself. This further weighs the tally in favor of the unvaccinated.

Let history remember Edward Bedford, a 9-month-old baby who on July 1884 was vaccinated. Subsequently, his arm became a mass of sores and eruptions appeared all over his body. The child turned blind, and after 15 months of illness succumbed and died. Mary Batty, a 3-months-old baby, was vaccinated on January 1881. Subsequently, her arm was inflamed. This was followed by sickness and diarrhea, and after 7 months of suffering, Mary succumbed and died. In December 1883, Alice Drage was vaccinated. Subsequently, her face and neck were covered with sores; as these disappeared, she slowly wasted away and died 11 months later. In April 1882, Thomas Hunt was vaccinated. Subsequently, wet and green sores appeared on his arm, and he died 3 weeks later. Let history remember the countless other babies who died as a result of the vaccine.

Following the lead of Leicester, cities have quietly and gradually adopted case isolation and early notification measures—all the while paying lip service to the vaccine. The vulnerable chain of transmission of the variola virus was ruptured throughout until the microbe was in circulation no more. Thus, what could have been accomplished in the 1790s with a few years of a coordinated campaign of isolation and early notification by the governments, was executed piecemeal,

commencing tragically only about a century later.

***

In writing this piece, the author consulted the bulk of the books, government reports, and committee hearings on smallpox that were published roughly between 1790 and 1910 in English. The more prominent ones include the following:

Biggs, J. T. (1912). *Leicester : Sanitation versus vaccination : Its vital statistics compared with those of other towns, the army, navy, Japan*, and England and Wales. England: The National Anti-Vaccination League, [1912].

Birch, J. (1817). *An appeal to the public on the hazards and peril of vaccinatio*n.

Brown, T. (1809). *An Inquiry into the Antivariolous Power of Vaccination*.

Edgar, M. & Crookshank, M.B. (1889). *History and Pathology of Vaccination: a critical inquiry*.

Haygarth, J. (1793). *A Sketch of the Plan to Exterminate the Casual Small-pox from Great Britain*.

Hutton, A. W. (1896). *The vaccination question*. The Hospital, 20(503), 115-115.

Maclean, C. (1810). *On the state of vaccination in 1810*. London.

Moseley, B. (1807) *An Oliver for a Rowland or A Cow Pox Epistle*, 9th ed.

Peebles, J. M. (1910). *Compulsory vaccination*. Life (1883-1936), 55(1437), 901.

Rowley, W. (1806). *Cow-pox inoculation no security against small-pox infection*, 3rd ed.

White, W. (1885). *The story of a great delusion*. London.

Winterburn, G. W. (1886). *The Value of Vaccination*.

(1897). *Final report of the royal commission appointed to inquire into the subject of vaccination*.

(1890s) *Second, Third, Fourth, Fifth, Sixth Reports of the Royal Commission Appointed to Inquire Into the Subject of Vaccination with Minutes of Evidence and Appendices*.

«**Previous Article** **Table of Contents** **Next Article**»

Daniel Plonix is the author of the upcoming book *The Earth Hearing* (July 12, 2020)

Follow NER on Twitter @NERIconoclast