

# The Necessary Sacrifice of Mary Mallon

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## Introduction

Typhoid, since its very first interactions with mankind, has proved to be deadly in every occurrence. The disease ravaged continents and the groups of people within unmercifully, in acts of unprejudiced and unrelenting attacks seemingly out of nowhere. Although typhoid is not seen in very large numbers in most modern civilizations today, typhoid in the United States, particularly during the mass immigrations of the early 1900s, infected large amounts of civilians. Perhaps the most notable of those impacted by typhoid was an Irish immigrant named Mary Mallon, or more commonly known as "Typhoid Mary". Being called a "Typhoid Mary" is typically seen as an insult in today's age, since it means someone who is at the center of an undesirable event. Mary was a victim of circumstance in the typhoid epidemics of New York in the early 20th century; she was also used as a scapegoat for the disease and lived a miserable and secluded life as a result. However, mostly positive things came out of the mostly negative treatment of Mary Mallon, and she is a prominent reason why the health system of the world is where it is today. The unfortunate case of Mary Mallon created an atmosphere of change in the public health sector by strengthening epidemiological contact tracing, determining what methods of disease prevention were unethical, and improving overall sanitary and cleanliness measures.

## History of Typhoid

Typhoid and its effects can be seen throughout many past civilizations and their histories. It is believed by many historians that the plague of Athens in 430 B.C. was in fact caused by typhoid; this plague, which killed roughly one-third of the Athenian people, was said to have originated from Ethiopia and spread its way throughout the Persian empire until it found the Greeks. Thucydides, the chronicler of Athenian history during this time, described the disease as such: "The general character of the malady no words can describe, and the fury with which it fastened upon each sufferer was too much for human nature to endure." (Thucydides). Clearly the disease was devastating to the Athenian people, and it played a key role in their defeat to the Spartans in the Peloponnesian War. A disease like typhoid also struck the native populations of Mexico during the arrival of the Spanish in the 1500s; this sickness killed upwards of 80% of the native people, or approximately five to fifteen million people. It has also become a common belief that the settlers of Jamestown were almost entirely wiped out by typhoid in the early 1600s. Nearly 6,000 settlers died from the disease in the span of a

few decades, since the disease spread rapidly through the fort. Typhoid fever was prevalent in high numbers in both the Civil War and the Spanish-American War; in fact, more Union soldiers died of typhoid and dysentery than were shot by bullets in the Civil War (Bray, 2000). Typhoid, although microscopic in size, swayed the outcomes of wars and nearly wiped entire peoples off the earth.

Typhoid, and the subsequent fever that follows, is an intestinal disease that is typically spread through infected individuals preparing food or water without properly sanitizing themselves, or simply when typhoid bacteria are in contaminated water and are ingested. Once in the body, typhoid usually takes one or more weeks to show symptoms, which means tracing the disease is a difficult task; the symptoms typically include nausea, fever, headache, and loss of appetite, along with other, more severe symptoms stemming from them. Typhoid is still a pressing matter in most underdeveloped countries, especially ones with low standards of living. As per the reporting of the World Health Organization, up to twenty million people contract typhoid every year, with deaths ranging from 128,000 to 161,000 annually. These numbers are rather daunting since typhoid has been a threat for thousands of years. Numerous health campaigns have been created to battle typhoid in underprivileged countries, and these efforts have driven the mortality rate down slightly (Smith, 2021).

## "Typhoid Mary" Mallon

Mary Mallon was born in Ireland in 1869, and at the age of fourteen immigrated to the United States. Settling down in New York, Mary worked as a chef for the area's rich and wealthy, doing most anything she could to make ends meet. In 1906, members of the house that Mary was working for fell ill from typhoid, which led to an investigation into the cause of the disease. Health officials ultimately traced the infection back to Mary, who was then sent off to North Brother Island to remain in isolation until she was released in 1910. Under the stipulation that she would never cook again, Mary disappeared from the public eye until she was discovered as the culprit of a typhoid outbreak in a maternity sanatorium. Health officials, furious at the disobedience of Mary, exiled her back to North Brother Island, where she was once again placed into quarantine. Mary lived at North Brother Island until her death in 1938; she was quarantined by the health department for almost thirty years. As a result of her cooking, over fifty people were infected with typhoid and as many as three died (Mercadal, 2022). Throughout her life, Mary was seen by many as a

villainous person who was dangerous to the general public, and her legacy remains one of infamy.

### **Epidemiological Contact Tracing**

Mary Mallon was the first typhoid carrier to be identified and kept up with in North America; this was largely in part to the work of George Soper. George Soper was a civil engineer by trade, but he was well known for his work analyzing previous typhoid epidemics. After six people out of a family of eleven contracted typhoid in a rental home in Oyster Bay, Long Island, Soper was called in by the owner of the house in fear that he would never be able to rent the house out again. Soper worked at first to rule out the usual typhoid causes, like contaminated water and milk, as well as any food consumed in the house during the time of infection. Not finding anything of concern, Soper began asking the family members if anything notable had occurred during the time they contracted typhoid. The family told Soper that they had recently changed cooks after the outbreak; the cook that had left was none other than Mary Mallon (Leavitt, 1992).

Although contrary to popular belief at the time, Soper quickly concluded that Mary was the cause of the outbreak. He began tracing back her former employment and made an interesting discovery: of the eight families that had previously employed her, seven of those families had contracted typhoid during her time working for them. Mallon was ultimately tracked down by Soper several months later, and with the help of city health officer S. Josephine Baker and five policemen, Soper was able to forcibly commit Mary to a hospital. Upon receiving tests at the hospital, Mary was found to have high levels of typhoid bacteria in her feces; this caused her to be sentenced to North Brother Island for her first three-year stint (Leavitt, 1992). Soper was also able to identify Mary as the culprit of the 1915 outbreak in the maternity sanatorium after her release from quarantine in 1910, which led to her over twenty-year quarantine until her death in 1938. Soper wrote the *British Medical Journal* after the death of Mary Mallon in 1938 to justify his actions, saying "I had seen typhoid spread from person to person and initiated energetic measures to prevent it" (Soper, 1939); he believed that his intentions were right and that he had done what was necessary. His efforts to track the disease were like the efforts of men such as John Snow in the cholera epidemics of London, but his method of contact tracing had never effectively been seen in the United States.

After the tracking down of Mary Mallon and her later quarantine, the New York Department of Health and the United States decided to enforce measures to keep account of the individuals with typhoid; they went about this in many different ways. Most importantly,

public health officials believed that individuals that were identified to be carriers could be taught to avoid transmitting the disease. One health official preached that "Most persons so informed will care for themselves in such a way that they will not be a menace to the public." Hermann Biggs, the general medical officer of New York City at the time, said that "Disease is largely a removable evil." By teaching healthy carriers what to do to avoid starting an epidemic, health officials could make sure that chronic carriers would be able to live peacefully in society (Finkbeiner, 1996). In 1915, the United States government issued a "lookout" program for typhoid that encouraged citizens to report suspected carriers to health officials. This program, along with the early forefronts of laboratory testing, allowed health officials to determine who was infected with typhoid (Mendelsohn, 1995). The health department also decided to keep a list of typhoid carriers; these carriers would be subjected to routine testing and monitoring, as well as instructed not to handle food. Hundreds of people were listed in the New York typhoid registry, and the state believed this to be the best way of protecting the public. The health department also routinely tested food handlers, which decreased the number of typhoid outbreaks substantially (Leavitt, 1992).

### **Ethical Disease Prevention**

Throughout the course of the typhoid epidemics in New York, the New York Board of Health had to consider the ethics of their rulings and decisions. For instance, the creation of a list of registered typhoid was seen by many as an overstep in authority by the Board of Health. This list continually expanded as new cases were found, and the public health officials believed that keeping up with active and chronic hosts of typhoid was imperative in tracking further outbreaks (Leavitt, 1992). As one health official put it, "Regulating the lives of a few hundred actual hosts - the healthy carriers - improves the lives of millions of potential hosts" (Mendelsohn, 1995). However, others believed that the list was unnecessary and that it was impossible to track every person with typhoid on a day-to-day basis. Those identified as healthy typhoid carriers were subjected to frequent testing and analysis, which proved to be daunting to the health department on account of such a large number of carriers.

A topic of ethics also arose when the health department considered forcible quarantine. It is important to realize that Mary Mallon was the only person forcibly required to remain in quarantine throughout the majority of the typhoid epidemics. All others found to have typhoid were simply added to the

typhoid carrier registry and sent on their way. Milton Rosenau, a prominent public health official of the time, justified this stance when he said, "We cannot lightly imprison persons in good health, especially in the case of breadwinners, even though they may be a menace to others" (Mendelsohn, 1995). Rosenau and others in the department of health deemed the negative economic effects of forcible quarantine to outweigh the positive effects of quarantine for safety. In her work "Typhoid Mary Strikes Back", Leavitt gives an example of a healthy carrier in 1922 that caused an outbreak that led to over a hundred infections and as many as five deaths. This man, contrary to Mary Mallon, was allowed to be free if he reported to the health department weekly for testing; Mary Mallon was not offered this same deal, and these events occurred while she was on quarantine, so it is clear that the health department did not treat her equally as the country evolved. Even though the number of typhoid cases had continued to grow in New York, the health department no longer observed the need to quarantine any healthy individual, although they seemingly disregarded Mary Mallon (Leavitt, 1992).

Since health officials knew that typhoid spread through contaminated food and water, they routinely tested food handlers to make sure no one with typhoid was involuntarily spreading it to others; in fact, by 1928 the city of New York had tested over 270,000 food handlers (Leavitt, 1992). As a result, the question of what to do with the healthy carriers of typhoid became an issue of high importance to public health officials. Many contemplated banning all healthy typhoid carriers from working, since they could no longer infect others if they were not in the workforce; however, the government would not be able to feasibly support these workers economically, so this idea was thrown out. A consensus of health officials determined that it would be best to allow the healthy carriers to still be able to work, just not in certain occupations such as bakers, cooks, and waiters (Mendelsohn, 1995). However, for people like Mary Mallon who cooked for a living, this judgment was almost impossible to live by, even though people would continue contracting typhoid if they kept cooking.

For many, cooking was the only way they had to make money, since that was their only useful skill in an environment such as New York City with little jobs available for the surge of immigrants; the economic outcome of not being able to cook would consequently subject many healthy carriers to poverty (Leavitt, 1992). As a result, many believed that the government and department of health should not be able to ban people carrying typhoid from working certain jobs, since they could not help that they had the disease. Instances of this can still be seen today; in her work, Ann Finkbeiner described an instance of a typhoid breakout in Maryland that was traced back to a young

woman who made salads at McDonalds. The woman received medication to treat the typhoid, but ultimately was fired from McDonalds; when asked by her doctor if she had got a new job, she said she had been working at Pizza Hut (Finkbeiner, 1996). For the young lady and similarly to Mary Mallon, the only way they could make a sustainable income would be to cook, so it is hard to blame them for continuing to, even if people were getting sick from it.

Lastly, in observing the way that Mary Mallon was apprehended by George Soper, there were several methods in her capture that were inappropriate and unethical. For one, George Soper himself was not a medical professional. As B.D. McClay states in his article "Learning from Typhoid Mary", "Soper was a civil engineer, not a doctor; he might have investigated typhoid outbreaks for a living, but there certainly would have been cause for a reasonable person to think he was overstepping his expertise" (McClay, 2020). Soper was not a trained medical professional, so he really had no right to force Mary Mallon to test for typhoid; it is no wonder why Mary chased him away with a carving fork, since he had no jurisdiction to demand a laboratory test. Soper's return to the home Mary was working in with five policemen was also extreme and unjust; needing police help to demand someone to submit to something against their will is not reminiscent of American values and freedoms and is almost similar to Marshall law. S. Josephine Baker, the health official that accompanied the police on the return to Mary's home, was quoted saying "I literally sat on her [Mary] all the way to the hospital" (Finkbeiner, 1996). Frankly, George Soper and his colleagues were out of line in their methods; Mary Mallon was right to resist the testing initially since she did not know the reason for it. She did what anyone else in the same circumstance would have done. Thankfully, the department of health became stricter in their methods of disease detection and did not allow for common civilians like George Soper to act out of their own unregulated free will and demand unknowing typhoid carriers to be tested without their understanding.

### **Sanitation Improvement**

It is easy in hindsight to recognize that many of the practices of New York in the early 1900s were not the most sanitary; the importance of good hygiene, although recognized as important, was not stressed to the public. According to B.D. McClay, "She [Mary Mallon] was told she had to do only two things: wash her hands properly after going to the bathroom and stop cooking. She found the first suggestion insulting and the second impossible" (McClay 17). Granted, it is obvious to see the ignorance in this statement, but the people of the time did not have a grasp on virology and germ theory that is commonly accepted today.

However, many different health campaigns were made after the events of the outbreaks surrounding Mary Mallon; posters urging the importance of handwashing and proper cleanliness appeared in newspapers and magazines across the country, and the American people began taking disease more seriously as a result. The pioneering of testing for typhoid allowed New York City to be a model for the world on the issue of the role of laboratory testing in public health. There also was a development of a bacteriological police, in which doctors and scientists became more aware of diseases and would look for them in certain areas and municipalities. This municipal disease control allowed scientists to slow the spread of certain diseases and contain them from spreading. The chlorination of water, although not directly related to Mary Mallon, also greatly reduced the percentage of typhoid spread through the drinking supply (Mendelsohn 272).

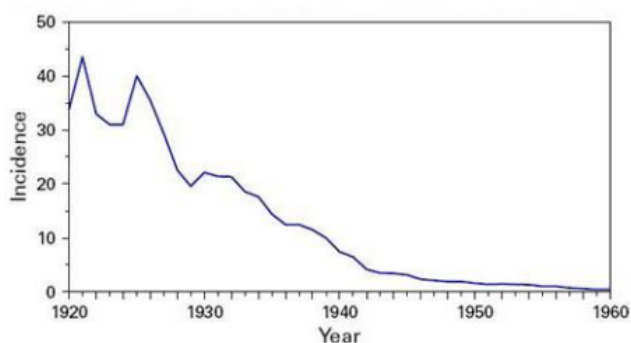


Figure 1. Graph of typhoid cases per 100,000 people from 1920-1960, per the CDC Centers for Disease Control and Prevention. (2012).

### Was It Necessary?

Ultimately, there is one final question to be taken away from the life and death of Mary Mallon: was it all necessary? Was it necessary for Mary Mallon to be quarantined for most of her life on an island with little human interaction? As B.D. McClay perfectly put it, "There is no version of the story of Mary Mallon that ends happily for everybody" (McClay 18). Although the way Mary was treated was unjust, the best possible outcome arose from her suffering. If she would have remained free, countless more people would have died, and the advances made from her circumstance would have taken longer to develop, leading to the death of more people. If the events of her life had not happened to her, they would have simply happened to someone else; who knows, there could have possibly been a "Typhoid Harry". It is easy to argue that more good came out of the situation than bad, although it is

still unfair what happened to Mary Mallon. There have been many occurrences of bad events that had positive outcomes throughout history. For instance, over 1,500 people died as a result of the sinking of the Titanic; however, after the sinking there was a developed importance on having an adequate number of lifeboats and life jackets on ships in the future, which undoubtedly has saved thousands of lives since. Although the sinking of the Titanic was a horrible event, there were some positive things that came out of it, similarly to the case of Mary Mallon.

It is also important to recognize the historical aspect of Mary Mallon's situation. Mary was an immigrant and a woman, so historically she would not have been treated equally compared to her male and non-immigrant counterparts. In Mary's mind, she was being used as a scapegoat; she said that "All the water in the world wouldn't clear me from this charge, in the eyes of the health department. They want to make a showing; they want to get credit for protecting the rich, and I am the victim" (McClay 17). However, Mary was told specifically not to go back to cooking since it would endanger others, but she refused. Even more shocking, she went and cooked at a maternity hospital, full of two demographics of people whom typhoid would be extremely deadly against: pregnant mothers and babies. Mary obviously had little care for the whirlwind that followed her, and instead focused more on making a living for herself. If she would have stopped cooking, she likely would not have spent the majority of her life in quarantine. As health official Milton Rosenau said when asked about Mary, "The price of liberty is good behavior" (Mendelsohn 275). Mary did not obey the command of the department of health, so she suffered the consequences, although the consequences were very extreme. Members of the public health authority constantly iterated that they had made the right decision, usually by emphasizing the negative traits of Mary. Josephine Baker, the physician who captured Mary the first time, described Mary as a "destroying angel whose own bad behavior inevitably led to her doom" (Leavitt 628). Each side of the argument was right in some ways, but it is impossible to decide who really made the best decision.

### Lasting Legacy

In 1933, Mary Mallon had a debilitating stroke that left her bedridden for the remainder of her life. She died slowly from the effects of her stroke over the next five years until her death in 1938; during that time, Mary spent most of it alone with only occasional visits from the medical professionals on the island. Mary certainly had a pitiful existence, and to this day is still given a bad reputation because of her name. Numerous politicians on both sides of the aisle

consistently call opposing members “Typhoid Mary’s of lies and disinformation” whenever they say something they do not like. There is even a Marvel supervillain named Typhoid Mary that first appeared in a Daredevil comic in 1988; she is an assassin with dissociative identity disorder and a nasty temper. The way Mary Mallon is remembered is not an accurate reflection of how she lived. Mary was a poor immigrant girl seeking a better life in the United States, only to become victim to something she could not control and imprisoned without any say; she was just trying to survive. The unknowing sacrifice of Mary Mallon that led to the many medical advances in the 1900s should be praised, instead of using her name as slander towards another person. Mary Mallon was essentially a hero, remembered as a villain, that endured what no person would want to endure, and the health of the world is a better place because of it.

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