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Trusting Science in the Face of Disease: COVID-19 and 19th Century Cholera

In 1831, Britain was plagued by its first cases of cholera following the Industrial Revolution, a major event that resulted in a larger population being crowded into the smaller and heavily confined spaces of newly industrialized areas. The entirety of the United Kingdom suffered from the disease for years following its initial introduction, leading to a Sanitation Revolution that dramatically altered the previously established ways of living, obtaining water, and disposing of wastes. As humanity copes with the crippling effects of another pandemic, it is easy to wonder what similarities are present between COVID-19 and a disease that previously had its grips on the people of Britain. Cholera and its devastation following the Industrial Revolution provides insight into how and why there is disconnection and mistrust between citizens and the “healthcare professionals” of the time, especially while having no professionalized medical practices in place yet. The extensive lack of trust that many individuals had for the medical facilities and practitioners that held their lives in their hands during Britain’s cholera pandemic highlights the changed response with COVID-19, as well as the worrying similarities that prove that modern countries still do not fully know the best ways to combat a tyrannical disaster like a worldwide illness. This is shown through the lack of faith in the hospital care system, the disregard for quarantine measures, and the distrust in new medical findings that go against previously established knowledge.

The lack of trust for medical centers is not occurring for the first time in the modern pandemic, it was heavily prevalent with cholera as well, and may have been more justified. At

the time, there was a choice of how one could suffer through the illness, either at home surrounded by family to care for them or isolated in a hospital where physicians would watch over them. In most cases, individuals chose to remain in their homes and deal with the illness in the comforts of their own space. Ireland was one of the nations in the United Kingdom that was struck by cholera in 1831, their mistrust with hospitals already heavily prevalent before its introduction¹. In the article *Pandemic Cholera in Belfast, 1832* by Gillian Allmond, there is an emphasis on this lack of trust being connected to the practice of “burking,”² in which medical students would commit murders to have cadavers to dissect that were in the earlier stages of decomposition. This practice became a very large problem in Belfast, leading citizens to believe that the medical professionals working in hospitals were going to commit the same acts for their own personal and economic gain. The fear of such acts resulted in “riots, attacks on cholera hospitals and on cholera doctors themselves in some English cities,”³ and ill people, particularly those who were in the poorer classes, refusing to go to hospitals in fear of isolation and premature death to be used as a cadaver.

Cholera occurred during a time of dramatic changes in the way that medicine was practiced. It was also a time of transitioning the place of medicine from its traditional position in the home and moving it into care facilities such as hospitals. The measures for diagnosis were also in a slow change toward a more modern method; medical practices were altered to make the “power over the doctor-patient relationship unequivocally in the hands of physicians.”⁴ At the time, there were also different types of certifications that one could attain to claim the status of a

¹ Gillian Allmond, “Pandemic Cholera in Belfast, 1832,” *History Ireland* (2020), 24

² Allmond, “Belfast”, 23.

³ Allmond, “Belfast”, 24.

⁴ Mooney, Graham. “Diagnostic Spaces: Workhouse, Hospital, and Home in Mid-Victorian London,” *Social Science History* (2009), 358.

‘medical caretaker.’ The most prevalent and relied upon were the physicians, “graduates of the medical programs at Oxford or Cambridge.”⁵ Following them, there were the surgeon-apothecary that “went through a longer apprenticeship, attending classes part-time at smaller medical schools.”⁶ As previously mentioned, the idea of professionalism in medicine was not yet common. With medicine changing so dramatically, it is understandable for people to be wary of the growing reliance that they needed to have on those who studied the human body, as well as skepticism when it came to treatments and prevention methods that such scholars recommended. Many of these “treatments” were incredibly unreliable and possibly further damaging to those with the disease. Many of these treatments included frequent mercury injections, which caused many patients to later suffer from high amounts of mercury poisoning.⁷

While such a large and justified fear of hospitals is no longer as common, there is still a disconnect between patients and medical centers during the modern pandemic. Stricken with a fatal case of COVID-19, many of those forced into hospitals are isolated to prevent spread and contamination. People facing isolation are prevented from obtaining any contact with their family members, friends, and other patients. Studies have shown that patients that are committed to hospitals with COVID-19 experience forced isolation, these patients are also fifty percent less likely to be seen by doctors on a regular basis throughout the day to prevent any spread.⁸ The isolation that results from a long-term hospital stay makes it more difficult for individuals to willingly go to the medical care facilities when they need to, reflecting the fear that those with cholera had in the nineteenth century.

⁵ Susan Bandoni Muench, “The Mystery of the Blue Death: A Case Study in Epidemiology and the History of Science,” *Journal of Science Teaching* (2009), 61.

⁶ Muench, “Blue Death,” 61.

⁷ Allmond, “Belfast”, 24.

⁸ Meadows, Christine. “COVID-19 Patient Isolation Could Lead to Mental Health Struggles: Alberta ICU Doctor,” *Global News* (May 2020).

The professionals that had to support victims and communities suffering from cholera were not just those who were medically trained, they were also committed members of the community and health boards trying to prevent the spread of the disease. There was disagreement from citizens regarding the measures that officials were attempting to take to stop the spread of the contagion, many of which met in large groups to oppose the changes. In one case, a member of the Irish Board of Medical Health had his house surrounded by a large group of heavily agitated protestors that were against the measures they were taking to isolate a family that had cholera.⁹ At the time, there were two prevalent beliefs as to how the disease had been spreading. The most common belief was that it was caused by miasma, similar to the ways in which the plague spread only 200 years earlier. The second belief was that it was contaminated drinking water causing the spread. Because of the dominant theory that the disease was an epidemic caused by “exposure to a toxic gas or miasma,”¹⁰ prevention and cleansing measures had been taken with this in mind. This belief was prevalent up until John Snow, a man who will be discussed in a larger depth later on, proved without a doubt that this belief was not the case. The fear of miasma was common, people constantly being surrounded with the stench of human waste and pollution encouraged this fear well before learning that their ingestion of it was the true cause of the illness.

In the wake of the cholera pandemic, several new measures were taken to prevent the spread of the disease. These included the intensive cleaning of infected houses, as well as the 1848 Public Health Act, and its creation of the General Board of Health. These new measures were, in most cases, protested by the local boards as they changed the ways that they would have to govern and tax the people that relied on them. In one letter, the Town Council of the Borough

⁹ Allmond, “Belfast”, 24.

¹⁰ Muench, “Blue Death,” 62.

of Clitheroe in the County of Lancaster stated that the new regulations being proposed by the Public Health Act was “quite unnecessary and if [they were] carried out will operate most injuriously to the interests of the Rate payers.”¹¹ They were against the changing ways of dealing with daily affairs proposed by the Act, furthering their argument by stating that it would “cause of much discontent... and annoyance”¹² among those who would be most affected by the raising taxation directly resulting from the new changes brought by the Public Health Act. Public discontent was becoming even more evident as the pandemic continued to take lives and the government made new restrictions for its citizens.

The same discontent is seen in the modern pandemic, COVID-19. While government and health officials make attempts at stopping the disease or preventing its spread to other victims, they are met with disagreement and the refusal to comply to the new restrictions in many countries around the world. Throughout the progression of the disease, there has been a multitude of changes and proposed quarantines put into place in an attempt to combat the pandemic. Some of these include the mandatory usage of masks in public spaces, the shutting down of restaurants and indoor leisure activities, and the prevention of non-essential services being open to the general public. With these large changes came an even larger uproar from citizens, particularly in North America and across Europe. This has led to the refusal to uphold the new guidelines by ignoring them, as well as protesting the new mandatory mask laws. This discontent with government and increasing medical control only escalates as new waves pass through the public sphere. The extensive unrest also heavily reflects the ways that people experiencing the cholera pandemic reacted to their changing situations.

¹¹ Clitheroe Town Council, Source 7, December 1851, The National Archives.

¹² Clitheroe Town Council, Source 7.

An aspect of every pandemic that is important to study is why it was stopped and how it ended. When it comes to the cholera pandemic, there were many factors that went into ending it. The person that began the path toward a scientific breakthrough was John Snow, a man who was able to finally put an end to the debilitating disease. As previously mentioned, it was believed that the cause of the disease was miasma, toxic particles that were found in gas and could be breathed in. John Snow, a man who heavily studied the usage of anesthesia and became the first to open an anaesthesia practice in London, “began to question conventional wisdom about miasmas, as epidemics did not seem consistent with what he learned about toxic gases.”¹³ During one of the more tragic waves of cholera in 1854, Snow wrote that it was “much more sudden, as the greater number of cases terminated in a few hours,”¹⁴ following it with his theory of where and when it could have originated. With extensive research he was able to prove that it was not actually toxic gas that caused the disease but contaminated water. His findings, however, were not monumentally celebrated as one would initially expect, as they went against what doctors traditionally believed and were taught regarding the ways that diseases and epidemics were spread. The fear that comes with changing medicine practices is evident in the ways that people responded to Snow and his theory, or more accurately their lack of response. It was not until the Great Stink, when the government officials had to come face to face with the disgusting living conditions of the poor and the reckless waste disposal, that the water systems and waste removal practices were changed for good,¹⁵ using the microscope to later prove once and for all that these harmful bacteria were infecting the water supply.

¹³ Muench, “Blue Death,” 63.

¹⁴ The source of cholera, Letter from John Snow, M.D. to the *Medical Times and Gazette*, September 1854, The British Library.

¹⁵ Muench, “Blue Death,” 66.

Mistrust in the evolving medical field is also seen in the modern pandemic. The newly developed vaccine is an incredible achievement for science and technology; however, many do not view it in this way. Reluctance to take the vaccine and refusal to support those who do choose to get it is growing in prevalence since the beginning of 2021. Many began fearing the speed at which the doctors were able to create such a complex medication and are unsure if the possible side effects are worth the risk. Resistance to vaccinations is by no means a new concept, however, it is now more important than ever for people to understand the benefits it would bring to society if they chose to obtain the vaccines that are now available. Movements such as the anti-vaccine movement may actually “further prolong the duration of the COVID-19 pandemic,”¹⁶ and continue even as new data regarding the safety of the vaccines is released. Refusal and ignorance toward new science is precisely what occurred during the cholera pandemic in Britain. Snow attempted to change the way his people viewed the illness in order to help the general public and people did not see the merit in his research, leading to citizens and governing forces waiting until it became a much larger and more invasive issue before finally making changes.

The mistrust that people have for government officials and medical professionals is not a new occurrence to the modern pandemic of COVID-19. The cholera pandemic also displays similar patterns of distrust, disorganization, fear, and reluctance to comply with newly developed laws and medicine. The extensive distrust for medical facilities and practitioners during Britain’s Cholera pandemic highlights a changing response with COVID-19, as well as worrying similarities that prove that modern countries still don’t fully know the best ways to combat a

¹⁶ Ramadas Ransing, Elona Dashi, Sajjadur Rehman, Ashish Chepure, Varun Mehta, and Ganesh Kudva Kundadak. “COVID-19 Anti-Vaccine Movement and Mental Health: Challenges and the Way Forward,” *US National Library of Medicine* (February 2021).

disaster like a global pandemic. Fearing new medicine and the newly developed ways to cure an illness is natural. However, for COVID-19 to end, individuals need to comply and trust the professionals that are committed to providing extensive research and care much like John Snow did.

Citations:

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