

**The 1903-1904 Typhoid Fever Epidemic in Butler, Pennsylvania**

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Typhoid fever was a statewide problem in Pennsylvania at the beginning of the twentieth-century. Typhoid fever is caused by the bacteria *Salmonella Typhi* and is only carried by humans in the bloodstream and intestinal tract. The bacterium is commonly spread through drinking water contaminated with *S. Typhi*. Once a victim is infected, the bacterium multiply in the bloodstream and cause a high fever, up to 103 or 104 degrees Fahrenheit. The fever can last weeks or months, causing complications and in about 20% of fever cases, death.<sup>1</sup> Today, antibiotics are used to treat typhoid fever infections, but in the early twentieth-century, prior to the discovery of antibiotics, the disease had no cure. Treatment was general, and usually consisted of making the victims comfortable while the fever ran its natural course. Preventative efforts included sanitation, disinfection, and quarantine of the sick. The largest preventative measure however, was the provision of clean drinking water.

Quality control over public drinking supply was lacking in Pennsylvania in the early twentieth-century. Until 1905, drinking water in Pennsylvania was unregulated. Water companies were considered responsible for the quality of their own services, but governments provided no oversight or control of the public drinking supply. This resulted in many typhoid outbreaks across the state, from Pittsburgh to Philadelphia. One such outbreak occurred in Butler, Pennsylvania from late 1903 to early 1904. The outbreak was called “one of the greatest epidemics in proportion to the population in the history of the world”<sup>2</sup> by the Pennsylvania State Board of Health. The epidemic ultimately resulted in 1,277 cases of illness and 111 deaths.<sup>3</sup> In 1903, Butler had a population of approximately 18,000.<sup>4</sup>

Butler had boomed in 1902 with the establishment of the Standard Steel Car Company plant, which employed 3,000 men. The town was rich in oil, coal, and natural gas, which contributed to its prosperity. The Butler sewage system was for house drainage only, and about 60% of the homes had sewer connections. Until the epidemic, the town was healthy, and had experienced no major epidemics of any kind.<sup>5</sup> This lack of experience with epidemics was felt throughout the town when typhoid fever broke out. Butler was ill-prepared to handle an epidemic of any size and this was evident through the town's response to the fever outbreak.

In late 1903, the people of Butler obtained their drinking water from two major sources: the Mutual Water Company of the Southside and the Butler Water Company.<sup>6</sup> The Mutual Water Company had five wells south of Butler, and supplied the city's First Ward. The Butler Water Company was the primary supplier of the Second through Fifth wards. This water company obtained its supply of water from the Boydstown Dam, which impounded water from Connoquenessing Creek. Between 1901 and 1903 the demand for water in Butler nearly doubled, an increase attributed to the building of the Standard Steel Car Plant and subsequent influx of population. Therefore, in late 1903, the company began constructing a second dam at Thorn Run due to an increased demand for water.<sup>7</sup> In 1902, the Butler Water Company had installed a filter at its pumping station at the Boydstown Dam, and from that point on Butler received filtered water from the Connoquenessing Creek.<sup>8</sup>

The end of August 1903 brought heavy rain to Butler, and on August 28, 1903 the dam at Boydstown burst. Initial damage reports from the cost of repairing the dam and from minor flooding were estimated to be about \$50,000.<sup>9</sup> The Butler Water Company

responded to the dam burst by constructing an emergency cofferdam, while speeding up the construction of the new dam at Thorn Run.<sup>10</sup> The water company implored Butler citizens to conserve water, as water reserves were already low from the summer and the town was already running on an emergency system.<sup>11</sup> Water Superintendent Mr. Wright nonetheless assured the citizens of Butler in an article in the Butler Times that they should “have no fear about the company’s not having a sufficient supply of water for the immediate needs of the city.”<sup>12</sup>

Butler’s emergency water supplies were indeed adequate until October 20, when the filtration system went offline to make repairs and upgrades in anticipation of the new Thorn Run dam coming online.<sup>13</sup> Between October 20 and November 2, the filters were not running and the town water supply came directly from the Connoquenessing Creek.<sup>14</sup> During this period, no warning was issued from the Butler Water Company disclosing the town water supplies were unfiltered and therefore possibly unsafe to drink.<sup>15</sup> One of the few mentions of the Butler Water Company during the period of suspended filtration was an article in the Butler Daily Eagle that actually praised the quality of the water and good record of the company, “The Butler Water Co. is a progressive corporation. Is had not spared money to make the service here all that it should be [sic].”<sup>16</sup> In a statement released to the Governor on behalf of the 19<sup>th</sup> Annual Report of the State Board of Health, Dr. Wilmer Batt, Quarantine Officer-At-Large subsequently revealed how vulnerable citizens of Butler were after the Boydstown dam broke,

No suspicion of the water supply had entered the minds of the people...How far they were misled by published statements or who may have been responsible for these statements is a matter for conjecture, but the fact remains that the local Board of Health and the people of Butler were entirely ignorant of the real source of supply subsequent to the 28<sup>th</sup> of August.<sup>17</sup>

On November 5, 1903, the first death attributed to typhoid fever and reported in the Butler news was Mrs. Sarah Otto from West Cunningham Street.<sup>18</sup> The article was brief and made no mention of any other cases of typhoid fever. Two days later, on November 7, the Butler Board of Health began an investigation into what appeared to be an alarming and rapidly growing number of typhoid fever cases. The Board did not have any ideas of possible causes, but advised “Extra precaution on the part of the people of the borough in regard to everything they eat and drink.”<sup>19</sup> The Board also, however, defended the Butler water supply,

The officers of the Board of Health had a conference with Supt. Wright of the Water Co. last night in regard to the water supply and the changes that have been made, and as far as could be ascertained everything is in good condition at the source of the water supply.<sup>20</sup>

But, this faith in Butler’s water would prove to be short-lived.

Citizens of Butler awoke on November 9 to read the headline of the Butler Daily Eagle pronounce, “*Typhoid Above Thorn Run Dam: Board of Health Finds Conditions Such that City Water Should Not Be Used Without Boiling.*”<sup>21</sup> The Butler Board of Health would not say at the time that the town drinking water was the exact cause of the typhoid fever, but evidence pointed to that possibility. The Board found “several cases of typhoid fever on a hillside sloping towards the tributaries of the new dam from which some of the water has been recently pumped and close enough to cause alarm.”<sup>22</sup> The Board recommended boiling all water that would be used for cooking or drinking as a “precautionary measure,” all while defending the efforts of the Butler Water Company to supply water to the town; “We believe the Water Co. is doing the best it can under the

circumstances and as soon as sufficient rain falls to fill its dam, water is expected to be both plentiful and healthful.”<sup>23</sup>

The Butler Daily Eagle’s report downplayed the findings of the Butler Board of Health’s report. Health Officer Robert B. Fowswor, and Dr. John E. Beyers, county medical inspector, traveled to Thorn Run dam to inspect the town water supply on November 7. They found three cases of typhoid fever in a home whose drainage ran into Thorn Run and the Connoquenessing Creek.<sup>24</sup> Further inquiry into the number of typhoid fever cases along the Connoquenessing Creek above Butler revealed eight or nine cases of typhoid fever during the summer of 1903.<sup>25</sup> (See Map 1.) Many of these homes dumped their sewage and waste directly into water that flowed into the Connoquenessing Creek, thus contaminating Butler’s water supply with typhoid bacteria.<sup>26</sup>

Public concern was felt soon after the Butler Board of Health’s report. The Butler School Board met to discuss filtration mechanisms and boiling techniques, so they could furnish clean water to the school. While the School Board also expressed faith in Butler’s water supply, they decided to follow the advice of the Board of Health and boil all school water.<sup>27</sup> Advertisements began appearing in the Butler Daily Eagle, for ice and soda water that were all made from “pure sources” and “filtered water.”<sup>28</sup>

Following the appearance of the Board of Health’s recommendation to boil all water, Dr. Matson, the Pittsburgh city bacteriologist, conducted a test of Butler town water, and found it free of all typhoid germs. This caused confusion that was expressed in the Butler Daily Eagle, “Now that it has been shown that the water is not to blame, no other theory is as yet advanced as to the cause of the epidemic of typhoid.”<sup>29</sup> The appearance of this report led some to question the Butler Board of Health’s attribution of

the disease and admonition to boil the water. In a fiery letter to the editor of the Butler Daily Eagle, the president of the Butler Board of Health, Dr. J.M. Leighner countered that Maton's test was "not a decisive one" and that the article "might leave the impression that the water that has been and is being furnished to the people of this city by the Butler Water company is beyond doubt pure and need not be boiled for drinking purposes as advised by the Board of Health." Dr. Leighner went on to write,

When the Board of Health advised the boiling of the water it did so advisedly and after much investigation of the situation. The Board felt it a duty to warn the people of the probable danger and to take the precautionary measure of boiling the water, which could certainly harm no one.<sup>30</sup>

The Board reiterated its precaution to boil all city water, with the support of Dr. John E. Byers, Butler county Medical Inspector and Dr. Benjamin Lee, the Secretary State Board of Health.<sup>31</sup>

The debate over the source of typhoid fever continued for almost a week following Dr. Matson's report. Water was the most logical source of contamination, especially after the Butler Board of Health's report of the presence of typhoid fever being present upstream of Butler. The Board stood by their blame of the water supply and was upset that no warning had been given when filtration was suspended in October,

The fact was brought out and agreed on by all that where the liability lays for the present-epidemic is that water was furnished to people in this city, that was not pure, without a warning first being given...The people had every confidence that they were getting fairly good water at least, while as a matter of fact the matter of fact the main source of supply was the Connoquenessing river...It may have been the best water that could be found, but warning should have been given in time. Instead an investigation disclosed these facts, after there were over a hundred cases of fever in the city, and nearly 1,000 more people had taken the germs into their system that would bring sickness to them and possibly to others.<sup>32</sup>

Though the Butler Board of Health did not have any oversight of the town water supply, if a warning had been issued when filtration was suspended, the epidemic may not have occurred at such a dramatic proportion.

While the Butler Board of Health blamed the Butler Water Company for failure to disclose the source of their water, Butler Mayor Kennedy blamed health officials and the citizens of Butler for the outbreak. In a letter to the editor of the Butler Daily Eagle on November 25 Mayor Kennedy wrote,

Now whose duty was it to warn the people from the time the dam burst to boil all water used and disinfect all premises and take due precaution to guard against an epidemic? Not the water company, surely... They certainly are not alone responsible for the typhoid fever cases... Not only may the water company be to blame, but the proper authorities, officers of health and others as well. Almost the entire population of Butler is in some measure responsible. The filthy condition of our streets, alleys, premises, etc., have been almost daily commented on, yet little or no provision was made to better them.<sup>33</sup>

The Mayor's editorial suggests that he was trying to distance himself from the blame of the epidemic. Mayor Kennedy had no prior experience in handling an epidemic and instead of taking charge of the situation; Kennedy pointed the blame and problem towards someone else.

Mayor Kennedy's letter was answered the next day by Butler Sanitary Inspector B.B. McQuiston. In his response, McQuiston defended his job as a health officer. McQuiston detailed his job duties, which included sanitation inspection, authorizing burials, serving quarantine notices, disinfecting sick homes, notifying the town of contagions, and keeping track of small pox outbreaks. This job paid \$50 a month, and McQuiston was the only Sanitary Inspector in Butler. McQuiston argued that he worked as hard as he could, but it was inconceivable to expect him to attend to an outbreak as



large as the typhoid fever outbreak. McQuiston also defended the Butler Board of Health, citing their commitment to their duty without pay. McQuiston was incensed that Mayor Kennedy not only questioned McQuiston's ability to perform his job, but that Mayor Kennedy seemed to have no knowledge of what McQuiston did in the first place. McQuiston challenged Kennedy to take actions regarding the epidemic, and not just to sit back and let the health officials do all the work.<sup>34</sup>

This exchange demonstrates how little experience Butler had in handling epidemics. When the town faced a growing number of citizens succumbing to typhoid fever, public officials such as Mayor Kennedy, the Board of Health, and Sanitary Inspector McQuiston did not have an established policy to follow. There was no prescribed method for confronting epidemics and no prescribed method for order. During the Butler epidemic city response was at first haphazard and fragmented. The city could not even provide a unified explanation of where the source of the outbreak was. The fighting and tension between city officials demonstrates that leaders were ill-equipped to fight an epidemic.

On November 27, the president of the Butler School Board made a call for help to the Pennsylvania State Board of Health to "aid in the suppression of an epidemic of fever...which [had] reached a point beyond the control of local authorities."<sup>35</sup> Members of the State Board of Health were ordered to go to Butler to make a thorough investigation and report to the Board. The following day, November 28, members from the State Board of Health came to Butler. They met Dr. Leighner and Mr. McQuiston to receive background knowledge of the epidemic. The State Board of Health representatives were so shocked by Leighner and McQuiston's presentation that they had

“no doubt in the minds of the members of the board that the conditions were such as to constitute a serious emergency, calling for assistance from the State Board of Health.”<sup>36</sup>

After their meeting, members of the State Board split up to verify that the city was, in fact, suffering from an epidemic of typhoid fever and where the source of fever could have come from. Investigation revealed that Butler was in the throes of a typhoid fever epidemic and,

From a careful personal inspection of the water supply of the Butler Water Company, we [PA Board of Health] are unanimously of the opinion that the pollution of the water in use in the greater part of the borough is the principal, if not the only cause of the present epidemic.<sup>37</sup>

The State Board of Health then endorsed the action of boiling all water used for domestic purposes, as previously suggested by the Butler Board of Health.<sup>38</sup>

The investigation by the State Board of Health resulted in the release of a statement on November 30 that read,

Traced causes of typhoid in close proximity to the reservoirs of the Butler Water Company and on the banks of the streams from which the supply of water for the use of the city was pumped, has surely polluted the water to such an extent that the health of every use of city water had been endangered.<sup>39</sup>

This statement from the State Board of Health answered all doubt in the minds of citizens and officials that the water supply was the cause of the typhoid fever. The breakthrough of identifying the cause led to progress in treating the sick, disinfection, and in the prevention of more sickness.

Previous to, and even after, the State Board of Health’s recommendation to boil all water, officials doubted whether their advice was actually being followed. Dr. Batt highlighted some of his doubts in his final report of the epidemic when he described the large concentration of fever cases that occurred in the Lyndora and Red Row districts,

which were home to a large number of immigrants. Dr. Batt theorized that this high concentration of typhoid was related to the immigrants “incapable of understanding” the methods of boiling water and disinfecting their homes.<sup>40</sup> Dr. Batt again doubted the public response to boil water when he reported on the distribution of cases over time. Dr. Batt found,

The daily occurrence of a large number of cases over an extended period of time subsequent to the public notice to the people concerning the boiling of water on November 9 would indicate that the warning had not been promptly heeded, and that the verdict of the Board of Health concerning the necessity of boiling water had not been accepted with the unanimity which it deserved.<sup>41</sup>

Following the distribution trend over time, Dr. Batt noted,

It was not until the latter part of November that the character of the disease seemed to be thoroughly recognized, and in fact it was not until the visit and proclamation of the State Board of Health on November 29, that the character and source of the disease were publicly and finally accepted.<sup>42</sup>

The resistance of the people to follow the recommendation to boil all drinking water could have been from a lack of understanding, as Dr. Batt theorized was the case in the Lyndora and Red Row districts, but also from the public’s reluctance to face the fact that an epidemic was taking place in their own backyards.

By the time the State Board of Health had issued its report, officially blaming the water supply for the source of typhoid fever, Butler schools had been closed for almost a week. On November 24, the Butler School Board announced it would have to close schools because of low attendance. The School Board estimated almost 400 children and 20 teachers were ill from typhoid fever. The Board also wanted to minimize the spread of typhoid fever by limiting contact between children.<sup>43</sup> Indeed, the spread of typhoid

virtually shut down the town of Butler, and the civic paralysis served as an extra motivation for town officials to begin a statewide, and even national, call for help.

One of the first steps Butler took towards typhoid fever aid was the formation of a relief committee. An advertisement on November 27 in the Butler Daily Eagle called for doctors, nurses, fundraisers, and volunteers to help form a committee for the relief of typhoid fever.<sup>44</sup> The formation of a relief committee occurred rapidly. Ministers, doctors, church members, Elk Lodge members, and ordinary citizens responded to the call for help and formed the Butler Relief Committee. During the very first meeting, the relief committee began to raise relief money, find and look after needy cases, find relief nurses, and look for a temporary hospital.<sup>45</sup> By November 30, the relief committee raised \$8,000;<sup>46</sup> by December 1, the relief committee raised \$10,000 with large donations coming from The National Transit Co., The American Brewing Co., The Producers' and Refiners' Oil Co., and Jennings Bros., the two oil companies in town, and the Standard Steel Car Co., which also offered money to drill new artesian wells.<sup>47</sup>

As the newly formed relief committee brought relief money to Butler, the Butler Board of Health ordered that complete records of every typhoid fever case be kept. Sanitary Inspector McQuiston was placed in charge of collecting case numbers from physicians and serving day-to-day reports to the Butler Board of Health. From December 1 on, evening reports were made regarding the new number of typhoid cases and deaths resulting from the fever.<sup>48</sup> Prior to this order, the number of typhoid fever cases was only estimated, not exactly known because physicians did not have to report every case of typhoid fever. This fact again reinforces how ill prepared Butler was in handling an

epidemic; town officials did not have a system to count accurately cases of a particular disease.

This raises a fundamental question of how accurate records were from the Butler epidemic. The epidemic may have started earlier than November, but there was no way to detect a growing pattern of typhoid cases without monitoring the number of cases to begin with. Dr. Batt raised this point in his final report, when he writes there was a “Necessity which has been shown to exist for the compulsory registration by physicians of contagious and infectious diseases occurring in rural districts.”<sup>49</sup> Dr. Batt compiled a breakdown of fever cases by day, age, and mortality. This can be found in the Appendix. These records demonstrate that good records could be kept regarding the epidemic, but were not kept by Butler officials.

On December 3, the Butler Daily Eagle reported there were 1,103 cases of Typhoid Fever in Butler.<sup>50</sup> Sanitation was named the priority in fighting the epidemic. Dr. Batt was in the process of supervising the flushing of the water mains, dams, and reservoirs used by the Butler Water Company, in hopes of flushing out the typhoid germs. Disinfectants were also handed out to all homes that experienced typhoid fever. A grant from Governor Pennypacker from the state emergency funds paid for these disinfectants and sanitary measures.<sup>51</sup>

Flushing the water mains was a primary method used by the Butler Water Company, the city, and the State and Local Boards of Health in an attempt to sanitize Butler. Between November 18 and December 2, the Butler Water Company, following the recommendation from the Butler Board of Health, began flushing the main water pipes used by the company. This was achieved by opening all of the fire hydrants in

Butler at different intervals, so that the entire system would not drain at once. On December 5, under the supervision of Dr. Batt, the system was re-flushed. Dr. Batt implemented a variation on the first method used, to incorporate individual service pipes as well as large water mains. The borough was divided into different districts and within each district homeowners were instructed to turn on every faucet in their home, while servicemen simultaneously opened fire hydrants in that district. Similar to the first flush, the process took almost 10 days to prevent the town's entire water supply from draining at once.<sup>52</sup> Following the flushing of the pipes, the city employed teams of men to drain and scrub the bottom and sides of the Boydstown. Water tests conducted after the flushing of the pipes and cleansing of the reservoir concluded that bacteria levels did go down following the sanitation process.<sup>53</sup>

Disinfection occurred alongside sanitation in Butler. Dr. Batt, with funds secured from the Governor, distributed disinfectants to all homes in Butler that had cases of typhoid in them. Commonly distributed disinfectants included carbolic acid, bichloride of mercury and formaldehyde. Dr. Batt both distributed the disinfectants and personally instructed households of their use and effectiveness in preventing secondary infection.<sup>54</sup>

Sanitation was a priority for halting the spread of secondary infection, but there were over 1,000 cases of fever that needed primary medical attention. The sheer number of cases meant local doctors and nurses were stretched beyond their capacity. On December 3, a temporary hospital was created at County Home. The hospital was able to care for 100 fever patients at a time, and was staffed by visiting doctors and nurses from Philadelphia. The hospital was thus appropriately dubbed, "City of Brotherly Love Hospital" for its duration in existence. In hopes of reducing the number of secondary

infections and improving sanitation, the new hospital specifically targeted those who usually stayed home when they became ill.<sup>55</sup> The Butler Board of Health released a statement encouraging citizens to seek professional attention if they became ill, “The committee earnestly requests the co-operation of the people in urging upon those who have sickness in their family and who are not able to properly and judiciously care for the sick ones, to have the patients removed to the hospital at once. Everything in the way of supplies that is necessary for the careful administration to the sick has been arranged for.”<sup>56</sup> The people of Butler had no experience with widespread epidemics, and were not aware of the dangers of secondary infections or disease transmission. Public reluctance to seek medical attention demonstrates a public inexperience dealing with disease, and also a mistrust of medical authorities to provide services.

Butler’s sanitation efforts began to produce results shortly after the opening of the City of Brotherly Love Hospital. On December 5, the headline of the Butler Daily Eagle proclaimed, “New Cases Becoming Fewer Every Day.”<sup>57</sup> On December 8, a headline read, “Situation Now under Control.”<sup>58</sup> Despite these headlines, Butler still had many relief efforts to oversee. While the new cases became less, many of the sick still had not reached the convalescing stage of the fever. A progress report on the epidemic published on December 7 estimated the total number of cases as 1,184.<sup>59</sup> Much of the money spent by the relief committee was on families that had multiple cases of fever, and could not support themselves. An estimated 175 families received aid of some sort by December 7. The tone of the report was hopeful that the end of the epidemic was near, but still grim regarding the finances of the town,

In order to maintain the work of relief, even on present lines, it will readily be seen that the funds on hand and in sight are only sufficient to maintain

the work for two more weeks, and thus the committee are brought to face the outlook for the future.<sup>60</sup>

The relief committee's worry over Butler's finances attracted national attention. The Red Cross chapter in Pittsburgh wrote to their national chapter asking for assistance. A week later, on December 14, Clara Barton, founder of the national Red Cross, visited Butler to observe the conditions first-hand. Barton had a very uplifting presence on the town. She spoke at the First Presbyterian Church, giving a history of the Red Cross and the work it provided. Miss Barton then toured Butler, reporting in the Butler Daily Eagle what she had witnessed, "Conditions in Butler are bad, looking at it one way, for the fever epidemic is a terrible one; but in another way they are good, for the work being done to stay its progress is a great work, and is being managed splendidly."<sup>61</sup> Barton praised the efforts of the relief committee and Butler Board of Health, adding that there was not much for her to do in Butler. Barton did concur with Butler officials that a lot of money would be needed to continue relief efforts at their current levels; "that in my belief, from \$75,000 to \$100,000 is needed to carry on the relief work."<sup>62</sup> Both citizens and officials of Butler appreciated Barton's visit,

Miss Barton's visit to Butler has made the local situation look brighter than at any time since the oncoming of the epidemic. Her presence here has been cheering to all with whom she came in contact, and the experience of Miss Barton and her tried assistants has materially aided those in the relief work.<sup>63</sup>

After Barton returned to Washington D.C, she issued a national appeal on behalf of the Relief Committee and Board of Health.<sup>64</sup>

Butler received an outpouring of help following Clara Barton's national appeal. An estimated \$65,567.48 was raised as a direct result of Clara Barton's involvement in



Butler.<sup>65</sup> In a letter drafted to Barton from the relief committee, praise and thanks was given to Barton on behalf of the town,

It will be a source of gratification to you to know that the opposite side of our supply room is now filled with an almost endless assortment of wearing apparel for children, young ladies, young men, and grown people, and that the Red Cross workers of Pittsburg [sic] are united hand in hand with the members of the relief corps and a great deal of aid is being rendered thereby. This in itself is a matter for which we are thankful and is directly attributed to your visit.<sup>66</sup>

In response to the thanks, Barton graciously responded in a letter read to the relief committee,

I feel all unworthy of your kindly spoken thanks. The greater gratification was surely mine in the meeting and knowing a body of men, capable of rising up to a charge like that which so suddenly confronted you, faced by a danger no less your own...I found you marching like veterans to meet a foe so new to you and so insidious as only to be recognized when his grasp was on your throats...Let the thanks be mine, not yours.<sup>67</sup>

Barton recognized that the scope of the epidemic was more than the town was prepared for, making her help all the more vital to the town.

Another appeal was made in addition to that of Miss Barton's, was issued from Mayor Kennedy's office on December 9. However, this appeal sparked some controversy and tension between the Mayor's office and the relief committee. Mayor Kennedy drafted a letter asking the American public for donations to the Butler relief fund. The letter was leaked to press and published in Pittsburgh, Philadelphia, New York, Cincinnati, and Chicago.<sup>68</sup> The relief committee was bothered by the release of this statement because there had been many incorrect reports on the state of the Butler epidemic previously released by the national media, and the relief committee wanted to stop these stories. The committee wanted to avoid sensationalism in the press and deny the newspapers the

chance to get a “scoop” from their town. The committee also stressed that erroneous reports led to obstacles in the relief efforts.

The premature publication from the Mayor’s office caused an uproar in the relief committee; at the time of publication they were unsure if Mayor Kennedy actually meant to publish the appeal, or if it was a mistake. Following the release on December 10, the relief committee held a meeting,

After a consultation by several members of the relief committee with Mayor Kennedy, at which time various features of the situation were discussed, the committee were informed that there was no desire or intention on the part of the mayor to have the article receive such undue notoriety or premature unauthorized publication.<sup>69</sup>

However, the Relief Committee did note that the appeal was much needed; after the appeal was published, the town received an influx of donations. The Butler Daily Eagle began publishing daily lists of contributions, included on the list was President Roosevelt, who personally donated to the relief fund,<sup>70</sup> and Andrew Carnegie and the Carnegie Foundation.<sup>71</sup> Although the erroneously published report brought in donations to the town, its publication shows the breakdown of communication between the relief committee, the Mayor, and everyone involved. While it was not clear how the letter was published, it shows how unorganized the government was at controlling its image and efforts.

While politicians appealed for aid, sanitary experts were inspecting Butler. The State Board of Health inspected tenement districts after there were reports of noncompliance in regards to sanitary measures there. The State Board of Health found many poor districts in Butler without access to clean water, and non-working filtration pumps.<sup>72</sup> The State Board of Health also inspected the watersheds that supplied Butler

with its water. Dr. Batt, of the State Board of Health, found typhoid germs in all of the local watersheds, and guessed they had been there for over a year.<sup>73</sup> As previously discussed, Mr. McQuiston, the Butler Sanitary Inspector, clearly had many responsibilities. The amount of work McQuiston had was enough for several workers, yet the Board of Health did not have more people working on the town's sanitation. The lack of access to clean water and the condition of the local watersheds indicates that Butler had nobody to make these inspections or do anything about them. The town could not take care of sanitary measures before the epidemic and when the epidemic occurred Butler could do even less.

Finally, the State Board of Health issued a final report disclosing the cause of the Typhoid epidemic: the suspension of filtration of the town water supply. Dr. George Soper, a New York sanitary expert hired as a consultant by the State Board of Health, blamed the suspension of the mechanical filtration of the city water for the Typhoid outbreak, which occurred between October 20 and November 2. The epidemic began November 5.<sup>74</sup> The mere fact that the Pennsylvania State Board of Health had to hire an outside consultant from New York not only demonstrates how not only the town of Butler was ill-equipped to handle a typhoid fever epidemic, but how the entire state of Pennsylvania did not have the capacity to make sanitary inspections necessary to preserve public health.

After the investigation of the source of the epidemic ended, there was still a lot of work to be done by the relief committee. The committee brought a new water sterilizer to the town of Butler. Said to be the only one of its kind in America, the Villard-Desmaroux sterilizer filtered water through copper pipes, heating it to 235 degrees Fahrenheit,

therefore killing all bacteria in the water.<sup>75</sup> The sterilizer brought an additional source of clean water to the Butler community, advertising “Clean Water for All.”<sup>76</sup> The Villard-Desmaroux sterilizer was not the only instance advertising clean water. The Butler Daily Eagle carried daily advertisements for home remedies and preventions against fever. “Manny’s Pop: made from pure well water, recommended by physicians,” “Avoid Fever by using a Cummings Filter in the house, hotel, hospital, factory, office building and for all purposes where pure water is desired,” “Who Knows? Is it the garbage not properly taken care of that CAUSES TYPHOID? The Butler Reduction Co. will call on you and explain,” “Prevent Typhoid Fever in your homes by using improved natural stone – a germ proof water filter,” were all common advertisements, promoted in the wake of citizens’ fear of catching typhoid.<sup>77</sup>

As December progressed, the fear of typhoid became less. Headlines from the end of December in the Butler Daily Eagle proclaimed, “Fever Epidemic Is Dying out Rapidly,” “Fever Patients now Convalescing,” “Typhoid Continues Rapidly Improving – Hopes Entertained that Worst of Epidemic is Past Both as to Deaths and New Cases.”<sup>78</sup> In an article from the Butler Daily Eagle on December 31, the paper reported anxiety was down, school and reservoir disinfection were progressing well, and there had been no deaths in over two days.<sup>79</sup>

The year 1904 began on a hopeful note. Butler schools re-opened, church attendance rose, and praise was heaped on the hospitals for their role in providing relief.<sup>80</sup> The number of typhoid cases remained relatively stable during the first week of January, and Dr. Batt felt comfortable to leave Butler for a few days to investigate another typhoid epidemic in a nearby town.<sup>81</sup> On January 12, the relief committee issued a statement

thanking everyone who donated money to the relief fund, and that the relief committee had adequate funds to continue their work without the need for more donations.<sup>82</sup> The City of Brotherly Love Hospital closed on January 14 because it was not needed anymore.<sup>83</sup> Relief work continued throughout the month of January, flushing Butler's water mains, and disinfecting homes. On February 2, the Butler Daily Eagle reported, "Butler Water is now Absolutely Pure."<sup>84</sup>

Dr. Batt's final report on the typhoid fever epidemic named it "one of the greatest epidemics in proportion to the population in the history of the world."<sup>85</sup> The final statistics released by the Pennsylvania Board of Health of the epidemic were 1,277 cases of illness, with 111 deaths directly attributed to the fever.<sup>86</sup> Dr. Batt ended his report on the epidemic with a note of warning to the state of Pennsylvania,

This epidemic illustrates the serious burden of responsibility which rests upon both municipal and private corporations engaged in supplying water for domestic uses, and at the same time demonstrates that the streams of our State even in comparatively remote sections are capable of receiving such serious contamination that they should become the objects of the most careful supervision on the part of local and state authorities.<sup>87</sup>

Dr. Batt's parting words were representative of Pennsylvania's growing need for better health regulations on behalf of its citizens.

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- <sup>1</sup> "Typhoid Fever." Center fo Disease Control. 2005. National Center for Immunization and Respiratory Diseases: Division of Bacterial Diseases. 7 Mar. 2009.
- <sup>2</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 572.
- <sup>3</sup> Ibid.
- <sup>4</sup> 20th Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Publication. 1904. p.9.
- <sup>5</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904.
- <sup>6</sup> McKee, James A., ed. "The Typhoid Fever Epidemic." 20th Century History of Butler and Butler County, PA. Vol. 1. Chicago: Richmand-Arnold Co., 1903. 352.
- <sup>7</sup> Ibid.
- <sup>8</sup> Batt, Wilbur. Rep. 1904.
- <sup>9</sup> "Water Works Dam at Boydstown Bursts." Butler Daily Eagle 28 Aug. 1903: 1.
- <sup>10</sup> "Coffer Dam to be put in at Boydstown at once." Butler Daily Eagle 29 Aug. 1903: 1.
- <sup>11</sup> Ibid.
- <sup>12</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 570.
- <sup>13</sup> Batt, Wilbur. Rep. 1904.
- <sup>14</sup> "Suspension of Filtration Said to have Caused Epidemic." Butler Daily Eagle 17 Dec. 1903: 1.
- <sup>15</sup> Butler Daily Eagle 20 Oct. 1903 – 2 Nov. 1903.
- <sup>16</sup> "Reduction in City Water Rates to Come." Butler Daily Eagle 29 Oct. 1903: 1.
- <sup>17</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 570.
- <sup>18</sup> Butler Daily Eagle 5 Nov. 1903: 1.
- <sup>19</sup> "Board of Health Making Typhoid Investigation." Butler Daily Eagle 7 Nov. 1903: 1.
- <sup>20</sup> Ibid.
- <sup>21</sup> "Typhoid Above Thorn Run Dam: Board of Health Finds Conditions Such that City Water Should Not Be Used Without Boiling." Butler Daily Eagle 9 Nov. 1903: 1.
- <sup>22</sup> Ibid.
- <sup>23</sup> Ibid.
- <sup>24</sup> McKee, James A., ed. "The Typhoid Fever Epidemic." 20th Century History of Butler and Butler County, PA. Vol. 1. Chicago: Richmand-Arnold Co., 1903. 347.
- <sup>25</sup> Ibid.
- <sup>26</sup> Batt, Wilbur. Rep. 1904.
- <sup>27</sup> "They Discussed Water Question." Butler Daily Eagle 12 Nov. 1903: 1.
- <sup>28</sup> Butler Daily Eagle 11 Nov. 1903.
- <sup>29</sup> "No Typhoid Germs in Butler Water." Butler Daily Eagle 14 Nov. 1903: 1.
- <sup>30</sup> "Boil All Water, Repeats Board." Butler Daily Eagle 16 Nov. 1903: 1.
- <sup>31</sup> Ibid.
- <sup>32</sup> "Typhoid Question." Butler Daily Eagle 24 Nov. 1903: 1.
- <sup>33</sup> "Open Letter from Mayor Kennedy." Butler Daily Eagle 25 Nov. 1903: 1.
- <sup>34</sup> "Mayor Kennedy is answered by Health Officer McQuiston." Butler Daily Eagle 27 Nov. 1903: 1.
- <sup>35</sup> "Minutes of a Special Meeting." Proc. of 19th Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. 189.
- <sup>36</sup> Ibid.
- <sup>37</sup> Ibid.
- <sup>38</sup> Ibid.
- <sup>39</sup> "The Typhoid Situation in the city of Butler." Butler Daily Eagle 30 Nov. 1903: 1.
- <sup>40</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 562.
- <sup>41</sup> Ibid, p.565.
- <sup>42</sup> Ibid.
- <sup>43</sup> "Schools Are Closed." Butler Daily Eagle 24 Nov. 1903: 1.
- <sup>44</sup> "Urgent Need for a Relief Organization." Butler Daily Eagle 27 Nov. 1903: 1.
- <sup>45</sup> "The Organization of Relief Now on Foot." Butler Daily Eagle 28 Nov. 1903: 1.

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- <sup>46</sup> “Liberal Response to Appeals for Aid.” Butler Daily Eagle 30 Nov. 1903: 1.
- <sup>47</sup> “Relief Work Goes Nobly On.” Butler Daily Eagle 1 Dec. 1903: 1.
- <sup>48</sup> “Complete Records Kept.” Butler Daily Eagle 1 Dec. 1903: 1.
- <sup>49</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 573.
- <sup>50</sup> “Exact Number of Cases in City is over Eleven Hundred.” Butler Daily Eagle 3 Dec. 1903: 1.
- <sup>51</sup> Butler Daily Eagle 3 Dec. 1903: 1.
- <sup>52</sup> Batt, Wilbur. The Typhoid Fever Epidemic At Butler: Report of the Secretary. Rep. Philadelphia, 1904. p. 554.
- <sup>53</sup> *Ibid.*, p. 556.
- <sup>54</sup> *Ibid.*, p. 530, 555.
- <sup>55</sup> Butler Daily Eagle 3 Dec. 1903: 1.
- <sup>56</sup> “From Board of Health.” Butler Daily Eagle 3 Dec. 1903: 4.
- <sup>57</sup> Butler Daily Eagle. 5 Dec. 1903: 1.
- <sup>58</sup> Butler Daily Eagle. 8 Dec. 1903: 1.
- <sup>59</sup> “Progress of Relief Work.” Butler Daily Eagle 7 Dec. 1903: 1.
- <sup>60</sup> *Ibid.*
- <sup>61</sup> “Miss Barton Sees Needs of Butler.” Butler Daily Eagle 15 Dec. 1903: 1.
- <sup>62</sup> *Ibid.*
- <sup>63</sup> *Ibid.*
- <sup>64</sup> Butler Daily Eagle 17 Dec. 1903: 1.
- <sup>65</sup> McKee, James A., ed. “The Typhoid Fever Epidemic.” 20th Century History of Butler and Butler County, PA. Vol. 1. Chicago: Richmand-Arnold Co., 1903. 354.
- <sup>66</sup> “Letter Read at the Committee Meeting.” Butler Daily Eagle 30 Dec. 1903: 1.
- <sup>67</sup> *Ibid.*
- <sup>68</sup> “Another Appeal Sent Out.” Butler Daily Eagle 10 Dec. 1903: 1.
- <sup>69</sup> “Relief Committee Issues Statement.” Butler Daily Eagle 11 Dec. 1903: 1.
- <sup>70</sup> Butler Daily Eagle 12 Dec. 1903: 1, 4.
- <sup>71</sup> “Carnegie Will Help Butler.” Butler Daily Eagle 17 Dec. 1903: 1.
- <sup>72</sup> “State Board of Health Making Close Sanitary Inspection.” Butler Daily Eagle 12 Dec. 1903: 1.
- <sup>73</sup> “Inspection of Water Sheds Now Finished.” Butler Daily Eagle 10 Dec. 1903: 1.
- <sup>74</sup> “Suspension of Filtration Said to Have Caused Epidemic.” Butler Daily Eagle 17 Dec. 1903: 1.
- <sup>75</sup> “New Sterilizer is Now in Use Here.” Butler Daily Eagle 23 Dec. 1903: 1.
- <sup>76</sup> *Ibid.*
- <sup>77</sup> Butler Daily Eagle.
- <sup>78</sup> *Ibid.*
- <sup>79</sup> “Typhoid Continues Rapidly Improving.” Butler Daily Eagle 31 Dec. 1903: 1.
- <sup>80</sup> Butler Daily Eagle 2 Jan. 1904: 1.
- <sup>81</sup> “Dr. Batt has Been Called to Kittaning.” Butler Daily Eagle 9 Jan. 1904: 1.
- <sup>82</sup> “Further Subscriptions Will Not be Needed.” Butler Daily Eagle 12 Jan. 1904: 1.
- <sup>83</sup> “Work of the Philadelphia Relief Corps Will Soon End.” Butler Daily Eagle 14 Jan. 1904: 1.
- <sup>84</sup> “Butler Water is now Absolutely Pure.” Butler Daily Eagle 2 Feb. 1904: 1.
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- <sup>86</sup> *Ibid.*
- <sup>87</sup> *Ibid.*, p. 572-3.

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