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# Cholera and Its Impact on Nineteenth-Century Mormon Migration

*Patricia Rushton*

Nineteenth-century migrants traveling across America suffered from many diseases as they journeyed to new homes in the West. The disease that was most common and caused the highest rate of illness and death was cholera.<sup>1</sup> Historian Robert Carter notes, "It was a disease with which people were . . . familiar, yet it was little understood. It would strike suddenly, with no warning, often killing the victim within hours of the first symptoms. It was so uncontrollable that often entire families, even whole emigrating companies, would be wiped out."<sup>2</sup> While cholera was not always fatal, it brought fear and suffering into the lives of nineteenth-century travelers.

The purpose of this article is to report the history and pathology of cholera, the factors influencing the transmission of the disease, and the occurrence of epidemics, and to assess the impact cholera had on the overland migration trails of North America during the 1800s, particularly the impact on Mormon migration from 1847 to 1869.

## **The Nature of the Disease**

Cholera was first referred to in the writings of Hippocrates and Galen but was not formally recognized as a severe, infectious diarrheal disease until 1817, during the first recorded pandemic, which began in India and spread through Asia and the Middle East. The second recorded pandemic occurred in 1829, introducing cholera to Europe and the Americas along trade and shipping lines.<sup>3</sup> Additional pandemics occurred in 1832, 1849, 1866, 1911, and 1961, with cases continually being reported in many third-world countries. Cases reported as recently as the 1990s in the United

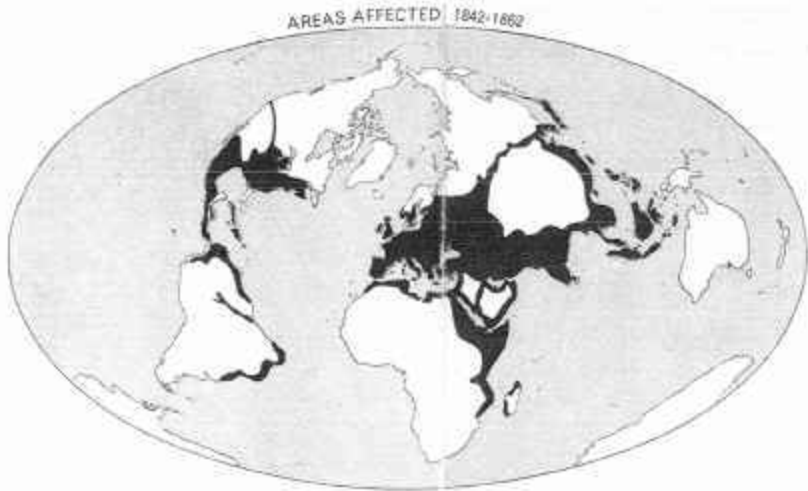
Patricia Rushton

My work on the impact of cholera on Mormon migration was begun as an assignment in a Church history class on Mormon migration taught by Dr. Fred Woods. I became interested in the topic because it became apparent that many members of the Church in the process of coming to the Great Basin died of cholera. Even more apparent was the fact that many of those who died were children. I felt I wanted to know more about this disease, which we see here in the United States so infrequently today but which rages in third-world nations during times of both natural and man-made disasters.



Learning about cholera was so interesting. There is a fair amount of current medical literature on cholera and, surprising to me, there were many historical accounts of the disease from early American pioneers and native Americans. It was fascinating to mesh the observations of those who had experience with the disease during American and Mormon migrations across the American continent and the observations of current health care providers. The observations of early Americans were so descriptive and detailed that writing the article for a nonmedical audience was greatly facilitated. It has been exciting to use the knowledge gained in the process of writing this article in both my nursing classes and the Doctrine and Covenants classes that I teach.

Writing the article for a nonscientific periodical was a new experience for me. I had never written in the historical format, and the scientific format is much different. I am very grateful to Dr. Richard Bennett in the Department of Church History and Doctrine and the reviewers and staff at BYU Studies for their continual help and support in producing this work. I am also very grateful to Elaine Marshall, Dean of the BYU College of Nursing for her critique of the article and encouragement to continue with the work.



Areas affected by cholera from 1842 to 1862. This map shows that cholera spread around the world along trade routes. Cholera followed travelers, including Mormon pioneers, from the Mississippi Basin on trails to the western edge of the continent. Information from *Geographical Review* 41, no. 2, Atlas of Distribution of Diseases, plate 2, American Geographical Society, 1951. Used by permission.

States are attributed to food products imported from affected countries.<sup>4</sup> Natural disasters such as the 2004 tsunami and Hurricane Katrina and social upheaval caused by military actions still cause concern about the occurrence of cholera.

Before scientists understood bacterial transmission of disease, there was little understanding of the cause of any disease, including cholera:

Misconceptions of the disease's [cholera's] cause were evident from the entries recorded in emigrant diaries and journals along the trail. Many thought the cause was drinking from "holes dug in the river bank and marshes" and "shallow wells . . . impregnated with alkali." . . . Some emigrants even believed that beans were the cause, so much so that beans were banned from many overland companies. . . . Other common theories of causation of the disease held by the emigrants, besides poor water quality, included diet, climate, night air, evening mists, and over-indulgence in alcohol.<sup>5</sup>

A major breakthrough transpired in 1849 when John Snow, Queen Victoria's physician, observed that cholera was likely to develop when water and sewage were mixed and then ingested. He hypothesized that

cholera was a localized disease affecting the gastrointestinal tract and its symptoms were caused by fluid loss. Snow further reasoned that the causal agent, once ingested, multiplied in the intestine and then passed from person to person. He saw that cholera transmission could occur as a result of touching contaminated bedclothes, but transmission over long distances had to take place through drinking water contaminated with the specific cholera agent.<sup>6</sup>

During the 1853–54 London cholera epidemic, Snow tested his hypothesis by tracking the agent from those infected to their water source—a water pump on Broad Street. Once he shut down the pump by removing its handle, new occurrences of cholera stopped. John Snow, the first scholar in epidemiology (the study of the cause of disease), did not understand the microbiological cause of the disease because he lacked the technology required to examine a sample. Yet he did understand the conditions necessary to cause and transmit the disease.<sup>7</sup> Other epidemiologists confirmed that the cholera organism is transmitted by contact with contaminated water, food, or clothing that has been exposed to the organism; by flies or other insects that carry the bacteria from a contaminated source to another source; or by contact with human feces or vomitus.<sup>8</sup>

The actual bacterial cause of cholera was discovered shortly thereafter, in 1854, when Filippo Pacini described the organism, *Vibrio cholera*, although the organism was not isolated and cultured until the 1880s by Robert Koch.<sup>9</sup> Koch proved that the bacteria colonize and multiply in the small intestine in as little as six hours or as long as five days. The bacteria produce a toxic substance that interferes with the ability of the gut to absorb water, electrolytes, and other nutrients, resulting in a severe dehydrating diarrhea, vomiting, and intestinal cramping. The rapid dehydration and electrolyte shifts are most malignant in those who can tolerate such losses the least, such as the very young, the elderly, or those with chronic diseases. In many cases, victims die within a few hours of the onset of the disease.

The first symptom in the clinical course of the disease is voluminous, odorless, clear diarrhea. The diarrhea is similar in chemical makeup to normal human body fluid, and the fluid lost can “exceed 1000 milliliters (1 quart) per hour in adults and 10 milliliters per kilogram per hour in small children.”<sup>10</sup> At this rate, victims may lose over 10 percent of their body weight in a matter of hours, causing severe dehydration.<sup>11</sup> Secondary to electrolyte loss from the diarrhea, vomiting and intestinal cramping follow but often with no initial fever and resulting in severe muscle cramping, especially in the calf muscles. Severe cases of cholera will exhibit

One of my first suggestions to students taking a Family History class is to create a timeline for each ancestor. This timeline should focus on religious, secular, cultural, social, or locality histories of specific events which occurred during the life of their subject. I quickly learned that one event which affected virtually all of my students' early-twentieth-century ancestors was the Spanish flu epidemic of 1918. After reading Patricia Rushton's article, I realize that the cholera epidemics she describes were as challenging as the flu epidemic. I appreciate the light her article sheds on the lives of my ancestors who dealt with cholera.

My ancestors William and Hannah Watkins of Islington, a district of London, had ten children during their first sixteen years of marriage. Eight of them died of cholera and were buried side by side in New Bunhill Fields cemetery. They were unaware that city officials were concerned that the Islington water supply might be contaminated by drainage from nearby cemeteries. In 1840, William and Hannah were converted by Mormon missionaries in St. Luke's Parish; they traveled to Nauvoo with Parley P. Pratt in 1842. Grief over the deaths of their babies probably led to conversion and a willingness to migrate.

Another ancestor, Laura Peters of Ffestiniog, Wales, was not sure that the time had come for her family to go to Zion but received an assurance from three heavenly messengers that it was indeed time for her family to leave and that she would arrive safely. She and her husband, David, and their two daughters took the seven-week journey from Liverpool to New Orleans on the vessel *Hartley*. After they secured clearance papers, they set off up the Mississippi for St. Louis in an American steamboat. On that riverboat, passengers were attacked by cholera. Many bodies were left buried along the riverbanks. Laura was very busy on the trip caring for the sick and preparing the dead for burial until she too became infected with the dread disease. Because of that heavenly assurance, she never lost faith and knew she would be healed by the power of the Lord. She kept walking, with help, to prevent herself from going to sleep; she had seen others die in their sleep. Elder Lucius N. Scovil said in his journal, speaking of Laura Peters's condition, that "through administration she was immediately healed. The promise given to her by heavenly messengers was fulfilled." (From family history records by John David Peters and Konda Atkisson, in my possession.)

Learning about the trials our forebears faced gives us not only knowledge and understanding but also empathy and gratitude.

—Lynne Watkins Jorgensen, Accredited Genealogist

the following symptoms after the initial symptoms have taken their toll: extreme thirst, rapid heartbeat, weakness, and postural hypotension (dizziness and fainting). The kidneys stop producing urine and the heartbeat becomes irregular. Victims then may develop rapid breathing; "sunken eyes; irregular, weak or absent pulses; . . . cool and clammy skin; and a decreased level of consciousness."<sup>12</sup> The final symptom and the one that heralds impending death is an elevated fever (sepsis), probably secondary to the inflammatory response to the bacterial infection and the overwhelming dehydration.

In the nineteenth century, there was little treatment available for victims of cholera, but those who could swallow fluids were encouraged to do so. Common treatments also consisted of some combination of calomel, camphor, opium, cayenne pepper, peppermint, musk, ammonia, or mustard plasters.<sup>13</sup> The treatments did not address the cause of the disease but rather were an effort to control the major symptoms of vomiting, diarrhea, and muscle cramping.

Ironically, the spread of cholera may also have been influenced by resistance to the disease. There are several types of cholera, each referred to as a serotype. Only two serotypes affect human beings.<sup>14</sup> Exposure to these serotypes produce antibodies in the person exposed, which may increase resistance to reinfection.<sup>15</sup>

The rapid spread of microbes, and the rapid course of symptoms, means that everybody in a local human population is quickly infected and soon thereafter is either dead or else recovered and immune. No one is left alive who could still be infected. But since the microbe can't survive except in the bodies of living people, the disease dies out, until a new crop of babies reaches the susceptible age—and until an infectious person arrives from the outside to start a new epidemic.<sup>16</sup>

The very fact of resistance among the world population in general may account for the cholera epidemics only during certain years.

Today, cholera can be treated successfully with aggressive rehydration and electrolyte replacement, either orally or intravenously. Antibiotics, such as tetracycline or doxycycline, reduce the duration and amount of fluid and electrolyte loss.<sup>17</sup> In areas of the world where cholera has developed a resistance to these antibiotics, newer antibiotics known as fluoroquinolones are an effective alternative.<sup>18</sup>

### **Causes of Cholera Epidemics in America**

The occurrence of cholera on the American continent followed the incidence of cholera on the other side of the Atlantic. "The simple reason that the United States was spared recurring bouts of cholera between 1835



and 1848 was that those nations with whom America engaged in commercial intercourse were temporarily free of the scourge."<sup>19</sup> When an epidemic did strike, specific factors probably had to be present: poor sanitation, significant population movement, flooding, and certain weather conditions.

**Poor sanitation.** While on board ships traveling to America, migrants, Mormons and non-Mormons alike, lived in terribly crowded conditions. Refitted cargo ships used for these transatlantic journeys often had temporary deck flooring that allowed rats and bilge water into passenger areas. Even though the American packet ships or passenger ships used in the mid-1840s had a bit more head and cargo room than other cargo ships prior to refitting, the lower deck held as many as five to six hundred passengers, while the main deck could accommodate another three hundred passengers. Four to six persons were assigned to the same six-foot-square berth, arranged in double and triple tiers. Between the berths, passengers had to store their few belongings, food stuffs, and cooking utensils, and needed to find space to do what little cooking they could. During rough or stormy weather, the hatches were closed to prevent water from filling the passenger spaces, yet even with the hatches closed, sea water got into the spaces. Human excrement resulting from sea sickness and other diseases was certainly present. Such periods of travel were truly miserable for those aboard, and the crowded conditions undoubtedly fostered the spread of diseases like cholera.<sup>20</sup>

Sanitation conditions were not much better on the overland trail than they were crossing the Atlantic: "Maintaining cleanliness and hygiene during the trail era was difficult, but especially so under the dirty, dusty conditions of overland travel. . . . Food cooked over an open fire of buffalo dung, prepared with dirty hands and utensils and tainted with contaminated water, was continually a potential risk."<sup>21</sup> Emigrants boiled their water, "not to kill the cholera bacteria, which was still unknown to [them], but to distill the water to remove the alkali and saline or to kill the insects often living in the water ('wiggles', as they were commonly referred to). One emigrant found so many organisms in his cup that he noted that his 'drinking water is living.'"<sup>22</sup> Emigrants often used rags to clean up personal waste—rags that were washed in the same streams from which they drank.<sup>23</sup>

Cholera seemed very unpredictable to people of the 1800s. "It ravaged some towns in a progressive sweep yet entirely skipped or inflicted only a few in others."<sup>24</sup> We now understand the logic of the erratic spread of the disease: if a town or location was situated so that human and animal waste ran away from the town, if the inhabitants of the site attempted to remove



waste, or if the area was not one of high traffic volume, the town might be spared the ravages of the disease.

**Population movement.** Infectious disease was spread by the major migrations of the nineteenth century. Such movement led to "vast and rapid urbanization in many areas of the world," increasing the risks of poor sanitation and transmission of disease from close human contact; "increased travel, allowing more rapid spread of diseases from isolated areas;" and "human encroachment into wilderness areas, resulting in contact with previously sequestered infectious" disease.<sup>25</sup> These conditions certainly existed during pioneer migrations, especially when vast numbers of people arrived from Europe into such cities as New Orleans, Boston, Philadelphia, and New York, swelling these cities' populations and overtaxing what were probably minimal systems of sanitation. During the California Gold Rush, large numbers of travelers crossed the continent. These travelers increased the population in outfitting centers and camps along the trails and often carried the cholera bacteria from one site to another. While human advancement into wilderness areas generally spread infectious disease, in the case of overland travelers entering the Rocky Mountains, the rate of cholera decreased.<sup>26</sup> This decrease was probably due to better drainage of water in the mountains.

**Flooding.** A third factor that may have influenced the high rate of cholera on the plains, specifically in river valleys, was flooding. The report of one assistant surgeon at Fort Harker, Kansas, in 1867, gives additional insight to the information of one historian:

Smoky Hill river had overflowed its banks "to an unusual extent" a few weeks before the cholera outbreak, and the "lowlands near it were extensively flooded" from April through July. There was also . . . "a great deal of rain for this section of the country." Decomposition of animal and vegetable matter "has taken place with unusual rapidity." . . . There had been "an unusual number of flies and mosquitoes," and houses in and near the post had been infested with "a large fly which differs from the common house fly."<sup>27</sup>

The waters of the flooding rivers, which contained soil nutrients, probably acted like the medium in a giant petri dish, since bacteria need moisture and nutrients to multiply. The wider the flood, the more moisture available, and the more nutrition provided for the cholera organism. In the mountains, the rivers did not flood as much, resulting in fewer media for the bacteria.

**Weather.** Another factor that may have influenced the high rate of cholera during some years and its absence in others was the weather. Many bacteria cannot live in cold conditions and are killed by the cycle of

each winter freeze. Freezing winters may have killed the bacteria, resulting in some years and some seasons when the rate of disease was low or nonexistent. Cold mountain winters may therefore account for the lack of cholera once migrants reached higher western elevations. There is no way to specifically correlate weather patterns with cholera epidemics in the West in the nineteenth century since official weather records are as lacking as specific numbers of cholera deaths.<sup>28</sup> However, some literature does refer to the decrease in the incidence of cholera during the winter and its increase again as warm weather occurred:

The bitter cold of January brought the city [New York in 1849] a momentary reprieve, and there were no more new cases. For most New Yorkers, gold fever quickly replaced fears of cholera. But the more thoughtful realized that their city enjoyed only a respite. The warmth of the coming spring would certainly quicken the dormant seeds of the disease.<sup>29</sup>

### Estimating Cholera's Death Toll among Mormon Migrants

Cholera epidemics occurred on the overland trails of the North American continent in the years 1833, 1849, and 1866. These American epidemics have been examined in some detail by several scholars.<sup>30</sup> While it is clear that thousands died of the disease, most references and discussions do not provide numbers but only describe the situation of suffering and how that suffering impacted the journal writer.

There may be other reasons why accurate statistics about the number of cholera deaths are not available today; undoubtedly, many were not recorded. Statistics may not have been reported out of fear of panic or economic damage. Many personal journal accounts note the number of graves or make reference to the numbers of deaths that occurred from cholera—sometimes in single digits, sometimes in the thousands—but they are frequently only estimates rather than hard numbers. However, some historians do provide figures: Roger P. Blair provides an estimated death toll of one hundred fifty thousand in the 1832 and 1849 epidemics combined and fifty thousand in the 1866 epidemic.<sup>31</sup> He notes, "The number of deaths from cholera on the overland trek West can never be accurately known; estimating losses from diary accounts or reminiscences is inherently difficult. But from an historical perspective, the number that died during the 1849–1854 epidemic is less important than recognizing that the number was great and that the risk faced by the embarking emigrants was immense."<sup>32</sup>

The pattern of inaccurate record keeping of cholera deaths among Mormon travelers was consistent with that of other travelers. Though

there are 136 references to cholera in the personal accounts found in the *Mormon Immigration Index*, probably less than a quarter of these describe separate incidents, and only a few state actual numbers of deaths. In one account, for example, John Martin wrote that cholera caused the death of two-fifths of all Saints traveling upriver from New Orleans to St. Louis in 1849. He found work burying the dead and noted that often they buried twenty-four persons a day. General voyage notes from the September 1849 voyage of the *Berlin* noted that forty-nine persons aboard ship died from cholera, twenty-six to twenty-eight of whom were Latter-day Saints.<sup>33</sup>

Several factors may explain the incomplete mortality records among Latter-day Saints in post-Nauvoo migrant communities. First, no established hospitals or clinics maintained records of diseases or deaths. Second, many Saints buried loved ones privately without notifying their leaders. Third, very poor families could not afford the burial fees or the cost of a coffin and so did not report deaths. Fourth, the dead were sometimes buried between or on top of existing grave sites or at any site convenient to the persons digging the grave. Finally, there may have been hesitancy on the part of Church leadership to admit that disease and death were a constant presence for LDS migrant companies lest Saints be deterred from gathering.<sup>34</sup> Therefore, most of the comments about the numbers of deaths from cholera in the *Mormon Immigration Index* employ the use of such terms as “many,” “some,” “a few,” or “an unusual number.”

### **Cholera among Soldiers, Non-Mormon Migrants, and Native Americans**

Elisha P. Langworthy, an assistant surgeon with U.S. Army troops at Fort Leavenworth in 1850, described the situation at that site. “Cholera raging to an awful extent among us. Men at active pursuits one day . . . the next day they are a loathsome mass, thrown coffinless into a yawning pit. We wrap 4 to 5 daily in their blankets, and throw their remains in the ground with a blessing or a prayer. No stone marks their last resting place . . . desertions [have] continued in gangs from 3 to 8 [a day].”<sup>35</sup>

Historian John D. Unruh comments on the few survivors left after a cholera outbreak in several companies of migrants:

[On] one 1850 turn-around [round trip], the only surviving member of his entire company, prudently decided to tempt fate no further. The three survivors of a cholera-ravaged seventeen-man group who retraced their steps in 1852 concurred, Ezra Meeker later recalled meeting a train of eleven returning wagons in 1852, all driven by women. Not a single male remained alive in the entire train. Another 1852 company, initially numbering seventy-two men, began to backtrack after more than a third

of their number died, but had barely enough men physically capable of driving their teams.<sup>36</sup>

Accounts of the course of cholera among the Plains Indians add to the picture of the disease's rapid course. "A famous warrior, known as Little Old Man, mounted his horse and rode through camp shouting, 'If I could see this thing [cholera], if I knew where it was, I would go there and kill it.' Minutes later, he succumbed to cramps, slumped from his horse, and collapsed dead on the ground."<sup>37</sup>

The record of a frontier doctor shows the helplessness felt by Indians faced with a disease they could not treat:

They dug two holes in the ground, about twenty inches apart. The patient lay stretched over the two,—vomit in one hole and purge in the other, and die[d] stretched over the two, thus prepared, with a blanket thrown over him. Here I witnessed cramps which go with cholera dislocate hips and turn legs out from the body. I sometimes had to force the hips back to get the corpse in the coffin.<sup>38</sup>

Huge numbers of Plains Indians died of the disease, significantly reducing their populations. The Kiowa Indian tribe remembered their exposure to cholera as "the most terrible experience in their history."<sup>39</sup> The Western Sioux "talked constantly of all the people who had died."<sup>40</sup> Exposure to or fear of the disease caused tribes to migrate, sometimes decreasing the incidence of illness, sometimes only spreading the disease. In fact, drastic reduction of tribal numbers due to cholera caused decreased numbers of potential marriage partners, and, consequently, a decrease in birth rates, and resulted in the effective extinction of some tribes. Additionally, since the elderly were particularly vulnerable to cholera, many wise tribal elders died, and tribes lost experienced leadership. Younger, less-experienced members were forced to lead, sometimes making angry, unwise decisions.<sup>41</sup>

### **Cholera among Latter-day Saints**

The first reference to cholera among a Latter-day Saint community was during Zion's Camp of 1834, when over two hundred men marched from Kirtland, Ohio, westward to Jackson County, Missouri:

As the march proceeded, exhaustion resulted, patience became short, and tempers flared. Finally, the dreaded cholera hit with its terrifying cramping and sudden death. Two years before this time America had experienced a major epidemic of cholera; and its symptoms were well known—diarrhea, spasmodic vomiting, and painful cramps, followed

by dehydration that left the face blue and pinched, the extremities cold and dark, and the skin on the hands and feet puckered.<sup>42</sup>

Thirteen members of Zion's Camp were buried near Independence, Missouri, and many participants suffered but survived.

Later, after the Saints had settled and then abandoned Nauvoo, disease and death stalked the Mormon Trail. There is some discussion about whether there is evidence of any deaths from cholera during the early years of the exodus at Winter Quarters. One author states that "cholera did not affect the Mormons until 1849."<sup>43</sup> However, the situation of Winter Quarters matches many of the risk factors previously mentioned: poor sanitation, population movement, and high risk for flooding. For example, James Linn described the bed of the Missouri River in the summer of 1846 as "a quagmire of black dirt, half-buried carrion and yellow pools of what the children called frog's spawn,"<sup>44</sup> conditions that would have been ripe for malaria as well as cholera. Deaths from cholera mentioned in other LDS Church history sources from that period may refer to occurrence of the disease in the smaller communities surrounding Winter Quarters or to occurrence later, in the epidemic in 1849. "Life in these settlements was almost as challenging as it had been on the trail [from Nauvoo]. In the summer they suffered from malarial fever. When winter came and fresh food was no longer available, they suffered from cholera epidemics, scurvy, toothaches, night blindness, and severe diarrhea."<sup>45</sup>

Cholera's devastation was clearly evident in the accounts of ships bringing Saints from Europe. For example, in 1849, sixty-seven of the 249 passengers on the *Buena Vista* and forty-three passengers on the *Berlin* died of cholera.<sup>46</sup> In 1854, the deaths of twenty-four passengers on the *Germanicus*<sup>47</sup> and most of the two hundred deaths of the 678 total passengers on the ships *Jesse Munn* and *Benjamin Adams* were due to cholera.<sup>48</sup>

James Moyle, a Mormon immigrant on board the *John M. Wood* in January 1851, described the awful course of the disease as follows: "They would be taken first with cramps in the stomach and vomiting, then they would begin to look a dark black color in the face then their limbs would cramp up and in a short time they would be dead. I have seen people eating breakfast apparently quite healthy, and we would have them buried before night."<sup>49</sup>

In 1866, the *Cavour* was struck by cholera while crossing the Atlantic. Passengers were afflicted again after they began their travel across the country in a Church wagon train:

Already, on board the *Cavour* cholera had broken out among the migrants. It made its first appearance in Brother L. Larsen's family,

of whom most of the members later died. But on the travel by railway that terrible malady raged fiercely among the emigrants, claiming its victims one by one. The rough treatment the emigrants received was in part responsible for the heavy death rate. Just before the train arrived at St. Joseph, Missouri, one of the passenger cars took fire, and it was with great exertion that the sick were removed from it to escape from being burned to death. At St. Joseph a number of sick and dying had to be left in the hands of wicked people. . . . On the voyage by steamer up the Missouri River nine of the emigrants died, four of them being buried one night and five of them the next. . . . Consequently, this cholera infested company had to get ready in the greatest haste for the long and wearisome journey, and on August 13th the emigrants left Wyoming with sixty ox teams in the charge of Captain Abner Lowry.<sup>30</sup>

Historian William Mulder writes that the joy the *Cavour* company felt as they were met by a Church wagon train at the Missouri River “was turned to grief when cholera, which had already taken a toll of the emigrants aboard ship and en route from New York, broke out again, leaving hardly a family intact and not abating till they reached the mountains. The deaths, John Nielsen remembered, ran ‘far past the hundred mark, and in history it [the *Cavour* company] has gone down as the cholera train.”<sup>31</sup>

From 1840 to 1855, most of the ships carrying Saints from Europe docked at New Orleans.<sup>32</sup> Saints traveling upriver to an outfitting site had to travel through St. Louis, where cholera was often reported. In 1849, the *Missouri Daily Republic*, a newspaper printed in St. Louis, noted that ships docking in that city either brought news of the spread of the disease or had passengers who were sick or had died of cholera. One such example was the riverboat *Highland Mary*. The newspaper reported that twenty-seven people on board had died from cholera, and another thirteen were ill.<sup>33</sup>

Sarah Jeremy, a British convert traveling up the Mississippi River in 1849 in the company of 249 Saints, was among the sixty or more who were stricken by cholera. She wrote, “Men and women were lying on the deck, unable to help themselves and no one able to do anything for them. Their tongues and mouths were parched with thirst and they felt as if they were being consumed with fire.”<sup>34</sup>

As noted earlier, convert John Martin found work burying the dead. He had been a passenger on the *Ashland* in 1849. He commented about his stay in St. Louis:

I accepted the offer to run one of the city hospital vans and stayed until the cholera had died out. The death rate was very great for three months. Three of us were kept busy running light wagons and we took two loads a day each and four dead bodies on each wagon at a time. As we took only such people known as paupers, this compared with the



others filling more respected graves would make the numbers somewhat alarming. The average paupers we buried daily was 24. The other two drivers were stricken down with the cholera and one died with it, but I did not get it.<sup>55</sup>

Cholera struck people at the ports and outfitting stations used by LDS immigrants in their travels from the East Coast to the Great Basin. For example, more than two thousand European Mormon converts spent two months at Mormon Grove, Kansas, in 1855,<sup>56</sup> chosen for "its desirable location on a bend of the Missouri River farther west than any other outfitting point, fine grazing grounds, abundant good water, and a healthy situation."<sup>57</sup> Yet in 1855, cholera attacked Mormon Grove:

[Cholera] afflicted the Mormon emigrants—not only at Mormon Grove but also at various other places along their journey west. Some even died along the four and a half-mile stretch between Atchison and Mormon Grove. One local observer wrote, "I saw several of the Mormons die of the cholera in their wagon beds before they got started for the Grove." Cholera decimated the Mormon immigrants in 1855. It was said, "[I]n that season, as many as sixteen persons were buried in one grave at this same Mormon Grove."<sup>58</sup>

Converts from Texas traveling to the Great Salt Lake Valley in 1855 detailed the loss of about thirty-three Saints out of a company of one hundred to cholera. One family lost five of their children.<sup>59</sup>

Ira Nathaniel Hinckley, great-grandfather of President Gordon B. Hinckley, crossed the Missouri River at Council Bluffs in April 1850. They

traveled up the Platte River to the Sweetwater, where cholera broke out in camp and Eliza [Ira's wife] became violently ill. Stunned by how quickly the disease struck, Ira watched helplessly as his young wife died. The day of her passing—June 27, 1850—he lost his half-brother Joel as well. Grief stricken, he split logs for coffins and buried his wife and brother in unmarked graves on the open prairie. Not yet twenty-two years old, he had lost both parents and was now a widower with an eleven-month-old daughter, with whom he arrived in the Salt Lake Valley on September 15, 1850.<sup>60</sup>

Cholera affected the handcart companies of 1856 as well:

The McArthur company [1856] was only a few days behind the Ellsworth company. Among those in the McArthur company was the Hans Heinrich Elliker family of Zurich, Switzerland, consisting of the parents and seven children ages 5 to 26. While camped at Florence, Nebraska, two of the daughters died of cholera and were buried there. Once on the trail, the father became ill and the mother and three sons took turns pulling him in the poorly constructed handcart.



One day as they crossed a small stream, the 21-year-old son, Konrad, asked if he could stop and rest awhile, saying he would catch up with them. "As they looked back they saw him wetting his white handkerchief in the stream. That was the last they saw of him." Though others went back and searched for him, no trace was ever found and the company had to move on. Adding to the heartache of this family, the father died a few days later and was "laid to rest on the plains with only a pile of stones to mark the hallowed spot."<sup>61</sup>

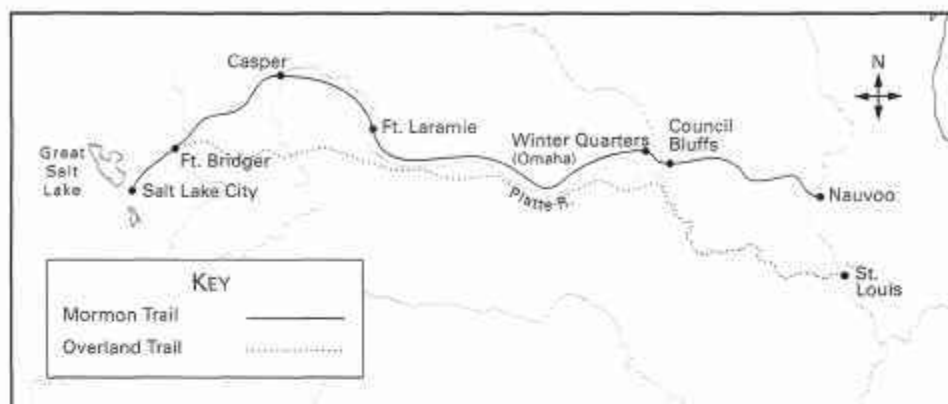
Cholera caused Mormon leaders to revise the converts' travel routes. In 1854 Brigham Young directed Franklin D. Richards, the Church agent in Liverpool, to begin sending Church ships to the eastern ports of Boston, Philadelphia, and New York City to avoid the effects of cholera in New Orleans and along the Mississippi.<sup>62</sup> Until then there was no efficient way to get the Saints from Eastern cities to outfitting posts for the westward cross-country trek.<sup>63</sup> In 1855 the Mormons "shifted their port of debarkation from New Orleans to New York and other eastern ports, to take advantage of the service which resulted from the rapid expansion of the railroads westward."<sup>64</sup> Brigham wrote the following to his son-in-law in England:

If we can have our emigration come to the eastern cities and the northern route, it will be much relieve [to] our Brethren from sickness and death which I am very anxious to due. There is a railway from new York City to Iowa City and will cost onley about 8 dollars for the pasedge. Then take hancarts and there little luggedge with a fue good milk coves and com on till they are met with teams from this place, with provisions &c.<sup>65</sup>

This travel plan provided a more rapid, efficient, and less expensive means of getting the Saints started on their transcontinental journey.

A related effect of cholera on Mormon migration was a change in trails used to traverse the country.<sup>66</sup> The Overland Trail, rather than the Mormon Trail, was used for 20 to 25 percent of the Saints who traveled west between 1849 and 1868 (see map below). Though there were a number of reasons Latter-day Saint migrants used the Overland Trail instead of the Mormon Trail, one goal was to avoid cholera along the North Platte River. The change in trails also shortened the journey, and after 1867, the change in trails allowed the Saints to take advantage of the railroad, built along the route of the Overland Trail.<sup>67</sup>

The threat of cholera in St. Louis or other outfitting stations caused many converts to hasten their journey to the Salt Lake Valley.<sup>68</sup> For example, Welsh convert Priscilla Merriman Evans records that despite an offer of a profitable job in Iowa, she and her husband decided to cross the plains rather than remain in Iowa a season. She recorded that "money was



**Mormon and Overland Trails.** The Mormon Trail, following along the North Platte River, was the trail used by the 1847 companies and afterward. By 1868, 20 to 25 percent of LDS companies had used the Overland Trail instead. One reason was that cholera occurred less frequently along the Overland Trail. Kimball, "Another Route to Zion," 34–36.

no inducement to us . . . Many who stayed apostatized or died of cholera.<sup>69</sup> Other journals expressed the same urgency to be moving west toward Zion.<sup>70</sup> It was common practice for those who could leave to escape those cities where cholera was present and keep from being attacked by the disease. Conversely, victims who survived and were recuperating from the disease needed time, causing migrating companies to delay their journey.<sup>71</sup>

It is important to note that although cholera produced changes in Mormon migration, the disease did not stop or slow the migration. Members barely interrupted the accounts of their westward journeys to report occurrence of the disease or the deaths it caused. Few Saints of the time ventured to describe their feelings about their losses in their journals; they seemed to preoccupy themselves with the continuing trials of their journey to the Salt Lake Valley. The accounts that do discuss cholera use terms such as "suffering," "awful scourge," "raging," and "sad terrible times." For example, Charles Sansom, a passenger on *Erin's Queen* and a resident of St. Louis in 1849 while earning money to travel west, stated, "During the raging of the cholera many of our folks, the Latter-day Saints were called to lay their bodies down. I was many times called on to assist in waiting on the sick and assisted in preparing for burial the bodies of those who were called away, but escaped myself from any attack of that fearful scourge."<sup>72</sup> James Thomas Wilson wrote in his autobiography, "This affair just ended as the cholera broke out in our camp, and many of our brethren and sisters

fell victim to this awful scourge. Whole families were entirely swept away, parents losing most of their dear ones, and children losing their parents, and if ever I was in a situation requiring all the faith I had, it was then."<sup>73</sup>

It seems reasonable that a high proportion of deaths from any condition would be seen in children and the elderly. One of the distinguishing characteristics of Mormon immigrant companies was that they were predominantly made up of families, which would include a high proportion of the very young and very old,<sup>74</sup> thus Mormon companies were at higher risk than others for disease. The loss of children due to cholera was especially hard for parents. "Infant mortality was high. Six out of seven [Mormon British immigrant] women experienced the death of a child" from all causes, including cholera.<sup>75</sup>

### **Cholera as a Punishment and a Trial of Faith**

In the case of Zion's Camp, Joseph Smith made it clear that the Saints were struck with cholera as a punishment from the Lord:

This night the cholera burst forth among us, and about midnight it was manifested in its most virulent form. Our ears were saluted with cries and moanings, and lamentations on every hand; even those on guard fell to the earth with their guns in their hands, so sudden and powerful was the attack of this terrible disease. At the commencement, I attempted to lay on hands for their recovery, but I quickly learned by painful experience, that when the great Jehovah decrees destruction upon any people, and makes known His determination, man must not attempt to stay His hand. The moment I attempted to rebuke the disease I was attacked, and had I not desisted in my attempt to save the life of a brother, I would have sacrificed my own. The disease seized upon me like the talons of a hawk, and I said to the brethren: "If my work were done, you would have to put me in the ground without a coffin."<sup>76</sup>

"At this scene my feelings were beyond expression," wrote Heber C. Kimball. "Those only who witnessed it, can realize anything of the nature of our sufferings."<sup>77</sup> One effect of this severe trial was that those who had endured Zion's Camp were later called to lead the Church. Brigham Young stated that after their return to Kirtland, Joseph Smith received a revelation that the Quorums of the Twelve and the Seventy would be made up of Zion's Camp members.<sup>78</sup>

Early Latter-day Saints saw cholera as a pestilence or the "wrath of God" upon humanity, a "sign of the times heralding the last days."<sup>79</sup> While in Zion's Camp cholera was considered a consequence of sin or punishment for lack of commitment to responsibilities in the Church, by the late 1840s cholera was seen as a trial to be endured and not as a punishment. Albert

Dickson, who came across the plains as a child, wrote about the disease in his company: "At the first camp on the Platte River, cholera broke out and two of our number succumbed to the dread disease which did not leave our company until we reached Loup Fork."<sup>80</sup> Albert's great-granddaughter wrote about the effect of this trial on him:

Disease was one of the first challenges faced by both children and adults. . . . Pioneers are generally thought of as adults, but the majority of the western pioneers were actually children like young Albert Dickson, who trekked the westward trails and settled in the valleys of the mountain west. As they grew older, they became the leaders of many thriving communities that were literally carved out of a barren and hostile land. . . .

Albert Dickson eventually moved to Morgan county [Utah] and became the first bishop of the Richville Ward. He served in that position for thirty-seven years. His strength and leadership qualities, along with those of other early Church leaders, were undoubtedly developed by his experiences on the journey west.<sup>81</sup>

Cholera was and is a terrible disease. It has taken the lives of millions worldwide, including many members of The Church of Jesus Christ of Latter-day Saints as they traveled from the eastern United States, Great Britain, and Scandinavia, across the ocean and plains, to gather in the valley of the Great Salt Lake. These Saints came in obedience to the command to gather to the tops of the mountains. They realized the possibility that some would never arrive at their destination, yet they came anyway. Cholera did not stop or slow the migration. Although migrants were afraid of the disease, the pull to gather to Zion was stronger than their fear.

The Saints suffered as a result of the loss of family members to cholera. When a child died, parents could be comforted by the Church doctrine of eternal life, which addresses the salvation of children who die before the age of accountability, but the loss of a child was heartbreaking for nineteenth-century Saints, as it is today.

Cholera was a severe trial to many of the Saints who traveled the oceans, rivers, and plains in the nineteenth century. They have left us a legacy of endurance and faith in the face of hardship and loss.

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Patricia Rushton (patricia\_rushton@byu.edu) is Associate Professor in the College of Nursing at Brigham Young University. She is a Registered Nurse, an Adult Nurse Practitioner, and an Advanced Oncology Certified Nurse. She earned a BS at the University of Utah and an MS and PhD at Brigham Young University.

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