Asiatic Cholera in Kentucky 1832 to 1873

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ASIATIC CHOLERA IN KENTUCKY
1832 TO 1873

A Thesis
Presented to
the Faculty of the Department of History
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Nancy Disher Baird
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ASIATIC CHOLERA IN KENTUCKY
1832 TO 1873

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PREFACE

Asiatic cholera has been called the scourge of the nineteenth century, for it caused the untimely death of millions throughout the world. During its four visits to the United States, unknown thousands of Kentuckians fell victims to the disease. In attempting to prevent the dreaded scourge, Kentuckians became more conscious of the need for cleaner cities, pure water and adequate sewage disposal. Modern water-works facilities, sewage treatment and disposal facilities have provided the means by which the United States has conquered this scourge of the nineteenth century, for with these facilities cholera is the easiest of all communicable diseases to prevent. But, as with the eradication of any disease, constant vigilance and continued use of modern scientific knowledge are necessary to prevent its return. The disease is presently ravaging India and the Far East, and with modern jet travel it could bypass quarantine stations and enter the United States undetected. The “seeds” of the pestilence could be sown across the nation within a few hours. The only safeguard is modern sanitation facilities, for no permanent inoculation or miraculous cure has been developed. Today many rural areas of Kentucky and other states use wells and old cisterns that are, or could easily become, contaminated by human fecal matter. A fifth
visit from cholera should not be necessary to correct the ignorance and complacent attitudes concerning inadequate sanitation facilities that exist in these areas of the nation. This study attempts to show the horrors of cholera's four visits to Kentucky, and how the fear of the disease stimulated interest in public health.

Many people have contributed to this study, and the author is indebted to each one. The librarians at the various libraries across the state have always been most helpful and cooperative. Special thanks are extended to the librarians at Western Kentucky University, especially to Mrs. Nancy Solley at the Margie Helm Library and to Mr. Riley Handy at the Kentucky Library for their interest, suggestions and help in obtaining information that was not always readily available or obvious. Considerable also is my debt to my family for their patience and cooperation, and most especially to my physician-husband for his advice, explanations and assistance concerning the scientific technicalities involved in this study.

Without the help and encouragement of the faculty of the Western Kentucky University history department, this thesis would never have been completed. I am deeply obligated to my graduate committee, Drs. J. Crawford Crowe, Lowell H. Harrison and Richard L. Troutman, whose suggestions, criticisms and encouragement were always appreciated.
CHAPTER I

CHOLERA TRAVELED WESTWARD

... the pestilence that walketh in darkness,
... the sickness that destroyeth in the noon-day.
A thousand shall fall beside thee,
And ten thousand at thy right hand...

The Psalter, 91:6
The Book of Common Prayer

To present day Americans, Asiatic cholera is little more than a disease described in medical textbooks, for it has not appeared in the United States during the twentieth century. It is therefore difficult to envision a pestilence that could travel with such speed and strike with such ferocity as to disrupt all normal activity and leave millions dead in its wake. Yet, such was the course of the cholera pandemics of the nineteenth century. Originating in India, the scourge began to pass beyond the Indian borders in 1817 and spread with the speed and direction of man's travels. Reaching nearly all parts of the earth during its several waves, cholera became the classic epidemic disease of the nineteenth century.

The United States suffered four main visits from Asiatic cholera; during each visit Kentucky was stricken. Cholera brought fear, panic and death to the people of the Commonwealth. Like physicians elsewhere, Kentucky's doctors made many guesses,
predictions and suggestions concerning the cause, prevention and treatment of the disease; they matched their courage and their knowledge and skills with the dreaded scourge. In courage only were they not lacking, for nineteenth century medical skills and knowledge were insufficient to deal with this mortal enemy. Yet, despite the frequent futility of his medical efforts, the physician provided strength and comfort during those dark hours when cholera was an unwelcome visitor in Kentucky.

Although epidemic diseases, even those with high fatality rates, were not novel to Americans, cholera's onset was more abrupt and more spectacular than diseases common to the United States. Individuals who seemed in perfect health in the morning might be stricken and die before evening. To understand the fear with which Kentuckians watched the disease travel towards their Commonwealth, one must examine the disease in the light of modern medical knowledge, remembering that nineteenth century Americans knew little about the disease except that when it struck, it was as swift and as deadly as the fanged viper.

Caused by the *Vibrio Cholerae*, a comma-shaped bacillus, Asiatic cholera differs from all other types of enteric diseases in the highly explosive character of the epidemic outbreaks, which are attributed to its short incubation period, its high

1Asiatic cholera should be distinguished from a variety of acute diarrheal diseases that have been termed "cholera" incorrectly. These include cholera nostras (simple diarrhea), cholera morbus (a variety of severe intestinal disorders), and cholera infantum (summer diarrhea in infants). Only man is naturally affected by Asiatic cholera. "Cholera" in animals is caused by a virus.
fatality rate, and its rapid and permanent disappearance when the outbreak subsides. Spread by the ingestion of water contaminated by the evacuations of other cholera victims, or by fruits and vegetables washed in contaminated water, Asiatic cholera has a short incubation period of one to three days. Symptoms and signs, caused by the toxins created in the intestine by the bacteria, make a precipitous onset, dominated by a very copious and purging diarrhea and accompanied by vomiting, severe muscle cramps in the abdomen and extremities, and general prostration. At first the stools contain dilute fluid feces; as the intestine is flushed out, the frequent movements appear as water in which numerous flakes of greyish-white mucous are seen—the characteristic "rice water" stools. Also plagued by frequent vomiting, the patient soon enters a profound state of dehydration in which the blood pressure drops, the pulse cannot be felt, the skin is coarsely wrinkled, the eyeballs are sunken, and all mucous membranes are dry and sticky. This is the "algid stage" and is frequently accompanied by peripheral-vascular collapse, cyanosis and sub-normal temperatures. Death may occur from circulatory collapse or asthenia. Urinary secretion is frequently absent during the algid stage, and signs of uremia may appear.

Occasionally the effects of the toxemia are so profound that the patient enters a state of collapse within several hours of the onset of the disease and dies before the appearance of the "rice-water" stools. The majority of deaths, however, occur
during the algid stage, within 24 to 35 hours after the onset of the disease. If the patient survives this period, he enters the "stage of reaction" during which the blood pressure and skin color are gradually restored to normal, the feeling of coldness decreases and the stools diminish. Complete recovery will probably occur unless the renal function has been impaired to such an extent that the flow of urine cannot be resumed. Although recovering, the cholera patient will continue to pass the bacillus in his normal stools for 10 to 14 days.

The incubating and recuperating victims are the greatest carriers of the disease; the casual carrier who spreads the disease, but shows no signs of it, is rare and remains a carrier for only eight to ten days. Susceptibility of the individual to cholera varies and is influenced by gastro-intestinal disturbances arising from purges, alcoholism, fatigue, poor nutrition and poor health. Attempts have been made to develop a vaccine that will give permanent immunity to cholera, but none has yet been discovered that provides it for more than one to six months; even those who have had the disease enjoy but a one to two year immunity.

Modern drug therapy has been unable to alter the course of the disease, but careful restoration of the body fluids and minerals, as the deficiencies occur, has reduced the death rate from as high as 70 percent to less than 30 percent. The bacillus requires a cool, moist place to survive and is easily destroyed
by heat (to the boiling point), chemical disinfectants and the drying process. 2

Descriptions of an illness with symptoms similar to Asiatic cholera indicate that the disease was known prior to 1817. Chinese literature described it as early as 430 B.C., its description appeared in the works of Tacitus, and a disease closely resembling cholera appeared in Burma in 178 A.D. It was also probably responsible for its share of the plagues of the Middle Ages, and the renowned English physician Thomas Sydenham described it in England in 1669. 3 However, the first authentic medical reports of the disease were made during the 1817 outbreak in India, which began in late summer at Jessore and was blamed on "unwholesome and contaminated water" and poor sanitation facilities. The disease soon spread to all parts of India and then crossed the borders of Burma and extended into China, Java, Japan and the Philippines, and as far west as Arabia and the Caucasian Mountains. There the pestilence mysteriously died out. 4


Appearing periodically in India between 1823 and 1826, cholera burst forth again in 1826 and followed its earlier routes. By 1829 it had reached Russia. The Russian government unsuccessfully attempted to prevent its descent on Moscow by placing a military cordon around the city; about 9,000 cases, with a 54 percent mortality rate, were soon reported in the city.

St. Petersburg also tried to prevent infected persons from entering that city with a triple cordon, but again the scourge slipped into the city. Government officials, physicians, priests and Jews were accused of poisoning the water supply; several physicians were killed in the ensuing riots, and thousands of citizens fled the city to escape the pestilence and the violence. 6

Troops were placed on the Austrian and Prussian borders in an attempt to prevent the disease from entering those countries, but the pestilence soon appeared in Berlin, Hamburg and Vienna despite these measures. From Hamburg it spread to the Sunderland area of England in October 7 of 1831 and then to London, which reported 1200 fatalities within a few months. Ireland and Scotland were also severely stricken. 7

Americans watched the approaching pestilence with terror, but also with some hope that it would pass by them. They noted that the crowded, filthy areas of Europe and Asia had been the most severely hit by cholera; Christian Europe had suffered slightly less than the non-Christian lands of the Far East.

7Ibid., 249.
Americans viewed their nation as one of clean cities and fresh air, a land where nearly 90 percent of the people lived in rural areas. Nothing in the United States could compare to the abominable slums of the Old World. Surely this "promised land" with its clean cities, predominantly rural inhabitants and Christian population would be spared by the Almighty. But neither living conditions nor religious persuasion prevented cholera.

Cholera had little trouble crossing the Atlantic as an uninvited guest on crowded, dirty immigrant packets. In early 1832 vessels carrying thousands of Irish immigrants arrived at Quebec's quarantine station at Grosse Isle. Unfortunately this "poorly understood and fumbling quarantine . . . was at its best only a coarse sieve through which the infected but not yet sick passed." The obviously ill were detained, but all others were permitted to travel on to Quebec, Montreal and other destinations.9

The announcement in early June of the presence of cholera in Quebec and Montreal caused great consternation in the United States. Philadelphia immediately sent a commission of three physicians to the Canadian cities to study the epidemic and report the best means of its prevention and cure. Unfortunately, the disease hit the City of Brotherly Love before the commission

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9Chambers, Conquest of Cholera, 23.
could complete its study. New York City also sent physicians to Canada; their report that cholera was curable and affected only the filthy and intemperate caused little feeling of relief. Although the mortality rate was greater among the poorer classes of the French Canadians and the newly-arrived immigrants, the scourge visited all levels of society. Despite the establishment of cholera hospitals, over 4,000 Canadians died during the summer—a mortality rate nine times greater than that of Paris and sixteen times greater than that of London.

Although New York City had established a quarantine station at her port, and the towns near the Canadian border had been advised to organize boards of health, cholera entered New York from both directions. The state's canal system served as a means by which cholera quickly penetrated every part of the state. There is some controversy as to the exact date of the introduction of the disease into New York City. Records are believed to have been destroyed in an attempt to hide the negligence and possible deception of physicians and city officials. However, it is probable that the disease was in the city in the early spring, but it was not announced until June. The areas of the city that suffered most severely were the low, damp sections

10 Samuel Jackson, Charles Heigs and Richard Harlin, "Spasmodic Cholera in America," Transylvania Journal of Medicine and Associated Sciences, V (July-Sept. 1832), 477. This journal will be cited hereafter as Transylvania Journal of Medicine.

11 Chambers, Conquest of Cholera, 43; Mile's Weekly Register, July 7, 1832; Lexington Observer and Kentucky Reporter, June 28, 1832. This newspaper will be cited hereafter as the Lexington Observer.
and those areas known for filth and vice. New York physicians formed a special committee which recommended a clean-up campaign of city streets, yards, and cesspools, established a cholera hospital, and distributed handbills advising citizens to "Be temperate in eating and drinking, avoid crude vegetables and fruits, abstain from cold water, ... and above all from ardent spirits. ..." The city forbade the sale of green and unripe fruits, cucumbers, green corn and peas. But despite all precautions, 3,500 of the city's 200,000 inhabitants perished and another 7,000 fled.

From New York the pestilence traveled to the major cities of the coastal area. Only Boston and Charleston were spared. Philadelphia made little attempt to prevent the disease from entering the city, for its outstanding medical faculty convinced the populace that their purification of the city with chloride of lime would prevent disease. Shortly after the disease

12 Rosenberg, Cholera Years, 19-20, 25n; Jackson, Meigs and Harlin, "Spasmodic Cholera," 433; Cholera Epidemic of 1873 in the United States, U.S. Executive Document Number 95, 43d Congress, 2d Session (Washington, 1875), 26-27. This document will be cited hereafter as Cholera Epidemic of 1873.

13 Rosenberg, Cholera Years, 30.

14 Ibid., 98; Nile's Weekly Register, Aug. 11, 1832.

15 The reason for the good fortune of Boston and Charleston is not known. However, both cities suffered from cholera during the 1849-1854 visitation.

16 The term "faculty" was used during the nineteenth century to refer to the physicians of a community as well as the teaching staff of a college or university.
entered the city in late July, the sanitation commission published the report of the Canadian commission, which was also carried by the leading medical journal of the mid-west. The report concluded that cholera was not contagious, that it was generally confined to the filthy parts of the larger cities, that the intemperate were its most frequent victims, and that "next to ardent spirits, the use of indigestible foods—green corn, unripe melons, cucumbers, etc.—has been the most prolific source of cholera." 17

The disease was carried overland to the Chesapeake area. There it was especially fatal to the immigrant laborers working in Washington D.C. and on the Chesapeake and Ohio Canal and Baltimore and Ohio Railroad. Norfolk reported 1,400 deaths and Baltimore 800. From the Chesapeake area the pestilence traveled over the Cumberland Road into western Virginia. 18

The precise route of cholera into Kentucky can only be surmised. It is generally believed, however, that it came from Canada and upper New York into the mid-west with the army of Winfield Scott. Having received orders to take command of the forces involved in the Black Hawk War, General Scott and about 1,000 men sailed from Buffalo on June 3, 1832. A few days later cholera broke out among the troops. Landing at Detroit, Cleveland and Chicago, they remained several days in each town while the ill received care. Fearful of the unwelcome visitor that arrived

17 Jackson, Heigs and Harlin, "Spasmodic Cholera," 434.
18 Hile's Weekly Register, Sept. 8, 15, 29, 1832.
with the army, many inhabitants of Chicago fled into the
wilderness, preferring to risk the brutalities of the Indians
rather than possible death from cholera. The pestilence spread
across Illinois, Indiana and Ohio and plagued Cincinnati in the
early fall, where more than 350 deaths were reported in less
than three weeks. The disease was probably transported from
Cincinnati by stagecoach and riverboat to Maysville, Louisville,
Nashville and New Orleans.¹⁹ In the Crescent City it joined
the yellow fever epidemic, and the two killers were responsible
for nearly 10,000 deaths.²⁰

Nineteenth century physicians understood little
concerning the etiology and pharmacology of disease, especially
cholera. Unable to understand the cause, they were unable to
prevent it or prescribe for it effectively. However, in searching
for its cause, Kentuckians took a close look at their cities and
the filthy, unhealthy living conditions that existed in many
areas of their state. The disease would leave a death toll of
thousands in the Commonwealth during its four visits, but it
would call attention to existing problems of sanitation. Cholera
would act as Kentucky's first health inspector.

¹⁹Cholera Epidemic of 1873, 566-573; Augustus Walker,
"Early Days on the Lakes with an Account of the Cholera
Visitation of 1832," Publication of the Buffalo Historical Society,
V (1902), 310-315.

²⁰Leland A. Langridge, Cholera in Louisiana (M.A. thesis,
Louisiana State University, 1955), 125.
CHAPTER II

CHOLERA'S FIRST VISIT TO KENTUCKY

The pestilence stalks in the midnight gloom,
And mantles the sky with the pall of the tomb.
Neither beauty nor youth from its clutches can flee;
It kills on the land, it blasts on the sea.

Thomas D. Miller, M.D.
Cincinnati, 1833

During the spring and summer of 1832, Kentucky's newspapers were filled with accounts of the hotly contested political issues of the day—the U.S. bank, the tariff and the forthcoming presidential election. News articles concerning the political activities of Henry Clay were read with great pride and interest by the electorate of the Bluegrass state, but these feelings were perhaps dampened by newspaper notations concerning Asiatic cholera's rapid advance towards the Commonwealth. During the spring, cholera statistics were confined to the sections of the newspapers reserved for foreign news; by late June, Lexington's newspapers had confirmed rumors of the entrance of the disease into New York, and in July the Lexington

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1 Madge E. Prichert and R. Carlyle Buley, The Midwest Pioneer: His Ills, Cures and Doctors (Crawford, Indiana, 1945), 23.
Observer and Kentucky Reporter concluded that there could be "no doubt" that cholera would "reach every part of the nation."²

Citizens were assured by their physicians that the disease was not contagious and could be cured with prompt treatment in its early stages. Most Kentuckians accepted the miasmatic or malarial theory on the causes of cholera. They believed diseases, especially cholera, were the results of poisonous gases produced by rotting vegetable matter and were advised to protect themselves from such airborne gases through the avoidance of night air, chill, mid-day sun, fatigue, crowded quarters, indigestible foods and "ardent spirits." It was also suggested that they preserve a tranquil mind "that springs from confidence in Him who has the life of all beings in His hands," and "await calmly the dispensation of His providence." As an additional ounce of prevention, the citizens of Lexington were requested to set aside August 18 as a day of prayer to implore "the Throne of God to throw its mantle around us and shield us from the desolating scourge. . . ."³ Yet, despite the observance of all of the best preventions of the day, cholera came to Kentucky in the fall of 1832, bringing with it fear, grief and death.

Sometimes called the "Graveyard of the West," Louisville was notoriously unhealthy because of its low, swampy location and its many ponds, and the city was frequently plagued by "autumnal

²Lexington Observer, July 12, 1832.
³Ibid., Aug. 16, 1832.
In 1822, after the city had suffered an epidemic of bilious fever, interest had been generated in draining the ponds, and the state legislature had approved the request for a lottery to raise the necessary money. However, interest in the project soon waned, and ten years later these ponds were still full of stagnant water.

In early October of 1832 a cook, employed on a regular packet traveling between Cincinnati and Louisville, died of cholera at Louisville. Between October 6 and October 8 several cases of cholera were reported by Louisville physicians, and reports of other cases soon followed. The majority of these cases appeared in the low areas along the Ohio River and Beargrass Creek, the same area that had been the most severely stricken in 1822. The city council appointed a board of health to keep records of the number of cases and deaths; it reported 122 fatalities during October and November. However, this figure can be considered only a rough estimate, for most physicians were either too busy or too complacent to report all cases.

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4 "Autumnal diseases" included the ague, bilious fever, malaria, typhoid and a variety of other intestinal diseases.


6 Lunford P. Yandell, "Notices of the Diseases of the Summer and Fall of 1832," Transylvania Journal of Medicine, V (Oct.-Dec. 1832), 500-506; Theodore S. Bell, "Remarks on Spasmodic Cholera in Louisville," ibid., 541-542; Daniel Drake, "Epidemic Cholera in Cincinnati," Western Journal of Medicine, VI (Oct.-Dec. 1832), 326. Contemporary accounts estimated the death rate in Louisville from "less than a dozen" to more than 150.
In an attempt to "adopt more extensive and effective measures [to aid the cholera victims]... than have been taken by city authorities," a public meeting was held in Louisville in late October. It was resolved that $1,000 be raised by volunteer contributions to establish a cholera hospital; the mayor requested nursing aid for the hospital from the Sisters of Charity at Nazareth, and five responded. It was also suggested at the public meeting that since cholera was a disease of miasmatic origin, an effective campaign to cleanse the city would remove the cause of the disease. Unfortunately, this campaign was not effective. Nevertheless, in looking at the dirty sections of the city, many citizens noticed the "squalid wretchedness... in the midst of what... [they] had assumed to be general prosperity." 

Louisville newspapers carried medical advice for the citizens of the city throughout the epidemic. One paper advised its readers that at the first sign of cholera, they should make a mixture of one gallon of West India rum, one gallon of molasses and a quart of Preparation Six (brandy, myrrh and cayenne) and take a one-tablespoon dose of the mixture three to four times a day. Should the symptoms become more pronounced, half a wine

7 Lexington Observer, Nov. 1, 1832.
9 Yandell, "Diseases of the Summer and Fall," 504.
glass of the mixture should be drunk every half-hour to provide relief and produce a "determination of the circulation outward." 10

By the end of the first week of November, the city board of health announced that the disease was abating in Louisville and the general health of the city was "as good as ever." It also expressed the hope that the country folk would no longer be deterred from visiting Louisville because of their fear of cholera. 11

Like Louisville, Henderson was also a victim of ponds, "those frightful generators of miasma." Nearly ten percent of the town's population died when cholera struck in late October; the community was paralyzed. Water for the larger part of the town was supplied by a city well. The majority of those who drank from this well were among the ten percent who died. Those who drank from the river generally remained untouched by the disease. Unfortunately, no notice was made of the correlation between the water supply and the disease. 12

A few cases of cholera were also reported in Maysville, Frankfort, Bardstown and Lexington. In Lexington it was limited to a small area along the stream into which the city's sewers emptied. A board of health was formed, and the newspapers carried the usual advice to their readers. However, the disease was

10 Louisville Journal and Focus, Oct. 31, 1832.
11 Ibid., Nov. 7, 1832.
12 Edmund L. Starling, History of Henderson County, Kentucky (Henderson, 1887), 166-167.
mild, and only a few cases were recorded. Describing the brief visitation to the city, a citizen of Lexington wrote that cholera "killed five intemperates, frightened our citizens into strict temperance, drove away some of the faint-hearted pupils who were just assembling [at Transylvania], and then took wing itself and troubled us no more." Compared to cholera reports from other states, Kentucky suffered so slightly that many people doubted that it was really Asiatic cholera. A heavy frost in mid-November ended the 1832 cholera scare in the Commonwealth, and three weeks later the Episcopal Bishop of Kentucky declared a day of thanksgiving for Kentucky's safe deliverance. The state's newspapers returned their attentions to the political questions of the day, and life resumed its normal activities. Cholera had come and gone, and the Bluegrass state had survived relatively unscathed.

13 Lexington Observer, Nov. 15, 1832; John W. Huir, Bardstown in Retrospect (Bardstown, 1965), 9.

14 Charles H. Caldwell to George Hayward, Nov. 25, 1832, Catalogued Collection (Margaret I. King Library, University of Kentucky).


16 Although Kentucky's bout with cholera caused little comment in newspapers across the nation, one Kentuckian received considerable notoriety because of the disease. Henry Clay proposed that the Senate request President Andrew Jackson to set aside a national day of prayer and fasting. Clay was severely criticized by churchmen who feared Jackson's desire to preserve the separation of church and state. Clay was also accused by his political opponents of making the request to embarrass the President and to further his own political career. Clay was reminded that in 1828
The mild outbreak in Kentucky during the fall of 1832 proved to be only a preview, an introduction. The great invader slumbered throughout the winter of 1832-1833; having rested, it seemed to acquire fresh power of desolation. Early in the summer of 1833, cholera struck Kentucky and the Ohio Valley with renewed force. Few towns were spared, and the victims came from every walk of life—public officials, physicians, wealthy planters, merchants, construction workers, prison inmates and slaves. Cholera was democratic in its selection of victims.

On the afternoon of May 29, the citizens of Maysville heard rumors that there were several cases of cholera in town; within 24 hours a dozen deaths had been confirmed, all among the "first families" of the town. By evening the roads were crowded with fleeing, frightened people, and within 36 hours, nine-tenths of Maysville’s white population had fled. The town remained nearly deserted for over two weeks. Only the medical faculty, mayor and a few relatives of the sick remained. Supplies became difficult to procure, for shops were closed and riverboat crews refused to land at Maysville. The town postmaster informed a Lexington newspaper that Maysville had "never before been visited by such a calamity." By mid-June 60 persons, he had stated that he would prefer pestilence, war and famine to Andrew Jackson in the White House. Rosenberg, Cholera Years, 48-50.
including the mayor and the last survivor of Mason County's first settlement, had become victims of the scourge. 17

Traveling with Maysville's fleeing refugees, cholera soon infected most of the towns along the Maysville-Lexington road. Within 24 hours after funeral services were held in Flemingsburg for a former resident of Maysville, nine cases of cholera were reported. The citizens of the town fled; of the few who remained, one out of six perished, including three of the town's four physicians. 18 The small village of Elizaville was completely wiped out. The last three to die were buried by passers-by several days after their demise. 19 Citizens of Sherbourn fled to the mountains on hearing that the pestilence was in the area, leaving crops to rot in the fields and their businesses to gather cobwebs. Both panic and death arrived as an unwelcome guest at the fashionable resorts of Blue Lick and Harrodsburg, where many Kentuckians gathered under the delusive impression that safety could be found there. Ten of the first eleven cases at Millersburg were fatal; a local resident blamed the high mortality on the

17 Lexington Observer, June 1, 1833; Hile's Weekly Register, June 27, Aug. 10, 1833; G. Glenn Clift, History of Maysville and Mason County, Kentucky (Lexington, 1936), 178-179.

18 Hile's Weekly Register, June 6, 19, 1833; A. Thompson to Thornton K. Thompson, June 24, 1833, Catalogued Collection.

19 Hile's Weekly Register, June 27, 1833.
flight of two of the town's three physicians. 

Nearly seven percent of the citizens of Paris became cholera victims, and one out of every 25 of Cynthiana's inhabitants died during the three months the disease ravaged that town. Choctow Academy mourned the loss of 10 Indians and 15 of the superintendent's slaves.

The citizens of Lexington felt reasonably safe from this disease that brought fear and death to so many of their neighbors. Lexington had the reputation of being the healthiest of Kentucky's towns and had previously escaped the many autumnal diseases so prevalent in the Ohio Valley area. During the previous fall, when other towns in the nation had lost hundreds to cholera, Lexington suffered only five deaths. The populace of the "Athens of the West" enjoyed the finest living conditions of any town in the state; there were no crowded and dirty sections, for in this aristocratic town, one family per spacious home was the rule. Lexington's physicians assured the people that theirs was not a likely location to be revisited by cholera, and the editor of a local newspaper promised his readers that

20 Ibid., June 27, 29, 1833; Lexington Observer, June 22, July 6, 27, 1833; "Epidemic Cholera: An Eclectic, Miscellaneous and Clinical Review," Western Journal of Medicine, VII (April-July 1833), 93.


22 Nile's Weekly Register, July 27, 1833; Perrin, History of Bourbon... Counties, 769.
if they kept their premises clean, remained temperate and bought a year's subscription to his newspaper, he could almost guarantee to them safety from the death angel.23

On June 3 heavy rains in Lexington caused the drain on East Main Street near the livery stable and stagecoach station to swell into a pond, flooding several wells and drainage ditches. Within three days 27 deaths from cholera were reported, but the number of cases seemed to be declining, and it was hoped that the worst was over.24 On the evening of June 7, rain fell in "unprecedented torrents" while the "incessant glare of lightning and roll of thunder made the night terrifying." Privies, city streets and wells were flooded.25 The cholera cases increased and the death rate soon mounted to 50 a day. To escape the invisible monster, one-third of the town's population fled, reducing its inhabitants by 2,000. For several days the streets were filled with the noises of crowded stagecoaches, carriages, wagons, carts and horses that carried the panic-stricken citizens to hopeful safety. Thereafter the town became abnormally quiet; one could hear the occasional footsteps of a neighbor going to the apothecary or in search of a physician. The routine trips of the death wagon

23 Prichert and Buley, Midwestern Pioneer, 140-141; Charles W. Short to William Short, June 16, 1833, Charles Wilkins Short Letters (The Filson Club, Louisville); Lexington Observer, May 16, June 6, 1833.

24 Lexington Observer, June 6, 1833.

25 Robert Davison, History of the Presbyterian Church in the State of Kentucky (New York, 1847), 133.
also broke the silence, as it made its grim journey between homes, once filled with gaiety, and the cemetery. Grass grew in the streets, and newspapers, when printed, reserved more than half of the front page for cholera news. Christ Church, the town’s largest church, was open every afternoon at five for prayer, but few persons ventured out.26

By early July the pestilence was waning, and the Fourth of July was observed at the Lexington churches with mingling tears and prayers of thanksgiving and supplication. On July 13 the Kentucky Gazette announced that the cholera had ceased to be epidemic in the town, and one citizen noted that "the sore affliction poured on this country may cause every soul spared to prepare to meet our God in Judgement."27 By early August the newspapers had returned to reporting political events, but more than 500 residents of the state’s "healthiest town" would never again read the news.28

Versailles and Nicholasville mysteriously escaped the disease in 1833, although the former was to suffer from it the following summer. Frankfort reported only a few deaths, but there were more than 100 in the county. Many of these occurred at the state prison, which was turned into a house of horror;

26Hile’s Weekly Register, June 22, 1833; George W. Ranck, The History of Lexington (Cincinnati, 1872), 323-325.


28Charles Short to William Short, June 23, 1833, Short Letters.
flight was impossible and nearly every inmate was stricken. Lancaster reported 116 deaths, Somerset recorded 34, Danville buried 55 of her citizens, and the students at Centre College fled in panic. Richmond suffered more from panic than from disease, and all but 17 of Mt. Sterling's 600 residents fled before the presence of the disease was established. In Winchester 25 died and others fled, "retreating in confusion and fright" from the cholera-producing poisons that were reported to have filled several homes with a "green vapor" and caused fresh meat to become "putrid within an hour." Bardstown did not suffer severely in numbers lost, but the Hon. John Rowan, one of the town's most distinguished citizens, lost two sons, a daughter-in-law, a sister and a granddaughter to the relentless destroyer.

There were a variety of contemporary opinions concerning the presence of cholera in Louisville in 1833. A visitor from Virginia wrote that the disease was ravaging the town and countryside, but local newspapers reported only 15 to 20 deaths; these

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29Perrin, History of Bourbon ... Counties, 370; F. Garvin Davenport, Ante-Bellum Kentucky (Oxford, Ohio, 1943), 146; L. F. Johnson, The History of Franklin County, Kentucky (Frankfort, 1912), 97.


31James Flanagan, Asiatic Cholera in Winchester, Typescript (King Library).

32Lexington Observer, Aug. 8, 1833.
deaths were said to be transient cases that were contracted elsewhere. Whatever the origin and number of cases in town, there seemed to be no panic. Believing in the miasmatic origin of the disease, Louisvillians saw no need to flee, as long as the cholera did not originate in their city.33

Cholera was reported spasmodically throughout the state during the summer months of 1834 and 1835. Versailles reported cholera cases in 1834, but neighboring towns were not to suffer this time, although occasional rumors told of cholera in Lexington and Louisville. Maysville was visited by a relatively mild form of the scourge in 1835, and her citizens were advised to be cautious and do nothing to put their systems out of order, lest they become victims of the disease.34

By spring of 1834 cholera had traveled to the southern part of the state. A Bowling Green man wrote in a letter to a relative that cholera cases were reported along the Green River in late March and concluded that the town could not expect to escape the disease, even though the health of the area had been "highly favored."35 Bowling Green, Glasgow and Greensburg all suffered from the pestilence. However, of the southern Kentucky

33 Ibid., July 7, 1833; William R. Finn to Felix G. Hansford, June 17, 1833, Felix G. Hansford Collection (West Virginia University, Morgantown).

34 Sarah Campbell to Matthew Monroe Campbell, June 28, 1835, Matthew Monroe Campbell Collection (The Filson Club); Kentucky Gazette, June 6, 1835.

35 E. Walker McClary to Elizabeth Harrison, March 26, 1834, Knott Collection (Kentucky Library, Western Kentucky University).
towns, it was Russellville, a town of 1,400, that was the most severely stricken. In a three week period during the summer of 1835, 147 of Russellville's several hundred cholera patients died, and most of the other residents fled, leaving their homes unattended. A woman who remained in town observed "a great many strange white men and Negroes prowling about the deserted lots, for there was no one to detect them, even in broad daylight. What hardened wretches."  

Contemporary accounts provided pictures of fear, confusion and pathos as Kentuckians awaited "in fear and trepidation" for the disease to strike.

Great fear fell over the people [of Danville] and paleness spread over every face ... the profane swearer no longer uttered the blasphemous oath; the drunkards, with few exceptions, abandoned their vicious courses. Many prayers were made and vows repeated ... which [would] stand as witness against those who uttered them on judgement day.

Men passed their close friends on the street in silence, "staring like lunatics for fear of contagion being upon them." A Lexington newspaper editor reported that he had never witnessed


37 Rebecca Walker to Jane and David Walker, Aug. 1, 1835, Walker Papers (Kentucky Library).

38 J. J. Polk, Autobiography of Dr. J. J. Polk (Louisville, 1867), 33.

39 Ranck, History of Lexington, 326.
such panic, alarm and anxiety as the faces of the citizens
generally evinced.

The stoutest hearts seemed to quail before the
relentless destroyer . . . no one pretended to claim
immunity from its grasp and no one knew at what
moment he, or some member of his family, would be one
of its victims. All seemed to be seized with an
awful dread.40

Nails were drawn up, medications were secured and farewell
letters were written to loved ones. Men who had led sinful lives
were induced to reform as they "prepared for judgement and for
eternity and trusted in God's mercy."41 The health of some
became so adversely affected by the fear of the disease, that
they were advised by their physicians to leave the stricken area.
Still others were so afraid they seemed to lose all sense of
propriety. A resident of Russellville, who had lost two of his
children to the disease, became so deranged that he hurried out
of town with the rest of his family, leaving two young, unattended
apprentices dying in his house.42 An army veteran summed up the
feeling of fear by stating that not even in the bloodiest of
battles had he felt such "dread of impending danger" as he had
experienced during the cholera epidemic in Lexington.43

40 Nile's Weekly Register, June 22, 1833.
41 Phillip E. McElroy to Elizabeth Harrison, June 10, 1833,
Knott Collection.
42 Rebecca Washington to Jane and David Walker, Aug. 10,
1835, Walker Papers; J. O. Harrison to Jilson Harrison, July 13,
1833, Harrison Papers.
43 Nile's Weekly Register, June 22, 1833.
Cholera tested the moral fiber as well as the physical endurance of the people; fear and panic were often as great a problem to arrest as the disease itself. Towns were suddenly vacated, businesses came to a halt, and construction sites were deserted. Farmers were forced to abandon their crops in the fields for lack of laborers, and steamboats were tied at their moorings, for passengers and crews feared these floating pest-houses. Stores, banks, hotels and taverns were closed; in many towns only the apothecaries remained open. The Maysville newspaper was forced to stop printing during the epidemic, and the presses of both Lexington newspapers remained quiet at the height of the epidemic there.44 An unidentified Lexingtonian described his city:

... the distress is beyond description! No city police,--(at least not visible)--no board of health--no medical reports--and the streets have for the most part the stillness which pervades the ruins of Palmyra. ... 

I leave you to imagine the picture of our dispair. But I must still add that the markets are suspended and the bakers' shops shut, with one exception. Not a pound of beef to be got--and very little else. Not even a cracker for sale.45

A Russellville woman observed that "every description of business made a full stop. The printer and all the magistrates died, the postmaster and clerks were at the point of death, every stor [sic] shut up, their owners [sic] either dead or fled into the country.


I have never seen such a scope of calamity in my life." A rugged Army general stated that he would prefer a "seven months campaign in a furious war to undergo another seven days..." like those during the height of the epidemic in Lexington. Famine was averted in Lexington and other towns only because of the generosity of a few philanthropic individuals and the few remaining civic authorities, who made generous contributions and appropriations to provide food for the needy. To many of the fearful, flight appeared to be the only answer to the threat of cholera. A Winchester resident described the flight of the residents of that town as a "perfect stampede... I was often reminded of it afterwards by the stampede of Union men when Morgan's or Scott's cavalry would come along." A few refugees found a haven with friends and compassionate citizens like Cassius H. Clay, the master of White Hall, who had several buildings on his Madison County farm prepared for friends fleeing from Lexington. Many citizens of Russellville were indebted to the Shakers at South Union for succor. But flight held no assurance of safety; many who fled carried the disease with them, spreading it to neighboring towns.

47 Robert Peters, History of Fayette County, Kentucky (Chicago, 1882), 410.
48 Lexington Observer, June 29, 1833; Dr. Hawley to Drs. Firkin [?], Hunt, Dudley and Cooke, June 14, 1833 (reprint, Lexington, 1968).
49 Flanagan, Cholera in Winchester.
or areas. Those who sought refuge at healing springs, spas and fashionable resorts across the state frequently had cause to regret, as cholera also visited there. Many of those who fled were returned within a day or two on a bier, and others died in the country, away from medical and nursing aid. A citizen of Lexington wrote, "... when I thought of flight, I knew not where to go--the country is filled with cholera."51

The services of a nurse were almost impossible to secure at any price. Lexington's attempt to establish a cholera hospital was thwarted by the inability to obtain nurses; local physicians believed that such a hospital would have saved many lives. Most of the nursing care was provided by family, close friends or the clergy. Unusual were the good Samaritans like the humble seamstress in Danville who cared for friends and strangers, and the young mother in Winchester who "with all her household cares had time and took occasion to visit many of the victims and administer all in her power to their suffering."53 The Sisters of Charity provided most of the professional nursing care for Louisville, Bardstown and Danville. These "ministering angels of charity, totally regardless of self, nursed the sick

50 Lexington Observer, Aug. 3, 1833; Julia Neal, By Their Fruits (Chapel Hill, 1947), 79; American Journal of Medical Science, XIII (Philadelphia, 1833), 187-188.

51 "Epidemic Cholera ... Clinical Review," 91.

52 Lunford P. Yandell, "Spasmodic Cholera as it Appeared in Lexington," Transylvania Journal of Medicine, VI (July-Sept. 1833), 262-203.

53 Polk, Autobiography, 216-217; Flanagan, Cholera in Winchester.
and dying. Other religious leaders provided care for their neighbors. The Episcopal Bishop of Kentucky, rector of Lexington's Christ Church, and theology students from Transylvania, "exerted themselves manfully" at Lexington. So appreciative were Lexington's citizens of the Bishop's services, that after the epidemic the city presented to him $1,000 in gold, a gift which he returned, requesting that it be used for the needy widows and orphans. A lovely painting, the sole possession of a dying Frenchman, was also given to the Bishop; this personal gift the Bishop kept. The Catholic Bishop of Danville worked constantly administering to the sick and burying the dead after most of the Protestant ministers had died or fled. Yet, there was never enough nursing care for the ill and dying, and many cholera patients received no care, or minimal care; probably more than one child "buried her mother in the afternoon, nursed her father in the evening, and for lack of help... had to close his eyes alone."  

55. Nile's Weekly Register, June 22, 1833.  
56. Swinford and Lee, The Great Elm Tree, 80-81; W. Robert Insco, Kentucky Bishop (Frankfort, 1952), 7; Charles A. Christian to Mrs. Charles J. Smith, Feb. 24, 1841, Catalogued Collection. A letter appeared in the July 20, 1833 issue of the Kentucky Gazette stating that the Episcopal Bishop was not the only clergyman who attended the sick and therefore should not have been singled out by the city for recognition. However, other contemporary accounts mention only the Bishop.  
57. Spalding, Bishop Flaget, 277-278; Calvin Morgan Fackler, Early Days in Danville (Louisville, 1941), 105.  
Physicians were also in great demand during the epidemic, and there were neither enough physicians nor hours in the day for every cholera patient to receive their professional care. Those troubled with other maladies had no chance to see the busy physician. A few medical men, after advising their patients to flee from the infected areas, took their own advice. A Lexington newspaper accused the doctors at Millersburg of fleeing in the face of danger; the physicians indignantly replied that they had fled only after nearly every one else had left. The physicians who remained in the cholera-ravaged areas were frequently at the point of exhaustion, or, like all but one of Lexington's physicians, seized by the disease. At the height of the Lexington epidemic, the shortage of physicians able to administer to their patients became so acute that aid was requested from Louisville physicians; three immediately traveled to Lexington to give their help, and others volunteered if they were still needed. Not waiting for his help to be requested, Dr. Luke Pryor Blackburn, a future Governor of Kentucky, went from Lexington to Versailles during the 1834 epidemic there and alone answered the town's need for medical attention. The aid of medical apprentices was also welcomed. One such apprentice, who later attended medical school, vividly recalled his feelings upon volunteering his services.

59 Lexington Observer, June 22, July 15, 1833; Thomas Buford to Clay, June 27, 1833, Clay Papers.

60 Dr. Hawley to Drs. Firkin, Hunt, Dudley and Cooke, June 14, 1833, reprint; J. H. McCormack, ed., Some of the Medical Pioneers of Kentucky (Bowling Green, 1917), 167-168.
I felt terror and trembled like an inexperienced soldier who hears the report of the first gun that brings on the engagement; and like the soldier, when the battle waxes warm, I too, became courageous and met the destroyer without faltering. I visited and prayed for the sick and helped to coffin and bury the dead. During the ravages of the disease, I, for the first time, acted as a physician, giving medicine to those who requested my aid.61

Despite flight and medical and nursing care, the mortality rate was alarmingly high. A veteran physician, who had spent a lifetime administering to the sick, noted that "its horrors have passed my most horrific conception, and its mortality has baffled the best concerted and most boldly executed practices."62 Coffin production was unable to keep up with the demand; additional special orders from Louisville and Cincinnati could not fill the needs of Lexington in 1833. During the Maysville epidemic that same year, even crude plank coffins had to be ordered at least 24 hours before they were needed.62 Cholera victims were frequently buried in trunks and boxes or merely wrapped in the bed linens on which they died. Carts made their daily rounds to collect and bury the dead, without rites of clergy or graveside mourners; those who had remained near their loved ones during life often fled when all hope was gone, for the body of a cholera victim was considered septic. Because of the subnormal temperature, near absence of pulse and lifeless appearance of the victim during...

61Polk, Autobiography, 33.
62Charles Short to William Short, June 16, 1833, Short Papers.
63A. Thompson to T. K. Thompson, June 24, 1833, Catalogued Collection; Chambers, Conquest of Cholera, 160.
the algid stage and due to the general fear of the septic corpse, it is possible that a few persons were hastened to the grave. The premature interment of a child was averted at Lair's Station only because of the delayed arrival of an undertaker. Coffins were frequently and hastily deposited at the cemetery gates in confused heaps, and among the coffins could be seen a few unincased corpses wrapped in bed linen shrouds. To facilitate rapid burial, many of the dead were buried in long trenches or shallow graves. In Russellville, the stench of those buried in shallow graves, could be detected for more than a mile.64

One of the heroes of the Lexington epidemic was the town's chief gravedigger, a vagrant named William but known as King Solomon. A quaint and colorful character who was "never known to catch cold from washing his face,"65 King Solomon gained the respect and admiration of the people of Lexington when he worked day and night to provide burial facilities during the epidemic. Through the literary efforts of James Lane Allan, chronicler of the Bluegrass, King Solomon became a living legend.66

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65 Chambers, Conquest of Cholera, 164.

66 Ibid.; Peters, History of Fayette County, 411. Many sources have labeled King Solomon as a Negro. However, according to the portrait of him painted by Colonel Price, he was a blue-eyed, sandy-haired Caucasian. The error is probably due to the fact that he had been sold as a bond servant.
Victims of the epidemic could be counted among the living, for the pestilence created poverty, left children homeless and others without families and friends, and created new conditions of servitude. Pathetic was the lament of an elderly man who derived "the greatest part of his comfort from his living among people endeared to him by a personal acquaintance of 40 years," for the death of these friends was "as painful as impairable." Even more pathetic were the children who were left without parents or close relatives. Through a series of fairs, the women of St. Louis Church in Louisville were able to raise money for an orphanage for the homeless waifs of that city, and St. Vincent's Orphan Asylum was opened in the late fall of 1832. The citizens of Lexington "united to secure ... a home and competent protection" for the new orphans of Lexington. This first non-sectarian orphanage in Kentucky was the result of the tireless efforts of Mrs. Benjamin Gratz, who had lost 10 members of her own family during the epidemic, and who had gathered many of the city's orphaned children into her home during the summer. After a public meeting of Lexington's citizens, $4,000 was collected through private contributions, and a house and lot, formerly owned by a physician, were purchased for $300. Although there was no orphanage established in the southern part of the state, the Shakers at South Union, who seemed to remain

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67 George Clark to Thomas G. Paige, June 17, 1833, John C. Clark Papers (Kentucky Historical Society).
untouched throughout all the cholera visitations, provided boarding home and school facilities for a few children who had lost one or both parents in the cholera epidemics. 69

Poverty appeared in the Bluegrass after the cholera epidemic to a degree not previously known. Family wage earners were among the dead, and widows were frequently left financially unable to feed, clothe and educate their children. Prior to the cholera visitation, there had been some interest in Lexington in establishing a free school, but little action had been taken. However, during the fall of 1833, new interest was revived because of the sudden need. The Old Rankin Church, on the corner of Walnut and Short, was obtained by the city, and Lexington’s first free school opened March 1, 1834 with 107 pupils. 70

Many surviving Negroes were also adversely affected by the epidemic. The estates of cholera victims who died intestate were sold at auction, and with the auction died the dreams of promised freedom or colonization in Africa for many a hapless slave. Even more unfortunate were a group of manumitted slaves from Kentucky, including several previously owned by Robert J.


70 Lexington Observer, Aug. 8, 1833; Peters, History of Fayette County, 313.
Breckinridge and Robert Wickliffe, who died on the Ajax enroute to Liberia when cholera broke out aboard ship.\textsuperscript{71}

The theories concerning the cause of cholera were varied during the early nineteenth century. A few Americans saw disease as a form of Divine punishment, a "rod in the hand of God," that would rid the earth of those who contaminated and defiled society.\textsuperscript{72} New Yorkers had been assured by the president of the state's medical council that cholera, with few exceptions, had been confined to the intemperate and dissolute. Ministers occasionally preached firebrand sermons in which they pointed out God's use of disease, especially cholera, to punish the wicked, the non-believers and those who defied His word. When affluent and respected citizens fell victims to cholera, it was assumed that they either had a secret vice, were one of the rare exceptions, or their disease had been incorrectly diagnosed.\textsuperscript{73} The Kentucky Conference of Methodist Preachers, meeting in Louisville during the 1832 epidemic, set aside a day of prayer and passed a resolution stating that they regarded the scourge as "a dispensation of Divine Justice in consequence of our national and individual sins."\textsuperscript{74}

\textsuperscript{71} J. Winston Coleman, Jr., \textit{Slavery Times in Kentucky} (Chapel Hill, 1940), 277-278.

\textsuperscript{72} Rosenberg, \textit{Cholera Years}, 200.

\textsuperscript{73} Ibid.; Chambers, \textit{Conquest of Cholera}, 170-171.

\textsuperscript{74} A. H. Redford, \textit{Western Cavaliers} (Nashville, 1876), 32.
The epidemic in Kentucky, however, seemed to prove the prevailing theory of a correlation between sin and disease to be in error; for while cholera struck Louisville in the poorer sections, where filth, poverty and vice were believed to be companion traits, it also struck Maysville in the town's most affluent area, and hit with its greatest fury in the aristocratic Bluegrass, where living conditions were the best in the state. Devout Christians and law-abiding citizens were also victims, for clergy and public officials were counted among those who died of the pestilence. One-fourth of the communicants of Christ Church in Lexington died during the epidemic, and other denominations probably had equally high statistics.\(^7\) An eminent physician at Transylvania observed that cholera had "proven more malignant, fatal and indiscriminate in the selection of its victims in Lexington than in any other town in the Union," for they had come "not from the ranks which commonly supply its victims, but from among the most respected, sober and useful citizens. . . . I have not heard of the death of a solitary drunk."\(^7\) Another citizen of Lexington agreed that the cholera victims were generally among that class "judged to be beyond its reach—the intemperate were generally spared."\(^7\)

\(^{75}\) Insko, Kentucky Bishop, 7; Letter from B. B. Smith, Rector of Christ Church, Lexington, to His Parishioners, July 2, 1833 (Lexington, 1833), Julia Alves Clore Collection (King Library).

\(^{76}\) Charles Short to William Short, June 16, 1833, Short Papers.

\(^{77}\) J. O. Harrison to Jilson Harrison, July 13, 1833, Harrison Papers.
It is doubtful that any other malady of the nineteenth century set the pens of so many physicians in motion as did the 1832-1835 cholera visitation. Letters, newspaper editorials and journal articles presented an array of opinions concerning the causes and treatments of the disease. The poisonous air or miasmatic explanation was the most frequently accepted theory for the cause of the pestilence. Dr. John Esten Cooke, a prominent member of the Transylvania Medical School faculty, noted that the disease was more prevalent in cities, especially in those areas noted for filth, marshy inlets, standing water and dirty streets. Cooke pointed out that many of the cases in Lexington occurred in the dirty areas near Main Street and East Limestone Street and in the vicinity of a filthy abandoned house, later burned by the town's disease-conscious citizens. Several deaths were also reported among the slaves working in a foul hemp factory. In nearly every case where deaths occurred in affluent sections of Lexington, Cooke detected a low spot in the yard or nearby area. In these low and unclean places, Cooke surmised, cholera-producing gases originated. Dr. Yandell of Louisville stressed weather as a major cause of the disease, pointing to the abundance of rain and lightning in the Bluegrass area prior to the worst part of the epidemic. Daniel Drake, editor of the widely circulated Western Journal of Medicine and the mid-west's most prolific writer on cholera, wrote that city filth, neglected vaults and lack of personal hygiene were the major causes. Agreeing that city filth was an important factor
in the cause of cholera, a group of citizens in Lexington suggested taxing watermelons to pay for the removal of rinds and other debris that were allowed to rot in vacant lots and for paving the streets to prevent dust and accumulation of filth. 78

The immediate cause that precipitated the disease in an individual was called the "exciting" cause. The eating of indigestible foods, especially green fruits and vegetables, was frequently blamed as an exciting cause. In an article in the Western Journal of Medicine, cases were cited of individuals who developed cholera after eating cherries immoderately and who developed cholera's diarrheal signs after eating a dozen green pears. Watermelons were noted as being exceptionally dangerous; most convincing was the story of the New York farmer who snatched a cholera-producing melon away from his children, and threw it to a hog, which ate it and immediately died of cholera. 79

Thoroughly convinced that nearly any fruit or vegetable might cause cholera, a Bowling Green family avoided all kinds of fruits and vegetables, except potatoes, although a Lexington paper had earlier noted that "even Irish potatoes, generally believed to be the most wholesome vegetable we have," could cause cholera. 80 A family in Mt. Sterling complained that although their garden was


79 "Epidemic Cholera . . . Clinical Review," 100; Rosenberg, Cholera Years, 98.

80 Lexington Observer, July 25, 1833; Philip E. McElroy to Elizabeth Harrison, July 1, 1834, Knott Collection.
filled with vegetables and fruits of all kinds, they did not
dare to eat any of them; the strawberries and vegetables went
to waste, but they dried the cherries and early pears and hoped
that they could be safely used for a Christmas pie.81

Strong emotion was also believed to be an exciting cause
of the disease. Kentucky's physicians read of the Austrian
girl who, upon hearing of the death of a loved one, was immediately
seized with violent cholera and died within six hours. Likewise,
a young servant, sent by her master to inquire about his friend
at Vienna's cholera hospital, was in such fear of the disease
that she developed signs of severe cholera upon her arrival at
the hospital.82 Believing terror to be an important exciting
cause, Daniel Drake advised his readers to "let no one presume
to laugh another out of his fears. All the terrified should
take to their beds; this will best counteract its [fear's] bad
effects." Drake also pointed out that the cathartic salino-
sulphuric waters at Blue Lick "were found in several cases to be
an exciting cause."83 Other causes believed to precipitate the
disease included a delicate nervous system, ardent spirits, a
hemorrhoidal disposition and "abuses of the pleasures of Venus."84

81 Micajah Harrison to Jilson Harrison, June 7, July 10,
1833, Harrison Papers.

"Miscellaneous Intelligence," Transylvania Journal of Medicine, V
(Jan.-Mar. 1832), 114.

83 Daniel Drake, A Broadside, Cincinnati Chronicle Extra,
Oct. 13, 1832, photostat copy (The Filson Club).

84 "Miscellaneous Intelligence," 114.
No one could explain all cases of cholera. In an analysis of the 1832-1833 epidemics in Kentucky and the Ohio Valley area, Daniel Drake was puzzled at the lack of conformity to any pattern. If topography were important, why had Cincinnati, Maysville and Louisville not suffered with equal severity in 1832? Likewise, why had Covington and Newport not had the same percentage of cases? Why was Versailles spared in 1833 when neighboring towns suffered? If the disease were miasmatic and contagious, why were some towns and some individuals spared? If cholera were aqueous in origin, why were towns with a variety of water supplies affected? If there were any correlation between weather, topography and climate, why had Moscow and New Orleans both been so severely affected, when they had nothing in common? Drake concluded: "On the whole, it appears to my comprehension that all our knowledge of the causes of epidemic cholera is purely negative. 85

Despite all explanations for the causes and spread of cholera, there was no mention of the contamination of water. As long as water was clear and cool, it was considered good for drinking purposes. No one realized that fecal wastes that were thrown on the ground or deposited in shallow privies could easily seep or be washed into wells and streams. The deep backhouses that were believed to never need cleaning, the pride of the elite in the Bluegrass, drained into underground limestone sinkholes

and subterranean caverns, through which also ran the streams that fed public and private wells.

Few measures were taken by city officials, and none by the state, to prevent the reoccurrence and spread of cholera. The officials of Carlisle provided a load of lime for their citizens, so that they might disinfect cellars, alleys and streets, and a committee was formed to examine the city and clear it of filth. This same procedure was followed in part by several towns in the Commonwealth, with few results. After the epidemic in Lexington, a city ordinance was passed which required privies to be at least five feet deep and walled with stone or brick; such privies should be cleaned when the contents reached two feet from the surface, and four bushels of unslacked lime were to be thrown in all such outhouses at least twice a year. These measures were intended to prevent the washing of decomposing matter into city streets, eliminate unpleasant odors, and prevent such odors and gases from becoming airborne.

The bulk of the many articles written about cholera concerned its treatment. Unfortunately, nineteenth century physicians were handicapped by the lack of fundamental scientific knowledge, the lack of an understanding of the pathology of the

86 Chambers, Conquest of Cholera, 176. Evidently no Kentuckians read or took seriously the brief article that appeared in the October 17, 1832 Cincinnati Gazette that suggested that perhaps water was the source of cholera and advised that all water should be boiled before it was used for drinking purposes.

87 Perrin, History of Bourbon . . . Counties, 371;
Lexington Observer, July 18, 1833.
disease, and the lack of reliable statistics. Therefore, they were unable to prescribe with any degree of effectiveness for their patients. Any enteric disease was considered cholera, if cholera were known to be in the vicinity. If the medication or treatment used seemed to prevent the patient from developing complete cholera symptoms, the treatment was hailed as a successful preventative. Records were not kept either by the individual physicians or the state and local officials, and it was therefore impossible to know the number of patients who died for every one that survived any given treatment. Cures were frequently more deadly than the disease. Many of the remedies used provided some relief, but not for the reason intended, and other medications had no effect whatsoever. However, if the patient survived, the medication was thought to be responsible; if he died, he probably was beyond all medical help anyway. Many physicians believed that cholera was easily cured at its earliest stage, and when asked "if cholera is so easily cured, please tell me why our learned body of physicians have let 400 slip through their fingers," would answer that such losses were an indication that the treatment had not begun early enough. During early treatment physicians were urged to excite the function of the liver: once the disease had "firmly fastened itself to the individual nothing . . . [could] prevent mortality."


89Jacob Walker to David Walker, Lemke, ed., Walker Family Papers, No. 10.
The major treatments for cholera during its first visit
to Kentucky were calomel, opium and the lancet. Calomel, a
mercuric chloride compound, was generally used as a cathartic
for enteric diseases, and Dr. Cooke of Lexington was its best
known and most outspoken advocate. Believing that gases produced
by decaying masses caused an accumulation of blood in the interior
vein of the liver, Cooke urged the use of increasingly larger
doses of calomel to act on the organ. Such doses were to be
increased until there was a change in the appearance of the
patient's discharges or until salivation occurred. Doses once
thought fit only for a horse were given routinely to children.
As much as a pound of the deadly mercuric salt might be given in
a 24 hour period. Dr. Theodore S. Bell of Louisville, also a
strong believer in calomel, advised Louisville physicians "never
to begin the treatment of a disease during an epidemic with
small doses, and thus sacrifice the patient," but rather begin
boldly with 100 grains or more. One of the few physicians of
the midwest who disapproved of the large doses of calomel was
Daniel Drake, who surmised that the high death rate in Lexington
might have been due to the excessive doses of calomel used by
those who followed Cooke's advice. Agreeing with Drake's theory,

90 Cooke, "Spasmodic Cholera," 492-500. The "change" in
the discharges was the appearance of a blackish semi-solid,
believed to be caused by the presence of bile. This change was
more likely due to the presence of blood, for excessive calomel
could cause internal bleeding.

91 Bell, "Cholera in Louisville," 544-549.

a Danville resident blamed the death of several members of his family on the "ignorant and unskilled faculty" who "stuffed and clogged ... [them] with calomel."93

To stimulate the circulation in the extremities and retain body heat, a Lexington physician was advised by his colleague in Cincinnati to bathe the patient's feet in hot salt or mustard water and give the patient hot tea to drink. Cramped muscles should be rubbed with spirits of turpentine or a mixture of camphor, turpentine and oil. The best diet for the recuperating patient was said to be the wholesome food and beverage "that you in Kentucky know how to prepare better than almost any other people."94

Opium was used to reduce muscle spasms and cramps and tranquilize the stomach. Some physicians, however, feared that it aggravated the "congestion of the brain." Daniel Drake warned against the use of opium for children and suggested the use of one teaspoon of powdered rhubarb in its place.95

The use of the lancet was another favorite remedy for cholera. One of the greatest advocates of bleeding was Dr. Drake, who stated that "in every desperate case, recourse should be had to the jugular [vein] from which blood will flow when it cannot

93 Thomas Nicholas to W. S. Nicholas, Aug. 3, 1833, Jonathan Bell Nicholas Papers, microfilm (The Filson Club).

94 Dr. John F. Henry to Dr. Short, Nov. 13, 1832, Short Papers.

95 "Epidemic Cholera: Its Pathology and Treatment," Western Journal of Medicine, VI (Oct.-Dec. 1832), 612.
be enticed from the arm." Such bleeding, said Drake, would
"contribute more to the relief of the oppressed brain that when
drawn from the arm." Dr. Bell believed that bleeding would
reduce the congestion of the blood vessels. He once bled a near-
terminal cholera patient of a quart of blood and then prescribed
large doses, totaling nearly a pound, of calomel; somehow the
patient survived. Others advised bleeding only if the pulse
were strong, to reduce arterial action. Bleeding when the pulse
was weak could only hasten death.

Not all physicians supported the calomel and opium
medications. Complicated preparations were also administered,
and a few practitioners believed that the patients who survived
owed their remarkable recoveries to these cholera preparations.
"Ardent spirits," believed to be one of the exciting causes of
the disease, were frequently the base of cholera preparations.
The manuscript collection of a Hickman resident contains two
such recipes:

1 oz. opium
1 oz. gum of myrrh
2 scruples of camphire [sic]
60 gr. of musk [?]
2 scruples of the flower of Benzoin
1 scruple of Incense of Irodine [sic]
5 pints of French Brandy

96 Ibid., 613.
97 Bell, "Cholera in Louisville," 543.
To prevent cholera, a teaspoon of the above mixture was to be taken two or three times a day. In case of a cholera attack, a tablespoon every few hours was prescribed.  

1 pound of Bayberries, well pulverized  
1 tablespoon of [?] berries. Simmer them well together and drain off the excess until you get 1 gallon of the liquor--to that add 1 gallon of good molasses, 1 gallon of Jamaican Rum, French brandy and [?] African cayenne.

Patients were directed to take one-half a wine glass of this berry, rum and brandy mixture every 15 minutes. Another remedy, believed to be so successful that it was carried by a Kentuckian to California years later, was the combination of:

20 drops of laudum  
20 drops of spirit of camphire  
20 drops of tincter of assofoedited  
6 drops of a cense of pepermint  
This is to be mixed together and repeat the dose every 15 minutes until the vomiting ceases then give 30 to 40 granes of callomel . . . apply a blister plaster to the stomach . . . rest and ancles and [rub] the limbs . . . with french brandy.

Other remedies included salt water enemas, draughts of water and brandy, water containing zinc sulfate, ice water and a variety of herbal teas. Despite all the favorite remedies and preparations, at least one Kentuckian expressed the opinion that she was not impressed with the skills and medicines of the state's physicians.

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98Dr. Porter's Recipe, 1833, Clark Papers. A scruple is equal to 20 grains.  
99Dr. T. Thompson's Cholera Preparation, 1833, Clark Papers. Two words in the recipe are illegible.  
100"Recept for the Cholera," Filson Club Historical Quarterly, XXVII (Oct. 1953), 334. Laudanum (Laudnum) was a tincture of opium.
for "they do not know how to treat it, ... [end] it is a more curable disease" than any other malady that frequented the state.

The retention of body heat, the stimulation of the circulation by rubbing the skin, regardless of what ingredients were contained in the rubbing compound, the replacement of body fluids—these probably helped the cholera patient and gave him a better chance for recovery. The variety of metallic salts ingested generally passed through the body too quickly to do any harm. Had the stomach contained normal amounts of hydrochloric acid, these medications, especially in large doses, might have produced fatal metallic poisoning. It is interesting to note that the symptoms of metallic poisoning from mercuric chloride are similar to the symptoms of cholera itself—excessive vomiting and diarrhea (usually containing blood), renal failure and circulatory failure. Other clinical manifestations include excessive salivation (extreme soreness of the mouth and possible loss of teeth), trembling of the eyelids, fingers and limbs, and poor muscular co-ordination.

With the appearance of cold weather in the fall of 1835, the cholera epidemic in Kentucky subsided, and the pestilence disappeared from the North American continent for 13 years. Those who had been spared seemed momentarily stunned and stupefied. The scourge had brought more terror and death to Kentucky than had ever

101 Polly Harrison to Jilson Harrison, July 19, 1833, Harrison Papers.

102 Beech and McDermott, Textbook of Medicine, 1770-1779.
been caused by hordes of wild savages. Whole families had been wiped out, towns deserted, children orphaned, and friends and loved ones buried in unmarked, common graves. Despite the abundance of articles written by the most outstanding medical minds of the day, there was no agreement on the causes of the disease, and no positive cure or prevention had been found. Events of the forthcoming years would be dated from the cholera visitation, and years would pass before the ravages of the disease were forgotten.

Yet, despite the lack of medical progress, Kentuckians, as other Americans, had looked more closely at their towns than ever before and had become aware of the areas where dirty, crowded conditions were common. The era of reform was beginning, and although it would take the jolt of a second cholera epidemic to bring about modest sanitation reforms in the state, the first cholera visitation had suggested the necessity for clean cities and had provoked many questions concerning the relationship between sanitation and health.
CHAPTER III

SIX LONG YEARS OF CHOLERA
1849-1854

Oh, Thou reforming Cholera. Thou'rt sent
Not as a scourge alone, but as a teacher....

author unknown

The year 1849 began as a year of promise and threat to
Kentucky--the promise of wealth and a new state constitution,
and the threat of another visit from Asiatic cholera. Hundreds
of Kentuckians joyously prepared for their journeys to California,
where they envisioned vast deposits of gold awaiting their picks.
The pro- and anti-slavery factions in the state battled for
control of the state's constitutional convention and a chance
either to abolish forever the evil institution, or to guard the
rights of property owners. The scourge of the nineteenth century
once again threatened to bring fear and death to the citizens of
the Commonwealth. Spreading beyond the borders of India in 1840,
cholera had steadily crept across Europe, leaving frightening
statistics in its wake--a million dead in Russia, 150,000 fatalities
in France and several hundred thousand victims in Germany and
England. By the fall of 1848 the disease had reached the major

\[1\] Rosenberg, Cholera Years, 59.
European port cities from which emigrants departed for the United States. It was only a matter of time before the disease would reach the North American continent and then travel to Kentucky.

The United States had made little progress in understanding the disease since cholera's first visit more than a decade earlier. Most states, including Kentucky, had no health legislation, and the few eastern cities that had tried to put elementary sanitation reforms into effect were hampered by corrupt politicians. Boards of health were frequently temporary and were often dissolved with the disappearance of the disease whose threat had caused their creation. Hospitals that were needed to care for the victims of cholera and other diseases were unavailable, for few communities had the financial resources to establish them, and most Americans seemed unwilling to be taxed or to provide available buildings for such "pesthouses." Cholera hospitals were viewed as places of death, and no respectable family would allow even a servant to go to them.\(^2\)

The prestige of the medical profession had fallen to a new low during the 1840s. Medical education was generally scant, and most medical students passed through their formal training "with the rapidity of a locomotive."\(^3\) Few states had any legal restrictions on those who practiced medicine, and new medical

\(^2\)Ibid., 116-120.

sects had become very popular. Many Americans viewed their physicians as ill-educated and unethical quacks and agreed with physician-poet Oliver Wendell Holmes who stated that "if the whole materia medica, as now used, could be sunk to the bottom of the sea, it would be all the better for mankind--and all the worse for the fishes."

As the threat of cholera neared, a variety of explanations for the cause of the disease were listed by physicians and the nation's clergy. Abolitionist ministers pointed out that the sins of human bondage practiced in the United States were enough to provoke Divine wrath against the peoples of the country. Others noted that the lack of a prevention and cure indicated that the disease was a visitation from God; only the will of God could account for the "reappearance of a disease that had been quiescent for so many years." A few ministers expressed the hope that the threat of cholera would cause an improvement in moral behavior and increase church attendance. To their dismay, theatres, grog shops and other sinful places remained open and well attended. Many churches proclaimed days of fasting and prayer for deliverance, and President Zachary Taylor set aside August 3, 1849 as a day of national prayer and fasting. Yet those who, according to nineteenth century theory, were the most

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likely to become cholera victims were not among that portion of the population whose habits included church attendance.6

The miasmatic theory was still the most frequently accepted idea concerning the cause of the disease. A few Americans, including many physicians, had become increasingly conscious of the relationship between disease and environment. Filthy city streets that contained decaying garbage and animal excrement, dirty, crowded, poorly ventilated houses, lack of personal hygiene and inadequate diet--these were cited as the causes of cholera. Cleaning the cities and providing better living facilities could perhaps prevent epidemics from ravaging the nation.7

Throughout the winter and early spring of 1848-1849, immigrant ships brought thousands of passengers to the United States from cholera-infested areas. Freezing temperatures in New York prevented an outbreak there, but in the mild winter weather of New Orleans, cholera appeared and spread along the lower Mississippi and Arkansas Rivers. During the following spring and summer, cholera spread rapidly throughout the states and into western territories. Between 1849 and 1854 it ravaged the nation, traveling with the army, wagon trains, gold prospectors,

6Rosenberg, Cholera Years, 110-128. The quotation can be found on page 127.

immigrant ships and steamboats. Every area of the nation was visited; no area was too remote to be stricken.

News of the entrance of cholera into the United States encouraged a few Kentucky towns to take preventative measures to safeguard their citizens from the disease. Covington provided the best example in organized resistance through the cleansing of the city and the educating of the populace. Covington's physicians met in December of 1848 and agreed that "we can scarcely hope that it [Covington] will escape a visit from the present epidemic." City authorities were informed that the disease generally struck along water courses and in neighborhoods containing ponds, marshes and sewers, and that cholera victims were most frequently found among those who were improperly clad, whose diet was of bad quality, or who resided in poorly constructed, badly-ventilated homes and breathed impure and humid atmosphere. A clean-up and educational campaign was suggested.8

Acting on the advice of their medical faculty, city officials divided Covington into districts; each district was to possess a board of health consisting of several discreet and active members of the community, including at least one physician. These boards were to supervise the cleaning of cellars, privies, stables, backyards, streets, gutters and sewers and to provide for the drainage of nearby ponds. Liberal use of whitewash, lime and nitrate of lead was suggested as good means of disinfecting

8Covington Journal, Jan. 3, 1849.
and removing offensive odors from the cleansed area, and the boards were encouraged to establish dispensaries where the poor could obtain free medicine and advice. The boards also were to keep check on the health of the inhabitants of their area and to report any cholera signs to the mayor's office.\(^9\)

The Covington newspaper reported the progress of the district boards of health. It urged the citizens to cooperate and aid the committees, and it carried numerous articles on the history, causes, prevention and cures of the disease. Good hygiene and care of the body and soul were stressed, for "those who are healthy and wholesomely clean, clad, fed and employed are not likely to take it [cholera], unless they are afraid."\(^10\) Since most persons were assumed to be stricken with the symptoms late at night, early retirement was stressed as a good preventative, and all public and private places were urged to close by ten or eleven o'clock. All persons were encouraged to be asleep before midnight. Employment was also considered essential, for "an idle man is always ill."\(^11\)

Other suggested preventative that were passed on to the citizens of Covington had been obtained from both American and foreign physicians. These included the avoidance of certain fruits and vegetables, especially blackberries and new potatoes, and the abstinence from all intoxicating drinks. A Cincinnati

\(^9\)Ibid., Jan. 3, 5, 1849.
\(^10\)Ibid., April 6, 1849.
\(^11\)Ibid.
physician warned that brandy, believed by some to be an infallible preventative, was very dangerous, and a St. Louis physician was quoted as saying that he could trace nearly all cases of cholera to the eating of cabbage and sauerkraut.12

Should cholera appear, despite all the measures taken, Covington's populace was advised to remain calm, for fear was "a fruitful cause of fatality in all epidemics" and "cheerfulness and tranquility of mind ... [were] perhaps the very best means of keeping off the disease." Immediate medical attention should be sought at the first sign of an irregular appetite, disordered digestion, a sense of fullness or uncomfortable feeling in the stomach, or noise and commotion in the bowel. It was also stressed that the disease was not believed to be contagious, and each citizen was urged to "do his duty to his afflicted neighbor, fearless of the consequences, conscious that his fate is in the hands of the Allwise Providence, who tempers the wind to the shorn lamb and will not forsake those who put their trust in Him."13

A variety of "infallible" cures and "time-honored" remedies were carried in the Covington paper, and family heads were advised to stock up on cholera medicines. Recommended medications included a mixture of calomel, opium and camphor or camphor, castor oil, French brandy and laudanum, which would cause a profound sleep

12 Ibid., Mar. 23, June 1, 1849.
13 Ibid., Jan. 3, 1849.
Advertisements for patent medicines also appeared regularly in the newspapers. Cherry Bounce was said to be a good cholera antidote and Brodie's Vegetable Specific was guaranteed "never to fail." Forward's Drops claimed great success on Mississippi riverboats and promised that if "taken in time, none need fear." Physicians, however, warned against the use of such anti-cholera quack nostrums.  

By late spring it was hoped that Covington was sufficiently cleansed and that the people were properly educated. However, the May 11 issue of the Covington Journal reported four cases of cholera, although it assured its readers that since one of the victims came from down river and the other three were of "irregular habits," no alarm was necessary among the "discreet and prudent portion of the citizens." Throughout the month of May the populace were told that the rumors of cholera in the city were exaggerated and that many of those reported dead were still quite alive.

Unfortunately, as the cholera cases increased, the district and city boards of health ceased to function, and the exact number of cases was impossible to determine. However, Covington's citizens were assured that the disease was relatively mild, that the number of fatalities was much lower than that of neighboring towns that

14 Ibid., May 11, 1849.
15 Ibid., May 18, June 1, 3, 22, 1849.
16 Ibid., June 8, 1849.
had not been cleansed, and that most of the cases seemed to be confined to the immigrant German population.  

By late July the disease began to abate in Covington, although flux (dysentery) prevailed in epidemic proportion. The philanthropic activities of those who "did all in their power to comfort their afflicted neighbors" were praised, as were the members of the boards of health, who were given credit for preventing a serious epidemic in the city with their clean-up campaign. The newspaper that had so faithfully attempted to inform and educate its subscribers requested that those whose subscription payments had fallen into arrears check their receipts and pay their overdue bills; otherwise, the paper would be forced to raise its subscription rates to cover increased expenses incurred by its conscientious efforts to provide cholera news.  

Cholera returned to the Covington area briefly in the early summer of 1851. A few cases of "so-called cholera" were reported, but the citizens, city officials and newspapers did not seemed alarmed. In late October of the same year, 90 cases and nine fatalities were reported by the surgeon at the army

\[17\] Ibid., June 20, 22, 1849.  
\[18\] Ibid., July 13, 1849.  
\[19\] Ibid., July 27, 1849.
hospital at Newport Barracks, but apparently the disease remained confined to the military installation.\textsuperscript{20}

The steamboat was the principal carrier of cholera into Kentucky, and the state was constantly reinfected by travelers to the Commonwealth. Louisville, the first important landing above Memphis, probably received more transient cholera than any other town in the Ohio Valley. In December of 1848 the Peytonia arrived at Louisville with many cholera cases that were transferred to the city's Marine Hospital; during the trip from New Orleans, 50 of the packet's 400 passengers had died. Veritable floating pesthouses, steamboats from infected areas arrived daily at Louisville during the pestilence's second visit to the United States.\textsuperscript{21}

The first cases of cholera within Louisville were reported on May 2, 1849 in the same area that had been most severely stricken in 1832, a block of riverfront dwellings and warehouses frequented by boatmen. Within two weeks nearly three dozen deaths were reported within this limited area; among them was the star performer at a theatre whose evening's repertoire included a skit entitled "A Cure for Cholera." Although diarrhea seemed prevalent throughout the city, the newspapers assured their readers that the general health of the city was good.

\textsuperscript{20}Ibid., May 25, June 2, Oct. 11, 1851; R. Jones to N. C. Macrae, Sept. 29, 1851, Newport Barracks Collection (Cincinnati Historical Society).

\textsuperscript{21}Chambers, Conquest of Cholera, 214; Frederick Eberson, Portraits: Kentucky Pioneers in Community Health and Medicine (Lexington, 1968), 90.
Louisvillians were urged to clean their city to prevent new cases of the dreaded disease. Several who refused to clean their yards were arrested. Twenty-two days after the first cases were reported, the mayor and city council appointed a board of health, which requested that all physicians and graveyard sextons make daily reports of deaths and interments. However, no reports were made, and thus the board assumed that no additional deaths occurred. It happily reported that the town of 50,000 had suffered only 33 deaths, a fatality rate that hardly raised a ripple of apprehension. The clean-up campaign continued through the fall and winter; when the disease returned to Louisville the following summer, no cases were reported in this newly cleansed area.\textsuperscript{22}

During late July of 1850, Louisville was again attacked by cholera. City newspapers carried daily cholera reports that took precedence over the opera, theatre and "Women's Tea Party" news in the local news sections. The disease struck with greater fury than it had the previous summer, "as if in compensation for comparative exemption heretofore."\textsuperscript{23} Thirty deaths were reported within the first few days, and the final death count was assumed to be between 100 and 150. The majority of these victims resided

\textsuperscript{22}Louisville Morning Courier, May 2, 3, 10, 14, 21, 25, 1849; Theodore S. Bell, "A Notice of Cholera as it appeared in Louisville in May 1849," Western Journal of Medicine, V (Oct.-Dec. 1849), 510-513. Later reports estimated the Louisville fatalities in 1849 at 50-75.

\textsuperscript{23}[n.a.] History of the Ohio Falls Counties (Cleveland, 1882), 302.
in the low areas around Beargrass Creek, on Market Street between Tenth and Eleventh, and on Jackson and Preston streets, an area where "cholera sat brooding and hatching a pestilence." These areas were poorly drained and contained pools of stagnant water and rotting vegetable matter, from which, it was believed, evening winds carried cholera to nearby residents. The city board of health called for the evacuation and disinfection of the area. The disease did not spread to the adjacent blocks.25

There were also a few cases reported in the affluent area of Louisville, where the residents were in possession of every comfort and every convenience. The mayor and several physicians who visited the stricken affluent area reported it to be "as clean as any other part of the city" and noted that the disease could not be traced to either filth or imprudence.26 However, since the disease did not appear in the areas cleaned the previous fall and did not spread from the areas that had just been disinfected, many claimed that such measures were responsible for the mortality rate not being greater. A more probable


25Frankfort Commonwealth, July 30, 1850; Louisville Journal, Aug. 8, 10, 1850; Bell, "Cholera in Louisville, 1850," 102-103.

26Mary Jacob Tyler to Thomas Prather Jacob, June 22, 1850, Thomas Prather Jacob Collection (The Filson Club). Louisville newspapers seemed to pay little attention to the cholera cases in the affluent area when reporting the cholera news.
explanation might be that, with few exceptions, most of the city's water supply was derived from the river or from wells that were fed by streams well filtered through the clayey soil.

In a brief contemporary study of the treatment used by Louisville's physicians, Dr. Theodore Bell made some interesting comments. He believed that most physicians "endeavored to meet the malady upon the principles which science, common sense and experience" had inculcated, and thus they were able to keep the mortality rate low. Calomel was considered the sheet-anchor of treatment, and mustard plasters to the abdomen and spine were used to suppress abdominal cramps and prevent the suppression of urine. Circulation was frequently aided by the use of lumps of unslacked lime wrapped in wet cloths and laid around the patient's body. Local citizens who aided the medical faculty and "laborad diligently in the cause of humanity," were assured there was no danger of contracting the disease during the daytime. Several of those who exposed themselves in the stricken areas at night reportedly became cholera victims, "thus giving conclusive proof of the malarial origin of the disease." Bell severely criticized the "flocks of corcorants" who preyed on the "credility, fear and follies" of the public by announcing that their unfailing and secret remedies always succeeded, whereas the treatments of physicians frequently failed. Bell concluded that the gullible

27 Bell, "Cholera in Louisville, 1849," 514.
28 Ibid., 515-519. Unslacked lime is "quicklime."
29 Bell, "Cholera in Louisville, 1850," 102.
public would swallow "brandy, opium, lead, and other noxious agents without sense, reason, discretion, or discrimination."30

Having been stricken two years in succession, Louisville did not expect the disease to return during the summer of 1851. However, in August cholera was again reported in the city. Fortunately, the disease was confined to a small area and did not spread to other parts of the city, and daily life continued as though the pestilence was not present.31 In reviewing the brief outbreak, Dr. Yandell commented that the brevity of the disease could not be due to general cleanliness, for the streets of Louisville "afforded the conditions of disease in a high degree--the offence [sic] is rank and smells to heaven." The disease abated "in the midst of dirty streets and the worst sort of weather."32

Isolated cases of cholera continued to be reported in Louisville during the summer months of the next three years, although most of these were transient in nature. Reintroduced by steamboat passengers, cholera remained a threat to Louisville until the late fall of 1854. However, since the disease did not return in epidemic proportions after 1851, it was assumed that the clean-up campaign was successful, and the city was proclaimed as "possessing ... enduring means of health," and being "one

30Bell, "Cholera in Louisville, 1849," 515-516.
31Lunford P. Yandell, "Cholera in Louisville," Western Journal of Medicine, VIII (Oct. 1851), 269-272.
32Ibid., 272.
of the most healthful cities in the great interior valley of the North American continent."  

The scourge made its initial 1849 appearance in the Bluegrass region on May 21 at the isolated Lunatic Asylum on the outskirts of Lexington. Although the asylum's resident physician believed that the disease would not have been regarded as very malignant in a healthy community, nearly one-third of the asylum's inmates died.  

Most of the fatalities occurred among the patients "advanced in life, or greatly infibed in body and among the lowest grade of lunatics." Contrary to contemporary opinion that humid, stale air and filth were major causes of the disease, the asylum apartments that were "the most elevated, clean and dry" were those most severely visited.  

Asylum patients, nurses and physicians were stricken, and volunteers from Lexington were sought. A Protestant minister, who volunteered his services and requested aid from his congregation, noted in his diary that the Catholic priests were the most active in nursing the stricken inmates; the Protestant clergy of the area remained aloof. The usual remedies were administered, and

33 Richard Deering, Louisville: Her Commercial, Manufacturing and Social Advantages (Louisville, 1859), 55-56.
35 Lexington Observer, June 2, 1849.
37 Diary of William H. Pratt, May 27, 1849, William Moody Pratt Collection (King Library).
brief records were kept. The institution's physician reported that he was not convinced that these remedies "cured the disease or prolonged the period of life." 38

In an attempt to rid the atmosphere of cholera-producing poisons, the asylum's cannon was fired on several days "with a very salutary effect on the health of the institution." The resident physician reported that "it is not unreasonable to suppose that good may have resulted. I may state that we have cases apparently relieved of a character which have heretofore proven altogether intractable." 39

Lexington was not stricken by the scourge until three weeks after it invaded the Lunatic Asylum. An attempt to prevent another epidemic like that of 1833 had been made by cleansing the city. The board of health "carefully examined" the streets and alleys of the town during the spring of 1849, saw to the cleaning of dirty areas, and recommended that all cellars, alleys, backyards, and streets be cleaned with lime after each rainfall. 40 The board also issued 14 rules of hygiene:

1. Avoid all fatigue.
2. Abstain from fear.
3. Strictly shun all excesses.
4. Observe strict personal hygiene.
5. Adopt regular hours for eating, sleeping and working.
6. Avoid all exposure to mid-day sun, night dew, rain, and sudden temperature changes.

38 Allen, "Cholera in the Lunatic Asylum," 95.
39 Lexington Observer, June 2, 6, 1849.
7. Avoid hot, close, and crowded rooms.
8. Ventilate homes daily, especially sleeping rooms, during the driest part of the day.
9. Air beds and expose bedding to the sun and air daily.
10. Light fires in damp weather.
11. Rub-dry floors instead of washing them.
12. Eat no unripe fruit, indigestible vegetables, fish, half-baked bread, or the grosser meats.
13. Abstain from excessive indulgences and ardent spirits.
14. At the first sign of diarrhea, obtain medical aid immediately.41

Despite all precautions, cholera came to Lexington. The first case was reported on June 10, although bowel complaints had been prevalent in the town all spring, and a "cholera atmosphere" was noted to be hanging over the city during the three weeks the scourge ravaged the Lunatic Asylum. Throughout the rest of June a few deaths were reported each day, but in early July, after a rainstorm, the number of fatalities suddenly rose to 10 to 12 daily. Remembering the horrors of the 1833 epidemic, some 1,500 of the town's citizens fled, hastily departing for the nearby springs, resorts and country homes of friends and relatives. In doing so, they spread the disease to the neighboring countryside.42 Those who remained "awaited the storm, with a full consciousness of its strength but prepared to do all that ought to be done to avert its destructive power."43 The disease seemed to abate in

41 Lexington Observer, May 12, 1849.
42 Pratt Diary, June 27, July 1, 26, 29, 1849. Pratt Collection; John H. Finnell to Orlando Brown, June [n.d.], 1849, Orlando Brown Correspondence (The Filson Club); J. Winston Coleman, Jr., The Springs of Kentucky (Lexington, 1955), 64.
late July, only to flare up again after several days of rain.
The city poorhouse was turned into a hospital and the inmates of the workhouse were released to nurse the sick. Farmers from the neighboring countryside provided the town with meat, and large grocery stores distributed food to the destitute, free of charge.\textsuperscript{44} The churches of Lexington remained open for prayer, but attendance was slight and "gloom seemed to rest on many countenances."\textsuperscript{45} Batteries of field artillery were set up around the town and fired at regular intervals in an effort to rend the atmosphere by concussion, and thus in some mysterious way reduce the violence of the disease. But despite all measures taken hundreds were stricken, including Robert Wickliffe and Senator and Mrs. Henry Clay. Wickliffe and the Clays were more fortunate, however, than the father of Mary Todd Lincoln and about 300 other cholera victims, whose deaths necessitated the opening of the new Lexington Cemetery, a "commodious repository for the dead . . . of that plague."\textsuperscript{46}

Lexington's physicians treated their cholera patients with medications similar to those used during the previous epidemic--calomel, opium or laudanum, and a variety of ointments

\textsuperscript{44}William H. Townsend, Lincoln and the Bluegrass (Lexington, 1955), 171; Pratt Diary, July 29, 1849, Pratt Collection.

\textsuperscript{45}Pratt Diary, June 27, 1849, Pratt Collection.

\textsuperscript{46}"Cholera in Lexington," 109; Townsend, Lincoln and the Bluegrass, 373n; Lexington Observer, July 22, 1849. The quotation is from Lexington Cemetery, (Lexington, 1895), 5. Lexington newspapers attributed the death of Robert S. Todd to "brain fever," but his private papers indicate that he was treated with the standard cholera treatments.
and stimulants. One young Lexingtonian was advised to take
camphor and ice water if a cholera attack came on suddenly,
water and arsenic if the attack progressed slowly and with
painful diarrhea, and water and cuprum if violent cramps seized
the stomach. Other families undoubtedly had their own
favorite remedies. However, a group of the town's leading
physicians concluded that the disease was treated too much,
that the "unmitigated storm of prescriptions and of heavy
doses which is kept up under the expectation of a direct,
decided and instantaneous conquest of the malady, has, too
frequently, overwhelmed the weakened powers of the system."48

By late August the disease had disappeared from Lexington,
and in early September a Lexingtonian reported there was "no
cholera--no fever, no flux nor any other disease. Our doctors
appear to have nothing at all to do."49 After a brief study of
available information concerning the cholera visitation, the
Lexington Medical Society named five causes for the cholera
outbreak: inadequate preparation and cleansing of the city;
the virulence of the invading disease; the inability of the
poor to obtain competent medical assistance, nursing care and

47 Scrapbook of Richard Menefee, Jouett Ross Todd
Collection (The Filson Club).


49 Covington Journal, Sept. 7, 1849.
proper foods; universal panic; and neglect of premonitory
symptoms.  

The disease returned to Lexington and the Lunatic Asylum
in September of 1850. Within a three day period, 27 cases and
about 14 deaths occurred at the asylum and a few deaths were
reported in town. Among the Lexington deaths was that of the
newspaper editor who had endeavored to educate and inform his
readers and to protect the community from the ravages of the
disease during both previous epidemics. In May of 1852 rumors
of several cases in Lexington were reported by a Louisville
paper but were emphatically denied by the Lexington press. A
month later, however, the Lexington newspapers confirmed the
deaths of several members of the community who had contracted
the disease elsewhere.  

Cholera appeared in Frankfort in 1849 after an unusually
wet and cool spring, during which dysentery and diarrhea were
prevalent. The appearance of the disease in neighboring towns
caused fear to mount within Frankfort; church membership and
attendance increased during the weeks prior to the outbreak,
and diets of "bacon, bread, tea and coffee, eschewing vegetables
of all kinds" were adopted by many citizens who wished to remain

50 P. Drake, "Cholera in Lexington," Transactions of the
First Annual Meeting, Kentucky State Medical Society (Frankfort,
1851), 59.

51 Lexington Observer, September 21, 1850, May 29, June 23,
1852.
healthy. It was reported that former Governor Robert Letcher "looks like he expects an attack any day," and at least one old slave felt his own belly "every five minutes" to detect any early signs of the disease. The pestilence arrived in Frankfort in late July, during the heat of a political campaign, but interest in politics soon waned. Local merchants began to complain of a dull summer, for many of the fearful fled from the town in an attempt to escape the disease. No records were kept concerning the case and death rate, but it was reported to be less than was expected. The use of calomel and opium was given credit for the salvation of those who recovered.

The disease returned to the state's capital in July of 1850, but less than a dozen deaths occurred in town, and only six fatalities were reported at the nearby state prison. The people were reminded to be cautious and prudent, for cholera "is a mysterious disease, and it may come down upon us when we least expect it," and were warned that to eat green fruits and vegetables was "to provoke disease and insult Providence."

Advertisements for the Keene Springs resort, carried frequently by the Frankfort

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52 Ibid., June 2, 1849; Mary A (?) to John B. Clark, June 20, 1849, John Clark Papers (Kentucky Historical Society). The quotation is from Thomas Lindsey to Orlando Brown, Aug. 31, 1849, Orlando Brown Papers (The Filson Club).


55 Frankfort Commonwealth, July 16, 23, 1850.
newspapers, assured the populace that the springs and neighboring village were, and would continue to remain, free from the disease.

Rumors that cholera had returned to Frankfort in 1854 were quickly dispelled by a local newspaper. In a brief article the single victim was described as a ne'er-do-well who had been "drinking to excess of new corn whiskey just from the still [and]... had taken no food for several days." It was also noted that "the circumstances and conditions of things about his premises" were such as to make it a matter of wonder that others were not attacked.56

Small villages and rural areas were also severely stricken by the scourge. Unfortunately, few records were kept or preserved. Brandenburg in Meade County was plagued by cholera in late June and early July of 1851. Although the disease was confined to the hollows and immediate adjacent area, most of the villagers fled. The local physician made liberal use of the lancet and prescribed calomel, opium and external and internal stimulants, but all cases were fatal.57 Cases in Millersburg also had a 100 percent fatality rate in 1852. About 50 families of the town fled, "lessening the material upon which it [cholera] may operate... Our nurses are tired, sick and worn out."58

56 Ibid., June 27, 1854.
58 Lexington Observer, July 14, 1852.
A relatively mild form of the disease was reported in Maysville in May and June of 1849 and late July of 1850, but it struck with greatest ferocity there in June of 1852. Within a month about 95 of the town's residents, most of whom lived in the lower end of town, had become victims of the disease. Nearly all business in Mt. Sterling was suspended, as the people fled when cholera visited there during a ten-day period in 1854.

The mood of the town was described by a visitor:

"Lonely indeed is the aspect presented to an occasional traveler as he winds his way through the town, looking in vain for a familiar nod or friendly salutation from the little knots of persons gathered upon the corners. Gloom and sadness he plainly sees depicted upon every countenance, and within a few short inquiries, he hastens from our limits."

In 1849 cholera created a state of anxiety and grief when it caused the deaths of 65 persons in Paris. A town previously interested in the forthcoming elections, politics were quickly forgotten, and it was assumed that the general alarm over the pestilence deterred many from the polls. The disease returned to Paris in September of 1852. Much alarm was manifested and many fled, but only 12 deaths were reported. Several fatalities in Georgetown during the 1849 epidemic there were blamed on "eating

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59 Covington Journal, May 11, June 29, 1849, June 8, 1850, June 12, 1852; Frankfort Tri-Weekly Yeoman, June 5, 28, 1852.

60 Lexington Observer, July 19, 1854.

61 Richard Harvey to Orlando Brown, July 28, 1849, Brown Papers; Frankfort Tri-Weekly Yeoman, Aug. 8, 1852; Covington Journal, Sept. 4, 1852; Perrin, History of Bourbon... Counties, 106.
cucumbers and onions freely," and nearby Harrison County was reported to be in the midst of alarm, for cholera was all around them and the waters of Raven Creek were "raging with peculiar virulence."62

In hopes of preventing an epidemic, the Shelbyville newspaper urged "every citizen to contribute his mite" toward the preservation of the city's health through an effective cleansing and purification campaign. The town's trustees were called upon to "awaken from their supineness," for the village should not be permitted "to remain an inviting resort for the devastating scourge. . . ." But despite hopes that "the death of some one among us will not be needed to awaken us to the danger," several fatalities were reported in 1849.63

Union County, where the disease was "very fatal" was stricken in 1849, and during the summer of 1852 Carrollton was visited by the destroyer. Hopkinsville reported 50 deaths in 1852, and among the fatalities at Henderson that summer was Mrs. Archibald Dixon. Senator Dixon was so severely ill with the disease that his recovery was considered improbable;64 his unexpected return to good health was celebrated by making a

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62Georgetown Herald, Aug. 1, 1849; Covington Journal, July 20, 1849.
63Shelbyville Shelby News, June 27, 1849.
64[n.a.] History of Union County (Evansville, Indiana, 1886), 234; Starling, History of Henderson County, 303; Covington Journal, Aug. 30, Sept. 20, 1852; Frankfort Tri-Weekly Yeoman, Sept. 30, Oct. 2, 7, 1852.
"profession of religion and ... [attaching] himself to the Presbyterian church." 65

Cholera was also reported at Hickman, Lebanon and Princeton in 1852, and two years later it visited Campbellsville, Springfield and Bedford. So fearful of the disease were the people of Bardstown, the trustees passed an order which forbade a grieving father to bring his son's body, a cholera victim, back to Bardstown for burial. 66 One of the few towns evidently not stricken to any great extent was Harrodsburg, where a cement-lined cistern had been built in 1844 because the citizens there "believed public improvement was needed." 67

Bowling Green and the southern part of the Commonwealth suffered visits from cholera in 1849, 1852, 1853 and 1854. Three deaths were reported in Bowling Green on June 9, 1849, the day appointed for the general muster of all the county militia companies. As soon as those who had gathered heard the words "cholera" and "death," they "mounted their horses and with whip and spur, left town, panic-stricken, turning every one back who [sic] they met, not returning until all traces of it had disappeared." 68 Although the disease seemed to be of a mild variety


67 Petition of Citizens [of Harrodsburg] for Sinking a Cistern in the Public Square, March 2, 1844, Small Collection (Kentucky Library).

68 Bowling Green Park City Times, June 6, 1902.
compared to that suffered by towns throughout the nation, the
anxiety in Bowling Green was great; many, remembering the
severity with which Russellville had been attacked 14 years
earlier, fled from the area. Those who remained "nursed the
sick and buried the dead, thereby giving confidence and keeping
up the spirits of all." Elections, scheduled during the
visitation, were poorly attended.69

In the two-week period of 1849 during which the
pestilence remained in Bowling Green, the number of cases
seemed to rise and fall with the frequency of rainfall and
rise in temperature. About 18 of the town's 2,500 residents
died, and it can be supposed that numerous other cases throughout
the county remained unreported. A few cases were also reported
during the summers of 1852 and 1853, and conscientious homemakers
attempted to prevent their families from eating choleva-producing
green apples, mulberries and other fruits.70

Cholera visited Bowling Green twice during the summer of
1854, as if it were bidding a prolonged and reluctant farewell to
that town before departing from the North American continent for
12 years. The first visit, resulting in more than a dozen deaths,
occurred between mid-June and mid-July, a period of extreme heat.

69 Lexington Observer, July 7, 1849; Diary of Lemuel C.
Porter, July 1849, Lemuel C. Porter Papers (The Filson Club);
Diary of Warren Lewis Underwood, June 18, 1849, Underwood Collection
(Kentucky Library). The quotation is from Bowling Green Park City
Times, June 6, 1902.

70 Elizabeth Underwood to Joseph R. Underwood, June 8,
1852, Underwood Collection; Bowling Green Park City Times, June 6,
1902.
In late September, following the performance of a traveling circus that had come from the infected Nashville area, cholera returned to Bowling Green. A large number of people from the nearby county came to town the day following the circus performance for County Court day. Within 24 hours cholera cases were reported in town and throughout the county; 16 deaths occurred in town and about 30 in the county. All the victims had been in Bowling Green on court day. A group of young people from Bowling Green, on a pleasure trip to Mammoth Cave, were probably responsible for spreading the disease to Edmondson County.71

The circus traveled from Bowling Green to Glasgow, Columbia, Knob Creek, Greensburg, Campbellsville and Lebanon, spreading cholera wherever it went. Glasgow was the most severely stricken. Many of the citizens fled, but a group of seven men agreed to remain and care for the ill. Fleeing merchants entrusted the group with the keys to their businesses, lest the town suffer from lack of supplies. For six weeks Glasgow was ravaged. In a successful effort to prevent the disease from spreading into the neighboring county, guards were stationed around the town and no one was allowed to leave. All travel through and near Glasgow ceased, and provisions became scarce. The country folk responded to a request for food, and a nearby miller furnished all the meal and flour needed. Other supplies

71 John E. Younglove, A History of the Cholera Visitation that Appeared in Bowling Green in the Year Eighteen Hundred and Fifty Four, Calvert-Obencain-Younglove Collection (Kentucky Library); Journal of Ellen Lucas, September, 1854, Lucas Collection (Kentucky Library).
were obtained from the local stores. All articles taken were recorded and reimbursements were made later with money collected by the townfolk. Remaining at his post throughout the epidemic, the telegraph operator kept in touch with the outside world. Messages were sent daily to Louisville, and from there were transmitted by mail and traveler back to Barren County. No lists of the dead were kept, but it was estimated that three-fourths of the population of Glasgow perished. After the epidemic was over, there was "so much work to be done that the people had no time to discuss those who had left this world in such terrible agony," and "the unmarked graves were soon obliterated," and the little town quickly recovered from the terrible tragedy.

Cholera vanished from the North American continent during the late fall and winter of 1854. Thousands of fresh graves remained as a reminder of the devastation that could be wrought by the relentless destroyer. However, neither the case nor death rate had been as great as during the first visitation of the disease, and the panic was not as severe. Most of the towns and villages of Kentucky had suffered slightly less than many other American towns. In St. Louis eight percent of the population died, and New Orleans had more than 9,000 fatalities among its 116,000 residents. One-tenth of Cincinnati's population


73 Ibid., 262.
had perished, despite the claim of one resident of the Queen City that the physicians there could generally control the disease. Nearly one-half of the military and civilian population at the army camp at Lavaca, Texas died of cholera, and the wagon trails across the west were marked by graves of cholera victims.74

Americans, although concerned with the dangers of the disease, wrote few comments about cholera's second visitation; so much had been written about the pestilence between 1832 and 1835, there was little more to be said. Newspapers, private letters and medical journals of the day contained little information concerning the disease and its cures or the fears and reactions of the people. Except for the omission of the lancet, the major treatments remained the same. Radical new treatments, including injections, enemas and herbal and metallic medications, were generally found to be of little value; a remedy proclaimed by one physician as infallible would be declared useless by another.

The accepted theory on the origin of cholera was the miasmatic theory. If any of Kentucky's physicians suspected a correlation between the disease and the water supply, they made no written mention of it. Two brief articles carried in the

Covington newspaper appear to be the only mention of the possibility that the disease was not airborne. In July of 1854 the Covington Journal carried two articles which, had they been used as a basis for further study, might have provided a clue to the origin of the scourge. The July 1 issue reported, without comment, that a Memphis physician had noticed that "those who used rain water when the disease was prevalent, remained free from it" and wondered if the exclusive use of cistern water might cause cholera to disappear. On July 29 the paper reported that during the summer cholera had prevailed "with marked severity in a number of localities in the interior of Kentucky [while] the towns along the Ohio have almost wholly escaped." Since most of these towns obtained their water supply from the river, the editor wondered if the absence of the disease could be linked to the origin of the water supply. Unfortunately, there seems to have been no further comment or study made concerning the correlation between the pestilence and drinking water.

Kentucky's Medical Society formed a committee of vital statistics in 1851, but lack of cooperation by local physicians rendered impossible any significant studies. A brief study on the disease in the Bluegrass area concentrated on the similarities of weather conditions before and during the 1833 and 1849 epidemics in Lexington. It compared the temperatures, amounts of rain and severity of lightning, but neglected to note that excess water frequently flooded privies and wells. The miasmatic theory was
fortified by the study's conclusion that moisture and standing water, aided by lightning and rotting vegetable matter, combined to produce the cholera poison.75

The first important and accurate study of cholera came not from the United States, but from England and a London physician, John Snow. Snow began his detailed study of cholera during London's 1849 epidemic, and he traced the disease to the water supply. His study was published, but it found few readers. However, his longer and more detailed study, published in 1854, was read by physicians on both sides of the Atlantic. In this second pamphlet, Snow revealed in detail his study of the origin of the disease. The addresses of London's cholera victims were traced to the city's water companies. Those companies that drew their water from the Thames below the city supplied water that smelled like raw sewage, and this was the water that was used by the majority of the people who had died from cholera. Those companies whose water came from above the city had fewer cholera cases. Snow also noted that in many cases sewers ran within a few inches of wells and frequently contained leaks which permitted wastes to seep into the water. Especially dangerous was the Broad Street Well; Snow found the water of this well to be fetid and full of organic impurities that were visible to the naked eye. In the Broad Street area, where more than 600 had died within a

ten day period, the number of cases rapidly declined after Snow removed the well's pump handle.

Once Snow confirmed, in his own mind, that cholera was transmitted through water contaminated by human waste, he was able to explain many of the mysteries of the disease. The case and death rate was unusually high among children; children drank lots of water, for they were not fond of tea. The rate was generally low for brewery workers, who drank malt with their meals. The disease usually subsided in England, but not in Scotland, during the winter months; Englishmen generally drank malt or tea made with boiled water, but the Scots mixed unboiled water with hard spirits all year long. Cholera was more prevalent among the poor, who were less likely to wash their hands after attending other cholera patients. 76

John Snow's ideas, although seemingly impressive, were not accepted by all of Kentucky's physicians or the general public. Old views are not easily changed. 77 Many would continue to read out-of-date and erroneous publications that would emphatically state that cholera was not contagious, but was miasmatic in origin. Because Snow pointed to the water rather than the air as a cause of the disease, many who were interested

76B. M. Richardson, Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D., Together with a Biographical Memoir (New York, 1936), passim.

77As late as 1856 prominent members of the faculty at the University of Louisville Medical School instructed their students on the miasmatic origin of cholera. See Medical School Notes, Small Collection (Kentucky Library).
in clean-up campaigns felt threatened by this new theory. Those interested in urban reforms would continue to stress the miasmatic theory and the need for cleaner cities as a means of preventing miasma and future cholera epidemics.

The Civil War held in abeyance many of the probable sanitation reforms that might have occurred in the United States, but the war and its sanitation problems gave the lay public a greater appreciation of the purposes of sanitation and the benefits to be derived from the practices of public and personal hygiene. When cholera returned to the United States for its final two visits, the case and death rates would be significantly reduced. However, hundreds of Kentuckians would yet become victims of the scourge of the nineteenth century.
CHAPTEIV

CHOLERA'S FINAL VISITS
1866 AND 1873

Cholera is "a health inspector that speaks in a language that no one can misunderstand."  

While the final battles of the American Civil War were being waged, cholera was again spreading across the Near East, and before Union and Confederate soldiers had returned to their homes, the scourge had penetrated Mediterranean cities and European ports. New York probably received a few cases of cholera by late fall of 1865, but cold weather suppressed the disease. New "seeds" of the pestilence arrived during the following spring, and, despite the quarantine of infected vessels and their passengers, cholera cases appeared in New York City by early summer. A clean-up campaign was begun, and cholera hospitals were established, but the disease raged out of control and spread.  

Kentucky's first confirmed cases of cholera were reported among recruits who had just arrived at Louisville's Taylor Barracks  

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1 Louisville Journal, June 16, 1850.  
2 Chambers, Conquest of Cholera, 269-275. According to the Louisville Daily Courier, April 29, 1866, one of these cholera hospitals was established in a building that had previously been used for storage of the arms surrendered by Robert E. Lee's army.
from Governors Island in New York Harbor. The Louisville post was known as an unhealthy and unsanitary site, and the army surgeon stationed there attempted to clean it by ordering that large quantities of disinfectants (chloride of lime, sulfuric acid and manganese) be freely scattered on the ground and in the privies. Bedding was aired daily, and recruits were cautioned against intemperance of any kind. A great variety of treatments were used--oral doses of calomel, opium and sub-nitrate of bismuth, enemas of brandy and strong tea, hypodermic injections of morphine and saline solutions--but all proved to be "without that miraculous effect some are disposed to ascribe. . . ."3

The base physician felt that perhaps champagne, had it been available, might have been an effective agent to arrest vomiting. Of the approximate 400 men stationed at the Louisville installation, 36 developed cholera and 23 died. Most of the cases occurred among the group of recruits from New York. Patients were isolated, and the disease did not spread widely among the rest of the troops, although a great many cases of acute diarrhea occurred.4

In late August of 1866, 45 men of Company E were sent from Taylor Barracks to Bowling Green. Six cases of cholera were reported among these troops upon their arrival, but all recovered. Non-fatal diarrhea was also prevalent among the men of Company E.


4Ibid., x, 8; H. Culbertson to Major General Baines, Aug. 1866, zeroxed copy in Newport Barracks Collection.
Isolation and disinfection were undertaken, and the disease apparently did not spread to the nearby civilians.5

The disease was also reported at Newport Barracks in July of 1866, and was believed to have been introduced to the post by a traveler from the infected city of Cincinnati. Nine cases and five fatalities from cholera and 126 cases of non-fatal acute diarrhea were reported among the 350 men stationed at the barracks. From Newport recruits carried the disease to Nashville, Memphis and Augusta, Georgia.6 A letter from the army surgeon at Newport, however, stated that all the soldiers were healthy when they departed from the northern Kentucky post and probably "breathed the poison" in Nashville, or got it there from "gorging themselves with unripe fruit or bad whiskey."7

Cholera evidently did not seriously affect the civilian population of Kentucky in 1866. However, in anticipation of possible outbreaks, Louisville and Frankfort newspapers reminded their readers that the best means of preventing cholera was to clean up the cities. A Louisville paper frequently urged the citizens to be on the lookout for possible cholera-producing filth, pointed out areas that needed special attention, and criticized the local board of health for not attending to these areas immediately. Concerning one especially dirty area, the

5Cholera in the Army, 9.
6Ibid., xvi, 7, appendix.
7J. W. Magruder to J. J. Woodward, April 3, 1866, zeroxed copy, Newport Barracks Collection.
paper invited the board of health and city council to "take a
pleasure excursion to the delightful spot some pleasant night,"
and when a suspected cholera victim from another dirty area
was pronounced as having died of natural causes, the paper
suggested that the woman "died of the intolerable stench in
O'Neal's Alley."8

Frankfort residents were also urged to clean up their
town and remove everything that "tends to produce miasma."9
City marshalls were appointed to inspect the city and take over
the jobs that owners and tenants refused to do, for it was
believed that cholera "cannot live where it cannot sniff a
foul breeze."10

It is probable that both Covington and Louisville had
a few cases of cholera that were transported from Cincinnati.
However, the pestilence did not spread, and no alarm or panic
resulted. Only the advertisements for cholera medications
mentioned the possibility of the disease in town. Those who
were stricken with it were urged to use the Hindoo Remedy, a
must for every household, and Sargent's Essence of Jamaican
Ginger, an infallible cure.11

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8Louisville Daily Courier, May 10-15, 17, June 3, 1866. The
quotations are from Ibid., June 12, 18, 1866.

9Frankfort Commonwealth, April 3, 1866.

10Ibid., April 3, 10, 27, 1866.

11Advertisements for these and other patent medicines
appeared in most issues of the Louisville and Covington newspapers
during the summer months of 1866. In the government document,
Cholera Epidemic of 1873, it is stated that there were a few cases
of cholera in Louisville in 1866.
Although the 1866 visitation to Kentucky was extremely mild, other areas of the nation were not so fortunate. Southern and western towns, rural areas and army posts were severely stricken. In their efforts to suppress and cure the disease, army physicians across the nation kept relatively complete records, which were later collected and studied. In 1867 the army published a report on a study of 1,749 cholera cases, 704 of which had been fatal. The study drew some interesting conclusions:

1. Distribution of recruits and other bodies of men from infected areas pointed to the danger of the contagion of the disease. Strict quarantine of such men would lessen the dangers.

2. Attention should be drawn to hygienic precautions, for the great variety and methods of treatment had generally proven unsuccessful. Personal and public cleanliness, the use of disinfectants, proper ventilation and most especially the use of pure drinking water were imperative in the control and prevention of the disease. Troops that had drunk distilled water or had obtained their water from cisterns had generally remained free of the disease. Where cisterns and distilled water were not available, water should be chemically purified with permanganate of potash (potassium permanganate).

The army’s study also made suggestions for preventing the spread of cholera:

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12 Cholera in the Army, xvi-xviii.
1. All discharges of cholera patients should be disinfected with a 10-15% solution of sulfate of lime, chloride of zinc or sulfuric acid.

2. All waterclosets and collected waste materials should be treated with oil of vitrol or chlorinated lime, followed a few days later by sulfate of iron.

3. Clothing and linens of cholera patients should be disinfected with a solution of carbolic alcohol and then exposed to the "temperature of a baker's oven."

4. Soiled floors should be washed with chlorinated soda.

5. Buildings where cholera patients had lived or were confined should be fumigated with sulfur or chlorine and white-washed. The ground under such buildings should be covered with powdered lime and charcoal.13

Despite the findings of the army, many medical books printed between 1866 and 1873 would continue to report that cholera was miasmatic, not contagious and that a variety of effective remedies existed. When cholera appeared for its final visit in 1873, many Kentuckians would die because the sanitary measures, recommended by the army, were not practiced.

The United States remained free from cholera for seven years after the relatively mild and brief 1866 visitation, but in the spring of 1873 it returned. Quarantine efforts at New York Harbor were successful in preventing the disease from

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13 Ibid., 64-65.
entering the city, but it was able to stealthily pass the ineffective quarantine station at New Orleans, and it rapidly spread throughout the interior valley. Of all the states in the nation, Kentucky was probably the most severely visited.\textsuperscript{14}

In May of 1873 several cases of cholera were reported in Paducah among travelers who had recently arrived aboard the John Kilgore and other river packets originating in New Orleans. Miraculously, the disease did not spread throughout the city, although no measures were taken to prevent it. However, in mid-June the disease returned to Paducah and ravaged the town for nearly a month. The majority of the cases were reported among the Negroes and foreign population who lived in a low, swampy region where wells and streams were the major sources of drinking water; the more affluent areas of the town had concrete cisterns. Paducah's physicians were "indefatigable" in battling the disease and the "necessities of the poor were as promptly considered as were those of the wealthy."\textsuperscript{15} To prevent the spread of the disease, city authorities prohibited the sale of vegetables. However, the German population bought vegetables in the country on weekends and it "became a recognized fact that on each Monday a large number of this class of the

\textsuperscript{14}Chambers, Conquest of Cholera, 295, 306.

\textsuperscript{15}"Cholera in Kentucky," Richmond and Louisville Medical News, VIII (April 1874), 279; Louisville Courier Journal, May 27, 1873; Cholera Epidemic in 1873, 261-263. The quotation is from ibid., 262.
community were buried."\textsuperscript{16} The death rate was appalling; an entire lumberyard was consumed making rude coffins for the dead. No records of the case and death rate were kept, but an estimated 180 fatalities occurred.\textsuperscript{17} The disease disappeared from Paducah in late July, but the residents were warned to "be careful not to bring it back by imprudence of any kind."\textsuperscript{18}

Cholera was also reported in Henderson in mid-May. A thriving river port and tobacco market, the town was in deplorable sanitary condition; neither sewers nor a system of artificial drainage existed. After the first case was reported, a board of health was hastily established and property owners were required to clean their premises. Only a few cases were reported in May and early June, but in mid-June a horse trainer from Nashville became seriously ill at the Henderson fairgrounds. A few days later several of the stable boys at the grounds developed cholera, and soon thereafter the disease reached epidemic proportions in the town. A temporary cholera hospital was set up, but the death rate was reported to be "alarmingly high," although the number was not known. The disease continued to plague Henderson throughout July.\textsuperscript{19}

\textsuperscript{16}Ely McClellan, An Account of Epidemic Cholera, During the Summer of 1873, In Eighteen Counties of the State of Kentucky (Cambridge, Mass., 1874), 3.

\textsuperscript{17}Cholera in Kentucky, Typescript, U.P.A. File (Kornhouser Medical Library, University of Louisville School of Medicine).

\textsuperscript{18}Covington Journal, July 26, 1873.

\textsuperscript{19}Cholera Epidemic of 1873, 268-269.
The disease arrived in southern Kentucky in early June. A visitor from Gallatin, Tennessee died in Bowling Green, and a Negro washerwoman, who had been the laundress for a riverboat cholera victim, was also stricken. Few other cases occurred in Bowling Green until mid-July, when the disease became epidemic. Within a two month period, 85 cases and 65 fatalities were reported. The majority of these appeared along the railroad and the low area towards the river. To prevent their being stricken with the disease, a few residents of Bowling Green took asafoetida pills each morning before breakfast and one-half teaspoon of bitters in sweetened water before dinner.20

The nearby village of Woodburn was also plagued with the scourge. Failing to detect the disease until it had reached epidemic proportions, the two local physicians ascribed the severe sickness to malarial influences, and took no precautions to prevent its spread. One-hundred of the village's residents were stricken, and most of them died.21

During the early spring Franklin had been placed in good sanitary condition. However, precautionary measures were abandoned when the first cholera fatality was reported. Many of the town's physicians denied that the sickness was cholera, and

20 Ibid., 264-265; McClellan, Cholera... in Eighteen Counties, 3-4; John Younglove's Scrapbook, Calvert-Obenheim-Younglove Collection (Kentucky Library); William Payne to Cousin Kitty [n.d., 1873], William Harrison Payne Collection (Kentucky Library).

21 Diary of Clinton C. Potter, summer, 1873, typescript, 17 (Kentucky Library); Cholera Epidemic of 1873, 265; Chambers, Conquest of Cholera, 307.
others, "disposed perhaps to compromise," called it American cholera. American or Asiatic, it was a fearful malady. Two-thirds of the citizens fled and most of those who remained, including all of the town's physicians, were stricken. Despite the earlier efforts to remove the miasmatic influences in the town and the flight of many of the residents, one-tenth of Franklin's population perished.22 A small settlement in nearby Barren County reported 11 fatalities, but a Glasgow physician reported "no cholera in Glasgow, but plenty of mothers-in-law, which is just as bad."23

From Bowling Green the disease was carried northward. Elizabethtown was stricken after a July Fourth celebration, which was attended by a group of Negroes from the infected Bowling Green area. Forty-one cases and 22 deaths followed during a six-weeks period. Most of the cases appeared in a low area adjacent to a small creek that frequently flooded nearby Negro hovels and privies. West Point, a small village near Elizabethtown, lost 50 to 60 of her citizens to the pestilence.24

No efforts had been made to clean or to introduce sanitary measures in LaGrange. Surface privies were cleaned by rain washings, and well water was used almost exclusively in the town.

22McClenan, Cholera ... in Eighteen Counties, 4-5; Cholera Epidemic of 1873, 265; Covington Journal, July 25, 1873. The quotation is from Charles H. Edwards to the editors, [n.d.], Medical and Surgical Reporter, XXIX (July 1873), 71.

23Covington Journal, July 26, 1873.

24Cholera Epidemic of 1873, 282-283; McClenan, Cholera ... in Eighteen Counties, 7-8.
When cholera struck, 31 cases with a 50 percent mortality resulted. Two-thirds of the town's residents fled, and those who remained were so disabled and fatigued that a request was sent to a New York City newspaper for help in obtaining another druggist and physician for the besieged town.  

A "special miasma traveling through the air" was termed the cause of the cholera cases in Caseyville in Union County, and several residents of the small settlement at Hardin's Bottom in Henry County were reported to have been stricken with the pestilence after "eating various fruits and vegetables ... laboring under the excitement over family troubles" and "eating a great many cucumbers for dinner and ... [fishing] in the hot sun during the afternoon." Residents of the area fled in panic; parents left their children, and children deserted their parents to seek safety in other localities. Those who remained "resigned themselves to die." The local physician, who kept no records, informed his neighbors that the disease was caused by "poisons being created in India, reaching us through the air ... [and] producing a cholera atmosphere."  

In Bourbon County the disease was confined to Millersburg, a town of 500 residents. Situated on the banks of Hinkston's Creek, into which emptied two nearby stagnant ponds, Millersburg had always enjoyed an average degree of health. In 1873, however, cholera claimed 76 lives during a six-week period. The

25McClellan, Cholera ... in Eighteen Counties, 8; Covington Journal, Aug. 2, 1873; New York Times, July 28, 1873.

26Cholera Epidemic of 1873, 280-281.
disease first appeared near the stagnant ponds, an area noted for intemperance. In an attempt to prevent the spread of the disease, a board of health and a council of physicians were formed, and a clean-up campaign was begun. Several of the local doctors recommended flight, for they feared that their medications would be powerless against the relentless destroyer. Many citizens fled to Paris, where there was "strong talk of establishing a quarantine hospital" lest Millersburg refugees infect the still-safe town. The few who remained in Millersburg to alleviate the suffering displayed "as true heroism as though they had periled their lives on the bloody field." Calomel was prescribed by local physicians "to keep up a free secretion from the liver," but many of their patients died despite all medication and nursing care. A Covington physician, believing that he had found an infallible cure for the most obstinate cases, went to Millersburg to test his secret preparation. His remedy was no more successful than that used by local physicians, and his plans to patent his cure and "apply for certain large rewards officially offered in certain foreign countries, and so to make his fortune," were foiled. The disease was believed to be miasmatic in origin, and an analysis of the air was made.

27McClellan, Cholera ... in Eighteen Counties, 8; Cholera Epidemic of 1873, 284-293.
29M. Dills to the editors, [n.d.], Cincinnati Clinic, Sept. 5, 1873; Covington Journal, July 19, Sept. 6, 13, 1873. The quotation is from the July 19 issue.
by the President of Millersbyg College, an "eminent chemist." The air was found to be "perfectly pure." 30

The disease was probably brought to central Kentucky by a construction worker from Tennessee, hired to work on the Ohio and Cumberland Railroad. A few days after his arrival at the construction site at Muldraugh's Hill, he was stricken with cholera. His excreta were thrown on the ground, uphill from the nearby stream that supplied water for the area. Following a heavy rainstorm, several other cases were reported at the construction site. The camp residents fled. One of the laborers reportedly carried the disease to Campbellsville, where 70 fatalities were soon reported. 31

From Muldraugh's Hill the disease was also taken to Lebanon, located on the stream Jordan, a "receptacle for filth of all kinds." During the early summer the physicians of Lebanon had formed a sanitary association and had attempted to cleanse the town and remove and disinfect the "reeking mass of decomposition" under a flour mill built on the stream. In mid-August cases diagnosed as cholera morbus appeared among the Negro residents and railroad laborers living near the Jordan. Their severe signs and symptoms were attributed to intemperance, and their evacuations were thrown on the ground. 32

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30 Covington Journal, Sept. 6, 1873.
31 Cholera Epidemic of 1873, 29-30.
32 Ibid., 305. The quotations are from McClellan, Cholera . . . in Eighteen Counties, 11.
On August 26 the Marion County fair opened on the outskirts of Lebanon, and it was attended by large crowds of local residents and visitors from all over central Kentucky. To offset rumors of cholera in Lebanon, handbills were circulated denying that the disease was in the vicinity. The circulars carried the signatures of local physicians, at least a few of whom had not authorized the use of their names. Since the fairgrounds had no well, water was brought from a town well located 30 feet from the Jordan, near an elevated graveyard and within a short distance of where the "cholera morbus" cases had occurred. On the second night of the fair, a violent storm flooded the Jordan and nearby wells and privies. Two days later 13 cases of cholera appeared in Lebanon and the case and death rate steadily grew. Even residents of secluded, high areas of the town were affected. Between August 29 and October 1, 116 cases and 65 deaths were reported. A "sympathetic" diarrhea, occasionally accompanied by partial suppression of urine, was also prevalent. This was probably a mild form of the disease, although it was not so diagnosed.

During the entire epidemic in Lebanon, a company of United States Infantry occupied barracks in the city. Under the supervision of the army, Lebanon's privies and drains were cleansed and disinfected. Debris was collected and burned. All sanitation recommendations of the medical officer were

33Cholera Epidemic of 1873, 305-310; McClellan, Cholera in Eighteen Counties, 10-12.
rigidly enforced at the barracks. Food was carefully inspected, and water was constantly tested for impurities. No enlisted men were allowed to leave the post, under penalty of court-martial, and anyone who "visited the company sink" more than once during a given period was reported to the hospital. Because of the care and rigidity with which these precautionary measures were enforced, only a few cases of cholera appeared among the troops. 34

From the Marion County fair the pestilence was carried into neighboring counties. A few cases had been reported in Nelson County in July, but the disease returned with greater fury after the fair. At New Haven 27 cases and 17 fatalities were reported, and 10 cases, all but one of which were fatal, resulted in Boston. Columbia, in Adair County, also received cholera "seeds" from the fair. A town of 600 residents, Columbia had been visited by the scourge on three previous occasions. Sanitary conditions were extremely bad; many areas were filled with debris. A few property owners had been induced by local physicians to clean up their property, but the carelessness and obstinancy of a few people "proved to be the cause of much suffering." 35 The owner of the worst spot, a hotel and stable, refused to cooperate with the authorities,

34 Cholera Epidemic of 1873, 309-310; Charles E. Moore to Lt. W. W. Barrett, Sept. 9, 1873; J. S. Fletcher to the Adjutant General, Aug. 24, 26, 1873, W.P.A. File.

35 McClellan, Cholera . . . in Eighteen Counties, 13-14, 19-20. The quotation is from William E. Collins, Folkways and Customs in Old Kentucky (Lexington, 1971), 138.
insisting that their request, that he clean up his property was an "unwarranted interference with his property." One of his stable boys who had attended the Marion County fair was stricken and died, and within a few days other stable hands suffered the same fate. The disease quickly spread, affecting many who boarded at the hotel while the circuit court was in session. Local physicians and town authorities ordered the hotel and stable closed and supervised the disinfection of the stable and hotel privy and had them filled with fresh earth.\(^{36}\) Two months later a visitor inspected the rooms of the hotel where several cholera victims had died and noted that no effort had yet been made to clean and disinfect them. Soiled rags were still under the beds, and the mattresses and linens remained unchanged. The error of not having cleansed these rooms was "most earnestly impressed upon the person in charge of the property, with the only result of eliciting an expression of displeasure at such interference--a closing demonstration of the same foolish obstinacy that had subjected the town to a fearful epidemic," and caused the untimely demise of 100 of Columbia's residents.\(^{37}\) From Columbia the disease was believed to have been taken to Allen County by a circuit court judge and to Jamestown by a mail carrier. In both areas, only a few cases were reported.\(^{38}\)

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\(^{36}\)McClellan, Cholera . . . in Eighteen Counties, 21; Cholera Epidemic of 1873, 315-318. The quotations are from page 315.

\(^{37}\)Cholera Epidemic of 1873, 316-317.

\(^{38}\)Ibid., 317.
Upon hearing that the disease was again prevalent in the state, the Boyd County Medical Society used effective means to protect the lives of the county residents. Danville, the county seat, was divided into districts, each to be inspected by a member of the town's trustees and a member of the medical society. Circulars were issued throughout the county that recommended effective means of preventing the disease. Sanitary cleanliness of all buildings, premises and privies was urged, and it was also highly recommended that all ponds of stagnant water be drained and cellars be kept dry and clean. Should cholera strike, the evacuations of the afflicted, which "undoubtedly contained the poison which has frequently been the cause of propagating the disease by getting into [drinking] water," should be disinfected. A good wholesome diet consisting of well-cooked fruits and vegetables and roasted, boiled, broiled and stewed meats was recommended. All use of the frying pan should be shunned, for greasy foods were a "powerful predisposing cause of diarrhea and cholera morbus." Those afflicted with the disease were urged to request the attendance of a qualified physician, and all patent medicines and quack nostrums were to be avoided. Everyone was urged to keep his mind and body well employed but to avoid fatigue. The circular concluded with a statement issued earlier in the summer by the American Public Health Association:

To combat and arrest the progress of the disease and prevent the epidemic prevalence of this scourge of sanitary neglect, it is necessary that the inhabitants of every city and town promptly resort to the most
effectual purification and best known means of disinfection . . . before any cases of cholera occur; and that in the presence of this disease, these sanitary duties should be enforced in every household and throughout the entire district. 39

The efforts of the Boyd County Medical Society evidently were effective. All miasmatic theories seem to have been forgotten. When the disease was introduced into Danville by a Centre College student from Lebanon, proper precautionary measures were taken and the disease did not spread. About a dozen cases appeared throughout the county, all among the visitors to the Marion County fair. The only case of infection contracted within the county was that of a physician who had attended several cholera patients. 40

A lone traveler from Tennessee was blamed for bringing cholera to Lancaster in Garrard County, and the epidemic there may have been fed by other cases from the Marion County fair. Sanitary conditions at Lancaster, like those in so many of Kentucky's small towns, were abominable. Filth of all kinds, including animal and human excrement, were on the ground, and no attempt had been made to clean the town. The major water supply for the town's 750 people was several wells that frequently received surface washings after heavy rains. In early August a visitor from Tennessee became ill and died shortly after his arrival at Lancaster. His illness was diagnosed as typhoid cholera. Several men who attended him were stricken a

39 Ibid., 319-320.
40 Ibid., 320-321.
few days later; in all cases, excrements were thrown on the ground. As the number of cases increased, fear mounted and those who were able to do so fled. All businesses were closed, except a drug store and a small family grocery. The disease raged for six weeks. The town physicians became so exhausted that a request was made for medical aid from Louisville; three practitioners from there volunteered their services. Ely McClellan, an army surgeon stationed at Lebanon, was also sent to Lancaster to help bring the disease under control.

Upon his arrival in Lancaster, McClellan met with the town physicians and civic leaders who still remained. No organized effort had been made up to this time to combat the scourge, but the army surgeon was requested to do so. The remaining druggist was directed to dispense medicine, at the town's expense, to all who applied for it. Several groups of nurses were organized to work among the poor, who were suffering the most severely, and beds and other hospital supplies were sent from the Lebanon post. McClellan urged immediate and generous use of disinfectants. Lard and sulphur were burned in the streets, and solutions of carbolic acid and sulphate of iron were thrown into the sinks and scattered on the ground. Each householder was required to supply lime, copperas and carbolic acid to disinfect his property, and the town spent about $3,000 to aid the poor and destitute and provide some of the disinfectants used. But despite all the tardy activities and precautions, more

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41Ibid., 321-332; Covington Journal, Aug. 30, 1873.
than 60 of the town's residents died. A large percentage of these deaths was among the Negroes, but victims represented every class and station of both races. A Negro preacher, leading a group of the town's citizens in prayer, explained the selection of the variety of victims:

... It has pleased Thee to take from us some of our good citizens as well as the bad ones. ... Thou has taken some of our best citizens to testify against the low-down chicken stealers on Judgement Day. ... 43

Many of those who fled from Lancaster went to Sanford, spreading the disease to that community. The first few cases appeared in the predominantly Negro section of town. The water supply for the area came from two streams contaminated by a nearby communal privy that frequently overflowed, a "hot-bed of pestilence." A few days after the first case was reported, the town authorities organized a cholera hospital and took measures to clean and disinfect the town. Morphine, atropine, calomel, camphor and intravenous feedings of raw milk "straight from the cow" were all found to be of little value in treating the malady. 44

Most of the larger towns across the state remained relatively untouched by the scourge on its last visit. Lexington

42 Cholera Epidemic of 1873, 321-324; McClellan, Cholera ... in Eighteen Counties, 15-17; L. S. Smith to the Surgeon General, Nov. 1873; E. McClellan to the Medical Director, Aug. 24, 26, 1873, W.P.A. File.


44 Cholera Epidemic of 1873, 314; McClellan, Cholera ... in Eighteen Counties, 23.
reported no cases of cholera in 1873, although it is possible that a few transient cases may have appeared there. Reliance on rainwater collected in concrete cisterns was probably the reason for Lexington's exemption. Maysville reported only eight cholera deaths, seven of which were in one family. Like Lexington, Maysville's near exemption was attributed to the almost universal substitution of cisterns for well water.  

Most of the cholera cases reported in Covington were transient cases occurring among those who worked in Cincinnati or had constant communications with the Queen City. Although later reports estimated that 75 cases and 25 deaths during the summer could be attributed to cholera, a newspaper of the day reported only that "in absence of official returns, we have to rely on rumor; and in such cases rumor always exaggerates. We may safely say that so far the number of [cholera] deaths does not justify alarm."  

In anticipation of another cholera visitation, Louisville's newspapers repeated their pleas of other years to clean the city. Pointing out several wretched areas, the Courier Journal noted that many of Louisville's streets might fit Mark Twain's statement that "... they hold as much bad smell now as the people can endure." Daily cholera reports appeared on the front page of  

45 McClellan, Cholera ... in Eighteen Counties, 6.  
46 Cholera Epidemic of 1873, 276. The quotation is from Covington Journal, July 26, 1873.  
47 Louisville Courier Journal, May 20, 1873.
the newspaper, acquainting Louisvillians with the travels and the mortality rates of the disease. Patent medicine advertisements in the newspapers continued to offer miraculous cures and preventatives. The 21 fatalities reported in Louisville were probably transients, for the local residents generally escaped the disease. This escape was due in part to the "admirable sanitation condition which was instituted whenever the disease appeared." By 1873 most of Louisville's residents used water piped from the Ohio River; few wells remained in use.  

Studies were made of the 1873 epidemic after it subsided. In an attempt to study the disease in Kentucky, army surgeon Ely McClellan requested information from the physicians from all Kentucky counties; medical men from 18 replied. Most of these physicians, none of whom had kept records, submitted first-hand narratives of their activities as they remembered them. A more detailed study of the epidemic throughout the United States was undertaken by the office of the Surgeon General. This appears to be the first study of the disease directed by any governmental group. Filled with individual case histories and comments made by physicians, both reports drew similar and interesting conclusions about the disease, its cause and prevention. These conclusions would have been important life-saving factors for the people of the state had the disease visited the Commonwealth again. Both studies concluded that:

1. Cholera was portable and contagious.

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48 McClellan, Cholera . . . in Eighteen Counties, 5-6.
2. It was transmitted through the ingestion of contaminated water, probably water contaminated by the evacuations of other cholera patients.

3. The best means of prevention was the use of pure drinking water and clean, sanitary, frequently disinfected towns.

4. Although all were likely to suffer when the disease struck a community, there were more fatalities among men than women, the fatality rate was greater among the 20-40 age group, and the disease was the most malignant among the "lower orders of each community" where sanitation facilities were extremely bad.

5. Quarantine methods used in New York City had proven effective. Immigrants with cholera were isolated, and those who had been exposed to the disease were quarantined and observed. Eight days, during which the immigrant remained free of cholera signs, were required before the quarantine was lifted. All clothing belonging to both the cholera patient and those exposed to the disease was aired and disinfected, as were ships on which the disease had appeared.

6. The mortality rate had averaged about 50 to 60 percent of all cases reported, regardless of what medications were used. Those cases that received treatment during the earliest stages of the disease had a slightly lower fatality rate than those that were not treated until the algid stage.

49 ibid., 1, 24; Cholera Epidemic of 1873, xvi, 2.
Although the number of cases and deaths that occurred in Kentucky was not known, the histories of about 1,700 cases from 52 Kentucky localities were collected and studied by the Surgeon General's office. About 50 percent of the cases studied had been fatal, and half of these deaths had been among the state's Negroes. The high percentage of deaths among blacks can be attributed to their squalid living conditions and poor sanitation facilities. During cholera's first visit to the United States, both races in Kentucky had suffered equally in proportion to their population, but in each subsequent visit the suffering among blacks had increased, while the percentage of whites stricken by the disease had generally decreased. The sanitation improvements that had been made generally affected the affluent and middle class neighborhoods, but few improvements had been made in areas where the "lower orders" of the community lived.50

The history of the 1873 cholera epidemic in Kentucky convinced most state physicians, as well as the laity, that cholera was transmitted through contaminated drinking water. In its first annual report in 1879 the Kentucky State Board of Health published an article which discussed the problems of contaminated water. Towns throughout the Commonwealth were encouraged to establish water works which could tap pure supplies and pipe it to local citizens. With such a system, it would be "almost impossible for surface water, the contents of drains, sewers and privies to come in contact with it [the water supply]."

50 Cholera Epidemic of 1873, 2, 35.
Bowling Green and Henderson had built such water works facilities after the 1873 cholera epidemic, and had not suffered seriously from enteric diseases since these systems had been built. However, nine-tenths of the state's population still obtained their water from wells and streams. Where river water and water works facilities were impossible, the board of health encouraged the building of cement-lined cisterns; the value of such cisterns had been proven during the 1873 cholera epidemic. Until such water works facilities and cement-lined cisterns could be erected, Kentuckians were urged to boil all drinking water obtained from wells and streams.51

In 1883 the German scientist Robert Koch identified the cholera-producing bacteria, the Vibrio Cholerae, in the evacuations of cholera patients in India. Once it was identified, other physicians were able to more easily identify cholera carriers and, with strict quarantine, isolation and disinfection methods, prevent the disease from ravaging the nation. When the disease attempted to return to the United States in 1885, the bacteria was quickly detected and identified in the excrements of suspected cholera patients by alert medical officers at the port of New York, and immediate and effective quarantine measures were put into effect. Only a few cases of the disease appeared in the American port cities in 1885, and improved sanitation.

51 W. P. Rodman, "Contamination of Water Supply as a Cause of Disease," First Annual Report of the State Board of Health of Kentucky, 1879 (Frankfort, 1879), passim. The quotation is from page xxvii.
facilities in these cities prevented its spread. No cases of Asiatic cholera have been reported in the United States since 1911.52

Thousands of Kentuckians died of Asiatic cholera during the nineteenth century. Medicine was powerless to control the disease. Believing it to be caused by airborne poisons generated by filth, Kentuckians became more aware of the unsanitary conditions around them, and in an attempt to prevent the disease from ravaging their communities, they began to eliminate some of the sources of the "miasma." It took more than just a clean city to prevent cholera, but with every pond that was drained, every garbage heap that was destroyed and every privy that was disinfected and deodorized, the breeding grounds of disease were eliminated. The scourge had indeed become the "health inspector" of the nineteenth century.

CRITICAL BIBLIOGRAPHY

The history of epidemic diseases has been one of the neglected areas of Kentucky's history. Although few maladies have struck the Commonwealth in epidemic proportions in recent years, the history of the state's first hundred years was plagued with epidemics of smallpox, typhoid, malaria, yellow fever and Asiatic cholera. The most dramatic and devastating, from a medical and historical viewpoint, were the cholera visitations.

Newspapers

Contemporary newspapers provide excellent insight into the fears and feelings of Kentuckians faced with the threat of cholera. Unfortunately few complete sets of Kentucky's newspapers from the nineteenth century have been preserved. Those that are available appear to have given adequate coverage to the disease in their localities, but provide little information concerning other areas of the state. Useful to this study were the original and microfilm collections of the Covington Journal, 1849-1873; Frankfort Commonwealth, 1850-1866; Frankfort Tri-Weekly Yeoman, 1852-1853; Lexington Gazette, 1832-1833; Lexington Observer and Kentucky Reporter, 1832-1866; Louisville Courier Journal, 1873-1954; Louisville Journal, 1850; Louisville Daily Courier, 1856; and Louisville Morning Courier, 1849-1854. Single issues of
newspapers that were used include the Cincinnati Gazette, 1832; Cincinnati Clinic, 1873; Georgetown Herald, 1849; Louisville Journal and Focus, 1832; and the Shelbyville Shelby News, 1849. The New York Times, 1873, contained several articles on the epidemic in Kentucky, and the Nile's Weekly Register, 1832-1833, provided excellent accounts of the disease in some areas of Kentucky as well as in other parts of the nation. A 1902 issue of the Bowling Green Park City Times contained an account of the 1873 epidemic in Bowling Green, and the "Notes on Early Logan County" series in the 1968 Russellville Logan Leader printed several articles on the epidemic in Russellville.

Manuscripts

Letters and diaries of those who lived through the cholera epidemics were occasionally excellent sources of information. Few personal letters written during or immediately after severe local outbreaks neglected to mention the disease. Unfortunately few letters written by residents of small towns and rural areas have been preserved, and therefore little information is available concerning the disease beyond the more densely populated areas.

The Filson Club Collection contains several manuscript collections in which diaries and personal letters describe Kentucky's cholera epidemics. Of special value were several letters contained in the Charles Wilkins Short Papers, written by Short, a Lexington physician, to his uncle in Philadelphia during the 1833 epidemic. The Orlando Brown Collection also
contains numerous letters written to Brown by business and personal acquaintances during the 1849 epidemic in Frankfort. Other collections deposited in The Filson Club that provided small bits of information include the Matthew Monroe Campbell Collection, Sydney Payne Clay Papers, Thomas Eastin Collection, Thomas Prattner Jacobs Correspondence, Jonathan Bell Nichols Papers (microfilm), David Morton Papers, Lemuel C. Porter Collection, the Juett Ross Todd Collection and a photostat copy of Daniel Drake, A Broadside, Cincinnati Chronicle Extra, Oct. 13, 1833.

Manuscript collections belonging to the Kentucky Historical Society in Frankfort were used. Several family letters in the Micajah Harrison Papers provided information on the 1833 epidemic in Mt. Sterling, and the John C. Clark Papers contain recipes for two cholera medications used in 1833 in Hickman.

The best single source of information concerning the 1849 epidemic in Lexington is the diary of William M. Pratt, William Moody Pratt Collection (Margaret I. King Library, University of Kentucky). Pratt, a Lexington minister, played an active role in caring for the sick during the epidemic and carefully recorded his observations and activities. Written in pencil, the diary unfortunately is very difficult to read. Other collections at the University of Kentucky that were of some value were the Julia Alves Clore Collection and the Catalogued Collection, which contains a variety of individually catalogued
manuscripts. The Felix G. Hensford Collection (West Virginia University, Morgantown) and the Lytle Family Papers (Cincinnati Historical Society) were also used.

Descriptions of cholera epidemics in the southern portion of the state can be found among the manuscript collections in the Kentucky Library at Western Kentucky University. Of use for this study were personal letters, diaries and scrapbooks from the Calvert-Olenchain-Younglove Collection, Henry Clay Northcott Collection, Knott Collection, William Henry Payne Papers, Lucas Collection, Underwood Collection and the Walker Papers. Many individually catalogued manuscripts from the Small Collection were also of value.

H. Lemke ed., The Walker Family Papers (Fayette, Arkansas, 1968), a collection of 74 mimeographed letters written to David Walker, Territorial Governor of Arkansas, by his family in Russellville, provided information on the Russellville epidemic. The reprint of a letter, Dr. Hawley to Drs. Firkin [?], Hunt, Dudley and Cooke, June 14, 1833 (Lexington, 1968) was also used. The letter was written by a Louisville physician to his colleagues in Lexington answering their request for medical aid during the 1833 epidemic.

Typescripts and typescript collections have also provided valuable information. Judge James Flanagan, Asiatic Cholera in Winchester (King Library) paints a vivid and sometimes almost humorous account of the 1833 epidemic in Winchester, and the account of a Bowling Green pharmacist, John E. Younglove,
A History of the Cholera Visitation in Bowling Green in the Year Eighteen Hundred and Fifty Four (Kentucky Library) describes the panic which resulted there. The typescript Diary of Clinton C. Potter (Kentucky Library) briefly mentions the 1873 cholera epidemic in Woodburn.

The W.P.A. File (Kornhouser Medical Library, University of Louisville School of Medicine) contained much valuable information. The file is a collection of typed letters from army officials, serving in Kentucky during the 1873 epidemic, to the Surgeon General's office and excerpts from newspapers and published materials on the 1873 epidemic in Kentucky. It appears that this file was to have covered the other epidemics, but it was either never completed or the material has been misplaced, for it contains information on the final epidemic only.

The Newport Barracks Collection of the Cincinnati Historical Society contains numerous hand-written and typed notes and photostat and zeroxed copies of letters collected by Dr. James Donnelly while researching the history of the Newport Barracks.

Journal Articles

Contemporary medical journals are a valuable source of information on the epidemics and the theories concerning their cause and prevention. The Western Journal of Medicine, published in Cincinnati, and the Transylvania Journal of Medicine and Associated Sciences, published in Lexington, enjoyed a relatively
wide circulation among Kentucky's physicians and during epidemic years carried articles that provided the state's practitioners with advice concerning the causes, preventions and cures for the disease. Many of the articles on cholera consist of case histories which frequently present erroneous pictures; no statistics were included to indicate how many cases had been studied before conclusions were drawn. This, however, appears to have been typical of nineteenth century medical journalism, for the importance of medical records and statistics was unknown.

593-616, 652-664; Samuel Jackson, Charles Feigs and Richard
Harlin, "Spasmodic Cholera in America," Transylvania Journal of
Medicine and Associated Sciences, V (July-Sept. 1832), 433-450;
"Miscellaneous Intelligence," Transylvania Journal of Medicine
and Associated Sciences, V (Jan.-Mar. 1832), 137-153; Lunford P.
Yandell, "Notices of the Diseases of the Summer and Fall of 1832."
Transylvania Journal of Medicine and Associated Sciences, V (Oct.-
Dec. 1832), 500-506; and Lunford P. Yandell, "Spasmodic Cholera
as it Appeared in Lexington," Transylvania Journal of Medicine
and Associated Sciences, VI (July-Sept. 1833), 197-222.

In the intervening years between the first and second
epidemics, medical journals ignored cholera. It appears that
no studies, using available medical publications, were undertaken,
and no attempts were made to draw any conclusions concerning
the variety of opinions about the causes or treatments of the
disease. When the disease returned in 1849, the Western Journal
of Medicine and Transylvania Journal of Medicine carried articles
on it. These articles were less numerous and were generally
shorter than those published during the first visitation. They
also usually contained less information on the reactions of the
citizens but more detailed case histories. Although comparative
statistics concerning the survival rate for any given treatment
were still not provided, the journal articles placed less emphasis
on treatment and greater importance on prevention. Since both
journals had briefly ceased publication during the years between
epidemics, the volume numbers do not follow logical sequence.
The Transylvania Journal of Medicine also dropped the last two words of its former title.


Other publications also carried articles on the second cholera visitation. An article expounding the miasmatic theories and written for the laity appeared in "Cholera: Its History and Causes," Southern Methodist Quarterly Review, IX (Oct. 1850), 575-601, and B. P. Drake's "Cholera in Lexington" appeared in the first publication of the Transactions of the Kentucky State Medical Society, I (1852), 321-328.
With the demise of the *Western Journal of Medicine* and
*Transylvania Journal of Medicine* during the Civil War, the
major medical journals for the mid-west disappeared. Few
articles were written on cholera in Kentucky during its final
visit, and none seems to have been printed concerning the mild
1866 visitation. A superficial study of the 1873 epidemic in
the Commonwealth appeared in "Cholera in Kentucky," Richmond
and Louisville Medical News, VIII (April 1874), 479-482.
William Berry and F. C. Wilson, "A History of Cholera in
Lancaster," American Practitioner, VII (Oct. 1873), 193-204,
is essentially a narrative of case histories. Other medical
periodicals used were W. P. Rodman, "Contamination of the Water
Supply as a Cause of Disease," First Annual Report of the Board
of Health of Kentucky, 1879, I (Frankfort, 1879), xxvii-xxxiv;
and untitled comments from American Journal of Medical Science,
XII (1883), 180-189; Medical and Surgical Reporter, XXIX (July
1873), 71; Journal of the American Medical Association, 213
(Sept. 4, 1970), 1773-1774; and Louisville Medical News, Aug. 29,
1885.

Two recent articles on medical thought during the
nineteenth century were valuable in their background information:
Howard D. Kramer, "The Beginnings of the Public Health Movement
in the United States," Bulletin of the History of Medicine, XXI
(1947), 352-376, and Charles Rosenberg, "Causes of Cholera:
Aspects of the Etiological Thought in Nineteenth Century America,"
Historical journals contain a near void in studies dealing with epidemics, especially cholera. The only study that appears to have been published on the cholera epidemics in Kentucky is Carolyn Berry, "Cholera in Kentucky," Journal of American History, VII (Oct.-Dec. 1913), 1427-1431, a brief article which primarily pertains to the 1833 epidemic in Lexington. Other articles used include "Recept for the Cholera," Filson Club Historical Quarterly, XXVII (Oct. 1953), 334, and Augustus Walker, "Early Days on the Lakes with an Account of the Cholera Visitation of 1932," Publication of the Buffalo Historical Society, V (1902), 208-354, which contains an interesting account of the epidemic that struck Winfield Scott's army. An excellent first-hand account of the cholera epidemic among troops in New Orleans in 1866 is found in J. R. Hurley, " Asiatic Cholera: A Reminiscent History with Special Emphasis on its Introduction and Spread in the United States," The Military Surgeon, XXIX (Sept. 1911), 245-270. Hurley's article also contains an excellent description of cholera's spread from India to the United States between 1817 and 1832.

Works on Cholera

In 1867 the United States Army published the first scientific study of cholera in the United States, using the medical records kept by army physicians during the 1866 epidemic. The fruit of this study, Report on the Epidemic Cholera in the Army of the United States During the Year 1866 (Washington, 1867),
stressed the need for improved sanitation to prevent the spread of the disease. The conclusions drawn concerning the contagious nature of the disease were later repeated by studies published on the 1873 visitation.

Two studies made of the 1873 epidemic were invaluable in the information they contained. Ely McClellan, An Account of Epidemic Cholera During the Summer of 1873, In Eighteen Counties of the State of Kentucky (Cambridge, Mass., 1874), was written by an army surgeon who had been stationed in Kentucky in 1873 and had played an active role in fighting the disease in Lancaster and Lebanon. McClellan's study, which consists of case histories and narratives of the reactions of the people, stressed the attempts to control the disease, as well as the probable cause for its devastating spread, but it made little mention of the treatments used. A much more detailed study of the epidemic throughout the United States, made by the Office of the Surgeon General, was published as Cholera Epidemic of 1873 in the United States, U.S. Executive Document Number 95, 43d Congress, 2d Session (Washington, 1875). This lengthy document contains a brief history of the disease and its earlier visits to the United States. The bulk of the document, however, concerns the 1873 epidemic. A chapter is devoted to each state where cholera struck. Lengthy case histories are given, and interesting letters and reports from local physicians are quoted. Since most of the information used was obtained from physicians, the social aspects of the visitation in many towns is either
slighted or omitted. Newspaper articles and personal letters were not used in the study. Nevertheless, it appears to be the most complete study of the disease in the United States ever made.

Several recent studies of cholera were found to be extremely helpful in providing general information. J. S. Chambers The Conquest of Cholera: America's Greatest Scourge (New York, 1938), is a well-written and well-documented history of the disease in the United States. Chambers, a physician, depicts the Americans faced with the disease in a sympathetic and compassionate manner. Of special value to this study was the chapter on the 1833 epidemic in the Bluegrass region and the excellent bibliography. Charles Rosenberg, The Cholera Years (Chicago, 1962), is a well-documented history of the disease in New York, but it also contains many references to the disease in Kentucky and other areas. Rosenberg's descriptions of the various theories on the etiology of cholera were especially helpful in understanding nineteenth century thought on the origin and cause of disease.

Of all the cities in the United States, New Orleans probably was the most severely stricken by cholera. During its four visits to the United States, 17,000 residents of the Crescent City died from cholera. Leland A. Langridge, Cholera in Louisiana (M.A. Thesis, Louisiana State University, 1955), vividly depicts the horrifying visits of cholera that turned the city into a death trap and many of its citizens into near barbarians.
B. W. Richardson, Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D., Together with a Biographical Memoir (New York, 1936), is a somewhat detailed study of Snow's findings on the cause and spread of cholera in London, England between 1848 and 1854.

Secondary Works

City, county and state histories generally ignore or only briefly mention the cholera epidemics. Those that do discuss the impact of the disease generally concentrate on the first visitation. William H. Peters, History of Fayette County (Frankfort, 1912), and George W. Ranck, History of Lexington (Cincinnati, 1872), give brief but vivid descriptions of the panic generated during the 1833 epidemics. William H. Perrin, ed. History of Bourbon, Scott, Harrison and Nicholas Counties, Kentucky (Chicago, 1882), contains several interesting comments on the first visitation but only acknowledges the subsequent epidemics. Florence Edwards Gardiner, ed., Cyrus Edwards' Stories of Early Days (Louisville, 1941), contains a lengthy account of the 1854 cholera visitation in Glasgow, and G. Glenn Clift, History of Maysville and Mason County (Lexington, 1936), briefly describes the 1833 visitation in Maysville. Other city, county and state histories of limited value to this study are: L. Boyd, Chronicles of Cynthiana (Cincinnati, 1894); Richard Deering, Louisville: Her Commercial, Manufacturing and Social Advantages (Louisville, 1859); Calvin Morgan Fackler, Early Days in Danville
(Louisville, 1941); [n.a.] History of the Ohio Falls Counties (Cleveland, 1882); [n.a.] History of Union County, Kentucky (Evansville, Indiana, 1886); J. Stoddard Johnston, Memorial History of Louisville from its First Settlement to the Year 1896 (2 vols., Chicago [n.d.]); John H. Muir, Bardstown in Retrospect (Bardstown, 1965); Edmund Sterling, History of Henderson County, Kentucky (Henderson, 1887); Lewis Collins, Historical Sketches of Kentucky (Lexington, 1968, originally printed Cincinnati, 1847); and William E. Collins, Folkways and Customs in Old Kentucky (Lexington, 1971).

Other publications dealing with various phases of Kentucky's history were of limited value. F. Garvin Davenport, Anto Bellum Kentucky (Oxford, Ohio, 1943), mentions the cholera epidemics. However, Davenport has confused the various diseases labeled "cholera" with Asiatic cholera, and therefore some of his reported cholera epidemics are misleading. The W.P.A. study, Medicine and Its Development in Kentucky (Louisville, 1940), contains much valuable information concerning the health problems in nineteenth-century Kentucky. It stresses the havoc wrought by the 1833 epidemic in the Bluegrass region but makes little mention of the second visitation and none of the 1866 and 1873 appearances of the disease. Two brief and inadequate studies in important related fields are Frederick Eberstein, Portraits; Kentucky Pioneers in Community Health and Medicine (Lexington, 1968), and J. H. McCormack, ed., Some of the Medical Pioneers of Kentucky (Bowling Green, 1917). W. L. Sullivan, Report on
the Epidemics of Tennessee and Kentucky (Philadelphia, 1852),
contains a superficial treatment of the 1851 cholera epidemic in
Kentucky. Sullivan's omission of many of the areas stricken
suggests to the reader that Kentucky was not generally affected
by the disease. Other publications used include J. Winston
Coleman, Jr., Slavery Times in Kentucky (Chapel Hill, 1940);
J. Winston Coleman, Jr., The Springs of Kentucky (Lexington, 1955);
Julia Neal, By Their Fruits (Chapel Hill, 1947), a history of the
Shakers at South Union; and William Townsend, Lincoln and the
Bluegrass (Louisville, 1940), which contains an excellent
description of Lexington during the 1849 epidemic. The Annual
Report of the Orphan Society of Lexington: Report of the
Board of Managers (Lexington, 1834); Lexington Cemetery (Lexington,
1895), a brief pamphlet about the history of the cemetery;
Transactions of the First Annual Meeting of the Kentucky State
Medical Society (Frankfort, 1851); and the Acts of the General
Assembly for the Commonwealth of Kentucky, 1822 (Frankfort,
1822) were also of limited value.

Information was also derived from church histories.
Robert Davidson, History of the Presbyterian Church in the State
of Kentucky (New York, 1947), contains a good description of the
Lexington epidemic in 1833. Francis Swinford and Rebecca S.
Lee, The Great Elm Tree (Lexington, 1968), a history of the
Episcopal church in Lexington, provides some information on the
first epidemic in Lexington, but only mentions the later one,
and incorrectly lists it as having occurred in 1848 rather than
1849. A. H. Redford, *Western Cavaliers* (Nashville, 1876), a history of the Methodist Church in Kentucky, refers briefly to the 1832 epidemic in Louisville.

Three biographies and autobiographies of Kentuckians were found of value for this study. Robert Insko, *Kentucky Bishop* (Frankfort, 1952), is the biography of Benjamin Bosworth Smith, the first Episcopal Bishop of Kentucky, who was quite active in providing nursing care for the stricken residents of Lexington during the 1833 epidemic. M. J. Spalding, *Sketches of the Life, Times and Character of Bishop Flaget* (Louisville, 1852), is a rather saccharine biography of the Roman Catholic Bishop of Bardstown, but it does contain references to the activities of Flaget and the Sisters of Charity from Nazareth during the 1833 epidemic, and it includes a letter written by Flaget to his brother in which he described his own attack of cholera. The autobiography of a physician-minister, J. J. Polk, *The Autobiography of Dr. J. J. Polk* (Louisville, 1867), provides an interesting account of the epidemic in Danville and the reactions of the people there to the scourge.

is especially interesting when compared to modern medical texts and family medical guides.