BIRMINGHAM HISTORICAL SOCIETY
Newsletter
December 2020

Birmingham Epidemics

Covid-19, the novel Coronavirus, has invaded our lives and created uncertainty about how to act day to day. This essay looks to history to place our current circumstances in context for guidance on how we should be living, and for a sense of what we can hope for in the future.

Humanity has been dealing with epidemics for ages. With few prevention and treatment options in ancient times, disease spread quickly. The Black Death Plague in Europe is said to have originated in 1334 and lasted for centuries. In 16th century Europe, a reported 5 to 10% death rate from smallpox slowed population growth. Among Native American populations, similar smallpox epidemics became the chief factor in their decimation. Archeologists now credit these epidemics with the abrupt abandonment of Choctaw, Chickasaw, Creek, and Cherokee villages in the Appalachian region.

During the 19th century as the industrial revolution expanded, cholera devastated Europe's densely crowded, fast growing cities. As urban areas in the United States grew in the late 19th and early 20th centuries, cities and their planners responded by creating the City Beautiful Movement that made sanitation, sewers, and wide tree-lined boulevards, parks, and open spaces priorities in the development of American cities. Leading this successful effort in Birmingham over a 40-year period was George B. Ward, a Birmingham Mayor and City Commissioner, who during the cholera epidemic of 1873 was a five-year-old living at the Relay House hotel. His grandparents and parents, who managed the hotel, followed appropriate sanitary measures and survived the epidemic.

In Birmingham, the cholera epidemic of 1873 and the Spanish Flu of 1918-1919 have been the major epidemics and are the principal subjects of this newsletter. In the late 19th and early 20th centuries, loss of life related to infectious disease also came from tuberculosis and influenza that was most often accompanied by pneumonia. Scientific understanding of and response to infectious disease was growing. However, effective prevention often took years as in the case of diphtheria. Today, diphtheria is known as a bacterial infection transmitted through close contact with an infected individual, usually by respiratory secretions spread through the air. While an antitoxin was developed in Germany in the 1880s, making it available and affordable remained a challenge well into the 1920s.

A Comparison of the Numbers of Deaths [in Alabama] from Nine Diseases by Year

	1914	1915	1916	1917	1918	1919
Typhoid	565	674	694	898	589	332
Malaria	435	500	617	530	376	257
Diphtheria	146	204	188	191	195	198
Scarlet Fever	17	40	15	19	12	16
Small pox	6	4	….	5	16	6
Pellagra	500	1,109	677	1,073	848	517
Tuberculosis	2,236	2,339	2,526	2,688	2,436	1,748
Influenza	221	359	435	392	5,446	2,332
Pneumonia	1,624	520	2,134	3,387	5,882	2,721

— **Annual Report of the State Board of Health for 1919**. Lister Hill Library, University of Alabama at Birmingham, courtesy Peggy Balch.

Birmingham's Cholera Epidemic of 1873

Dr. Howard Holley, founder and long-time head of UAB's distinguished Rheumatology program and a medical historian, described the cholera epidemic of 1873.

> Early Birmingham and Jefferson County (1870-1900) were apparently subjected to abnormal numbers of infectious diseases—probably because of their boom town conditions. Poor nutrition, exposure, polluted water, inadequate sewage disposal, and overcrowding contributed to this condition.
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> In the summer of 1873, Asiatic cholera devastated the city of Birmingham. Contamination of the drinking water was considered the source of infection. There are no surviving records showing the number of individuals who developed the disease, but the death rate was extremely high. It is estimated that between 128 and 175 [4.2–5.89%] died during the epidemic. People fled the city, leaving the sick and dying in the care of clergymen, nurses, and physicians.
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> — Howard L. Holley, M.D., *A History of Medicine in Alabama*, 1982.

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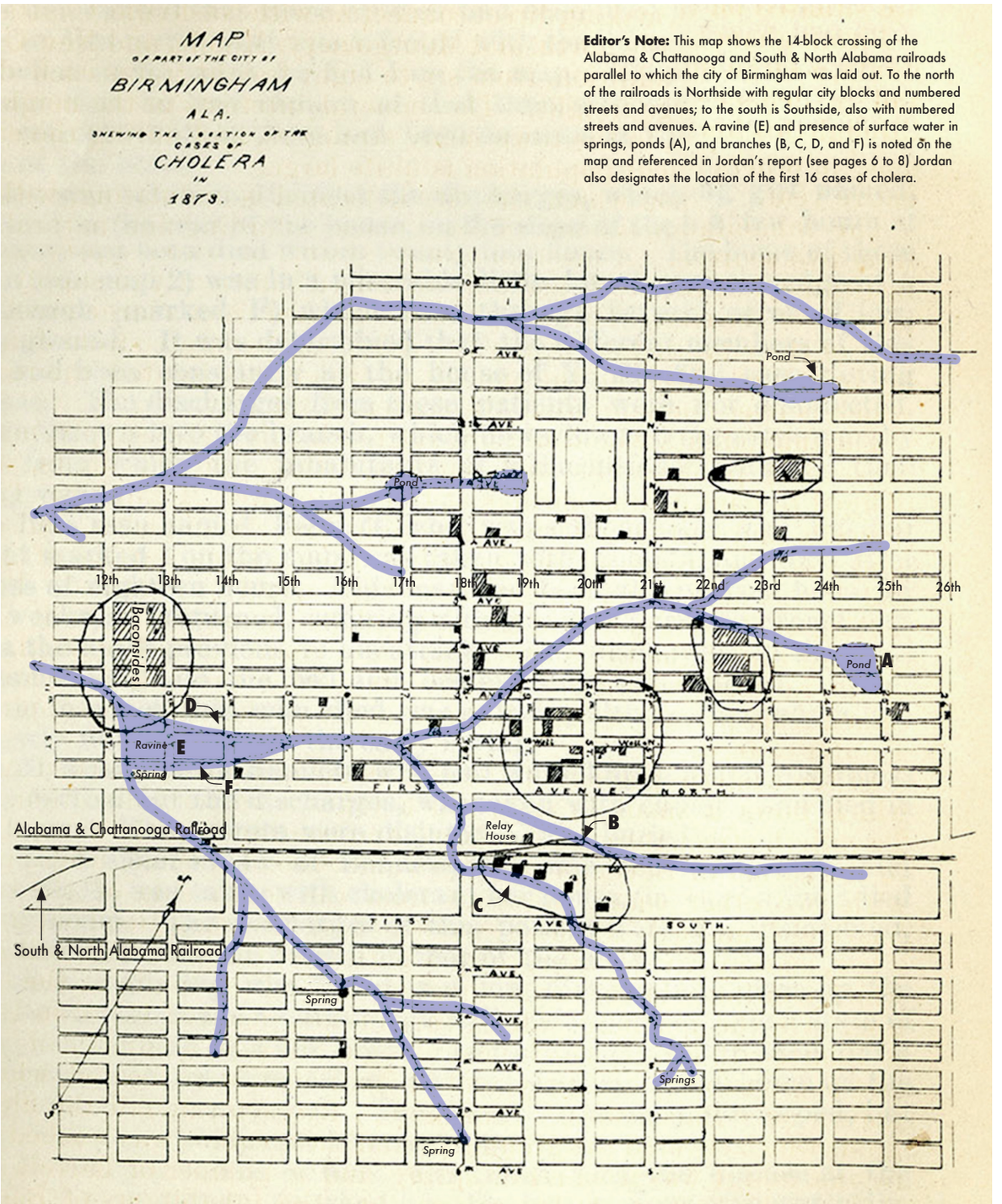

Map of Part of the City of Birmingham, Ala., showing the location of the cases of cholera in 1873, "Cholera at Birmingham, Ala., in 1873," Mortimer Harvey Jordan Jr., *Cholera Epidemic of 1873 in the United States*, U. S. Government Printing Office, 1875. Courtesy Reynolds Historical Collection, Mervyn Sterne Library, University of Alabama at Birmingham.

About the author: Mortimer Jordan Jr. (1844-1889), son of Jefferson County planter Mortimer Jordan and his second wife, Connecticut-born school teacher, Amy Welton Jordan, studied at the University of Alabama, served in the Confederate army, returned to study medicine with his uncle Nathaniel Hawkins and graduated, first in his class, from the Miami College of Medicine in Cincinnati, Ohio. In 1873, he set up practice as a physician and surgeon in Birmingham. He authored numerous medical papers, served as an officer of the Jefferson County Medical Society and of the Alabama Medical Association, and taught at the Medical College of Alabama in Mobile. He died of tuberculosis in 1889. His widow Florence built a grand house on Highland Avenue at Rhodes Park in the years 1906 to 1908.

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Birmingham's Cholera Epidemic of 1873 (continued)

Cholera is an acute disease of the small intestine, with severe watery diarrhea, vomiting, and rapid dehydration. It has a fatality rate of 50 percent or more when untreated. Today, it is known that cholera is spread mainly by water and food contaminated with sewage. In 1873 it was thought that cholera was an airborne disease. No one in Birmingham had experience with the disease when the epidemic broke out in the summer of 1873.

Studying and Mapping Cholera

In a seminal act of modern public health epidemiology, John Snow M.D. documented and mapped the transmission of the 1854 cholera epidemic in London. His detective work demonstrated that the disease was transmitted through water, not air as was thought at the time. In 1886 the discovery of the *Vibrio cholerae* bacterium confirmed Snow's theory that cholera is spread mainly by water and food contaminated with sewage. In Birmingham, Mortimer Jordan mapped the 1873 cholera epidemic in a manner strikingly similar to that of London's Dr. Snow (*see facing page*). Jordan also found that cholera spread through water and food contaminated by sewage. It is not known whether Jordan copied Snow or arrived at his method of analysis and conclusions independently. Jordan led the response to the Birmingham epidemic. Afterwards he authored numerous reports on the outbreak and contributed the essay that is reprinted on pages 6 to 8 of this newsletter.

Mortimer Jordan's Report

Jordan's narrative documents Birmingham's topographic conditions, including its limestone substructure, surface water accumulations, and the oft low and marshy conditions in Jones Valley, the valley in which the then two-year-old city of 3,000 was located at the crossing of two railroads. Jordan also describes crowded housing, lack of basic sanitary efforts, and the constant influx of persons arriving via rail. While he felt that these conditions contributed adversely to the spread of the disease, he correctly identified the "specific poison of cholera" as the cholera excretions. The municipal water system, then under construction, provided water from Five Mile Creek for the town's principal business, the Relay House hotel. It remained free of the epidemic despite its location alongside the railroads where the disease prevailed.

Jordan details the start of the epidemic on June 12 in "Baconsides," a residential district at the western crossing of the railroads along 14th Street North in which the company that founded the city donated lots for the future 16th Street Baptist and St. Paul's Methodist Churches. By July 1, the outbreak was declared epidemic across the entire city. As many as 1,500 persons fled the city and never returned. Jordan and his fellow physician, James B. Luckie; members of the clergy; and the "women of the town" remained and nursed the sick and the dying. (The prominent madam, Lou Wooster, penned her reminiscences of the epidemic as the *Autobiography of a Magdalen*, published in 1911 by John C. Henley Jr.) A national financial panic contributed to the woes of the infant city that was established by hopeful speculators to be the city center of the Alabama mineral region. Recovery from the pandemic and the financial panic would be slow. The region's famed mineral resources had yet to be exploited, and significant iron and foundry industries had not been established.

Keep the Civic Flame Alive

On New Year's Eve of 1873, Charles Linn, the Swedish born sea captain and Montgomery merchant who threw his lot with the infant city, orchestrated a celebration to signal the survival of the city and the opening of his bank, The First National Bank of Birmingham. Linn's Calico Ball gathered Birmingham's elite to dance the night away. Dr. Mortimer Jordan and his wife, Florence Mudd Jordan, were in attendance, as were Dr. and Mrs. James Luckie and William and Jane Ketcham, the proprietors of the Relay House. During 1874, hotelier William Ketcham placed newspaper advertisements offering a sublease on the Relay House that he managed. There were no takers. Difficult economic conditions persisted in Birmingham for many years. (A boom would eventually come in 1886!)

State Support for Public Health Initiatives, 1875-1917

Alabama's State Board of Health was organized in 1875. Legislation provided for county boards and county medical societies. The medical societies received the authority to name municipal and county health officers. This state legislation required county health departments to supervise all sanitary work, advise in health matters, inspect public institutions, educate the public concerning sanitation, administer vaccines and quarantines, investigate and prevent disease, and promote sanitary drainage.

Despite the 1875 authorization, no full-time Jefferson County health department was organized for more than 40 years. Beginning in 1880, a single part-time physician served both Birmingham and Jefferson County. Physicians Thomas Parke and Russell Cunningham served in this capacity, successfully advocating for improvement of conditions for convict miners. During this time, several of Birmingham's industrial corporations—especially Tennessee Coal & Iron Company (TCI) and ACIPCO—provided on-site (at their company facilities and towns) care for their employees and their families.

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Employees Hospital of the Tennessee Coal & Iron Company, later Lloyd Noland Hospital, would open in 1919 in Fairfield to provide an advanced standard of health care to industrial workers and their families.

In 1917, Dr. Judson Dowling became Jefferson County's first full-time health officer in the county's newly created Health Department. Dowling upgraded the department's budget and its professional staff, just in time to coordinate the region's response to the influenza pandemic.

The Spanish Flu of 1918-1919

While historians still debate the origin of the 1918 flu, it is clear that it did not originate in Spain. The Spanish press first reported an outbreak of this influenza, leading to the flu's best-known moniker. The Spanish, however, called it the "French flu."

> 100 years ago, an influenza (flu) pandemic swept the globe, infecting an estimated one-third of the world's population and killing at least 50 million people [including 675,000 Americans]. The pandemic's death total was greater than the total number of military and civilian deaths from World War I, which was happening simultaneously. . .. The pandemic is commonly believed to have occurred in three waves. Unusual flu-like activity was first identified in U. S. military personnel during the spring of 1918. Flu spread rapidly in military barracks where men shared close quarters. The second wave occurred in the fall of 1918 and was the most severe. A third wave of illness occurred during the winter and spring of 1919…. Four pandemics have occurred in the past century: 1918, 1957, 1968, and 2009. The 1919 pandemic was the worst of them. But the threat of a future flu pandemic remains. A pandemic flu virus could emerge anywhere and spread globally.
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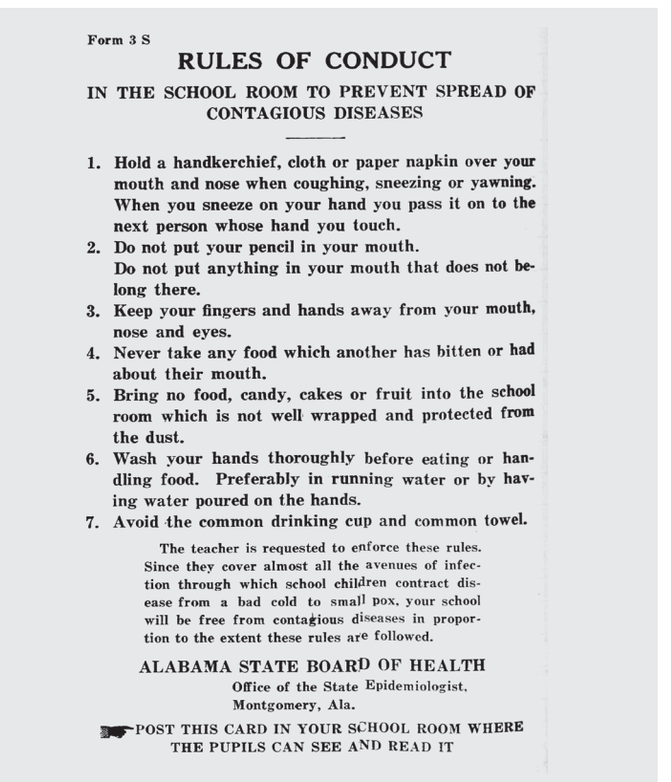
> —"The 1918 Flu Pandemic: Why It Matters 100 Years Later," *Public Health Matters Blog*, Centers for Disease Control and Prevention, 2018.

The Flu Comes to the U. S. and to Jefferson County

The first reported case in the United States was in the U.S. Army in Kansas in March 1918. The first reported case in Alabama was in Huntsville in September 1918. On October 7, 1918, Dr. J. D. Dowling, the Jefferson County Health Officer, announced that flu episodes in Jefferson County made it too deadly to ignore this fast-growing problem and recommended that "all places of public assembly" be closed. Birmingham and Jefferson County closed schools for two weeks. Birmingham closed all public meetings, including churches, Sunday schools, and the state fair. Hospitals filled to capacity, and black and white high schools were converted to segregated emergency hospitals. While care was available in the city, family members and neighbors cared for the sick in the countryside.

This flu was deadly to people of all ages. Death came quickly. Same day burial and mass graves became common practice as the flu surged. During the last two weeks of October 1918, 37,000 persons contracted the disease in Jefferson County. Health officer Dr. Dowling urged citizens to wear gauze masks, stating that they were "the most practical and efficient general method at our command to limit the spread of influenza." Over the objections of many pediatricians, schools reopened November 4 as the armistice ended World War I on November 11, 1918. The flu had essentially finished with Alabama by February 1919. The number of statewide deaths during 1918 from influenza and pneumonia was estimated at 9,401. The total number of deaths during 1919 from influenza and pneumonia was reported as 5,053 persons. During 1920, the State Health Board sent "Rules for the Prevention of Contagious Diseases" to every teacher in the Alabama and reported them to be "found in the majority of the schools." The effectiveness of the public health measures is not known. In 1920 3,100 cases of influenza and pneumonia in Jefferson County and 687 deaths as the epidemic came to a welcome close.



Form 3 S

RULES OF CONDUCT

IN THE SCHOOL ROOM TO PREVENT SPREAD OF CONTAGIOUS DISEASES

1. **Hold a handkerchief, cloth or paper napkin over your mouth and nose when coughing, sneezing or yawning. When you sneeze on your hand you pass it on to the next person whose hand you touch.**
2. **Do not put your pencil in your mouth. Do not put anything in your mouth that does not belong there.**
3. **Keep your fingers and hands away from your mouth, nose and eyes.**
4. **Never take any food which another has bitten or had about their mouth.**
5. **Bring no food, candy, cakes or fruit into the school room which is not well wrapped and protected from the dust.**
6. **Wash your hands thoroughly before eating or handling food. Preferably in running water or by having water poured on the hands.**
7. **Avoid the common drinking cup and common towel.**

The teacher is requested to enforce these rules. Since they cover almost all the avenues of infection through which school children contract disease from a bad cold to small pox, your school will be free from contagious diseases in proportion to the extent these rules are followed.

ALABAMA STATE BOARD OF HEALTH
Office of the State Epidemiologist,
Montgomery, Ala.

POST THIS CARD IN YOUR SCHOOL ROOM WHERE THE PUPILS CAN SEE AND READ IT

"Rules of Conduct in the School Room to Prevent Spread of Contagious Diseases." *Annual Report of the State Board of Health*, 1920. Lister Hill Library of Life Sciences, courtesy Peggy Balch.

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Official State Reports on the Flu

In 1919 and 1920, Alabama's State Department of Health included a report on the impact of the Spanish flu in Alabama in their annual report.

> Following the usual lines of travel it spread and finally found its way into every county and into every settlement in the State. Physicians were too busy treating the sick to report promptly either cases or deaths. It is safe to say that about one in seven of the inhabitants of Alabamians suffered from the disease, which resulted in a mortality rate far exceeding that from any other epidemic at that time.
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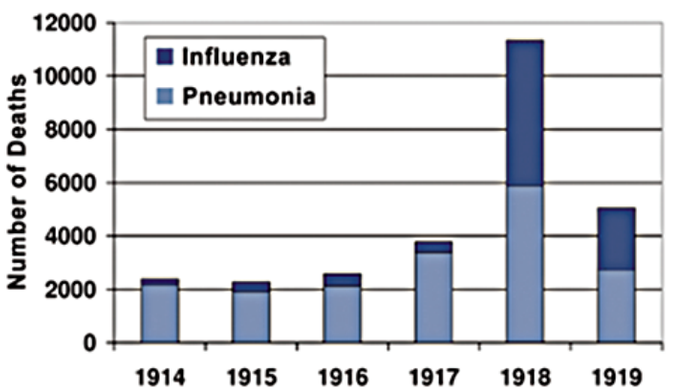
> — *Annual Report of the State Board of Health of Alabama,* January 1-December 31, 1918.



"Alabama Influenza and Pneumonia Deaths (1914-1919)." *Annual Report of the State Board* of *Health*, 1919. Lister Hill Library of Health Sciences, courtesy Peggy Balch.

> The epidemic of influenza which began in the latter part of January [1919] and reached a peak in the early days of March was nothing like as widespread nor as fatal as was the epidemic of a year ago. Its appearance in communities was not attended with the same degree of panic characterized by the 1918 epidemic. No measures have yet been discovered which promise to adequately control the spread of the disease. All health authorities agree that assemblage of people in close apartments tends to the spread of the disease. The majority believe that it is a droplet infection and spreads by close contact. . .. The reports of the U. S. Army will be available in the course of a few months, which will add very greatly to the sum of our knowledge of this and all other respiratory diseases.
>
> — *Annual Report of the State Board of Health of Alabama,* January 1, 1919-December 31, 1920.

Members Share Family Flu Stories

Birmingham Historical Society members have contributed to this brief history of the Spanish flu in Birmingham with remembrances passed down in their families.

"I had always heard that my great uncle Arthur Meredyth Roberts died in France during World War I, I assumed of the flu. My grandmother Anne Roberts Gayler's unpublished manuscript, written after her hundredth birthday, includes written accounts documenting her brother's sickness and death. On July 14, Bastille Day, the French national holiday, Roberts, then a U. S. airman in Tours, France wrote, 'While all France celebrates, I am in the hospital with what they call the Spanish flu, and the darned thing has left me so weak they won't let me fly a bit. The nurse is taking away my pencil.' Roberts died in Issoudun, France on October 18, 1918. The exact cause of death is not known. However, his mother traveled to France to make certain that his remains and those of Birmingham native Mortimer Jordan III were returned for burial in Arlington National Cemetery.

"Mrs. Gayler, the wife of a Navy engineer Ernest von Rotteck Gayler, who was then living in Haiti, summarized the Spanish flu: 'In 1918 the ghastly flu killed in terrifying number and if one sneezed it must have been as in the time of the Great Plague in London. People said God Bless You in fear and fled. Everyone was wearing gauze masks.' "

— Belle Sumter Coleman

"My Grandmother Bishop, who grew up in Greenbrier County, West Virginia, kept a diary. The Spanish flu of 1918-1920 reached her very small, very rural farming county in the state of West Virginia; it was not just a city thing. She and her mother constantly took food to others who were so ill. The words pandemic, quarantine, Spanish influenza, etc. are never mentioned in her diary, but her diary entries record more deaths during the 1918 to 1920 period that at any other time.

— Carolanne Griffith Roberts

"My grandmother, Muggie Collins, spoke primarily of pneumonia and tuberculosis. Medical doctors were few or nonextant in rural Perry and Bibb counties. Using herbs and home remedies, neighbors and family cared for the sick. Severe cases were housed in a shack near the main house so that other family members would not become sick. Death was certain in most cases. My grandmother told the story of a relative who died and was unceremoniously wrapped in his bed sheets and the clothes he had on and promptly buried in a box casket constructed by her brother, Huriah

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Belcher. Everything associated with the stricken person was taken outside and burned."

— Gregory Wilson

"My mother, Mary Smith Slaughter, who was five in 1918, was terrified that she would lose me to the flu. When I had a bad bout at age 30, I could feel the fear in her."

— Carol Slaughter

"Wyatt Rushton Haskell is named for his great uncle Wyatt Rushton. A Rhodes Scholar and volunteer Red Cross who before served ambulance driver, served in World War I in Europe and died on a troop ship returning home."

— Susan Haskell

"Two family members died during the 1918 flu pandemic. My great-grandmother, Dell Ten Eyck Freeman, of Worcester, Mass. died in 1918 in her home as my eight-year-old grandmother, Janice ("Grandma J"), and her sister, Barbara, listened from downstairs where they remained here at a distance once their mother fell ill to avoid infection. Just before great-grandmother passed, my grandmother said she heard her shout, "There is a God!" My grandfather Rushing, who was in the army and stationed at Augusta, Ga., also died."

— Brian R. Rushing

"In November 1918, my grandmother contracted the Spanish Flu and became deliriously ill. She recalled overhearing the doctor say that she was not going to make it. Soon thereafter as church bells rang out celebrating the Armistice ending World War I, the 24-year-old willed herself to live to care for her husband and eight-month-old child. Her "flu story" became a favorite lesson for her grandchildren."

— Cathy Adams

The Birmingham Cholera Epidemic of 1873

JEFFERSON COUNTY
CHOLERA AT BIRMINGHAM, ALA., IN 1873
BY M.H. JORDAN., Member of the Board of Health

In reporting a history of the recent epidemic of cholera as it prevailed at Birmingham, I will not discuss any theories nor indulge in any idle speculation, but will contain myself strictly to a simple, concise, narrative of events.

Our little city was terribly scourged for long weeks; our citizens became panic-stricken; many left, almost depopulating the town, and leaving the sick and indigent principally in the care of clergymen and physicians. The latter class, however, did not escape the disease, but two of their number lay for many days and nights upon the brink of the river, and it was only by the intervention of an all-wise Providence and the assiduous care of their attendants, that they recovered.

Birmingham is located in Jones Valley, near the center of Jefferson County, with the Red Mountain lying a short distance to the south and east, and what is known as Reservoir Ridge to the north and west. The stone near the surface is blue limestone, covered with a stiff clay soil, such as is usually found in the hilly portions of Central Alabama. The bed of the valley is formed by the old Silurian limestone, which doubtless was brought to the surface through the superincumbent strata, and is found throughout the entire valley, almost on edge, dipping, as we recede from the valley, to the northeast and southwest. From this fact we are led to conclude that the only water that appears on the surface or is found in wells in this valley must be surface-water, for the strata of limestone are not water-bearing, and only afford such supply of water as may have filtered throughout the strata of earth overlying the edges of this formation during the winter months, which finds a ready outlet in a southwest direction along the line of upheaval. This water finds numerous outlets at various points in the valley, as is shown by the location of the springs, to be seen on the accompanying map *(see page 2)* all of which, with others northeast and southwest of Birmingham, are situated on the line of upheaval. Birmingham is a railroad center, having about 3,000 inhabitants, a large number of whom live in houses closely crowded together, and in defiance of sanitary laws. Each day four railway trains pass through this town, making direct connection with Nashville, Chattanooga, and Louisville, in the north, and Montgomery, Mobile, and New Orleans, in the south. In addition, from six to eight freight-trains each day receive and discharge freight. The mineral interests in the neighboring mountains attract to the town many strangers, and during the summer months the transient population is quite large.

The ground upon which the city is located is undulating, with many elevations and depressions, in some places affording fine natural drainage; in others it is low and marshy, and remains damp throughout the entire year.

The inhabitants of Birmingham were in 1873 supplied with water from two sources. A most admirable system of water-supply had been instituted, but the work had only advanced sufficiently to supply a small portion of the city. This supply was obtained from a large creek northeast of the city, distant nearly two miles, and separated from Jones Valley by a high ridge over one mile from the center of the city.

The inhabitants who could not yet reach this water supply, made use of several public wells and springs within the city limits, or were obliged to haul it from springs at the foot of Red Mountain. The public wells and springs referred to were in low, damp places, and so situated that they received the washes from a large surface of ground; and it was only at such points that water could be obtained. For that portion of the city north of the railroad, being built over the greatest dip of the limestone rock, water could not be obtained. South of the railroad, where the rock-bed is nearer the surface, water is obtained from private wells. But one house in the city was supplied with a water-cistern.

In the eastern portion of the city there is a pond *(marked A),* from which flows a small branch, which takes a westerly direction, crosses Twentieth street

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through a culvert, and continues in the same direction to the corner of Seventeenth street and Second avenue, where it unites with two other small branches from the south side of the railroad *(marked B and C)*. At their junction these streams spread out and form a low, marshy ravine, overgrown a portion of the year with tall grasses, which continues in the same direction beyond the limits of the corporation. On the northern side of this ravine, from Eleventh to Fourteenth street, which pass along a hill-side, a number of shanties and negro cabins, low, dirty, and ill ventilated, were located, which were known as "Baconsides". By each rain-fall the filth of all kinds which covered the ground around these cabins was washed into the ravine *(marked E)*, and it was from a low spring and a number of barrels sunk in the marshy bottom of this ravine that the inhabitants of Baconsides and many of the white residents of Birmingham obtained their drinking water.

Until the alarm of cholera was sounded upon the streets, no effort was made by the city authorities to clean the streets and alleys, to drain and disinfect cess-pools, and wet places, nor had cleanliness been demanded in privies and stables. The first case of cholera that occurred in Birmingham in 1873 was in the person of a Mr. Y., who was taken sick on the 12th day of June and died after an illness of twenty-four hours. He was an able-bodied man, who had been in the city about six weeks, and had been perfectly healthy until the arrival of his bed and bed-clothing, which had been shipped to him from Huntsville, and which were received and used by him three days before he was taken with the disease; and it was subsequently determined that these articles had been used in the portion of the city of Huntsville that was infected with the disease. Y. was taken with cholera. His physicians had no suspicions that he had cholera at that time, although his symptoms greatly resembled it, as there had been no cases of the disease in this section of the state. No care was taken to disinfect the discharges, which were thrown on the ground in the rear of the house, on the slope of the hill, immediately above the branch *(marked D)*. No other cases occurred until June 17, when a young girl named, Hughes and her sister were taken with cholera within a few hours of each other, and both died within twenty-four hours. The home of these children was in a miserable little hovel near the edge of a small branch *(marked F)*, which runs through several acres of low, marshy ground. It was determined that the different members of this family had been constantly at the house of Y., the first case, during his illness. The discharges from these patients were not disinfected, but were thrown into the branch, which flows down to the same marshy ground from which the inhabitants of "Baconsides" obtained their drinking water. June 19, a man named Bennett, who was a shoemaker, was taken with cholera, and died after an illness of eighteen hours. This man had been absent from home for several weeks and returned, suffering with an acute diarrhoea, from Chattanooga the night previous to his attack. The discharges in this case were disinfected, and the bed and bed-clothing were burned. Under the house in which this man died was a damp, filthy cellar, which had been nearly full of water in the early spring. June 20 a comrade of Bennett, who had waited upon him in his illness and had carried out the discharges, was taken with cholera, and died in twelve hours. The excreta were disinfected and buried. June 21, a sister-in-law of Bennett, who was constantly with him until his death, was taken with cholera at her house, and died in twenty hours. The discharges of this patient were not disinfected, but were thrown into the branch in rear of the house. June 22, a negro boy was found in a low, dirty shanty close by the line of the Alabama and Chattanooga Railroad, in a state of collapse, and he died in a few hours. In the evening of the same day a negro named Edwards was taken with the disease at his home on the banks of the ravine *(marked C)*. The disease was fully developed, but reaction was established and he recovered. June 23, a negro named Eubank was taken with the disease at the residence of a gentlemen. He had copious rice-water discharges, cold skin, profuse perspiration, small, frequent pulse, and cramps in the extremities; he responded to the treatment and recovered. Great care was taken to disinfect and bury the excreta. He was kept as much isolated as possible, and no other case was developed on the premises or in the immediate neighborhood. On the same day several cases of cholera occurred at Baconsides, all of which terminated fatally within twenty hours. No disinfectants were used; the excreta were thrown upon the ground; the epidemic was inaugurated, and deaths occurred in every household. At first all of the negroes in this portion of the city who took the disease invariably died within a few hours; but when the violence of the epidemic began to subside, many recovered. Along the banks of the branch *(marked C)* upon the map are a number of cabins, in one of which Edwards, the case of June 22, had the disease, and in one of these cabins, on the 24th, Minerva, a negro girl who had nursed Edwards and carried out his dejections, was attacked, and died within ten hours. Before this girl's body was buried, two other cases occurred in the same cabin, which rapidly proved fatal. The discharges in these cases were disinfected and buried, and by order of the board of health the beds and bed-clothing were burned. The occupants of all the cabins upon the line of this branch suffered so severely with the disease that they were abandoned. June 27, Hughes, the father of the two girls who died upon the 17th, was taken with cholera, and died on the following day; the third death in the same house, out of a family of five individuals. July 1, cholera was declared epidemic over the entire city of Birmingham, and it is now impossible to give step by step the progress of the disease, for the spread of the disease was so rapid and its virulence so great that the physicians could take no time to record cases. July 2, Mr. M., who was a clerk in the city, but who slept at his home at Elyton, distant two miles, was attacked with cholera, and died within ten hours. The excreta of this case were disinfected with carbolic acid and buried. No other case of the disease occurred in the village. July 4, an excursion party of about two hundred citizens of Birmingham visited Blount Springs, some thirty-odd miles north, on the line of the South and North Alabama Railroad. They spent the day in eating, drinking, dancing, &c., and returned to Birmingham about 8 o'clock in the evening. Before daylight the next day seven of their number had died of cholera. July 7, a Mrs. H. Had slight symptoms of diarrhoea, and concluded to go to the house of her father-in law, who lived on the top of Thodes Mountain, distant about eight miles. The next day she was taken with cholera, and died in twenty-four hours. Her mother-in-law, who nursed her carefully until her death, was taken with cholera July 10, and died in twelve hours. The discharges from these cases were received upon cloths, which were washed out, and the water thrown upon the grass in the back-yard, but after the arrival of a physician they were disinfected and buried, and the bed and bed-clothing were burned. No other cases of cholera were developed in this family, although several members of it suffered from diarrhoea. July 9, was called to see Lee Anderson, the carriage-driver of Colonel T., who lived in an elevated portion of the city, in which there had been to this time no cholera, and found him with the symptoms of the disease strongly defined. This man had remained well

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until he had visited some of his friends at Baconsides. His system responded to the remedies exhibited, and late in the evening he had fully reacted, but the next morning at an early hour was found fully collapsed. It was discovered that during the night he had several times left his bed and had gone to the cistern on the premises for drink, and that he had several dejections in the yard, which were not disinfected. He died in a few hours. July 10, Colonel T., his wife, and several members of his family were taken with diarrhoea, which, with the exception of Mrs. T., yielded readily to the remedies used. This lady, however, fearing that the medicine might injure her sucking child, concluded to dose herself with Simmons's liver regulator, a proprietary medicine much in vogue throughout the Southwest; and the next day an attack of cholera was fully developed. She however reacted, and for several days seemed convalescent; her dejections contained bile; the secretion of urine was re-established, but on the fifth day she sank and died. This lady had been exposed to the disease by assisting in washing and dressing the body of a Mrs. K., who had died of cholera a few days previously in another portion of the city. The premises of Colonel T. was one of the few in the city which were provided with cisterns of rain-water, and the generous owner, thinking that cistern-water was the safest for drinking purposes, allowed free access to his water-supply to all in his neighborhood. In this portion of the city no cases of the disease had occurred until after the negro Anderson's visit to Baconsides; but after his death the persons who used this cistern-water, and the immediate neighborhood of Colonel T.'s property, suffered as severely, if not worse, than any other portion of the city.

The most popular hotel in the city, located close to the line of the railroads, around which the disease prevailed, escaped the disease. This house is built upon pillars several feet above the surface of the ground, allowing free ventilation. The drainage was admirable, the water-supply good, and the proprietor spared neither time nor expense in keeping his premises clean and disinfected.

It was observed during the course of the epidemic that wind from the south and east, or that blowing from Baconsides to the more populous portions of the city, increased the violence of the disease and the rate of mortality, while when it came from the north and west there was a decided moderation in the severity of the symptoms.

Every shower of rain apparently aggravated disease. These showers were unaccompanied with thunder, of short duration, and the subsequent heat was intense. It having been stated by some physicians of local repute in the State that the disease which prevailed at Birmingham was not epidemic cholera, it is proper to state that the exhibition of the disease, both in its introduction, its mode of communicability, and in all its symptoms, closely and fully followed the history of cholera as it is laid down by authorities.

The active treatment of the premonitory diarrhoea was most successfully instituted, and the general expression of the profession of this city is that in not a single instance where this stage of the disease was treated, and where the patient followed fully the orders given, did the disease advance to its second stage; and so marked was this immunity that it is desired to add to the testimony on record, that by proper precautions, and the observance of hygienic laws, cholera attendants may enjoy the most perfect security from the disease.

The treatment adopted was the opium and mercurial. When the stomach seemed so inactive that nothing made any impression upon it, an emetic of mustard, salt, ginger, and pepper, suspended in hot water, in many cases produced a warm glow over the surface of the body in a few moments. For the relief of cramps which would not yield to ordinary remedies, a number of dry cups applied from the neck to the sacrum, over the spine, in every case in which they were used furnished the desired relief. The use of iced water ad libitum was found injurious; in many instances the unrestrained gratification of the thirst was followed by a fatal relapse. Ice and ice-water in small quantities and at short intervals was found most useful. Many of the cases were complicated with uraemia, and the majority of these died, although they were carefully treated. Diuretics produced no good results. No condition in life, sex, or age escaped. The sucking babe and those of extreme age suffered alike from its ravages.

Before closing this paper, justice demands that we should briefly allude to the heroic and self sacrificing conduct, during this epidemic, of that unfortunate class who are known as "women of the town." These poor creatures, though outcasts from society, anathematized by the church, despised by women and maltreated by men, when the pestilence swept over the city, came forth from their homes to nurse the sick and close the eyes of the dead. It was passing strange that they would receive no pay, expected no thanks; they only went where their presence was needed, and never remained longer than they could do good. While we abhor the degradation of these unfortunates, their magnanimous behavior during these fearful days has drawn forth our sympathy and gratitude.

In closing this brief record we desire to state that, in the experience of our observations, facts will not justify us in believing that any local conditions of the soil, or peculiarity of climate, or moisture of the atmosphere, or masses of decomposing debris, either animal or vegetable, can in or of themselves produce the specific poison of cholera, "but they are the hot-beds in and on which the cholera excretions having been placed, the poison is reproduced with fatal rapidity."

Birmingham, Ala., August, 1874.

— "Cholera at Birmingham, Ala. in 1873," by Mortimer Harvey Jordan Jr., *Cholera Epidemic of 1873 in the United States*, U.S. Government Printing Office, 1875.

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