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“A Blessing in Disguise”: The Influenza Pandemic of 1918 and North Carolina’s Medical and Public Health Communities

DAVID L. COCKRELL

As the North Carolina Medical Society’s annual meeting in Pinehurst convened on a spring evening in 1919, many of the topics to be discussed that night concerned the recent influenza pandemic. Several times the discourse became pointed, the doctors’ frustration and helplessness in the face of an unseen killer still apparent. The occasion grew particularly solemn, however, when the time came to honor those who had not survived the fight against the virus. Dr. William M. Jones of Greensboro rose to give a moving oration dedicated to his departed colleagues. “It is beyond the power of man to adequately express even in part, that which has taken place since we last gathered here. Never before has a year . . . so pregnant with momentous results passed across the dial of time; a year wherein such Herculean efforts have been directed upon one object, and one wherein the effects were to affect so many people and for so long a time.” The object to which Dr. Jones referred was the pestilence that had so recently killed over thirteen thousand of his fellow North Carolinians and seventeen of his brother physicians. “I hope,” he continued, “we are a changed and improved body of men and women from what we were one year ago. Surely this has been a year to try men’s souls. . . .”¹

The pandemic that ran roughshod over North Carolina’s medical community affected the entire world.² Although the initial outbreak of the Group A influenza virus was in the United States, it was erroneously labeled the Spanish flu and caught the world unprepared for such a catastrophe. According to Alfred W. Crosby, the

1. *Transactions of the Medical Society of the State of North Carolina, Sixty-sixth Annual Meeting* (Raleigh: Edwards and Broughton, 1919), 317.

2. The plague claimed up to forty million people worldwide—more than were killed in World War I—but strangely has not generated a large body of historical literature. Book-length monographs on the pandemic are Richard Collier, *The Plague of the Spanish Lady: The Influenza Pandemic of 1918-1919* (New York: Atheneum Press, 1974); Alfred W. Crosby, *Epidemic and Peace, 1918* (Westport, Conn.: Greenwood Press, 1976) and *America’s Forgotten Pandemic: The Influenza of 1918* (New York: Cambridge University Press, 1990); Bradford Luckingham, *Epidemic in the Southwest, 1918-1919* (El Paso: Texas Western Press, 1984); William Ian Beardmore Beveridge, *Influenza, the Last Great Plague: An Unfinished Story of Discovery* (New York: Prodist, 1977). In this article the 1918 influenza outbreak is referred to as a pandemic—a disease that affects a wide geographical area. An epidemic is usually more local in nature and remains confined within a community.

pandemic's preeminent scholar, by early 1918 the ever-mutating influenza viruses reached a rare stage of uniqueness, possibly by working in conjunction with bacteria, to form a highly contagious disease to which a large percentage of the human race was susceptible. This development occurred at the exact moment that a world war was causing an immense movement of people to and from all parts of the globe. Crossing continents and leaping oceans, the deadly plague crept into every corner of the world in a matter of months, infecting almost one-half of the earth's population. The pandemic's sheer rapidity and Biblical scale still stagger the mind.³

Doctors, armed with medical skills and techniques that would be considered primitive when compared with today's standards, found themselves powerless to halt the spread of the disease or to save many of those already ill. Called the "blue death," the virus induced severe pneumonia in its victims with amazing speed as it filled their lungs with thin bloody fluid and turned their skin a dark bluish color.⁴ Numerous victims died in a matter of days, some within forty-eight hours of their first cough or sneeze. When the virulent strain swept over the United States in three separate waves beginning in the spring of 1918, the authorities were faced with a health crisis of monumental proportions. Initially, the mortality figures were slight, but then in the second stage of the pandemic, the death rate rose dramatically. Philadelphia, probably the worst hit of the large cities, reported more than forty-five hundred fatalities in one week. Passing through the population in the first months of 1919, the third wave of influenza was like the first, with many reported cases but fewer deaths than in the previous fall.⁵

Along with virtually every state in the country, North Carolina experienced an unparalleled medical emergency as the successive waves of sickness brought various degrees of suffering to different localities.⁶ At the height of the pandemic during the winter of 1918-1919, with at least 20 percent of the state's population infected, the sparse medical facilities of the era were overwhelmed by the masses of sick and dying. The majority of the patients were treated in "temporary" hospitals, which had been hurriedly established in closed public buildings and served primarily as quarantine wards. The few public health and welfare institutions existing at the time were also pushed beyond their capacities. Many victims and their dependents received assistance solely from a massive outpouring of public charity. Although the pandemic revealed severe weaknesses in the state's community wellness systems, many beneficial changes

3. Crosby, *Epidemic and Peace*, 217-221; Collier, *Plague of the Spanish Lady*, 306-308.

4. Charles M. Strong, *History of Mecklenburg County Medicine* (Charlotte: News Printing House, 1929), 127.

5. Crosby, *Epidemic and Peace*, 60-61, 72.

6. A selection of individual state histories of the pandemic includes Ann McLaurin, "The Influenza Epidemic of 1918 in Shreveport," *North Louisiana Historical Association Journal* 13 (winter 1982): 1-14; Nancy D. Baird, "The Spanish Lady in Kentucky 1918-1919," *Filson Club Historical Quarterly* 50 (July 1976): 290-301; Judith R. Johnson, "Kansas in the 'Grippe,'" *Kansas History* 15 (spring 1992): 44; Dennis J. Carr, "The Spanish Influenza of 1918 and Berkshire County," *Historical Journal of Massachusetts* 19 (winter 1991): 43-62; Gregory K. Culver, "The Impact of the Spanish Influenza Epidemic on the Jackson Purchase," *Filson Club Historical Quarterly* 65 (October 1991): 487, and "The Sick and the Dead: Self-dosage, Medical Treatment, and Burial during the 1918 Spanish Influenza Epidemic in the Jackson Purchase," *Filson Club Historical Quarterly* 68 (January 1994): 66; and Richard Peterson, "The Spanish Influenza Epidemic in San Diego, 1918-1919," *Southern California Quarterly* 71 (spring 1989): 89-105.

occurred as a result. The organizational inadequacies demonstrated by the pandemic provided a major impetus to the development of newer medical facilities and technology and gave a boost to the state's budding public health movement. In retrospect it appears that the "Spanish Lady" was not only an agent of death and sorrow that killed approximately 13,644 North Carolinians, but it was also a modernizing factor on the state's social health services.

As was the case elsewhere, North Carolinians were slow to recognize the danger posed by "le grippe." The pandemic's first wave passed virtually unnoticed, with its few deaths causing little concern among the usual cases of fatal illness prevalent in the time before modern medicine virtually eliminated such common afflictions as tuberculosis and smallpox. Who would have noticed a dozen or so influenza-related fatalities among the more than twenty-two hundred deaths that had occurred already in 1918 from typhoid fever and tuberculosis?⁷ Consequently, when flu cases surfaced on September 19 in Wilmington, the state's first city to be hard hit by the pandemic, few people became concerned. Dr. Charles Low, the city's leading public health official, assured the citizenry that they had little reason for concern and that the illness was just the "old fashioned grippe under a new name."⁸ Within a week, however, the sick had inundated Wilmington, volunteer assistance efforts had appeared, and James Walker Memorial Hospital, considered one of the state's best, was crowded to the point that several other treatment facilities had to be opened.⁹

The virus moved westward along the railroad lines, and the pattern of events that marked Wilmington's response to the pandemic reoccurred in many other cities, towns, and villages. The more densely populated areas suffered more than isolated regions. As the death toll mounted, the state government initiated steps to warn the public of the danger and advise them of what few precautions they could take against the disease. Unfortunately the government had few means of informing its citizens, and a statewide public health organization simply did not exist. The North Carolina State Board of Health had been created in 1877, but by 1918 only a handful of counties had established local health departments. Since 1909 the state had been fortunate to have Dr. Watson S. Rankin as its chief public health official. Under his guiding hand several agencies had their genesis: Guilford County established the first county health department in 1911, but Robeson County bears the distinction of having created the state's (and the nation's) first truly rural health department the following year. Rankin had first achieved recognition through his energetic campaigns against hookworm and smallpox, and his unorthodox methods in dealing with these diseases

7. "Influenza and What You Should Know about It," *Health Bulletin* 34 (November 1918): 38-39. Beginning in April 1886, the *Health Bulletin* was published monthly by the North Carolina State Board of Health and was sent without charge to North Carolinians upon request.

8. *Morning Star* (Wilmington), September 20, 1918.

9. The situation became so critical that Dr. Charles Stiles of the U.S. Public Health Service was assigned to direct operations at Wilmington's U.S. Marine Hospital. *Morning Star*, September 28, 1918. Several temporary hospitals were also established. Among these was the Liberty Emergency Hospital, which was founded by Dr. J. W. Tankersley. Although the hospital had only thirty-one beds, as many as eighty-seven patients were cared for at one time. J. W. Tankersley to Dr. Charles Low, January 22, 1919, Correspondence, 1919-1920, Records of the State Board of Health, State Archives, Division of Archives and History, Raleigh, hereinafter cited as Records of State Board of Health.



As secretary of the State Board of Health, Dr. Watson Smith Rankin was responsible for coordinating local, state, and federal relief efforts in North Carolina during the 1918 influenza pandemic. In sixteen years at the board of health (1909-1925), Rankin developed a national reputation for his efforts in public health education. An original trustee of the Duke Endowment, he is credited with persuading James B. Duke to dedicate a portion of the endowment's funds for the support of nonprofit hospitals in the Carolinas. Photograph from the Watson Smith Rankin Collection, courtesy of the Special Collections Library, Duke University, Durham.

had sometimes caused a stir. For example, known smallpox carriers were allowed to remain in their neighborhoods, where peer pressure eventually forced them to accept inoculations, a treatment many common folk viewed with suspicion.¹⁰

In 1917 Rankin and the board of health created the North Carolina Bureau of County Health Work (BCHW) to stimulate the growth of rural health departments. Ten counties participated in this pilot program, and all experienced some local resistance against this innovative endeavor. Dr. Benjamin E. Washburn, Nash County's BCHW operative, suffered professional and personal ostracism as a result of his efforts to develop that county's initial health agency. Nashville's senior physician reported the bureau's required statistical information to Washburn in a strictly "perfunctory" manner and refused to have any social contact with the official's family—the elderly doctor

10. Dorothy Long, ed., *Medicine in North Carolina: Essays in the History of Medical Science and Medical Service, 1524-1960*, 2 vols. (Raleigh: North Carolina Medical Society, 1972), 1:592-598.

obviously viewed the newcomer as an infringement on his tradition role as the area's leading health care provider. Washburn's experiences in the countryside were equally frustrating. The general population, he noted, was "more influenced and interested in what Moses and the Prophets have to say" than any arguments for the creation of a public health department. This opposition to Washburn and the bureau was rooted in the larger struggle between local autonomy and centralized authority then occurring in many rural areas as federal and state governments expanded their bureaucratic power over more and more facets of American life. The clash was particularly evident in the South, where reform movements for increased education and public health, even those for women's suffrage and prohibition, were delayed or obstructed by the intense provincialism and closed-mindedness of many communities.¹¹

All this led to anguish for Gov. Thomas Bickett when he discovered the limited powers of his governmental agencies. The governor improvised, utilizing what resources he had at his disposal. On October 3, 1918, a statement compiled by the board of health was released to the press. In a matter of days, many North Carolinians had heard of the dangers of sharing eating and drinking utensils, unrestrained sneezing or coughing, and any other means of "swapping spit." The board also recommended an initial curtailment of social functions—public gatherings were to be avoided because large groups of people confined to a small area were susceptible to "psychic waves" of coughing.¹² Governor Bickett then reissued the warning through the North Carolina Council of Defense (NCCD), an organization designed to reach into every nook and cranny of the state to maximize war mobilization. This capability was what the governor so desperately needed at the moment, and the effect was as he hoped. As every county manager received the NCCD telegram, many enacted their first anti-influenza measures.¹³

As the situation worsened, state government moved to enact stronger regulations aimed at curbing the spread of the disease. The board of health imposed a ban on almost all social interaction that made it illegal for anyone to hold an event that would draw a crowd. This restriction, if properly adhered to, would have closed all industries and businesses. But as Rankin discovered, it would be very difficult to enforce his order.¹⁴

11. Benjamin E. Washburn, *As I Recall: The Hookworm Campaigns Initiated by the Rockefeller Sanitary Commission and the Rockefeller Foundation in the Southern United States and Tropical America* (New York: Rockefeller Foundation, 1960), 145; William A. Link, *The Paradox of Southern Progressivism, 1880-1930* (Chapel Hill: University of North Carolina Press, 1992), 293.

12. Many newspapers carried the full text of the press release. See, for example, *Alamance Gleaner* (Graham), October 3, 1918.

13. See, for example, the actions of the county manager for Orange County. Entry for October 7, 1918, Loose-leaf Notebook, Orange County World War I Record, 1917-1920, Southern Historical Collection, University of North Carolina Library, Chapel Hill.

14. Many businessmen resisted the closure regulations, particularly the owners of tobacco warehouses, and Rankin had to continually remind local health boards of their obligation to keep businesses closed. "Secretary" [W. S. Rankin] to Eli Scarborough, chairman of the Wake County Board of Health, October 23, 1918. Some individuals appealed directly to the governor to authorize the reopening of businesses, but their appeals were unsuccessful. See Stanford Martin, Governor Bickett's private secretary, to W. S. Rankin, October 25, 1918. Henry Page, U.S. Food Administration representative for North Carolina, protested the influenza-related closing of a mill that produced cottonseed oil, a valuable war material. Henry A. Page to

As it turned out, many enterprises shut their doors voluntarily or were forced to do so by worker absenteeism. In addition to the ban on public assemblies, the board also imposed a quarantine that amounted to house arrest for individuals suffering from influenza.¹⁵ Most local health officials followed suit and rigorously enforced the new restrictions.¹⁶ The news of widespread suffering led Governor Bickett to once again improvise and create an organization to oversee statewide relief efforts. The "Governor's Committee," led by NCCD director Dr. D. H. Hill Jr., oversaw the formation in each county of "home relief groups," which were composed of representatives of local health boards, civic leaders, and concerned citizens. This effort was in reality a belated attempt to formalize the relationship between the State Board of Health and the spontaneous assistance activities already undertaken by members of Bickett's "committees," who had already been busy orchestrating local relief efforts. Hill appointed Benjamin Washburn as the Governor's Committee representative for the eastern counties. Washburn rode the rails day and night aiding county commissioners in developing "Central County Committees," which served as headquarters for relief efforts and clearinghouses for influenza-related statistics. A whirlwind of activity, Washburn sometimes visited two counties on the same day, bringing with him copies of a plan for committee structural organization.¹⁷

Meanwhile, the Bickett administration continued its attempts to help the stricken areas with the meager resources at its disposal. Little help was available from the federal public health service. U.S. Surgeon General Rupert Blue told Rankin that North Carolina "at this moment of national need . . . [should] endeavor to organize local available resources."¹⁸ Created in 1917, the board of health's bureau of epidemiology initiated its own relief work, but the lack of personnel and organizational capability limited its effect. During the pandemic the bureau's staff members were active in just eleven counties and were able to establish only nine assistance "corps."¹⁹ One of Rankin's pet projects was the state volunteer medical society, a wartime physician pool that floundered when many doctors refused to leave their stricken communities to serve.²⁰ Consequently, nonhealth-related bureaucrats were put to use. The grass-roots nature

Dr. John G. Blount, chairman of the Beaufort County Board of Health, October 21, 1918. All three letters are in Correspondence, 1918, Records of State Board of Health.

15. The regulation was adopted by most local health boards and stated specifically that "all persons that have had influenza are prohibited from leaving their homes and houses until such time as attending physicians shall pronounce it safe for them to do so." *Alamance Gleaner*, October 31, 1918.

16. This was not always the case. Frederick Archer, Greensboro's public school superintendent, complained to Rankin that the local health board had rescinded the closure and quarantine rules too early resulting in a new outbreak of influenza in the city. Frederick Archer to W. S. Rankin, December 6, 1918, Correspondence, 1918, Records of State Board of Health.

17. Washburn, *As I Recall*, 168-169.

18. Rupert Blue to W. S. Rankin, October 11, 1918, Correspondence, 1918, Records of State Board of Health.

19. "North Carolina Bureau of Epidemiology: Extra Work, 1919," Correspondence, 1919, Records of State Board of Health.

20. "We are in the midst of an 'Influenza' epidemic, in this city, it will be impossible for me to offer my services for work at any other point just now. . . . I feel that my services are needed here. Am sure you understand the situation." R. L. Carlton, health officer for the city of Winston-Salem, to W. S. Rankin, October 7, 1918, Correspondence, 1918, Records of State Board of Health.

ALL
Public Gatherings
PROHIBITED
Beginning Oct. 5

And lasting until further notice, all public gatherings, including public schools, church services and Sunday schools are prohibited on account of Spanish Influenza epidemic.

By Order of
County Board of Health
 State Board of Health and United States
 Public Health Service.
All Public Offices Closed to the Public

Within a few weeks of its initial outbreak in early September 1918, influenza quickly spread throughout North Carolina. In an effort to slow the pandemic, Gov. Thomas Bickett used the N.C. Council of Defense to issue a ban on all public gatherings in the state. Broadside from an unidentified county, [October 1918], in Correspondence, 1919-1920, Records of the State Board of Health, State Archives, Division of Archives and History, Raleigh.

of the North Carolina Council of Defense made it the most effective state-run assistance organization.²¹ At the same time county demonstration agents—women sent to each county to instruct local housewives on new innovations in home economics—turned their considerable talents toward the relief campaigns.²² As director of the board of health, Rankin found himself trying to coordinate these various activities and became the target of many anguished queries for medical assistance. He shuttled personnel from county to county, but the demand always exceeded the number of available caregivers.

21. The activities of the North Carolina Council of Defense are mentioned in many pandemic memoirs and official records. A report on the pandemic for Lenoir County describes the local branch of the NCCD as having been “largely instrumental” in the county’s relief effort. “Record of the Influenza Epidemic: October to December 1918, for Lenoir County,” Correspondence, 1919-1920, Records of State Board of Health.

22. In one day, county demonstration agents in New Hanover County dispensed seventy-five gallons of broth to the sick of Wilmington. *Morning Star*, October 29, 1918. Similarly, demonstration representatives offered relief to the stricken of Orange County. Entry for October 7, 1918, Loose-leaf Notebook, Orange County World War I Record, 1917-1920. In Alamance County demonstration agents made “dainty” soups for local flu patients. *Alamance Gleaner*, October 31, 1918.

Frequently he was powerless to help, as is demonstrated by his response to a request from Warsaw: "No nurse available," he wired to a local official, "you should insist on community organization as advised three weeks ago."²³ The messages continued to flow through his office, some providing a dramatic illustration of the dire situation in many areas. "Our people are dying," T. B. Attmore urgently wired Rankin from Stonewall, "the doctors are overworked and cannot do justice to the situation and we need help."²⁴

The American Red Cross augmented relief efforts, filling in the gaps left by the state government's organizational deficiencies. In many communities, when the extent of the emergency became evident, Red Cross representatives drummed up assistance committees, usually of similar composition as the "home relief" groups founded by the Governor's Committee. These ad hoc bodies established "temporary" hospitals for the infirm and soup kitchens to feed the hungry dependents of flu victims. They also organized bands of volunteers to venture into the countryside where shocking discoveries were made, such as whole households incapacitated and corpses lying unburied.²⁵ Though the efforts of these organizations and those hastily established by the state government were heroic and did much to help certain areas, they were too localized and their numbers too limited to actually help the bulk of the population.

One of the wonders of this bleak period of death and fear was the tremendous outpouring of public activism aimed at alleviating the effects of the pandemic. The inability of medical and public health institutions to minister to the majority of the sick left many stricken individuals in the hands of volunteers, mostly school-age children and older adults.²⁶ The need for public charity was even more pronounced in rural areas where the primary medical caregivers were country doctors, who at the least were overloaded with patients and at the worst were ill themselves. The efforts of these good Samaritans were occasionally channeled into relief organizations spontaneously created by local authorities; however, many people simply roved among their sickened neighbors handing out food or tending to neglected chores.²⁷ These acts of charity were a national phenomenon, as Alfred W. Crosby has indicated. When the nation's public health facilities failed, Americans "by the hundreds of thousands, did lend each other a helping hand despite the lack of institutional structure to enable them to do so and despite the deep schisms in their society."²⁸ The spontaneous assistance efforts that occurred in almost every community in North Carolina were mirrored by tens of thousands more across the country.

Orange County's response to the crisis reflects this improvised community action and its occasional impact on the county bureaucracy. As was the case in many areas,

23. W. S. Rankin to W. J. Middleton, telegram, November 4, 1918, Correspondence, 1918, Records of State Board of Health.

24. T. B. Attmore, secretary of the Pamlico County Board of Health, to W. S. Rankin, October 21, 1918, Correspondence, 1918, Records of State Board of Health.

25. Washburn, *As I Recall*, 167.

26. Crosby, *Epidemic and Peace*, 215-223. Adding to the Spanish influenza's uniqueness was its tendency to strike people that the flu usually does not disable—those in their twenties and thirties.

27. Cowanna Montgomery, interview with author, Burlington, N.C., April 15, 1995. Ms. Montgomery's father survived the epidemic and related his experiences to his daughter.

28. Crosby, *Epidemic and Peace*, 115.

CLASS OF SERVICE DESIRED		WESTERN UNION		Form 1206	
<input type="checkbox"/>	TELEGRAM	 TELEGRAM		RECEIVER'S NO.	
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<small>Patrons should mark an X opposite the class of service desired; OTHERWISE THE MESSAGE WILL BE TRANSMITTED AS A FULL-RATE TELEGRAM</small>		<small>NEWCOMB CARLTON, PRESIDENT</small>		<small>GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT</small>	

Send the following message, subject to the terms on back hereof, which are hereby agreed to

October 12, 1918.

Dr. C. W. Stiles,
Public Health Service,
Wilmington, N.C.

Kannapolis, Cabarrus County, six or seven thousand people, three doctors, 2,000 cases influenza. Doctors about exhausted. Condition urgent and serious. Please have three nurses and two doctors sent them earliest possible moment.

W. S. Rankin.

(Charge Executive Department State Board of Health)

The pandemic quickly overwhelmed North Carolina's limited medical resources. Board of health secretary Dr. Watson S. Rankin received hundreds of urgent telegrams from local officials reporting thousands of cases of influenza and requesting assistance for overworked doctors and nurses. In this telegram Rankin asks Dr. Charles W. Stiles of the U.S. Public Health Service for relief doctors and nurses to aid the citizens of Kannapolis. Telegram in Correspondence, 1918, Records of the State Board of Health.

local leaders found their public health capabilities inadequate to deal with suffering on the scale faced in the winter of 1918. After the NCCD's warnings in early October, the Orange County commissioners convened to discuss their plan of action. "It was realized at this meeting that there was no County Board of Health," Annie Sutton Cameron recalled in her unofficial minutes, "and so one was created." Recognizing the absence of any organization to marshal efforts to help those indisposed by the virus, the commissioners assembled an ad hoc system for this purpose and appointed civic leaders who, despite the danger to themselves, brought needed supplies and comfort to their ailing community, particularly people in the rural areas. In many cases the volunteers themselves procured food and supplied the transportation to deliver it, often at their own expense.²⁹ Not surprisingly, countless relief workers fell ill after repeated exposure to infection. A few died and were memorialized by their communities as heroes. In Raleigh, private funds were raised to install a water fountain near the Capitol in memory of Eliza Riddick and Lucy Page, both of whom had perished while tending the sick of that city.³⁰

These volunteers were not alone in their sacrifice. The physicians, orderlies, and nurses who fought the epidemic were pushed to the brink of their endurance. Urban hospitals were inundated with patients, quickly overwhelming already exhausted staffs. Rural doctors were also "swamped," recalled Dr. Charles Strong, a leading Mecklenburg

29. Entry for October 7, 1918, Loose-leaf Notebook, Orange County World War I Record, 1917-1920.

30. Washburn, *As I Recall*, 169-170.

County physician who sometimes made over one hundred house calls in a single day.³¹ In Northampton County, Dr. Henry Lewis was “on the go night and day” and displayed a certain fearlessness in the face of the lethal virus. It was not greed that drove these men—one physician recalled that the rush made it “impossible to keep any accounts” and what little treatment he could provide was “largely a work of charity.”³²

The best and the brightest of North Carolina’s doctors applied their skills to fighting the flu. The sick of Robeson County were blessed with Dr. Thomas Norment, who had gained professional renown by his innovative treatment of a local farmer who had lost both legs in a threshing machine accident. After skillfully finishing the job the machine had begun, the doctor fashioned a set of pads for the man’s stumps that allowed him to walk by himself. Dr. Norment’s efforts during the pandemic were described as “indefatigable.” Likewise, Dr. Paul Crumpler worked tirelessly for his fellow Sampson County residents until the virus struck him down. Years earlier Crumpler had amazed everyone when he saved a diphtheria-choked infant by performing an emergency tracheotomy only moments after learning the procedure in an adjacent building. Crumpler survived his bout with the flu and practiced medicine for another four decades.³³

Other North Carolina physicians happened to be at influenza hot spots and had experiences that would long live in their memory. In 1918 Dr. Fred C. Hubbard of Wilkes County found himself at Philadelphia’s Bryn Mawr Hospital while that city struggled through the pandemic. Sixty years later he vividly recalled the nightmarish scenes in the overfilled basement morgue.³⁴ Major M. H. Fletcher of Asheville served with the army’s medical corps and related to his Medical Society colleagues at their 1919 meeting in Pinehurst his harrowing trip across the Atlantic onboard the troop carrier *Kronland*. Flu broke out immediately after the ship left New York, according to Dr. Fletcher, and the “intolerable” conditions below decks fueled the spread of the virus:

The flu gained virulence on the boat from its inception. This was due primarily to overcrowding. . . . The ventilators were not working, . . . the life preservers, which everyone was required to wear constantly, were filthy, and could not be removed, the portholes were always closed.

Several weeks later in Brest, France, Dr. Fletcher found himself tending the survivors of the troopship *Leviathan*, which had been turned into a house of horrors by what was probably the worst flu outbreak aboard a troop transport.³⁵

The records of the North Carolina Medical Society indicate that seventeen of the state’s doctors died in the pandemic.³⁶ Among the deceased were young men of promise,

31. Strong, *History of Mecklenburg County Medicine*, 126.

32. Henry W. Lewis, *The Doctor and Mrs. Lewis* (Chapel Hill, N.C.: the author, 1980), 103; Strong, *History of Mecklenburg County Medicine*, 126.

33. The Robeson County Medical Auxiliary and Robeson County Medical Society, *Our Medical Heritage: A History of Medicine in Robeson County* (Lumberton, N.C.: Robeson Office Supplies, 1959), 21-22; Jessie P. Owens and Anne H. Hubbard, eds., *Sketches: Sampson County M.D.’s, 1736-1980* (Clinton, N.C.: Commercial Printing Company, 1980), 15-16.

34. Fred C. Hubbard, *Physicians, Medical Practice, and Development of Hospitals in Wilkes County 1830-1975* (n.p., 1978), 71.

35. *Transactions of the North Carolina Medical Society*, 284-285.

36. *Transactions of the North Carolina Medical Society*, 317-318. Influenza probably claimed many more physicians than are noted in the official records. A number of North Carolina doctors were not active

some of whom had already left their mark on the medical profession. Charlotte's Dr. James Squires, regarded as one of the best roentgenologists (x-ray technicians) in the country, sailed for France in August 1918, just as influenza settled on his home state. Twenty-nine-year-old Squires became sick shortly after arriving in France and died soon thereafter. His death was widely lamented. Another victim was thirty-eight-year-old Dr. Edgar Lassiter of Rich Square, whose "fidelity to duty" soon had him infected with the virus. Within a week, pneumonia set in and the "cultured and progressive" physician was gone.³⁷

By the end of the year the great pandemic had run its course. Soon all the dead were buried; schools, businesses, and churches reopened; and people could again walk the streets and socialize. The terrible autumn quickly became a memory that most North Carolinians wanted to forget. A mild resurgence of flu in the spring did not cause much excitement. By 1919 Dr. Benjamin Washburn noted that things had returned to "business as usual."³⁸ Everyday life did not resume so quickly for the members of North Carolina's medical and public health communities. For these professionals the knowledge that so many had languished beyond their reach, lying in makeshift shelters and tended by untrained volunteers, brought home the realization that the existing state health system was inadequate.

Upgrading of medical facilities and practices began immediately. The pandemic had made the lack of hospital bed space glaringly apparent.³⁹ In response, new hospitals began to spring up, especially in areas hard hit by the virus. In Morehead City, for example, "the press of patients, the physical demands, almost beyond endurance, on physicians, nurses, and nonprofessional attendants, plus the strain on accommodation were powerful stimuli for revision and enlargement" of the local medical center.⁴⁰ The "Hospital Age" had emerged, according to one physician, and the early 1920s witnessed the "greatest hospital movement" in North Carolina's history.⁴¹ The campaign was transformed into a construction boom when philanthropist James B. Duke, "knowing the scarcity of hospitals . . . and the handicaps under which they were laboring," created a multimillion dollar endowment to finance the development of rural

members of the medical society, and their deaths went unrecognized, or at least undocumented, by their colleagues.

37. *Transactions of the North Carolina Medical Society*, 320-321.

38. Washburn, *As I Recall*, 175.

39. Dr. L. B. McBrayer, director of the North Carolina Bureau of Tuberculosis, writing to Dr. Franklin Martin, chairman of the Advisory Commission for National Defense, was of the opinion that the state's hospitals "need to be magnified." L. B. McBrayer to F. Martin, October 1, 1918, Correspondence, 1918, Records of State Board of Health. During the pandemic W. S. Rankin received a number of complaints about the state's sparse medical facilities. F. W. Thomas, an Asheville attorney, wrote to Rankin to suggest the establishment of a state hospital where all North Carolinians could receive treatment free of charge. F. W. Thomas to W. S. Rankin, June 16, 1919, Correspondence, 1919-1920, Records of State Board of Health.

40. Long, *Medicine in North Carolina: Essays*, 1:300.

41. Dr. J. F. Highsmith, "Reminiscences of the Past and Ideals for the Future," *Transactions of the North Carolina Hospital Association, Annual Convention of the North Carolina Hospital Association in Joint Meeting with the South Carolina and Virginia Hospital Association, April 11-12, 1935* (n.p., [1935]), 17.

medical facilities.⁴² Watson Rankin, as an administrator of the Duke funds, was influential in the growth of “small community hospitals,” which he believed would lure more doctors into the state’s hinterlands, especially if the facilities were outfitted with modern equipment.⁴³ Many such hospitals were built, guided by Rankin’s handbook *The Small General Hospital*, which showcased new buildings and provided detailed architectural plans suitable for future construction.⁴⁴ Increased regulation abolished older hospitals that did not meet the “stock” codes for treatment. By the end of the decade there were actually fewer treatment locations than before the pandemic, but the quality of their care had been greatly enhanced.⁴⁵ These improvements doubled available bed space, although twenty years later North Carolina still had only half the number of hospital beds recommended by the American Medical Association.⁴⁶

Increased specialization accompanied this growth in new facilities. One-third of Mecklenburg County’s nongeneral clinics were established in 1919.⁴⁷ The pandemic particularly intensified the interest of Tar Heel physicians in postmortem investigation, an area of medical knowledge significantly furthered by the frenzied efforts of scientists to find and isolate the influenza virus in the corpses of its victims.⁴⁸

After the pandemic revealed the inadequacy of the fledgling public health system, there was an increasing awareness that more funding was needed to promote public health. The North Carolina Medical Society began to campaign for an expansion in public health agencies, even before the pandemic had run its course. In the November issue of the *Health Bulletin*, the State Board of Health issued its first and only warning about the flu, advising people to “keep their bowels open, snuff vaseline up the nose three times a day, and gargle with warm salt water.” The warning also recommended that once the flu had passed, everyone should “secure the cooperation of your neighbors in petitioning your county board of health to establish a full time health department . . . to organize the people and teach disease prevention.”⁴⁹ In a subsequent issue

42. John Wilber Jenkins, *James B. Duke, Master Builder: The Story of Tobacco, Development of Southern and Canadian Water-Power, and the Creation of a University* (New York: George H. Doran Company, 1927), 252.

43. Watson Smith Rankin, “A Million Dollars a Year for Carolina Hospitals,” *Review of Reviews* 73 (April 1926): 406-408.

44. Watson Smith Rankin, *The Small General Hospital* (Charlotte: Trustees of the Duke Endowment, 1928).

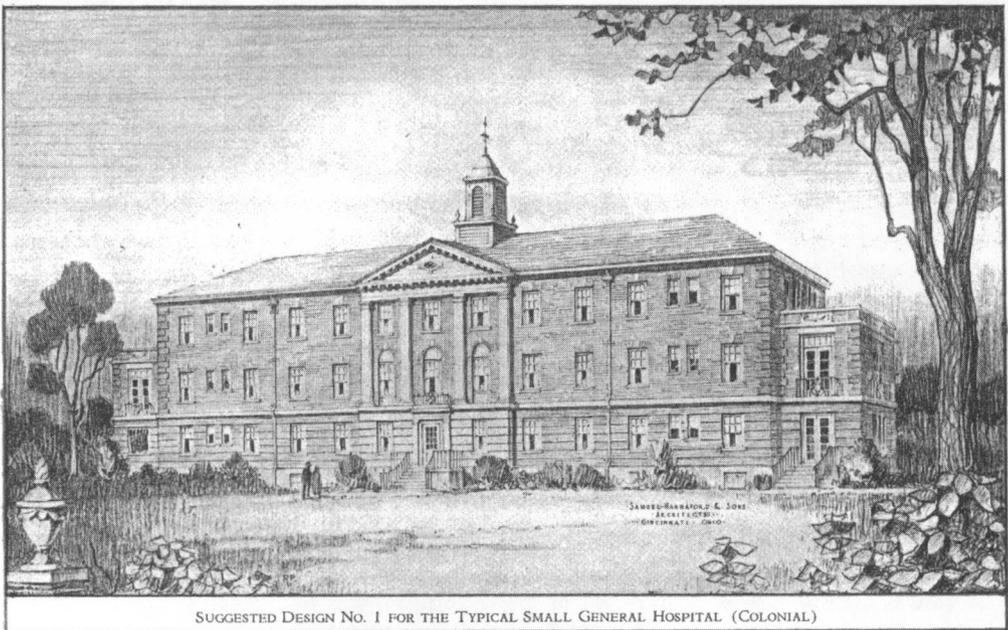
45. Hubbard, *Physicians, Medical Practice, and Development of Hospitals*, 66.

46. A 1940 report stated: “North Carolina has 128 general hospitals, approved by the American Medical Association, containing 8,475 beds, or 2.4 beds per 1,000 population. In order to bring the hospital ratio of beds to the recommended standard of 4 beds per 1,000 people, approximately 6,000 additional beds are needed. . . . In 1940, North Carolina ranked 42nd in the nation in number of hospital beds per 1,000 population.” See page 8 of “Hospital and Medical Needs of North Carolina Rural Population,” in *Report of the Committee on Rural Health Problems* (N.p., [1940]), copy in the North Carolina Collection (NCC#CP362 N87h6), University of North Carolina Library, Chapel Hill.

47. Strong, *History of Mecklenburg County Medicine*, 106-108.

48. Long, *Medicine in North Carolina: Essays*, 1:105.

49. “Influenza and What You Should Know About It,” *Health Bulletin* 34 (November 1918): 38-39. Amazingly, the pandemic was scarcely mentioned in the *Health Bulletin*. The issues of late 1918 were much more concerned with venereal disease than the virus that was quickly killing millions. For example, the September issue, which did not include a single reference to influenza, gave exhaustive detail regarding the effect of sex gland removal on humans, to the point of discussing the role of eunuchs and swimming pool hygiene. “Sex Hygiene and Character,” *Health Bulletin* 34 (September 1918): 64-72.



In 1918 North Carolina was a rural state with few hospitals, and the pandemic quickly demonstrated the insufficiency of health care available to the state's citizens. Recognizing this problem, J. B. Duke pledged 32 percent of the Duke Endowment's annual income to encourage the building of new, nonprofit hospitals and to assist these facilities in providing quality health care to all North Carolinians. In 1928 the Duke Endowment published *The Small General Hospital*, which included detailed architectural plans and specifications for the construction of a county hospital with forty-five beds. Sketch from Watson Smith Rankin, *The Small General Hospital* (Charlotte: Trustees of the Duke Endowment, 1928), facing preface.

of the *Health Bulletin*, civic leaders expressed their desire for new health departments. "Why," one unidentified official asked, "does no one come to me or my community to explain the causes of catching diseases and show me how to avoid them? Why, is there no one to discover and warn me of the presence of catching diseases in my neighborhood and to force affected persons and their families to keep their diseases at home?" Dr. K. E. Miller answered the query by suggesting that "A few dollars spent on a good health department would do away with a very large portion [of these concerns]."⁵⁰

The enhanced status of public health institutions brought both internal improvement and a heightened perspective to guide development. Watson Rankin initiated discussions on postgraduate instruction and fieldwork requirements for his health officers,⁵¹ while establishing firmer ties to other agencies such as the Red Cross.⁵² By 1920,

50. K. E. Miller, "Responsibility for County Health Work," *Health Bulletin* 35 (January 1920): 22-23. Miller was the assistant surgeon for the U.S. Public Health Service and was stationed in Tarboro during the pandemic.

51. Harry Woodburn Chase, chairman of the UNC-Chapel Hill faculty, wrote to Rankin and outlined an entire postgraduate program for public health officers. In addition to extensive fieldwork, the program included courses in sanitary engineering and epidemiology. H. W. Chase to W. S. Rankin, April 11, 1919, Correspondence, 1919, Records of State Board of Health.

52. "Agreement between the American Red Cross and the North Carolina State Board of Health for a Cooperative Plan of Work between the Two Agencies for the State of North Carolina," unsigned draft,

according to one medical society official, a “new public health” had been born: now public health workers had knowledge of “germs and their transmission,” a hard lesson learned during the preceding years and a result of the recent explosion of medical research devoted to contagious diseases.⁵³ In addition, health officials gave more attention to matters that some thought contributed to the spread of bacteria and viruses, such as the cleanliness of water supplies.⁵⁴ Rural public health particularly came under scrutiny, and resulting legislation from the General Assembly stiffened regulations regarding private sanitation practices (outhouses), school medical inspections, and the spread of venereal disease.⁵⁵

The new concern for the health of those in the countryside became part of a national movement. North Carolinians played a significant role in the creation and passage of the Lever Bill (H.R. 14185) or the Rural Health Act, which allocated federal funds for the development of rural health programs. Dr. Watson Rankin, as president of the Conference of State and Provincial Health Authorities (CSPHA) and a member of the State Health Officer's Association (SHOA), rallied support for the bill among his colleagues across the country.⁵⁶ A CSPHA delegation was sent to Washington to lobby for passage of the act, while Rankin initiated correspondence with the bill's sponsor, Representative Asbury F. Lever, chairman of the House Agricultural Committee. Lever responded favorably to Rankin's “splendid” suggestions for new rural sanitation measures that mirrored those just passed in North Carolina, but he dismissed other proposals, such as mandatory medical examinations of school children, as “dangerous propositions.” The bill was for “instructional purposes” only, Lever added, and not to provide for the actual “doctoring” of the population.⁵⁷ Still Rankin resolutely supported the legislation and used his considerable influence to keep the congressmen

Correspondence, 1919-1920, Records of State Board of Health. The first half of the agreement concerns the appointment of a public health nurse for each of North Carolina's counties and the nurse's responsibilities. The second half details the joint efforts of the North Carolina State Board of Health and the Red Cross to establish county health departments. A signed but incomplete copy of this document is in Correspondence, 1919, Records of State Board of Health.

53. “The New Public Health,” *Health Bulletin* 35 (January 1920): 3-4; Crosby, *Epidemic and Peace*, 313.

54. On December 9, 1918, Dr. Joseph F. Patterson, city physician for New Bern, wrote to Rankin expressing his concern about two new wells that were being tapped into the town's water supply. He believed that the wells were possibly contaminated by their proximity to stables and privies near the courthouse. In July 1918 he had written to Dr. C. A. Shore, director of the State Lab of Hygiene, requesting that water from the wells be tested. Dr. Shore responded by recommending that the water from the wells be tested immediately. Apparently local officials delayed having the wells tested for contaminants. See Jos. F. Patterson to W. S. Rankin, December 9, 1918; Jos. F. Patterson to C. A. Shore, July 13, 1918; C. A. Shore to Jos. F. Patterson, July 17, 1918, Correspondence, 1918, Records of State Board of Health.

55. “Health Legislation by the General Assembly of 1919,” Correspondence, 1919, Records of State Board of Health.

56. Rankin urged SPHA members to appeal to their congressmen to support the act and assured them that Representative Lever had “nothing of the demagogue pork-barrel politician about him.” See “Statement and Appeal” with accompanying circular letter, W. S. Rankin to “Doctor,” January 1919, Correspondence, 1919, Records of State Board of Health. Rankin did not limit his efforts to SPHA members. See two circular letters, W. S. Rankin to “Friend,” January 25, 1919, and W. S. Rankin to “Doctor,” February 4, 1919, Correspondence, 1919, Records of State Board of Health.

57. “Secretary” [W. S. Rankin] to A. F. Lever, January 7, 1919, and A. F. Lever to W. S. Rankin, January 13, 1919, Correspondence, 1919, Records of State Board of Health.

from North Carolina solidly behind it as well.⁵⁸ The final bill contained an appropriation of fifty thousand dollars for rural sanitation improvements, an amount that both Rankin and L. L. Lumstead of the U.S. Surgeon General's office tried unsuccessfully to have doubled.⁵⁹

These political achievements reflected or perhaps resulted from another important watershed event that had occurred—a basic change in the way the public viewed their health departments. Dr. K. E. Miller summarized this attitudinal shift. Only “a short time ago,” he wrote, “the whole-time county health officer was a novelty.” The past few years, however, had made “the idea [take] root with great rapidity” and was currently “a fixture in the minds and lives of half our state so that the people would no better know how to get along without their health officer than they would know how to dispense with their Sheriff.”⁶⁰ Ben Washburn, who had experienced firsthand citizen resistance to the public health movement, also noted the transition in public thought. “The epidemic,” he wrote, was a “blessing in disguise.” The state's population had been “brought in touch with the county health departments,” he concluded, “and there arose a better spirit of cooperation than had existed before.” Washburn also observed another side effect of the flu—the sudden creation of new public health institutions, such as the Orange County Board of Health. “In several counties,” Washburn noted, “the emergency township organizations were maintained and became valuable assets to the health department.”⁶¹

Clearly the pandemic had transformed the concept of a permanent public health organization into a concrete reality that people felt their community could not afford to be without. The health officers' new desirability was reflected in an upsurge in the establishment of new county health departments—six in one year. In the previous decade only sixteen such departments had been formed. Increased public funding allowed this expansion: in 1919 the General Assembly nearly doubled the previous year's allotment of \$15,000 for public health facilities;⁶² likewise, the board of

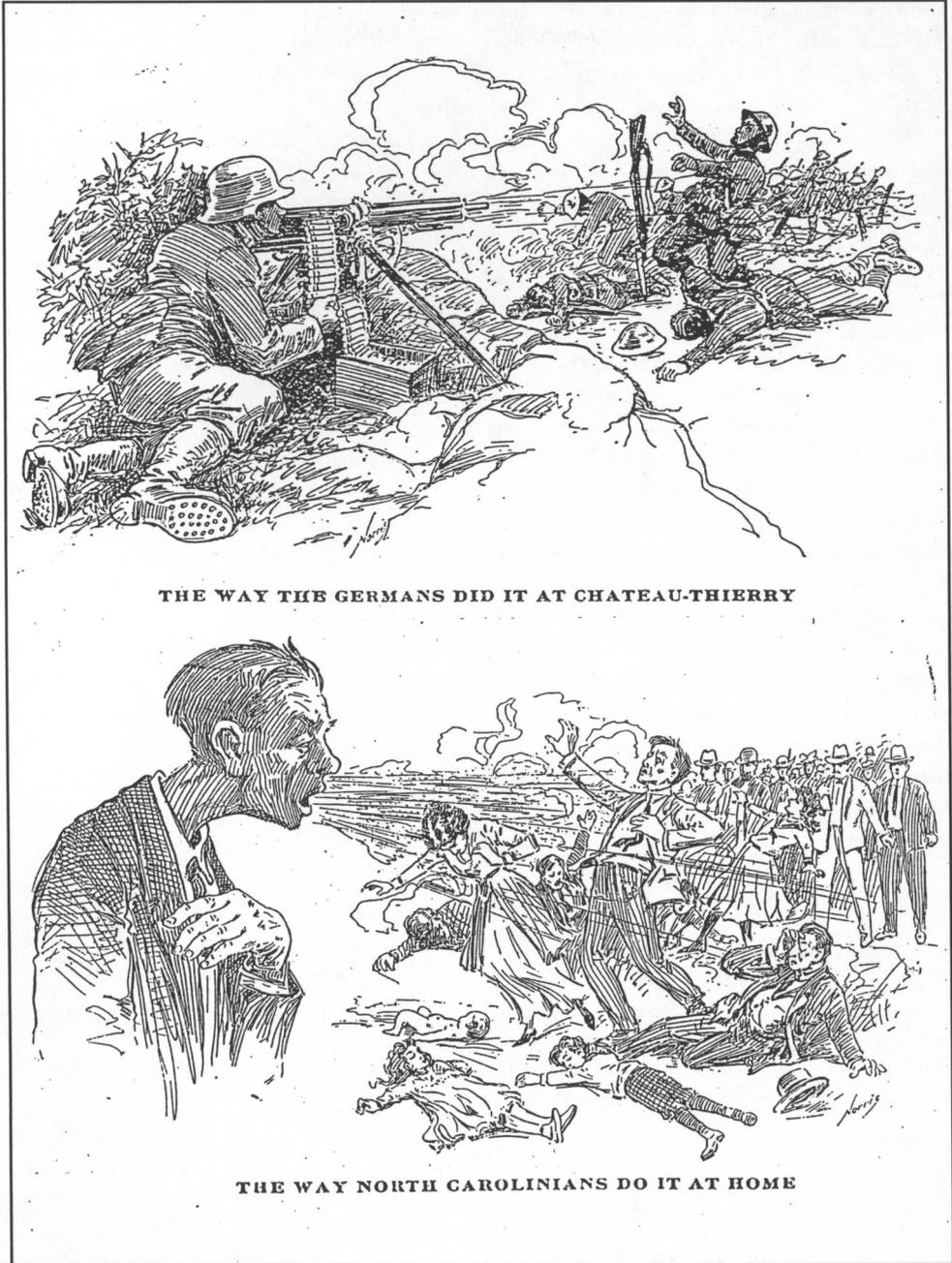
58. W. S. Rankin to A. F. Lever, February 4, 1919; “Secretary” [W. S. Rankin] to L. L. Lumstead, an official in the U.S. Surgeon General's Office, February 7, 1919, Correspondence, 1919, Records of State Board of Health. There is evidence that Rankin actually helped write the Lever Bill. He made revisions on several preliminary versions of the act and wrote a rough draft of the bill's opening statements. See “Statement” and “Program: For Each State Health Officer For Assisting In the Enactment Of Bill Providing For Rural Health Work,” enclosed in the circular letter, W. S. Rankin to “Doctor,” January 21, 1919, Correspondence, 1919, Records of State Board of Health. Rankin also authored several health-related bills for the North Carolina General Assembly. The bills concerned venereal diseases, prostitution, free medical examinations for schoolchildren, and the establishment of a state hospital to treat drug addicts. Drafts of the bills are in Correspondence, 1919, Records of State Board of Health.

59. Lumstead sent Rankin excerpts from the *Congressional Record* for June 27 and 28 that concern the debate on appropriations in the Lever Act. L. L. Lumstead to W. S. Rankin, July 18, 1919, Correspondence, 1919, Records of State Board of Health.

60. K. E. Miller, “Future Plan for County Health Work,” *Health Bulletin* 35 (January 1920): 23-24.

61. Washburn, *As I Recall*, 166-167.

62. *Eighteenth Biennial Report of the North Carolina State Board of Health, 1919-1920* (Raleigh: State of North Carolina, 1921), 21.



Dr. Watson S. Rankin and other medical officials saw public health education as the most important means for ending the influenza pandemic and for preventing widespread outbreaks of other diseases in the future. These two cartoons illustrate how the ignorance of the transmission of the influenza virus resulted in the deaths of 13,644 North Carolinians—thirteen times the number of Tar Heels killed by the Germans during World War I. Cartoons from the *Health Bulletin* 34 (October 1919): cover and frontispiece.

health's annual appropriation experienced a fivefold increase between 1917 and 1920.⁶³ As Alfred Crosby observed, the pandemic incited a "massive growth in the size and power of public health departments" throughout the nation.⁶⁴ Although only one-quarter of North Carolina's counties had full-time health agencies by the mid-1920s, the state's public health movement had turned an important corner: its role and function in society had at last been secured.⁶⁵

A last major effect of the pandemic was that it helped solidify the role of women in the field of medicine. The tireless efforts of women at the forefront of the volunteer relief movement had well illustrated the value of trained nurses, whose scarcity likewise indicated a need for increased nursing education. Durham had created its own corps of emergency caregivers by providing local schoolteachers a three-hour nursing course.⁶⁶ Dr. Charles W. Stiles, the federal government physician in charge of the Wilmington relief effort, recommended, "I know of nothing at the present moment more important in the education of the South than teaching the young women something about home nursing."⁶⁷ In 1919 these lessons were not lost on Rankin and others. Soon the board of health, in cooperation with leading educators, initiated summer sessions of "home nursing" instruction at state universities, while the *Health Bulletin* disseminated information on nursing scholarships and career opportunities.⁶⁸ Rankin decided to go a step further and appoint a permanent public health nurse to each county under his jurisdiction—a bold step considering the resistance already encountered by his male public health officers.⁶⁹ Meanwhile, a number of nurses and administrators sensed this elevation in their profession and, perhaps spurred by the recent successes of the women's suffrage movement, began to call for the creation of an independent state nursing agency.⁷⁰ These desires materialized in 1919 with the establishment of the North Carolina Bureau of Public Nursing and Infant Hygiene,

63. *Eighteenth Biennial Report, 1919-1920*, 14-21.

64. Crosby, *Epidemic and Peace*, 312.

65. *History of Medicine in the Piedmont Section of North Carolina as well as a Medical and Generalized Chronology for this Period* (Greensboro: Custom Graphic Impressions, 1985), 141.

66. Report by C. E. Waller, medical officer in charge of Camp Polk in Raleigh, to the U.S. Surgeon General [Rupert Blue], October 14, 1918, Correspondence, 1918, Records of State Board of Health.

67. [Dr. Charles Stiles] to W. A. Withers [director of the North Carolina Agricultural and Mechanical College], November 29, 1918, Correspondence, 1918, Records of State Board of Health.

68. "Facts About Public Health Nursing," *Health Bulletin* 35 (February 1919): 16.

69. Rankin outlined his plans in "Public Health Nurse in Wholtime Health Department," a copy of which is enclosed in L. B. McBrayer to W. S. Rankin, June 28, 1919, Correspondence, 1919, Records of State Board of Health. Rankin's plans are further developed in an undated draft agreement among the Red Cross, the North Carolina Board of County Commissioners, and the board of health. The draft of the agreement is in Correspondence, 1919, Records of State Board of Health. The final form of Rankin's plan for permanent county public health nurses appears in the first half of "Agreement between the American Red Cross and the North Carolina State Board of Health," Correspondence, 1919-1920, Records of State Board of Health.

70. "Resolution of the North Carolina State Nurses Association," June 12, 1919, copy enclosed in Blanche Stafford, secretary of the association, to W. S. Rankin, June 19, 1919, Correspondence, 1919, Records of State Board of Health.

whose first director, Dr. Rose Ehrenfield, saw public nurses as the “missing link” between the state health department and the general population.⁷¹

The great influenza pandemic of 1918 was indeed a “blessing in disguise” for North Carolina’s health care and public health communities; its modernizing influences on the former hastened the growth and development of medical capability and knowledge and bestowed upon the latter the legitimization it needed to proliferate among the state’s counties. The pandemic had an even more broad effect on society through its fomentation of the rural health care campaign. In reviewing the achievements of the cause to which he had become so devoted, Dr. Watson Rankin pointed to the source of the sudden public enthusiasm for his avocation. The current “progressive attitude,” Rankin surmised, was “due to the great cost in human suffering, health, and life [during] epidemic conditions and the need for providing against such conditions as impressed on our people by the recent influenza epidemic.”⁷²

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71. Dr. Rose M. Ehrenfield, “Does Your County have a Public Health Nurse?” *Health Bulletin* 36 (February 1921): 7-10.

72. “Health Legislation by the General Assembly of 1919,” Correspondence, 1919, Records of State Board of Health.