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The Impact of the 1918-1919 Influenza Epidemic on Virginia

By Stephanie Forrest Barker

Master of Arts in History, University of Richmond, 2002

R. Barry Westin, Thesis Director

In the fall of 1918 an unparalleled influenza pandemic spread throughout the world. More than a quarter of Americans became ill, and at least 600,000 died. For many Virginians, this was a time of acute crisis that only could be compared to the days of the Civil War. This thesis describes Spanish influenza's impact on Virginia, primarily focusing on the cities of Newport News, Richmond, and Roanoke. It details influenza's emergence in Virginia and explores how state and city officials dealt with this unprecedented epidemic. This study examines how the epidemic disrupted daily routines of life and overwhelmed the state's medical community. This thesis briefly discusses the effect that the segregation of races had on the spread of influenza and the role that women played in battling the epidemic. Sources used in this study include newspapers, manuscript collections, and government documents.

I certify that I have read this thesis and find that, in scope and quality, it satisfies the requirements for the degree of Master of Arts.

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THE IMPACT OF THE 1918-1919 INFLUENZA EPIDEMIC ON VIRGINIA

 $\mathbf{B}\mathbf{y}$

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CHAPTER 1

INTRODUCTION

In 1918 America's attention was focused on the war in Europe. Men had left home to fight for the Allied cause, and women had crossed the Atlantic to serve as nurses. Newspaper headlines kept the public informed of events overseas. On the home front, patriotic citizens contributed to Liberty Loan drives and made sacrifices for the war effort. During the fall, however, a deadlier threat overshadowed the war. An unprecedented influenza pandemic spread around the world, eventually claiming the lives of a wide range of people. Over one-quarter of Americans became ill, and at least 675,000 deaths resulted from influenza and pneumonia. More American servicemen died from influenza than in battle. Unlike other outbreaks, this strain of influenza targeted the most productive members of society: young men and women between the ages of twenty and forty.¹

The influenza epidemic tested all levels of government and overwhelmed a medical system already depleted by the war effort. Health organizations mobilized to contain influenza, but authorities could do little except offer methods of prevention. Doctors and nurses were in great demand, and many communities opened emergency hospitals to treat the most serious cases. The battle against influenza was waged by

¹Alfred W. Crosby, Jr., *Epidemic and Peace*, 1918 (Westport, Connecticut: Greenwood Press, 1976), 205-07.

courageous men and women who set aside their fear of this deadly illness and volunteered to aid the sick.

During the fall outbreak in the United States, influenza first emerged among men stationed at military bases and ports on the East coast. It quickly spread throughout the civilian population of neighboring cities and towns. Federal, state, and local officials wrestled with what course of action to pursue. Health authorities often disagreed about the benefits of closing ordinances and quarantines. Although the epidemic peaked in many eastern cities by mid to late October, influenza remained a threat throughout the remainder of 1918.

Virginia did not escape the ravages of what commonly was referred to as "Spanish Influenza." During October 1918 life in the state was disrupted by the pandemic. Schools, churches, and a variety of public places closed their doors during the epidemic's peak. Newspaper obituaries were filled with the names of young men and women whose lives had been cut short by influenza. Although the epidemic abated in November, influenza reappeared the following month in a less deadly form.

By the beginning of 1919 life was returning to normal in Virginia and in the United States. The war had ended and Spanish influenza had mysteriously disappeared. The impact of the influenza outbreak faded from memory with the passage of time. The influenza pandemic, however, should not be forgotten. The fall of 1918 was a time of acute crisis as communities struggled to combat a menacing illness that attacked an alarming number of the most productive members of society.

CHAPTER 2

THE FALL OUTBREAK: SEPTEMBER – NOVEMBER 1918

Scientists remain uncertain about the origins of the influenza pandemic. In March 1918 an influenza outbreak was reported at the Camp Funston training base in Kansas. That same month, military installations in the Midwest and the Southeast reported cases of influenza. This milder first wave largely went unnoticed in the United States. By April the epidemic had spread to Europe where it quickly infected American, British, French, and German troops.¹

In May, the *New York Times* noted that a mysterious illness, similar to the grippe, was spreading throughout Spain: "This malady attacks all classes, from the King down to his humblest subjects." It was speculated that this disease originated in Germany and would spread to other nations. Because news in Spain was not censored during the war, many details about the epidemic in that nation were reported. This severe form of influenza soon became known as "Spanish influenza," though German troops dubbed the illness "Flanders Fever." The disease ravaged Europe and appeared in other countries

Gina Kolata, Flu: The Story of the Great Influenza Pandemic of 1918 and the Search for the Virus that Caused It (New York: Farrar, Straus and Giroux, 1999), 10-12; Crosby, Epidemic and Peace, 18-25; K. David Patterson and Gerald F. Pyle, "The Geography and Mortality of the 1918 Influenza Pandemic" Bulletin of the History of Medicine 65 (1991), 5.

including India, China, Australia, and New Zealand. During the summer, however, the virus seemed to fade from these hard-hit nations.²

By late summer a more lethal strain of the influenza virus had returned to the United States. In mid-August several European ships arrived in New York City carrying passengers who had become ill during the voyage. Over 200 cases of influenza had developed on a Norwegian liner. Local health officials objected to a quarantine of these ships believing that Spanish influenza was nothing more than the familiar grippe.³

The fall outbreak of influenza first struck East Coast military installations.

Boston's Commonwealth Pier was the focal point of the epidemic when the second wave hit the United States in late August. Within days Spanish influenza spread to the civilian population of Boston. On September 8, nearby Camp Devens reported an outbreak of influenza. The flu also appeared at a naval base in Philadelphia, the Marine training camp at Quantico, Virginia, and the Great Lakes Naval Training Station in Chicago.

After attacking the navy bases, influenza struck the army. The numerous and widespread army camps helped spread influenza throughout the United States.⁴

²New York Times, 31 May, 21 June 1918; Crosby, *Epidemic and Peace*, 26-29; Patterson, "The Geography and Mortality of the 1918 Influenza Pandemic," 7-8; Kolata, *Flu*, 12.

³Patterson, "The Geography and Mortality of the 1918 Influenza Pandemic," 8; *New York Times*, 22 September 1918.

⁴Crosby, *Epidemic and Peace*, 39-40, 56-62; Kolata, *Flu*, 13; *New York Times*, 22 September 1918.

Influenza first appeared in Virginia at army camps and naval bases. On September 13 an "acute respiratory infection" developed at Camp Lee, near Petersburg. At 9:30 P.M. a newly arrived soldier from the Fifth Battalion, Depot Brigade, was sent to the base hospital. A few hours later, ten additional cases were reported in other sections of the camp. Fearing an epidemic, camp officials banned all forms of public gatherings and canceled motion picture and theater shows. Three days after the outbreak began, the base hospital could not care for the number of men that had fallen ill. By the morning of September 16 there were 500 cases of influenza at Camp Lee. To treat the influenza victims, base officials established special infirmaries in the squad rooms of the company barracks.⁵

The commanding general of the cantonment, Brigadier-General Charles A.

Hedekin, believed that a quarantine would be ineffective because Spanish influenza already had spread throughout the East. The camp surgeon, Charles Y. Brownlee, did recommend preventive measures. To halt the spread of the airborne disease, curtains were placed around the head of every cot on the base. In addition, patients had to wear gauze masks when they were being transported to an infirmary. The doctors warned soldiers to watch for symptoms of influenza such as severe chills, headache, back pain, high fever, and acute nose and throat irritation.⁶

⁵Richmond Times-Dispatch, 15, 17 September 1918.

⁶Ibid., 17 September 1918.

By September 20 Spanish influenza had surfaced in nine army training camps in the United States. Out of the 9,313 cases reported, 6,583 existed at Camp Devens in Massachusetts. Within three days, influenza had appeared at eighteen additional camps, and Camp Devens reported 424 new pneumonia cases. Camp Dix, New Jersey had the second largest number of cases with 1,897 sick. Camp Lee also reported over 1,000 cases of influenza. The transportation of army troops in crowded trains worsened the spread of the disease. Twelve of 239 members of the 328th Labor Battalion were ill when the group left Louisiana for Virginia. When they arrived in Newport News, over one hundred soldiers had become sick, and sixty additional men soon developed influenza. After the senior medical officer of the Norfolk Naval Base announced 150 influenza cases, officials quarantined the military installation.

By September 26, the number of influenza cases in army camps totaled 35,146, pneumonia cases numbered 3,036, and 700 individuals had died. Only thirteen camps remained free of influenza. Two days later, army camps reported over 16,000 additional cases of influenza. While the number of new cases had decreased at Camp Devens, other bases experienced an increase in new cases. More than 2,600 cases had developed at Camp Lee. Camp Eustis, Virginia reported twenty-six cases for the first time. Camp Devens still reported the largest number of deaths, the majority resulting from influenza patients who had subsequently contracted pneumonia. A quarter of the soldiers at Camp

⁷Ibid., 19, 21, 23 September 1918; Crosby, *Epidemic and Peace*, 62; *Newport News Daily Press*, 19 September 1918.

Devens had contracted the flu, and ten percent of these cases had developed into pneumonia.8

Influenza forced the War Department to reduce the transport of troops to France by at least ten percent. The provost marshal canceled the entrainment of 142,000 white men scheduled for October 7 to 11. These soldiers were to have reported to training camps throughout the United States. The War Department took precautions to halt the spread of influenza, but acknowledged that more camps would be affected. To alleviate the crowding of troop trains, only one soldier was allowed in each seat and berth.

Officials also dispatched additional doctors and nurses to the camps where the epidemic was the most serious.

Camp Lee authorities hesitated to enact a quarantine of the entire base, but did advise relatives not to visit the camp until they learned if their family member was ill and quarantined. Medical authorities also launched an educational campaign to inform soldiers about the precautions to take against the disease. Camp officials gave addresses on sanitation and health inspection. Doctors warned soldiers to refrain from talking directly to another person and to avoid crowds. Soldiers were expected to keep a partition around their bed and avoid using dirty towels and drinking cups. Breakfast was

⁸Richmond Times-Dispatch, 25, 27, 29 September 1918, New York Times, 27 September 1918.

⁹Richmond Times-Dispatch, 27 September 1918; Newport News Daily Press, 27 September 1918; Crosby, Epidemic and Peace, 62.

postponed by twenty minutes to give soldiers extra time to tend to personal hygiene.

Health officials instructed soldiers to contact a doctor if they began to feel sick. 10

The epidemic at Camp Lee concerned officials in Richmond. The head of the Richmond Health Department, Dr. Roy K. Flannagan, believed an unprecedented outbreak of the disease was inevitable and warned residents that he "would not be surprised if we were visited by the most widespread epidemic of grippe the city has ever known." To prepare for Spanish influenza, he visited Camp Lee to study the precautions officials had implemented. He also issued a special bulletin about influenza that city residents could obtain from the Health Department. The Health Department displayed posters in restaurants, hotels, and streetcars informing the public about the prevention of influenza. Flannagan warned the public to avoid crowds and poorly ventilated areas. He directed residents to walk to work or school rather than ride on streetcars. ¹¹

As Flannagan had feared, influenza began spreading from army camps to other areas of the state. By the beginning of October the epidemic was underway in Richmond (the population of Richmond was approximately 170,000). Local doctors had reported 340 cases of the flu by noon on September 30. Five hours later the total had risen to

¹⁰Richmond Times-Dispatch, 22, 29 September, 12 October 1918.

¹¹Ibid., 18, 20, 29 September 1918.

425. In addition to the cases that developed on military bases, 19,512 influenza cases and 359 deaths were reported in Virginia during September 1918.¹²

Richmond and state officials debated whether to quarantine Camp Lee.

Flannagan met with State Health Commissioner Ennion G. Williams to consider if soldiers from the army base should be prevented from entering Richmond. Flannagan also addressed the closing of schools and other public places. Because Richmond was faring better than other areas of the country and no deaths had occurred, Flannagan maintained that no drastic action was needed. He promised to protect children by barring students from attending school if their homes were infected. Flannagan acknowledged that if the situation worsened, he would have no choice but to close schools and other public places.

13

The *Times-Dispatch* urged the public not to panic and voiced its support for the military quarantines:

Unfortunate as health conditions are, there is no reason for the people as a whole to be alarmed. . . . Often before the country has experienced epidemics of a similar character, if not identical in diagnoses. The plain every-day "grippe" has had its day again and again. . . . for the time being the military camps are the most fertile fields for influenza. . . . it is important to quarantine each soldier or even each company of soldiers. All the army medical officers can do is to act swiftly just as soon as the outbreak manifests itself. The disease will be conquered in the

¹²John Andriot, ed., *Population Abstract of the United States* (Mclean, Virginia: Andriot Associates, 1983), 828; *Richmond Times-Dispatch*, 1 October 1918; *Annual Report of the State Board of Health and the State Health Commissioner to the Governor of Virginia for the Fiscal Year Ending September 30, 1919* (Richmond, Virginia, 1920), 7. Hereinafter cited as Annual Report of the State Board of Health.

¹³Richmond Times-Dispatch, 1 October 1918.

camps and elsewhere. It may take a heavy toll meanwhile, but it will sooner or later surrender to science. 14

Roanoke health officials also urged the public to remain calm. City Health Officer Dr. W. Brownley Foster expected many influenza cases to develop, but advised people to take a "sane view" of the epidemic: "The one big question is whether there is sufficient reason for becoming panicky. People have the idea it is something new, dreadful and with unknown dangers. It is the same old grippe we have had all the time, but we do not know the essential causes for its being now pandemic." Foster initially opposed the closing of schools and churches. He warned residents to avoid public gatherings and urged the sick to remain at home until all symptoms of influenza had passed. ¹⁵

By early October Spanish influenza had affected every region of Virginia. Both state and local health officials continued to educate the public about the disease and warned people to avoid crowds. The State Board of Health distributed 20,000 placards and 100,000 bulletins explaining methods of prevention (see figure 1). Postmasters, school officials, and local defense councils helped disperse these materials throughout Virginia and urged the public to reprint and re-circulate these bulletins in their communities.¹⁶

¹⁴Ibid.

¹⁵Roanoke Times, 28 September 1918.

¹⁶Annual Report of the State Board of Health, 6; Richmond Times-Dispatch, 16 October 1918.

SAVE YOURSELF

FROM INFLUENZA AND

PNEUMONIA BAD COLDS MEASLES TUBERCULOSIS DIPHTHERIA SCARLET FEVER WHOOPING COUGH MENINGITIS MUMPS

FOLLOW TWO SIMPLE RULES

RULE 1

Whenever you cough or sneeze, bow your head or put a handkerchief over your mouth and nose.

RULE 2

Don't put in your mouth fingers, pencils, or anything else that does not belong there, nor use a common drinking cup.



The Germs of these Diseases are spread through the secretions of the mouth and nose of sick people and carriers.

Furnished by THE VIRGINIA STATE BOARD OF HEALTH
PLEASE POST: Council of National Defense, C. R. Kelley, Federal Field Secretary

Other Virginia cities ordered the closing of public meeting-places and schools. After approximately 1,800 influenza cases had been reported to Petersburg health officials, the city Board of Health advised the public to avoid crowds and ordered the closing of all schools, churches, and places of public amusement. Health officials in Hopewell issued a similar closing order after 300 cases had developed. The mayor of Fredericksburg, J. P. Rowe, followed the advice of the city school and health boards and closed all places of public assembly. After three individuals died from influenza, the Board of Health of Elizabeth City County closed schools, theaters, and meeting places in the county and the cities of Hampton and Phoebus. By the end of September, thirteen men had died from influenza at the Norfolk Naval Base. After 350 new cases were reported in the city on October 2, Norfolk officials closed schools and public meetingplaces. Schools, churches, and other public meeting places were closed in the small town of West Point after 300 cases were reported. One hundred cases developed among local shipyard employees. West Point also lacked a sufficient number of doctors and nurses.¹⁷

The epidemic had become so serious that the government now considered the fight against influenza to be part of its war effort. Representatives of the War and Navy Departments, the United States Public Health Service (USPHS), and the Red Cross joined to formulate a plan to battle influenza. Surgeon General Rupert Blue of the USPHS and the Acting Surgeon General of the Army, Robert F. Noble, considered a quarantine of the civilian population to be impractical. The USPHS appointed Health Officers to direct the

¹⁷Ibid., 30 September, 1-3, 6 October 1918.

fight against influenza in their states. These Health Officers were instructed to wire information about the epidemic to the Public Health Service. 18

Twenty-six states had reported influenza cases by September 26, and the Surgeon General's office reported that the weekly death rate had almost doubled. On September 28, Congress appropriated \$1,000,000 to help combat the epidemic. This appropriation supplemented the Public Health Service's annual budget of \$3,000,000. Some of the funds were used to equip hospitals and pay physicians and Red Cross nurses. The USPHS also began investigating the cause of Spanish influenza and searching for a vaccine. ¹⁹

The spread of influenza in Washington concerned government officials. The city's population had grown during the war, and people frequently shared one-room apartments. With the war continuing in Europe, it was vital that government employees remain healthy. Prominent leaders who became ill included Speaker of the House Champ Clark, Majority Leader Claude Kitchin, and Assistant Secretary of the Navy Franklin Roosevelt.²⁰

The Public Health Service declared the city a sanitary zone and ordered District Commissioners to close all movie houses, theaters, and dance halls. City schools were

¹⁸New York Times, 19, 27 September 1918; Richmond Times-Dispatch, 26 September 1918, Crosby, Epidemic and Peace, 48-50.

¹⁹Richmond Times-Dispatch, 26 September 1918; New York Times, 28, 29 September 1918; Crosby, *Epidemic and Peace*, 52.

²⁰Richmond Times-Dispatch, 20, 29 September 1918; Roanoke Times, 4 October 1918.

closed on October 2, and all public gatherings, including Liberty Loan parades, were canceled. The federal government ordered employees to wear gauze masks and staggered work hours so that streetcars would be less crowded. The government also commandeered buildings on F Street to be used as hospitals for war workers. Senators and congressmen instructed their constituents to avoid traveling to Washington during the epidemic. Senator Thomas S. Martin of Virginia was one of several senators and congressman who urged President Woodrow Wilson to halt the influx of new government employees into Washington. In mid-October the War Department joined other departments in limiting the arrival of new employees to those essential to government work. The Supreme Court also extended its recess due to the epidemic in the nation's capital.²¹

Throughout the nation, influenza became more serious among civilians as the situation improved in the army camps. By October 3, forty-three states and Washington, D.C. had reported cases of Spanish influenza. Although influenza was declining in some army bases, camps across the country had reported more than 100,000 cases. Over 7,000 individuals had contracted pneumonia, and 2,148 deaths had occurred in the military. New cases at Camp Devens had decreased substantially, but Camps Meade and Dix still battled the epidemic.²²

²¹Ibid., 3, 4, 15, 18 October 1918, Richmond Times-Dispatch, 10 October 1918; New York Times, 4, 18 October 1918.

²²Richmond Times-Dispatch, 1, 3 October 1918; Roanoke Times, 3 October 1918.

Approximately 8,500 cases of influenza and 167 deaths had been reported at Camp Lee by October 2. Brigadier-General Hedekin promised that "everything humanly possible is being done to handle the Spanish influenza situation." Officials converted five barracks into an annex for the base hospital where the most serious cases would be treated. Instead of using one squad room in each barrack as originally planned, now one barrack in each battalion was used to care for ill soldiers. Officers and enlisted men who had recovered from influenza and were thought to be immune assisted the camp's medical team.²³

General Hedekin denied that a quarantine of Camp Lee was being debated.

Officials also questioned the quarantine that Richmond was considering against soldiers from the camp. One officer commented, "It is entirely a matter for Richmond to decide, but if there are already 600 cases in that city there is already sufficient seed of the germ to insure the spread of the disease. However, if Richmond wants to quarantine she can do it." Indeed, the limits of a quarantine were illustrated at Camp Lee. Officials prohibited anyone from leaving or entering the veterinary school, which was separated from the main part of the base, yet cases of influenza had appeared among its students.²⁴

The influenza epidemic continued to worsen in Richmond, and by October 2, approximately 850 cases had been reported. Dr. Flannagan cautioned the public that the greatest danger associated with influenza was contracting pneumonia. The following

²³Richmond Times-Dispatch, 3 October 1918.

²⁴Ibid.

day, 279 new cases were reported and the total number of deaths stood at ten. Because schools in Richmond and other areas of the state were still open, Dr. Williams instructed local districts about the prevention of Spanish influenza. Williams hoped schools would not have to be closed, but told superintendents throughout the state that the epidemic was serious. He ordered that placards listing preventive measures be posted in every classroom and insisted that students with sore throats or coughs immediately leave school. Williams maintained that these safeguards would help protect children from the disease: "With proper care and instruction, schools can be made positive agencies for the prevention of the spread of Spanish influenza in the community."²⁵

Major H. A. Crosby, head of the General United States Hospital in Richmond, believed that the public had failed to heed the advice of officials like Williams and Flannagan. Crosby quarantined his hospital and stressed that the public did not fully understand the seriousness of the epidemic. Half of the 200 patients at the hospital were influenza victims, and officials planned to double the capacity of the hospital from 1,000 to 2.000 beds.²⁶

By October 4 almost 2,000 cases of influenza had been reported in Richmond, and Williams described the epidemic as "grave." While other cities including Norfolk, Washington, and Boston had closed public meeting-places, Richmond officials wanted to avoid doing so. Dr. Flannagan visited theaters in the city to ensure that they were

²⁵Ibid., 3, 4 October 1918.

²⁶Ibid., 4, 5, October 1918.

disinfected and ventilated. Churches were instructed to keep windows and doors open during services and to avoid using the common cup in sacraments. Despite these preventive measures, the public hesitated to patronize many meeting-places. Theater and movie house operators reported a decrease in business.²⁷

On October 5 Flannagan joined his counterparts in other cities and advised Richmond officials to close all public and private schools, churches, and meeting-places. Flannagan remarked that the influenza outbreak was intensifying in Richmond: "There is no lessening of the epidemic, which is manifestly still on the increase. The city authorities are doing all within their power to combat it." While Dr. Williams and the State Board of Health initially disagreed with the closing of schools, Flannagan concluded that they should be closed even if the decision had no direct effect on the spread of the disease. The Richmond School Board supported this decision and ordered the city schools closed from at least October 7 to 13. Henrico and other surrounding counties also decided to suspend some of the schools in their districts.²⁹

City officials initially exempted the Virginia State Fair from the order closing public meeting-places. Dr. Flannagan met with the fair's board of directors and informed them that because of the open-air nature of the fair, city health authorities would not force its closing. Following the advice of Flannagan, the board agreed that the indoor

²⁷Ibid., 2, 5 October 1918.

²⁸Ibid., 6 October 1918.

²⁹Ibid., 6, 7 October 1918.

sideshows would be eliminated. Some questioned why the fair was exempt from the closing orders passed in Richmond. C. C. Cochran, the deputy clerk of the U. S. District Court in Big Stone Gap, wrote Governor Westmoreland Davis, "Will you kindly advise me why the exception is made to the Drastic Action which is provided for every other gathering? I am advised that over 100 cases of Spanish influenza can be traced directly to the small county fair held at Jonesville, Lee County, Virginia, and that all assemblies of every character tend to spread the disease."

On October 7 Surgeon General Rupert Blue recommended that health officials throughout the nation close all schools and public gathering places. Due to the large number of new cases in Virginia, the State Board of Health forbad public gatherings, recommended that the public avoid crowds, and advised against train and streetcar travel. In newspaper ads, State Health Commissioner Williams and State Board of Health Acting President R. R. Tucker warned Virginians that indoor and outdoor gatherings were "positively dangerous." C. R. Keiley, Executive Secretary of the Virginia Council of Defense, endorsed the Board's decision and maintained that the public had a "patriotic duty" to avoid these potentially harmful gatherings. The closing orders had little effect on halting the spread of the disease but, as Alfred Crosby states, "public health officials

³⁰Ibid., 6, 9 October 1918; Annual Report of the State Board of Health, 6; C. C. Cochran to Westmoreland Davis, 7 October 1918, Westmoreland Davis Executive Papers, 1918-22, "Influenza," Box 14, Library of Virginia. Hereinafter cited as Davis Executive Papers.

had to do *something*, and closing up theaters, schools, pool halls, and even churches was the style in fall 1918."³¹

Acting on the advice of the camp surgeon, General Hedekin prohibited the issuing of passes to Camp Lee soldiers who wanted to visit Petersburg or Richmond. Individuals who had official business in the two cities would be able to leave, and visitors could be admitted to the base. This epidemic of influenza, which was more serious than previous outbreaks, puzzled the medical officers at Camp Lee. Members of the medical staff had contracted the illness, and three medical officers and one nurse had died.³²

By October 8 over 10,000 cases of influenza existed in Richmond. Drs. Williams, Flannagan, and A. M. Willis, a representative of the Johnston-Willis Sanatorium, stated that the epidemic was the worst crisis the city had faced since the Civil War. The doctors predicted that 900 to 1,500 residents could die within six to eight weeks, and 25,000 to 50,000 cases could develop in the next several months if influenza continued to spread. Unlike the 1889 epidemic, which affected the very young and very old, the doctors noted that this particular influenza strain targeted people between the ages of sixteen and forty. Spanish influenza struck the healthiest and most productive members of society.³³

The public noted this characteristic of the 1918 epidemic. Robert Herndon Fife

II, a college professor in Middletown, Connecticut, had family that lived in

³¹Newport News Daily Press, 8 October 1918; Richmond Times-Dispatch, 5 October 1918; Roanoke Times, 8 October 1918; Crosby, Epidemic and Peace, 74.

³²Richmond Times-Dispatch, 7 October 1918.

³³Ibid., 8 October 1918; New York Times, 29 October 1918.

Charlottesville. He informed his mother, Sarah Fife, that classes had been canceled at his school because many students had become ill. Robert Fife inquired about the situation at home:

I am really anxious about the influenza, as Virginia is always mentioned along with Massachusetts as one of the most strongly affected districts. Up here it seems to be an affection of the young, as I don't think I have heard of any person past forty-five being affected with it. Perhaps the older ones have still some immunity handed down from the great epidemic of twenty-five years ago. I do hope none of you all get it. There are literally hundreds of cases up here, but pneumonia seems to be mostly lacking.³⁴

Robert's sibling Margaret Fife described the influenza epidemic to their sister Ella Katherine Fife, a Red Cross nurse stationed in France: "If you were here you would have your hands full for the town is begging for nurses. This Spanish Influenza has surely 'got the ups' on this country. The funny thing about it is that only young people seem to have it, very few cases over thirty-five years old." 35

The influenza epidemic in Roanoke was serious, but less severe than in Richmond (the population of Roanoke was approximately 50,000). By October 4, 500 cases had been reported to health officials; however, only two individuals had died in the city. The Roanoke Board of Health initially chose not to quarantine the city or issue closing orders, but did embark on an educational campaign. Officials spoke at schools and businesses and distributed leaflets detailing preventive measures to take against influenza. They

³⁴Robert Herndon Fife II to Sarah Ann Graves Strickler Fife, 6 October 1918, Correspondence of Ella Katherine Fife Freudenberg, Box 1, Alderman Library, University of Virginia. Hereinafter cited as Freudenberg correspondence.

³⁵Margaret Whitler Fife to Ella Katherine Fife, 11 October 1918, Box 1, ibid.

instructed movie theater managers to observe their customers closely for any signs of illness and asked the public to avoid large social gatherings. The Board of Health requested that ministers instruct their congregations about flu prevention and ordered private funerals for all influenza victims.³⁶

Dr. Foster wished to avoid closing Roanoke churches, schools, and meeting places. He hoped that by warning the public to avoid crowds, the people could halt the spread of influenza on their own. The Board of Health promised to pay close attention to the epidemic, and if conditions worsened, vowed to implement "drastic regulations" immediately. However, after the State Board of Health recommended the indefinite closing of all schools, churches, and public places, Dr. Foster issued a closing order on October 6. Four days later, over 1,000 influenza cases and twenty deaths had been reported in Roanoke.³⁷

Over 280 cases of influenza and three deaths had been reported in Newport News by October 1 (the population of Newport News was approximately 35,500). The Board of Health warned the public about drinking from common glasses and recommended that children remain in their homes. Health officials hoped that public meetings would not have to be banned. To prevent such a ban, the public was urged to follow simple

³⁶Andriot, Population Abstract of the United States, 829; Roanoke Times, 5, 6 October 1918.

³⁷Ibid., 6, 8, 11 October 1918.

precautions such as avoiding crowds, going to bed at the first sign of illness, and avoiding the coughs and sneezes of others.³⁸

On October 7 Newport News officials decided to ban public gatherings and close public places such as churches, theaters, and poolrooms. City schools had been closed since October 4 as a precautionary measure. During the war, Newport News' population had risen from 25,000 to 70,000 and the city's hospitals proved to be inadequate during the epidemic. To alleviate the overcrowding, an emergency hospital was established at Walter Reed High School. By October 9, city officials estimated that 8,000 to 10,000 cases of influenza existed in Newport News. At least 3,500 additional cases had developed at the shipyard. In one week, Spanish influenza had claimed the lives of thirty individuals. While local doctors initially thought that a mild type of influenza had infected Newport News residents, they now stated that the disease was more serious than originally believed.³⁹

In the Newport News area, Langley Field, the Hampton Normal School Negro Camp, and the National Soldiers' Home were quarantined. No cases had developed at the soldiers' home, but officials believed a quarantine was the best method of preventing influenza's appearance at their institution. Hampton officials had closed movie theaters in the city, but residents determined to see a motion picture traveled to the theaters that

³⁸Andriot, Population Abstract of the United States, 828; Newport News Daily Press, 1, 2, 5 October 1918.

³⁹Ibid., 5, 8-10 October 1918, Richmond Times-Dispatch, 8 October 1918.

remained open in Newport News. Norfolk schools, churches, and public gathering places were closed. Norfolk also opened an emergency hospital, and the city's doctors, druggists, and morticians worked day and night. The *Times-Dispatch* reported that the large number of furloughed soldiers from nearby military bases exacerbated the epidemic in the Norfolk area.⁴⁰

In Pulaski, a town of 7,000 residents, 2,500 cases of influenza and fifty deaths had been reported by October 10. The number of new pneumonia cases continued to alarm the public. On one Sunday alone, nine funerals took place in the town. Mayor E. W. Calfee ordered all churches, schools, businesses, and public places closed. Pulaski officials asked doctors in Bristol, Virginia for assistance in fighting influenza, but Bristol was also combating at least 500 cases. Calfee urgently requested doctors from Roanoke, but with physicians at a premium, Dr. Foster found it difficult to locate volunteers to send to Pulaski. Doctors from Roanoke, Bristol, and Richmond eventually arrived to care for the sick in Pulaski. A New York physician, Dr. J. T. Foard, also answered the call for help and treated the most serious cases at the emergency hospital that had been established at the Elks' Home. 41

As Richmond hospitals quickly filled with patients, officials opened an emergency hospital at John Marshall High School. To fund the hospital, the city council

⁴⁰Newport News Daily Press, 2 October 1918; Richmond Times-Dispatch, 8 October 1918.

⁴¹Ibid., 5, 8, 13 October 1918; Roanoke Times 6, 11 October 1918.

appropriated \$25,000. Dr. Lawrence T. Price, a professor at the Virginia Medical College, was named hospital director. Price appointed Mrs. Agnes Randolph, the executive secretary of the Antituberculosis Society, as his Assistant Chief Medical Director. The conversion of John Marshall High School into an emergency hospital took place in less than a day. Work began at 7:00 P.M. on October 7, and the hospital admitted its first patients the next morning. Dr. Flannagan praised the leadership of Dr. Price and his staff and marveled at the school's rapid transformation. An emergency hospital for black influenza patients was opened in the Baker School.⁴²

Influenza also raged in Petersburg, where the first cases of influenza had appeared among the relatives of soldiers at Camp Lee. Petersburg health authorities persuaded Camp Lee officials to prohibit civilian visits to the base except in emergency cases. The limited medical facilities in Petersburg made it difficult for the city to treat ill transients, such as the wives of Camp Lee soldiers. Five thousand cases of influenza had been reported by October 15, and the illness was beginning to spread among the city's black population (the population of Petersburg was approximately 31,000). Petersburg schools, churches, barbershops, and ice cream parlors closed during the epidemic. City officials appropriated \$10,000 for an emergency hospital staffed by six physicians and seven

⁴²Richmond Times-Dispatch, 8, 9, 11 October 1918; "Report of Acting Superintendent A. H. Hill to the Richmond School Board," Minutes of the Richmond School Board, 31 October 1918, minute book entitled "November 1916 – February 1919," Richmond School Board office, Richmond, Virginia, 354.

graduate nurses. The need for physicians in Petersburg remained high. After five local doctors became ill, USPHS physicians arrived to treat the influenza patients.⁴³

By the second week in October, Camp Lee officials judged that the worst of the epidemic had passed. Most of the new cases on the base came from the veterinary school, which had been affected later than other areas of the camp. On October 12— one month after the first influenza case appeared— 10,876 cases of the flu had been reported. For the first time in three weeks fewer than 5,000 soldiers remained under treatment. The total number of deaths on the base had risen above 500.⁴⁴

By October 9 approximately 200,000 cases of influenza had been reported in United States army camps. The deadliest period on the bases was the week ending on October 11. During this one-week period, influenza and pneumonia killed 5,380 soldiers. By comparison, in the first six months of 1918, deaths from disease in the army totaled 5,502. From October 4 to 11, Camp Lee recorded 220 deaths.⁴⁵

By mid-October, 60,000 cases of influenza had been reported to the State Board of Health, but officials estimated that the total number exceeded 200,000 (Virginia's population in 1920 was approximately 2.3 million). Influenza had appeared from southwestern Virginia to the Eastern Shore. At the height of the epidemic, the weekly death rate in the nation's cities averaged two to three times higher than normal. In New

⁴³Richmond Times-Dispatch, 12, 14, 16, 17 October 1918; Andriot, Population Abstract of the United States, 828.

⁴⁴Richmond Times-Dispatch, 9, 12, 13 October 1918.

⁴⁵New York Times, 26 January 1919.

England, that number ranged from four to seven times the normal death rate; while in Philadelphia and Washington, the rate tripled. The death rate in Richmond and cities such as Memphis, Nashville, and Jersey City doubled.⁴⁶

In mid-October there were signs that the worst had passed in Richmond. At the John Marshall Emergency Hospital, 422 cases of influenza and pneumonia were being treated on October 15, but hospital officials reported a decrease in the number of new patients. Physicians at John Marshall now had an opportunity to answer cases outside of the hospital. Doctors traveled to Hopewell to investigate a high death rate caused by acute cases of pneumonia. Physicians and nurses also were sent to areas in the western part of the state where influenza remained serious.⁴⁷

Dr. Flannagan reported that the influenza epidemic was under control in Richmond; however, the number of new cases and deaths continued to increase. By October 18, the total number of reported cases reached 8,742 and the death toll stood at 320. Flannagan did not expect the death rate to decline in the immediate future because more influenza patients were developing pneumonia. He did hope that those who had recovered could help treat the sick and lessen the burden on doctors and nurses.⁴⁸

On October 17, the Newport News Health Office reported ninety-seven deaths resulting from influenza or pneumonia. Four days later the number of new cases was

⁴⁶Andriot, Population Abstract of the United States, 820; Richmond Times-Dispatch, 14 October 1918; New York Times, 26 January 1919.

⁴⁷Richmond Times-Dispatch, 15, 16, 20 October 1918.

⁴⁸Ibid., 17, 19 October 1918.

decreasing, but the number of deaths was climbing. Officials estimated the total number of deaths at 203. Dr. C. H. Waring, acting head of the USPHS in Newport News, revealed that city physicians had reported 1,500 cases to the Health Office. Waring estimated that this number was only a fraction of the actual cases that had developed in Newport News. Despite the increase in deaths, health officials believed influenza was decreasing in the city. If the situation continued to improve, Newport News officials planned to lift the ban on public meetings and reopen barber shops, movie theaters, pool rooms, churches, and schools before the end of October.⁴⁹

Conditions in Roanoke remained critical in mid-October. Over 3,000 cases of influenza and over fifty deaths had been recorded by October 19. The severity of the pneumonia cases led Roanoke officials to modify policy and designate pneumonia as a reportable disease. The city council and the Health Department debated opening an emergency hospital in Roanoke and decided that the closed, but equipped, Jefferson Hospital could be used if conditions worsened.⁵⁰

Influenza peaked in many eastern cities on the week ending October 19. Almost 18,000 influenza related deaths were reported in the United States during this week. By comparison, influenza deaths had totaled 316 during the second week of September. On the week ending October 19, Washington, D.C. reported 621 deaths, New York 4,217, and Philadelphia 4,597. During that same week, 197 deaths were reported in

⁴⁹Newport News Daily Press, 18, 22 October 1918.

⁵⁰Roanoke Times, 20, 23 October 1918.

Richmond— a number approximately equal to the city's average monthly death rate from all causes. The number of influenza cases recorded during this week totaled 4,717. Since the beginning of the month, seventy percent of all deaths were caused by influenza. In Richmond the epidemic crested in mid-October, when cases averaged 350 per day and the daily death rate hovered around thirty-five. Influenza also began to decline in cities including Philadelphia, Washington, Baltimore, Buffalo, Indianapolis, Nashville, and Chicago ⁵¹

By October 19, Camp Lee officials no longer considered influenza to be epidemic. Out of 16,000 men on the army base, 2,328 soldiers remained hospitalized. Over 11,000 influenza cases had developed and 626 deaths had been recorded. By October 23, influenza was decreasing in army camps throughout the United States. The disease was characterized as epidemic in three camps in Washington, California, and Alabama. The military also resumed its draft call after a three-week suspension in areas of the nation where influenza had abated and cantonments were regarded as safe. Since the epidemic began over 283,000 cases and 14,000 deaths had been reported in the camps. ⁵²

The influenza epidemic in Richmond continued to concern officials. While the epidemic was improving, approximately 140 cases and over twenty deaths were reported

⁵¹Richmond Times-Dispatch, 23-25 October 1918; A. A. Hoehling, *The Great Epidemic* (Boston and Toronto: Little, Brown and Company, 1961), 150.

⁵²Richmond Times-Dispatch, 20 October 1918; Newport News Daily Press, 24 October 1918, New York Times, 23 October 1918.

each day during the week ending October 25. Because the situation remained serious in the city, Flannagan asked Camp Lee authorities to delay lifting the quarantine against Richmond. Camp officials agreed, and soldiers were prohibited from visiting Richmond for at least one additional week.⁵³

At the John Marshall Hospital, 711 people had been admitted by October 24. Dr. Stuart Michaux, chief of the medical staff, praised the doctors, nurses, and volunteers for the low mortality rates reported at the hospital. As patients were released, hospital officials combined wards together to prepare for the reconversion of the building. On October 25 the Health Department stopped admitting patients to John Marshall and the Baker School. Two hundred patients remained at John Marshall, and 100 individuals were at the Baker School. New patients were taken to the Virginia Hospital and the City Home or cared for in private residences. By November 1, the staff at John Marshall was treating only fifty patients. The death rate of the hospital totaled eleven percent. Thirtyeight percent of the pneumonia patients treated at the hospital succumbed. Eighty-one patients died at John Marshall during the hospital's operation. Officials at the Baker School had more difficulty locating facilities to care for the remaining fifty-six patients. When Baker closed, 180 individuals had been treated and twenty-four had lost their lives. 54 Acting School Superintendent A. H. Hill praised the staff of the John Marshall and Baker hospitals: "The work done there was wonderful and saved the lives of many

⁵³Richmond Times-Dispatch, 26 October 1918.

⁵⁴Ibid., 25, 26 October, 2, 4 November 1918.

citizens who became patients, and by taking care of these people it prevented the greater spread of this dread disease."55

In Newport News, seventy-five patients remained at the Walter Reed Emergency Hospital on October 23. Only fifteen of these cases were characterized as serious. At the height of the epidemic, doctors and nurses treated 200 patients at this emergency hospital. Dr. Waring hesitated to predict when the hospital would be reconverted into a school. He promised that before the school was reopened, the building would be disinfected. The Newport News School Board planned to proceed cautiously and only open schools when there was little chance of a recurrence of the epidemic. Newport News public schools would be reopened when the Walter Reed Emergency Hospital closed. A tentative opening date was set for November 4, but school officials stated that the scheduled reopening could be postponed until November 11. Dr. Waring informed school officials that although the epidemic had peaked, he could not predict when the hospital would be reconverted.⁵⁶

While schools remained closed in Newport News, city officials lifted the ban on public gatherings on October 26. Poolrooms and movie theaters were allowed to reopen; however, theater owners were required to ventilate their buildings each morning. The Daily Press reported that people waited in lines to see movies and crowded the pool halls once the ban was lifted. City officials decided to reopen the public schools on

⁵⁵"Report of the First Assistant Superintendent," 30 June 1919, *School Reports*, 1918-1919. Richmond School Board office, Richmond, Virginia, 32.

⁵⁶Newport News Daily Press, 23, 24, 26 October 1918.

November 11. The fifty patients remaining at Walter Reed would be transferred to other facilities.⁵⁷

The State Board of Health supported lifting the bans in communities where the epidemic had subsided. The Board advised local officials to proceed with the reopening of public places on November 3 if the epidemic was no longer serious in their communities. Acting State Health Commissioner Garnett developed an "influenza catechism" that would be distributed to the schools once they reopened. From this publication, children would memorize simple questions and answers relating to influenza prevention. The Board continued to warn the public about the dangers associated with crowds and urged people to avoid close contact with those who exhibited symptoms of influenza.⁵⁸

The number of new influenza cases declined in Richmond during the last week of October, but the death rate remained high. Some Richmonders, however, felt that the situation had improved enough to consider reopening schools and churches. The Richmond Health Department agreed that the influenza epidemic had crested, but refused to reopen public institutions.⁵⁹ Flannagan maintained that a premature decision to reopen could jeopardize the health of Richmond residents who had not yet developed influenza.

⁵⁷Ibid., 26, 29 October 1918.

⁵⁸Ibid., 30, 31 October, 2 November 1918.

⁵⁹Richmond Times-Dispatch, 26, 27 October 1918.

He recognized that the situation had improved in the city, but resisted any action that could undo this progress:

I am reminded of the case in Philadelphia. There things were opened up again, and they had a secondary epidemic worse than the first. You see things are very much better; something has caused it, therefore, we shall not prematurely cease doing anything we have been doing, even though we may not know exactly what to attribute the improvement to. We shall not open things up this week anyhow, and I cannot say when we shall... The conditions are greatly improved, but we want to stop men dying at such a rate. ⁶⁰

Richmond recorded thirteen deaths on October 28. Two days later only seven influenza victims succumbed, and Flannagan decided that it was safe to lift the closing restrictions on November 3. Because Flannagan anticipated that the number of influenza cases might rise after the ban was lifted, he urged that all buildings be kept well ventilated.⁶¹

Richmond residents debated the reopening of city schools, churches, and public places. Reverend A. O. Boda of the North Side Baptist Church suggested that officials should not reopen these places until influenza disappeared from Richmond. The Richmond Academy of Medicine and Surgery met on October 31 to debate the closing issue. The Academy passed a resolution which opposed the reopening of schools and public places:

Considering the disastrous experience of certain cities following a premature reopening of public meeting places, it is the part of prudence to postpone further the reopening of schools, theaters, churches, and other places of public assembly,

⁶⁰Ibid., 26 October 1918.

⁶¹Ibid., 29, 31 October 1918.

until in the opinion of the chief health officer, such reopening will be entirely safe. 62

Doctors respectfully urged Flannagan and the Administrative Board to wait at least another week before lifting the restrictions. The majority of Academy members maintained that because influenza was an airborne illness, segregation of the public was the best method of preventing its spread. Dr. E. C. L. Miller, who became director of the John Marshall Hospital after Dr. Lawrence Price developed influenza, appeared at the meeting and reported that the white and black doctors, nurses, and preachers he had spoken to unanimously opposed a premature ban lifting. Dr. Price remarked that two Richmond theater owners also supported a continuation of the restrictions. Dr. W. S. Gordon believed the epidemic to be unprecedented in American medical history and insisted that public places should remain closed for another week.⁶³

Several physicians did side with Flannagan and expected that there would be a slight increase in the number of influenza cases whenever public places were reopened.

Dr. Edward McGuire questioned the benefit of the closing restrictions, remarking that the number of people who gathered for lunch each day at a Richmond department store was greater than those who worshiped at several churches on Sunday. McGuire also

⁶²Ibid., 31 October 1918; Minutes of the Richmond Academy of Medicine and Surgery, 31 October 1918, minute book entitled "Minutes: 1908 – 1927," Richmond Academy of Medicine and Surgery, Richmond Virginia.

⁶³Richmond Times-Dispatch, 1 November 1918; Minutes of the Richmond Academy of Medicine and Surgery, 31 October 1918, ibid.

Richmond. On this occasion, the board decided to follow Flannagan's recommendations and lifted the restrictions that had been in place since October 5.⁶⁶

City schools, with the exception of John Marshall and Baker, reopened on November 6. Richmond's Acting Superintendent Albert H. Hill emphasized that students should not return to school if even a single case of influenza existed at their homes. Patients were removed from John Marshall on November 4 and from the Baker School the following day. Before they reopened as schools, city officials fumigated the buildings. When John Marshall reopened on November 7, sixty-seven percent of students were present. The Baker School reopened on November 11.⁶⁷

In early November the number of new influenza cases and deaths declined in Richmond. On November 14, the Health Department officially stated that the disease had subsided. During the five-week period of the epidemic anywhere from 15,000 to 20,000 people had contracted influenza and approximately 600 had succumbed. The closing restrictions had been lifted for over a week, and officials were pleased to note that no secondary outbreak had developed. When the Richmond Academy of Medicine and Surgery met in late November, a member proclaimed that the epidemic of the previous month was "the worst disaster that ever befell the state of Virginia."

⁶⁶Ibid., 2-4, 8 November 1918.

⁶⁷Ibid., 5, 6, 8 November 1918; Minutes of the Richmond School Board, 22 November 1918, minute book entitled "November 1916 – February 1919," Richmond School Board office, Richmond, Virginia, 358.

⁶⁸Richmond Times-Dispatch, 14, 27 November 1918.

Most schools in Virginia reopened by the second week of November. When Newport News schools reopened on November 11, after a five-week vacation, students had to present certificates from their parents confirming that their homes were free of influenza. State Superintendent Harris Hart recommended to local school boards that teachers receive full pay for the time missed. He also doubted that the school year would be extended due to the large number of students who helped their families on the farm; however, school days would be made up by shortening holiday periods.⁶⁹

Other localities lifted their closing restrictions in late October and early

November. Petersburg rescinded its ban and shut down its emergency hospital. The
town of West Point reopened its schools. Elizabeth City County reopened schools,
churches, and meeting places on October 31. The Acting Secretary of the County Board
of Health, Harry Holt, asked the public to continue following precautions against
influenza. As the number of new influenza cases and deaths decreased, Norfolk health
authorities lifted their ban on November 1. Physicians had to examine children for signs
of influenza before they were allowed to return to school.⁷⁰

Roanoke health officials allowed churches to hold one morning service on November 3 and permitted normal activities to resume a week later. Theaters and movie houses held evening shows on November 4; and poolrooms, bowling alleys, and lodges

⁶⁹Newport News Daily Press, 10 November 1918; Roanoke Times, 7 November 1918.

⁷⁰Richmond Times-Dispatch, 3, 5 November 1918; Newport News Daily Press, 27 October 1918; Roanoke Times, 30 October 1918.

reopened that same day. Officials decided that on November 11 schools would be reopened and all restrictions would be removed from theaters. Following the partial lifting of the ban on November 3 and 4, Roanoke recorded an increase in influenza cases. Dr. Foster doubted that the removal of the restrictions was responsible for the increase, and speculated that the public may not have been taking necessary precautions. This increase proved temporary, however, and influenza and pneumonia cases quickly declined in Roanoke. City officials proceeded with the full lifting of the ban, but warned the public to guard against influenza for the remainder of the winter.⁷¹

It had been a deadly fall in Virginia. The State Bureau of Vital Statistics reported that influenza killed almost 6,000 Virginians in the month of October, though officials expected the actual number of deaths to be even higher. Of the reported number of deaths, 1,171 individuals were between twenty-five and thirty years old, and 1,041 victims were between twenty and twenty-five years of age. The number of whites and blacks who died equaled 4,139 and 1,832 respectively. The bureau reported that the mortality rate among whites and blacks was proportional.⁷²

Over 4,000 cases of influenza had been recorded in Roanoke, though health authorities considered the number to be higher due to the difficulties associated with the official reporting of cases. Ninety-one Roanoke residents had died from Spanish influenza in late September and October. Eighty-seven of the 138 deaths recorded in

⁷¹Ibid., 27 October, 5, 7, 9 November 1918.

⁷²Ibid., 23 January 1919

October were attributed to influenza. In Lynchburg, over 8,000 influenza cases and 267 deaths had been reported by early November. Richmond officials estimated that 15,000 to 20,000 influenza cases had developed in the city, and approximately 600 residents had died from influenza and pneumonia. In Newport News, 3,500 cases of influenza and 191 deaths had been recorded in October, but officials estimated the actual total to be two or three times greater than the recorded amount. The *Daily Press* aptly described influenza's attack: "The epidemic here took hold quickly and thoroughly, reached its peak rapidly, and subsided with equal dispatch." ⁷³

Influenza, according to the *New York Times*, "made the barracks of this country a much more dangerous place than the front in France" during the fall of 1918. The War Department reported that approximately 338,000 influenza cases and 17,000 deaths occurred in army camps between September 12 and December 1. The number of deaths in the army camps from all causes totaled 19,649. A study of the six-month period ending on December 27, 1918, found that the death rate in the army had risen from 6.37 per thousand to 32.13. Officials believed that the high loss of life was due to the age of the soldiers and their living conditions. Spanish influenza targeted young, healthy adults such as those serving in the military. Furthermore, crowded military housing intensified the spread of the flu. The navy, which was ten times smaller than the army, lost a higher

⁷³Ibid., 10 November 1918, 23 January 1919; *Richmond Times-Dispatch*, 8, 14 November 1918; *Newport News Daily Press*, 7 November 1918.

percentage of its force to influenza. A quarter of the officers and sailors had become ill, and 5,000 succumbed to the flu.⁷⁴

A Bureau of the Census study of the forty-six largest American cities determined that over 82,000 influenza-related deaths had occurred from September 8 to November 9. During that time period, the normal number of deaths resulting from influenza or pneumonia equaled 4,000. In the United States the epidemic peaked during the second half of October. On the weeks ending October 19 and 26, approximately 41,000 individuals lost their lives to influenza or pneumonia. According to the census study, more Americans died from Spanish influenza than by serving in the American Expeditionary Forces, where deaths were estimated at 40,000 to 45,000. 75

⁷⁴New York Times, 26 January 1918; Newport News Daily Press, 22 December 1918; Hoehling, The Great Epidemic, 186.

⁷⁵Roanoke Times, 23 January 1919; Newport News Daily Press, 8 December 1918.

CHAPTER 3

THE SECOND OUTBREAK: DECEMBER 1918

In early December the Public Health Service reported that influenza and pneumonia had claimed the lives of at least 300,000 to 350,000 Americans. The epidemic had not run its course, however, and influenza began to reappear in many sections of the country. Surgeon General Rupert Blue recommended that schools close when the first signs of a second epidemic appeared. Blue warned the public to remain on guard: "Any statement at the present time that the epidemic has 'come and gone for good' can only do harm, for it will lull the people into a false sense of security and cause them to relax the precautions they should take to avoid the infection."² He urged the public to continue following safeguards such as covering coughs and sneezes. As reports of a second outbreak emerged, the New York Times called on the nation's health officials to take action: "what would be the pleasantest reading of all would be announcements of preparations to prevent another affliction of this sort and a vigorous education of the public and the medical profession in whatever means science provides for protecting us from another desolating plague like the one which has just 'burnt itself out.'"3

¹Newport News Daily Press, 5 December 1918.

²Roanoke Times, 17 December 1918.

³New York Times, 14 December 1918.

Influenza seemed to have disappeared from Newport News in November. During that month, the city recorded only one case of pneumonia. The next month, however, the illness reemerged. Thirty-eight influenza cases had been reported to health officials by December 11. Two days later, USPHS officials uncovered sixty-one additional cases that doctors had not reported. Captain C. H. Waring, head of the Public Health Service in Newport News, criticized physicians for their failure to report these cases. He stated that if health officials were to halt the spread of influenza, they needed to have an accurate count of new cases as they occurred. The *Daily Press* also urged doctors to be more vigilant when reporting cases of influenza to health authorities. Because influenza was milder than it had been in October, Waring doubted that schools, churches, and theaters would be closed. Over 600 influenza cases had been reported by December 17, but the number of deaths had risen to only seven.⁴

Newport News officials disagreed over whether or not to reinstate the closing ordinance. Mayor A. A. Moss supported a closing order, but could not enact one unless advised to do so by health authorities. Newport News Health Officer, Dr. W. F. Cooper, maintained that this outbreak was not serious enough to justify a ban on public gatherings.⁵ The *Daily Press* described the debate between those who believed that the

⁴Newport News Daily Press, 30 November, 12, 14, 15, 18 December 1918.

⁵Ibid., 28 December 1918.

second outbreak was milder than the first and those who maintained that it was just as deadly. According to the editors, the latter:

would have us again become a closed town. They would have soft-drinkless days and churchless Sundays and the old trouble of school-less children under foot at home. They would deny us 'movies' and keep the young sport from practicing draw shots on pool tables, and in all and sundry have us curl up and try the blighting effects of passivism on a relentless foe.⁶

Elizabeth City County re-closed schools during the second epidemic. No one under the age of sixteen could attend church or movie theaters. Officials also prohibited the use of public drinking cups and recommended that adults avoid crowds. After an increase in influenza among the young, the Norfolk Health Commissioner, Powhatan Schenk, closed public schools and prohibited children under fifteen from attending church, Sunday school, or movies.⁷

Influenza reappeared in Richmond in late November when a Richmond medical inspector and a team of nurses discovered fifty unreported cases of influenza in Ginter Park. Flannagan investigated the new cases and recommended that the Ginter Park Public School be closed. Despite his advice to close this school, Flannagan considered the influenza cases in Ginter Park to be milder than those that appeared in October. Because this outbreak was affecting mostly children, he also expected the death rate to be lower.⁸

⁶Ibid., 27 December 1918.

⁷Ibid., 13, 14 December 1918.

⁸Richmond Times-Dispatch, 19, 21, 22 November 1918.

By the end of November a second, though milder, outbreak of influenza seemed to be underway in Richmond. On November 29, fifty cases were reported. The following day ninety-six additional cases appeared—the most since the epidemic's crest in October. On December 2, over 200 new cases and three deaths were recorded. Many cases had developed in the West End where it was reported that wealthier residents who had been spared during the first epidemic were now becoming ill. In the North Side, however, a decrease in influenza cases led to the reopening of the Ginter Park School.⁹

On December 9, Richmond recorded over 400 new cases and eleven deaths.

Although this was a large number of new cases, the Health Department believed the increase had resulted from physicians reporting backlogged cases from the past week.

On December 10, the number of new cases had declined to 155. Still, there was little doubt that a second epidemic had begun. Authorities were not surprised by the reappearance of influenza in Richmond and stated that it was normal for the disease to linger. During the period between December 8 and December 12, 1,365 cases were reported in Richmond— the largest number since the week ending October 19. Over 2,000 cases and 120 deaths had been recorded since the second outbreak began. While influenza was less deadly, officials continued to urge the public to follow precautions against the illness. 10

⁹Ibid., 1, 3 December 1918.

¹⁰Ibid., 10, 11, 13, 14 December 1918.

At Richmond public schools, the re-emergence of influenza led to the absences of many teachers and students. School officials did not allow teachers or students to attend school unless the Board of Health or a family doctor reported that their homes were free of influenza. By December 13, one-third of the 24,000 students were absent, as were sixty-eight teachers. Due to a shortage of substitutes, classes were combined and teachers from the closed Ginter Park School were sent to other city schools.¹¹

Dr. T. W. Murrell, president of the Richmond Academy of Medicine and Surgery, worried that the public was not treating the second outbreak of influenza as seriously as the first. At a special meeting of the Academy held on December 13, Dr. McGuire Newton reported that influenza now was more serious among children. He maintained that many of these children had contracted influenza at school. The Academy stated that it was "mere speculation and personal opinion" to connect the remergence of influenza to the reopening of public places. The physicians admitted that they felt a heavy burden in prescribing the course of action to be followed by the public: "We are not looking at this with unprejudiced eyes. Our loved ones, intimate friends, are dying, and we stand by heart-torn and desperate in being unable to render the aid they

¹¹Ibid., 10, 14 December 1918; "Report of Acting Superintendent A.H. Hill to the Richmond School Board," Minutes of the Richmond School Board, 19 December 1918, minute book entitled "November 1916 – February 1919," Richmond School Board office, Richmond, Virginia, 370.

¹²Richmond Times-Dispatch, 13, 14 December 1918.

look to us to give." The members of the association concluded that because influenza was spread by personal contact, the only true safeguard was the avoidance of this contact. 13

The Academy recommended that Richmond close its public and Sunday schools. Richmond Public School Acting Superintendent A. H. Hill and school physician Dr. T. N. Ennett opposed this decision believing children would be safer at school than at home. Dr. J. Fulmer Bright also argued against school closings: "True there will be some empty cradles, but the education of humanity must not be stopped." Dr. Murrell, however, strongly believed that the health of children must take priority: "Rather than have my cradle empty, I would advocate the closing of schools for a thousand years, and I feel that my duty as a physician demands that I protect the cradles of other fathers." While the Academy supported the school closings, its members chose not to recommend the closing of all public places. ¹⁴

Flannagan disagreed with the recommendations of the Richmond Academy of Medicine. He reported that public health officials who met at a conference in Chicago had concluded that school closings did little to reduce the number of cases or halt the spread of the epidemic. Flannagan believed that schools helped educate students about influenza. If medical inspection was implemented in schools, students would be safer than at their homes, where they might be unsupervised. Furthermore, schools offered

¹³Minutes of the Richmond Academy of Medicine and Surgery, 13 December 1918, minute book entitled "Minutes: 1908 – 1927," Richmond Academy of Medicine and Surgery, Richmond, Virginia.

¹⁴Richmond Times-Dispatch, 14 December 1918.

protection for students who lived in crowded sections of Richmond. If they believed their homes were safer, parents could choose not to send their children to school.

Flannagan recommended that schools remain open, and the Administrative Board supported his decision. 15

By mid-December the second epidemic in Richmond was peaking. Flannagan continued to warn the public to avoid crowded public places, especially the poorly ventilated shops on Broad Street. By Christmas, the second epidemic had waned. As 1918 came to a close, 1,126 influenza-related deaths had occurred, and 20,481 cases of influenza had been reported since the beginning of the epidemic in Richmond. 16

Roanoke also experienced a secondary epidemic in late November. On November 28 and 29, over one hundred new cases were recorded in the city. To contain this new outbreak, the Health Department quarantined infected homes. Officials placarded the front doors of these houses, warning the occupants not to leave and preventing visitors from entering. The Health Department urged these families to isolate the sick from the rest of the household. Above all, the public was instructed to continue following the publicized precautions against influenza. According to the *Roanoke Times*, local authorities recalled that after the passing of the October outbreak "there was

¹⁵Ibid., 16, 17, 20 December 1918.

¹⁶Ibid., 21, 24 December 1918, 1 January 1919.

¹⁷Roanoke Times, 30 November, 3 December 1918.

a very apparent tendency on the part of the average citizen to cast aside all restraints upon his actions and try to forget there ever was such a thing as the 'flu.'".

Dr. Foster hesitated to close schools and theaters again, and instead asked the public to voluntarily avoid public places and crowds. City authorities did issue special precautions to be observed in the Roanoke public schools. Principals had to inquire about the health of their teachers and prevent those with influenza symptoms from working. Teachers were to observe their students for signs of illness and exclude the sick or those from infected homes from school. Furthermore, the school buildings were to be heated in the mornings, and windows were to be opened at certain times of the day to ensure proper ventilation. In early December, absenteeism among teachers and students was high due to illness or the quarantine of individual households. 19

From December 1 to 11, 714 cases of influenza and twenty-eight cases of pneumonia were recorded in Roanoke. To expedite the reporting of cases, the Health Department mailed local physicians printed post-cards to fill out and return. One Roanoke physician regarded the influenza outbreak as more harmful than a smallpox epidemic and believed that the public had dismissed the seriousness of the situation. On December 13, Roanoke officials closed schools, churches, theaters, and other meeting places for the second time.²⁰

¹⁸Ibid., 28 December 1918.

¹⁹Ibid., 30 November, 3, 5 December 1918.

²⁰Ibid., 5, 11, 12 December 1918.

The reissuing of the ban was unpopular with those who earned their livelihoods in the city's theaters and poolrooms. Allen Jenkins who managed the Bijou and Comet theaters vowed to open despite the closing ordinance. He questioned why schools, churches, and public places were closed, while crowded shops remained opened.

Jenkins insisted that the Board of Health and the City Council favored the Retail Merchants Association of Roanoke. He supported a stringent quarantine of homes to combat influenza and believed that stores were more dangerous to the public than theaters:

Go at the epidemic at its source, the homes of the city. Don't try to dam it at the mouth by shutting up the churches, schools, theaters, etc., and leaving a waterway in the congested stores of the city. The health department is turning upon the street a vast crowd of men, women, and children, who will seek companionship during their fright. They will find it at each other's homes, in the stores, and anywhere that one or two more can congregate. With the strict regulations in force in the schools and theaters regarding ventilation and sanitation they would be far better off at those places.²¹

Jenkins insisted that he was not trying to defy the authorities, but only wished to test the validity of the closing ordinance. When Jenkins voluntarily appeared at a Roanoke Police Court, he reported that business at his theaters was brisk throughout the day and night. Several pool halls also remained opened. After refusing to close his poolroom, Joseph Hanna was issued a summons to appear in court. Like Jenkins, Hanna faulted officials for allowing congested retail stores to remain open. Pool hall operators, including Hanna, appeared at the Police Court, only to have their cases postponed.²²

²¹Ibid., 13 December 1918.

²²Ibid., 12-14 December 1918.

M.A. Smith, Vice-President of the National Business College in Roanoke, also criticized the Health Department's policy. Smith believed that health officials displayed bias by meeting with the Retail Merchants but not the owners of the public places they closed. Smith had supported the closing of his college in October when a number of students were ill, but now that his institution was free of influenza, he argued that the ordinance was unwise. Smith pressed for a more rigorous enforcement of the quarantine and questioned the policy of the Health Department:

The idea of closing a few places as 'constant reminders' to the people that they must be more careful is fundamentally wrong. This appears a case of allowing menacing individuals to freely go their way through the stores, offices, shops, and streets, scattering disease germs, while the well people, who have observed safe and sanitary regulations are made to suffer financial loss and personal inconvenience.²³

A group of ministers also criticized the closing ordinance, though they agreed to cooperate with city officials. A. W. Brooks, pastor of a Baptist church in Roanoke, repeated the assertion that authorities were favoring the retailers at the expense of other groups. He also took offense with the grouping of churches with "nonessential" businesses such as movie theaters and bowling alleys. Brooks asked how a church service lasting one hour per week could be more harmful to public health than the retail stores, banks, and factories that opened each day. He also questioned the necessity of the second round of closings: "If conditions are so serious why not quarantine everything?

... If not serious enough to close commercial institutions, then why close the churches

²³Ibid., 13 December 1918.

and leave the impress that the people of Roanoke can get along without God, but cannot get along without money-worship."²⁴

Joseph W. Coxe, chairman of the Board of Health, acknowledged that the city's shopping district was overcrowded in the afternoons. He urged the public to avoid crowds by shopping in the morning and limiting the number of trips to stores. The city council apologized for the inconveniences or financial losses caused by the closing ordinance, but warned that violations of the order would not be tolerated. Regarding the crowded retail stores, Dr. Foster instructed owners to ventilate their stores throughout the Christmas season. Woolworth stores in Roanoke joined the cause by distributing cards describing influenza prevention.²⁵

On December 16 the Roanoke Board of Health and the city council agreed to rescind the closing ordinance. Officials planned to lift the ban in two days, though restrictions on certain public places remained in effect. While public schools remained closed until after Christmas, the National Business College was allowed to reopen. Health inspectors continued to visit the school to ensure that regulations were being followed. Churches, but not Sunday schools, reopened, and no social gatherings were allowed in church buildings. Funerals were to be held at cemeteries or in homes if necessary. City officials still prohibited public dances and social events in Roanoke.²⁶

²⁴Ibid., 15 December 1918.

²⁵Ibid., 13, 14, 18 December 1918.

²⁶Ibid., 17 December 1918.

Pool halls, bowling alleys, and movie theaters reopened on December 18, but health authorities still placed restrictions on these businesses. Managers of pool halls and bowling alleys were required to limit the number of people that could congregate at individual pool tables and bowling lanes. Theaters were not allowed to be more than two-thirds full. No one under fifteen years of age could patronize a movie theater, and theaters had to close for one hour each evening for cleaning and ventilation. The Board of Health's new policy did not satisfy critics like Allen Jenkins. Jenkins continued to argue that Roanoke officials had discriminated against theater owners: "the picture men regret they are not members of the Retail Merchants' Association, as it is very evident that the merchants are not restricted in any way and the picture shows I represent will continue fighting for their rights unless like restrictions are placed on all lines of business." 27

The Roanoke Times implored the public to heed the advice of the Health

Department. The editors reminded their readers of the gravity of this unprecedented

epidemic and appealed for cooperation: "It is a serious menace that the health authorities

are combating and they are not open to reproach because it is evident— sometimes

glaringly evident— that they are somewhat uncertain themselves as to just what is the

best way to go about the tasks of checking its ravages." Concerned about the

congested retail stores, Dr. Foster urged the public to shop early in the day to help limit

afternoon crowds. He also encouraged people to shop alone and advised parents not to

²⁷Ibid., 17 December 1918.

²⁸Ibid.

bring their children to the stores. Business owners cooperated with Foster in reducing crowds in their stores. Some displayed signs requesting that customers conduct their transactions quickly. Managers and the police also discouraged people from loitering in these public places. Foster personally inspected some of the more crowded stores and conferred with managers about methods of limiting congesting and providing for better ventilation.²⁹

As December came to a close, the influenza epidemic subsided in Roanoke. The number of influenza cases reported during November and December totaled 1,033 and 1,679, respectively. The number of deaths reported during December totaled sixty, compared to the eighty-six deaths reported in October. Influenza continued to be reported throughout January. Roanoke recorded 553 flu cases and twenty-three deaths that month. Since the epidemic began in September, over 7,000 cases of influenza had been reported to Roanoke health authorities.³⁰

Influenza continued to plague parts of Virginia in early 1919. The illness reappeared in Charlottesville and Luray in January. That same month, Petersburg reported an increase in influenza cases. The acuteness of influenza in Hot Springs led the State Council of Defense to dispatch doctors to a local hospital. The Elizabeth City County Board of Health did not reopen schools until January 20. During the second

²⁹Ibid., 18, 19 December 1918.

³⁰Ibid., 28, 31 December 1918, 5, 14 January, 4 February 1919.

outbreak, schools in Hampton, Phoebus, and Elizabeth City County were closed for six weeks.³¹

As Spanish influenza abated, Americans began to put the epidemic into perspective. The *New York Times* compared the disease to the plagues of olden time: "to find a mortality approaching that caused by this visitation it would be necessary to go back to the days when preventative medicine was in its infancy and sanitation was regarded as the troublesome fad of a few absurdly timid people— to the days of cholera, yellow fever, and typhoid." The *Times* also criticized physicians like New York Health Commissioner Dr. Copeland, who at the start of the epidemic had reassured the public that Spanish influenza would be of small concern to the United States: "The doctors proved themselves the worst of prophets when they told us that the malady would have little or no power over a well-fed population, for when it came its favorable victims were the young and the strong, while the weak, at both extremities of life, were almost immune." 33

In September 1919, the State Health Commissioner revealed that over 326,000 cases of influenza had been reported in Virginia since the epidemic began the previous

³¹Robert P. Valentine to Vinton Valentine, 30 December 1918; Ella Katherine Fife to Margaret Whitler Fife, 15 January 1919, Box 2, Freudenberg correspondence; Mabel Menefee to Marvin Menefee, 1 January 1919, Papers of Marvin J. Menefee, 1914-82, Alderman Library, University of Virginia. Hereinafter cited as Menefee papers; *Richmond Times-Dispatch*, 5, 25 January 1919; *Newport News Daily Press*, 18 January 1919.

³²New York Times, 2 December 1918.

³³Ibid., 7, 14 December 1918.

fall. According to the State Board of Health, influenza killed more than 11,000 residents, while over 2,000 Virginians lost their lives to pneumonia (see table 1). The number of influenza-related deaths published in the newspapers during the epidemic often exceeded the official totals. Due to the problems associated with the reporting of cases, the actual number of influenza and pneumonia deaths in Virginia probably was higher than the official count.³⁴

According to mortality statistics from the Bureau of Census, influenza and pneumonia killed 17,064 Virginians during the last four months of 1918 and the first six months of 1919. Influenza-related deaths in 1918 in the twenty-four states included in the census statistics averaged 6.0 per 1,000 people. By comparison, the 1917 death rate due to influenza and pneumonia was 1.7 per 1,000. The 1918 influenza-related death rate in Virginia was 6.2 per 1,000 people, compared to 1.4 per 1,000 in 1917. Richmond's influenza-related death rate rose from 2.0 per 1,000 in 1917 to 6.6 per 1,000 in 1918. Among the states included in the census statistics, Pennsylvania (8.8 per 1,000) and Maryland (8.0 per 1,000) had the highest influenza-related death rates in 1918. The lowest death rates were found in Michigan and Minnesota (3.9 per 1,000).

The president of the Actuarial Society of America, Henry Moir, estimated that influenza had killed 400,000 Americans. Moir's study of statistics from seven life insurance companies revealed some interesting findings. Of all reported influenza-

³⁴Annual Report of the State Board of Health, 7, 156-161.

³⁵Bureau of Census, *Mortality Statistics*, 1919 (Washington, D.C.: Government Printing Office, 1921), 28-31, in Crosby, *Epidemic and Peace*, 208-214.

related deaths, thirteen percent resulted from influenza and eighty-seven percent were caused by pneumonia. Moir found that the average age of death was thirty-three, and projected that an average of twenty-five years of active life had been lost in each case.

Census statistics from the nation's forty-six largest cities found that the death rate in 1918 equaled 19.6 per thousand. The rate in Boston climbed from 16.4 in 1917 to 22.0 in 1918. In Philadelphia, the total increased from 17.1 to 24.2; while in Washington, D.C., the death rate rose from 16.8 to 23.6. In four months, more Americans died from Spanish influenza than had been killed in nineteen months of war.³⁶

³⁶New York Times, 6 December 1918, 6 January 1919; Richmond Times-Dispatch, 13 February 1919.

CHAPTER 4

THE FIGHT AGAINST INFLUENZA: DOCTORS, NURSES, AND VOLUNTEERS

When influenza emerged in the fall of 1918, American communities quickly realized that they lacked resources to fight the epidemic. There was a severe shortage of doctors and nurses due to the war in Europe. Federal, state, and local officials pleaded for volunteers to battle influenza. Women were called upon to care for the sick and perform other duties related to the epidemic. Many cities had to open emergency hospitals to treat the growing number of patients. Organizations such as the Red Cross concentrated all efforts on influenza. These volunteers and charitable groups played a vital role in the fight against influenza.

Cities in Virginia had to devise ways to deal with the lack of medical personnel.

The Newport News Daily Press commented on the scarcity of doctors in the nation. The editors of the paper argued that the United States should exempt some physicians from military service so that they could attend to the health of the homefront:

Contrary to the general opinion, we have never been overstocked with doctors, and since the war the supply has been woefully limited. Medical men are acutely needed in private practice, not only to meet epidemics like the influenza, but to preserve and maintain and educate in health standards that are vitally necessary at home. . . . An epidemic in the United States affects in ten thousand ways the comfort and efficiency of the army in France. And a doctor who is engaged in protecting the home base certainly is doing a direct service to that on foreign soil.¹

¹Newport News Daily Press, 10 October 1918.

Due to the lack of doctors and nurses, Surgeon General Rupert Blue of the USPHS urged the public to become familiar with the home care of influenza patients, rather than rely solely on medical professionals: "The present generation has been spoiled by having had expert medical and nursing care readily available. While I cheerfully recognize all the good that has been done by our splendidly trained graduate nurses, I believe that the public generally has come to rely too much on their services and has not interested itself in studying the home care of the sick."

Richmond officials divided the city into four districts so that doctors could better locate and treat the sick. The Richmond Academy of Medicine instructed its physicians to practice only general medicine during the epidemic and to accept all calls from influenza patients. Dr. Roy Flannagan estimated that overworked Richmond physicians had reported one-third of the actual number of cases. Roanoke also faced a shortage of doctors. Before the epidemic, forty percent of local physicians had joined the military. Health officials asked for cooperation during the epidemic. They instructed the public to call for doctors in the morning and limit night calls to emergencies.³

To treat influenza patients in locales lacking medical facilities, the State Board of Health and the State Council of Defense operated hospital trains that carried the sick to towns with emergency hospitals. The Board of Health and the Council of Defense also opened emergency hospitals in places where there was an urgent need for medical

²Ibid., 13 October 1918.

³Richmond Times-Dispatch, 8, 9, 14 October 1918; Roanoke Times, 8 October 1918.

facilities. The great demand for physicians led State Health Commissioner Dr. Ennion Williams to ask Surgeon General Blue for permission to use Medical College of Virginia students as "doctor-assistants." These third and fourth year MCV students were dispatched throughout the state to treat influenza patients. The State Board of Health sent doctors, including the medical students, to thirty-five localities that requested physicians. Surgeon General Blue also provided doctors from the USPHS. The Public Health Service used some of the funds appropriated by Congress to pay these physicians and medical students. In January the Surgeon General of the Army agreed to furlough some doctors from army camps in Virginia and send them to areas of the state where their services were needed.⁴

Due to the lack of medical care in southwestern Virginia, the State Board of Health sent Dr. Paul Barringer to educate the public about influenza in the railroad centers and coal towns of this region. Barringer supported a ban on assemblies and worried about the epidemic's effects: "No national disaster that we can conceive would be more far-reaching than a serious let-down in the output of coal at this time." There was an urgent need for physicians in the towns of Covington, Norton, and Saltville. An official from the Virginia Council of Defense and the state Federal Fuel Administrator asked the federal government to send doctors and nurses to southwestern Virginia where

⁴Richmond Times-Dispatch, 9, 12, 14 October 1918; Annual Report of the State Board of Health, 7; Roanoke Times, 12 January 1919.

⁵Annual Report of the State Board of Health, 6; Dr. R. B. Barringer to Judge Henry C. McDowell, excerpted in C. C. Cochran to Westmoreland Davis, 7 October 1918, Box 14, Davis Executive Papers.

influenza had paralyzed the coal industry. United States Fuel Administration representative G. D. Kilgore reported that coal production was crippled in the region. He praised the State Board of Health for their help in opening emergency hospitals and operating the relief trains in the towns of Southwest Virginia.⁶

Dr. W. A. Brumfield of the Public Health Service reported that the influenza epidemic was very serious in Lee County: "Conditions at St. Charles could not well be worse. The great majority of the people are sick and the rest are panic-stricken and completely disorganized. It is said that the sick and the children in some houses are suffering for food because there is no one able to prepare it." Brumfield noted that the town of Coeburn had established a hospital. He began to organize relief work in the area and planned to create a soup kitchen in the town. A nurse from the John Marshall Emergency Hospital was dispatched to assist Dr. Brumfield with his work. Brumfield informed the State Board of Health that the influenza situation remained critical in small communities throughout Southwest Virginia.

To make matters worse, the appearance of diphtheria in St. Charles led Brumfield to fear that this disease might spread to other areas of the state. Diphtheria was a serious problem in Lee County, and the State Board of Health took measures to prohibit its transmission outside of southwestern Virginia. Acting on behalf of State Health

⁶Richmond Times-Dispatch, 14, 17 October 1918; G. D. Kilgore to Westmoreland Davis, 15, 18 October 1918, Box 14, ibid.

⁷Richmond Times-Dispatch, 20 October 1918.

⁸Ibid.

Commissioner Williams, who was ill, Dr. R. W. Garnett sent instructions to all Virginia physicians warning them to watch carefully for symptoms of diphtheria: "Considering the unprecedented demands being made upon the time and energy of doctors, it would not be surprising if cases of diphtheria were overlooked."

Twelve USPHS doctors, eighteen of their assistants, and thirty-four civilian physicians were available to treat the sick in Newport News. Newport News Mayor A. A. Moss asked the Secretaries of War and the Navy to allow four local doctors to remain in Newport News instead of being inducted into the military as planned. Dr. C. H. Waring, acting head of the USPHS in Newport News, issued a set of instructions to reduce the demand for doctors and nurses. The public was asked to call physicians only in case of an emergency. When house calls were needed, the visit was scheduled for the following morning so that doctors could organize their trips according to geographic location. Waring urged the public to release private nurses so that they could assist the Public Health Service. He also recommended that only the most serious cases be admitted to a hospital.¹⁰

State health officials received constant requests for nurses. There was a great demand for nurses in rural areas where the fear of influenza made some residents reluctant to care for the sick. To ease the demand, the Board of Health sent county extension agents with nursing experience to areas where they were needed. Flannagan

⁹Ibid, 20, 22 October 1918.

¹⁰Newport News Daily Press, 4, 8, 12 October 1918.

and State Health Commissioner Williams addressed a group of graduate and practical nurses in hopes of recruiting them to aid in the battle against influenza. The Richmond Health Department also urged married women to volunteer for a few hours each day.¹¹

Treating influenza patients was dangerous work for doctors and nurses. At one point, four of five Richmond Health Department physicians were confined to their beds. The assistant director of the John Marshall Emergency Hospital, Dr. E. C. L. Miller, became hospital director when Dr. Lawrence Price developed influenza. Dr. R. W. Garnett served as Acting State Health Commissioner while Dr. Ennion Williams was ill. Dr. Charles R. Robbins worked for four days at John Marshall before he became sick. Nurses often developed influenza after caring for patients. Grace D. Morris, a twenty-six-year-old senior nurse at Virginia Hospital in Richmond, died after an eight-day bout with influenza and pneumonia. 12

The difficulty in locating doctors and nurses was accompanied by an overcrowding of hospitals throughout the state. Some communities chose to open emergency hospitals to treat serious influenza cases. In early October, Public Health Service representatives recommended that an emergency hospital be opened in Newport News. City officials agreed and initially planned to convert a tabernacle into an emergency hospital. While the city was given permission to use the tabernacle, a tour revealed that it would take too long to convert the building into a hospital. Dr. Waring,

¹¹Richmond Times-Dispatch, 3, 14 October 1918.

¹²Ibid., 10, 11, 16, 19 October 1918; Annual Report of the State Board of Health, 7.

the Public Health Service representative, inspected other buildings before deciding on the Walter Reed School. The Newport News School Board agreed to let the USPHS use the school as a temporary emergency hospital.¹³

The Public Health Service pledged to provide administrators, doctors, and nurses to staff the hospital. The local Red Cross chapter donated \$5,000 to pay for nurses and supplies at the hospital. The city of Newport News contributed an equal amount towards the operation of Walter Reed. The Newport News shipyard, the U. S. Housing Corporation, and the Old Dominion Land Company also helped fund the hospital.

Officials from Newport News, the Red Cross, the Chamber of Commerce, the shipyard, and the Old Dominion Land Company organized the Walter Reed Emergency Hospital Association to manage the facility's business affairs. 14

Dr. Samuel W. Hobson, a member of the State Board of Health and a physician at the Newport News Shipyard and the Chesapeake & Ohio Railroad, believed that sending influenza patients to hospitals like Walter Reed would worsen their condition. Dr. Hobson stated that the seriously ill could infect the mildly ill when grouped together. He advocated the dispersion and isolation of influenza patients: "Dispersion may seem a hardship on many households, but it is a hardship they should have the heroism and nobility of character to bear, for it is unthinkable that they would force their guests into the pneumonia sprays of hospitals or other concentration depots for purveying infection."

¹³Newport News Daily Press, 4-6 October 1918.

¹⁴Ibid., 4, 5, 9, 11 October 1918.

Hobson advised influenza patients to remain in their beds for several days and proposed the construction of special hospitals where pneumonia patients could be completely isolated from each other. 15

Dr. Waring insisted that influenza patients were safer in emergency hospitals like Walter Reed than in congested and poorly ventilated homes. He informed the public that influenza and pneumonia patients were treated in separate wards. Cots were partitioned with large screens, items that patients came in contact with were disinfected, patients received proper nutrition and medicine, and the hospital prohibited visitors. Furthermore, Waring argued that concentration of the sick was preferable to dispersal because doctors and nurses could treat more patients in a central hospital like Walter Reed.¹⁶

The Walter Reed Hospital was opened on October 6, and by the next day fifty patients were being treated at the facility. The hospital staff planned to accommodate up to 250 patients within two weeks. Only the most serious cases would be treated at the emergency hospital. Patients without family in Newport News would be given preference over those with relatives in the city. Newport News residents were charged \$1.50 per day, while non-residents paid a dollar more. Indigents were not assessed a fee. 17

¹⁵Ibid., 9 October 1918.

¹⁶Ibid., 10 October 1918.

¹⁷Ibid., 6, 8, 9, 11 October 1918.

Walter Reed needed additional nurses, untrained male and female attendants, and cooks to care for the growing number of patients. The Newport News superintendent of schools requested that teachers volunteer to work either as nurses or clerical assistants. The hospital staff and health officials appealed to the heroism and self-sacrifice of Newport News residents. The public was asked to donate hospital supplies such as pillows, sheets, and bedding. On October 12, over 170 patients were at Walter Reed. Unable to admit more people due to the shortage of nurses, hospital officials pleaded with the women of Newport News to volunteer even if they had no nursing experience. ¹⁸

Three days later, the demand for nurses had decreased and the hospital was caring for almost 200 patients. Ten individuals had died at Walter Reed—the majority of the deaths resulting from pneumonia. By October 17, however, five nurses had developed influenza, leaving only six nurses to treat more than 200 patients. Hospital officials sent twenty individuals to Norfolk hospitals due to the nursing shortage at Walter Reed. Newport News health officials repeated their pleas for women to volunteer at the emergency hospital. Volunteer attendants who could work during the night continued to be in demand. While the hospital quickly obtained a sufficient number of attendants, the five nurses who had become ill were not replaced. 19

As the epidemic in Newport News abated in late October, plans were made to move patients out of Walter Reed and convert the building back into a school. The *Daily*

¹⁸Ibid., 9, 11, 13 October 1918.

¹⁹Ibid., 16, 18-20 October 1918.

Press praised the doctors, nurses, and volunteers who treated influenza victims. The paper questioned if the city could cope without an emergency hospital in the future, especially if another epidemic emerged: "The Spanish influenza invasion found the city utterly unprepared, and one of our best schoolhouses had to be pressed into service for a hospital. But what shall we do next time? Shall we wait for another emergency to arise, or shall we take counsel of our experience and prepare in advance?" A city council member proposed that funds left over from the operation of Walter Reed be applied to the construction of a permanent emergency hospital in Newport News.²¹

Richmond officials also combated influenza by opening an emergency hospital for serious cases. The John Marshall Hospital was equipped to handle up to 700 patients but lacked doctors and nurses. Because only four physicians initially worked at the hospital, Dr. Price urged Richmond doctors to volunteer even if it was for only one hour each day. Ten graduate nurses and volunteers with prior nursing experience staffed the emergency hospital, but Price called for more nurses: "It is urgently requested that all persons not seriously ill and using the services of a nurse will release her at once, so that she may report here for duty. If the situation is not relieved from a nursing standpoint, it will be necessary to commandeer the services of nurses doing less important work."²²

²⁰Ibid., 29 October 1918.

²¹Ibid., 6 November 1918.

²²Richmond Times-Dispatch, 9 October 1918.

By October 10 the John Marshall Hospital was caring for 200 patients, but only three nurses were available to work each shift. The executive staff of the hospital and the Richmond Administrative Board met with Attorney-General John R. Saunders to discuss the legality of commandeering nurses to work in the hospital. Agnes Randolph called on nurses tending convalescents to aid with the more urgent cases: "A spirit of patriotism should cause the people to turn over their nurses to the hospital as soon as humanely possible." Graduate nurses were offered a salary of forty dollars per week, while trained attendants were paid twenty-five dollars.

On October 11, a group of prominent Richmond physicians informed the public that the hospital had sufficient medical supplies and ambulance service, but the nursing staff was inadequate. The doctors asked recent graduates and trained nurses to volunteer, and also urged women and men of both races who had no nursing experience to help at the hospital. These individuals could perform simple tasks, while the trained nurses attended to the patients.²⁵

Some prominent Richmond residents responded to the calls for helps. Governor Westmoreland Davis visited the hospital, and his wife worked in the pneumonia ward. Maggie Walker, the African-American president of St. Luke's Penny Savings Bank, arrived with three friends to volunteer at the hospital. A nurse and two of her students

²³Ibid., 11 October 1918.

²⁴Ibid., 12 October 1918.

²⁵Ibid.

from Grace Hospital joined the staff at John Marshall and planned to work full time, taking breaks only to sleep and eat. The brotherhood of Saint Andrews Church and a number of Catholic sisters also offered to work at John Marshall.²⁶

Teachers throughout the nation and Virginia joined the fight against the influenza epidemic. With the schools closed, administrators and teachers who were not ill volunteered their services. Dr. Miller, a MCV professor and a physician at the John Marshall Emergency Hospital, praised the teachers who volunteered as "capable, brainy, and efficient." In addition to working as nurses, teachers visited families in their districts, gave the sick first aid, and reported new cases to the health authorities. School clerks worked overtime at the John Marshall offices, school mechanics converted rooms into emergency facilities, and the domestic science department and elementary school teachers prepared the hospital's food. The Richmond School Board car was used solely for the purpose of answering emergency calls. Superintendent Hill reported that 477 public school teachers had volunteered their services during the height of the outbreak in October. Seventy-five teachers had become ill and at least four teachers and one school nurse had died.²⁷

²⁶Ibid., 12, 13, 15 October 1918.

²⁷Ibid., 15, 16, 20 October 1918; "Report of Acting Superintendent A. H. Hill to the Richmond School Board," Minutes of the Richmond School Board, 31 October 1918, minute book entitled "November 1916 – February 1919," 354; School Reports 1918-1919, Richmond School Board office, Richmond, Virginia, 21-22.

An investigation of the hospital by Drs. R. W. Garnett and Beverly R. Tucker concluded that conditions at John Marshall were satisfactory and patients were receiving appropriate medical care. Rooms on each floor had been transformed into sanitary wards filled with rows of clean, white beds, separated by screens. The transformation of the school into a modern hospital led one individual to comment that John Marshall was "the most interesting building in the city of Richmond. . . . Gone are the desks from the classrooms and the blackboards alone are mute reminders of lessons learned from books for the greatest lesson of all is being taught—the caring for suffering humanity." in the hospital, as people gathered on the sidewalk and leaned on the fences surrounding the building watching "the lighted windows and figures of doctors, nurses, and attendants moving about within with the same intentness that they would accord a thrilling screen drama."

The hospital was divided into pneumonia, influenza, and children's wards. The medical team consisted of both general practitioners and specialists who made rounds in the various wards twice a day. Surgeons admitted the sick, answered emergency calls, and treated patients in the absence of attending physicians. A team of six doctors worked from 5:00 A.M. to 8:00 P.M., and three physicians staffed the hospital at night.³⁰

²⁸Richmond Times-Dispatch, 13 October 1918.

²⁹Ibid., 14 October 1918.

³⁰Ibid., 19 October 1918.

While the very young escaped the worst of the epidemic, a number of babies and children were admitted to the John Marshall Emergency Hospital. These cases, however, were less serious, and there were few deaths among these patients. On one occasion, a healthy baby was born to a mother in the influenza ward. When children were released from John Marshall, many returned home only to discover that other family members had contracted influenza. In several cases, children had been orphaned or lost a parent while hospitalized. A father asked hospital officials to delay the discharge of his two children by one day because he had just buried their mother and was preparing to bury their infant sibling. Another discharged boy returned home to find that his mother had died and four family members were ill. To care for these cases, hospital officials formed a committee to investigate the home conditions of children who were ready to be discharged. A Catholic priest also established a home for black children who were orphaned or unable to return to their homes.³¹

Richmond authorities reported that influenza had taken longer to infiltrate the city's black population. Flannagan hoped that the medical community could control the epidemic among blacks by preparing for an increase in cases among this group and promoting preventative measures. Black influenza patients initially were treated in the basement of the John Marshall Hospital. As this ward reached capacity, city health officials opened an emergency hospital at the Baker Colored Public School on October 15. Dr. Miller of the John Marshall Emergency Hospital and state and city officials

³¹Ibid., 14, 16, 20, 21 October 1918.

supervised the operation of this Jackson Ward facility. Black patients at John Marshall, who were not seriously ill, were transferred to the Baker School shortly after it opened. The Baker Emergency Hospital was staffed entirely by African-Americans, including its head physician, a Dr. Hughes. A young woman, Dr. Bessie Tharp, who had studied at Harvard Medical School and the University of Boston, assisted Dr. Hughes. By October 24, over one hundred patients were being treated at the Baker School.³²

After inspecting the hospital, Governor Davis remarked, "It is an excellent thing to have our colored people so well able to work out their own problems independent of white help and without any mixing of activity. It shows that they are progressing and that they will become helpful workers in the future of the state." A reporter also praised the leaders at the Baker School for their excellent organization and management, noting that people born and raised in Richmond, not "northern importations," made up the majority of the staff. A member of the medical team appreciated the chance to demonstrate the capabilities of black physicians:

We have had no opportunity before to do for our own people what we have been able to do here. It is a service from which we will reap benefits for years to come, for our own people here in the South have never had the confidence in us in the past that they will have in the future since with funds and equipment furnished us we have been able to show them what we are able to accomplish.³⁴

³²Ibid., 13, 15-17, 23, 25 October 1918.

³³Ibid., 20 October 1918.

³⁴Ibid., 25 October 1918.

Dr. Flannagan also opened the Richmond Board of Health to treat emergency cases; however, the influenza epidemic soon depleted his staff of nurses. Flannagan repeated his plea for women to volunteer at his office and the emergency hospital. The demand for trained nurses was so great that it was considered unpatriotic for these women to continue treating their private patients.³⁵ The Board of Health also asked women to assist with chores that visiting nurses lacked the time to do. A woman on Flannagan's staff emphasized that these volunteers were expected to do unpleasant work:

The exigencies of this terrible situation in the city demand unusual things of the women of the city. We must face the fact that to carry flowers or a pitcher of soup is well enough, but there is other work to be done in these stricken homes which in normal times would be servants' work— clean linen must be put on beds, slops must be emptied, soiled garments changed, and dirty hands and faces washed.³⁶

As the epidemic eased in Richmond, there was less demand for nurses and volunteers. Assistant Director Agnes Randolph reported that graduate nurses were available to teach volunteer nurses about the proper care of influenza and pneumonia patients.³⁷ Dr. Flannagan's wife, who had volunteered at John Marshall, asked workers to remain committed to their jobs: "the real test in the influenza situation, so far as this hospital is concerned, is now upon us. The excitement is over. Work from now on is

³⁵Ibid., 14, 15 October 1918.

³⁶Ibid., 16 October 1918.

³⁷Ibid.

bound to be more or less of a grind, and it remains to be seen how many of us will stick to our posts and see it through."³⁸

Despite the apparent crest of the epidemic, patients continued to arrive at John Marshall and officials renewed their calls for volunteers. Some volunteers at John Marshall and the Baker School had to return home to care for influenza patients in their families, while others could not continue with the demanding hospital schedule. The principal of John Marshall High School appeared before the Richmond School Board to ask for more reliable janitorial service at the emergency hospital. Because the Richmond Health Department now controlled the school, the School Board decided that it had no authority to require janitors from Richmond schools to work at the emergency hospital. However, after only one elderly man answered the call for help, public school janitors agreed to return to work even though the Richmond School Board opposed their decision. In a public appeal for orderlies and nurses' aides, Dr. Miller noted how difficult the work had become:

The trouble is that the novelty of the hospital is wearing off and we are getting down to the grind. The nervous strain is beginning to tell on all of us. This is the first time I have relaxed today. We have to admit that it is not only a nervous strain to work in the hospital, but to come into the building at all with the natural fear that every one has of contracting the disease, but we cannot afford to let go at this stage of the game.⁴⁰

³⁸Ibid., 20 October 1918.

³⁹Ibid., 22, 23 October 1918; Minutes of the Richmond School Board, 21 October 1918, minute book entitled "November 1916 – February 1919," Richmond School Board office, Richmond, Virginia, 347.

⁴⁰Richmond Times-Dispatch, 23 October 1918.

Richmond families called the Health Department and the Instructing Visiting

Nurses' Association (IVNA) for aid in their homes. Nurses from the IVNA merged with
the Richmond Health Department and worked in assigned districts in order to locate
those who needed assistance. These nurses, along with volunteers, reported their findings
to the Richmond Health Department. Mrs. J. W. Faris, the chief nurse of the Health
Department, issued a general appeal to the public for available nurses. She called on
married graduate nurses to volunteer on either a full or a part-time basis. Faris also asked
undergraduates, nurses' aids, and white or black women with nursing experience to
register with her.⁴¹

Even when the epidemic crested, Mrs. Faris continued to request the service of visiting nurses, hoping that women would not quit as the cases began declining. As the situation improved throughout the state, nurses were needed even more than doctors. At the emergency hospitals, they trained and supervised volunteers, as well as cared for patients. Health officials appealed to the patriotism of women and urged them to work in the emergency hospitals or serve as visiting nurses.⁴²

Before they visited homes, Flannagan gave the nurses instructions regarding equipment and care of the sick. Each nurse was expected to dress simply and carry a handbag containing supplies such as a large apron, nail brush, soap, gauze masks, castor oil, two-grain quinine pills, and alkaline antiseptic tablets for mouth wash. When visiting

⁴¹Ibid., 6 October 1918.

⁴²Ibid., 26 October 1918.

a family, nurses first were to ask if a doctor was treating the sick. If so, the nurse was to follow his orders. If there was no doctor in attendance, the nurse was instructed to use her own judgment. She was told to wear a mask when treating the patient and to urge family members to do the same. Nurses were to ventilate the patient's room and emphasize the need for extended bed rest in order for the sick to regain their strength and prevent pneumonia. After leaving the patient's room, they were told to wash their hands and clean their masks in the antiseptic solution. Nurses also left leaflets on home prevention of influenza.⁴³

The American Red Cross joined the Public Health Service and the state governments to fight the influenza epidemic. These organizations mobilized medical and nursing units to travel to areas of the country in need of aid. Throughout the nation, the Red Cross enrolled nurses, opened emergency hospitals, donated supplies, and sent volunteers to help manage household duties in homes where adults were ill. The Red Cross asked each chapter to form a committee that would work with its local health department. The local chapters were instructed to organize women with nursing experience and those without training who were willing to volunteer. Women with little experience were placed under the supervision of physicians or highly trained nurses. Because nurses were needed in Europe as well as in the United States, Red Cross

⁴³Ibid., 6 October 1918.

chapters complied with a request from the Surgeon General of the Army to survey the number of women with nursing experience.⁴⁴

The Roanoke Red Cross chapter, headed by Mrs. S. W. Jamison, teamed with the local Board of Health to combat influenza. Mrs. Lydia LaBaume was chosen as the chapter liaison to the Health Department. LaBaume organized free nursing classes at the Roanoke Hospital to help train volunteers. Over twenty public school teachers enrolled as Red Cross volunteers. Black teachers were called upon to volunteer in the homes of black influenza victims. Red Cross volunteers were paid for their service, but warned that the work would be difficult.⁴⁵

Roanoke officials called for more women to assist with nursing duties. The *Roanoke Times* urged women to accept this call to duty:

We know of no better way in which women may serve their community and their country at this time than by heeding this call. To alleviate the sufferings of stricken humanity has ever been true womanhood's noblest accomplishment and we have faith that the women of Roanoke will not fail to recognize the opportunity for service that this call presents. . The young woman of Roanoke must face the fact that this is no time to be playing bridge or attending teas. There's work—real work, needful work—to be done for God and His people. To do nothing at all in the common cause is to be the worst kind of slacker. 46

⁴⁴New York Times, 27 September 1918; Roanoke Times, 8, 24 October 1918.

⁴⁵Roanoke Times, 6, 8, 18 October 1918.

⁴⁶Ibid., 22 October 1918.

The *Newport News Daily Press* issued their own "call to womanhood," and asked all women with nursing experience to respond to the Red Cross survey of the nation's nursing force.⁴⁷

Although the Red Cross paid nurses for their work, private doctors sometimes offered nurses higher wages to care for their wealthy patients. Those who were not seriously ill were called upon to release their nurses so that they could treat emergency cases. The *Lynchburg Advance* decried those who monopolized nurses:

Scores of trained nurses are now paid a high price to care for semi-invalids, who suffer from selfish imagination more than from illness, and for normally healthy children who would be better for a little real material care. . . . No civilian has the right to monopolize the life-saving power of a nurse in time of national need, and no nurse of high patriotic and professional principles will permit selfish interest to stand in the way of essential service to the Nation.⁴⁸

The Richmond chapter of the Red Cross, headed by H.G. Boykin, suspended all activity unrelated to influenza and concentrated its efforts on combating the epidemic. Red Cross members unpacked boxes that were to be shipped to France, and instead sent the supplies to the John Marshall Hospital. The organization donated hundreds of sheets, pillowcases, pajamas, bathrobes, slippers, and handkerchiefs to the emergency hospital. The Red Cross furnished nurses with medicine bags and supplies and arranged for the installation of hospital beds donated by the Army-Navy club.⁴⁹

⁴⁷Newport News Daily Press, 27 October 1918.

⁴⁸Roanoke Times, 24 October 1918.

⁴⁹Richmond Times-Dispatch, 9 October 1918.

The Richmond Catholic Women's Auxiliary to the Red Cross made nightgowns for children at the John Marshall Emergency Hospital. The Richmond chapter of the Red Cross requested the assistance of all women who could sew in order to meet the growing demand for hospital supplies and garments. The Roanoke Red Cross also supplied clean clothes and gowns for children. The Newport News chapter contributed volunteers as well as supplies to the Walter Reed Emergency Hospital. Red Cross chapters throughout the state also produced facemasks for the public.⁵⁰

The Red Cross assisted at Camp Lee, where it aided the visiting relatives of ill soldiers. In one case a soldier died a few hours before his mother and sister arrived from Minnesota. The Red Cross paid for their return home, as well as the departure of a Texas woman who contracted influenza while visiting her ill husband at Camp Lee. At the Red Cross convalescent house, relatives of influenza patients at the base hospital were given free board and transportation to Camp Lee. 51

During the epidemic, various organizations opened soup kitchens to feed the sick. The Richmond IVNA established soup kitchens throughout the city. On October 8, the first soup kitchen opened at St. James Church, and the Health Department recommended that other churches open their own kitchens. Members of the congregations were asked to donate milk, soup, meat, and glass bottles. Richmond's chief dietitian, Helen Gallegher, requested that individuals wishing to help should contribute ingredients rather

⁵⁰Ibid., 13 October 1918; *Roanoke Times*, 19 October 1918; *Newport News Daily Press*, 13 October 1918.

⁵¹Richmond Times-Dispatch, 9 October 1918.

than donate homemade soup to city hospitals. Nurses in need of broth for their patients could acquire it from the numerous kitchens that began appearing throughout Richmond. The United States government also began making soup at a city plant, eventually preparing one hundred gallons a day for Richmond patients. A distribution headquarters for bread soon was established at St. Peter's Church on Eighth and Grace Street, and the Catholic Women's Auxiliary began dispensing as many as 2,000 rolls per day to the city's ill. 52

Soup kitchens were opened in communities throughout the state. In Pulaski, Reverand Thomas Opie, Mayor E. W. Calfee, and several other community members opened a soup kitchen in the town Fraternity building. Chicken and beef broth, coffee, and toast were prepared by volunteers and taken to homes where families were unable to cook. Volunteers in Roanoke prepared special food for the sick at the Y.W.C.A. diet kitchen. The Hampton Red Cross chapter opened a soup kitchen in a local church to provide soup and tea to influenza patients and their family members.⁵³

Doctors often prescribed a liquid diet of milk, but due to shortages, patients in Newport News and Richmond had a difficult time obtaining it. The government had purchased most of the milk supply in Newport News for use in the military camps. To ensure the proper delivery of milk in Richmond, Dr. Flannagan instructed the Chief Dairy Inspector to give preference to infants and the sick. Many workers at Richmond's dairy

⁵²Ibid., 9-11, 13-15 October 1918.

⁵³Roanoke Times, 11, 22 October 1918; Newport News Daily Press, 19 October 1918.

distributing plants had become ill, and the shortage of manpower affected the delivery of milk to city residents. Production also fell at local dairy farms due to the illness of workers. As the milk shortage became more acute, Flannagan requisitioned prisoners from the city jail to work in the dairies. He pledged that the city would take control of the plants if this solution failed.⁵⁴

The delivery of food was vital to families overwhelmed by influenza. Members of the IVNA reported that many children had to accept soup because the adults in the home were sick. Some victims of influenza were too ill to call for medical assistance. At one residence, ambulance drivers observed a sign reading "Walk in, don't knock," and discovered a woman who needed to be carried to the hospital. Single women who lived alone and had few acquaintances in the city were especially at risk since their illness could go undetected by others.⁵⁵

Louise Lewis, a social worker with the IVNA, and three assistants investigated home conditions in almost 1,400 cases. The social workers encountered households where the majority of family members were bedridden. At one Cary Street home, a father had succumbed to influenza, and his wife and their seven children remained ill. At another home, ten of thirteen members were confined to their beds. Visiting nurses also discovered a single mother who had been ill for eight days and was unable to contact a

⁵⁴Ibid., 3 October 1918; Richmond Times-Dispatch, 11, 13, 16 October 1918.

⁵⁵Ibid., 11, 15 October 1918.

doctor. She died the next day, leaving eight children under the age of ten to be cared for by nurses until relatives could be contacted.⁵⁶

Throughout the epidemic, volunteers were called upon to help the sick. The *Richmond Times-Dispatch* commended these individuals for their service:

Never before, at least not since the Civil War, has there been such a magnificent demonstration of public spirit in the readiness and willingness to make sacrifices for humanity sake. Day and night these volunteers are working tirelessly, ever at the bedside of those who are ill, administering to those whom death has robbed, or performing other tasks and errands of mercy and helpfulness.⁵⁷

Individuals noted for their sacrifice included an eighty-year-old Roanoke woman who volunteered for nursing duty, but was turned down by the Red Cross because officials did not want to expose her to influenza. Another citizen singled out for recognition was a Richmond telephone electrician who refused to return home to North Carolina after learning his sister had died and his brother-in-law was ill: "I couldn't do anything if I went down there, and I can do something for people who are sick here in the city, so I have just stayed on the job." After the influenza epidemic had passed, the State Board of Health praised the commitment of volunteers stating that "community spirit had been awakened in Virginia as at no time since the Civil War." 58

⁵⁶Ibid., 21 October 1918.

⁵⁷Ibid., 15 October 1918.

⁵⁸Roanoke Times, 25 December 1918; Richmond Times-Dispatch, 15 October 1918; Annual Report of the State Board of Health, 80.

CHAPTER 5

DAILY LIFE DURING THE EPIDEMIC

The daily lives of Americans changed dramatically during the fall of 1918.

Churches, schools, and gathering places were closed, and normal routines of life were disrupted. Many Americans turned to their faith to cope during this period of illness and death. The Presbyterian National Headquarters called on its 10,000 churches to use November 6 as a day of prayer for the abatement of Spanish influenza. Popular evangelist Billy Sunday instructed his followers to use prayer to suppress the flu.¹

The closing of houses of worship was a controversial issue in Virginia. When churches first closed in Richmond, several congregations quickly announced outdoor Sunday services as a substitute for indoor worship.² Richmonder George H. Wiley believed that some form of worship needed to continue during the epidemic:

It is a very different matter to meet in promiscuous crowds of hundreds to hear men comment on Sunday school lessons or preach from a text of scripture, from gathering in small groups to cry unto God for city and State and nation in this time of great calamity from war and disease. If ever Richmond has had more reason, since the Civil War, to gather for the sole purpose of prayer, I do not recall that day.³

The *Richmond Planet*, the city's black newspaper, also questioned the closing of churches during a time of great hardship: "Faith is not in evidence in this country today.

¹New York Times, 31 October 1918; Hoehling, The Great Epidemic, 118-119.

²Richmond Times-Dispatch, 6 October 1918.

³Ibid., 12 October 1918.

God has the power to heal the sick, restore sight to the blind, but He is not believed to be able to cure people of Spanish influenza, nor to prevent the people from contracting it when they go up to His temple for spiritual consolation in the time of trouble. Oh the pity of it. . . . It is the lack of faith in God that is the cause of much of our troubles."

Ministers in Elizabeth City County recommended that the local Board of Health ban all funerals in churches or homes, and allow only graveside services. Richmond health authorities also prohibited funerals held in churches. Dr. Roy Flannagan, head of the Richmond Health Department, recommended that all funerals take place at the grave, rather than in private homes, to reduce the likelihood of influenza transmission. One thirty-two-year-old woman reportedly contracted influenza at the funeral of her mother. State Health Commissioner Ennion Williams received numerous requests for mortuary transportation permits. Undertakers in Richmond had a difficult time locating coffins for those who had succumbed to Spanish influenza. In one day alone, twenty-one burials took place in the city's Oakwood Cemetery. In Roanoke up to thirteen funerals had been held on a single day.⁵

Other cities in the United States experienced severe coffin shortages. In Baltimore, coffins were at a premium, and undertakers had difficulty keeping pace with the bodies that awaited burial. The lack of gravediggers forced the city to use its laborers to dig burial plots. Similar conditions existed in Buffalo, Pittsburgh, and Philadelphia.

⁴Richmond Planet, 19 October 1918.

⁵Newport News Daily Press, 9 October 1918; Richmond Times-Dispatch, 6, 7, 15, 21 October 1918, Roanoke Times, 20 October 1918.

During the second and third weeks of October, death rates in Philadelphia soared. Due to the shortage of coffins, morticians, embalmers, and gravediggers, bodies quickly accumulated and sometimes remained in homes for days before they were buried. The city morgue, which could normally handle up to thirty-six bodies, soon was overburdened, and five temporary morgues were established in Philadelphia.⁶

Influenza disrupted telephone service throughout Virginia and the United States. In Philadelphia 850 telephone employees were absent on October 7, forcing the Bell Telephone Company to request that customers confine calls to emergencies. In New York City, 2,000 telephone operators were ill, and the *New York Times* asked its readers to limit their calls during the crisis. Service in cities including Washington, D.C., Newport News, and Roanoke was interrupted. Some operators at the Chesapeake and Potomac Telephone Company in Richmond also developed influenza. Their absence, combined with a dramatic upswing in calls, forced the phone company to limit long-distance calls to government business and emergencies. In desperate need of manpower, the phone company asked former employees at the central office to return to work for a few hours each day. The volume of calls became so high that the company sent out an urgent plea for volunteers to help call each of the 13,000 telephone customers in

⁶New York Times, 19 October 1918; Crosby, Epidemic and Peace, 76-77, 82-83.

⁷Ibid., 75, 97; New York Times, 17, 22 October 1918.

Richmond. Many young women answered the request for help and began contacting city residents to ask that they limit their use of the phone to emergencies.⁸

Automobiles also were in high demand across the nation. Residents of Washington, D.C. donated vehicles to the Motor Ambulance Corp that was established during the epidemic. Two automobiles had been donated to the Roanoke Red Cross to transport Boy Scouts delivering food to the sick. Automobile owners in Newport News were asked to donate their vehicles so that patients and supplies could be transported to the Walter Reed Emergency Hospital. The Woman's Club of Richmond asked its members to lend their cars to the churches delivering soup to the sick. Women were asked to drive Boy Scouts as they conducted their surveys of Richmond doctors. Automobiles loaned to the John Marshall Hospital were registered so that it would be known when specific cars would be available during the day. City officials also permitted the emergency use of automobiles on Sundays. Drivers assisting influenza patients were asked to display a poster furnished by city administrators in their car. With the exception of these emergency cars, ambulances, and hearses, Richmond streets were empty during the epidemic.9

The influenza epidemic also hurt trade. Richmond retailers reported that their business had slowed considerably, but expected shoppers to return once the epidemic

⁸Richmond Times-Dispatch, 11, 12 October 1918; Newport News Daily Press, 11 October 1918; Roanoke Times, 15 October 1918.

⁹Hoehling, The Great Epidemic, 55; Richmond Times-Dispatch, 12-14 October 1918; Roanoke Times, 22 October 1918; Newport News Daily Press, 11 October 1918.

ended. Though stores remained open, salespeople often took absences because of illness. Wholesalers urged their traveling salesmen to stop working. Rural merchants who usually bought goods in Richmond delayed their trips to the city while influenza was at its peak. The cancellation of the state fair also affected retailers who depended on trade from out-of-town visitors. The only businesses that did not suffer during the epidemic were drug stores and groceries.¹⁰

Stores in Pulaski closed at noon each day due to the severity of the epidemic. The closing orders also decreased trade in Roanoke. Accounts of the sick refusing to leave work concerned Roanoke health officials. The Health Department asked managers to insist that any employee who showed symptoms of influenza immediately return home. As in Richmond, visitors delayed trips to Roanoke until after the closing ordinance was lifted. Hotels and passenger trains reported a reduction in business during the epidemic. Indeed, influenza crippled commerce throughout the nation. Robert Fife informed his family in Charlottesville about the situation in Connecticut: "We are at the height of the epidemic and it certainly has stopped the wheels of trade and industry. Some factories have closed, the others are barely able to make the wheels go round."

The absence of workers left many manufacturers unable to fill their orders. The reduced manpower in freight offices and on trains made it difficult to transport goods.

¹⁰Richmond Times-Dispatch, 14 October 1918.

¹¹Ibid., 16 October 1918; Roanoke Times, 9, 11, 19, 31 October 1918; Robert Herndon Fife II to Sarah Ann Graves Strickler Fife, 12 October 1918, Box 1, Freudenberg correspondence.

Norfolk and Western foremen were required to report influenza cases after a large number of workers reported sick. The Virginian Railway suffered high absenteeism due to the illness of employees or their families. In Newport News, influenza struck the workforce at the Chesapeake & Ohio Railroad and construction at the city's shipyard was reduced by a third. A steamboat line, which traveled between Richmond and Petersburg, also suspended operation because of a lack of workers. An order by the State Council of Defense led to the closing of all tobacco warehouses throughout Virginia. Auctions at the warehouses drew large crowds which officials feared would contribute to the spread of influenza.¹²

Influenza struck many of the workers who staffed offices and businesses throughout Richmond. Forty post office clerks were ill, while at the police department at least three detectives, a sergeant, and an automobile policeman had the flu. The absence of employees at the Richmond Gas Works forced the Administrative Board to threaten to fire those who missed work without a valid excuse. Influenza also impacted the Virginia Railway and Power Company, which operated Richmond's streetcars. Streetcar service was running below normal levels due to the illness of sixty conductors and motormen. During the second epidemic in Richmond, twenty-five streetcars were idled after fifty employees became ill.¹³

¹²Richmond Times-Dispatch, 14, 15 October 1918; Roanoke Times, 17 October, 30 November 1918; Newport News Daily Press, 8, 13 October 1918.

¹³Richmond Times-Dispatch, 4, 8, 14 October, 10 December 1918.

The Board of Health requested that city streetcars operate according to an "open house" plan. The windows of all cars were to remain open, and passengers were advised to dress warmly when traveling. The congestion on streetcars during the morning rush hour concerned city health officials. When schools reopened, they feared the crowds of men, women, and children on the cars would contribute to the spread of influenza. To prevent this, Richmond officials planned to open schools at 10:00 A.M. and stagger the peak loading times throughout the morning. One patron urged the Virginia Railway and Power Company to provide more streetcars during the epidemic. ¹⁴

Some passengers refused to keep the windows of the streetcars open. One individual assaulted a conductor who refused to close the windows on his car. A concerned citizen wrote to the *Richmond Times-Dispatch* claiming that air circulating in open streetcars facilitated the transmission of influenza. Another patron took a different view. During the second outbreak, this individual criticized the relaxed attitudes his fellow passengers seemed to display: "Get on any car and you will find them almost hermetically sealed against the fresh air. People were coughing and sneezing and few took the trouble to use their handkerchiefs or hands to protect their fellow passengers from being sprayed by germs."

¹⁴Ibid., 6, 9, 16 October 1918.

¹⁵Ibid., 9 October, 10 December 1918.

¹⁶Ibid., 10 December 1918.

Roanoke health officials also ordered the Roanoke Railway and Electric Company to keep windows open in all city streetcars. With the closing of schools and public places, traffic on the city streetcars was lighter than normal. In Washington, D.C., the work hours of government employees were staggered to prevent crowding on city streetcars. As in Richmond, a number of streetcar operators missed work due to illness. Newport News officials also opened windows in streetcars to halt the spread of influenza. Passengers were asked to voluntarily keep the windows open and to exercise caution when sitting beside someone with cold symptoms. After passengers failed to abide by this request, the Health Department threatened to mandate an open window policy.¹⁷

After influenza depleted the Richmond street cleaning force by fifty percent, the sanitation of city streets became another matter of debate. Richmond Sheriff J. Herbert Mercer called on every able-bodied resident to help sweep the streets, alleys, and backyards in the city. One resident described the condition of the streets as appalling and faulted health officials for not cleaning the streets at the beginning of the epidemic. Another Richmonder called for a thorough cleansing of the streets: "the contagion that is suppose to spring upon us unaware lurks in the dust of our dirty city. A royal flush is what the streets need."

¹⁷Roanoke Times, 8, 15 October 1918; Richmond Times-Dispatch, 10 December 1918; Newport News Daily Press, 1, 2, 18 October 1918.

¹⁸Richmond Times-Dispatch, 16, 19 October 1918.

¹⁹Ibid., 14 October 1918.

The social life of Virginians also came to a halt during the height of the epidemic. In Newport News the manager of the Academy of Music reported that the closing restrictions forced him to cancel nightly traveling shows. Indeed, traveling shows were stranded throughout the nation after the new closing ordinances prohibited their performances. Brent Witt, the *Times-Dispatch* society columnist, noted the "ban on entertaining of all kinds. There are no dances at the clubs, no functions of any size given, and most of the weddings are celebrated very quietly with church ceremonies abandoned at the last moment." Nellie Scott Payne of Richmond withdrew the invitations to her wedding and held the ceremony in her aunt's apartment. Even small gatherings were discouraged, as Witt remarked "there is no gossip over the teacups, for one hesitates to invite even a round of one's friends in to make a gathering of any sort."

When the ban in Richmond was lifted, the mood of the city's socialites brightened. As theaters reopened, and concerts and meetings once again took place, Witt observed that "all signs point to a more joyous atmosphere than has been felt here since the first effects of the epidemic were noted. . . . added to the encouraging and inspiring news from across the seas, one finds the outlook for the social season not half so

²⁰Newport News Daily Press, 12 October 1918; Hoehling, The Great Epidemic, 55-56.

²¹Richmond Times-Dispatch, 13 October 1918.

²²Ibid., 12 October 1918.

²³Ibid., 27 October 1918.

humdrum as had been at first expected."²⁴ When Richmond movie theaters reopened, crowds flocked to see the latest films starring Mary Pickford, Douglas Fairbanks, Billy Burke, and Marguerite Clark.²⁵ A *Times-Dispatch* reporter noted that Richmonders were enjoying their freedom: "Those people who have talked germ, heard germ, thought germ, and heard others thinking germ until they thought themselves a germ are now free to think of other things. With the removal of the restrictions fear of the 'flu' has abandoned the minds of persons, and all goes merry as a marriage bell once more."²⁶

Some colleges were forced to close during the epidemic. Influenza killed at least three students at Robert Graves's college. After thirty William & Mary students became ill in late September, officials quarantined the campus and forbad anyone from entering or leaving without a pass. Influenza spread through Hollins College where seventy-five cases and one death were reported by September 26. By early October, a member of the State Board of Health who had visited the college, informed parents that the situation was improving and it would be safer for their daughters to remain at school. Influenza also crippled the Fork Union Military Academy. When the school opened on September 17, four incoming students were ill. By September 26, approximately half of the 120 students were sick and the school was placed under a strict quarantine. Influenza quickly

²⁴Ibid., 11 November 1918.

²⁵Ibid., 10 November 1918.

²⁶Ibid., 6 November 1918.

spread through the student body and the local community, claiming the lives of at least four cadets.²⁷

The epidemic affected the Medical College of Virginia in a different manner.

Because students had left school to assist doctors in the fall of 1918, classes remained in session throughout the summer of 1919.²⁸ The State Board of Health praised the third and fourth year students from the Medical College of Virginia and the University of Virginia for their dedication and sacrifice: "these students . . . have ventured into stricken communities where every hardship confronted them, and where their powers of endurance were taxed to the uttermost. . . . In many instances, they jumped into the breach when no other doctors were available and forthwith assumed burdens little short of staggering."²⁹

The influenza epidemic also threatened the success of the Fourth Liberty Loan drive. In the fall of 1918, Americans embarked on a campaign to raise six billion dollars in bonds for the war effort. In cities throughout the United States, Liberty Loan parades and rallies were held. On September 28, 200,000 Philadelphians gathered to view a Liberty Loan parade. That same day, 10,000 San Franciscans participated in their own parade. Buffalo officials permitted a Liberty Loan parade led by John Philip Sousa's

²⁷Robert Herndon Fife to Sarah Ann Fife, 12 October 1918, Box 1, Freudenberg correspondence; *Richmond Times-Dispatch*, 26 September, 14 October 1918; *Newport News Daily Press*, 27, 28 September 1918; *Roanoke Times*, 6 October 1918.

²⁸Richmond Times-Dispatch, 23 October 1918.

²⁹Ibid., 29 October 1918.

band. While influenza would have spread without these parades, these large assemblies probably encouraged the transmission of the disease.³⁰

John R. Mott, the Director General of the United War Work Campaign, encouraged local organizations to devote extra energy to the loan campaign during the epidemic. With people spending greater time at home, Mott theorized that the public might be more accepting of personal solicitations. He urged workers to emphasize printed material and hold informal gatherings since large meetings were prohibited. Liberty Loan workers were instructed to target the businesses and individuals who would be the most generous subscribers.³¹

When the epidemic emerged in Richmond, a number of Liberty Loan workers became ill, and officials canceled meetings throughout the local district. Furthermore, the depleted staffs of local banks had difficulty managing the subscriptions and compiling reports for the central committees. The Federal Reserve Bank in New York City also reported a large number of absences at a time when work related to the Liberty Loan was at its height.³²

Prohibited from addressing audiences at the closed theaters, Liberty Loan speakers now planned to meet with workers in the city's manufacturing plants. Loan

³⁰Crosby, *Epidemic and Peace*, 52-53, 72, 93; Hoehling, *The Great Epidemic*, 97-98.

³¹John R. Mott, "Influenza and the United War Work Campaign," Bulletin XIII, United War Work Campaign for \$175,000,000 (New York: Office of the Director General, November 1918).

³²Richmond Times-Dispatch, 8 October 1918; New York Times, 18 October 1918.

officials urged Richmond residents to go to their local banks and place their subscriptions themselves: "it is the duty of every Richmonder to go to his bank and purchase his bonds, just as the soldiers in France are not waiting to perform their duty, but are going out and searching for an opportunity to do some act which will contribute to the defeat of Germany."³³ After the cancellation of a Richmond Liberty Day program, the Women's Munition Reserve used advertising to reach their subscription goal. An ad placed in the *Times-Dispatch* linked the bond drive with the epidemic: "Influenza is rampant at home. Huns are on the Rampage in Europe. Medical skill will stop the epidemic. Liberty bonds will stop the barbarous Germans."³⁴

Newport News officials canceled a large Liberty Loan rally scheduled for October 6 and a "monster military and civic parade" to be held in celebration of Liberty Day on October 12. W. B. Vest, the director of the Liberty Loan campaign in Warwick County and Newport News, called on the public to subscribe at booths located in stores and banks. Vest requested that the public observe Liberty Day by buying bonds and asking neighbors if they had done likewise. During the epidemic, between sixty and eighty loan workers continued the door-to-door canvassing of the city. Boy Scouts also embarked on a campaign to sell bonds from October 11 to 19.35

³³Richmond Times-Dispatch, 8 October 1918.

³⁴Ibid., 11 October 1918.

³⁵Newport News Daily Press, 5, 8, 11, 12 October 1918.

With the Liberty Loan drive falling below expectations, President Woodrow Wilson appealed to the American people to buy bonds at this critical time. On October 12, Wilson led 25,000 marchers in a New York City Liberty Loan parade. According to police estimates, over a million spectators lined the parade route. Despite these obstacles, the Fourth Liberty Loan drive was a success and the nation reached its quota.³⁶

The effect influenza had on individuals as well as the larger community is evident in the correspondence among members of the Fife family of Charlottesville. In a letter to her husband James Douglas Fife, an army doctor stationed in France, Katherine Fife described the anxiety and uncertainty influenza brought to her community: "Before you know people are sick. You hear of more death and it just makes you so depressed and worried." James Fife's brother William wrote to their sister Ella Katherine Fife, a nurse stationed in St. Denis, France, that "Influenza and the sequel, pneumonia has claimed many victims here. You cannot imagine how it has scourged the country, schools closed, churches, theaters, and all public gatherings dissembled. None of these will open again here until November, though the epidemic is now abated." Margaret Fife also informed Ella about the closings and the loss of life in Charlottesville: "This grippe has been just like a plague of olden times, for about two weeks the *Progress* was mainly given up to recording the deaths of its citizens." "

³⁶Richmond Times-Dispatch, 11 October 1918; Newport News Daily Press, 13 October, 20 November 1918; Roanoke Times, 2 November 1918.

³⁷Katherine Mae Reynolds Fife to James Douglas Fife, 13 October 1918; William Ormond Fife to Ella Katherine Fife, 26 October 1918; Margaret Whitler Fife to Ella Katherine Fife, 7 November 1918, Box 1, Freudenberg correspondence.

Several members of the Fife family, including William and his wife, developed influenza, as did some close friends. Crump Tucker, the fiancée of Margaret, lost eight friends to the disease. Within the Fife family the most serious case involved Shelton Strickler Fife's spouse, Mildred. Mildred Fife was pregnant when she contracted influenza and pneumonia. Doctors confined her to her bed, and the family hired nurses to treat her during the day and at night. Although Mildred's condition was grave, her family did not want to alarm Ella, who remained in France. When Mildred's health improved, Margaret revealed just how ill their sister-in-law had been:

Mama went to see Mildred today for the first time. I haven't been in her room yet, she is so nervous about seeing people, but has invited me to come next time I go up there. . . . Mama says she is very thin but talks a lot and her voice is strong and she is gradually getting her strength back. Dr. Daniel is anxious for her to try to walk about some. Thinks she needs to have some exercise now. She was surely one ill woman. When I wrote to you last, she was just developing pneumonia, but I couldn't tell you because I knew it might be so long before you got another letter from home. Her recovery is regarded as one of the seven wonders of the town.³⁸

In December, Sarah Fife reported that Mildred still remained weak, but was able to leave her home.³⁹

Ella Fife confessed to her mother how difficult it was to hear about the epidemic when she was so far from home: "As it is, I will worry now for fear something is wrong— Suspense is dreadful." Ella found it difficult to digest the news of sickness and

³⁸Sarah Ann Graves Strickler Fife to Ella Katherine Fife, 29 October 1918; Margaret Whitler Fife to Ella Katherine Fife, 7 November 1918, Box 1, ibid.

³⁹Sarah Ann Graves Strickler Fife to Ella Katherine Fife, 4 December 1918, Box 1, ibid.

death at home: "If I were to stop and think of the tragedies that have passed since I left home to go to camp, I would be overwhelmed."

Ella had treated influenza patients in France, and some of her colleagues became ill: "There has been a great quantity of it here. Most of the nurses and doctors are better now, though some have been quite sick. We lost our lieutenant and two enlisted men. . . . [we] have really had very few deaths considering the number of sick patients we've had." She also remarked that the cases she encountered seemed milder than those described in the United States: "The 'flu' has absolutely played havoc at home— it seems so much more virulent there than here." In December, Ella was diagnosed with a mild case of the flu and pleurisy. She left the damp climate of St. Denis to recuperate in milder Cannes. 41

The Menefee family of Luray, Virginia also wrote to their loved-one, Marvin Menefee, about the epidemic. Marvin, a second lieutenant in the U. S. Army, had been wounded in the Meuse-Argonne offensive on October 15 and was recovering in a French hospital. His younger sister Mabel offered her brother a few words of advice: "Don't get the flu. So many people have got it and they don't last very long either. I never heard of so many people dying with it." She reported that school had been canceled for the past two weeks, and would probably be closed for at least a month. 42

⁴⁰Ella Katherine Fife to Sarah Ann Graves Strickler Fife, 14 November 1918, Box 1, ibid.; Ella Katherine Fife to Margaret Whitler Fife, 15 January 1919, Box 2, ibid.

⁴¹Ella Katherine Fife to Sarah Ann Graves Strickler Fife, 28 October, 14 November 1918, Box 1, ibid.; Ella Katherine Fife to James Douglas Fife, 30 December 1918; Ella Katherine Fife to Margaret Whitler Fife, 30 January 1919, Box 2, ibid.

⁴²Mable Menefee to Marvin Menefee, 17 October 1918, Menefee papers.

Marvin's mother, Minnie, informed her son that entire families in their community were dying from the flu and commented on the unprecedented nature of this illness: "There never was anything passed through the country like this." Though their family had been using "every preventative," Marvin's father, James, his mother, and his sisters Katherine and Isabel became ill. Mabel was the only member of the household spared by influenza. The Menefees eventually recovered, but Minnie mentioned acquaintances that died, including a mother and her twenty-year-old son. She remarked that all of the deaths had resulted from pneumonia. 43

⁴³Minnie Menefee to Marvin Menefee, 17, 24 October 1918, ibid.

CHAPTER 6

SPANISH INFLUENZA: CAUSES AND CURES

During the epidemic the public speculated about the actual cause of Spanish influenza, and rumors about its origin spread throughout the nation. Some connected the disease with the war and believed that the Germans had unleashed influenza on their enemies. Health officials publicized the symptoms of the flu, and the public tried various remedies to treat the illness. The medical community was divided over the most effective way to prevent influenza. Doctors and health officials could do little to halt the advance of influenza in the fall of 1918.

Syndicated columnist Dr. William Brady noted that rumors about the source of influenza were common during the epidemic of 1889. At that time, a popular superstition held that influenza had been brought to the United States on "wild winds" from Europe. Surgeon General Rupert Blue informed the public that despite the name of "Spanish influenza," the disease had not originated in Spain. Dr. Alfred Williams, a Richmond physician, reminded the public of the epidemic in Lawrence, Kansas that had occurred during March. He traced the spread of the illness to Europe and Asia before it reappeared in the United States in September.¹

Others connected influenza with the war, often blaming the spread of the disease on sinister forces. The *New York Times* reported that Spanish influenza may have arisen

¹Richmond Times-Dispatch, 25 September 1918; Crosby, Epidemic and Peace, 49; Roanoke Times, 7 October, 29 November 1918.

in the unsanitary and overcrowded German trenches and camps. In a syndicated article published in the *Richmond Times-Dispatch*, Dr. Gordon Henry Hirshberg maintained that the epidemic had originated in the trenches of Germany, but became known as Spanish influenza after the French noted how serious the epidemic was in Spain. Hirshberg also mentioned rumors of German U-boats spreading influenza in the United States:

The physicians and scientists of the Allied countries are seriously considering whether or not the germs of this disease have been intentionally disseminated by the German Government with the intention of weakening their opponents. No definite conclusion has been reached on this point, but the charge cannot be hastily dismissed, as the German Government has already been convicted of employing disease germs against civilians in Romania.²

Theories concerning U-boats were widespread. The *New York Times* speculated that influenza had originated in the poor living conditions aboard these submarines and was brought to Spain by the U-boat crews.³ Lieutenant Colonel Phillip Doane, head of the Health and Sanitation Section of the Emergency Fleet Corporation, believed that Germans had used submarines to infiltrate and spread influenza in the United States: "It would be quite easy for one of these German agents to turn loose Spanish influenza germs in a theatre or some other place where large numbers of persons are assembled. The Germans have started epidemics in Europe, and there is no reason why they should be particularly gentle with America." United States agents investigated the widespread

²New York Times, 22 September 1918; Richmond Times-Dispatch, 6 October 1918.

³New York Times, 31 May 1918.

⁴Ibid., 19 September 1918.

rumors concerning the German submarines, but concluded that servicemen and travelers had spread Spanish influenza.⁵

According to another theory, American soldiers had been infected with influenza through aspirin tablets manufactured by the German Bayer company. Dr. W. Brownley Foster, Roanoke's Health Officer, denounced this rumor and believed it could cause people to fear simple remedies. He urged the public to focus on the true source of influenza and its prevention. Foster believed that the epidemic had originated in Europe and had been brought to the United States on warships.⁶

Infantry Captain Alcott Elwell thought that the influenza epidemic was an aspect of German propaganda. In a letter to the *Times-Dispatch* he criticized what he believed was an exaggeration of the epidemic: "You people of Richmond who fill your conversation to soldiers and friends with 'Scare headlines' about the epidemic of influenza are doing all you can to help the German cause as directly as if you were firing at your own troops from the roof tops." The *New York Times* reported that Germans had spread a story in a Mexican newspaper claiming that the bodies of influenza victims were piling up in the streets of New York City. The Acting Surgeon General of the Army denounced German propagandists for circulating reports that medical officers and nurses had been executed for spreading influenza in army camps.⁷

⁵Newport News Daily Press, 24 October 1918.

⁶Roanoke Times, 28 September, 9, 10 October 1918.

⁷Richmond Times-Dispatch, 3 October 1918; New York Times, 19, 31 October 1918.

A doctor at Johns-Hopkins Hospital speculated that Chinese laborers brought to France to dig trenches had spread influenza in Europe. According to this theory, the Chinese had developed immunity to this type of influenza and pneumonia, but the Europeans, and later the Americans, had not. A Roanoke businessman believed that gases from heavenly bodies were the cause of influenza. One Richmond resident speculated that the epidemic emerged because of the dark phase of the moon. Aside from the war, the *Richmond Times-Dispatch* considered the cause of the epidemic to be the "question of the day." The editors cautioned the public against believing various rumors that "cause people to think lightly of a serious question and not to take necessary precautions against a malady which is taking a heavy toll of deaths throughout the nation."

Rumors concerning death rates and the treatment of the sick also spread among the public. One man incorrectly informed a *Roanoke Times* reporter that 400 soldiers had died during a one day period at Camp Lee. Other reports maintained that the military was withholding proper medical treatment and food from ill soldiers, allowing them to die like diseased animals. In early October residents of an Alabama city heard that over 5,000 cases of influenza existed in Roanoke and that deaths were recorded hourly. Even a man from nearby Salem believed that thousands of Roanoke residents had died. The difficulty in making a telephone call or sending a telegraph fueled these rumors. A father

⁸Roanoke Times, 14, 17 December 1918; Richmond Times-Dispatch, 26 October 1918.

⁹Ibid., 24 October 1918.

working in the Roanoke offices of Norfolk and Western tried for hours to contact his daughter after hearing that she was seriously ill at their home in Bristol. When he was finally able to reach her, he was relieved to discover she had only a cold.¹⁰

The public was warned to watch for the symptoms of influenza. An infected person suddenly felt ill and weak. Pain could develop in the eyes, ears, head, and back. Chills, a high fever, coughing, and sneezing followed. These symptoms usually lasted from three to four days. It was believed that Pfeiffer's bacillus was the cause of influenza; however, doctors discovered other "germs" that were potential sources for the illness. 11

Doctors informed the public that the influenza germ could be passed from a person who exhibited no symptoms of the disease. Dr. William Brady, a syndicated newspaper columnist, advised his readers to remain five-feet away from others because droplets carrying the infection rarely traveled more than four feet. The State Board of Health recommended that people keep a three-foot distance from others when talking.¹²

According to the adherents of "droplet infection," facemasks successfully filtered and absorbed the individual germs carried through the air in these larger droplets. In September the USPHS advised those treating influenza patients to wear masks. Indeed, Dr. Brady believed people were morally bound to wear these cheesecloth or gauze masks. The public was instructed to wear masks in the presence of the sick and either burn or

¹⁰Roanoke Times, 9 October 1918.

¹¹Ibid., 7 October 1918.

¹²Richmond Times-Dispatch, 31 October, 20 November 1918; Roanoke Times, 12 October 1918.

boil the masks after use. The well-known Richmond physician Dr. J. Fulmer Bright urged both the sick and the healthy to wear masks over their nose and mouth as the best method of preventing the spread of influenza.¹³

Women from Red Cross chapters in cities such as Richmond, Petersburg, Norfolk, Lynchburg, and Roanoke made masks. In Richmond, the public could purchase these masks at their actual cost of three cents; while in Norfolk, city, state, and federal officials supplied them at no charge. The Roanoke Red Cross provided every volunteer nurse with a gauze mask. Because the supply of masks was limited, the local chapter warned the public to take good care of those they obtained. The Lynchburg Board of Health required bank tellers, streetcar employees, barbers, and dentists to wear masks. In Washington, D.C., the Red Cross distributed masks to government employees who wore them at work and on the streetcars.¹⁴

Richmonders quickly donned this "influenza camouflage." The demand for Red Cross masks became so great that volunteers were called upon to help make them. It took between six and ten minutes to make one five-by-six-inch mask with five layers of gauze. After doctors first instructed people to wear masks during the epidemic, the supply at the Richmond chapter was depleted several times each day. Men, women, and children waited in long lines at the Red Cross building on Fourth and Grace Streets for

¹³Crosby, *Epidemic and Peace*, 101; *Richmond Times-Dispatch*, 26 September, 9 October 1918; *Roanoke Times*, 21 December 1918.

¹⁴Richmond Times-Dispatch, 9, 13 October 1918; Newport News Daily Press, 8, 17 October 1918; Roanoke Times, 19, 22 October 1918.

the masks, and Boy Scouts stationed at the entrance informed the public when a new supply was ready.¹⁵

The medical community was divided over the use of facemasks to prevent influenza. A California doctor believed that masks were only beneficial in an operating room. While they might be appealing to the public, facemasks did little to prevent one from becoming ill. Dr. Foster of Roanoke also was skeptical of their benefits. While he maintained that masks helped protect doctors and nurses from influenza, Foster acknowledged that people improperly wore facemasks, making them of little use to the general population. Dr. Edwin Jordan investigated the use of masks for the American Medical Association and reached similar conclusions. Jordan found that masks could benefit those caring for the sick, but offered little protection for the public. Indeed, health statistics in cities with masking regulations were no better than nearby communities without these ordinances.¹⁶

Along with avoiding crowds, coughs, and sneezes, health officials advised the public to follow a number of precautions. The Surgeon-General of the Army, William C. Gorgas, recommended that individuals follow the "Three C's" by keeping a clean mouth, clean skin, and clean clothes. Food should be carefully chosen, chewed well, and

¹⁵Richmond Times-Dispatch, 9-11 October 1918.

¹⁶Hoehling, *The Great Epidemic*, 84; *Roanoke Times*, 21 December 1918; Crosby, *Epidemic and Peace*, 101-102, 112-113.

followed by a couple glasses of water. Ill family members should be separated from others, and dishes used by the sick should be disinfected in boiling water.¹⁷

When a person became sick, doctors stressed the need for bed rest to prevent pneumonia. The *Richmond Planet*, however, questioned how easy it was to thwart the progression of influenza: "They tell us that people do not die from Spanish influenza, but with pneumonia. First, Spanish influenza; next, pneumonia; next, a doctor; next, an undertaker; next, a cemetery and a grave digger; next, and finally, Heaven as a resting place." In his instructions regarding the home care of influenza patients, Surgeon General Blue recommended that the rooms of the ill should be ventilated, clean, and kept at a comfortable temperature. Attendants treating the sick should wear masks at all times. A doctor should be called if the patient had a fever, coughed up blood-stained sputum, or experienced painful breathing. Due to the shortage of doctors and nurses, the *Richmond Times-Dispatch* insisted that the public had a civic duty to follow the publicized precautions:

They are simple measures. They have been thoroughly explained and published broadcast, and it is a duty every one owes to himself, to his family, and to his city to follow them to the letter. Otherwise he may be responsible for his own illness and the means of others contracting it. To be careless now is nothing short of criminal.¹⁹

¹⁷Richmond Times-Dispatch, 25 September 1918; Roanoke Times, 25 October 1918.

¹⁸Richmond Planet, 2 November 1918.

¹⁹Roanoke Times, 12, 15 October 1918; Richmond Times-Dispatch, 9 October 1918.

Anti-spitting and sneezing ordinances were popular during the epidemic. The New York City Police Sanitary Squad embarked on a drive to stem public spitting and fined or jailed "open-face sneezers." The Chicago Health Commissioner and the Chief of Police ordered violators of the city's spitting ordinance arrested, as well as those who coughed or sneezed without a handkerchief.²⁰ With Dr. Roy Flannagan in Chicago attending a conference, Richmond's Acting Chief Health Officer Dr. P. M. Chichester ordered all individuals with colds to carry handkerchiefs so that they could cover their sneezes at all times. Theater patrons who refused to do so would be ejected. The Roanoke Police Department also enforced an anti-spitting ordinance, and several offenders were brought to court for spitting on sidewalks. In a letter to the *Times-Dispatch*, a Richmond resident implored the Board of Health to enforce the existing laws against spitting on public sidewalks and steps.²¹

The cleanliness of soda fountains was another concern. Months before the influenza epidemic, a Richmond resident noted with disgust that a soda attendant had served him a lemonade in a dirty glass that had been cleaned only in a "slop basin." During the height of the epidemic, soda shops substituted paper cups for the usual glass variety. Norfolk officials required soft drinks to be served in paper cups and ordered restaurants to sterilize all cooking utensils and silverware. When the epidemic abated,

²⁰New York Times, 4, 27 October 1918; Hoehling, The Great Epidemic, 81.

²¹Roanoke Times, 8 October 1918; Richmond Times-Dispatch, 20 October, 13 December 1918.

some cities allowed the return to glasses. When Newport News lifted its restrictions, however, patrons still were prohibited from using common cups or glasses.²²

The Roanoke police visited soda fountains to ensure that owners were sterilizing glasses. If proprietors did not implement sanitary precautions, the businesses would be closed. The *Roanoke Times* urged the public to adhere to Dr. Foster's regulations:

The Health Department is not omnipotent. It cannot check influenza by merely willing to do so. All that it can accomplish is to minimize the danger of contagion, and this it has done by means and measures approved by health experts the country over. . . . It is up to the public to become acquainted with and heed the simple and obvious rules which have been laid down. . . . There is no occasion at all for anyone becoming panicky. There is every reason for all to be cautious and circumspect. ²³

After Roanoke officials lifted their "paper cup" ordinance, state sterilization regulations took effect during the second outbreak. Some soda fountain owners continued using paper cups, rather than risk contamination. Shop owners who improperly sterilized glasses received a summons to appear before the Roanoke Police Court. Judge Berkeley found that the individual soda clerks, and not the proprietors, should be responsible for their disregard of sanitation procedures.²⁴

The sick sought out various remedies to cure them of influenza. Some believed that alcohol could alleviate flu symptoms. Governor Westmoreland Davis received

²²Ibid., 11 October, 6 November 1918; Newport News Daily Press, 8, 27 October 1918.

²³Roanoke Times, 8, 10 October 1918.

²⁴Ibid., 5, 6 December 1918.

numerous requests from Virginians who wanted easier access to whiskey during the epidemic. Mrs. Cora B. Lemon of Oriskany, Virginia wrote the Governor:

Can't some arrangement be made at once for a supply of whisky to be shipped to the doctor in charge here. . . . My sister is very ill with pneumonia and the Dr. prescribed whiskey to be used at once. . . . There is over one hundred cases of influenza under one Drs. care and the Dr. is very sick now. The Dr. sent here by the state a few days ago will leave here this P.M. for some other point. He is the one that prescribed the whiskey but could not stay long enough to order it sent to him. 25

Lexington resident R. W. Hawkins described people "dying off like flys" and appealed to the governor for whiskey to be taken "strictly as medicine." G. W. Warren, the mayor of Bristol, informed Davis that doctors had prescribed whiskey for patients in his city, but none was available. In response to these requests, Governor Davis replied that he had no authority over the sale of whiskey. He directed citizens to the commissioner of prohibition, Dr. J. Sidney Peters, who could sell alcohol to druggists. Those with a prescription could obtain small quantities of whiskey.²⁶

There were reports of excessive whiskey consumption at Camp Lee. Responding to these allegations, the camp surgeon, Colonel Charles Brownlee, stated that alcohol was only used in limited amounts for pneumonia patients. Fredericksburg Judge John T. Goolrick reported that at the Quantico camp, the demand for alcohol "has been and is now urgent, imperative, and irresistible, to all of which we have responded to the very

²⁵Cora B. Lemon to Westmoreland Davis, 25 October 1918, Box 14, Davis Executive Papers.

²⁶R. W. Hawkins to Westmoreland Davis, 15 October 1918; G. W. Warren to Westmoreland Davis, 11 October 1918; Westmoreland Davis to J. N. Hale, 31 October 1918; Westmoreland Davis to W. H. Wilson, 2 January 1919, Box 14, ibid.

best of our ability. In doing this we have obeyed the mandate of the Bible as found in Proverbs, Chapter 21, verse 6, 'to give strong drink to him who is ready to perish."²⁷

The Roanoke commonwealth's attorney had authority to dispense confiscated whiskey in emergencies. Instead of giving whiskey directly to the patient, he gave physicians a limited supply to be used in serious cases. A similar situation developed in Newport News. After local drug stores reported shortages of whiskey, suggestions were made to commandeer the supply seized in police raids. Prohibition Commissioner Peters gave Commonwealth's Attorney Captain C. C. Berkeley permission to dispense this whiskey to physicians. Ten days after the sale of whiskey to doctors was allowed, over one hundred quarts had been sold. The *Daily Press* reported that a large number of doctors had requested whiskey and were prescribing it to their patients. Commissioner Peters also ordered whiskey held by the Winchester police to be released to the city's Memorial Hospital, where it would be used to treat indigent pneumonia patients.²⁸

Advertisements for influenza preventatives, remedies, and cures filled newspapers during the epidemic. The manufacturers of Kolynos Dental Cream stated that their product would keep the teeth, mouth, and throat clean. The public was urged to brush and gargle with the product and place a small amount in each nostril at the first sign of a cold. Pro-Phy-Tol antiseptic mouthwash promised protection against influenza germs.

²⁷Richmond Times-Dispatch, 24 October 1918, Judge John T. Goolrick, undated newspaper clipping attached to a letter to Governor Westmoreland Davis, 17 October 1918, Box 14, ibid.

²⁸Roanoke Times, 18 October 1918; Newport News Daily Press, 11, 13, 24 October 1918; Richmond Times-Dispatch, 20 October 1918.

Inhaling Oil of Hyomel would kill the germs that targeted the respiratory system. Dreco, a tonic made from roots, herbs, and berries, Horlick's Malted Milk, and Hood's Sarsaparilla were marketed as preventatives as well as ways to regain strength during recovery. The demand for Vick's Vaporub led to a shortage in drugstores throughout the country. By October 19, over two million jars of Vaporub had been sold. Customers applied the product on their throat and chest to facilitate breathing and "throw off" the influenza germs in the lungs. Some also mixed Vaporub and water in kettles and inhaled the steam to relieve congestion.²⁹

Newport News drug stores reported brisk business during the epidemic. Medicine was in short supply and druggists throughout the city needed additional clerks to fill prescriptions. Extra supplies of medication were slow to arrive, and the public was asked to be patient during the crisis. It was reported that the panic generated by Spanish influenza led people to request medicine that had not been prescribed and was of little benefit to the sick.³⁰ By mid-October, business at the drug stores had slowed. The *Daily Press* reported that the public was disenchanted with the supposed cures: "Medicine, as the public is learning, is not by any means the best agent to be used in fighting the disease as a general thing. Rest, air, nourishment, and disinfection are the things to be considered, except in acute cases."³¹

²⁹Ibid., 11, 10, 15, 16, 18, 25, 29 October, 1 November, 3 December 1918.

³⁰Newport News Daily Press, 8, 10 October 1918.

³¹Ibid., 16 October 1918.

Doctors questioned the value of the many serums and remedies that flooded the market. The Richmond Academy of Medicine and Surgery had misgivings about the use of whiskey. The members passed a resolution stating that the Academy "strongly deprecates and condemns the prescribing of whiskey and other alcoholic stimulants by physicians without a careful personal examination of the applicant, and a precise adherence to the strict requirements of the law."

Health officials also argued about the benefits of quarantines and closing ordinances. Issues related to the epidemic were debated at the American Public Health Association (APHA) convention held in Chicago in December 1918. Representatives from the Southeast and smaller localities tended to endorse strict quarantines, while those from large cities rejected the quarantines and facemasks in favor of vaccines. The commissioner from Detroit opposed quarantines and the closing of schools, churches, and public places. He also questioned the advantages of the widely used facemasks. Dr. Charles Hastings, president of the association, admitted that the opinions expressed at the meeting were so diverse that the association could not expect to formulate a comprehensive program for fighting influenza.

Some physicians developed medicines to treat the sick. Dr. Samuel Budd, a professor of bacteriology and pathology at MCV, treated pneumonia patients with anti-streptococcus serum. While this vaccine could not prevent influenza, Budd believed it

³²Minutes of the Richmond Academy of Medicine and Surgery, 14 January 1919, minute book entitled "Minutes: 1908 – 1927," Richmond Academy of Medicine and Surgery, Richmond, Virginia.

³³ New York Times, 13 December 1918.

would cure pneumonia cases caused by streptococcus. He reported that only two of the twenty patients he treated with this serum had died. A Clifton Forge doctor reported that only one of his thirty-five pneumonia patients who received the serum had died. The State Board of Health distributed the serum to doctors and hospitals throughout Virginia. In Newport News, Dr. C. H. Waring of the Public Health Service ordered the serum, but admitted he did not know how effective it would be. Due to shortages in Roanoke drugstores, Dr. Foster recommended that Budd's serum be used only in pneumonia cases. Virginia health officials also investigated a serum developed and used by a St. Louis physician.³⁴

Dr. Russell A. Cecil, a native of Richmond and a major in the army medical corps, also developed a vaccine against pneumonia. Cecil began vaccinating soldiers upon their arrival at Camp Wheeler in Macon, Georgia. He planned to repeat these vaccinations at camps across the United States. Pneumonia vaccinations were also administered to soldiers at Camp Lee in December. Chicago health officials planned to vaccinate the entire population of the city with a serum developed by the Mayo brothers. The *Newport News Daily Press* hoped that a vaccine would be readily available to the public: "The anti-grippe serum, if it proves to be what it is hoped it will be, should be

³⁴Richmond Times-Dispatch, 18, 22, 23 October 1918; Newport News Daily Press, 19, 20 October 1918; Roanoke Times, 18, 19 October 1918; Westmoreland Davis to Frank E. Bowman, 22 January 1918, Box 14, Davis Executive Papers.

sold at a price to place it within reach of the masses and become an incident of preparation for winter as matter-of-fact as filling the coal bin used to be."³⁵

Physicians also questioned the effectiveness of these vaccines. Dr. W. H. Park, a member of the APHA committee on vaccines, believed vaccines should be used in a limited number of controlled cases. Park also criticized the arbitrary use of "stock vaccines" which he considered dangerous and of little benefit. Surgeon General Blue stated that the use of vaccines by the USPHS was still in the experimental phase and the results of the vaccinations were inconclusive: "The health service urges the public to remember that there is as yet no specific cure for influenza. The chief reliance must be on medical attention, good nursing, fresh air, nutritious food, plenty of water, and cheerful surroundings." Syndicated columnist Dr. William Brady cautioned his readers about the so-called grippe cures. Dr. Foster also warned Roanoke residents to be wary of advertisements promising remedies and cures for influenza. The remedies might be harmless, or in the worse case, they potentially could worsen the health of the user. 38

³⁵Richmond Times-Dispatch, 7 October 1918; Roanoke Times, 22 October, 11 December 1918; Newport News Daily Press, 1 October 1918.

³⁶New York Times, 13 December 1918.

³⁷Roanoke Times, 27 October 1918.

³⁸Richmond Times-Dispatch, 26 September 1918, Roanoke Times, 12, 27 October 1918.

CHAPTER 7

EPILOGUE

In the years following the pandemic of 1918, scientists attempted to discover the cause of influenza. Many doubted that Pfeiffer's bacillus was the source of the illness. In 1933, three British scientists, Christopher H. Andrews, P. P. Laidlaw, and Wilson Smith, conducted experiments to prove that a virus, not bacteria, caused influenza. Dr. Richard E. Shope had begun researching swine flu in 1928. An epidemic of flu had appeared in pigs during the fall of 1918 and had reappeared in the Midwest in the following autumns. Shope isolated the swine flu virus and theorized that it had worked in conjunction with Pfeiffer's bacillus to produce influenza. He postulated that a flu virus triggered by Pfeiffer's bacillus had caused the fall outbreak among humans.

Shope and the three scientists from England compared their data and made some important discoveries. In 1935 Andrews, Laidlaw, and Smith found antibodies to the swine virus in the blood of London residents who had lived during the 1918 epidemic. The blood of children younger than ten had no swine antibodies. Shope tested the blood of Americans and found high levels of antibodies to the swine virus in those over twelve years old. Those under twelve had low levels of the antibodies.

¹Crosby, Epidemic and Peace, 286-290, 298-303.

In 1952, Dr. Thomas Francis, discovered the most swine antibodies among those born between 1915 and 1918, while those born after 1924 had no antibodies.²

In 1995 Dr. Jeffery Taubenberger and a team of scientists at the Armed Forces Institute of Pathology began research on the lung tissue of victims of the 1918 flu. Two samples studied had been stored in the institute's facilities. The third sample was taken from the frozen corpse of a flu victim from Brevig, Alaska. By December 1997 the scientists had sequenced a viral gene from the three tissue samples and found them to be identical.³

Despite these recent discoveries, scientists can only speculate about the origins of the influenza pandemic of 1918. Did this virus appear prior to the pandemic of 1918? Did the virus originate in Southern China, a region known to be a breeding ground of flu viruses? Did laborers from China bring the virus with them to Europe? In many respects, the influenza pandemic of 1918 remains a mystery.

However, ongoing research may one day unlock the secrets of the deadly virus.⁴

The influenza pandemic of 1918 should not be forgotten. In less than a year it spread across the globe, attacking the most productive members of society. In the United States, over a quarter of the population became ill and more than 600,000 individuals died. Virginia struggled to deal with this unprecedented epidemic. State and local officials could do little to halt the spread of the deadly virus, and the

²Ibid., 303-304; Kolata, Flu, 79-80.

³Ibid., 212-218, 255-274.

⁴Ibid., 281-298.

medical community lacked the resources to combat influenza. Localities throughout the state desperately needed extra doctors and nurses, and many communities were forced to open emergency hospitals to treat the large number of patients. At the height of the epidemic, officials urgently called for volunteers to battle influenza. Women responded to these requests and played an important role in caring for the ill.

This menacing illness disrupted life in the state during the fall of 1918 as churches, schools, and other public places closed their doors. Due to the lack of knowledge about influenza, officials had few effective methods of limiting the spread of the disease. By the time the epidemic retreated, influenza had claimed the lives of thousands of Virginians and tested the state in ways that had not been experienced since the Civil War.

TABLE 1
Summary of Deaths in Virginia Cities and Counties with Rates per 1,000

Summary of Death's in		Death Rate	Number of	Number of
County	Number of	per Thousand,		Pneumonia
	Deaths, 1918	1918	Deaths, 1918	Deaths, 1918
Accomac	614	15 33	124	43
Albemarie	536	20 62	106	11
Alexandria, city	530	29 39	165	29
Alexandria, county	193	15.87	54	10
Alleghany	215	14	49	9
Amelia	172	19.71	27	6
Amherst	309	15.59	77	10
Appomattox	109	12 24	21	3
Augusta	512	15.11	119	25
Bath	73	96	7	1
Bedford	433	14 65	84	25
Bland	62	12 02	12	1
Botetourt	231	12.7	65	9
Bristol, city	138	18 06	51	3
Brunswick	356	17.77	76	8
Buchanan	299	20 58	124	10
Buckingham	230	15.13	37	9
Buena Vista, city	97	25 05	44	2
Campbell	387	14 27	104	7
Caroline	241	14 52	57	12
Carroll	221	9 76	54	12
Charles City	76	13 98	12	4
Charlotte	204	12 62	40	8
Charlottesville, city	220	18 01	43	9
Chesterfield	318	17 48	63	10
Clarke	135	18 06	36	5
Clifton Forge	134	18 27	51	6
Craig	50	9 88	11	2
Culpeper	154	11 43	29	10
Cumberland	149	15 91	25	9
Danville, city	500	24 58	102	35
Dickenson	205	19 71	95	6
Dinwiddie	565	36 47	74	10
Elizabeth City	815	35 91	189	35
Essex	140	14 89	15	5
Fairfax	896	41 99	531	30
Fauquier	325	14 43	65	14
Floyd	162	115	24	6
Fluvanna	117	14 06	19	4
Franklin	275	10 22	40	9
Frederick	150	11 74	40	9 2 2
Fredericksburg city	164	25 06	33	2
Giles	162	13 16	38	3

		Death Rate	Number of	Number of
County	Number of	per Thousand,		Pneumonia
County	Deaths, 1918	1918	Deaths, 1918	Deaths, 1918
Gloucester	153	12.27	19	6
Goochland	131	14.17	21	3
Grayson	240	10.74	79	3
Greene	101	13.39	28	Ö
Greensville	226	16.54	72	4
Halifax	706	16.65	219	32
Hanover	305	17.73	55	9
Henrico	347	21.12	79	16
Henry	284	15.39	61	13
Highland	55	10.35	6	1
Isle of Wight	216	13.14	24	14
James City	244	35.65	57	2
•	148	15.04	28	5
King and Queen	85	13.22	6	3
King George	202	26.28	37	5
King William	171	26.26 16.42	43	6
Lancaster	439	16.16	203	8
Lee Loudoun	354	16.73	203 90	18
-	354 317	19.07	52	14
Louisa	221	16.16	43	8
Lunenburg	786	23.08	219	57
Lynchburg, city Madison	112	11.14	17	1
	137	14.43	21	8
Mathews	487	15.73	123	31
Mecklenburg	172	18.33	33	8
Middlesex	231	12.53	66	15
Montgomery	486	16.17	81	30
Nansemond	193	11.06	28	9
Nelson	81	17.29	8	0
New Kent	798	32.33	209	127
Newport News, city	2722	20.01	623	189
Norfolk, city	1311	25.7	401	61
Norfolk county	287	15.04	47	20
Northhampton Northumberland	191	16.55	41	20
	228	15.86	30	8
Nottoway	155	10.88	18	10
Orange	260	18.01	73	8
Page	158	8.46	31	3
Patrick	856	32.96	201	46
Petersburg, city Pittsylvania	846	15.58	213	47
Portsmouth	855	20.49	188	52
Ponsmoun	107	17.53	20	4
Prince Edward	229	16.06	37	17
Prince George	1606	40.15	879	79
Prince George Prince William	359	28.09	115	14
•	312	26.44	42	8
Princess Anne	312	20.44	42	0

	Number of	Death Rate	Number of	Number of
County	Deaths, 1918	per Thousand,	Influenza	Pneumonia
		1918	Deaths, 1918	Deaths, 1918
Pulaski	338	17.4	125	13
Radford, city	88	17.89	28	2
Rappahannock	114	12.89	29	5
Richmond, city	3824	23.79	590	218
Richmond, county	108	14.05	6	9
Roanoke, city	874	18.31	189	37
Roanoke, county	387	18.41	75	21
Rockbridge	296	13.98	68	12
Rockingham	587	16.29	145	21
Russell	398	14.22	156	16
Scott	298	12.04	60	6
Shenandoah	351	16.32	95	12
Smyth	438	19.05	162	6
Southampton	466	15.97	99	13
Spotsylvania	148	20.94	32	8
Stafford	102	11.49	14	3
Staunton, city	381	31.78	40	49
Surry	171	15.92	25	4
Sussex	237	15.83	50	7
Tazewell	489	19.23	195	19
Warren	145	22.11	31	6
Warwick	794	162.66	385	68
Washington	449	12.47	129	16
Westmoreland	183	19.53	20	10
Winchester	175	27.13	47	7
Wise	961	14.96	347	44
Wythe	284	13.94	101	5
York	213	26.66	91	10
Total	44083	19.08	11352	2140

Source: Annual Report of the State Board of Health and the State Health Commissioner to the Governor of Virginia for the Fiscal Year Ending September 30, 1919, Richmond, Virginia 1920, Table II.

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