YELLOW JACK

How Yellow Fever Ravaged America and Walter Reed Discovered Its Deadly Secrets

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Chapter 2

The Capital Under Siege

Philadelphia was prosperous and confident, secure in its position as America’s premier city. Perhaps not quite on equal footing with London or Paris, it was the center of learning, religion, commerce, trade, and government for the newly founded United States. It was a city where 27 industries and manufactures, and human improvement of every kind thrive and flourish. Some of America’s greatest thinkers argued science, law, philosophy, and literature and the arts in the College of Philadelphia and the American Philosophical Society. But it was also a city of artisans and merchants, merchants and traders, lawyers and bankers. The mix of religious, races—including a free black society—and nationalities undoubtedly made it the most cosmopolitan town in the New World.

In part, the temporary presence of the federal government contributed to Philadelphia’s prosperity. In 1790, the growing bureaucracy established itself in the Quaker City—a brief stop as it made its journey from New York City to the nascent city of Washington, D.C. Those wanting to be close to the central government flocked into town. Between 1790 and 1800, the population in the city proper increased from 28,522 to 41,220, an increase of 45 percent gain. In nearly every street, new homes were being built “in a very neat, elegant style.” Demand must have outpaced supply as house rents became extravagant.

In the city’s cafes, business doubled and even tripled as ordinary citizens and the leaders of a new nation—George Washington, John Adams, Alexander Hamilton, and Thomas Jefferson—met to drink and eat while arguing the future of their creation.

Not everyone was happy with the transformations taking place in Philadelphia. Prosperity came with costs. Luxury and wealth were not universally accepted virtues. Mathew Carey was among those increasingly concerned by what he saw as an encroaching decadence. Carey, a Roman Catholic, was born in Ireland and had emigrated to Philadelphia in 1784 after publishing a paper attacking the British government that landed him...
in an English jail. By 1793, he was one of Philadelphia’s most prominent publishers and booksellers. At the end of 1793, he rushed into print his account of that year’s tragic yellow fever epidemic. As the year began, Carey worried that the temperance and sober manners needed for the “liberty and happiness of a nation” were less and less practiced. He saw a steady erosion of the city’s wholesome habits. Others observed this moral decay, at least in retrospect. Dr. Benjamin Rush described a “bitter and unchristian spirit” taking hold in 1793.

Rapid growth brought other problems. Sanitation was less than ideal. The new redbrick homes and crowded cafes lined streets that ran with sewage and other unpleasant and odorous wastes. The Philadelphia physician William Currie found his town to be quite agreeable, though plagued with “a few nuisances . . . such as slaughter-houses, tan-yards, and graveyards.” The summer heat intensified the stench emanating from some of these nuisances. In many neighborhoods, the air was barely breathable.

The spring of 1793 had been wet and warm. Fruit trees blossomed in the first week of April. Migratory birds returned two weeks early. The early summer was hot and dry, giving way to a “temperate and pleasant” August. The various dysenteries and remitting fevers were common. Yet, Dr. Rush recalled that “[t]here was something in the heat and drought of the summer months which was uncommon in their influence upon the human body.” Philadelphians, however, didn’t let this influence keep them from enjoying a “merry and sinful” summer.

The fifth of August began warm and clear. Dr. Benjamin Rush was called on to attend the daughter of his colleague Dr. Hugh Hodge. The Hodge family lived at the eastern edge of the city along Water Street, two blocks down and six blocks north of Dr. Rush’s home. The young girl was struck with a bilious fever in the last week of July. When Rush arrived, she was vomiting blood and the yellow tint of jaundice infused her skin. The girl was too far gone for even such a prominent and successful physician as Dr. Rush to save. She died later in the day.

If Dr. Rush walked up Water Street from Chestnut, he passed the bustling crowded wharves where longshoremen unloaded the goods needed to support the city of Philadelphia and its surrounding communities. He may have seen the Mary, recently arrived from St. Domingue loaded with refugees. Also recently in from the Caribbean and points south were other vessels like the Amelia, Flora, Sans Culottes, and Il Constant. As
In late August 1793, he realized he was again coming face-to-face with that great scourge, yellow fever. He and his colleagues were worried by the increasing number of cases. By the end of August, over three hundred citizens would die, more than twice that expected in any given month. Of course, not every case was seen by a physician, and not every death was properly diagnosed and recorded, so the true extent of the insidious infection was unknown. Yellow fever had announced its presence but not its intentions. Rush, who had observed the 1762 epidemic as an apprentice, and other experienced physicians knew that the disease came on in late summer and did not depart until the first frost.

Rush sounded the alarm on August 21. He called on Mayor Matthew Clarkson and told him of his fears: a great epidemic was stirring in the city. This was a homegrown disease, the mayor was told, the result of the frightful effluvia carried in the air from the waste products of a great and teeming city. In Philadelphia, as in most major cities at the time, open sewers ran through streets littered with waste.

The city, aware that sanitation and good health worked in tandem, had a law on its books requiring the proper disposal of wastes, but in the summer of 1793, it was all but ignored. At Rush's urging, the mayor ordered that the ordinance be republished and enforced along with weekly trash removal. He also called for a meeting of the College of Physicians. Their collective knowledge and experience was needed to halt the sickness. The meeting was set for Sunday, August 25. It was the first time since the founding of the college that the city government called on it for guidance.

On August 22, Rush wrote his last letter until November that did not dwell on the devastating disease now spreading through Philadelphia. Instead, he described a celebration he had attended. About a mile outside town, the freed black community had held a roof raising on their new African Church." Calling it one of his most pleasant days, the staunch abolitionist recounted a plentiful dinner, accompanied by fine liquors and a simple dessert of melons. When he returned to the city after a two-hour absence, he had enough new business to keep busy till after ten o'clock.

On the night of August 24, Rush lost two patients to the fever. He knew of five other fever deaths in the neighborhood and four more elsewhere. Having decimated the waterfront, the disease was being reported from neighborhoods away from Water Street.
Most frightening to the doctors trained to fight disease, even as cruelly as was done in the eighteenth century, this fever was mocking the power of their medicine. Despairingly, Rush told his wife, “I even strive to subdue my sympathy for my patients; otherwise, I would sink under the accumulated loads of misery.”

Such was Rush’s state of mind as the College of Physicians convened. Its members were the premier doctors in town, as recognized by one another. There was Rush’s mentor, John Redman, William Currie, Phillip Physick, and Hugh Hutchinson, whose daughter was one of the first known victims of yellow fever, among others. Not counted in the membership were the less well regarded doctors, barber-surgeons, bleeders, and assorted healers, many of whom were seeing a different side of the emerging epidemic than the top-drawer doctors.

Sixteen of twenty-six college fellows set to work on Sunday afternoon. A committee was formed to draft directions for checking the spread of the disease. The committee imposed on Rush to produce the document. By the time he sat down that night to write his wife, the directives were written. They were published on Tuesday, August 27.

Among the steps to be taken to halt the illness’s onslaught were: avoid every infected person, as much as possible; avoid fatigue of the body and mind; dress according to the weather; avoid intemperance; mark every house with sickness in it; place patients in the center of well-ventilated rooms, change their clothes often, and remove all offensive matter; stop tolling bells at once; transport the dead in closed carriages and bury them as quickly as possible; clean the streets and keep them clean; stop building fires in homes, instead burn gunpowder and use vinegar and camphor freely; and, called most important by the committee, provide a large and airy hospital near the city to receive the poor people infected with the disease who have no one else to care for them.

Perhaps stopping the tolls of the bells was initially the most welcome recommendation. In part marking deaths, the city’s church bells had been pealing nearly constantly. Mathew Carey wrote that they terrified the healthy and drove the sick to their graves: “Dismay and affright were visible in almost every person’s countenance.”

The bells notwithstanding, fear was dominating the town. Philadelphia averaged three to four deaths a day in the 1790s. The day after the College of Physicians published its treatise, twenty-two burials were recorded.
From the Delaware River ports inland, yellow fever was moving through the city's neighborhoods. Thousands left town; others locked themselves behind their doors and shuttered windows, afraid to walk the streets.

Two of Rush's sons had stayed in Philadelphia for the summer. On August 26, he told their mother that the boys had "so much apprehension" of getting yellow fever from their father's clothes that he had concluded they would be better off in Trenton. Both suffering headaches, the boys set out on August 27 with the admonishments to "go to bed as soon as they reach Trenton, and by no means expose themselves to cold, heat or fatigue."15

On August 27, the Pennsylvania legislature met at the State House, now Independence Hall. Eleven of eighteen senators and about half of the seventy-six representatives attended. They remained in session for three days, over which they were described as becoming increasingly "uneasy."16 The House doorkeeper, Joseph Fry, was found dead in the west wing of the State House on the twenty-ninth. Yellow fever was uncomfortably close.

Addressing the lawmakers, Governor Thomas Mifflin blamed the disease on the foreigners flooding the city from the West Indies. He pointed out "the necessity of more strongly guarding the public health, by legislative actions."17 His pronouncement was in direct conflict with the College of Physicians' and Dr. Rush's assertion that the disease was of local origin, but Mifflin was supported by other prominent doctors.

The governor went on to call for the city's health officer and physician of the port, assisted by the police and college faculty, to use "every rational measure to allay the public inquietude, and effectively remove its cause."18 It was the governor's belief that the vigorous enforcement application of quarantine and inspection was needed. He ordered ships coming up the Delaware to stop at Mud Island, where they were to be boarded by a doctor and inspected for signs of disease. He gave the health officer of the port funds to buy a boat for this purpose and to hire assistants.

In an open letter to Mayor Clarkson, Mifflin found fault with the city's response to the emergency. He demanded that the mayor institute all of the recommendations from the college. And he promised state money to pay for any measures the city council and mayor could not or would not pay for.

At the governor's request, the mayor dispatched a troop of militia from Ft. Mifflin to drag a cannon through the streets. They fired it every few yards to chase away the contagion. In the already stressed town, the noise was unwanted and the action generally recognized as useless.
The mayor attempted to answer the governor's criticism while demonstrating to his political allies and the people of Philadelphia that he was taking action. Clarkson described the definitive steps the city was taking to stem the epidemic. The mayor’s call for improved sanitation was being enacted. City officials were receiving clear orders to visit the wharves and market streets and to clean them of any offensive materials. Those scavengers available to work were directed to continuously remove wastes and not limit their collections to once a week.

While the leading politicians postured and defended their actions, the civil and social structure of America's premier city was collapsing. As people packed up and left, took ill or died, many shops and businesses closed their doors. Night watchmen, the town criers, called the hours wrong, as the clocks were not maintained. At the dock, stranded ships stayed tied up because there were not enough healthy sailors to man them. Despite the mayor's call to clean the city, garbage and other wastes piled up in the streets. Bodies went unburied. The scavengers and gravediggers were in short supply. People from all walks of life, all social classes, fled in all directions.

Those who ventured into the streets took what they believed were appropriate precautions. Some wore scarves or other cloths soaked in vinegar or camphor as recommended by Rush. They kept off the footpaths and walked down the middle of the street to avoid homes known to house yellow fever victims. "Acquaintances and friends avoided each other in the streets, and only signified their regard by a cold nod," wrote Mathew Carey. "The old custom of shaking hands fell into such general disuse, that many were affronted at even the offer of a hand."19

Within families, fear of yellow fever broke the bonds of marriage and blood. Rush's descriptions of life under siege were particularly poignant and chilling: "[P]arents desert their children as soon as they are infected, and in every room you enter you see no person but a solitary Black man or woman near the sick."20 In many families, the first sign of a headache, a common harbinger of the disease, was enough to thrust a family member into the street.

In some homes, infants were found sucking the breasts of their dead mothers. In one home, a woman went into labor, her dead husband still beside her. Neighborhood women would not enter the sick house, and she lay in anguish until finally she reached a window and cried out for help. Two passing men went to her aid, but she was beyond help and died in their arms.

Scenes like this were being reported in Philadelphia.

At the midpoint of the epidemic, coldhearted acts occurring in every street were extending to the citizens of Philadelphia. It was reported in the newspaper "Philadelphia Gazette. Rush explained that they were being in the same room with a patient greater than that from walking the street, there seemed to be little scientific knowledge.

In these dark days, the burden of the "Overseers and Guardians of the Streets" was great. As a member of this organization, the Guardians was working under the direction of the city’s destitute would not take in anyone.

In keeping with the College of Physicians near the city to take in the poor, a hospital was opened. The troupe had taken their show on the road.

Seven yellow fever victims were quarantined in a hospital. Residents in the neighborhood surrounding the hospital, who lived in the same streets were terrified at the prospect of having a disease hospital, or lazaretto, within their backyards. They threatened to boycott the city.

In a hastily called meeting on August 19, the Guardians, a handful of aldermen, and residents of the neighborhood, gathered at the Independence Hall, on the first floor of the home of architect William. For a short time, the house was occupied by John Adams and his wife, Abigail, who used the house as a temporary residence. A contemporary elegance style home with two large chimneys and a fine view of the whole city. Abigail found the surrounding country
Dr. Currie’s accusations and the snide comments of others stung Dr. Rush. He wrote his wife on September 13 that in addition to having to battle yellow fever, he had to contend with the “prejudices, fears, and false- 
hoods of several of my brethren, all of which retard the progress of truth and daily cost our city many lives.” In another letter later in the same 
month, he complained that few doctors in the city had adopted his treat-
ment regime, and he accused those who did not of “murder by rule.” He 
believed his colleagues were conspiring to spread calumnies against him 
and that Currie was “the weak instrument of their malice and prejudices.”

Currie and Rush disagreed on another key element of the outbreak— 
how many diseases were afflicting the people of Philadelphia. Currie be-
lieved yellow fever accounted for a relatively small proportion of the cases 
and that other bilious fevers were responsible for the rest. Rush saw yellow 
fever everywhere he looked.

The lay citizens of Philadelphia also had opinions on things medical 
and what constituted good medical care. A leading resident reminded his 
town of Benjamin Franklin’s observation that in Barbados the sick began to 
recover “only after the doctors had run out of medicine.”

Others were tiring of the feuding doctors. A writer to a local paper told 
his fellow Philadelphians to “be no more pestered with the disputes about 
a doctrine, which hath been a bone of contention for a couple of centur-
ies.” He noted, “At this moment [it] is as far from a decision as when it 
commenced.”

While the physicians bickered, Philadelphia plunged deeper into des-
pair. Treasury Secretary Alexander Hamilton was stricken on September 5. 
He recovered, but his illness was a symbol of the capriciousness of yellow 
fever. On September 10, President George Washington rode away from his 
Walnut Street home. The annual return to Mount Vernon, his Potomac 
River plantation, was long-planned and even delayed until he could no 
longer justify the risk to his family, especially since there was little business 
for him to conduct in the capital. “The disorder has blockaded the Federal 
Government,” Washington said. Yet, his departure further demoralized 
the citizens left behind.

Sickness and desertion were taking their toll. Halfway through Sep-
tember, some six to seven weeks into the epidemic, Philadelphia was col-
lapsing. Newspapers ceased publication; nearly all shops and taverns were 
shuttered. Half the population was gone. Farmers could not or would not 
bring food into the city, the port was shut down, and many surrounding
communities blockaded the metropolitan area, refusing admittance to its desperately fleeing citizens.

The city needed help, and the white community turned to a largely untapped resource. The free blacks of Philadelphia operated in a parallel society to the whites. As the epidemic spread through town, it seemed that blacks were spared the horrors of yellow fever. This was not unexpected.

In the eighteenth and nineteenth centuries, many doctors and laypersons, both black and white, believed blacks had special innate immunity to yellow fever. This may have arisen from the lifelong immunity conferred by a childhood infection. Blacks born in Africa or the Caribbean were more likely than whites to have been exposed to yellow fever when young. In children, the disease was more likely to cause a mild flulike illness rather than the fulminating, often fatal, disease seen in many infected adults. This acquired immunity could have been mistaken for natural immunity.

Believing along with many others in their God-given immunity, Richard Allen and William Grey, free blacks and members of Philadelphia’s African Society, argued that they had a special obligation to help the beleaguered whites of Philadelphia. They called on Mayor Clarkson and offered their services. He immediately accepted their assistance. The city ran an appeal in the newspapers calling on the black community to step forward. The mayor even freed black prisoners from the Walnut Street jail to work in the lazaretto, or fever hospital, at Bush Hill.

The response was overwhelming. Soon blacks were filling many jobs unwanted or unfillable by whites, such as nurses, street sweepers, scavengers, undertakers, and gravediggers, among others. While one of the epidemic’s chroniclers, Mathew Carey, accused the African Society of price gouging, thievery, and other crimes, their work and contributions were defended and accepted by the vast majority of citizens. In a January 1794 letter to Absalom Jones and Richard Allen, who were largely responsible for recruiting their fellow blacks to aid the city, Mayor Clarkson praised these citizens, noting, “Their diligence, attention and decency of deportment, afforded me, at the time, much satisfaction.”15

By mid-September, the myth of divine immunity was crumbling as many blacks became ill. Even Rush, a believer in black immunity, admitted on September 22 that the disease occurred frequently among blacks, though the cases were milder than in whites.

Physical illness was not the only effect of the epidemic. As it wore on, the emotional toll mounted. Mathew Carey recorded his observations on
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the loss of compassion and emotional fatigue setting in. “Less concern was felt for the loss of a parent, a husband or an only child,” he wrote, “than on other occasions would have been caused by the death of a servant, or even a favourite lap dog.”

The doctors felt the same fatigue. The number of potential patients overwhelmed them. Accosted in the street and implored to visit a sick wife, husband, parent, or child, Rush, with some reluctance, had to tear himself away from the petitioners. Adding to the burden, sickness and desertion among the city’s doctors removed many from practice.

Rush’s description of how families reacted to illness in their midst mirrored Carey’s. He told his wife that “parents desert their children as soon as they are infected” and that “many people thrust their parents into the streets as soon as they complain of headaches.” “These scenes,” he reported, “now cease to move me.”

On the streets, orphaned children wandered among the sick, dying, and dead. Food supplies, even in a city whose population was reduced by half, grew short as farmers refused to enter the city and those who did faced possible exile for exposing themselves to the contagion. The shortages were most acute among the poor, who now faced the threat of starvation in addition to yellow fever.

On September 12, the same day a meteorite crashed down into Third Street, Mayor Clarkson addressed a group of his fellow citizens who gathered at city hall. He told them that the state of their city was not good and was slipping toward anarchy. The citizens rose to his challenge and voted two days later to create a volunteer committee to take on almost any job that needed doing. In effect, these citizens, drawn mainly from the city’s middle classes—tradesmen, artisans, and the like—many of whom had not participated in the civic life of their town before, became the de facto government of the City of Philadelphia. Benjamin Rush’s nemesis, Dr. William Currie, and Mathew Carey also signed on. Their mandate included procuring supplies, borrowing money to pay for those supplies as well as for labor, and recruiting doctors, nurses, and other caregivers.

Mayor Clarkson, the stalwart leader who was bravely guiding his city through the worst crisis of its young existence, was named committee chair. While others, including most city and state government employees, fled, he remained; the door to his vinegar-soaked offices was open to all comers.

As the committee began its work, the epidemic was clearly worsening. The daily mortality counts ranged from sixty-seven on September 16 to
The battle over Derève raged for a week. In the end, Girard, the American doctors, and the committee came to a compromise. Derève was given medical control of Bush Hill—but only until the number of patients “considerably exceed those now in the Hospital.” The four doctors resigned their posts, and the Philadelphia physician Benjamin Duffield was appointed to assist.

Two miles to the southeast of Bush Hill, the rest of the committee began making progress against the demise of their town. Of the twenty-six members, thirteen were able to remain active throughout the crisis. They met every day from September 14 through the month of October. The members crisscrossed the city looking for situations to improve—they didn’t have to look far or hard. The committee’s courage, it has been noted, infected the city, a much-needed counter-note to the infection brought by the yellow fever.

The orphan problem was worsening and demanded their attention. The committee found housing, collected donated clothes, provided food, and tried to place the children in homes. During the last six weeks of the epidemic, the committee took charge of 194 “helpless innocents.” Homes were found for 94, 27 died, and 71 remained wards of the city. The fate of 2 was not reported.

The city was running out of burial space. The city’s potter’s field was full by the end of September. The committee seized land at the North West Public Square between Eighteenth and Twentieth streets and Vine and Race streets. Getting people to burial was another problem. Shoddy casket construction allowed the bodily fluids of the dead to leak and foul the streets of Philadelphia. The risk of disease and the stench forced the committee to demand well-constructed leakproof coffins.

It was the members of the committee and other unheralded citizens that Mathew Carey referred to when he wrote, “Amidst the general abandonment of the sick that prevailed there were to be found many illustrious instances of men and women . . . who, in the exercises of the duties of humanity exposed themselves to dangers, which terrified men, who have hundreds of times faced death without fear, in the middle of battle.”

As the battle raged in Philadelphia, surrounding cities and states took steps to protect themselves from yellow fever. Fueled by the awful truth of the epidemic and the often exaggerated reports in the press, cities and
towners in New York, Maryland, and New Jersey set up roadblocks to keep Philadelphians out or designated quarantine houses to warehouse them. To ward off yellow fever, postmasters in distant towns dipped letters from Philadelphia in vinegar.

In Alexandria, Virginia, boats patrolled the harbor in an attempt to intercept ships traveling from the Quaker City. Outside Baltimore, militia blocked the Baltimore-Philadelphia Road; while in the city, it was resolved that none of its citizens should grant shelter to anyone traveling from Philadelphia. In New York City, vigilantes worked the ferry slips along the Hudson River looking for and turning back travelers suspected of fleeing north from the epidemic.

But as in Philadelphia itself, where coldhearted neglect and indifference mixed with scenes of heroism, the response of the infected city’s near and distant neighbors was not entirely obstructive. The citizens of Springfield, New Jersey, met and chose to open their town as a sanctuary to people fleeing across the Delaware River. Elizabeth, New Jersey, to the north and Elkton, Maryland, to the south also welcomed the refugees.

While many cities turned away travelers and cargo, they also understood Philadelphia’s plight. Whether through pure altruism, a sense of “there but for the grace of God go I,” compassion, or something in between, these communities gave aid and support to the struggling, worn-down but still battling, yellow fever-infected town. J. H. Powell, who has produced one of the most comprehensive historical studies of the epidemic, wrote, “Carts laden with livestock, vegetables, supplies of all sorts came in over roads already thronging with refugees fleeing the city.”24 From New York City came $5,000. The influx of supplies and cash must have been a welcome show of support for people increasingly besieged and cut off from normal commerce and communication with their neighbors.

As September faded and October began, there was no sign that yellow fever was ready to release its stranglehold on Philadelphia. Yet, the burden was becoming easier to bear. “Courageous leadership,” Powell noted, “brought people out of panic to resolution, and beyond resolution to hope.”25 As the daily death toll approached its zenith of one hundred or more, the city was actively fighting back.

The optimism was not blind to the realities of the time. Rush recalled meeting a man on October 1 who was busily stacking firewood for the coming winter. Such long-term planning surprised him, and he told his wife,

“I should as soon have thought of my going to the city of Philadelphia to spend the day of the year 1800.”26

One hundred and nineteen days after October 11, the single highest one-case had first sailed into town two and a half weeks after being reported. Dr. Rush reported that the disease rage in the city.27 But three days after that, he was able to say from all quarters that the disease was checked.28

The day that the city’s doctors declared an end to the yellow fever epidemic in the temperate zones had been a day of triumph and joy, and a day of gratitude to those who came to help.

The following day, October 31, a white flag was raised in the city, a flag of surrender but one proclaiming that the city was free of yellow fever patients. It can be said that the city’s horrible visitor was about to depart.

Dr. Rush publicly expressed his gratitude for the many who had helped him. “I am much beholden to the city of Philadelphia for its ready and hearty response to its own needs and to the needs of those unfortunate ones who were in distress.”29

The man who had arrived from New York City on October 7, 1800, and who had been taken ill with yellow fever was now well and had returned to the college, where he was greeted with open arms and a warm welcome. The men of the college had been his doctors, and they were now his friends. The city of Philadelphia had been his home, and it was now his place of work.

But the work was not easy. The city was still a place of disease and despair, and the men of the college were still faced with the challenge of controlling the epidemic. Rush was determined to do his part, and he was determined to do it well. He was determined to prove that what he had learned at the college was worth the time and money that had been spent on it.

In his autobiography, written ten years after the epidemic, Rush explained his reasons for sending the men of the college to New York City. “I have always been of the opinion that the men of the college should be trained to be doctors, and not merely to be able to write and speak English,” he wrote. “I believe that the men of the college should be trained to be able to think for themselves, and to be able to act as doctors, and to be able to take care of their patients, and to be able to be of service to their community.”

Rush was right. The men of the college had done their part, and they had done it well. They had fought the disease, and they had won. They had saved the city, and they had saved their patients. And they had done it all with the help of the men of the college.