A HISTORY OF MEDICINE AND THE ESTABLISHMENT OF MEDICAL INSTITUTIONS IN MIDDLESEX COUNTY, NEW JERSEY THAT TRANSFORMED PATIENT AND DOCTOR RELATIONSHIPS DURING THE EARLY TWENTIETH CENTURY

A dissertation submitted to the Caspersen School of Graduate Studies

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ABSTRACT

A History of Medicine and the Establishment of Medical Institutions in Middlesex County, New Jersey That Transformed Patient and Doctor Relationships During the Early Twentieth Century

Doctor of Medical Humanities Dissertation by
Linda Whitfield-Spinner

The Caspersen School of Graduate Studies May 2011
Drew University

The early twentieth century was a period of tremendous advancements in medicine and technology and as a result experienced a revolutionary change in the delivery of healthcare in America. Modern medicine which encompassed specialized knowledge, technical procedures, and rules of behavior, changed the way medical care was provided in the United States during this period. In addition, the development of advanced diagnostic tools changed the interactions between doctor and patient.

In many respects, the evolution of medicine in New Jersey mirrored the culture of medicine as it was developing in America. Sandwiched between the dominating medical centers of Philadelphia and New York, New Jersey practitioners drew upon the knowledge and expertise of their metropolitan colleagues. As the New Jersey practitioners accepted and integrated new techniques and therapeutics into their practices, the relationship between doctor and patient changed.

This project focuses on medicine in Middlesex County during the early twentieth century, in particular, the two cities of New Brunswick and Perth Amboy. This geographic setting and the timeframe of the early 1900s represents an era and location in which modern medicine began to evolve in central New Jersey and technology became a part of routine medical care.

Although much has been written about medical events and medical organizations in other New Jersey counties, such as Essex and Camden, Middlesex County received little attention. The intent of this study is to rectify the lack of attention to the history of medicine in Middlesex County.

Middlesex County medical practitioners were in tune with how illnesses were being addressed and how innovative medical techniques were being practiced nationally. The introduction of new diagnostic test procedures and technology changed the way they interacted with their patients. The establishment of social and professional medical organizations and institutions; the passing of legislation; and the application of modern approaches to medical practice, helped to change the landscape of medicine in the county. This project presents a historical and social context for the practice of medicine in the county and the research contributes to New Jersey's medical history.

The process that occurs during the doctor and patient interaction is central in the practice of medicine. This relationship evolved alongside the practice of medicine and its institutions during the early twentieth century and is a common thread among all of the chapters in the study. The organization of medical institutions to care for the sick and the development of new medical technology, which gave physicians authoritative decision-making powers, transformed patient and doctor relationships in the county, as it did in other counties and cities across the country.

This dissertation presents a history of medicine and the establishment of medical institutions in Middlesex County, New Jersey that transformed patient and doctor relationships during the early twentieth century.

DEDICATION

To my parents Ulysses and Gladys McCullough,

Thank you for allowing me to march to the beat of my own drums.

Your actions always spoke louder than words.

To Paquita Roberts,

My life coach and mentor who helped me make my own music.

Thank you for always being there when I needed you.

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ACKNOWLEDGEMENTS

This dissertation was conceived in appreciation for the Middlesex County residents who pioneered the practice of medicine in the county during the early twentieth century. Despite the hard work and fear that this project would never come to fruition, the process provided me the opportunity to provide research that will contribute to New Jersey's medical history.

I am grateful to Dr. Jo Ann Middleton, who from the first day of classes encouraged me as a student to explore the intricacies of patient and doctor relationships. As my advisor her guidance throughout my time at the university and especially during the dissertation process has been invaluable. My thanks go also to Sandra Moss, M.D., M.A. for her support and encouragement. She was truly the beacon that guided me through every chapter and reassured me each step of the way that I would accomplish my goal.

Thank you to the following institutions where I received courteous and efficient assistance: Saint Peter's University Hospital Medical Library, Special Collections at Rutgers, Cranbury Public Library, New Brunswick Public Library, Perth Amboy Public Library, South Brunswick Public Library, East Brunswick Public Library, Toms River Public Library, Margaret Gurowitz and the Johnson and Johnson Company (Kilmerhouse.com), Ceil Leedom, Joan Luckhardt and the Dayton Village Citizen's

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INTRODUCTION

History is more than the record of events. In history we find testaments to a variety of human experiences as well as lessons learned to take as models and caveats to avoid. The twentieth century was a period of medical discoveries that influenced the practice of medicine across America. Modern medicine, which encompassed specialized knowledge, technical procedures, and rules of behavior, changed the way medical care was provided in the United States during the early decades of the twentieth century.[1] In addition, the development of advanced diagnostic tools changed the interactions between doctor and patient.

According to historian Charles Rosenberg, in *The Care of Strangers: The Rise of America's Hospital System,* by the first decade of the twentieth century, hospitals were becoming more central, "both in the provision of medical care and in the careers of ambitious physicians."[2] The experience of patients who received medical care in the hospital during the early twentieth century was very different from the medical interventions provided in the home environment during the previous decades.

In this study, the doctor and patient relationship is described as the clinical and social interactions that take place between the doctor and patient. Prior to the twentieth

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1. Paul Starr, *The Social Transformation of American Medicine: [the Rise of a Sovereign Profession and the Making of a Vast Industry]* (New York, NY: Basic Books, 1982), 3.

2. Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (Baltimore: Johns Hopkins University Press, 1987), 5.

century the average doctor had few effective drugs and little laboratory equipment. His role was that of bedside comforter. Caring communication, careful listening, and patience were frequently the best the doctor had to offer. However, the family doctor had an intimate knowledge of the patient's medical and social history. During this period the physician and patient shared the same conceptual framework in the understanding of traditional medicine and therapeutic practices.

The physician and patient relationship changed during the early twentieth century with the growth of industrialization and urbanization, scientific developments, and improved educational training for doctors. Physicians took on a more paternal approach to delivery of health care with the introduction of new scientific medical tools. Twentieth century physicians and patients realized that one individual could not possibly know everything there was to know about practicing modern medicine. General practitioners increasingly turned to their colleagues who were specializing in different fields of practice (i.e. surgery), as well as to technicians who had developed specialized skills in a specific diagnostic procedure. As a result, patients became increasingly dependent on strangers for their medical care.

The provision of medical care that shifted from the patient’s home to medical institutions, increased specialization and the growth of hospitals contributed to the depersonalization of medical services. Patient and doctor relationships changed over time in part due to the establishment of medical institutions and the adoption of new medical technologies. Changes in the medical profession, such as the establishment of medical societies, educational requirements, legislation, and specialization, as well as the public health movement, also helped transform doctor and patient relations during this period.

In many respects, the evolution of medicine in New Jersey mirrored the culture of medicine as it was developing in America. Throughout the forthcoming chapters, this study will examine the factors that led to change in doctor and patient relationships in Middlesex County during the early twentieth century.

Sandwiched between the dominating medical centers of Philadelphia and New York, New Jersey practitioners drew upon the knowledge and expertise of their metropolitan colleagues. As the New Jersey practitioners accepted and integrated new techniques and therapeutics into their practices, the interactions between doctor and patient changed.

There is a plethora of primary and secondary resources related to medicine in America housed in local and national libraries, as well as on online websites. Historians like Stephen Wickes (1813-1890) and David Cowen (1909-2006) have done a thorough job in documenting the history of medicine and health in New Jersey. Although much has been written about medical events and medical organizations in counties such as Essex and Camden, Middlesex County received little attention. The intent of this project is to rectify the lack of attention to the history of medicine in Middlesex County. I propose that in many ways, medical practice in Middlesex County, with the exception of not having a medical school in the state, was a reflection of what was occurring throughout America.

This project will focus on medicine in Middlesex County, in particular, the two cities of New Brunswick and Perth Amboy. This geographic setting and the timeframe of the early 1900s represents an era and location in which modern medicine began to evolve in central New Jersey and technology became a part of routine medical care. The

research draws heavily on annual reports of local hospitals, medical societies and other medical institutions and organizations; organizational meeting documentations; documents from local and state health departments; and manuscripts from physicians who practiced medicine in the area. In addition, local newspapers of the period and municipal histories helped to shed light on daily life in Perth Amboy and New Brunswick and how medicine was practiced there. The following pages will explore the establishment of medical institutions and the advancement of medical technology in the two cities and how these entities transformed patient and doctor relationships. This project presents a historical and social context for the practice of medicine in the county and the research contributes to New Jersey's medical history.

The paper is divided into five chapters. Each chapter contributes to a full understanding of how the establishment of medical institutions and the development of new medical technology transformed patient and doctor relationships in Middlesex County during the early twentieth century.

Chapter One will discuss the influence industrialization and urbanization had on the development of Middlesex County during the early twentieth century, as well as the relevance of these experiences and events to the evolution of medical practice in the county.

The public health and social welfare movements in America grew out of a need to address some of the problems caused by economic hardships and the negative effects of a growing industrial society. Chapter Two will consider how federal legislation as well as state and local social welfare institutions and policies influenced the provision of health care for Middlesex County residents during the early twentieth century.

Chapter Three explores the evolution of hospitals in Middlesex County. The discussion will address how the advancement of medicine influenced public opinion about Middlesex County medical institutions, the role the medical profession played in them, and how these entities affected patient and doctor relations. Although medical institutions in several cities in Middlesex County will be reviewed, the town of New Brunswick will be the primary focus in the discussion on the hospital movement as New Brunswick was the most progressive and enterprising city of the county during the early twentieth century.

Chapter Four, "The Medical Profession in Middlesex County, Early Twentieth Century," takes a look at how the evolution of the medical profession influenced the practice of medicine and the establishment of medical institutions in Middlesex County, to determine how well Middlesex County practitioners integrated new and innovative techniques and technologies into their practices and how these developments transformed relations between doctors and patients.

Lastly, Chapter Five will showcase contributions made by a few individuals, who, through the establishment of social and professional medical organizations and institutions, the passing of legislation, and the application of modern approaches to medical practice, helped to change the landscape of medicine in the county during the early twentieth century.

The process that occurs during the doctor and patient interaction is central in the practice of medicine. This relationship evolved alongside the practice of medicine and its institutions during the early twentieth century and will be the common thread among all of the chapters.

CHAPTER 1

INDUSTRIALIZATION AND URBANIZATION OF MIDDLESEX COUNTY: THE TWENTIETH CENTURY MEDICAL EVOLUTION BEGINS

Medical practice in Middlesex County during the late nineteenth century and the early twentieth century was fundamentally a reflection of what was occurring in other towns and cities across America, with one major exception: the state of New Jersey did not have a medical school during this period. In fact, New Jersey would not have a medical school until Seton Hall College of Medicine and Dentistry was incorporated in 1954. The school was established at the Jersey City Medical Center in 1956 and graduated its first class in 1960.[1] As a result, many of the future physicians and surgeons in the county during the nineteenth and twentieth century were forced to go out of state for their academic training. Nevertheless, significant medical events did take place in Middlesex County that helped change the landscape of medicine for its residents. By 1908, three Middlesex County hospitals had been established. In addition, Middlesex County figures prominently in the nation's medical history. In 1766, the first medical society in America was organized in New Brunswick, in the 1880s the provision of electric lighting systems for industries (and later hospitals) was developed by Thomas Edison and his group of technicians at the Menlo Park research laboratory and the New

1. Fred B. Rogers and A. Reasoner Sayre, *The Healing Art : A History of the Medical Society of New Jersey.* (Trenton, NJ: Medical Society of New Jersey, 1966), 276.

Jersey Agricultural Experiment Station, under the direction of John Smith, investigated and reported on the habits of mosquitoes, their relationship to diseases, and offered ways to control them.

During the early twentieth century, Middlesex County, like many counties in New Jersey, was changing from an agricultural economy to an industrial one. The county saw extensive transformation with the development of manufacturing, particularly in New Brunswick and Perth Amboy. Industrialization had a profound effect on the economic, social, cultural, and medical conditions of Middlesex County residents, influencing their attitudes about how they earned a living, where they lived, and where they sought medical care. Farm families moved to the cities to find work. The role of women changed when many of them joined the work force in an effort to help support their families. This internal exodus from the countryside was coupled with an external migration of European immigrants to America, all seeking job opportunities and a better way of life for their families.

This chapter will discuss the influence industrialization and urbanization had on the development of Middlesex County during the early twentieth century, as well as the relevance of these experiences and events to the evolution of medical practice in the county. New technology and the growth of manufacturing and transportation systems after the turn of the century changed how people lived and interacted with one another. These new technologies and newly discovered medical interventions also changed the doctor and patient relationship. As urbanization and industrialization took hold of Middlesex County, provision of medical care shifted from the patient's home to the doctor's office and medical institutions. A brief review of the history of New Jersey and

Middlesex County will help lay the foundation for a better understanding of the social, economic and medical evolution that took place in the state and county during the early twentieth century.

The first known inhabitants of New Jersey, including Middlesex County, were the Lenape, or Lenni Lenape Native Americans. The Dutch and the Swedes were the first Europeans to establish a colonial settlement in New Netherlands in the early seventeenth century. This area included New York, New Jersey, Delaware, and Connecticut, with parts of Pennsylvania and Rhode Island. However, the British took control of the region in 1664. The British maintained control of the land until the American Revolution.[2]

The Lenape referred to themselves as, the "Original People or "True People."[3] Noted to be gentle people, the Lenape were hospitable to the European settlers and shared their knowledge of hunting, farming, fishing and healing with them. Conversely, the settlers did not always reciprocate the respect, as many newcomers encroached upon the land and made it their own. Conflicts between the settlers and the Lenape later emerged, which forced the Lenape to relocate to other states.

Middlesex County was named after the original Middlesex County located in southeast England.[4] It was then and is still located in the middle of the state and positioned midway between New York City and Philadelphia. Walter A. De Angelo,

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2. Gary Karasik, *New Brunswick & Middlesex County: the Hub and the Wheel : an Illustrated History* (Northridge, CA: Windsor Publications, 1986), 18.

3. Ibid., 19.

4. United States, Middlesex County Board of Chosen Freeholders, *History Buff's Guide to the History of Middlesex County*, comp. Walter A. De Angelo (New Brunswick, 2007), 3.

Esq. County Administrator in 2007 and author of *History Buff's Guide to Middlesex County,* attributes the central location of the county as a key factor "in the establishment of the original settlement and subsequent growth of Middlesex County."[5] According to De Angelo, "the predominant geographic feature of the County is the Raritan River, which flows the entire width of the County from west to east (actually forming part of the Middlesex/Somerset County line), and is navigable from its mouth at the Raritan Bay to New Brunswick."[6] Location in the middle of the state helped define Middlesex County's medical history. Unlike Essex County which lies in the shadow of New York and Camden County which is situated near Philadelphia, Middlesex County is distant from any major metropolis and was left to its own resources.

In 1830 there was a major undertaking to connect the Delaware River in Trenton with the Raritan River in New Brunswick. The canal system was completed in 1834 and was dug mostly by Irish immigrants. Unfortunately, many of the canal workers were victims of the cholera epidemic of 1832[7] and died during construction.[8]

The Irish immigrants first came to New Brunswick in the early eighteenth century. Many of the early Irish men and women came to America as indentured servants, who agreed to work for a specified number of years in return for passage to

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5. Ibid., 1.

6. Ibid.

7. Charles E. Rosenberg, *The Cholera Years: the United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1987), 4.

8. Margaret M. Byrne, "The Irish Community," in *The Tercentennial Lectures New Brunswick, New Jersey: 300 Years 1680-1980,* ed. Ruth M. Patt, (New Brunswick, 1980), 63.

America. However, according to Margaret Byrne ("The Irish Community," in *The Tercentennial Lectures New Brunswick, New Jersey,* 1980), "the largest emigration of people from Ireland" occurred after the "Long Famine of 1846 through 1849," when hundreds of thousands were forced to leave the country due to mass starvation and disease.[9] When New Brunswick experienced a period of vast commercial growth during the mid-nineteenth century, many of the Irish immigrants worked on various construction projects.

During the 1860s and 1870s, the canal was used primarily to transport coal from Pennsylvania through New Brunswick to New York City. In addition, freight and naval vessels, as well as recreational boats used the canal.[10] The nation, including Middlesex County, began the transformation from rural agricultural to urban industrial society with the expansion of waterways and construction of railroads and highways, which connected urban industrial centers to markets across the country and stimulated growth during the early twentieth century.

Industrialization and Urbanization

The Raritan River brought increased trade and growth to the county. This navigable river was a crucial factor in the growth of towns like New Brunswick and Perth Amboy. There were plenty of incentives to entice potential manufacturers, including

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9. Ibid., 61.

10. The Canal Society of New Jersey, "Delaware & Raritan Canal Fact Sheet," Canalsocietynj.org, Under NJ Canal Facts, accessed July 19, 2009, http://www.canalsocietynj.org/dnr1.pdf.

inexpensive land for purchase and an abundant water supply. The early manufacturing companies established along the banks of the canal at the turn of the century found this waterway provided "effective means of distribution."[11] Machinery builders, who produced equipment for manufacturing companies, added to the industrial development of Middlesex County. Populations in the county grew with the need for workers in the manufacturing plants. By 1901, New Brunswick alone had 20,000 residents.[12]

Major industries like the New Brunswick Hosiery Company, Janeway and Carpender Wallpaper Establishment, New Brunswick Rubber Company (see figure 1.1), and the Consolidated Fruit Jar Company settled in and around New Brunswick. [13] Some commerce developed out of the county's natural resources, like the brick and terra-cotta industry in Perth Amboy which took advantage of the clay-like soil in the region. With hopes of prosperity and a better life for their families, European immigrants from Hungary, Ireland, Germany, Poland and other countries came to Middlesex County for job opportunities.

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11. Louis N. Parent, "The Smokestacks of New Brunswick: Its Industries," in *The Tercentennial Lectures New Brunswick, New Jersey: 300 Years 1680-1980,* ed. Ruth M. Patt, (New Brunswick, 1980), 123.

12. Ibid., 124.

13. Karasik, *New Brunswick,* 95.

Figure 1.1. U.S. Rubber Company on the Raritan canal, in New Brunswick, N.J. Courtesy of Ken Lew.
Source: Ken Lew Collection http://kenlew.com/collections/

As previously mentioned, the external migration of European immigrants to America was coupled with an internal exodus of farm families to cities like New Brunswick and Perth Amboy in search of opportunities and a better way of life for their families. Populations grew rapidly with the increase of commercial activity along the Raritan River. By 1900, the population of Middlesex County had grown to nearly 80,000, and in 1905 it grew to a little over 97,000.[14]

After Hungary's defeat in the War of Independence (1848-1849), in which Hungary tried to gain self-rule from Austria, Hungarian immigrants arrived in the United

14. Board of Health of the State of New Jersey. *Thirty-second Annual Report of the Board of Health of the State of New Jersey, 1908, and Report of the Bureau of Vital Statistics*. Paterson, NJ: News Printing Co.; 1909. pg. 12.

States in large numbers around 1850.[15] Out of a total population of 30,019 living in New Brunswick in 1915, there were 5,572 Hungarians.[16]

European immigrants and farm families were not the only ones striving for a better life in New Jersey and Middlesex County. New Jersey was the last state in the north to enact laws to abolish slavery. A law passed in 1804 established a system that gradually emancipated slaves in New Jersey.[17] Under this system, all children born of slaves after July 4, 1804 "were to be freed after serving as apprentices to their mothers' masters – females after twenty-one years, males after twenty-five."[18] Following protest of the gradual process of the 1804 law by some abolition and religious groups, a second emancipation law was passed in 1846. Under this new law all children born after its passage were freed. However, those who were already slaves were made apprentices for life. [19] In addition to New Jersey's reluctance to end slavery in its own state, the state government cooperated with the southern states in seizing and returning runaway slaves. According to historian Giles R. Wright, New Brunswick was particularly dangerous for

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15. August J. Molnar, "The Hungarian Community, " in *The Tercentennial Lectures New Brunswick, New Jersey: 300 Years 1680-1980*, ed. Ruth M. Patt, (New Brunswick, 1980), 83.

16. Ibid., 85.

17. Giles R. Wright, *Afro-Americans in New Jersey: a Short History* (Trenton: New Jersey Historical Commission, Dept. of State, 1988), 14.

18. Ibid., 25.

19. Ibid., 27.

runaways, "because slave hunters headquartered there to watch for fugitives crossing the bridge over the Raritan River."[20]

Despite New Jersey's refusal to ratify both the Thirteenth Amendment to the United States Constitution, which abolished and prohibited slavery and involuntary servitude in 1865, and the Fifteenth Amendment, which extended citizen rights to all races in 1870, blacks in New Jersey were still given these rights because enough states ratified the amendment, making it national law.[21] Thomas Peterson Mundy from Perth Amboy was the first black American in the nation to vote under the Fifteenth Amendment. Thomas Mundy voted in a municipal election on March 30, 1870.[22]

After the turn of the century there was a significant movement by blacks out of the south to the north, seeking jobs in the manufacturing companies established in large cities in states such as New Jersey and New York. According to Giles, in 1915, most blacks who migrated from the South to New Jersey, "lured mainly by the prospect of better- paying jobs," settled in Newark, Trenton, Camden, Atlantic City, and Jersey City.[23] Hopes and dreams of a prosperous life for many blacks dissipated with the reality of limited occupational opportunities in New Jersey. As previously mentioned, in 1900 the population of Middlesex County was nearly 80,000. The total number of blacks living in the county at that time was 1,900. In Essex County with a total population of

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20. Ibid., 28.

21. Ibid., 29

22. Ibid., 34

23. Ibid., 54.

359,053, there were 12, 559 black citizens. In Camden County with a total population of 107,643, there were 8,583 blacks.[24]

Although many New Brunswick manufacturers employed blacks, the work was usually menial. Racial prejudice prevented blacks from obtaining skilled work or decent housing. Expert craftsmanship by blacks who worked for white-owned businesses was rarely if ever acknowledged by the employer.[25] One of the largest manufacturers in New Brunswick during the early twentieth century was the Johnson and Johnson Company. The company had one black employee, Pelton Swann, who was a wagon driver for a team of horses that delivered goods to customers.[26]

Many blacks who settled in New Brunswick during the late nineteenth century and early twentieth century, worked as domestics and in food services. According to author Vivian Neal Stewart, "just about every fraternity house had black housekeepers and cooks." Cooks and other domestics who worked at the Rutgers Preparatory School and other educational institutions in the area came from the black community in New Brunswick, according to Stewart.[27] Blacks in New Jersey, including Middlesex County,

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24. Ibid., 90.

25. Vivian Neal Stewart, "The Black Community," in *The Tercentennial Lectures New Brunswick, New Jersey: 300 Years 1680-1980,* ed. Ruth M. Patt, (New Brunswick, 1980), 78.

26. Ibid.

27. Ibid.

developed cultural and social institutions (e.g. the black church, schools and civic organizations), which helped them survive in a hostile environment.[28]

Even though the industrial revolution did improve the lives of a few Middlesex County residents, many people (both black and white) lived their lives in cramped and unhealthy living conditions. In addition to spreading unsanitary living conditions in large cities, industrialization inevitably led to an increase in occupational injuries and diseases. Life was difficult for many urban dwellers at the turn of the century, and especially so for those who came to the state and the county alone without the support of their families. For many immigrants, assimilation into American society was not easy. Despite high expectations many immigrants did not find the streets of America paved in gold.

During a period when many industrial workers were protesting unfair treatment and unsafe working conditions, one trailblazing company, the Johnson & Johnson Company, manufacturer of health care products, understood the significance of acknowledging the needs of their employees, many of whom were women. The Johnson & Johnson Company provided a variety of social, economic and medical benefits, including counseling and language instruction in English, to help employees and their families cope with and adjust to urban life. At one time Hungarian immigrants made up nearly two-thirds of the company's workforce in New Brunswick.[29]

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28. Barbara Cunningham, ed., "Blacks," in *The New Jersey Ethnic Experience* (Union City, NJ: W.H. Wise, 1977), 79.

29. Karasik, *New Brunswick,* 100.

Johnson & Johnson

The Johnson & Johnson Company was founded in 1886, in New Brunswick, New Jersey. It was incorporated the following year, with three brothers, Robert Wood Johnson, James Wood Johnson, and Edward Mead Johnson as the sole stockholders. (Figure 1.2). As chairman of the company, Robert Wood held forty percent of the shares, and his brothers James and Mead held thirty percent each.[30] The Johnson brothers were pioneers in the manufacture of pharmaceutical plasters. Medical plasters delivered medicine directly through the skin to generate heat or pain relief.

Figure 1.2. Robert Wood Johnson (*Left*), James Wood Johnson (*Center*), and Edward Mead Johnson (*Right*). Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

The Johnson & Johnson Company manufactured the first mass produced sterile surgical dressings used in American hospitals. This new type of surgical dressing was sterile, and wrapped and sealed in individual packages. This processing reduced the risk of contamination, which helped to reduce mortality rates from surgical infections. In

30. Johnson and Johnson and Margaret Gurowitz, "Kilmer House: The Story Behind Johnson & Johnson and Its People," *Kilmerhouse.com* (web log), "under Beginnings," accessed October 10, 2010, http://www.kilmerhouse.com/ Beginnings.

1888 the company published a book, *Modern Methods of Antiseptic Wound Treatment*, which was widely recognized by physicians as a standard text on antiseptic practices and wound care information.[31]

The company also worked to improve the efficacy and production of their medicinal plasters. A popular medical product of the time, the plasters were made of rubber infused with medications and were sticky on one side (see figure 1.3). To apply the product the consumers would peel off the backing, cut the plaster to size and stick the plaster directly over the part of the body needing the medication. The users would remove it when they were done.[32] The Johnson & Johnson Company's original building (1886), located along the Raritan River, was formerly the Janeway and Carpender wallpaper factory. It was converted into a plaster mill to mass produce medicated plasters.

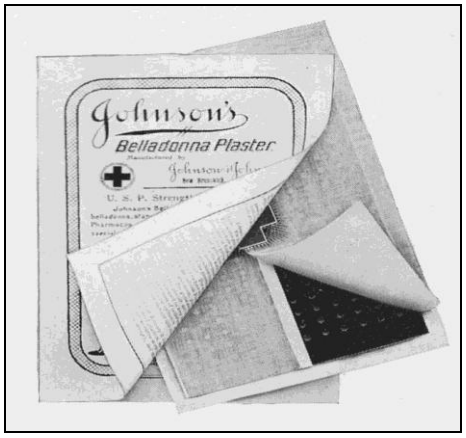

Figure 1.3. Johnson & Johnson's medicated plasters. Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

31. Ibid.

32. Ibid.

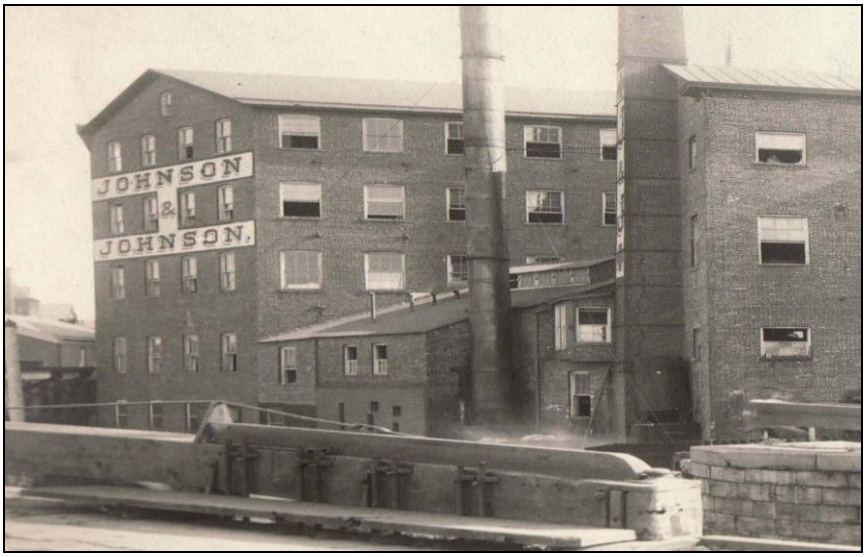

Figure 1.4. Photograph of Johnson & Johnson Company building (1893).
Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

The products made in the five stories building, on the left in figure 1.4, included sterile surgical dressings, sterile sutures, and adhesive tapes. In 1907, the Johnson & Johnson Company had about 1000 employees. This number more than doubled by 1908. The Company expanded from its original building into thirty-five buildings by 1907. These buildings included a cotton mill, plaster-making facilities, laboratories, sterile dressing manufacturing, offices, warehouses, and shipping facilities.[33]

As mentioned earlier, most of the early Johnson & Johnson employees were Hungarian immigrants, many of whom arrived in New Brunswick without family or supportive resources. (Figure 1.5).

33. Ibid.

Figure 1.5. Early Johnson and Johnson employees, many if not most were Hungarian. Circa 1890s. Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

During the early years, the company produced employee notices and signs in both English and Hungarian because of the large number of Hungarian employees. (Figure 1.6).

Figure 1.6. Medicated plaster ad in Hungarian, (1912).
Source: Kilmer House: Employees, http://www.kilmerhouse.com.

Figure 1.7 displays a page from an early workmen's time book which shows the last names of Hungarian employees.

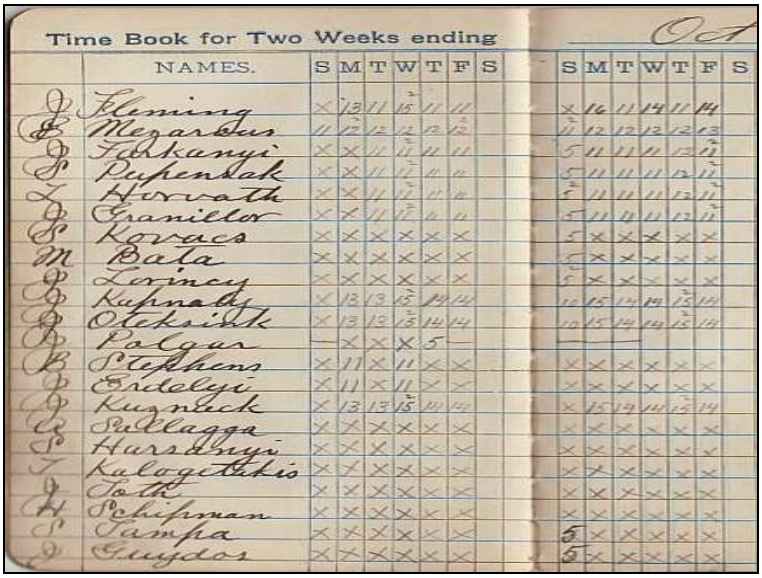

Figure 1.7. Johnson and Johnson Company employee ledger book from The Bleaching Department in the old Cotton Mill 1914-1915.
Source: Kilmer House: Employees, http://www.kilmerhouse.com.

The Johnson & Johnson Company provided a variety of supportive resources to help their employees adjust to their new culture. The company formed a Company Welfare Department, which set up hospital and "retiring rooms" (see figure 1. 8), to take care of employees who fell ill on the job, provided counseling service to help employees deal with family problems, and established a mutual benefit fund to provide help to employees during financial or medical crises.

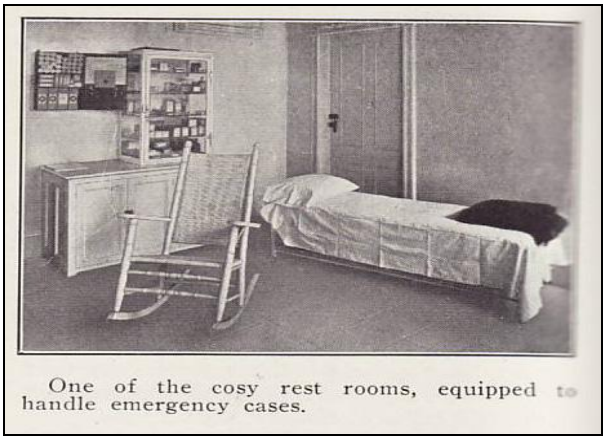

Figure 1.8. Johnson & Johnson Employee retiring room
Courtesy of the Johnson & Johnson Company.
Source: Kilmer House: Employees, http://www.kilmerhouse.com.

In addition, the Company organized classes in hygiene and gymnastics. Many of these activities were orchestrated by the Laurel Club, which was formed by women employees in 1907 for recreation, education and volunteer work."[34]Volunteerism was encouraged on all levels at the company. Robert Wood Johnson had instilled in the company a feeling of responsibility not only for the employees, but also for the communities in which they lived and worked. During its first year, the Laurel Club raised enough money to buy a bed for one of the local hospitals in New Brunswick and paid for a holiday party and gifts for the children at St. Mary's Orphanage in town.[35] Many of the social and educational activities took place at the Laurel Club's headquarters, which was located on the corner of Hamilton and Nielson Streets in New Brunswick (Figure 1. 9).

Figure 1.9. The Laurel Club's headquarters Circa early 1900s.
Source: Kilmer House: Employees, http://www.kilmerhouse.com.

34. Ibid.

35. Ibid.

Laurel Club members established volunteer well baby clinics at the headquarters, during the early 1900s. The mission of the well baby clinics was to provide health services in the community. Many of the mothers were recent immigrants who may not have had access to regular medical care.[36] The clinics were held every Thursday from 4:30 to 6:30 pm. The medical staff consisted of a doctor and a nurse. The doctor advised the mothers about feeding, clothing, and other health related issues. The babies were weighed and measured every week. According to Johnson and Johnson company historian, Margaret Gurowitz, in a July 8, 1919, Laurel Club correspondence, it was strongly emphasized that only the doctor was permitted to give medical advice. The "Laurel Club members sat and talked with the mothers and kept the babies amused, while they waited to see the doctor." [37]

The Laurel Club headquarters' on-site facilities also included an outdoor tennis court, an indoor gymnasium, and a swimming pool for employees. The Company also had a number of men and women sports teams. (Figure 1.10 and Figure 1.11)

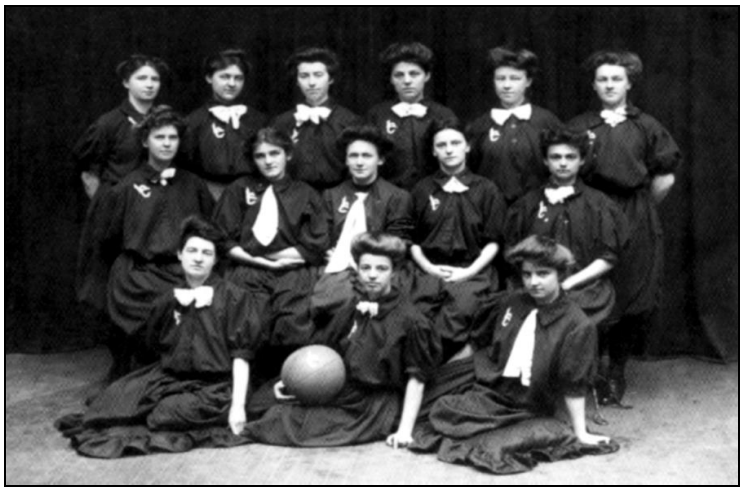

Figure 1.10. The Johnson and Johnson 1907 women's basketball team.
Courtesy of the Johnson & Johnson Company. Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

36. Ibid.

37. Ibid.

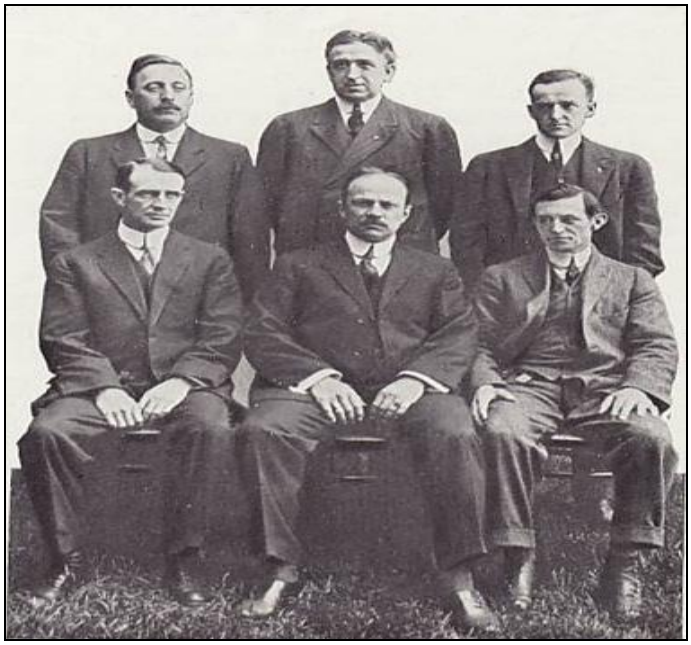

Figure 1.11. The Johnson and Johnson 1914 Men's Bowling team.
Courtesy of the Johnson & Johnson Company.
Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

Another benefit the company provided for their early employees was subsidized housing. Johnson & Johnson bought and renovated three blocks of houses on Morell Street, in New Brunswick. The houses were rented to company employees at reasonable rates (Figure 1.12).

Figure 1.12. Morell Street Houses subsidized housing for Johnson and Johnson employees. Courtesy of the Johnson & Johnson Company.
Source: Kilmer House: Beginnings, http://www.kilmerhouse.com.

The Johnson & Johnson family appreciated their hardworking employees and did whatever they could to make their working and living environment congenial and productive. Johnson and Johnson employees were very loyal to the company and would encourage their relatives to work there as well. It was not unusual to find generations of families working for the company. In 1912, there were thirty-five employees who had been with the company twenty years or more. Six of these employees (three men and three women) had been employed since 1886, when Johnson & Johnson was founded.[38]

Robert Wood Johnson had the ability to rally his employees and foster enthusiasm for the work they were doing. Frederick Kilmer, who worked for the company from 1889 until 1934 as the Director of Scientific Affairs, engaged professionals, employees, patients, and consumers in the development of company health care products and publications. The Company published a number of pamphlets and bulletins on public health, maternal and child health, and other health related topics that influenced the consumer's health care decision making process.

A great deal has been shared regarding the influence the Johnson and Johnson Company had on medicine in Middlesex during the early twentieth century. This is not to say that other contemporary Middlesex County manufacturers did not make significant contributions to the field of medicine, but I believe that the Johnson brothers along with their staff of directors and employees helped change the landscape of medical practice, not only in Middlesex County, but across the nation as well. Their innovative ideas, products and services changed the way in which their consumers related to the people

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38. Ibid.

who provided medical care. Equipped with new knowledge and scientifically produced manufactured goods (i.e. medicated plasters, first aid kits, maternal health and preventative health literature etc.), early-twentieth century patients began to develop a new framework for medical decisions.

At the same time, Middlesex County residents began to accept medicine as science. They moved medical practice from their homes into the hands of medical practitioners, who were now operating from medical institutions. Hospitals in the big cities were viewed as symbols of science. The experience of patients in the hospital environment contrasted strongly with the clinical encounter in private homes. Hospitalization regularly involved other people besides the physician (i.e. nurses, technologists, administration and facilities staff, and volunteers). The movement of patients from their homes to hospitals (e.g. for surgery) contributed to a significant shift in the balance of power between the patient and the doctor. Despite the fact that many consumers seemed to be generally aware and knowledgeable about available medical practices and scientific technologies during the early twentieth century, patients still had to rely on the experts or specialists and general practitioners for major medical interventions and disease prevention.

By the early twentieth century many farm families had moved to the cities to find better employment opportunities. There they were joined by European immigrants and migrating blacks from the south, who were also seeking job opportunities and a better way of life. According to Paul G.E. Clemens, in a report prepared for the New Jersey

Historical Commission, "New Jersey had become among the most urban, industrial, and ethnically diverse states in the nation."[39]

The social and economic changes that resulted from industrialization also transformed the practice of medicine and changed patient and doctor relationships in Middlesex County. New technology, industrialization, the growth of transportation systems, and newly discovered medical interventions influenced county residents' attitudes about how they earned a living, where they lived, and where they sought medical care. The industrial revolution provided prosperity for some, but many impoverished families lived in cramped and unhealthy conditions and others found themselves living alone without support of family, in slums.

Public health and social welfare movements were a response to concerns about health and poverty. The next chapter, "Public Health and Social Welfare," will examine how the public health and social welfare movements in Middlesex County influenced medical practice and the patient-doctor relationship, during the late nineteenth and early twentieth century.

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39. Paul G. E. Clemens, *A Brief History of New Jersey*, report, accessed October 10, 2010, http://www.state.nj.us/state/divisions/historical/

CHAPTER 2

PUBLIC HEALTH AND SOCIAL WELFARE

The public health and social welfare movements in America grew out of a need to address some of the problems caused by economic hardships and the negative effects of a growing industrial society. This chapter will look at how federal legislation as well as state and local social welfare institutions and policies influenced the provision of health care for Middlesex County residents during the early twentieth century.

Social welfare will be broadly defined as social services provided by national or local entities in an effort to improve social conditions for New Jersey citizens in need. Included in this definition are the professional and philanthropic institutions and organizations that had a hand in the development and distribution of these interventions.

The evolution of welfare institutions and agencies, as well as the development of policies to prevent poverty and care for the sick in New Jersey, began during the colonial period and was an extension of the Dutch and British welfare systems which were initially based in the belief that people should be treated with humanistic dignity.[1] Indigent citizens from cities and country towns across the New Netherlands (territories which are now New York, New Jersey, Delaware, and Connecticut), were cared for

1. William Starr Myers, *The Story of New Jersey*, vol. 1 (New York: Lewis Historical Pub., 1945), 1.

primarily by the communities in which they lived with charitable funds collected from churches and residents of these communities.

After the Dutch lost power to the British in the New Netherlands, the "Elizabethan Poor Laws," brought over from England, began to influence American society's attitudes regarding the poor. Colonists dismissed the notion of free handouts to able-bodied persons and they were not empathic to the plight of nonproductive citizens.[2]

The Elizabethan poor laws stipulated that towns and cities were to provide for their poor and sick. Poor Law legislation provided the foundation for social welfare in this country. As growing populations in cities increased, the need for assistance and the financial burden on the towns grew. When care for the poor was no longer provided by relatives or communities, cities and towns in many states across America instituted almshouses to accommodate the dependent poor (the indigent populations who were dependent on society for care). People who required full support, individuals who were so poor that they could not provide for themselves and their families, were considered to be a "public charge" and in need of "permanent" or "indoor" relief.

People who needed temporary help and had a place to live were considered "outdoor poor."[3]

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2. Ibid., 5.

3. Onecle, "New Jersey Statutes - Title 44 Poor - New Jersey Attorney Resources - New Jersey Laws," Law and Legal Research — Lawyers, Legal Websites, Legal News and Legal Resources, March 29, 2010, http://law.onecle.com/new-jersey/44-poor/index.html.

Almshouses

Almshouses were established as social institutions to address the needs of the poor in America from the colonial period up through the mid-twentieth century. States did away with home relief after 1828, making almshouses the sole source of governmental assistance to the poor.[4] An almshouse was a place where the poor were housed and cared for at the public's expense. Almshouses, sometimes referred to as workhouses, were also places where certain residents labored to help pay for their upkeep.

There was no distinction made between the sex and age of the residents, who were regularly referred to as "inmates."[5] Poor adults, criminals, prostitutes, families, children, drunkards and mentally ill persons were all put together under the same roof. Beggars were commonly viewed as criminals, and debtors were housed together with other criminals in jails and almshouses.[6]

"Overseers," citizens appointed by the justices of the peace, allotted funds raised by taxation of community residents for the care of the poor. The overseers were the gatekeepers to basic life supports like food, shelter, and medical services for the physically and mentally impaired, blind, and orphans, as well as for poor individuals and families that had no viable means to support themselves. A current view of this rudimentary system of care may seem more punishing than supportive. However, this

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4. Starr, *Social Transformation*, 150.

5. Amos Griswold Warner, Mary Roberts Coolidge, and George Elliott Howard, *American Charities,* (New York: T.Y. Crowell &, 1919), 179.

6. Myers, *Story of New Jersey*, 7.

process of caring for the poor was a very acceptable practice during the described time period. Under the Elizabethan poor laws, it was considered criminal to be poor; debtors were regularly indentured (labor for debt) to businessmen or other citizens for employment. Even children were indentured to pay for the debt of their families. Poor children were sent to work at a young age in order to help support their families.[7]

During the seventeenth, eighteenth, and mid to late nineteenth century, medical care in America was usually provided by family members. The female in the household administered to the sick using remedies handed down through the generations. Only the rich and middle class could afford doctors and there were few hospitals before the early 1900s.

Medical care for the sick in most almshouses was typically provided by other residents with a local doctor available on occasions, unless the almshouse contracted or held an agreement with one of the local physicians. Sick inmates struggled to recuperate from their illnesses and countless died due to unsanitary conditions and poor nutrition.

The authority of the Elizabethan Poor Laws was particularly felt in towns and cities where the benevolence of churches and philanthropies could no longer match the increasing needs of the poor. Towns and cities sought to provide for their own citizens and outsiders were expected to seek financial aid and medical attention from their towns of origin. The medical needs of the poor were not high priorities for these communities.

The almshouse relief model was viewed as a less expensive alternative to outdoor relief (financial aid provided to the poor in their own homes). As in the case of

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7. Ibid., 5.

almshouses, the facilitator for the outdoor relief funds was the overseer for the poor. In later years aid to the poor would be distributed by county or state public agencies.

Administration of the almshouses was managed by local communities. The management styles of the administrators were reflective of the community's social milieu. Neglectful indifference was generally America's disposition regarding indigent poor. Almshouses were usually established on the outskirts of towns, and not a constant and visual reminder to productive town folk. Almshouse staff never received any specialized training on how to deal with the special needs of the poor and the sick. The infirm were attended to by other inmates. The duties of caring for the sick were generally coupled with household responsibilities.

Some almshouses had matrons who were responsible for the supervision of the sick and keeping the facility clean. Despite the well intended efforts of a few administrators and workers, the majority of almshouses were inadequately equipped and poorly staffed.

Almshouses were among the first social institutions to develop in New Jersey. One of the earliest almshouses in New Jersey was the Salem County Almshouse, built in Mannington, New Jersey, in 1845." The Insane Asylum, a three-story, three bay brick Italianate house, was constructed fifteen feet to the west in of the Almshouse in1870."[8] In a 2006 video produced by New Jersey Network (NJN), the narrator Kent Manahan described the Salem County Almshouse as "a place where Salem County's poor,

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8. Janet L. Sheridan, "The Almshouse and Insane Asylum: Salem County's Landmarks and Legacy of Poor Relief," University of Delaware Library, June 14, 2010, http://dspace.udel.edu:8080/dspace/handle/19716/5269.

homeless, orphans and mentally ill took refuge."[9] The Almshouse was barely standing at the time this video was taken, but its dilapidated remains told the story of what it must have been like for New Jersey indigents during the late nineteenth century. Among the resident populations of the Salem County Almshouse were the homeless, sick elderly, women and children, mentally ill and the addicted, all living together under the same roof. Mentally ill inmates were housed in the basement of this three story building. The basement residence consisted of cells with iron bars and chains, which still remained a part of the ruins at the time of the videotaping. In the video, the camera crew escorted the viewing audience down narrow hallways leading to cells with steel doors and bars on the window.[10] The mentally ill were later housed in the insane asylum that was built adjacent to the almshouse. Inhumane treatment of the insane was typical of the times, not only in New Jersey, but also in other states across the United States.

The NJN Reporter Marie De Noia described the Salem County almshouse as "one of New Jersey's most primitive and earliest attempts at developing a Department of Human and Social Services."[11] At the time of the taping, efforts were being made to have the Salem County Almshouse declared a historical site. The County Freeholders spoke of plans to renovate the building for new office space. Jean Jack, Salem County

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9. NJN Public Television and Radio, prod., "History Hunters," in *The Alms House, Salem County*, NJN - New Jersey Public Television and Radio, August 21, 2006.

10. Ibid.

11. Ibid.

Historian in the video, took a more nuanced historical view of the Salem County Almshouse story "They did the best they could at the time."[12] (Figure 2.1)

Figure 2.1. Salem County Almshouse and Asylum, 1995. The Almshouse was built in 1845. The Insane Asylum was later built and connected to the Almshouse in 1870. Source: http://www.preservationsalem.org/Almshouse.htm.

During a telephone interview with Irene Wanner, Salem County Public Information Assistant, on October 16, 2009, it was learned that since the taping of the documentary, the Salem County Almshouse/Insane Asylum experienced major damage to its structure as a result of a rainstorm. The dilapidated roof of the Almshouse gave way to the rain, which resulted in extensive damage to the lower levels of the structure. After surveying the damage it was determined that three quarters of the structure would have to be demolished. Remaining today is a small three level brick building, which was the insane asylum.[13] (Figure 2.2).

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12. Ibid.

13. Irene Wanner, "Salem County Almshouse and Asylum," e-mail interview by author, October 16, 2009.

Figure 2.2. Salem County Asylum, October 19, 2009 3:55 PM.
The almshouse was demolished due to water damage.
Courtesy of Irene Wanner, Salem County Public Information Assistant

Records show that provision for the poor was made in North Brunswick as early as 1802. A resolution was passed at an annual town meeting that year, which called for the appointment of a committee to rent a house for the poor at the expense of the town. The poorhouse inhabitants were to be employed in "useful labor" at the discretion of the superintendents. Provision for the attendance of the residents and "supplies as may tend to their comfort and support," was included in the resolution.[14] The township was ordered to raise "poor money" to care for the poor. This fund was at the expense of the taxpayers of the whole township of North Brunswick. In an annual report in 1804, the committee reported that twelve "poor" were cared for in the poor house at an expense of $506.30 and eight "poor" were supported outside the poor house at a cost of $482.93. The annual expense for maintaining the poor increased almost every year from 1805 to

14. W. W. Clayton, ed., *History of Union and Middlesex Counties, New Jersey with Biographical Sketches of Many of Their Pioneers and Prominent Men.* (Philadelphia: Everts & Peck, 1882), 744.

1810. There were no records of township business from 1810 to 1815, but at an annual meeting held at the court house in New Brunswick, on June 12, 1815, the committee gave recommendation to change the "mode of supporting the poor of the township." The committee asked the township to consider the purchase of a farm, where the poor could be housed and employed. This successful model had been implemented in Woodbridge Township.

The administrators in Woodbridge reported an increase in stock, produce and revenue since they initially established their poor house farm. Regarding a visit to the Woodbridge institution, the committee reported that they had seen "the comfortable manner in which the poor were supported, the cleanliness and good order that prevailed, and the industry of those that were able to labor." The committee recommended that, "in compassion of the poor," a similar model be adopted in North Brunswick.[15]

The committee received an appropriation of $10,000.00 and bought a farm on Georges Road in 1816. Additional funds had to be raised by the township to erect a building, make improvements on the farm and hire a person to take charge of the facility and its inhabitants. In 1817, the committee reported on the progress of the new poor house: "About $800 was spent for the support, clothing and medical attendance of 21 paupers maintained at the poor house farm during the past year." The committee made a point to acknowledge the cost savings made with the new plan compared to the old poor house model.[16]

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15. Ibid., 745.

16. Ibid., 746.

The poor house was a white two story wood building. The property included two barns. In 1860, after a restructuring of North Brunswick, East Brunswick and New Brunswick Townships, the poor-house and farm were designated to New Brunswick and maintained at the benefit and expense of that city.[17] After the poor house transition to New Brunswick, North Brunswick adopted a plan to house their "paupers" with private families.[18] Towns without established almshouses would send their poor to neighboring cities, usually within their county, for housing.

The mentally and physically ill who had families and communities to take care of them fared much better than their counterparts in almshouses. This scenario began to change during the industrial revolution when families flocked to the cities for better economic opportunities. Urban communities and families living in cramped tenements found it difficult to care for the sick.

Social reformers who blamed diseases on dirt and poverty began a crusade to clean up the almshouses. Voluntary associations concerned with poor relief visited almshouses in their communities and found neglected facilities and equally neglected residents. Residents with varying needs were housed in the same units. The odors within the buildings were repulsive. Poor ventilation and sanitary conditions impeded the sick inmate's ability to recover from illness. Almshouses failed to provide adequate support and care to their residents. Inmates very rarely became productive members of society as a result of their stay in almshouses.

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17. Ibid., 746.

18. Ibid., 747.

Public opinion about the poor and the sick changed over the decades in response to particular events or identified social needs. Inspections of almshouses that occurred in the late nineteenth and early twentieth century resulted in the transitioning of certain populations from the almshouses to alternate forms of shelter and support. For example, children were transferred to orphanages and the mentally insane were moved to state asylums and hospitals.

Asylums

A shift to remove the feeble-minded and the insane from poorhouses and almshouses to institutionalized care came about in large part because of the work done by social reformists like Dorothy Lynde Dix. Dix, after learning that individuals suffering from mental illness were commonly housed with criminals and addicts in jails and almshouses, called for changes and improvements in the care and the living conditions of these individuals. Dix visited jails and almshouses across the country assessing the living conditions of the mentally ill residents. She kept notes, spoke to physicians who treated mentally ill patients, and collected data that helped to illustrate the deplorable conditions suffered by these special populations. She presented her findings to government officials with hopes that legislation would be generated to protect the mentally ill and transition them to institutionalized care.

In 1845 Dix visited New Jersey almshouses. David J. Rothman, in his book, *The Discovery of the Asylum: Social Order and Disorder in the New Republic***,** described Dix's account of her visit to New Jersey almshouses. "Well-administered almshouses" included the Salem County Poorhouse –"well conducted eighty inmates, decently

dressed, provisions good quality," Bridgeton Poorhouse – "neat comfortable sixty-two inmates," and Burlington Poorhouse "well-ordered, all apartments very neat, well scrubbed and whitewashed."[19] Rothman later described how Dix's account changed when she went to the basement of the almshouses to visit the mentally ill: "Only when one descended the steps into the basement, to visit the lunatics, did conditions take on a different quality."[20] Here Dix found mentally ill inmates in filthy rat-infested cells.

Philanthropic citizens and social reform activists visiting poorhouses and almshouses across the country brought to the public's attention the deplorable living conditions of these facilities. Overseers who administered poor relief in cities and towns were required to keep a record of the poor open to public inspection.[21] New Jersey statutes called for inspection of almshouses or welfare houses: "The welfare-house shall be subject to inspection by duly authorized representatives of the state board, or the commissioner, and of the state board of health."[22]

Social reform advocates called for action that would require all insane residents in need of public assistance to be supported in state operated hospitals or asylums. Throughout the late nineteenth century, state governments removed special classes of

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19. David J. Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic* (New York: Aldine De Gruyter, 2002), 201.

20. Ibid.

21. Department of Commerce and Labor, Bureau of the Census, *Special Reports, Paupers in Alms Houses 1904*, report (Washington: Government Printing Office, 1906), 45, accessed July 19, 2009, http://http://www.poorhousestory.com/LegalSummary45.htm.

22. Onecle, New Jersey Statutes.

inmates from almshouses. The sick and mentally ill were the first to initiate the transition, followed by children.

Dix convinced the American public and state legislatures that people with mental illness were valued citizens who should be treated with dignity. According to historian David Cowen, New Jersey physicians had already made attempts to establish a State Asylum. Dr. Lyndon A. Smith raised the idea of a state asylum during his presidential address to the Medical Society of New Jersey in 1838. In 1839, the State Society took an official position in favor of an asylum.[23] Concerns over finances to support sufficient appropriations delayed approval to establish a State Hospital. Eventually, consistent campaigns to improve conditions in the almshouses prompted New Jersey and other states to pass laws to improve conditions for the poor and move mentally ill inmates into hospitals and other types of care institutions. The first state-run public mental hospital, originally named New Jersey State Lunatic Asylum, was opened on May 15, 1848 in Trenton, New Jersey. Dix had a private apartment at the institution where she spent her last days before she died in July 1887. In 1893, the facility's name was changed to the New Jersey State Hospital at Trenton. In 1971 it received its current name, Trenton Psychiatric Hospital.[24] (Figure 2.3).

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23. David L. Cowen, *Medicine and Health in New-Jersey: A History* (Princeton (N.J.): D. Van Ostrand, 1964), 102.

24. David Esmann and Karie Esmann, "A Unique Perspective into the Realm of Historic Asylums and State Hospitals," Forgottenphotography.com, Trenton Psychiatric Hospital, accessed November 19, 2009, http://www.forgottenphotography.com/index.html.

Figure 2.3. Postcard view of the New Jersey Lunatic Asylum at Trenton, New Jersey State Hospital at Trenton established on May 15, 1848. Source: http://www.rootsweb.ancestry.com/~asylums/trenton_nj/index.html

New Jersey's second psychiatric hospital, The State Asylum for the Insane at Morristown, was established in 1876. In 1893, its name was changed to the New Jersey State Hospital at Morris Plains and again in 1925 to the New Jersey State Hospital at Greystone Park. Today the hospital is referred to as Greystone Park Psychiatric Hospital. (Figure 2.4)

Figure 2.4. The New Jersey State Lunatic Asylum at Morristown opened on August 17, 1876. Name was later changed to Greystone Park Psychiatric Hospital. Source: http://www.asylumprojects.org.

Despite efforts to improve the plight of the mentally ill by moving them from almshouses into state institutions, this population quickly faced some of the same problems they had endured in the almshouse (i.e. overcrowded conditions and mistreatment from medical and lay staff). Hospitals built to accommodate the mentally ill inmates in the late nineteenth and early twentieth century rapidly became overcrowded and understaffed.

Child Welfare

A study of the poor made in New Jersey by the State Bureau of Statistics of Labor and Industry in 1883, reported children and infants living in "poor-houses."[25] Children who resided in almshouses lived there with their families or independently because they had no family. Some children were indentured to families or companies in order to pay the debts owed by their families. Despite an already established rudimentary child welfare system that included orphanages, the welfare of children was not a major priority in America before social reform and before state boards enacted laws for the protection and rights of children, such as the 1851 child labor laws restricting the hours that children might be employed in industrial establishments.[26]

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25. New Jersey Department of State, "Sixth Annual Report of The Bureau of Statistics of Labor and Industries of New Jersey, 1883," digital image, The New Jersey State Library, accessed December 02, 2010, http://www.njstatelib.org/NJ_Information/Digital_Collections/Bureau_Statistics/Statistics1883.pdf

26. Myers, *Story of New Jersey*, 25.

Organizations and agencies like the State Charities Aid Association provided inspections of poorhouses and submitted reports to the state depicting the terrible conditions in almshouses. Disclosures in the form of exposés and reports on the terrible conditions at almshouses led to statewide reform. Legislation was enacted to create the New Jersey State Board of Children's Guardians in 1899. The Board removed children from almshouses and placed them in foster homes. The caretakers in these homes received a payment from local governing body, county or municipality for the support of these children.[27] The law gave the State Board of Children's Guardians control of children, who became dependent public charges. The Board became the only agency responsible for the removal of children from almshouses and for their placement either as a ward of the state or by adoption. For the first time in the state's history, New Jersey had a centralized system for child care, which monitored the care of public charges.[28]

On a more local level, the Children's Aid Society of New Brunswick incorporated in 1877 by a group of concerned church women was established "to provide temporary care of friendless, neglected, or destitute children." [29] The Society established residential homes, initially for girls and later for boys during the late nineteenth and early twentieth

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27. Myers, *Story of New Jersey* 26.

28. New Jersey, Legislature, Senate, *Journal of the Senate of the State of New Jersey: Being the One Hundred and Twenty Third Session of the Legislature,* by Fifthy-Fifth Senate (Trenton: John L. Murphy, 1899), 307.

29. Rutgers University, "Women's History Sources: Manuscripts: C - D (Rutgers University Librares: Special Collection and University Archives)," Rutgers University Libraries, Children's Aid Society of New Brunswick, accessed October 19, 2009, http://www.libraries.rutgers.edu/rul/libs/scua/womens_fa/wfa_c_d.shtml.

century. The residential homes closed in the early 1940s, when social programs shifted their focus to foster home care.[30]

With the transition of the mentally ill and children into alternate institutions of care and the administration social security legislation in the 1930s, the number of almshouses declined radically during the mid twentieth century. Over the next few decades, many almshouses evolved into general hospitals and nursing homes.

Urbanization and the Industrial Revolution

Around the same time that reforms were being instituted for the mentally ill and children, some Americans were beginning to call for improved living conditions in the country's large metropolitan cities. America went through an industrial revolution in the early 1900s (The first Industrial Revolution occurred in Great Britain and Europe during the late eighteenth century) with rapid growth in urban cities due to the increased demand for manufactured goods, development of new products, improvement in production methods and advanced means for transporting goods. This urbanization was a direct result of a great migration of immigrants coming to the United States from a variety of countries and the movement of Americans from farms to urban areas seeking better lives and job opportunities. For the first time in American history there were more people living in cities than in the countryside.

Although the industrial revolution provided prosperity for some, many found themselves living in cramped and filthy conditions. Industrialization spread unsanitary

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30. Ibid.

living conditions and fostered an increase in occupational injuries and diseases. Poor people lived in very small tenement apartments. These buildings had no elevators or indoor plumbing. Occupants would share toilet facilities; cesspools and outhouses were used for sewage. Waste from industries and residential sewage flowed into the same rivers where city dwellers obtained their drinking water. Such contaminated water supplies spread diseases like cholera and typhoid. People threw their garbage into the street as there was no systematic or routine garbage removal process. Vast numbers of the working class city dwellers died due to diseases that spread easily through cramped and dirty streets. Epidemics of diseases such as cholera from polluted water and typhoid were common. Crowding conditions increased airborne transmission of diseases such as tuberculosis.

Cholera first appeared in the United States in 1832.[31] Prior to that time many thought diseases were caused by miasma (poisonous vaporous air containing particles of decaying matter). At that time the medical community did not know that cholera was caused by bacteria. In 1854, epidemiologist Dr. John Snow established a correlation between a high prevalence of cholera in families living in the Soho district of London near the Broad Street water pump. There were many pumps in the district and surrounding areas that provided free water to the community. When the handle was removed only from the pump at the Broad Street location, there was a dramatic reduction

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31. Rosenberg, *Cholera Years*, 1.

in the spread of cholera.[32] It wasn't until 1883 that scientist Robert Koch discovered that cholera disease was caused by bacteria.[33] It wasn't surprising then that many cases of cholera were being reported in poor and filthy areas in large cities across America during the late nineteenth century. However, cholera also found its way into the homes of the wealthy and in townships outside large cities. The germ theory (microorganisms are the cause of many diseases) would not be generally accepted by the medical community until years later after the work of scientists Louis Pasteur and Robert Koch. By the end of the nineteenth century physicians began to understand cholera as a specific disease caused by microscopic organisms.

In America during the 1830s, the global cholera epidemic reached America and spread through city ports, canals, railways and other routes of transportation, claiming the lives of citizens in cities and towns across the United States. In 1830 there was a major undertaking to connect the Delaware River in Trenton with the Raritan River in New Brunswick. The canal system was completed in 1834 and was dug mostly by Irish immigrants. Hundreds of these Irish laborers died as a result of the cholera epidemic.[34] During the 1860s and 1870s, the canal was used primarily to transport coal from Pennsylvania through New Brunswick to New York City. The range of boats that passed

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32. Ralph R. Frerichs, "John Snow - a Historical Giant in Epidemiology," UCLA Department of Epidemiology School of Public Health, accessed November 23, 2009, www.ph.ucla.edu/epi/snow/broadstreetpump.html.

33. Louis S. Warren, *American Environmental History*, 2nd ed. (Chicago: University of Chicago Press, 1987), 142.

34. Christopher N. Dela Cruz, "Spotlight Shines on Overlooked Delaware & Raritan Canal | NJ.com," New Jersey Local News, Breaking News, Sports & Weather - NJ.com, accessed July 19, 2009, http://www.nj.com/news/index.ssf/2009/07/littleknown_delaware_raritan_c.html.

through the canal included, but was not limited to, boats that tugged barges and carried freight, as well as naval vessels and recreational boats like sail boats and yachts. [35]

The federal government's earliest attempt to provide for public health was the provision of healthcare for sick and disabled seamen, when an act was passed in1798 establishing the Marine Hospital Service. Subsequent legislation broadened the scope of the Marine Hospital Service's (MHS) activities. MHS's public health responsibilities expanded when quarantine and medical inspection legislation for seamen and immigrants was passed in 1878.[36] Immigrants arriving in America from abroad were examined for symptoms of infectious diseases, such as cholera and yellow fever, as a way to prevent epidemics. With new responsibilities came a name change from the Marine Hospital Service to the Public Health and Marine Hospital Service in 1902, and again to the Public Health Service in 1912. Today the Public Health Service is a subdivision of the Department of Health and Human Services.[37]

National, State and Local Boards of Health

In 1879 public health reformers called for a national board of health. National leadership fought against the establishment of a national board of health, concerned about individual rights to privacy. However, during the mid to late nineteenth century,

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35. Canal Society of NJ, Delaware & Raritan.

36. Marcia Stanhope and Jeanette Lancaster, *Community & Public Health Nursing*, 6th ed. (St. Louis, MO: Mosby, 2003), 24.

37. "United States Public Health Service," *American Journal of Public Health* 38, no. 7 (July 01, 1948): 1009.

epidemic diseases in cities and towns across the country caused fear among the general public and moved legislation to establish state health commissions and health boards.

Prior to the mid-1800s, New Jersey, like many other states in America, lacked an organized mechanism for supporting and enforcing public health efforts. Members of the New Jersey Medical Society periodically called for reforms to improve health conditions for New Jersey residents. In 1849 a committee of the Society was appointed to review the New Jersey public health laws. The committee found the state health laws to be "inefficient."[38] In1866 a new committee of the Society was formed and chaired by Dr. Ezra Hunt of Metuchen, N.J., an emerging pioneer in the sanitarian movement. In the same year, the committee was able to persuade the Governor to create a sanitary commission, which had the ability to provide recommendations and required the members submit annual reports to the state. The commission did not, however, have the power to implement any major changes nor was it able to persuade the legislature to pass a general health law at that time.[39]

The sanitation reform movement continued in New Jersey, with the establishment of a second commission in 1873 with Dr. Hunt as chair again and with the creation of the New Jersey Sanitary Association in 1875. The Association promoted scientific studies

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38. Cowen, *Medicine and Health*, 84.

39. Ibid.

and sanitary reform. The New Jersey Sanitary Association had a name change in 1951 to the New Jersey Public Health Association.[40]

In 1877 the "Commission" became the New Jersey State Board of Health.[41] The basic function of the Board was to collect and report to the State evidence of communicable diseases, and "the effect of poor sanitary conditions on the welfare of the communities."[42] The purpose of the Board of Health did not change much from when it was originally established as a commission. Until the next decade, when sanitation reform became more scientific and fears about disease epidemics generated more responsibilities for the Board through legislation.

The Board would later be empowered to "eliminate nuisances" (e.g. filthy privies, unclean water supplies, garbage, and contagious individuals), vaccinate children, monitor slaughter houses, monitor for food safety, "pass ordinances and prescribe penalties" for hygiene, and sanitary violations, and quarantine contagious individuals.[43] The State Board of Health and its local partners were instrumental in improving sanitary conditions and general health in New Jersey, with the establishment of regulations to protect the living conditions in the state. No one person was more influential in moving sanitation reform in New Jersey than Dr. Ezra Mundy Hunt. He made a case for reform with the

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40. New Jersey Public Health Association, "Historic Highlights," New Jersey Public Health Association, accessed November 04, 2009, http://njpha.rutgers.edu/history.jsp.

41. Cowen, *Medicine and Health*, 85.

42. Sam Alewitz, *Ezra Mundy Hunt: a Life in Public Health* (Trenton, NJ: New Jersey Historical Commission, Dept. of State, 1986), 48.

43. Cowen, *Medicine and Health*, 86.

support of reports that demonstrated a correlation "between disease and contaminated water, overcrowded tenements, overwork, poor ventilation, and industrial pollution."[44] One of Middlesex County's own, Hunt rallied doctors, politicians and the lay public to work together to improve hygiene and public health in New Jersey.

In 1880 a law was passed in New Jersey requiring municipalities in the state to form local boards of health. Dr. H. R. Baldwin was president when the Board of Health in New Brunswick was instituted in 1879. The other health officers who followed were Drs. Edward A. Reiley, Thomas L. Janeway, A. Van Nest Baldwin, Staats V. D. Clark, Benjamin Gutmann, and E. Irving Cronk, who was elected in 1910 [45]

Prior to state health laws, local health boards established their own rules for identifying and addressing health related issues. The 1880 Act empowered local health boards to "eliminate nuisances" and provide free vaccines for indigent children. Over the next few years, the scope of responsibilities for the local health boards expanded. Local boards were soon empowered to regulate water supplies and sewage, institute actions to prevent nuisances and contain contagious diseases, and prosecute laws against those who violated health laws[46]

Dr. Fred Kilmer, pharmacist and pharmaceutical chemist in New Jersey, was a promoter of health education and the public health movement. He was the president of

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44. Karen Reeds, *A State of Health: New Jersey's Medical Heritage* (New Brunswick, NJ: Rutgers University Press, 2001), 21.

45. "Medical Fraternity," in *History of Middlesex County, New Jersey, 1664-1920*, ed. John Patrick Wall and Harold E. Pickersgill, vol. I (New York: Lewis Historical, 1921), 255.

46. Cowen, *Medicine and Health*, 86.

the New Brunswick Board of Health and an advisor to the New Jersey Board of Health during the early 1900s. In 1889 Kilmer was hired as the Johnson and Johnson (J & J) Pharmaceutical Company's Director of Scientific Affairs. Kilmer spearheaded a number of public health projects for benefit of the community and the J & J employees. The J & J Company, incorporated in 1887, produced numerous health care informational pamphlets, guides and manuals, and used its products to create and promote first aid kits for the home.[47]

In 1903 Fred Kilmer worked as chemist for the New Brunswick Board of Health. He collaborated with other Board members, government officials, local politicians, and businessmen, to improve sanitary conditions in New Brunswick. In correspondence with Professor John B. Smith, who was the President of the New Brunswick Board of Health at the time, Kilmer discusses the need to clean New Brunswick's polluted water supplies. In one letter dated August 7, 1903, Kilmer referenced a report that was submitted with the correspondence, "Agreeable to your request I enclose herewith a table showing the various analyses of the city water from 1876 up to the recent one by the State Board of Health on June 3rd 1903." He calls Smith's attention to the fact that "two species of disease producing organisms have been found to be present in the water in previous examinations." Kilmer suggests that "careful and frequent examinations of the water and active steps," would help resolve the problem.[48]

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47. Johnson & Johnson Services, Inc., "Kilmer House » Community," Kilmer House, accessed November 04, 2009, http://www.kilmerhouse.com/category/community/

48. "Polluted Water Supplies in New Brunswick, New Jersey." Fred Kilmer to John B. Smith, August 7, 1903, New Brunswick, New Jersey.

In the following decades, the New Brunswick Health Department continued its efforts to improve living conditions in the city. Elected as board president in 1910, Dr. E. Irving Cronk served as health officer for the New Brunswick Health Department in the 1930's. It is not clear whether the Board President and Health Officer were one and the same.

Letter writing and newspapers were the major ways people communicated with one another during the early 1900s. During this period, the New Jersey Department of Health published national and local health news information and notifications in a monthly bulletin publication called the *Public Health News.* During the 1930s the New Brunswick Department of Health also published a monthly publication called the *New Brunswick Health News*. Cronk was an active promoter of public health education. He wrote columns in the *New Brunswick Health News* (e.g. "the Health Officer Says") and used this forum to educate the public about important health topics like the prevention of communicable diseases, sanitation reform efforts, and health care tips.

During the nineteenth and early twentieth century, tuberculosis (TB) also known as "consumption" or the "great white plague," was the leading cause of death in the United States. Effective pharmaceutical treatment for TB would not come until the late 1940s, early 1950s. During the 1930s, the main strategies used to control this dreaded disease were isolation and quarantine. For patients institutionalized in sanitariums (hospitals or treatment facilities), treatment usually consisted primarily of rest, a nourishing diet, and fresh air. Mortality rates decreased when public health measures (early diagnosis, quarantine of infected individuals, treatment and improved standards of living) were applied. Cronk used the *New Brunswick Health News* to share with the

public the importance of quarantine (as a method used in preventing the spread of disease) and of reporting cases of communicable diseases.[49]

In an effort to develop effective methods for controlling communicable diseases and reducing health care risks, the local health departments had to collect and monitor incidences of diseases as well as birth and mortality records. The New Brunswick Health Department conducted health surveillances, regulated health laws, collected data, and submitted reports to the State Department of Health during the early twentieth century. These endeavors helped to improve the living environment for New Brunswick residents after the turn of the century.

Vital Statistics

In 1848, New Jersey was one of the first states to required statewide registration of birth and death records. However, early registration records were found to be incomplete. In 1878, legislation was enacted to establish a Bureau of Vital Statistics. The new law required that every local health department have a keeper of vital statistics in addition to a municipal physician and a health inspector.[50] This important action would later have a tremendous influence on future sanitary reform efforts and social welfare programs. Records of vital incidents like births and deaths were recorded locally, and then sent to the state. Under the auspices of the State Board of Health, the Bureau of Vital Statistics maintained a statewide registry of health related events. This new

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49. E. Irving Cronk, *New Brunswick Health News* (New Brunswick: Department of Health, 1932).

50. Cowen, *Medicine and Health*, 86.

mechanism helped to identify statewide medical trends as well as health areas in need of intervention (i.e. episodes of epidemics, infant mortality rates, populations vaccinated, etc.). Statistical data provided important indicators regarding the health status of the community.

Under a resolution passed by the State Department of Health in March 1916, failure to properly report vital statistics such as births, deaths and marriages by responsible parties ("physicians, midwives, and local health officials") put violators at risk for prosecution and penalties. These same laws gave the State Board of Health the power to prosecute members of the local boards of health when they failed to prosecute offenders. These new laws made it clear that everyone had a responsibility to make the community a safe and healthy place to live.

Preventive medicine was not a concept generally practiced prior to the mid nineteenth century. The anonymous author of "Everybody's Business," an article published by the Department of Health, in the May 1930 edition of the *New Brunswick Health News*, provides his views about the individual's responsibilities in the control of communicable diseases. The author expressed his belief that communicable disease, community water supplies, and the quality of milk was everybody's business. "If you fall down your own front stairs and break your leg that is your business. But if you have typhoid fever, diphtheria, smallpox, or any other catching diseases, it is everybody's business."[51] Decisions about health care could no longer just be left up to the sick patient and his family. With a better understanding of how diseases were transmitted, health

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51. *New Brunswick Health News* (New Brunswick: Department of Health, 1930).

officials worked with the public to minimize health risks in the community. Public opinion about the provision of health care and public assistance continued to evolve nationally and locally as it was influenced by world events, cultural beliefs and the institutionalization of care.

The efforts of the early sanitarians against disease focused primarily on cleansing the environment. Early sanitation reformers blamed diseases on filth and poverty. Some people blamed the poor for their lack of cleanliness and unhealthy habits. Throughout his career, Hunt promulgated the idea that unsanitary conditions negatively affected people's physical and psychological status. Furthermore, conditions of the poor would improve with clean air, healthy food and safe working environments. Thus, the best way to achieve positive public health outcomes was to disseminate appropriate public health information and to employ "skilled personnel" to apply the Board of Health recommendations and regulations efficiently.[52] Conditions did improve during the nineteenth century as public health acts were introduced to address areas such as hygiene, food safety and water pollution.

Increased urbanization and industrialization contributed to increased incidences of life threatening diseases. The consequences of these developments had a tremendous impact on the survival of infants and children during the early 1900s. Through the registration of death records the state was able to document high rates of pregnancy, neonatal and maternal deaths. Statewide vital statistics also illustrated alarming rates of mortality for infants less than one year.

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52. Alewitz, *Ezra Mundy Hunt*, 48.

As a consequence, the State Department of Health, Division of Child Hygiene was established in 1915. In 1918 the Division was reorganized as a Bureau and received an appropriation of $125,000 from the legislature for the protection of mothers and infants. A state coordinated nursing service was employed to visit expectant mothers, infants and children and offer care, advice, and education.[53]

New Jersey was not alone in these high morbidity and mortality statistics; national reports showed that the majority of all pregnant women in the country did not receive adequate pre-natal care. During the late nineteenth and early twentieth century, childbirth was a leading cause of death and many children died before the age of five. Concerns about inefficient health care for women and children lead to the passage of the Sheppard-Towner Act. Officially named the National Maternity and Infancy Protection Act, the Sheppard-Towner Act (sponsored by Senator John Morris Sheppard of Texas and Representative Horace M. Towner of Iowa) was passed by Congress in April 1921. As the first federal welfare legislation in the United States, it provided matching funds to states for prenatal and children's health services. The program's objective was to reduce maternal and infant mortality rates by financially supporting states the establishment of health centers, where nurses and physicians cared for pregnant women, infants, and children. The centers taught women prenatal, delivery, postnatal, and infant care. Outreach programs were developed to instruct women on proper health care for themselves and their children. Under the administration of the Children's Bureau of the Department of Labor, each State agency, cooperating with the Children's Bureau under

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53. Cowen, *Medicine and Health*, 171.

this Act, submitted reports regarding its operations and expenditures to the Bureau. Some states who opposed the act, calling it an intrusion on state jurisdiction, refused to accept its provisions. Strong opposition resulted in the act being terminated in June 1929.[54]

Child hygiene work was also going on in New Brunswick during the early 1900s through the State Department of Health and the local city Department of Health. The city Health Department kept records of births and deaths for New Brunswick residents. Nurses from the Department of Health visited the homes of pregnant women and homes where women gave birth to provide instructions on infant care and feeding. Dr. Cronk, health officer for the New Brunswick Health Department, in a report to the City Commission, addressed health conditions in New Brunswick and emphasized the importance of vital statistics with the study of diseases and improving the health of the community: "registration of births is very important, for in years to come this record proves citizenship, residence, legal age and many other things essential to one's life." Cronk stressed that "registration of deaths has its importance in the settlement of life insurance, property inheritance, etc."[55]

An article that appeared in the *New Brunswick Sunday Times* on May 31, 1925, reports that New Brunswick, in comparison to other cities its size, had the lowest infant mortality rate in New Jersey. This great accomplishment was attributed in part to the

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54. Facts On File, Inc., "Sheppard-Towner Maternity and Infancy Protection Act of 1921," American History Online. Facts On File, Inc., accessed December 4, 2010, http://www.fofweb.com.

55. *New Brunswick Sunday Times*, "New Brunswick Leads State in Low Infant Mortality," 1925.

work that was being done in the city's baby clinics. Located in three local public schools, the clinics provided medical supervision by a physician (Cronk, health officer from the Department of Health was in charge on Tuesdays and Thursdays), who volunteered his time to provide care for the infants brought into the clinics.[56] The care provided focused on nutrition and hygiene. Nurses conducted visits in the home at least once a week for all babies enrolled in the clinic. A record of each baby's progress and weight was kept. These "Baby Wellness Stations," whose major aim was to reduce the infant mortality rate in the city, were part of the New Brunswick Health Department.

The *New Brunswick Sunday Times* April 21, 1940, reported that "in 1935, the rate (infant mortality) was 59 per 1,000. A year later it had dropped to 49 and in 1937 to 26." According to the article, the work of the baby clinics saved the lives of hundreds of New Brunswick babies. The New Brunswick Health Department also collaborated with the Medical Society of New Jersey and other agencies to reduce maternal mortality and prevent blindness.[57]

In 1929 concerns about socialized medicine influenced Congress's decision not to renew funding for programs under the Sheppard-Towner Act. Despite its short term, the Sheppard-Towner Act raised awareness of the importance of preventive health care and directly addressed the needs of women and children. It also introduced the idea of national, state and local collaboration in an effort to improve public health. The

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56. *New Brunswick Sunday Times*, "More Than 2,950 Babies Examined in Year at Three Local School Clinics," May 31, 1925.

57. *New Brunswick Sunday Times*, "Four New Brunswick Baby Stations Save the Lives of Many Children," April 21, 1940.

Sheppard-Towner Act provided a model of care for future maternal and infant care programs.

The twentieth century witnessed a professionalization of public health as it moved away from sanitarians and their public works toward scientific medicine. The medical community was equipped to measure cause and effect for some illnesses, based on science (bacteriology). As a result, medical practices began to offer effective treatment therapies and instituted useful preventive plans. The medical profession often led the crusade in the public health movement. Physicians were frequently sought after for advice and leadership by public health reformists. Some doctors saw their involvement in the movement as a way to maintain authority for their profession. However, participation in public health programs didn't always have a smooth transition in state and local medical communities in New Jersey.

In 1937, a letter was sent by the Public Health Committee of the Medical Society of New Jersey to the secretary of each county medical society encouraging their members to incorporate preventive medicine in their practices. The message acknowledged the call for medical support of federally funded programs under the Social Security Act and other public health problems and warned the membership that "the field of Preventive Medicine was rapidly slipping from the grasp of organized medicine; and unless strenuous efforts are made by our members to reassume responsibility for the preventive medical care of the community and county, the medical profession is in grave danger of losing its control of this most important service."[58] The major concern expressed in the

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58. Public Health Committee, "Participation in Public Health Programs," *Journal of the Medical Society of New Jersey* XXXIV, no. 3 (March 1937): 199.

letter was the fear that if physicians did not assume responsibility for preventive medicine, other groups and health agencies would take over these responsibilities. The doctors felt that care provided by these groups was inferior and that physicians could do a better job. There was a call for physicians to equip themselves through training in order to administer superior preventive care.

Support for public health, as well as health department infrastructures and activities, varied from state to state. Responsibilities for some health departments included treatment of school children and the provision of vaccinations. Many health departments incorporated public health education in their programs and kept registries of reportable communicable disease cases. Some towns with limited resources or those with little interest in sanitary reform collaborated with neighboring towns in order to establish local departments of health. Others chose to do only what was minimally required of them through state law. A number of large urban health departments with local and state support and resources established laboratories to diagnosis communicable diseases and recommend action plans. Testing suspected cases of diseases (such as diphtheria using the Schick test) reduced death rates when medical interventions were applied early (e.g. diphtheria antiserum). Cities also saved money when the spread of communicable diseases could be controlled.[59]

By the early 1900s, diagnosis of infectious diseases was made easier with new diagnostic tools like x-ray machines and bacteriological laboratories. During this period,

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59 Starr, *Social Transformation*, 186.

New Jersey used the State Board of Health's bacteriological laboratory to diagnose suspected cases of tuberculosis, typhoid fever, diphtheria and others diseases).[60]

As we have seen, many diseases of the nineteenth and twentieth century were easily transmitted by contagious individuals or by food and water. Transmission of diseases by animals and insects is another way humans can be infected. Several diseases that plagued urban communities during the 1800s and 1900s (e.g. tuberculosis, typhoid and diphtheria) could be traced to cow's milk. Dr. Ezra Mundy Hunt has already been acknowledged as one of the most influential public health pioneers in New Jersey. Another doctor who made a huge impact on public health in the state and later in the nation was Dr. Henry Leber Coit of Newark, New Jersey. A search for pure milk for his sick infant son who later died led Coit to crusade for safe milk for all children. Coit correlated the high rates of child mortality to milk infection. [61] He worked passionately to develop a protected way to process and store milk. Other physicians from around the state began to notice that children were getting sick after drinking milk. Dr. Coit with the help of his colleagues from the New Jersey Medical Society established a Medical Milk Commission in Essex County in the early 1890s. The commission worked to secure safe milk by establishing criteria for the production and distribution of safe milk.[62] Initial

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60. Cowen, *Medicine and Health*, 114.

61. Reeds, *State of Health*, 36.

62. Ibid., 37.

criteria for certifying safe milk included bacteriological testing of milk and examinations of milk dairies and livestock.[63]

Realizing that the milk certification process (killing bacteria via heat, using stringent hygiene measures to ensure pure milk production) was too expensive for most producers and families, pasteurization (reducing the number of pathogens in milk) of milk was looked upon as a less expensive alternative. When it was proven that pasteurization could be used as an effective method to improve the quality of milk, cities and states began requiring it. A result of using impure milk dropped death rates dramatically when pasteurization regulations were instituted. Why did states find it necessary to regulate the milk industry? After all, milk from animals had been a source of food for humans for centuries. However, with the development of urbanization and industrialization in cities across America, distribution of fresh milk became a problem. From the time milk cans left the farms until the milk was ingested by little children there were multiple opportunities for bacterial contamination. In addition to traveling long distances, the milk containers were handled by numerous transporters, who did not practice sanitary techniques. However, milk from diseased cows was the main culprit for unsafe milk. Animals kept in filthy environments and unrefrigerated milk also contributed to contamination. The safe milk movement helped to establish standards for quality milk and dairy sanitation. Coit had a great influence on the development of milk sanitation not only in New Jersey, but nationally as well. As a pediatrician, Coit's work

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63. David Cowen, "Profiles in New Jersey Health and Medicine-Dr. Henry Leber Coit," *Medical History Society of New Jersey* 25 (October 25, 2005): 3.

was focused on the treatment of infants and young children. His work with children will be discussed in more detail in Chapter Four.

On July 19, 1910, during a meeting of the Middlesex County Medical Society, a committee of three was appointed to investigate and report on the condition of the milk supply in the county. It was also suggested at this meeting that a milk commission be appointed and that Dr. Coit be invited to present to the Society on this topic.[64]

Safeguarding milk for the city of New Brunswick was an important responsibility of the local health department. In a report to the city's Commission, Dr. E.I. Cronk, Health Officer, reported that laboratory examinations of all milk supplied to the city were being conducted consistently. Investigations on the handling and distribution of milk were also conducted. When necessary, farmers and dealers were advised regarding need for improvements. According to Cronk, "All milk sold in New Brunswick is certified, pasteurized or raw from tuberculin tested cattle."[65]

Various methods to reduce mortality rates for infants were being discussed statewide at this time. At a Middlesex County Medical Society meeting held in New Brunswick on October 17, 1917, Dr. Miner C. Hill of New York City spoke on "The Use of Dry Milk in Infant Feeding." He explained the manufacturing process of the dry milk and provided statistics that illustrated a decline in infant mortality rates reported by those who used the powdered milk in some New York City clinics. Another advantage of

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64. F. E. Rivas, "Middlesex County Medical Society Report," *Journal of the Medical Society of New Jersey* VII, no. 3 (August 1910): 126.

65. *New Brunswick Home News*, "Safeguarding City Milk an Important Feature of Local Health Work," January 31, 1923.

using the product, according to Dr. Hill, was its "simplicity and adaptability to feeding among the poor and ignorant people with whom formula feeding with raw cows' milk had been unsatisfactory."[66]

Farm animals were not the only culprit in the transmission of diseases to humans. Malaria is an infectious disease that can be transmitted by the Anopheles mosquito. In the early twentieth century, salt marshes that stretched across the state of New Jersey generated enormous numbers of mosquitoes. These disease carrying pests posed serious public health risks to the residents of the state.

According to historian Karen Reeds, "New Jersey quickly reacted to the news that certain types of mosquitoes carried a malaria-causing microorganism from victim to victim."[67] New Jersey's quick response was largely due to the work of entomologist John Smith, who did extensive research on the types of mosquitoes that inhabited the state. In 1901, under Smith's direction, the state Agricultural Experiment Station in New Brunswick studied the habits of mosquitoes and explored theories for mosquito control. Details of his findings were reported to the state and described in articles in local papers. In an article published on July 14, 1901 in the *New York Times*, Smith described how he gathered mosquitoes from various parts of the state for the purpose of experiment and bred them to study their habits. He noted that there were various types of mosquitoes in New Jersey and suggested that breeding locations be drained as a possible solution for

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66. Middlesex County Medical Society, "Middlesex County Medical Society Report: The Use of Dry Milk in Infant Feeding," *Journal of the Medical Society of New Jersey* 14 (November 1917): 440.

67. Reeds, *State of Health,* 8.

pest control.[68] As a result of this study, in 1902 the state legislature passed an act authorizing and directing the State Agricultural Experiment Station to investigate and report on the habits of mosquitoes, their breeding places, relationship to diseases, and ways to control them. Ten thousand dollars was appropriated with this authorization.[69]

Over the next few years the work of the State Agricultural Experiment Station included mapping of breeding areas, narrowing ditches in marshes, and draining salt-marshes. In a special report to the state, *Report of the New Jersey State Agricultural Experiment Station upon the Mosquitoes*, Smith reported that mosquitoes bred in salt-marshes could fly several miles inland and pose a serious health crisis for residents in the surrounding cities and town.[70] This new information suggested that the elimination of salt- marsh mosquitoes was more a state problem than a local one. However, it was quickly discovered that the state was not equipped to handle a problem of such magnitude and in 1904 the legislature vested local boards of health with authority to eliminate mosquito breeding places as public nuisances. The next year, the legislature made it possible for communities with salt marshes within their borders to obtain state aid for treatment under the supervision of the Agricultural Experiment Station.[71] Through the

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68. *New York Times*, "New Jersey Mosquitoes: State Entomologist Smith Tells of His Researches," July 14, 1901.

69. Rutgers University Dept. of Entomology, "Rutgers Dept. of Entomology: Early Work of the Department (1889-1912)," Rutgers School of Environmental and Biological Sciences, John B. Smith, accessed August 16, 2010, http://www.mosquito.rutgers.edu/early.htm.

70. John Bernhard Smith, *Report of the New Jersey State Agricultural Experiment Station upon the Mosquitoes Occurring within the State, Their Habits, Life History, &c.* (Trenton, NJ: MacCrellish & Quigley, State Printers, 1904), 35.

71. Rutgers University, "Rutgers Dept. of Entomology."

Agricultural Experiment Station John Smith spearheaded a statewide campaign to control the mosquito problem. These efforts would eventually pay off as illustrated by the significant decline in number of malaria-related deaths statewide.[72]

During the early part of the nineteenth century, diseases, whether transmitted by human beings, animals or insects, were perceived as afflictions of those who lacked morality and hygiene. Poor living conditions were said to have been contributing factors for poor health.[73] However, in addition to creating poor immigrant populations living in urban tenements, the Industrial Revolution produced a large middle class that was no better able to escape the ravages of life threatening diseases like cholera, typhoid and tuberculosis than the poor. The work of the sanitarians became crucial in battling communicable diseases that affected both urban and rural populations.

Tuberculosis was a major public health problem national and locally during the nineteenth and early to mid-twentieth century. Before the turn of the twentieth century, a German physician, Robert Koch, discovered the causative agent of tuberculosis (tubercle bacillus), but effective treatment for the disease (antibacterial drugs) would not arrive on the scene until the 1940s. Isolation in sanatoriums was advocated as a way to care for the infected and as a way to keep healthy citizens safe from harm.

Gradual acceptance of the germ theory of disease, which proposed that microorganisms were the cause of many diseases, made interventions like quarantines and immunizations more acceptable by the public. In 1895, New Jersey passed a law

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72. Vincent Cirillo, "John Bernhard Smith," *Medical History Society of New Jersey* 28(2) (October 2008): 4.

73. Reeds, *State of Health,* 13.

requiring the notification of dangerous communicable diseases. Local health officers and physicians instituted measures in an effort to curtain the spread of communicable diseases (i.e. exams, report of suspected cases to the board of health and quarantine).[74] Public health officials, the medical community, and families began to promote the use of these new methods to ward off communicable diseases during the early 1900s.[75] Use of these new tools, as well as some of the old public health methods like "cleansing" and fresh air, fought off potential epidemics and prevented illnesses. In the *1900 Annual Report of the State Board of Health,* it was reported that New Jersey had 3,514 consumption-related deaths.[76] In the secretary's report on consumption in the *Thirty-Third Annual Report of the Board of Health of the State of New Jersey 1909 and Report of the Bureau of Vital Statistics*, it was reported that the total number of deaths from pulmonary tuberculosis for 1908 was 3,616. The death rate was 15.72 per 10,000 populations, which was lower than for any period during the previous five years.[77] (Table 2.1)

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74. State Department of Health, "Then and Now in New Jersey: Health Profiles for 1900 and 2000," State of New Jersey, accessed March 14, 2009, www.state.nj.us/health/chs/19002000.doc.

75. Reeds, *State of Health*, 8.

76. State Department of Health, "Then and Now in New Jersey."

77. United States, New Jersey Department of Health, *Thirty-Third Annual Report of the Board of Health of the State of New Jersey 1909 and Report of the Bureau of Vital Statistics*, by State Board of Health (Paterson: News Printing, 1909), 19.

Table 2.1. Showing number of deaths in New Jersey, per 10,000 population, from consumption from 1900 to 1908.

Year	1900	1901	1902	1903	1904	1905	1906	1907	1908
Consumption Deaths	18.48	16.91	15.32	16.76	17.83	16.73	16.64	16.67	15.72

Source: *Thirty-Third Annual Report of the Board of Health of the State of New Jersey 1909 and Report of the Bureau of Vital Statistics,* page 19.

The educational campaigns for the prevention and aid of tuberculosis, conducted by many of the state's municipalities, were deemed effective in lowering the death rate for this disease. The report emphasized the need for notification of all cases of tuberculosis to the boards of health, so that swift follow up interventions could be employed.[78] Despite the lowering death rates during the first decade of the new century, far too many people were still dying from this devastating disease.

Next we will discuss how the problem of tuberculosis was handled through the public health infrastructure in New Jersey and, where plausible and more specifically, how this condition was dealt with in Middlesex County during the early 1900s.

Sanitariums

In 1901 the State Charities Aid Association "criticized the casting aside of consumptives into almshouses." Consumption was another term used for tuberculosis during this period. In 1904, the association worked with the Medical Society and the

78. United States, *Thirty-Third Annual Report*, 25

state sanitary association to persuade the legislature to provide appropriations to establish a state sanatorium, where people with long term illnesses like tuberculosis could go for treatment.[79]

The National Association for the Study and Prevention of Tuberculosis was founded in 1904. In 1918 it was renamed the National Tuberculosis Association and is currently known as the American Lung Association. In 1906, the New Jersey Association for the Relief and Prevention of Tuberculosis (later called the New Jersey Tuberculosis League) was created to monitor incidences of tuberculosis and educate the public about the disease and its treatment.[80] Physicians, laypersons and legislators worked together to fight this major health crisis in the state.

Concerns about whether the state was able to effectively address the problem of tuberculosis led to the passage of legislation establishing county facilities for the treatment of tuberculosis. Public health practice at this time emphasized isolation to prevent the spread of the disease. By 1926, nearly all New Jersey counties had established facilities. Some of the facilities (sanatoria) were spa like, encouraging rest, good nutrition and fresh air. Additional services for these patients were provided by a network of clinics and public health nursing services made available in the home of the patients.[81]

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79. Cowen, *Medicine and Health*, 118.

80. Ibid..

81. Myers, *Story of New Jersey*, 28.

The New Jersey State Sanatorium was opened in Glen Gardner, New Jersey in 1907.[82] (Figure 2.5)

Figure 2.5. The New Jersey State Sanatorium in Glen Gardner, New Jersey was opened in 1907. Source: http://libraries.umdnj.edu/History_of_Medicine/postcards_1.html#DE.

Middlesex County practices a freeholder form of government. The Board of Chosen Freeholders functions as the legislative head of county government. In 1917, the Middlesex County Board of Chosen Freeholders adopted a resolution to establish a county hospital to care for residents with tuberculosis. However, due to a lack of sufficient funds, the process to open a treatment facility was delayed. In 1929, with the prevalence of tuberculosis still very high, there was another major push by area physicians and representatives from the tuberculosis associations, to construct a county hospital to treat tuberculosis. The Board of Freeholders appointed a commission made up of Middlesex County citizens to explore the need for county institutions. Care for the

82. Cowen, *Medicine and Health*, 118.

indigent and for the aged was also investigated by the commission.[83] The commission reported that there was a high prevalence of disease in the county and that high costs were being paid out to other counties to treat Middlesex County residents. Tuberculosis cases from Middlesex County were sent to the New Jersey State Sanatorium at Glen Gardner, the Bonnie Burn Sanatorium in Union County or to facilities out of state in nearby Pennsylvania.

As a result of their findings the commission recommended that there be a facility constructed in Middlesex County to accommodate at least 200 patients. Efforts to establish a tuberculosis treatment facility in Middlesex County was impacted by the Depression. The county did not have the finances to support this plan to secure a much needed treatment facility. This defeat had stronger implications for the indigent, as other county facilities started turning away "outsiders" to make room for their own residents in the early 1930s.[84]

The United States Emergency Public Administration (also known as the Public Works Administration [PWA] was instituted during President Franklin Delano Roosevelt's administration. This program provided funds to states for public projects including the building of hospitals and schools, roadways and airports, which in turned provided job opportunities for thousands who were previously out of work. Under this program, in 1934, Congress appropriated funds for federal construction projects, with 35

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83. United States, Middlesex County, Board of Freeholders, *Middlesex County in Review: Middlesex County, New Jersey Celebrating 300 Years of Progress in 1983*, by Middlesex County Board of Freeholders (New Brunswick, 1983), 24.

84. Ibid., 25.

of the loans and grants going to New Jersey. Included in the 35 New Jersey grants was the funding for the construction of the Middlesex County Tuberculosis Hospital. The original site for the construction (Georges Road in North Brunswick) met with public opposition, as critics protested that the hospital would be built to close to the New Brunswick watershed, which supplied water for New Brunswick and Highland Park residents. The objection was unfounded, but the decision makers voted to relocate the hospital to Raritan Township, currently known as Edison Township.[85] On March 8, 1937 twenty-seven patients were admitted into the new facility named in honor of President Roosevelt.[86] (Figure 2.6) With the advent of anti-tuberculosis medications, prolonged hospital stays were reduced and many patients were able to be treated as out-patients. In the 1950s, Roosevelt Hospital reduced the number of beds on the tuberculosis treatment unit and made way for patients with chronic illnesses. With the onset of modern medicine and new scientific innovations, death rates from many diseases had declined and more people were living longer with chronic diseases (e.g. lung diseases other than tuberculosis).

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85. Ibid.

86. Ibid.

Figure 2.6. Postcard of Roosevelt Hospital, Middlesex County tuberculosis hospital
Source: http://libraries.umdnj.edu/History_of_Medicine/postcards_2.html

Emergency Relief

During the nineteenth century, relief work was relegated to philanthropic individuals and charitable groups in the colonies and later in the new nation. A century later, America was ill-prepared to handle the urban poverty caused by industrialization, the economic devastation caused by the Wall Street crash in 1929, and the subsequent Great Depression. Benevolent citizens and charities could no longer assume the burden of caring for the poor.

A new school of thought emerged with the surge of economic hardships which advocated government for support for those in need. The Progressive Era (1900 – 1920) generated government measures to help the poor, especially mothers and children. These efforts were seen as investments in the betterment of society.

With the establishment of Poor Laws in colonial America, the poor were generally classified in three major categories: 1) the idle poor who were able, but too lazy to work and who usually ended up in work houses or almshouses; 2) the deserving poor who were too old to work or very young children and who could be found in almshouses

and orphanages; and 3) the well-intended deserving poor, who despite the fact that they were physically and mentally able to work, could not find viable means to support themselves and their families.

The Depression changed the way most Americans viewed the poor, especially women and children. Americans who faced poverty and income issues during this time could not be held accountable for their economic downturn nor could their moral character or lack thereof be blamed for the devastating economic condition of the country. Perceptions of deserving and undeserving poor were blurred during and after the Great Depression.

President Herbert Hoover initiated the Reconstruction Finance Corporation (RFC) in 1932, which provided aid to state and local governments, banks and big businesses, but fell short of providing direct aid to families. During President Franklin Roosevelt's administration, federal government control over the economy was increased, with significant changes in political and domestic policies. President Roosevelt referred to his economic programs as the New Deal. These new programs promoted economic recovery, reform in business practices, and relief to the unemployed. The first group of New Deal programs dealt mainly with the banking and railroad industry. In his second sweep of New Deal programs FDR's administration passed the Federal Emergency Relief Act in 1933, which created the Federal Emergency Relief Administration (FERA). The FERA was a measure to get people to work by distributing grants to states for unemployment relief. The program was expanded to include provision of medical attention and medical supplies to recipients of unemployment relief programs.

In the October 1933 edition of the *American Medical Association Bulletin*, FERA was described as a federal government movement to provide medical relief for those who were unemployed and affected by the poor economic situation. Provision of medical care for these individuals was to be considered an "Emergency Measure" and was to be terminated once the emergency was over. The big issue here was that doctors opposed government medicine and felt these federal programs posed a threat to the AMA.[87] In a resolution presented to the Middlesex County Medical Society, on October 14, 1932, the Society's resolutions committee addressed the County Emergency Relief Committee's request for "a method of procedure" in payments to physicians who provided services to indi*g*ent patients. Recognizing their commitment to serve the poor, but more importantly in an effort to "limit socialized medicine," it was resolved that Middlesex County Medical Society would be opposed to payment fees from Emergency Relief funds and expressed its willingness to provide services to the poor without compensation. Exceptions to this resolution included physicians who worked for the city or county and physicians who received compensation in the service of the indigent, because they also felt the economic impact of the Depression.

With federal funds, states established local ERAs. In Middlesex County, an agreement and medical policies were established between the ERA and physicians who agreed to accept emergency relief clients. The agreement included, but was not limited to, the following directives and policies: patients could be sent to any physician of their choosing from a list provided by the County Medical Society; medical relief was to be

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87. American Medical Association, "Emergency Relief," *American Medical Association Bulletin* 28, no. 7 (October 1933).

provided individually or as a family; special forms were to be used in the process of providing medical care to indigent patients; and an Advisory Committee of the County Medical Society would be appointed to work with the Middlesex County ERA to provide advice and counsel on complex matters, as well as to consult on the appropriateness of patient bills submitted by participating doctors. [88]

Forms were designed and implemented as part of an elaborate procedure for hospitalization of non-emergent and emergent cases. In the non-emergent cases, the client would go to the ERA office and apply for hospital relief. If he was already on relief, his case would be reviewed and, if deemed warranted, hospitalization would be authorized. If he was not on relief then an investigation would be done. Results from the investigation would determine whether or not hospitalization would be authorized. Specific details regarding the criteria (other than poverty) used to determine relief eligibility could not be found in the research. Once hospitalization was authorized a special form was completed in duplicate by the ERA office with a "Provisional Diagnosis." The client had the physician sign the form and provided a "Provisional Diagnosis." The client then took the signed document back to the ERA office where it was signed by the municipal director. The client presented both original and duplicate forms to the hospital admitting officer and then was admitted for treatment. The admitting officer filled out the form in duplicate, sending the original back to the municipal director and keeping the duplicate for the hospital files. The municipal

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88. "Emergency Relief," Lewis Compton to Municipal Directors, Municipal Directors, Case Supervisors, and Physicians, November 17, 1933, County of Middlesex, Perth Amboy, New Jersey.

director kept the file open until he was informed that the patient was discharged and then the form was entered into the client's case history.[89]

In the case of a medical emergency, the patient went directly to the hospital and was evaluated by the admitting physician who determined eligibility for admission. If the patient's condition was deemed not to be an emergent case, he would have to go to the relief office and wait for the four days investigation process before receiving treatment. Once the emergent patient was admitted, the hospital filled out another type of ERA form in duplicate. The hospital kept the duplicate and sent the municipal director the original. The signature of the patient or the head of the patient's family on the authorization forms was also required. If the hospital had a social service department then a social service report accompanied the form sent to the municipal director. Following the receipt of the form, a full social investigation was done by the ERA. Every month the hospital would send the municipality bills for the "authorized hospitalizations." Each bill had to have the number of patients seen, the number of patient days, and total charges.[90]

In an effort to keep down the costs for care, a letter was sent on August 7, 1934 from the Middlesex County ERA to "approved" doctors in Middlesex County, emphasizing the need for physicians to comply with the ERA's rules and regulations pertaining to the medical policy on the treatment of indigent patients. Each doctor approved to provide services to the poor was required to complete special ERA forms.

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89. "Emergency Relief," P. M. Geronimo to Middlesex County Municipal Directors, May 31, 1933, Middlesex County, Perth Amboy, New Jersey.

90. "Emergency Relief," P. M. Geronimo to Middlesex County Municipal Directors, May 31, 1933, Middlesex County, Perth Amboy, New Jersey.

Each month, participating physicians submitted reports using these forms, which documented the patients seen for that month, treatment diagnoses, dates of authorization for treatment, and the number of visits (office and home) made for which bills were submitted for payment. The letter encouraged the treatment of acute cases only and discouraged treatment of chronic cases. The feeling of the local ERA representatives was that chronic patients would not seek continuous care if they had to pay for it themselves. The ERA did not want to incur costs related to the provision of medical care for chronic patients over a long period of time. Physicians were mandated to provide pertinent information on every indigent patient seen in order to receive payment. Some physicians saw the medical agreement between the ERA and Middlesex County physicians as a way to preserve the relationship between the doctor and the patient.[91]

In an effort to avoid the risk of losing their paternalistic relationship with patients and already concerned about child care clinics, immunization clinics and tuberculosis clinics, participating doctors generally complied with the requirements of the ERA. Participation in Public Health Programs was promoted by the Public Health Committee of the State Medical Society. The Committee composed a series of letters that emphasized the need for physicians to take back control of "preventive medicine" for their patients. With the onset of a number of government-sponsored public health programs that came out of the Social Security Act, members of the Society were warned that if they did not collaborate with health agencies, preventive medical services would be taken over by group methods of care (i.e. child care clinic, venereal disease clinics,

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91. "Emergency Relief," Paul Rasmussen to All Approved Physicians in Middlesex County, August 7, 1934, Middlesex County, Perth Amboy, New Jersey.

etc.). The Committee encouraged the County Medical Societies to read these letters at their meetings.[92]

Like most Americans, New Jersey residents who experienced the ramifications of the Depression changed their attitudes regarding relief and for the most part welcomed the social and economic aid provided to them. New Jersey citizens and public officials worked together to pass the first State Emergency Relief Act (SERA) on October 1, 1931.[93] Prior to the establishment of this act, local municipalities were responsible for the provision of relief in their communities. During the 1930s, this charge was impossible to meet for most municipalities. With the passing of the SERA, the state came to the aid of local and private agencies and established rules and regulations for the operation of local relief programs. Disbursements of state aid went to local municipalities for reimbursements for work relief projects and welfare to the poor.[94]

With the passing of the Federal Emergency Relief Administration (FERA), the state was authorized to disburse matching federal funds. The federal funds went to the counties to provide relief for dependent children, mothers, the elderly, and the blind.[95]

The administrative infrastructure for the SERA consisted of a State Director appointed by the Governor; an administrative council composed of the Commissioner of Institutions and Agencies, the commissioner of Labor and the Commissioner of Municipal Accounts. The State Director was authorized to appoint county relief officers

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92. Public Health Committee, "Participation in Public Health," 199.

93. Myers, *Story of New Jersey*, 63.

94. Ibid, 64.

95. Ibid., 66.

and local committees to coordinate and administer the program.[96] The SERA was abolished in 1936, and the legislature passed a new Act that returned control of emergency relief to the municipalities, with the assumption that the change to local administration would create a more efficient process. Emergency relief was termed "public assistance" with the passing of this act.[97]

The Social Security Act of 1935 included a program that provided aid to mothers and their dependent children. Titled Aid to Dependent Children or ADC (later renamed Aid to Families with Dependent Children, or AFDC) the program offered assistance to poor children whose mothers (raising children alone) lacked an adequate source of income. Reasons for father absenteeism varied, but may have been due to factors such as: death, divorce, mother never marrying or fathers simply leaving the families. The federal government matched state aid to issue payments to these families.

Historically, people have argued whether health care is a right or a privilege, an issue still unresolved in the 21st century. Many would contend that communicable diseases, polluted environments and poverty impact all of society and measures should be taken to protect everyone. In *Jacobson v. Commonwealth of Massachusetts*, the Supreme Court of the United States upheld the authority of states to pass compulsory vaccination laws. The decision "raised questions about the power of state government to protect the public's health and the Constitution's protection of personal liberty" [98] Some would

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96. Ibid., 63.

97. Ibid., 70.

assert that each member of the community should have access to effective medical care and that it should not be limited to those who can afford it. Traditional American values changed with the onset of the Great Depression. Ideas of individual economic opportunities with limited government involvement shifted to a call for national aid to help the masses in need. The poor laws of the eighteenth and early nineteenth century were gradually replaced by the social security legislation of the 1930s.

During the late 1800s and early 1900s, many American citizens worked together to change certain aspects of society by advocating for social, economic, and political reforms. Some groups called for the social and legal equality of women. Others pushed to end the exploitative practices of child labor. Several citizen groups as well as local and national organizations and associations worked to change the plight of the urban poor. These reform movements raised political consciousness of a multitude of social problems and worked to improve the lives of the disadvantaged. Changes were gradual and efforts to bring about improvements frequently required several attempts before any real changes were instituted. Social and health reform in New Jersey, during the timeframe of this project, mirrored the reform activities of other states with large growing metropolises, despite the fact that the New Jersey had no formal medical education institutions.

Like many Americans during this period of study, New Jersey citizens, including Middlesex County residents, began to accept medicine as science and moved medical

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98. Wendy K. Mariner, George J. Annas, and Leonard H. Glantz, "Jacobson v Massachusetts : It's Not Your Great-Great-Grandfather's Public Health Law," *American Journal of Public Health* 95, no. 4 (April 2005): 581, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1449224.

practice from their homes into the hands of medical practitioners, who were now able to demonstrate and replicate positive health outcomes using new and scientific interventions like immunizations, quarantine, and hygiene. The years between 1900 and 1930 were marked by the development of national and local health resources and the transformation and modernization of health care institutions. At the turn of the century and as historian Erwin Ackerknecht points out, "for the first time in history," medical practice no longer focused exclusively on the treatment of individuals, but began to implore strategies to protect and care for the community as a whole, through regulated health standards, clean water and effective sewage systems.[99] Some contemporary practitioners believe that in today's society of intercontinental economics and recreational exchanges, considerations and provisions of health care should not be limited to local and national communities, but must give thought to the global implications of health care needs.

The patient and doctor relationship altered during the late nineteenth and early twentieth century as a result of the changing landscape of medical practice and technology. In addition, the federal government's role in the provision of health care during this period of study, especially during the Depression, also had a direct impact on the patient and doctor relationship with the establishment of several social programs. The conditions for the poor improved over the course of the nineteenth and early twentieth century because of government and locally led activities, like sanitation improvements and public health education. Local institutions like almshouses, children asylums, tuberculosis sanatoriums and hospitals for the insane were all important components of

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99. Erwin Heinz Ackerknecht, *A Short History of Medicine* (Baltimore: Johns Hopkins University Press, 1982), 215.

the New Jersey welfare system. People who had never been to the doctor may have seen a doctor for the first time as a result of serving in the military, being admitted into a treatment facility for mental illness or tuberculosis, participating in a Baby Wellness program or visiting a public clinic. Even those who were wealthy enough to have a doctor care for them at home experienced a change in that relationship when the doctor introduced new tools and made referrals to doctors who specialized in a specific area of medicine. The rich continued to receive more services than the poor; however, public health services, like preventive measures to avert disease epidemics, usually affected the whole community.

In a report on tuberculosis in New Jersey, in the *Public Health News*, author Dr. Samuel B. English (Medical Director, New Jersey Sanatorium Glen Gardner, NJ.) emphasized the importance of addressing the public health of the whole community, using the following illustration: "While the population of colored in New Jersey is but about one-sixth of the white ... the rate (tuberculosis) in the colored race is approximately four times that of white." He goes on to say that the "colored race" should not be ignored and that if measures to control tuberculosis were to be effective then, treatment had to be made available to all.[100]

The evolution of public health and welfare during the early 1900s changed the way medicine was practiced in Middlesex County, as a result of the transformation and adoption of new and innovative medical interventions and practices and in the passing of

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100. United States, Department of Health of the State of New Jersey, Director of Health, *Public Health News*, by Samuel B. English (Trenton: Department of Health, Circa 1910s), 299.

legislative policies to care for the poor. Many of these changes had a direct correlation to how the public viewed medicine and medical providers. Public demands for action to fight against cholera epidemics, the influenza pandemic in 1918, pest control for mosquitoes, and improvement in the quality of cow's milk, would continue to influence public health reform in the future. However, public health medicine would take a back seat to clinical medicine in the coming decades. Some doctors who were still struggling to establish their own authority in the early 1900s fought against public health care and saw it as an infringement on their duties and responsibilities, not to mention their pockets.[101]

People living in the new industrialized society changed their beliefs about their abilities to care for themselves medically and began to rely more on the skills of others. "Professional medicine drew its authority in part from the changing beliefs people had about their own abilities and understanding."[102] In the next chapter, the evolution of hospitals will be explored, as well as the role that the advancement of medicine played in changing the public opinion about these medical institutions, and the influence such opinions had on patient and doctor relations.

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101. Starr, *Social Transformation*, 181.

102. Ibid., 142.

CHAPTER 3

THE EVOLUTION OF MIDDLESEX COUNTY MEDICAL INSTITUTIONS

In many respects, the evolution of medicine in New Jersey mirrored the culture of medicine as it was developing in America. For centuries, New Jersey communities, like many other communities across the country, felt they had a civic or moral responsibility to assist the poor and care for the sick. This obligation was especially realized when these unfortunate individuals had no family or friends to support them.

As we entered the twentieth century, changes in the techniques of diagnosis and the use of new therapeutics gradually became a part of the New Jersey physicians' clinical practice. The New Jersey medical community, like other medical communities in this country, struggled throughout the nineteenth century to establish themselves as respected experts in the field of medicine. The organization of medical institutions to care for the sick and the development of new medical technology, which gave physicians authoritative decision-making powers, transformed patient and doctor relationships in Middlesex County, as it did in other counties and cities across the country.

This chapter explores the evolution of hospitals in Middlesex County. The discussion will address how the advancement of medicine influenced public opinion about Middlesex County medical institutions, the role the medical profession played in them, and how these entities affected patient and doctor relations.

Although medical institutions in several cities in Middlesex County will be reviewed, the town of New Brunswick will be the primary focus in the discussion related to the hospital movement. New Brunswick was the most progressive and enterprising city of the county during the twentieth century. Centrally located between New York and Philadelphia, the city was an important center of industry and commerce. During the industrial revolution, New Brunswick was a magnet for European immigrants searching for jobs and a better life for themselves and their families. The city founded two hospitals and, among the major manufacturers in the city, the Johnson & Johnson Company produced health care products that helped revolutionize the practice of medicine around the world.

From Almshouse to Hospital

During colonial America and through the Great Depression, the overseers of the poor, appointed municipal officials, administered relief to the poor. Overseers were required to keep public records on applicants for relief. Citizens applying for relief had to live in the town to which they made application or return to their town of origin to apply for relief.[1] In some cities and towns, overseers established almshouses, which were charitable housing, to care for the poor. The almshouses were the first institutions to provide housing and care for the sick.[2] Almshouses were among the earliest social

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1. Department of Commerce and Labor, Bureau of the Census, *Special Reports, Paupers in Alms Houses 1904*, report (Washington: Government Printing Office, 1906), 45, accessed July 19, 2009, http://http://www.poorhousestory.com/LegalSummary45.htm.

2. Starr, *Social Transformation*, 149

institutions to develop in New Jersey. (A detailed description of New Jersey almshouses was presented in Chapter Two).

During the nineteenth and twentieth century, some towns and cities in America experienced tremendous growth as a result of the Industrial Revolution. As industrialized cities grew with increased numbers of immigrants and displaced persons, the need for charity and welfare support also grew. Some families in these urban communities could not care for sick relatives in the home due to crowded living arrangements, if indeed the sick or immigrant destitute had any family in the United States. With no other recourse, a number of ill-fated individuals found themselves in New Jersey almshouses.

Although there were many cities that instituted almshouses, there was no standardization of services, policies, or facilities.[3] Reports issued as a result of periodic inspections showed that many almshouses were unsafe and unclean. Medical care for the sick in most almshouses was typically provided by other residents and perhaps a matron or supervisor with a local doctor available on occasions, unless the almshouse contracted or held an agreement with one of the local physicians. Sick inmates struggled to recuperate from their illnesses and many died due to poor ventilation, unsanitary conditions, and poor nutrition.

The latter part of the nineteenth century saw the growth of specialized facilities for the housing and care of special populations, like children and the mentally ill. Social activists like Dorothea Dix, medical groups, and philanthropic citizens called for action that required the separation of these populations in almshouses; children were transferred

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3. Earl Willis Crecraft, *The Government of Hudson County, New Jersey*. (Jersey City, NJ, 1915), 50.

to orphanages and the mentally ill were placed in newly constructed asylums (e.g. the New Jersey State Lunatic Asylum in Trenton).

Social welfare, the framework for the provision of medical and financial assistance to the needy, has historically been influenced by changing economic and social conditions. Despite the call for separation of special populations in almshouses, care generally remained custodial and not rehabilitative. Beliefs about the poor and how they should be supported did not change much from colonial times until the Great Depression of the 1930s, which shattered the lives and livelihoods of many Americans. Massive unemployment left many families without basic necessitates such as food and housing.

Despite varying beliefs about social welfare, the general American consensus was that jobless people, who were able and willing to work, as well as indigent mothers and children deserved the assistance of the government. In the 1930s, President Franklin D. Roosevelt initiated reforms, such as work relief programs and created a system of insurance for the aged, unemployed, and disabled through the Social Security Act. These initiatives brought relief to millions of unemployed Americans and enabled many citizens to avoid institutions like almshouses during difficult times.

As more government assistance programs were instituted and the number of residents declined in almshouses, these institutions gradually evolved into public and municipal hospitals. During this period, almshouse inhabitants were more apt to be the elderly and the chronically ill. Many of the remaining almshouses were transformed into nursing homes.

Hospitals, Outpatient Departments, and Dispensaries

Before the twentieth century, medical care took place mainly in the home. The female in the household administered to the sick using remedies handed down through the generations. During the nineteenth century, Americans viewed hospitals as the last resort for medical care. Many of these early establishments that evolved from almshouses were overcrowded and filthy. They were the only source of governmental aid to the poor sick. Poor adults, drunkards, prostitutes, mentally ill persons, immigrants, factory workers, or strangers, who fell ill while traveling, were the typical patients in the nineteenth century hospital. These religious and charitable institutions were for people who did not have the resources to go a private doctor or have family to attend to their ills. Only the rich and middle class could afford doctors.

The first general hospitals established to serve the poor in America were founded during the eighteenth century and began as almshouses. The Philadelphia Hospital was founded in 1751.[4] New York Hospital was chartered in 1771, but did not open until 1791. Massachusetts General Hospital in Boston opened in 1821.[5] According to Roy Porter, in *Blood & Guts*, "by the early twentieth century few towns were without a hospital and America possessed over 4,000 hospitals".[6]

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4. University of Pennsylvania, "Pennsylvania Hospital History: Nation's First Hospital," University of Pennsylvania Health System | Penn Medicine, accessed March 26, 2010, http://www.uphs.upenn.edu/paharc/features/creation.html.

5. Starr, *Social Transformation*, 150.

6. Roy Porter, *Blood and Guts: a Short History of Medicine* (New York: W.W. Norton, 2004), 138.

During the latter part of the nineteenth century and the early part of the twentieth century, however, hospitals began serving all classes of people. Provision of medical care became more centralized and modern as new medical technology and interventions were introduced in hospital settings. By the first decade of the twentieth century, patients moved from their homes to the physician's office, and then to institutions of medical care.[7] Changes were also occurring within the medical communities during this period: some doctors began to specialize in their practice, physicians collaborated with their colleagues regarding their patients' care, and the number of procedures like surgeries performed in hospitals increased due to improved techniques and safer settings. As a result of these new interventions and the changes that urbanization brought to the family, public opinion about hospitals and medical treatments changed. People and their physicians felt hospitals with their new aura of science and technology and increasingly professionalized nursing staffs represented the best care available. They also grew more accepting of medical care provided by strangers with formal training. These new public opinions helped to influence how hospitals were designed and staffed. With the public's acceptance of hospital care came the routine use of clinical laboratories for blood and urine analysis, bacteriological testing, microscopic examination of surgical specimens, and, at the turn of the century, roentgenology.

Dispensaries or clinics that provided outpatient medical care and supplies came before hospitals in some cities like Newark. Many hospitals once established, opened outpatient clinics. Outpatient clinics provided prescriptions, extracted teeth, gave

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7. Joel D. Howell, *Technology in the Hospital: Transforming Patient Care in the Early Twentieth Century* (Baltimore: Johns Hopkins University Press, 1995), 18.

vaccinations and other ambulatory services to residents in their communities**.** As we discussed in the chapter on public health, nurses from the department of health provided instructions on child care to new mothers in community baby stations and general health care and vaccinations were provided to school children in school clinics, in New Brunswick.[8] Middlesex General Hospital added an "outdoor" (outpatient) department in 1888[9] and held weekly tuberculosis clinics in the 1920s.[10] St. Peter's Hospital treated 28,132 "outside patients" from 1909 to 1924.[11] Patients were able to receive medical care in the clinics "without the necessity of occupying a hospital bed." Seen as a "follow-up" system, the clinic was the place where patients went to receive follow up care after being discharged from the hospital or medical care that prevented hospitalization.[12] Provisions of medical care outside the home increased the social distance between patient and doctor and reformed the customary interaction between doctor and patient.[13]

Faced by economic depression in the 1930s, people from all socioeconomic backgrounds readily used outpatient clinics and dispensaries (office, school or

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8. *New Brunswick Sunday Times*, "Four New Brunswick Baby."

9. Middlesex General Hospital, *Beginnings (1884-1984): Centennial 100 Years of Caring* (New Brunswick: Middlesex General Hospital, 1984), 10.

10. (New Brunswick), "New Brunswick's Health as Seen by Experts of the Nation and State." New Brunswick Library vertical file "New Brunswick Health," accessed April 8, 2008.

11. Frederick Kilmer, *Why St. Peter's General Hospital Must Enlarge and Rebuild:St. Peter's General Hospital Annual Report 1923*, report (New Brunswick: St. Peter's General Hospital, 1923), 3.

12. Ibid.

13. Rosenberg, *Care of Strangers*, 289.

department that dispenses medications and medical supplies).During the Great Depression, a state and federally funded program (Emergency Relief Administration) operated through the Medical Society of New Jersey, was instituted to provide medical service for those in need and income for physicians, as a way of not "disturbing the pattern of what the profession considered proper patient-physician relationships."[14] Concerned about the possibility of the government taking over the provision of medical care to the needy, many practitioners adopted this plan of action in an effort to maintain some authority and still make a living.

Evolution of Hospitals in Middlesex County

Like most hospitals opening around the country during the late nineteenth century, New Jersey hospitals were established to care for the poor. Historian David Cowen states in *Medicine and Health in New Jersey: A History,* that in the mid-nineteenth century citizens in large cities initiated plans to build hospitals because of the high rate of mortality in almshouses, which were unhealthy and considered to be death traps. These new industrial cities experienced high numbers of work related injuries and traffic and railroad accidents [15] There was an enormous need for hospitals in growing cities where people lived in crowded conditions without adequate facilities for care in the home or families to care for them. In addition, manufacturers grew concerned about their employees who became sick or injured on the job.

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14. Cowen, *Medicine and Health*, 157.

15. Ibid., 92.

It is not clear which New Jersey hospital was established first as the literature presents conflicting reports. Cowen attempts to explain the discrepancy by stating that it was difficult in some cases to distinguish between when a hospital was "established" and when it actual went into operation. He suggests that St. Mary's Hospital in Hoboken, which opened in 1863, was the first hospital in New Jersey.[16] However, Saint Barnabas Medical Center, which began in Newark, founded as an Episcopal institution, claimed to be New Jersey's oldest hospital, when the hospital was opened in a converted private home in 1865 and later incorporated by the state on February 18, 1867.[17]

Many hospitals were founded by civic groups in cities across the state. Others were started by religious institutions and orders. Three hospitals were established in Middlesex County in the decades around 1900. In 1872, the New Brunswick City Council discussed the need for a hospital and considered a New Brunswick Hospital Board, but it did not materialize until the New Brunswick City Hospital was incorporated on March 13, 1884. New Brunswick City Hospital opened its doors on April 1, 1885 and saw its first patient on April 7, 1885.[18] St. Peter's Hospital, founded as a Catholic institution, also located in New Brunswick was established in 1872. However, after two years the hospital closed for economic reasons. St. Peter's Hospital, another institution

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16. Ibid., 94.

17. Saint Barnabas Medical Center, "Saint Barnabas Medical Center, "Our History: 1865 – 1900: The Early Years - An Auspicious Beginning in 19th Century Newark," Saint Barnabas Health Care Center, accessed March 26, 2010, http://www.saintbarnabas.com/hospitals/saint_barnabas/aboutus/1865.html.

18. Robert Wood Johnson, *Robert Wood Johnson University Hospital: A Look at the past . . . a Vision for the Future* (New Brunswick: Robert Wood Johnson University Hospital, 1996).

with the same name, opened its doors in 1907 and saw its first patient in November of the same year; however it was not officially incorporated until March 1908.[19] Perth Amboy City Hospital opened its doors on May 2, 1902.[20] Most if not all of these early hospitals typically began in large Victorian homes, which were fitted out as hospitals.

The discussion in this chapter will address the founding of these diverse medical institutions, their financial arrangements and management, and their efforts to meet the medical needs of the communities they serviced. Such an historical analysis provides a context in which to examine how the evolution of medical institutions in Middlesex County influenced the relationship between the patient and the physician and other professionals.

Middlesex General Hospital

Discussions about opening a hospital in New Brunswick date back to the late nineteenth century. After a failed attempt by the Catholic Church to found a hospital in the 1870s, New Brunswick City Hospital was incorporated on March 13, 1884. Initially two separate groups, distinguished by gender, worked independently to establish the new hospital. Prominent men from the community were successful in getting the hospital incorporated in 1884, but did not generate much movement in getting the hospital opened after that. The signers of the incorporation papers and members of the board of directors

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19. Nayan Kothari and Palma Formica, *A Century of Caring: Saint Peter's University Hospital* (New Brunswick: Saint Peter's Healthcare System, 2009), 11.

20. *Home News Tribune* (Perth Amboy), "Raritan Bay Medical Center's 100th Anniversary," May 1, 2002.

included "John N. Carpender, president of the Norfolk and New Brunswick Hosiery Company, James Neilson, and V.M.W. Suydam, directors of the same company, Willard P. Voorhees, Arthur S. Ogilby, William R. Janeway, John C. Meyer, John T. Hill, and Nahum Kent."[21] On March 13, 1885, the following six physicians were appointed to the hospital's medical staff: Drs. Henry R. Baldwin, Nicolas Williamson, Frank Donahue, Charles H. Voorhees, Staats V. D. Clarke, and Thomas L. Janeway.[22] As discussed in the chapter on public health, Dr. H. R. Baldwin was president when the Board of Health in New Brunswick was instituted in 1879. Other health officers later appointed to the New Brunswick City Hospital medical staff included Drs. Janeway, and Clarke, Dr. Benjamin Gutmann, who would join the hospital staff after the turn of the century.[23] The women from the community did not wait for the men to establish a site for the hospital. Under the leadership of Grace Tileston Wells, wife of Dr. John Wells, a prominent New Brunswick physician, several women from the community began to meet as the Ladies Hospital Aid Association in 1884, and raised funds to get the hospital opened.[24] The Ladies Hospital Aid Association rented a small cottage to serve as the new hospital, which opened on April 1, 1885. The Association wrote to the board of directors to announce the opening of the facility and requested that they take responsibility for it.[25]

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21. Middlesex General Hospital, *Beginnings*, 8.

22. Ibid., 9.

23. John Patrick Wall and Harold E. Pickersgill, *History of Middlesex County, New Jersey, 1664-1920*, vol. 1 (Lewis Publishing Company, 1872), 255.

24. Middlesex General Hospital, *Beginnings*, 8.

25. Ibid., 9.

The first hospital structure was located on the corner of Commercial Avenue and Seaman Street. The owner of the cottage was hired as the matron for the hospital. The board of the New Brunswick City Hospital assumed the lease for the building, as well as, the salary for the matron. In turn, the board asked the Association to be responsible for the "domestic arrangements" for the hospital. This responsibility included, but was not limited to, establishing "appropriate visiting, inspecting and other committees," and "to act in concert with the Board of Trustees."[26] On March 28, 1887, Mrs. Wells and several members of the Ladies Hospital Aid Association were appointed to the board of the New Brunswick City Hospital.[27]

The first patient, Mr. Frank Gottleib, was admitted on April 7, 1885. He was a victim of a railroad accident and after eighty-one days he was discharged and declared cured. Gottlieb's occupation was listed as "tramp" in the medical records and he was not able to pay for his hospital care. The second patient was Amy Belmont, a little girl who was admitted on May 13th "suffering from ill treatment." She was discharged "cured" on June 2, 1885.[28]

It wasn't long before the demand for services outgrew the capacity of the hospital. Following a call from the community for medical services for patients who did not require in-hospital stay, an "outdoor department" was established in 1888. Property for this out-patient clinic was purchased on Somerset Street. Mrs. Wells, president of the Ladies Hospital Aid Association, offered to build a new hospital with her own finances

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26. Robert Wood Johnson, *Robert Wood Johnson University*.

27. Ibid.

28. Middlesex General Hospital, *Beginnings*, 9.

with the stipulation that the new facility be named in memory of her late husband, Dr. John Wells. In April 1889 Mrs. Wells presented the hospital board with keys to the new the John Wells Memorial Hospital.[29] (Figure 3.1)

Figure 3.1. John Wells Memorial Hospital New Brunswick, New Jersey.
Source: Kenlew Collection, "New Brunswick," http://kenlew.com/collections.

The John Wells Memorial Hospital had a bed capacity of fifteen beds. In 1899, a wing was added onto the hospital building, increasing capacity to twenty beds.[30] As populations in New Brunswick and the surrounding towns grew, so did capacity and clinical services in the New Brunswick hospital. In 1916, a new building was constructed expanding bed capacity to forty beds. With Mrs. Well's blessings, the hospital's name was changed to Middlesex General Hospital.[31]

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29. Robert Wood Johnson, *Robert Wood Johnson University*.

30. Middlesex General Hospital, *Beginnings*, 10.

31. Ibid.

With the establishment of numerous industries, as well as educational and religious institutions, the city of New Brunswick was thriving economically during the late nineteenth century and early twentieth century. Public leaders and the medical profession strived to meet the needs and demands of the community. At the turn of the century, another hospital, St. Peter's General Hospital, was established in town to help meet the demand.

St. Peter's Hospital

The first hospital in Middlesex County was St. Peter's Hospital. It was established in 1872 by Father Miles Duggan, Pastor of St. Peter's Church in New Brunswick, together with a group of local physicians who provided their services for free. The hospital was located at the site of the current hospital across from Buccleuch Park on Easton Avenue in New Brunswick.[32] This was a sixteen bed hospital operated by the Franciscan Sisters of Glen Riddle, Pennsylvania. The life of this hospital was short-lived due to lack of funds; the hospital was forced to close its doors in 1874. The building was reopened several years later as an orphan asylum and home for the aged.[33]

After visiting the Montreal General Hospital in Quebec, Canada in 1881, Monsignor O'Grady of St. Peter's parish revisited the idea of opening a Catholic-sponsored hospital in New Brunswick. The Sisters of Charity of the Order of Grey Nuns

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32. St. Peter's Medical Center, *The Progress of compassion: St. Peter's Medical Center 1872 to 1990* (New Brunswick: St. Peter's Medical Center, 1991), 1.

33. Norman Reitman, M.D., "The History of Medical Care in New Brunswick, New Jersey," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 27-29, 28.

of Montreal were solicited to provide nursing care and administrative functions for the newly established St. Peter's General Hospital.[34] (Figure 3.2).

Monsignor O'Grady and three local physicians, Drs. Frank M. Donahue, Charles Buttler, and J. Warren Rice, chose the former home of postmaster Charles W. Russell at the corner of Somerset and Hardenberg Streets as the site for the new Catholic hospital. It was renovated to accommodate a fourteen-bed ward for male patients and an eight-bed ward for female patients. This new facility also included two semi-private wards with five beds, and eight private rooms.[35] (Figure 3.3)

Figure 3.2. St. Peter's General Hospital - Order of Grey Nuns of Montreal.
Source: St. Peter's University Hospital Library Archives files.

On November 8, 1907, St. Peter's General Hospital admitted its first patient; Miss Flora Dewhurst, a 28-year old stenographer who was successfully treated for a kidney

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34. St. Peter's Medical Center, *Progress of Compassion*, 2.

35. Ibid.

ailment.[36] During its first year of operations (November 8, 1907 – December 31, 1908), St. Peter's admitted and treated three hundred and eighty six patients.[37] (Figure 3.4. St. Peter's General Hospital medical and nursing staff in 1913.)

Figure 3.3. St. Peter's General Hospital, Victorian House corner of Somerset and Hardenburgh Streets in New Brunswick, N.J. Early 1900s. Source: St. Peter's University Hospital Library Archives files.

36. Kothari and Formica, *A Century of Caring*, 11.

37. St. Peter's General Hospital, *St. Peter's General Hospital First Annual Report*, report (New Brunswick: St. Peter's General Hospital, 1908), 25.

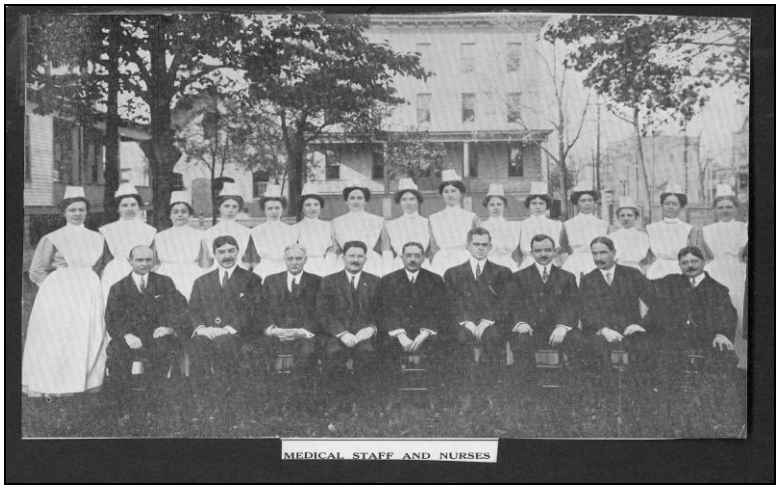

Figure 3.4. The medical staff and nurses of St. Peter's General Hospital in 1913. Source: St. Peter's University Hospital Library Archives files.

New Brunswick wasn't the only community in Middlesex County calling out for the establishment of medical institutions during this period. Perth Amboy citizens were also trying to meet the medical needs of their rapidly growing population.

Perth Amboy General Hospital

Docking facilities, natural clay deposits, and modern transportation brought factories to Perth Amboy, New Jersey during the nineteenth century. As was the case in New Brunswick, eastern and western European immigrants poured into the city to fill the available factory jobs. The work was hazardous at times and often resulted in life-threatening injuries. As the population rapidly increased in Perth Amboy over the decades, there was an urgent need for general medical care for the poor as well as for emergent care to address the numerous job-related accidents. In June of 1900, the Women's Hospital Guild conducted an appeal by letter to the area employers asking for contributions to build a hospital that would benefit their employees. An article which appeared in an early twentieth century newspaper, *The Perth Amboy Chronicle*,

emphasizes the need for employers to support the establishment of a hospital in Perth Amboy, at the turn of the century: "The great need of a hospital in this large and fast growing city, full of manufacturing and transportation enterprises, where machinery is used to an extensive degree, need not be recited here."[38]

Figure 3.5 Perth Amboy City Hospital 1902
Source: Perth Amboy Library vertical file – hospitals accessed.

Perth Amboy City Hospital was dedicated on May 2, 1902, after fourteen years of false starts and insufficiency capital.[39] Years of tireless fundraising by women's groups, local benefactors, and civic organizations finally yield funds sufficient to build and furnish the hospital. Six physicians were appointed to the medical staff: Drs. J. G. Wilson, J. L. Lund, F. C. Henry Sr., W. C. Ramsey, George W. Tyrrell, and H. Levy. The first operation performed in the new facility was an appendectomy on June 23, 1902.

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38. Perth Amboy, "Perth Amboy Hospital Marking Anniversary," January 22, 1969. Perth Amboy Library Hospital vertical file, Accessed July 2008.

39. Raritan Bay Medical Center, *Raritan Bay Medical Center: 100 Years of Caring, Annual Report 2001* (Perth Amboy: Raritan Bay Medical Center, 2001), 3.

Mr. Gustave Madsen was the first surgical patient.[40] During the first year of operation Perth Amboy City Hospital admitted 105 patients.[41] (Figure 3.5)

The founding mandate of all three hospitals in Middlesex County was the provision of medical care for the poor in their communities. New Brunswick City Hospital's stated purpose at the time of inception was: "to afford succor to the victims of sudden accident, and medical relief in case of temporary illness."[42] At its inception St. Peter's Hospital was planned with intent of providing "for the care of those who could not be cared for at home."[43] When the Perth Amboy City Hospital building was first opened at a dedicatory ceremony in 1902, it was "consecrated to the needs of sick and suffering humanity."[44]

General hospitals in Middlesex County were voluntary hospitals that were started by private secular and religious groups. Historian Paul Starr emphasizes that "the movement for hospital reform originated, not with doctors, but among upper class women."[45] As we have seen, a group of women under the leadership of Grace Tileston Wells organized the Hospital Aid Association, with the purpose of starting a hospital in New Brunswick. The Ladies' Catholic Benevolent Legion, Ladies' Auxiliary of Temple Anshe Emeth, German-American Union, St. James Hungarian society, and the Polish

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40. Perth Amboy, "Perth Amboy Hospital: Hospital."

41. Ibid.

42. Middlesex General Hospital, *Beginnings*, 8.

43. Kilmer, *Why St. Peter's General*, 2.

44. *Home News Tribune,* "Raritan Bay Medical."

45. Starr, *Social Transformation*, 155.

congregation were among the many community contributors who furnished and equipped St. Peter's Hospital in 1908.[46] After several attempts over a fourteen-year period, the dream of establishing a hospital in Perth Amboy, New Jersey, finally came to fruition, due to the hard work and tireless fundraising of women's groups, civic organizations, and local business men.

The need for institutionalized medical care increased over the years as communities in New Brunswick and Perth Amboy continued to grow and as society's attitude toward hospitals changed.

Throughout the nineteenth century and into the early twentieth century, the middle and upper classes received medical attention at home or made a visit to their physician's office. Even surgical procedures took place in the home prior to the twentieth century. During the home visit, physicians rarely attended to a patient without family members or friends being present. Medical cases were often discussed openly and the family provided assistance when needed following the doctor's orders. In some cases, surgical specimens were dissected and buried in the back yard.[47]

In major cities across the country, the poor sought medical care in hospitals and out-patient dispensaries during this period. Many early nineteenth-century hospitals were filthy and rat-infested. They were viewed as little more than death traps by many in the community. Some hospitals required that patients help with the washing, ironing, and cleaning. Poor patients were expected to help care for fellow patients. Despite the

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46. St. Peter's General Hospital, *First Annual Report*, 13.

47. Mavis P. Kelsey, *Twentieth Century Doctor: House Calls to Space Medicine* (TAMU Press, 1999), 59.

general feeling people had about hospitals during this period, the sick poor often had no other choice. The failure of the earlier St. Peter's Hospital (1872–1874) was attributed to the attitudes people had about hospitals at the time. "The public's impression of hospitals in the late 1800s was as places where sick people went to die, rather than to recover."[48]

Hospital administrators and medical staff, in an attempt to sway the public's opinion about hospitals, avoided admitting patients who were chronically ill, contagious or incurable.[49] The first annual report (1908) of St. Peter's General Hospital listed "Rules for the Admission of Patients." First and foremost, the administration affirmed that "Cases of contagious or infectious disease and maternity cases will not be admitted"[50]

Towards the latter nineteenth century and early twentieth century, new drugs and diagnostic tools, such as the X-ray machine, stethoscopes, thermometers, and ophthalmoscope, helped to improve diagnosis and patient care. It was the development of the hospital system, however, that brought these discoveries to the public.[51] Early twentieth century hospitals were sought out for the latest scientific and technological innovations and for procedures that could not be performed in the home. Scientific ideas and medical applications, such as, the germ theory (knowledge of pathogenic microorganisms), antisepsis (elimination or reduction of the growth of microorganisms), and antiseptics (substances with the ability to act against bacteria), had a dramatic impact on the American hospital experience, and increased the number surgeries that were

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48. St Peter's Medical Center, *Progress of Compassion*, II.

49. Starr, *Social Transformation*, 151.

50. St. Peter's General Hospital, *First Annual Report*, 18.

51. Howell, *Technology in the Hospital*, 237.

performed during this period. Every aspect of hospital life was affected by the technological changes occurring in western society; telephones and electric lights, calculators, and elevators, all impacted hospital design and function.[52] Individual practitioners with limited resources found it difficult to purchase and maintain many of the new technologies. In many cases it was easier and more economical to send the patient to the hospital. Hospitals admissions increased rapidly in the early decades of the twentieth century as the public grew more accepting of hospitals as suitable places for the middle and upper classes to be diagnosed, treated, and nursed to recovery.

The majority of the twentieth century hospital admissions involved surgery. The most common operations performed in the early decades of the twentieth century were consistent with what the public and the medical community perceived as modern and scientific.[53] The most common diseases at the turn of the century were primarily infectious diseases (pneumonia, typhoid fever and tuberculosis), which could be detected by the new diagnostic tools of the microbiology laboratory.[54] According to Joel Howell, in *Technology in the Hospital: Transforming Patient Care in the Early Twentieth Century*, at the end of the nineteenth century appendicitis "was seen as new and exciting" and many Americans viewed the surgical treatment of the disease as "one of the most glorious triumphs of modern medicine."[55]

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52. Rosenberg, *Care of Strangers*, 288.

53. Howell, *Technology in the Hospital*, 60.

54. Ibid., 191.

55. Ibid., 207.

In St. Peter's General Hospital's First Annual Report (from November 8, 1907, to December 31, 1908) in the category of operations, appendectomy was the most frequent procedure performed (45 out a total number of 216).[56] The next category with the highest number of procedures performed was "curettage" (In the "Detailed Analysis of The Diseases" section of the report, endometriosis was listed with the highest numbers of all diseases diagnosed). [57]

The introduction of ether (Ether anesthesia was first demonstrated in America at Massachusetts General Hospital in 1846), of chloroform (anesthetic used in surgery and childbirth, 1847) and the implementation of Listerian antisepsis techniques made surgeries less painful and risky. According to Charles Rosenberg, a leading American social historian of medicine, the increased numbers and complexities of surgical operations and diagnostic testing meant that more house staff and nurses were needed, with a growing demand for round-the-clock care.[58] As discussed earlier in this chapter, six physicians were appointed to the New Brunswick City Hospital's medical staff on March 13, 1885. In 1922, the staff had increased to seventeen doctors. (Figure 3.6) The hospital's name was changed in 1916.[59]

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56. St. Peter's General Hospital, *First Annual Report*, 29.

57. Ibid.

58. Rosenberg, *Care of Strangers*, 181.

59. Middlesex General Hospital, *Beginnings*, 11.

Figure 3.6. Middlesex General Hospital's medical and surgical staff in 1922. Left to right, first row: Drs. F. M. Hoffman, L. P. Runyon, Benj. Gutmann, A.L. Smith, N. N. Forney Sr.; second row: Griggs, R. H. McKiernan, F. E. Riva, J. P. Schureman, F. W. Scott, H. L. Nafey; third row: J. L. Fagan, F. L. Brown, J. F. Anderson. Not shown: Drs. D. L. Morrison, B. M. Howley, Sr., G. L. Leonard, H. Iredell, F. L. Hindle. Source: Middlesex General Hospital, Seventy-five Years of Service to the Community, 1960, hospital brochure.

Table 3.1 shows the steady increase of admissions in the early years of Middlesex County hospitals. Admissions continued to increase through the early decades of the twentieth century.

Table 3.1. Middlesex County Hospital Admissions in the early years.

Middlesex County Hospitals	Admissions by year		
New Brunswick City Hospital	1885	1886	1889
Number of patients treated	19	21	74
St. Peter's General Hospital	1907-08	1909	1910
Number of patients treated	386	488	704
Perth Amboy City Hospital	1902	N/A	N/A
Number of patients treated	105		

Source: New Brunswick City Hospital - "First Patient of Hospital in 1885 Was a Railroad Accident Victim" New Brunswick, *Sunday Times* Sept. 9, 1951**.** St**.** Peter's Hospital – First (1908), Second (1909) and Third Annual Reports**.** Perth Amboy City Hospital, "Perth Amboy Hospital Marking Anniversary," Jan. 22, 1969, PA Library Vertical files.

The increase in surgeries at the end of the nineteenth century stimulated general hospital expansions. Increased admissions of all socioeconomic classes reflected public confidence in the medical care provided by hospitals. At the turn of the century, private (paying) patients were being admitted into hospitals in significant numbers and the hospitals began to cater to the needs of their newest residents. With the steady growth of hospital communities and advancements in the medical field, hospitals quickly grew out their structural capacities. Hospitals began to expand their facilities by building new hospitals, adding on new wings, or renovating the original sites. Middlesex County hospitals were no exception.

Perth Amboy City Hospital, opened in 1902, completed several expansion projects over the next couple of decades. Despite these expansion efforts, in 1926, the *Perth Amboy Evening News* claimed that the "City Hospital" was still in need of more room and better equipment.[60]

It was felt from the beginning that the original home of St. Peter's General Hospital, which opened in 1907, was not big enough to accommodate the need of the community. The board of directors stated in the first annual report of the hospital that "it was necessary to make considerable improvements" to the building in order to prepare it for use as a hospital. Construction included the erection of an operating room and sterilizing room "with the most approved equipments and an x-ray room supplied with all necessary appliances."[61]

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60. "Perth Amboy Hospital."

61. St. Peter's General Hospital, *First Annual Report*, 13.

Despite St. Peter's General Hospital's original policy not to admit maternity cases, a fourteen bed maternity wing was built in 1915 and at the same time a six bed pediatric ward was established.[62] (Figure 3.7)

Figure 3.7. St. Peter's pediatric ward in the 1920s. Source: Saint Peter's University Hospital Library, Vertical file – Hospital, accessed March 2009.

Annual growth at St. Peter's General Hospital is illustrated in Table 3.2.[63]

Next Page: Table 3.2. St. Peters Hospital Growth by years
Source: Kilmer's Why St. Peter's General Hospital Must Enlarge and Rebuild, (3)

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62. Kothari and Formica, *A Century of Caring*, 15.

63. Kilmer, *Why St. Peter's General*, 3.

St. Peter's Hospital Growth By Years	
Year	Number of Patients
1908	386
1909	488
1910	704
1911	811
1912	1012
1913	1204
1914	1306
1915	1443
1916	1874
1917	2122
1918	2626
1919	2910
1920	3620
1921	3220
1922	3459
1923	4066

Overcrowding resulted in the construction of a new facility which opened on October 29, 1929, at the present site on Easton Avenue. The new five floor structure had a capacity for two hundred patients. Each floor had a solarium and kitchen[64] (Figure 3.8)

Figure 3.8. A kitchen in St. Peter's General Hospital (1929).
Source: *A Century of Caring: Saint Peter's University*, 29.

64. St Peter's Medical Center, *Progress of Compassion*, 8.

In March 1923, the friends of Middlesex General Hospital, responding to an appeal from hospital directors, donated to $200,000 for the purpose of building expansion and improvements of existing buildings and departments. In addition, funds were used to cancel the mortgage on the property.[65]

In 1912, ten years after Perth Amboy General Hospital opened its doors, a new nurses' residence was built.[66] In 1914, additional expansion increased the hospital's bed capacity from twelve to forty nine beds.[67] In 1917, a maternity wing was added.[68]

Hospitals, influenced by sanitation reforms, began to implement better hygienic practices. Rosenberg provides examples in *The Care of Strangers* of how planners considered sanitation reforms when designing hospital buildings: "... smooth, hard-surfaced floors, metal instead of wooden bedsteads, the systematic removal of garbage, all helped minimize the accumulation of disease-inducing organic matter." Even the "effective placement of widows to maximize circulation of fresh air" was a serious deliberation.[69]

Nursing played a key role in shaping the modern hospital, according to Rosenberg. Nurses had a tremendous influence on how hospitals were physically designed (i.e. ward and room environment) and how care was provided (with dignity and

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65. John P. Wall, *The Chronicles of New Brunswick, New Jersey, 1667-1931* (New Brunswick, NJ: Thatcher-Anderson, 1931), 392.

66. "Perth Amboy Hospital: Hospital Is Striving."

67. *Home News Tribune*, "Hospital Celebrates 100 Years of Care," May 2002.

68. Ibid.

69. Rosenberg, *Care of Strangers*, 127.

compassion).[70]The nursing profession will be explored in more detail in chapter five on medical professions.

Middlesex County hospitals' expansion projects weren't only about increasing space for more beds or adding more people to the medical staff; focus was also placed on acquiring the latest diagnostic tools and equipment being offered at the time.

According to Howell, the term "medical technology" meant something different in the late nineteenth century and early twentieth century than it does today." He identifies the most important machines in the early twentieth century as "those that were essential to the daily operations of the facility." He explained that hospitals considered themselves "modern" if they had the latest technology in hospital structures, like the laundry room, the kitchen, the telephone system and furnishings for patients' rooms. Eventually the concept of medical technology came to be understood as "machines that were used directly on or around patients."[71]

By the third decade of the twentieth century, "well-conducted hospitals" were considered to be the best place for medical care for the poor and rich alike. Given a choice between home treatment and innovative care in a modern hospital most people chose the latter.[72]

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70. Ibid., 9.

71. Howell, *Technology*, 7.

72. Cowen, *Medicine and Health*, 147.

Modern Hospitals

Twentieth century hospitals (including Middlesex County hospitals) sought to capitalize on their image as modern institutions of science. In an effort to raise funds for additional equipment, services or expansion projects, administrators, staff physicians and medical boards worked to change the image of hospitals from warehouses for the sick poor to scientific institutions that provided the best medical care with the most modern equipment. They attempted to change the negative image of hospitals by showcasing their sophisticated operating rooms and laboratories or other technological advancements in hospital brochures and articles in their local newspapers.

According to Roy Porter, advanced antiseptic surgeries performed in well-equipped and sterile operating rooms helped turn hospitals into places for cure instead of refuges for the poor.[73] (Figure 3.9)

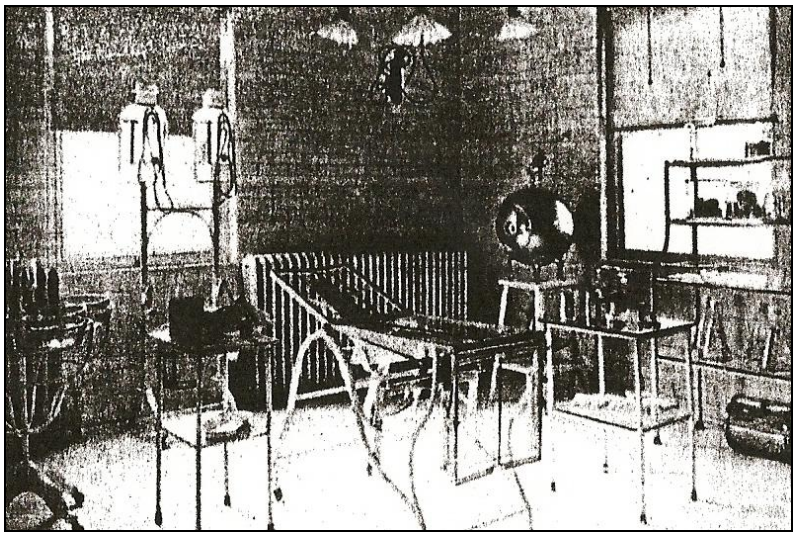

Figure 3.9. Middlesex General Hospital's operating and etherizing room in the early 1900s. Source: Middlesex General Hospital, Seventy-five Years of Service to the Community, 1960, hospital brochure.

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73. Porter, *Blood and Guts*, 148.

In 1925, Middlesex General Hospital boasted in a newspaper article that upon completion of a new wing, this institution would be "one of the most modern hospitals in New Jersey, if not the most modern." The article went on to say that the new wing would house the hospital's obstetrical and orthopedic departments. [74] Public visiting events were conducted so that hospital administrators and boards could boast of the hospital's latest modern technological apparatus. Concerns about patient privacy dissipated when private rooms with all the amenities of home were made available to patients who could afford to pay for them. (Figure 3.10).

Figure 3.10. St. Peter's General Hospital's private room in the 1930s.
Source: *Saint Peters University Hospital*: *A Century of Caring*

X-ray machines became a must have for modern hospitals. Portable units developed for hospital use made it easy to take pictures of patients without having to transport them to a different room or department.

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74. *Sunday Times,* (New Brunswick), "New Addition to Middlesex Hospital Will Make It One of Most Modern in State," May 10, 1925.

In the early twentieth century, motor-powered ambulances, used to transport patients in need of emergent care to the hospital, began to phase out the horse-drawn models. In gratitude for the care he received as a patient at John Wells Memorial following an automobile accident, Mr. Manton Metcalf of Orange, New Jersey, donated an ambulance to the hospital "to make the ride to the hospital more comfortable."[75]

Throughout the early decades of the twentieth century, Middlesex County hospitals made every attempt to bring the most modern and innovative apparatuses to their communities, such as x-ray machines and laboratory equipment. Dr. Frank M. Donohue, member of the St. Peter's Medical Staff, donated "x-ray equipment" and a microscope to the hospital 1907.[76] Perth Amboy General Hospital was credited with being the first institution of its kind to install the "sterilamp" in its operating room in 1937. The New Jersey hospital owned one of only three lamps in existence at the time. Duke University in Durham, N.C., where pioneer work on the lamp was first performed, owned the other two. The machine was designed to kill microbes in an effort to decrease or eliminate infections during and after operations. A local newspaper, the *Perth Amboy Evening News*, described the procedure in an article on Feb 25, 1937: "In dealing death blows to bacteria the 'Death Ray Lamp' employs ultra violet ray which shakes the acid nuclei of the microbes into pieces and shrivels them into extinction." Because the sterilamp was not commercially manufactured at the time, a Perth Amboy General Hospital electrician customized the apparatus with help from the Westinghouse Electric

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75. Middlesex General Hospital, *Beginnings*, 15.

76. St. Peter's General Hospital, *First Annual Report*, 13.

Company and constructed a framework to hang the lamp from the operating room ceiling.[77] (Figure 3.11)

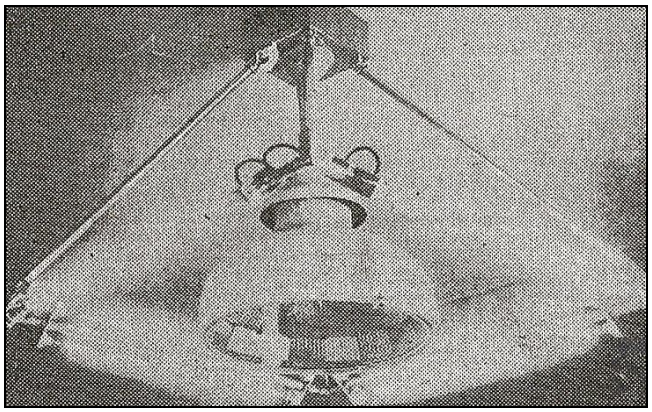

Figure 3.11. Perth Amboy General Hospital's sterilamp.
Source:*" Death Ray" Lamp, Now Installed At General Hospital, Massacres Microbes In the Operating Room,* PAEN Feb 25, 1937.

The article adds that in a preliminary test conducted in the hospital's operating room, the sterilamp, killed ninety-five per cent of the bacteria in the room in sixty seconds; "in several seconds more, the room was entirely sterile."[78] No additional material could be found regarding Perth Amboy General Hospital's sterilamp beyond the fanfare accompanying its installation. However, research did disclose a contemporary by-product in the form of air purifiers.

Related in part to technology, hospitals were faced with new financial challenges. Staff and new technology were expensive. One of the many ways hospital boards and administrators sought to control steadily rising costs was to keep running tabs on all hospital expenditures and receipts. It wasn't a question of how to manage greatly

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77. *Perth Amboy Evening News,* "Death Ray Lamp, Now Installed At General Hospital, Massacres Microbes in the Operating Room," February 25, 1937.

78. Ibid.

expanded hospital budgets, but how to manage them effectively. Business and accounting procedures facilitated the transition of hospitals to modern medical institutions. Administrators provided their boards and potential funders with detailed reports that tracked daily and yearly costs. Information such as total number of patient days spent in the hospital, cost per patient, number of operations completed, and costs for food and other supplies were often included in annual reports. Disbursements for construction and maintenance, number of patients admitted, cured, improved, and unimproved, as well as types of operations performed were provided in St. Peter's General Hospital's annual reports. In the first annual report, the hospital reported patient admissions and discharges for the first year of operation (1907 -1908) (Appendix 3.A). New Brunswick City Hospital's first patient registry of admissions and diagnosis is illustrated in Appendix 3.B.

In a 1923 report entitled, "Why St. Peter's General Hospital Must Enlarge and Rebuild," by Fred Kilmer, director of publicity at St. Peter's General Hospital, the hospital's recently added pathological-clinical laboratory was described as a "disease-searching adjunct .... In the laboratory the blood, the excretions, secretions, and tissues are examined, and diseased spots are located, enabling the physician to at once apply the proper methods of cure." The report stressed that the x-ray and laboratory departments enabled the physicians to identify the patient's medical problem efficiently and apply the proper treatments. Through the use of these resources, patient suffering and hospital expenses were reduced.[79]

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79. Kilmer, *Why St. Peter's General*, 13.

Other entities that helped shape hospitals in Middlesex County during the early twentieth century were the hospital aid societies and lady guilds. In its first year, St. Peter's Hospital received furnishings and supplies from benevolent groups including religious charitable leagues, lodge organizations, cultural societies, and clubs. The St. Peter's Hospital Guild, organized in 1908, began as a sewing group to provide the bed linen and bandages for the hospital. Members worked in different "bands" or teams, in groups of ten, sewing at the hospital or in their homes. The leaders of the bands would meet weekly for a business meeting and this would be followed by a social meeting.[80] Many of the members were wives of the hospital doctors. From 1914 to 1922, the Guild collected over $7,000 and turned it over to the hospital's treasury.[81] In 1930, the Hospital Auxiliary, as it was then called, conducted drives for funds to help complete another wing of the hospital. They also held other benefits, like card parties and sewing circles, to help the institution. In 1930, membership in the Auxiliary was opened to the general public. Anyone who wanted to work to help the hospital could join, according to the 1930 Annual Report. Payment of yearly dues was expected of all members[82]

As mentioned earlier, the Hospital Aid Association, a group of women lead by Grace Tileston Wells, was formed on February 18, 1884, with a purpose to start a hospital in New Brunswick. The idea to establish a hospital in the city was initiated after the women attended several lectures on "Aid to the Injured," given by local physicians.

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80. St. Peter's General Hospital, *St. Peter's General Hospital Sixth Annual Report*, report (New Brunswick, 1913), 21.

81. Kilmer, *Why St. Peter's General*, 18.

82. St. Peter's General Hospital, *St. Peter's General Hospital Twenty Third Annual Report*, report (New Brunswick, 1930), 9.

During 1884, the Association raised money to open a hospital.[83] In the *Twenty-sixth Annual Report of the John Wells Memorial Hospital: Report of the Hospital Aid Association*, an appeal to the "Friends of the Hospital", through subscriptions and donations was made for the enlargement of the hospital. Additionally, under "Permanent Funds," a listing of "collections" from the churches in the area is provided for 1910 and 1911.[84]

Auxiliary organizations continued to raise funds for hospital expansions, equipment, and patient services. In addition to financial contributions, community members in the early years also donated food and clothing to the hospitals. Without the support of hospital guilds, aids associations and auxiliaries many hospitals might not have survived, especially during difficult economic times.

Despite their initial charitable missions, hospitals at the turn of the twentieth century needed to find ways to continue to operate in times of economic expansion and the inevitable periodic economic downturns. By promoting themselves as modern hospitals with the best available equipment and treatment options, they increased their chances of recruiting patients who would pay for care in their institutions.

The pressing needs for more patient rooms, larger rooms to accommodate bigger equipment, rooms for more specialized treatments, and rooms to house the medical and nursing staff spurred continuous growth of these institutions and reflected society's

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83. Middlesex General Hospital, *Beginnings*, 8.

84. John Wells Memorial Hospital Aid Association, *Twenty-sixth Annual Report of the John Wells Memorial Hospital: Report of the Hospital Aid Association*, report (New Brunswick, 1911), 8.

confidence in what hospitals had to offer. The public saw the expansions as signs that these hospitals provided the best medical care with the most modern equipment.

In addition to providing medical services for the general public, Middlesex County hospitals also worked to meet the medical needs of the manufacturing companies in the community and their employees. These enterprises also played an important role in the development of hospitals in Middlesex County. Many of the hospitals' board members were representatives of local manufacturers. One company in particular, Johnson & Johnson, stood out among the rest, as having the greatest influence on the development of New Brunswick hospitals. The company was (and still is) a manufacturer of medical and surgical supplies that started production in New Brunswick, NJ. Johnson & Johnson was incorporated on October 28, 1887.[85] The Johnson and Johnson Company introduced the first antiseptic surgical dressing used in the operating room in the 1880s. The company's catalog of products included items such as medicated plasters and wound dressings. Robert Wood Johnson, founder of the company, had great business ability. He was a wealthy man who gave to the community. The company provided liberal amounts of medical and surgical supplies as well as funds for both New Brunswick Hospitals.[86]

Robert Wood Johnson II had a strong interest in hospital management and consistently offered his views on ways to improve patient care, as well as how to improve

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85. Johnson and Johnson and Margaret Gurowitz, "Kilmer House: The Story Behind Johnson & Johnson and Its People," *Kilmerhouse.com* (web log), "under Beginnings," accessed October 2, 2010, http://www.kilmerhouse.com/ Beginnings.

86. St. Peter's General Hospital, *First Annual Report*, 13.

hospital operations in the local hospitals. In a 1931 report titled "*Service to the Patient: a Discussion of New Brunswick Hospital Service and Proposals for Its Modernization*," Johnson offered proposals for the modernization of New Brunswick hospitals. He acknowledged the rapid changes occurring in hospitals due to advancements in medical technology. According to Johnson, if the purpose of hospitals was to care for the sick and prevent illness, than having the most modern equipment and beautifully constructed buildings was not enough. It was more important to have "a well organized, cooperative group of medical experts, supported by a trained nursing staff." [87]

Medical care in twentieth century hospitals and the mechanisms by which that care was delivered were consistent with what physicians and the public perceived as modern and scientific. Patients were encouraged to seek care in hospitals where they would get the best most modern treatments. However, unlike the personal care that patients received in the home decades earlier, there was a transformation to impersonal patient care that changed patient and doctor relationships. The nineteenth-century doctors made house calls which often turned into social encounters as the doctor met not only with the patient, but with the family members as well. Visiting the patient in his home environment provided the physician with a great deal of information about the patient's lifestyle and social supports. There was plenty of time for the patient to share his medical story and to articulate his concerns. Family members filled in the gaps in the patient's story and provided assistance to the doctor when needed.

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87. Robert W. Johnson II, *Service to the Patient: a Discussion of New Brunswick Hospital Service and Proposals for Its Modernization*, December 15, 1931, New Brunswick.

One major characteristic that set twentieth medicine apart from previous practices was the steady increase in the number of caregivers involved in the patient's diagnosis and treatment.[88] Specialists and technologists had become a part of the patient's experience in the hospital. At the same time, the patient became a number associated with an organ, a lab specimen, or X-ray film. The relationship between doctor and patient during the nineteenth century transitioned from a one-to-one liaison to a multifaceted healthcare approach in the next century. As patients moved their care from the home into the hospital, they (and their families) became increasingly dependent on strangers for their medical care.

Human touch associated with physical diagnosis was one of the most important instruments in the physician's arsenal of medical interventions during the nineteenth century. This intimate patient-doctor interaction was sometimes overshadowed by technology in the new hospital environment. The touch of metal replaced the touch of the physician's reassuring hands. With the change in patient-doctor relation came fewer opportunities for patient to articulate their own symptoms or concerns. Physician medical training (although not yet established in Middlesex County) focused more on developing mechanical skills than on humanistic skills. Patients were seen less as social beings and more as objects with a problem to solve.

Physicians, who realized that they could not afford the same technological resources such as X-ray machines and laboratory equipment housed in hospitals, convinced their patients that the hospital was the best place to go for medical care,

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88. Howell, *Technology in the Hospital*, 234.

especially for surgical interventions. The lone physician providing medical care in a patient's home or in a private office gave way to a multi-team approach in designated medical, surgical, pediatric, and obstetrical spaces within hospitals. Although this development did benefit the growth of the hospital (centralized and specialized care) and was an improvement in general medical care for patients (an increase in life expectancy and more effective treatment options), it did change the way patients interacted with their medical provider(s).

"Early hospitals had a fundamentally paternalistic social structure," says Paul Starr. Hospital workers and patients were subjected to special rules.[89] Family and friends that had previously been a source of emotional support for the patient in the home were now restricted in the hospital by hospital policy and strictly enforced visitation hours.

Rules for admittance to both John Wells Memorial and St. Peter's Hospitals were similar. Both required an application process. Except in emergent situations, the patient seeking admission into the hospital had to obtain a card of admission signed by a member of the medical staff and endorsed by a member of the executive committee at Johns Wells Memorial Hospital.[90] St. Peter's Hospital patients had to acquire a certificate from the attending physician "stating the nature of the disease or injury."[91] Potential cases had to

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89. Starr, *Social Transformation*, 149.

90. Middlesex General Hospital, *A Dedication: Middlesex General Hospital* (New Brunswick, 1957).

91. St. Peter's General Hospital, *First Annual Report*, 18.

be screened for suitability by the Matron at John Wells Memorial[92] or the Sister Superior at St. Peter's General.[93]

Professionalization, hospital administration, and medical specialization played important roles in transforming the nineteenth century hospitals.[94] For the first time the physician could call upon a set of procedures and techniques to treat patients who fell into the same subcategories of illnesses. This was significant with regard to the patient and physician relationship because the focus of the medical intervention had turned from the patient to the disease.

In this chapter we have seen how hospitals developed from the almshouses and poorhouses of the nineteenth century into the modern hospitals of the twentieth century and how the patient's relationship with the physician changed as a result. Hospitals continue to evolve and the patient-doctor relationship continues to be influenced by these changes.

As we have discussed, Middlesex County followed a national and statewide pattern in the evolution of medical practice and in the establishment of medical institutions in the county. This chapter has also addressed how advances in science and technology and the changes in the delivery of healthcare during the late nineteenth and early twentieth century influenced the relationship between doctor and patient.

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92. Middlesex General Hospital, *Dedication.*

93. St. Peter's General Hospital, *First Annual Report*, 18.

94. Rosenberg, *Care of Strangers*, 341.

In the next chapter, we will look at how the evolution of the medical profession in Middlesex County influenced the establishment of medical institutions and how these developments affected the medical community's relation with patients.

CHAPTER 4

THE MEDICAL PROFESSION IN MIDDLESEX COUNTY

EARLY TWENTIETH CENTURY

This chapter will examine how the evolution of the medical profession influenced the practice of medicine and the establishment of medical institutions in Middlesex County during the early twentieth century. How well did Middlesex County practitioners integrate new and innovative techniques and technologies into their practices and how did these developments transform relations between doctors and patients?

The nineteenth century was a period in which the American medical profession transitioned from a vocation based on little to no knowledge of the etiology of disease and the use of aggressive treatments, in the beginning, to a modern medical profession that embraced scientific knowledge and new technologies by the end. As we entered the twentieth century, the foundation for the medical profession (medical societies, medical schools in America, medical institutions and licensing legislation) had been laid.

Medical practice in Middlesex County, during the late nineteenth century and the early twentieth century, was fundamentally a reflection of what was occurring in many other towns and cities across America.

In Middlesex County, the evolution of medical theory and practice was influenced by social, economic, and industrial developments, as well as the philosophies and attitudes of the residents of the county.

During the Colonial and early national period there was no license required or regulations to be followed in order to practice medicine in New Jersey. Anyone who had a desire could be a doctor. Before 1765 America had no medical schools. The wealthy went to Europe to obtain a formal medical education. Most American practitioners however, learned the practice of medicine in informal systems of apprenticeship. The student would study medicine with a practicing physician, have access to his medical library and participate in his practice. In exchange, the student would pay a fee and perform menial chores.

The first physician on record to practice in Middlesex County was Dr. Henry Greenland, who practiced there from 1675 to 1706. His office was in what is now called Highland Park. In addition to being a physician, Greenland owned a local tavern.[1] Medical practice was not a primary role for most seventeenth and eighteenth century practitioners. Since medicine didn't pay well enough to support physicians and their families, many of them combined medical practice and other sources of income (i.e. clergyman, politicians, tavern owners, businessmen, pharmacists, and others).

A notable "innovator" in the medical profession from Middlesex County, was Dr. Clifford Morrogh of New Brunswick (1821-1882), who was the first physician in the state to use chloroform. He used it during a leg amputation. Dr. Morrogh was also an inventor of many instruments and designed a sailing yacht.[2]

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1. Rogers and Sayre, *Healing Art*, 69.

2. Ibid.

On July 23, 1766, a major historic meeting took place at Duff's Tavern, located on the corner of Albany and Peace Streets in New Brunswick. The Medical Society of New Jersey was organized as the first colonial medical society.[3] Reverend Dr. Robert McKean from Perth Amboy was the state society's first president.[4] Adopted at the first meeting of the Medical Society of New Jersey, the "Instruments of Association and Constitutions" "outlined the aims and regulations of the new association."[5] The Articles and Laws of the Constitutions "encouraged honesty and integrity in matters relating to doctors and patients."[6] According to the constitution, members were to "strive for the highest standards of treatment, consult with other physicians, share discoveries and improvements, treat the poor without fee." The membership was to "do all in its power to discourage and discountenance all quacks, mountebanks, imposters, or other ignorant pretenders to medicine."[7] Although seventeen physicians had responded to an advertisement placed in the *New York Mercury* "to form a Society for their mutual Improvement, the Advancement of the Profession, and the Promotion of the Public Good," only fourteen physicians who attended that first meeting, signed the constitution.[8]

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3. Ibid., 19.

4. Cowen, *Medicine and Health*, 6.

5. Rogers and Sayre, *Healing Art*, 26.

6. Ibid., 27.

7. Susan Chore, "Historical Note: The Medical Society of New Jersey," Department of State | Divisions | NJ Historical Commission, May 1998, http://www.newjerseyhistory.org/.

8. Rogers and Sayre, *Healing Art*, 20.

After a great deal of discussion, the members of the newly established medical society developed a "Table of Fees and Rates." This was an attempt to set general and uniform fees for services provided by physicians in the state. However, the public took exception to the fee table, and accused the Society of trying "to bring the inhabitants to terms." The decision to implement and follow a fee table was repealed by the membership.[9]

States around the country had a desire to regulate medical care. As previously mentioned, anyone who wanted to practice medicine could with or without having had medical education. New Jersey became the first colony to establish a system of examination and licensing of physicians. In an effort to regulate and enhance the quality of medical practice in the state, a bill was passed by the legislature in 1772. The law, granted the state Supreme Court, aided by medical examiners, the authority to license physicians. According to historian Karen Reed, "it gave the Society the power to examine applicants for licenses to "administer Physic (medicine) and practice surgery."[10]

In 1894, the responsibility for licensing physicians fell to the State organized Board of Medical Examiners under the New Jersey "Medical Practice Act," which authorized the State Board of Medical Examiners "to regulate and license medical professionals for the protection of the state's citizens."[11] This law remains in effect today.

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9. Cowen, *Medicine and Health*, 12.

10. Reeds, *State of Health*, 42.

11. New Jersey Division of Consumer Affairs, "New Jersey Division of Consumer Affairs State Board of Medical Examiners - Board History," The Official Web Site for The State of New Jersey, section goes here, accessed May/June, 2010, http://www.state.nj.us/lps/ca/bme/board/history.htm.

In 1816, an Act was passed by the legislature that included a provision for the formation of district (county) medical societies.[12] The first county societies organized in 1816 were Somerset, Essex, Cumberland, Middlesex, Morris, and Monmouth.[13] On June 13, 1816, the following physicians met to organize the Middlesex County Medical Society: the Medical Society of New Jersey President Dr. Lewis Dunham, Drs. Jacob Dunham, Enoch Wilson, Matthias Freeman, Charles Smith, Nathaniel Manning, Ralph P. Lott, and John Van Cleve.[14]

By 1829, all counties had established a district society. The Medical Society of New Jersey was composed of delegates from each county. District societies were governed by the constitution and by-laws of the state society. The state legislature gave the Medical Society of New Jersey the authority to confer the Doctor of Medicine degree, in 1825.[15]

As a part of a federation of medical societies called the American Medical Association (A.M.A.), The State Medical Society of New Jersey observed the Principles of Medical Ethics of the A.M.A. The Middlesex County Medical Society worked in conjunction with the Medical Society of New Jersey to advocate for the rights of patients and physicians in an effort to deliver the highest quality of care. Members of the county

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12. Rogers and Sayre, *Healing Art,* 63.

13. Chore, "Historical Note."

14. Rogers and Sayre, *Healing Art,* 70.

15. Chore, "Historical Note."

societies were also members of the state society. State societies appointed delegates to the A.M.A.[16]

Formed in 1820, the Standing Committee of Medical Society of New Jersey investigated and reported on the general state of health of New Jersey citizens. Reports from district societies regarding epidemics, unusual cases, and member births and deaths were gathered and submitted to the Standing Committee, as well as any violations of Medical Society of New Jersey rules and regulations. In addition, the Committee suggested "matters for the promotion of medical science and the best interests of the profession."[17] The Society started printing and distributing its transactions and other business in *The New Jersey Medical Reporter* (an independent journal published in Burlington, New Jersey) in 1847. In 1859, the Society's transactions were published in annual volumes as the *Transactions of the Medical Society of New Jersey*.[18]

Institution of legislative measures and the establishment of professional societies and committees did not prevent quackery or sectarians from practicing outside the regular profession; however "members of the Medical Society of New Jersey saw these efforts as their stamp of approval and hoped the public would act accordingly."[19]

New Jersey eighteenth century and early nineteenth-century practitioners administered most of their services in the patient's home at the bedside. Physicians

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16. Rosemary Stevens, *American Medicine and the Public Interest: a History of Specialization* (Berkeley: University of California Press, 1998), 59.

17. Rogers and Sayre, *Healing Art,* 84.

18. Chore, "Historical Note."

19. Sandra Moss, *Institution of Legislative Measures and the Establishment of Professional Societies*, September 2010, Discussion.

usually practiced as solo practitioners, but would often call in a colleague (if one was available) to assist with difficult cases. Physicians functioned primarily as bedside comforters for patients who either got better on their own or for those who never recovered from their illnesses and eventually died.

According to historian Charles Rosenberg, "past therapeutic practices could…be construed as a mixture of ritual and placebo."[20] There wasn't much the doctor could offer the patient during this period and patients didn't expect much in the way of miracle cures from their doctors. If treatment failed and the patient died, then the death was attributed to "God's Will."[21]

The early nineteenth-century physician had no diagnostic tools. The physician and patient shared the same conceptual framework in the understanding of traditional medicine and therapeutic practices. The physician, as well as the patient, relied on the phenomenon of "intake and outgo," to evaluate a patient's health condition and forecast outcomes.[22] Rosenberg explains that "it was the physician's responsibility to 'regulate or restore' the body's normal secretions whenever interrupted."[23] According to Roy Porter, in *The Greatest Benefit to Mankind: a Medical History of Humanity*, bodily fluids or "humours" (blood, phlegm, yellow and black bile) were observed and regulated in an

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20. Charles E. Rosenberg, *Explaining Epidemics and Other Studies in the History of Medicine* (Cambridge: Cambridge University Press, 1992), 9.

21. Ibid., 18.

22. Ibid., 14.

23. Ibid., 21.

effort restore health.[24] The aggressive treatments administered by regular physicians (i.e. bleeding, severe purges and emetics) provided "visible and predictable physiological effects" (i.e. vomiting, diarrhea and pain control) as evidence that there was a change in the "body's internal balance."[25] Application of therapeutics, often referred to as "heroic therapy," gave assurance to all involved that something was being done to help the patient.[26] No matter how harsh the treatments, the early nineteenth century physicians believed in the therapeutics they practiced. Physicians routinely prescribed the same therapeutics for themselves and their families.[27] The physician's position in society depended on a shared belief between the doctor, patient, and family that the doctor had the knowledge, skills, and the ability to care for the sick. This sacred bond upheld the ritualistic practices of bedside medicine.[28]

During the home visit process, physicians rarely attended to a patient without the presence of family members. Roy Porter identifies the following scenario of a "bedside manner" approach to medicine in his book, *Blood & Guts: A Short History of Medicine:* the usual procedure for a doctor when he reached the patient's house was to greet the relatives and "pat all the kids on the head before approaching the bedside. He greeted the patient with a grave look and a pleasant joke. He felt the pulse and inspected the tongue,

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24. Roy Porter, *The Greatest Benefit to Mankind: a Medical History of Humanity* (New York: W. W. Norton, 1997), 57.

25. Rosenberg, *Explaining Epidemics*, 15.

26. James C. Whorton, *Nature Cures: the History of Alternative Medicine in America*, (Oxford: Oxford University Press, 2002), 6.

27. Rosenberg, *Explaining Epidemics*, 19.

28. Ibid., 11.

and asked where it hurt. This done, he was ready to deliver an opinion and prescribe his pet remedy."[29]

The physician dispensed his own medications and his office equipment usually included a mortar and pestle, scales, vials, and bottles.[30] Doctor fees for visits varied according to period, location, travel time and community. Most doctors made their money from the medications they dispensed. In the 1880s, Dr. Charles F. Clarke of Woodbury, a city in Gloucester County, New Jersey, recorded his patient visits and accounts in a large daybook. He listed the patient and family, the date, the treatment (but not always the diagnosis), as well as payments made in cash. Sometimes payments were made in farm produce or labor. "For simple visits on foot to give advice, he charged little to nothing. His medical income came from delivering babies, bloodletting, tooth pulling, surgery, out-of-town visits, and above all, the medicines he and his family compounded."[31]

Since there were no organizations to enforce standards of practice for medicine as a profession, physicians were free to choose any therapies they wished to administer. Orthodox practitioners used the aggressive therapies advocated by traditional medical school professors, like University of Pennsylvania medical professor Benjamin Rush, or their own preceptors (during apprenticeship). Other practitioners practiced gentler applications of healing, such as "vis medicatrix naturae –healing power of nature," i.e.

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29. Porter, *Blood and Guts*, 41.

30. Cowen, *Medicine and Health*, 19.

31. Reeds, *State of Health*, 45.

homeopathy, chiropractic, hydropathy, osteopathy and naturopathy, but regular practitioners considered anything outside of orthodox medicine as quackery.[32]

Eager to find less aggressive treatments, many Americans rejected the traditional practices of purges and bleedings and turned their attention to non-traditional therapeutics like homeopathy (which advocated among other things, highly dilute medications and the so called "law of similar," when a drug produced symptoms of a specific disease, given in extremely small doses would cure it),[33] naturopathy (diet, mental state, exercise, and hygiene),[34] and hydropathy (water as the primary curative agent).

Popular support was generated for irregular medicine when regular doctors and their "heroic" methods came under intense scrutiny, during the Jacksonian democracy era (1820s and 1830s), which advocated a philosophy of hard work, economic freedom and rights for the common man.[35] A major unconventional system of medical treatment that swept the nation in the early nineteenth century was founded by Samuel Thomson. Thomsonianism was a democratic approach to health, which made every man his own physician. Thomson, an unschooled farmer who experimented with plants and herbs as a young person, believed as the Greeks did, that the body was made of four elements: earth, air, fire, and water. An imbalance of these elements resulted in illness. This system was based on a major principle that there was "one disease and one remedy, which was to

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32. Whorton, *Nature Cures*, 6.

33. Ibid., 52.

34. Ibid., 195.

35. Ibid., 34.

deplete the body."[36] Health could be restored by means of steam baths and hot botanicals like red pepper, and the use of emetics (lobelia inflata), purgatives, enemas, and sweat-producing herbs, which would clear the body of all obstructions to health.[37] Thomson believed in purging but not in bleeding patients.

Any layman could become a Thomsonian physician "by purchasing Thomson's New Guide to Health and a kit of Thomson's sequentially numbered remedies."[38] John J. Waldron of New Brunswick was among the few Thomsonian practitioners in New Jersey. In 1831, he paid twenty dollars for the "Right" to practice medicine under the Thomsonian system. This action "constituted" him as a member of the friendly botanic Society, which entitled him "to all the privileges there unto Belonging."[39]

It wasn't long before Thomsonians were fighting amongst themselves for the same political and professional aspirations held by their regular physician counterparts (the ability to generate profits and to be recognized as an authorized profession).[40] The Thomsonianism movement declined around the mid-nineteenth century soon after Thomson's death in 1843.[41]

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36. Starr, *Social Transformation*, 52.

37. Ibid., 51.

38. Sandra Moss, "Fountains of Youth: New Jersey Water-Cures," Garden State Legacy, 2008, accessed November 16, 2010, http://www.gardenstatelegacy.com/.

39. Ibid.

40. Starr, *Social Transformation*, 53.

41. Ibid., 54.

Religious denominations like Christian Scientists, led by Mary Baker Eddy (1821-1910) and the Seventh Day Adventists provided other avenues for alterative healing practices. Christian Science promoted the idea that "sickness was not in the body, but in the mind and could be cured by mental effort and faith alone."[42] Seventh Day Adventists (1860's) preached abstemiousness and vegetarianism. They asserted the use of natural remedies to heal diseases: water (hydropathy), proper diet, exercise and fresh air.[43]

The principal medical factions in America during the second half of the nineteenth century were the eclectics and homeopaths.[44] The eclectics were botanic doctors, "that originated independently of Thomsonians, but used many of their therapies." Eclectics borrowed from all schools of practice and incorporated anything they deemed as "effective and safe," but campaigned against the excessive use of drugs and aggressive practices (e.g. bleeding) of the regular profession.[45] According to James C. Whorton in *Nature Cures: the History of Alternative Medicine in America*, the eclectics' only principle was "Use anything that works."[46]

Many New Jersey residents, who could not find or afford a "regular" doctor, or who wanted an alternative to conventional treatments, turned to unorthodox practitioners. According to historian Karen Reeds, "Botanic medicine, Thomsonism, eclectic medicine,

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42. Porter, *Blood and Guts*, 50.

43. Ibid., 51.

44. Starr, *Social Transformation*, 96.

45. Whorton, *Nature Cures,* 47.

46. Ibid., 47.

hydropathy, and homeopathy all had a considerable presence in New Jersey, especially between 1854 and 1890, when, by state law, anyone with a medical diploma from virtually any institution that declared itself a medical school was allowed to practice in New Jersey."[47] Reeds states in her historical account of medicine in New Jersey, *A State of Health: New Jersey's Medical Heritage,* that of approximately 750 New Jersey medical practitioners in 1866, one in eight were "irregulars." Most of these unconventional practitioners were homeopaths. [48]

During the 1800s, James Still of Medford, New Jersey, the "black doctor of the Pinelands," was sought after for medical care and comfort by residents from South Jersey and Philadelphia.[49] Son of former slaves, James Still was not a trained or licensed physician, but a self-taught practitioner. (Figure 4.1) "Doctor" Still, as he was respectfully called, offered his community an alternative to heroic treatments with his gentle botanic remedies.[50] Despite racial prejudice, a life begun in poverty, and very limited formal education, Still made a prosperous living by preparing, selling and delivering herbal medicines. He was advised by a lawyer to charge only for the

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47. Reeds, *State of Health*, 45.

48. Ibid.

49. Ibid., 42.

50. New Jersey Department of Environmental Protection, "DEP Acquires Historic Office and Homestead of James Still in Medford," The Official Web Site for The State of New Jersey, News Release, http://www.nj.gov/dep/newsrel/2006/06_0010.htm (accessed May 28, 2010).

medicines and the delivery, but not for the issue of prescriptions. In this way he could not be fined for practicing without a license.[51]

Figure 4.1. Dr. James Still (1812-1882)
Source: http://www.medfordnj.com.

Homeopathy was the most popular irregular practice from the 1850s to the start of the twentieth century. This alternative system was founded by German physician Samuel Hahnemann (1755–1843) who began his career as a regular MD, but later "lost confidence" in regular therapies.[52] As previously mentioned, homeopathy was founded on the principle of the "law of similar" – "like cures like." In order for a drug to have its most powerful effect, it had to be administered in minute doses, prompting the body's own immune system to heal itself. Paul Starr in *The Social Transformation of American Medicine* offers the following rationale for homeopathic treatment: "A patient's natural disease was somehow displaced after taking homeopathic medicine by a weaker, but

51. Reeds, *State of Health,* 42.

52. Whorton, *Nature Cures,* 49.

similar, artificial disease that the body could more easily overcome."[53] Homeopathic doctors were able to win favor of the public through the development of patient-doctor relationships. These empathetic practitioners listened carefully and patiently to each individual patient's report of symptoms and concerns (both physical and mental) before they presented a diagnosis and offered treatment.[54]

Grover Taylor Applegate was a homeopathic physician who practiced in New Jersey. Dr. Applegate was born in Red Bank, New Jersey in 1859 and attended public schools. He taught school in Chapel Hill, New Jersey and was principal of the public schools of Holmdel. During the latter part of his years as principal, he studied medicine under the "preceptorship" of Dr. A. F. Trafford. He was matriculated at Hahnermann Medical College and Hospital of Chicago and graduated from there in 1883. Dr. Applegate settled in New Brunswick, where he started his practice and raised his family. He became a member of the New Jersey State Homeopathic Medical Society in 1884, was treasurer from 1891 to 1893 and held the position of president in 1894. Later in 1900, Dr. Applegate was appointed state medical examiner.[55]

When the first State Board of Medical Examiners was created in 1890, its membership included five regular practitioners, three homeopathic practitioners, and one

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53. Starr, *Social Transformation*, 97.

54. Whorton, *Nature Cures*, 65.

55. William H. King, ed., *History of Homeopathy and Its Institutions in America: Their Founders, Benefactors, Faculties, Officers, Hospitals, Alumni, Etc., with a Record of Achievement of Its Representatives in the World of Medicine*, PDF, vol. VI (New York: Lewis Publishing Company, 1905), 47.

eclectic practitioner.[56] Regular physicians and irregular or sectarian physician fought to establish themselves as reputable professionals and to earn the respect and the support of the communities they served. Informally trained practitioners were not professionalized to any significant degree until the nineteenth century. Some "alternative healers" came together within their specific groups to prescribe the same drugs, adhere to the same theory of practice, establish schools, and publish journals.[57] Irregulars presented their therapies as being less brutal than the drugs prescribed by regular practitioners. No one could contest the horrific side effects that resulted from the use of therapies such as calomel, for which caused the patient's mouth to swell, cheeks and gums to bleed, and in extreme cases, ulcerate, and teeth to fall out when given repeatedly over time.[58] Many New Jerseyans, weary of traditional medicine and its harsh remedies, were attracted to the sure-fire cures ("magnetic, electrical, chemical or herbal cures") promised and marketed by charlatans and sectarians.[59]

One of the most interesting and well known patent medicines was Lydia Pinkham's vegetable compound. (Figure 4.2, Lydia Pinkham and Figure 4.3, Pinkham's iron tables). This remedy for the "female complaint" was widely marketed and advertised in newspapers and women's magazines, during the late nineteenth century.[60]

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56. Cowen, *Medicine and Health*, 74.

57. Whorton, *Nature Cures*, 8.

58. Ibid., 4.

59. Porter, *Blood and Guts*, 46.

60. Vanderbilt University Medical Center, "Special Collections Digital Library - Patent Medicine Collection," Vanderbilt University Medical Center, Lydia Pinkham,

Figure 4.2. Lydia Pinkham (1819-1883). Source: Photos of Lydia Pinkham-Bing Images, http://www.bing.com.

Figure 4.3. Pinkham's iron tablets. Source: *Voices from Calhoun County*, http://www.fnai.org/ARROW/almanac/history/history_oralhistory_Bylers.cfm.

Proprietary medicines won loyal followings when manufacturers turned to ingenious advertising strategies. Many of these nostrums were promoted as exotic promises of cure and prevention. Lydia Pinkham's huge success was attributed to her skillful marketing approaches directed toward women. "Comprised of black cohosh, life root, unicorn root, pleurisy root, fenugreek seed and a substantial amount of alcohol, Lydia's Vegetable Compound claimed to bring relief to women during the menstrual cycle by alleviating menstrual cramps, and also during menopause by counteracting depression, hot flashes, and other symptoms."[61] Pinkham solicited women's testimonies

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(accessed May 27, 2010), http://www.mc.vanderbilt.edu/biolib/hc/nostrums/pinkham.html

61. Harvard University, "Open Collections Program: Women Working, Lydia Estes Pinkham (1819–1883)," Harvard University Library: Open Collections Program: Home, http://ocp.hul.harvard.edu/ww/pinkham.html (accessed May 18, 2010).

as positive confirmation to the effectiveness of her herbal compound. In addition, she encouraged women to write to her about their medical and mental health complaints. When the Pure Food and Drug Act of 1906 forced the Lydia Pinkham company to reveal that the compound contained up to 20% alcohol, the formula was changed.

Other manufactures of patent medicines used similar marketing strategies to promote their products in Middlesex County during this period. Almanacs, annually published books of subject related information, were very popular mediums for patent medicine advertising. For example, the G. G. Green Firm in Woodbury, New Jersey, known for their Green's August Flower and Boschee's German Syrup, published an almanac from around 1870 to the early twentieth century[62] (see figures 4.4 and 4.5). Among the many patent medicines produced in New Jersey, during the nineteenth century, Dr. Dutton's Angle-Worm Liniment for pain was manufactured in New Brunswick by Horace L. Fairchild, M.D.[63]

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62. Hagley Museum and Library, "August Flower and German Syrup Almanac: Patent Medicine Exhibit: Hagley Museum and Library," August Flower and German Syrup Almanac, accessed November 18, 2010, http://www.hagley.lib.de.us/library/exhibits/patentmed/items/augustflower.html.

63. Reeds, *State of Health,* 83.

Figure 4.4. G. G. Green Firm patent medicine advertisement.
Source: http://www.hagley.org/library/exhibits/patentmed/items/augustflower.html

Figure 4.5. Promotional tag for George Gill Green's "Green's August Flower" and "Boschee's German Syrup" from 1904. Source: Rutgers University archive, Newark, New Jersey, http://en.wikipedia.org/wiki/George_Gill_Green , (accessed November 18, 2010).

Some medicines used in the nineteenth century, such as opiates, cocaine and mercury later proved to be extremely harmful. Patent medicines like the Cocaine Toothache Drops described in the advertisement below were very popular and required no prescription.[64] (Figure 4.6)

64. University of Victoria, "Medicine in 1860s - 19th Century Medicine," University of Victoria - Cocaine Toothache Drops, Web.UVic.ca, accessed November 18, 2010, http://web.uvic.ca/vv/student/medicine/medicine19c.htm.

Figure 4.6. Nineteenth century advisement – "Cocaine Toothache Drops"
Source: U.S. National Library of Medicine, History of Medicine Division
http://ihm.nlm.nih.gov.

Quinine was used frequently in New Jersey for fever as early as 1829. To address any type of pain or discomfort, opium and morphine were freely used. In 1877, Dr. Elias J. Marsh of Newark reported using morphine himself for hay fever.[65] As the problem became more pervasive, New Jersey physicians, concerned about the growing problem of narcotic addiction, called for legislative actions to prohibit the dispensing of drugs without a prescription. These laws would come decades later, just after the turn of the century. Until the Harrison Act was passed in 1914, which allowed narcotics to be dispensed only by a prescription from physicians or dentists, the public could legally purchase drugs, hypodermic needles and syringes. Opiates and cocaine were widely available.[66] Around this time, proprietary drug advertisements in local newspapers began

65. Cowen, *Medicine and Health*, 49.

66. Gloria J. Baciewicz, MD, "Injecting Drug Use: EMedicine Psychiatry," EMedicine - Medical Reference, accessed May 5, 2009, http://emedicine.medscape.com/article/286976-overview.

to highlight the negative effects of narcotics and promote their products as safe and free from these harmful substances. (Appendix 4.A. Father John Advertisement).

Today we realize that despite the outrageous claims behind the non-traditional medicines and irregular practices, the patients of irregular doctors got better because most sick people eventually overcome their ailments through the body's own healing processes. Patients who received therapies from irregular practitioners probably did better because the drugs prescribed by the regular physicians made their patients sicker than their presenting illnesses.

With the development of the germ theory in 1860s and 1870s by Louis Pasteur, Joseph Lister, Robert Koch and others, the nineteenth century witnessed a great advance in public health. The focus of medicine expanded to include implementation of public health measures. Advances in understanding the causes and control of disease changed the way medicine was practiced and public health measures were implemented during the late nineteenth century. Medical practice was also affected by popular beliefs about illness and by public views on appropriate actions to be taken to ensure good health. The scientific breakthroughs in bacteriology empowered public health reformers to institute community health strategies that promoted healthy behaviors, sanitation, and control of contagious infections, through organized community efforts.[67]

No individual was more influential in moving sanitation reform in New Jersey than Dr. Ezra Mundy Hunt (1830–1894). Dr. Hunt was born in Metuchen, New Jersey,

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67. Division of Health Care Services Institute of Medicine, "The Future of Public Health," The National Academies Press, 1988, accessed November 18, 2010, http://www.nap.edu/catalog/1091.html, 58.

on January 4, 1830. He graduated from the College of Physicians and Surgeons, New York City, in 1852, and practiced in Metuchen from 1852-1876. [68] In 1861, Hunt called for an end to the practice of heroic medicine by advocating a more moderate approach. He avoided the old practices of bleeding and emetics and included sedatives, stimulants, and tonics in his arsenal of therapeutics.[69] Although not predicated on the germ therapy, Hunt and a small group of New Jersey sanitary reformers believed that dirt and pollution played a significant part in the causation of disease, and further, that disease and death in a community could be limited with the availability of clean air and water, pure food and moral living.[70] In 1864, Hunt served as president of the State Medical Society and in 1866, under his chairmanship, New Jersey established a Sanitary Commission. The work of the commission led to the creation of the State Health Commission, in 1874, of which Hunt was asked to head. [71] In addition, Ezra M. Hunt served as president of the American Public Health Association (A.P.H.A.) in 1872, and was instrumental in organizing the New Jersey State Board of Health in 1877, which later became known as the State Department of Health. [72] He also authored and published numerous books and articles.

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68. "Ezra Mundy Hunt," in *The Cyclopaedia of American Biography: Comprising The Men And Women Of The United States Who Have Been Identified With The Growth Of The Nation*, ed. John H. Brown, vol. VI (Boston: Kessinger Publishing, LLC, 2006), 243.

69. Cowen, *Medicine and Health*, 32.

70. Sam Alewitz, *Ezra Mundy Hunt*, 5.

71. Rogers and Sayre, *Healing Art,* 134.

72. Ibid., 135.

In 1876, components of Pasteur's work on the germ theory were reported to the Medical Society of New Jersey and, as previously mentioned, the following year New Jersey established its state board of health.[73] Despite the fact that there was still some debate going on in the state regarding the germ theory, on March 11, 1880, an act concerning the protection of the public health and the record of vital facts and statistics was passed that required municipal governments in New Jersey to establish local boards of health. The boards were directed to eliminate nuisances (e.g. filthy privies, unclean water supplies, garbage, and contagious individuals), impose isolation and quarantine, require birth and death records, and enforce laws around adulteration of food and drugs, among other actions.[74] Public health officers (originally called sanitarians) moved away from municipal sanitation responsibilities to centralized state regulation of services.

Conditions in New Jersey did improve during the nineteenth century as public health acts were introduced to address areas such as hygiene, food safety and water pollution. Much of the success of sanitary reforms in the state is owed to Dr. Ezra Mundy Hunt and the other sanitarians that were steadfast in their efforts to establish public health programs and public health institutions in New Jersey.

At the turn of the century, public opinion about the provision of health care continued to evolve nationally and locally, as it was influenced by world events, cultural beliefs and the institutionalization of care. The development of antiseptic and aseptic techniques had a dramatic impact on surgery and wound care. The germ theory of

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73. Cowen, *Medicine and Health*, 38.

74. Ibid., 86.

disease was accepted, and antiseptic surgery dramatically reduced infection and mortality rates. However, there were still few effective drugs available during this period.

New theories began to enter the mainstream during the early decades of the twentieth century with new scientific discoveries and technologies. The medical profession in New Jersey was aware of the advances in science and medicine, the "nineteenth century older practitioner was kept informed of innovations, no matter how overwhelmed he may have been by them, and the younger practitioner was increasingly the product of more scientific training." [75]

Late nineteenth-century physicians, in New Jersey were providing services in their offices, patients' homes, and the hospital, "a relatively new institution in New Jersey."[76] Physicians, who were impressed with the new medical discoveries and technologies of the times, thought of themselves as practicing scientific medicine.[77] However, as new advances in medicine continued to develop at a rapid pace, many general practitioners felt overwhelmed. Physicians realized that one individual could not possibly know everything there was to know about practicing modern medicine. General practitioners increasingly turned to their colleagues who were specializing in different fields of practice (i.e. surgery), as well as to technicians who had developed specialized skills in a specific diagnostic procedure. As a result, patients became increasingly dependent on strangers for their medical care.

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75. Ibid., 53.

76. Reeds, *State of Health*, 48.

77. Stanley Joel Reiser and Michael Anbar, *The Machine at the Bedside: Strategies for Using Technology in Patient Care* (Cambridge: Cambridge University Press, 1984), 8.

Middlesex County practitioners did not adopt and use new technology immediately. As was the case in many other states, medical progress in New Jersey at the turn of the century was slow and lagged behind the pace set by European medicine. Cowen provides the following explanation: "The absence of medical schools in New Jersey, the scarcity of teaching clinics, and the lateness of hospital development, imposed particular handicaps on the State."[78] By the 1890s American doctors began to catch up with European practitioners in adopting and improving upon medical advances like antiseptic surgical practices.[79] Many New Jersey practitioners who went to Europe to learn from European practitioners, brought new procedures back to New Jersey and trained others in them.[80]

One of the major medical advances in the nineteenth century was the introduction of new approaches and application of new technologies to physical diagnosis (i.e. physical examination). New-fangled medical apparatus and techniques contributed to fresh and innovative practices. Following the development of the stethoscope, invented in 1816, improved microscopes, clinical thermometers (1866), ophthalmoscope (1847), laryngoscope (mid 1800s), sphygmomanometers that allowed the testing of blood pressure (1881), and the X ray (1895) appeared.[81] The hypodermic syringe, which increased the accuracy of drug administration, was invented in the mid-1800s and was

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78. Cowen, *Medicine and Health*, 111.

79. "Antisepsis - Used, First, Anesthetic, Blood, Body, Uses, History, Antiseptic History, Puerperal Fever, Listers Work, Modern Antisepsis," Medical Discoveries, http://www.discoveriesinmedicine.com/A-An/Antisepsis.html (accessed May 16, 2010).

80. Cowen, *Medicine and Health*, 124.

81. Porter, *Blood and Guts*, 42.

being used in the United States by the late 1800s and early 1900s.[82] According to Cowen, the hypodermic needle had come into general use in New Jersey around the 1860s. The Standing Committee of the State Society reported in 1874 that the hypodermic needle was being used extensively and it was considered a safe procedure. "Morphia" was the drug most often used with the syringe.[83]

As the practice of medicine continued to evolve in the state and the germ theory of disease became more accepted among the New Jersey medical community, the early twentieth century general practitioner looked beyond the standard physical examination used to establish a diagnosis. Physicians turned to new diagnostic laboratories to enhance their diagnostic accuracy. These practices included analyses of bodily fluids (urine, blood, sputum) and were performed in an effort to gather more precise and scientific information about the patient's condition. Practitioners sought to eliminate evidence influenced by their patient's own reports of the problem and focused objectively on the outcomes provided by diagnostic testing. In this process the physician could learn something about the patient that the patient himself could not know or relate (e.g. stethoscope, lab test).

The public welcomed these practices and began to demonstrate a new found respect for physicians. According to Roy Porter, "The best respected general

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82. "Antisepsis."

83. Cowen, *Medicine and Health*, 50.

practitioners…were those who could impress upon patients that they were skillful, serious, attentive, and trustworthy and doing their best."[84]

Modern medicine is "an elaborate system of specialized knowledge, technical procedures, and rules of behavior," says Starr.[85] The hospital, especially in large cities, came to symbolize medicine in the twentieth century. Systematic physical examinations and diagnostic tests became routine during this period. The twentieth century brought new found authority to the profession and changed the roles and responsibilities of general practitioners. General practitioners continued to provide general medical care to patients and families, but at the turn of the century they also informally assumed the role of gatekeepers to the hospital and conduits to specialists.[86] Patients were encouraged to seek care in hospitals, where they would get the best most modern treatments. Those who could afford it sought out specialists directly without assistance of a general practitioner.[87]

Physicians, directed by the *Hippocratic Oath* "to leave knife-work strictly to the surgeon," left a clear demarcation of labor between medicine and surgery. Surgery, work done by hand and not by the head (intelligence or book learned), was viewed as inferior.[88] During the early twentieth century, however, surgical practice was revolutionized by the discovery of asepsis and antisepsis and was propelled to modern

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84. Porter, *Blood and Guts*, 43.

85. Starr, *Social Transformation*, 3.

86. Porter, *Blood and Guts*, 43.

87. Stevens, *American Medicine*, 134.

88. Porter, *Blood and Guts*, 110.

medicine status. Despite the fact that "advancement of surgery in New Jersey, like the progress of medical research, was . . . hindered by the absence of medical schools in the state," innovative surgical techniques and medical research were introduced to New Jersey through the literature and by New Jersey physicians who learned and acquired skills and knowledge from the relatively advanced medical centers in neighboring states (mainly New York City and Philadelphia).[89]

As hospital facilities, antiseptic and aseptic procedures and specialized procedures kept improving, "there was virtually no kind of surgery that could not and was not performed in New Jersey."[90] Hospitals became the key agents in the integration of new medical approaches based on physical examination, advanced surgical techniques, and the pathology laboratory. The advances in science and technology began to change delivery of healthcare in hospitals at the turn of the century and these establishments evolved from predominantly sites of charity care to modern medical institutions.

The death rate from abdominal and pelvic surgery in the decade of the 1880s was 40 percent, with the acceptance of anesthesia and sterile surgical procedures, by 1900 it fell below 5 percent. Surgery became both more acceptable to patients and more challenging to practitioners. [91] Surgical sub-specialties such as gynecology and urology, developed quickly after the introduction of modern techniques in abdominal surgery.

By 1925, blood tests played a significant role in diagnosing patient's aliments and X-ray tests were routine procedures for patients suspected of having broken bones.

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89. Cowen, *Medicine and Health*, 123.

90. Ibid., 124.

91. Stevens, *American Medicine*, 49.

Radiologists and pathologists became a part of institutionalized medicine in hospitals around this time.

Wilhelm Roentgen was a German physicist who discovered x-rays in 1895. According to Bettyann Holtzmann Kevles in *Naked to the Bone: Medical Imaging in the Twentieth Century*, "By 1896 scientists knew that electromagnetism existed and how it could be harnessed, but they did not understand the nature of its waves, rays, or particles . . . All that was known in 1896 was that an electric current, energized to a very high voltage in a partially evacuated glass tube, produced mysterious 'X'-rays that when directed through an object left a permanent record of the internal structure of that object on a photographic plate."[92]

According to historian Sandra Moss, New Jersey physicians learned about the new technology and began to use it in their offices and hospitals practices around the end of the nineteenth and early twentieth century. Moss states that New Jersey physicians reported their experiences with the x-ray technology in the Transactions of the Medical Society of New Jersey, during this period.[93] New Jersey delegates to medical society meetings in other states conveyed the latest advances in radiology. For example, New Jersey delegates to the Massachusetts State Medical Society recorded the details of that society's 1896 meeting in Boston, in which X-rays of a living subject were taken by using the Roentgen process and demonstrated to the audience. A New Jersey delegate to

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92. Bettyann Kevles, *Naked to the Bone: Medical Imaging in the Twentieth Century* (New Brunswick, NJ: Rutgers University Press, 1997), 60.

93. Sandra Moss. M.D., "New Jersey Radiology: the First Decade," *New Jersey Medicine* 92, no. 11 (November 1995): 727.

the annual meeting of the New Hampshire Medical Society described his excitement upon witnessing a demonstration of the application of the x-ray to surgery.[94]

Radiology, a specialty of turn-of-the-century medicine, was being used to diagnose and confirm disease. X-rays were also used, often recklessly, for therapy to treat cancer, tuberculosis, and infertility.[95]

Radiologic equipment was available in some New Jersey hospitals by the early 1910s and considered a must have for modern hospitals. Portable units developed for hospital use made it easy to take pictures of patients without having to transport them to a different room or department.[96] As we saw in Chapter Three, Dr. Frank M. Donohue, member of the St. Peter's Medical Staff, donated x-ray equipment to St. Peter's Hospital the year it opened in 1907.[97]

In the early twentieth century, general practitioners began to look to experts for X-ray advice and the public welcomed the new technology. Those who could afford it paid for images of their skeletal structures. For the first time ever, patients were able to see evidence of their own medical malformations. These findings supported the physicians' diagnoses and helped the patients to decide what treatment option (if any) to take.

There were downsides to this new technology. Many early radiologists paid a high price in radiation induced malignancies. No one understood the effects X-ray had

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94. Ibid.

95. Kevles, *Naked to the Bone*, 59.

96. Ibid, 74.

97. St. Peter's General Hospital, *First Annual Report*, 13.

on living tissue. The rays sometimes caused burns, hair loss and rashes. In extreme cases some radiologists lost fingers, hands and limbs as a result of their work with X-rays. As some inventors worked to improve the techniques, others worked to make the process safer.

Despite the family practitioners' attempts to guard their interests against the ever encroaching specialists, they soon realized it was a lost cause. By the late 1920s, even in rural areas, general practitioners were no longer attempting major surgery and were steering their patients to hospitals and surgeons.[98] "By 1930, one physician in four in the United States was a specialist."[99]

As mentioned previously, New Jersey lacked a medical school until the 1950s, which limited the progress of medical research in New Jersey. However, considerable research was being done in the universities and at the State Health Department, as well as in laboratories in private practices and in pharmaceutical houses. Some of this work made a significant impact in the history of medicine and health.[100] As we saw in Chapter Two, in the early 1890's Dr. Henry Leber Coit, a pediatrician from Newark, New Jersey, worked with the Medical Milk Commission in Essex County to secure safe milk by establishing criteria for the production and distribution of safe milk.[101] Initial criteria for

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98. Stevens, *American Medicine*, 147.

99. Reiser and Anbar, *Machine at the Bedside*, 9.

100. Cowen, *Medicine and Health*, 140.

101. Reeds, *State of Health*, 37.

certifying safe milk included bacteriological testing of milk and examinations of milk dairies and livestock.[102]

An example of research conducted in Middlesex County, during this period of study, comes through the work of Dr. John B. Smith, who at the turn of the century studied the characteristics, life cycles, and habitat of various species of mosquito at the Rutgers College of Agriculture. Smith's work led to strategies which eliminated malaria causing mosquitoes. The life and work of Dr. Smith will be discussed in more detail, in Chapter Five.

We learned earlier that nineteenth century physicians mixed their own medicines. During the early decades of the twentieth century, prescriptions were filled by pharmacists using commercially prepared ingredients. Frederick Barnett Kilmer, who was a pharmacist and prominent figure in the Middlesex County community during the late nineteenth century and early twentieth century, worked to advance pharmacy and the role of the pharmacist in the health care field. Kilmer's son, Alfred Joyce Kilmer, (December 6, 1886 – July 30, 1918), was an American journalist and poet, famous for his short poem entitled "Trees."[103]

The success of scientific medicine, the public's perception of the "desirability of medial specialization," and the growth of transportation systems changed the traditional

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102. Cowen, "Profiles in New Jersey."

103. Roy A. Bowers, Ph.D., "Frederick B. Kilmer: A Notable New Jersey Pharmacist," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 54.

relationship between doctor and patient in the early twentieth century.[104] Instead of spending a great deal of time listening to the patient's subjective complaints and doing an extensive physical exam, the early twentieth century physician shortened the time spent with his patients by referring them to specialists and ordering specific tests (chest x-ray, urinalysis, eye exam etc) in the diagnostic process. The need for referrals brought about a shift from dependence on patients to dependence on colleagues, according to Starr, which not only changed the patient-doctor relationship, but also "changed the direction of the profession from a competitive to a corporate one."[105]

The focus of diagnosis and medical intervention had changed from balancing the four humors to identifying a single suspected diseased organ. With so much attention placed on a single entity (organ, a test result, blood, urine), aspects of the individual (family role, occupation, community position, social activities) were becoming lost in the diagnoses and treatment processes. As previously mentioned, opportunities for the patient to tell his medical story was diminishing. This resulted in the physician spending less time (if any) addressing the patient's ability to cope emotionally, financially or socially with his illness.

Richard Clarke Cabot (1868-1939) was a Harvard professor and was on staff at Massachusetts General Hospital in the early 1900s. He was instrumental in establishing the first hospital social work department in America at Massachusetts General Hospital. The department was formed to help patients deal with the psychosocial elements of their

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104. Stevens, *American Medicine*, 134.

105. Starr, *Social Transformation*, 230.

lives, such as, family, shelter, food, social supports, and employment, which made treatment and recovery from illness difficult for some.[106] Cabot worked to integrate social workers, counselors, and clergy with medical care, realizing that doctors were already too busy with their responsibilities to address non-medical issues. He understood that attending to patients' psychosocial concerns would help them cope better with treatment and recuperation.

Establishing a link between illness and the social conditions of the patient, Ida Cannon, a trained nurse, chaired the first social work department in a hospital in the United States at Massachusetts General Hospital. She was made chief of the department in 1915, a position she held for thirty years until she retired in 1945.[107] In that same year, **i**n an address to the National Conference on Social Welfare (NCSW), Abraham Flexner, who was an influential critic of American higher education and published a report which led to reforms in the way doctors were trained, declared that social work had not yet qualified as a profession, especially because its members did not have a great deal of individual responsibility and because it lacked "a written body of knowledge and educationally communicable techniques."[108]

In an effort to professionalize medical social work, Ida Cannon collaborated with the Boston School of Social Work and the Massachusetts General Hospital Department of

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106. Rosenberg, *Care of Strangers*, 313.

107. Heather Miller, "Ida M. Cannon: Founder of Medical Social Work," Harvard Square Library | Unitarian Biographies | Cambridge | History | Philosophy, accessed June 10, 2010, http://www.harvardsquarelibrary.org/unitarians/cannon_ida.html.

108. National Association of Social Workers, "1900 to 1950s Social Work Milestones," National Association of Social Workers, accessed June 7, 2010, http://www.socialworkers.org/profession/centennial/milestones_3.htm.

Social Work in developing a specialized training program for medical social workers. The American Association of Hospital Social Workers (AAHSW) was formed in 1918, as the first specialty within the field of social work. The organization was renamed the American Association of Medical Social Workers (AAMSW) in 1934.[109] Social work departments were established in the Middlesex County hospitals; however, efforts to attain information regarding the years they were established or any information on the founding leaders were unsuccessful. Nineteenth-century women performing responsibilities in their roles as caregivers, settlement house workers, and early social workers confronted many obstacles in their efforts to provide services to their communities. However, women who sought careers in other health professions, such as medicine and nursing, faced challenges that called for a change in societal values and attitudes.

Women in Medicine

During Colonial times, women were expected to care for sick relatives. A woman's place was in the home as wife, mother and daughter. Many housewives kept a stock of medicinal herbs and other remedies in the home, which were handed down orally from generation to generation. A network of kinfolk and community neighbors provided advice and assistance when illness struck in the home. Domestic medical manuals, books and pamphlets, such as William Buchan's Domestic Medicine, first published in 1769

109. Ibid.

and Samuel Thomson's botanic medical guide, first published in 1835, were very popular during this period of study.[110]

Until the mid-nineteenth century, medicine was a male monopoly and women were excluded from the traditional medical profession. Sectarians, such as homeopaths, eclectics, and Thomsonians, however welcomed women. The general feeling about women in medicine prior to that time was best described by Roy Porter, in *Blood & Guts*: *A Short History of Medicine*: "The female constitution was not designed for higher education, warned male chauvinists: dominated by their wombs or ovaries, a woman's place was in the home as wife and mother."[111] However, women did extended their healing roles outside the home in the nineteenth century to become midwives and nurses.

Attending to women in childbirth had traditionally been exclusive to women. Throughout the first three centuries of New Jersey's history, trained doctors were limited and rural Jersey families had "to rely on their own resources or were forced to turn to pharmacists, midwives, and unlicensed healers."[112] Many immigrant women however preferred midwives well into the twentieth century. Midwives did more than just help deliver babies; they practiced other forms of medicine. One learned midwifery either from a relative, usually the mother, or as an apprentice to a midwife. A few midwives trained under physicians. During times of war when doctors went off into the military,

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110. Harvard University Library, "Open Collections Program: Contagion, Domestic Medicine," Harvard University Library: Open Collections Program: Home, Domestic Medicine, accessed November 21, 2010, http://ocp.hul.harvard.edu/contagion/domesticmedicine.html.

111. Porter, *Blood and Guts*, 52.

112. Reeds, *State of Health*, 45.

the services provided by midwives increased. After the war, returning doctors resumed their positions as primary medical care providers.

In the early decades of the twentieth century, obstetricians became the provider of choice for affluent women, who sought out hospitals to have their babies. Midwives were not allowed to conduct births in hospitals. They cared more for patients who lived in rural areas, immigrants living in large cities and non-whites. Until the 1930s, many, if not most, of New Jersey's babies were born at home with midwives in attendance. "New Jersey's medical and public health community respected midwives (not the case in many other states) and worked to improve their skills and the services they provided to mothers and babies."[113]

Magdalena Kovàcs was a midwife who practiced in New Brunswick between 1917 and 1929. She also delivered babies in other communities in Middlesex and Somerset Counties. Her clients were mostly immigrants from European countries (Hungary, Poland, Russia, and others). Records show she also delivered a few African American babies.[114] Kovàcs documented the birth of the babies on special template forms bonded in booklets, and compiled by year of birth. The information recorded included the name, sex and race ("color") of the child; the place of birth (usually a street address); the parents' names, ages, and places of birth (usually a foreign country); and the total

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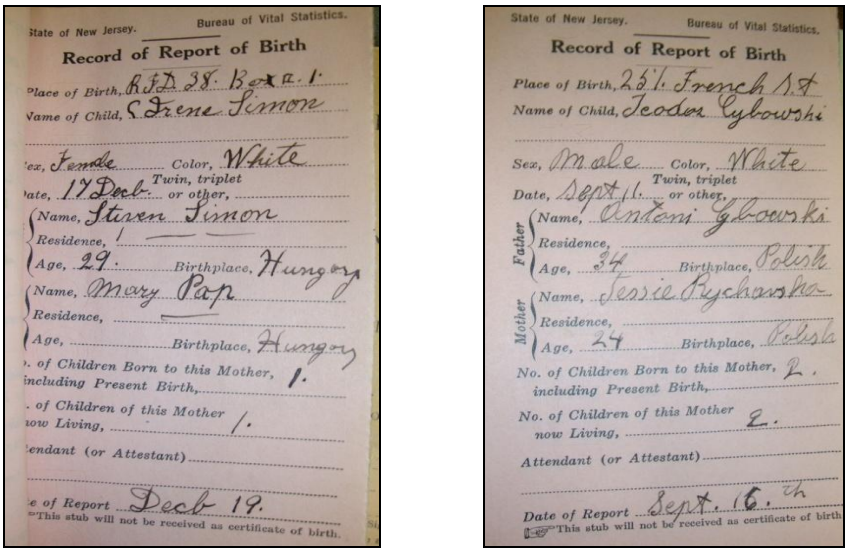
113. Ibid.

114. "Women's History Sources: Manuscripts: H - K (Rutgers University Libraries: Special Collection and University Archives)," Rutgers University Libraries, accessed June 7, 2010, http://www.libraries.rutgers.edu/rul/libs/scua/womens_fa/wfa_h_k.shtml.

number of children born to the mother.[115] (Figure 4.5). This information was also filed with the New Jersey Bureau of Vital Statistics.[116]



State of New Jersey. Bureau of Vital Statistics.
Record of Report of Birth
Place of Birth, RFD 38 Boxa. 1.
Name of Child, Irene Simon
Sex, Female Color, White
Twin, triplet
Date, 17 Decb or other,
Father: Name, Steven Simon
Residence,
Age, 29. Birthplace, Hungary
Mother: Name, Mary Pap
Residence,
Age, Birthplace, Hungary
No. of Children Born to this Mother, including Present Birth, 1.
No. of Children of this Mother now Living, 1.
Attendant (or Attestant)
Date of Report Decb 19.
This stub will not be received as certificate of birth.

State of New Jersey. Bureau of Vital Statistics.
Record of Report of Birth
Place of Birth, 25 L. French St
Name of Child, Teodor Cybowski
Sex, Male Color, White
Twin, triplet
Date, Sept 11. or other,
Father: Name, Andam Gibowski
Residence,
Age, 34 Birthplace, Polish
Mother: Name, Jessie Bychowska
Residence,
Age, 24 Birthplace, Polish
No. of Children Born to this Mother, including Present Birth, 2.
No. of Children of this Mother now Living, 2.
Attendant (or Attestant)
Date of Report Sept. 16. th
This stub will not be received as certificate of birth

Figure 4.7. Midwife Magdalene Kovàcs' patient record of birth
Source: Special collections and University Archives, Rutgers University Libraries. Magdalene Kovàcs Papers, MC 584

Stevens points out in *American Medicine and the Public Interest: a History of Specialization*, that, unlike other medical specialties, (i.e. optometry and dentistry), "midwifery developed no new technological bases in the nineteenth century on which a new profession might rise. It was also nationally unorganized. There was no effective pressure from the ranks of the midwives to offer a general alternative to medical obstetrics."[117] With legislation introduced by physicians in the early twentieth century to control the standards of their practice, the number midwives rapidly decreased. An Act

115. Magdalene Kovàcs, Magdalene Kovàcs Papers, MS MC 584, Special Collections and University Archives, Rutgers University Libraries, New Brunswick.

116. "Women's History Sources."

117. Stevens, *American Medicine*, 99.

to Regulate the Practice of Midwifery in the State of New Jersey was introduced on February 9, 1909, and passed shortly thereafter. The act declared that every person wanting to practice midwifery in the state had to apply to the State Board of Medical Examiners of New Jersey for examination and licensure. Candidates for examination had to present to the secretary of the board a certificate or diploma from a legally incorporated school of midwifery. All midwives had to secure the immediate services of a reputable physician, in cases of emergencies or complications with mother or infant. Any person practicing midwifery in the State without complying with the provisions of this act could have been found guilty of a misdemeanor and fined or imprisoned at the discretion of the court.[118]

There were 712 practicing midwives in the state in1914.[119] It was estimated that forty percent of all births in New Jersey were delivered by midwives in 1918.[120] The higher costs of physician services, the scarcity of physicians in rural areas, as well as the physical care the midwives provided, coupled with emotional and social support, contributed to the profession's ability to sustain itself. Nurse-midwifery schools opened in the United States during the 1930s. In later decades, popularity and acceptance of nurse-midwifery increased dramatically, with nurse-midwives not only servicing the poor, but also affluent consumers, who desired the benefits of the personalized holistic

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118. David Cowen, ed., "An Act to Regulate the Practice of Midwifery in the State of New Jersey," *Journal of the Medical Society of New Jersey* V (April 1909): 593.

119. The Women's Project of New Jersey, Inc., "Newark Maternity Hospital," New Jersey Women's History, accessed July 10, 2010, http://www.njwomenshistory.org/Period_4/maternity.htm.

120. Cowen, *Medicine and Health*, 172.

healthcare midwives had to offer.[121] While some nineteenth and twentieth century women were serving their communities as midwives, others were seeking healthcare employment opportunities in hospitals, private homes, schools and as public health nurses.

The history and practice of nursing in America began in the home, with women using folk remedies handed down through the generations and medicines from medicinal gardens to treat ailing and injured relatives and neighbors. Prior to the late nineteenth century, no formal nursing training existed. Hospital nursing was menial work usually performed by lower class women and some men, who generally came from almshouses or prisons. According to Paul Starr, the movement for nursing reform "originated, not with doctors, but among upper class women, who had taken on the role of guardians of a new hygiene order."[122]

Modern day nursing can be traced back to war volunteers and nuns, who cared for the wounded and the sick. Florence Nightingale in the Crimean War and Dorothea Dix in the Civil War provided care for wounded soldiers, and, with Clara Barton who founded the American Red Cross, provided the kindling that ignited the nursing profession.

Nursing education began in Europe with a small hospital and training school called the Order of Deaconesses, which opened in Kaiserwerth, Germany, in 1836. Florence Nightingale, who would later influence the development of nursing education in America called the Nightingale System, received her formal education at Kaiserwerth.

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121. American College of Nurse-Midwives, "About Midwifery:A Brief History of Nurse-Midwifery in the U.S.," MyMidwife.org - Midwifery, accessed June 11, 2010, http://www.mymidwife.org/history.cfm.

122. Starr, *Social Transformation*, 155.

[123] By the late nineteenth century, schools of nursing had opened in the United States. As the women's movement gained momentum during the late nineteenth century and early twentieth century, women from all social classes were encouraged to pursue a career in nursing. Professionalization of nursing began in the United States when training schools were established in New York, New Haven, and Boston, in 1873.[124]

Clara Weeks Shaw, who was head nurse at Paterson General Hospital in New Jersey, wrote and published the first textbook for nurses by an American nurse: *Textbook for Nursing for Use of Training Schools, Families, and Private Students* (1885).[125] Other American pioneers that influenced the nursing profession include Linda Richards, Mary Eliza Mahoney, Clara Barton, Clara Louise Maass, and Annie Warburton Goodrich.

Linda Richards (1841 – 1930) was American's first trained nurse. She graduated in 1873 from the New England Hospital for Women and Children Training School for Nurses, in Boston.[126] Mary Eliza Mahoney (1845-1926) was the first black professional nurse in America. She was trained at the New England Hospital for Women and Children and graduated in 1879. Mary Eliza Mahoney was one of the first black members of the American Nurses Association (A.N.A.). However she strongly supported the establishment of the National Association of Colored Graduate Nurses (N.A.C.G.N.),

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123. Alex Attewell, " Florence Nightingale (1820–1910)," *Thinkers on Education*, accessed July 17, 2010, www.ibe.unesco.org/publications/ThinkersPdf/nightingalee.PDF.

124. Starr, *Social Transformation*, 155.

125. Reeds, *State of Health*, 54.

126. American Association for the History of Nursing, Inc., "Linda A. J. Richards," American Association for the History of Nursing, Inc., accessed July 18, 2010, http://www.aahn.org/gravesites/richards.html.

when the A.N.A. was slow to enroll black nurses.[127] Clara Harlowe Barton (1821-1912) served as a nurse during the Civil War and in 1882 organized the American National Red Cross. Clara Louise Maass (1876 – 1901), attended a two year program at the Christina Trefz Training School for Nurses at Newark German Hospital and graduated in 1895, at age nineteen. She worked as a private duty nurse and then a head nurse at the hospital where she trained. She was also a volunteer nurse for the Army during the Spanish-American War. She cared for soldiers who were suffering from smallpox, typhoid, yellow fever and other illnesses. Clara Maass died at the age of twenty-five after she volunteered to be bitten by a mosquito in a yellow fever experiment in Cuba. In 1952, Newark German Hospital, also called Newark Memorial Hospital and Lutheran Memorial Hospital, was changed to Clara Maass Memorial Hospital, which has since moved to Belleville, NJ.[128] Annie Warburton Goodrich was born on February 6, 1866 in New Brunswick, New Jersey and earned her nursing degree at New York Hospital, graduating in 1892. She worked as superintendent of nursing for a number of hospitals in New York, and received several honorary degrees from various colleges and universities. Goodrich was the first dean of the Army School of Nursing (1918-1919) and the first dean and professor at Yale University School of Nursing (1923-1934).[129]

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127. Partners of the Heart, "African American Medical Pioneers: Mary Eliza Mahoney (1845-1926)," Partners of the Heart, American Experience, accessed July 19, 2010, http://www.pbs.org/wgbh/amex/partners/early/e_pioneers_mahoney.html.

128. Partners of the Heart, "Clara Louise Maass (1876 – 1901)," American Association for the History of Nursing, Inc., American Experience, accessed July 18, 2010, http://www.aahn.org/gravesites/maass.html.

129. Yale School of Medicine, "Annie Goodrich," Yale School of Medicine, accessed July 18, 2010, http://info.med.yale.edu/library/nursing/historical/goodrich.html.

The growth of hospitals in New Jersey during the late-nineteenth and early-twentieth century was due to the public's acceptance of institutionalized healthcare, advances in medical and surgical practice, the growth of medical technology, and the professionalization of nursing.

Public opinion about hospitals and trained nurses influenced how these institutions were designed and staffed. To help meet the demand of staffing, by the end of the nineteenth century, New Jersey had established a number of hospital-operated nursing schools. By 1904, thirty hospitals in the state had nursing training facilities.[130] By 1933, New Jersey had forty eight hospital schools for nursing.[131]

Paterson General Hospital Training School, started in 1882, was the first training school for nurses in New Jersey. Orange Memorial Hospital, also founded in 1882, was the second training school started in the state.[132] In 1884, Paterson General Hospital Training School graduated its first two nurses. The school was supervised for the first three years by Clara Weeks Shaw, the author of the first text book written for nurses by a nurse.[133]

Dr. Thomas W. Harvey felt there was an urgent need for a training school for nurses in the town of Orange and presented a prospectus to the medical staff of Orange Memorial Hospital on June 20, 1882. He proposed that the hospital establish a training

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130. Cowen, *Medicine and Health*, 101.

131. Janet L. Fickeissen, R.N., "New Jersey State Nurses' Association," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 90.

132. Irving S. Kull, ed., *New Jersey A History*, vol. IV (New York: American Historical Society, 1930), 1276.

133. Cowen, *Medicine and Health*, 100.

school to meet the demand for nurses. On July 2, 1882, Harvey's prospectus was adopted by the hospital board and a Training School Committee, comprised mostly of women from the community, was established to manage the "Orange Training School for Nurses."[134] The first class began with only one student, Miss Jennie Baldwin. After a few months, four more trainees were added to the class roster.[135] The school was incorporated on December 1, 1884. In 1906, the school was taken over by Orange Memorial Hospital and in 1919 the school's name was changed to the Orange Memorial Hospital School of Nursing.[136]

Initially, the hospitals founded by religious orders, mainly Catholic and Episcopalian, "had the immediate advantage of having a dedicated nursing corps at hand," in nuns, sisters, and deaconesses. The non-sectarian hospitals, however, had more difficulty meeting the demand for staff. On occasion, these hospitals would recruit trained nurses from out of state.[137] In an effort to maintain staffing, hospitals began to train nurses themselves. Student trainees provided a continuous supply of inexpensive nursing staff.

A small number of training schools were established in Middlesex County, during the early twentieth century. Perth Amboy City Hospital established its own school of

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134. Orange Memorial Hospital School of Nursing, *Guide to the Orange Memorial Hospital School of Nursing (N.J.)* (Orange: Orange Memorial Hospital, 1899), 7.

135. Ibid., 8.

136. The New Jersey Historical Society, "Guide to the Orange Memorial Hospital School of Nursing (N.J.) Records1882-1982," The New Jersey Historical Society, accessed July 18, 2010, http://www.jerseyhistory.org.

137. Cowen, *Medicine and Health*, 100.

nursing in 1903.[138] Miss Ida Wilson was the first nurse to graduate from the school on May 11, 1906. She completed a three year course of instruction and practice. In addition, she passed a satisfactory examination before members of the medical staff.[139]

In an effort to recruit a larger number of students, a nurses' residence was added to the facility in 1912, after seven years of planning and fundraising. In 1922, a wing was added to the nurses' home to accommodate additional hospital staff and nurse trainees.[140] The nurse trainees received support in gifts from hospital personnel and community supporters. Staff physicians provided lectures and donated equipment. Course instruction was supplemented by nursing school instructors. By the 1930s, course work included "anatomy, physiology, bacteriology, pathology, and other sciences."[141] The trainees had little time to themselves, worked very long sifts, and were granted few vacation days. However, the students were allowed to partake in holiday parties and social gatherings on occasion. These events were often sponsored by the Women's Guild of Perth Amboy General Hospital.

In 1932, the Superintendent of the Perth Amboy General Hospital submitted an annual report before the Board of Governors, which described the hospital's nursing department: one director, one assistant and practical instructor, one science instructor, one night supervisor, four day charge nurses, two night nurses, two orderlies, and forty-

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138. *Home News Tribune,* "Hospital Celebrates."

139. "Perth Amboy: 60Years Nursing: Duties Differ, Dedication Doesn't," November 15, 1963. Article found in "PA-Hospital" vertical file at Perth Amboy Public Library.

140. Perth Amboy Hospital, "Hospital Is Striving."

141. Perth Amboy, "Annual Report Is Submitted."

six student nurses. That year 3,541 patients were treated in the hospital.[142] Student nurses who provided patient care during that period fulfilled a tremendous need for the hospital.

After graduation, many graduates stayed and worked in the hospital in which they trained. Other grads went to other hospitals, perhaps closer to home; some made a career in private duty work or public health. The first graduate of the Perth Amboy Training School for Nurses, Miss Ida Wilson, became the head night nurse of the Seaside Hospital, near New Dorp, Staten Island, after graduation. She had agreed to become Superintendent of Nursing for Perth Amboy Hospital about a month before her life took a tragic turn. She was only twenty-four years old, but had won the respect of both her patients and her colleagues. She was known as "The Night Angel," because she was very good at comforting sick children on the wards at night. On the day of her death, Wilson reported to work and started rounds. She later asked a couple of physicians if they had any carbolic acid. When they replied no, she retrieved the keys to the medicine cabinet from the superintendent's office and took out a bottle of the substance. She drank from the bottle of carbonic acid and was caught before landing on the floor, by a physician who happened by. She passed out in his arms and died within an hour. Wilson did not leave a suicide note, but according to her colleagues, in the days before her death, she seemed anxious as she sorted through the mail each morning. A newspaper article about

142. Ibid.

her death alluded to the idea that her suicide might have been related to an expected love letter that never arrived.[143]

The Perth Amboy Hospital School of Nursing continued to train student nurses over the next six decades. In 1961 it changed its name to the Charles E. Gregory School of Nursing, in honor of a late hospital president. The school evolved into a private, for-profit school and issued associate degrees until its last class graduated in June of 2009.[144]

When Saint Peter's Hospital, in New Brunswick, first opened in 1907, six Sisters of Charity (Grey Nuns) of Montreal, Canada, were responsible for the care of the patients. In the same year, St. Peter's Hospital began to organize a training school for nursing, to help meet the staffing needs of its fast growing facility. It was a non-sectarian school, which was opened to all applicants who met the entrance requirements.[145] The first student was Kathryn Cafferty. Cafferty completed a two and one half year training program, which consisted of didactic lectures provided by the staff physicians and the nuns. "Hands-on" practical experience rounded out Cafferty's training experience and she graduated in 1910.[146] A 1987 newspaper article on the history of St. Peter's School of Nursing, noted that "the first student used only one textbook," printed in the 1890s.

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143. *New York Times*, "'Night Angel' Dies Among Her Babies," August 24, 1907.

144. Charles E Gregory School of Nursing, "Charles E Gregory School of Nursing Information, Admissions, Alumni, History, Campus, Students, Faculty, Address, and Tuition," Online University Degree Search, accessed July 19, 2010, http://www.stateuniversity.com.

145. St. Peter's General Hospital, *St. Peter's General Hospital School of Nursing 1924 Announcement* (New Brunswick: St. Peter's General Hospital, 1925), 1.

146. Kothari and Formica, *Century of Caring*, 13.

This textbook was very likely Clara Weeks Shaw's *Textbook for Nursing for Use of Training Schools, Families, and Private Students*.[147]

The hospital quickly outgrew space in its original mansion style home and in the "rented quarters" for student nurses.[148] A new building for a nurses' home was constructed on Hardenberg Street, around the corner from St. Peter's General Hospital on Somerset Street, in 1910. Over the next couple of decades, hospital admissions continued to increase and in 1929 a new hospital was built on the site of the original St. Peter's General Hospital, across from Buccleuch Park (the first St Peter's General Hospital was only in existence from 1872-1874).[149] St. Peter's General Hospital solicited funds from the public in the late 1920s to construct living quarters for their students in an effort to adhere to the Nurses' State Board of Examiners' standard for housing for student nurses. Hospital training schools registered with the State Board of Examiners were obligated to provide proper housing facilities for student nurses.[150]

Fred Kilmer, a pharmacist and director of scientific affairs for the Johnson & Johnson Company from 1889 to 1934, was on the board of directors at St. Peter's General Hospital during the 1920s and early 1930s. He was also the director of publicity for the hospital. In St. Peter's General Hospital's Annual Report 1923, "Why St. Peter's General Hospital Must Enlarge and Rebuild," Kilmer addressed the problem of

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147. Anne Marie Cooke, "Nursing School Passes into History: Seven Decades of Nursing Ethics Were Born in St. Peter's Classes" (New Brunswick), April 30, 1987.

148. Kothari and Formica, *Century of Caring*, 13.

149. Ibid., 21.

150. St. Peter's General Hospital, *Twenty Third Annual Report*, 8.

insufficient space for the students in the hospital by calling for the expansion of the nurses' home and training school. In his view, the success of the hospital depended on it.[151] Due to the economic depression of the 1930s, the new nursing residence did not open until 1939. From the time of the hospital's relocation in 1929 until the opening of the new student residence, the student nurses and the nuns lived in the hospital.[152] Despite the economic hardships that came with the Depression, the public's response to the hospital's fundraising campaigns was generous and provided a large part of the necessary funds to build the new training facilities and living accommodations for nursing students.

Like most hospital-based training schools for nursing, courses for the St. Peter's trainees were taught by members of the hospital's medical and surgical staff. During these early years, the Sister Superintendent supplemented course instruction and directed the students regarding hospital duties. Initially, the course of training extended over a period of two years, but a three-year course was implemented in 1921 to include a more comprehensive program.[153] Hospital laboratories and a reference library were made available to the nursing students. Volumes of books were donated to the library by Mr. and Mrs. Fred Kilmer in memory of their poet son, Sgt. Joyce Kilmer.[154] The Johnson and Johnson Pharmaceutical Corporation, also located in New Brunswick, was a major contributor of hospital supplies and other equipment to the two New Brunswick hospitals.

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151. Kilmer, *Why St. Peter's General*, 8.

152. St Peter's Medical Center, *Progress of Compassion*, 10.

153. St. Peter's General Hospital, *School of Nursing 1924*, 1.

154. Kothari and Formica, *Century of Caring*, 25.

The New Brunswick City Hospital Nursing School opened in 1912.[155] The first class of four "trained nurses" graduated in 1917.[156]

During the mid decades of the twentieth century, many nurse graduates served aboard and in this country as a consequence of World War II (United States 1941-1945), but many more were needed. Efforts to increase class size and number of classes in nurse training schools resulted from the need to meet the demand for skilled nurses. In an article, "Nursing Schools in Hospitals Here Are Geared to Meet Demands of War," in the *New Brunswick Sunday Times* (1944), Al Maskin describes the impact World War II had on the nursing training facilities in the county because of the demand.[157] This description however, could have very well been applied to the periods during and just after World War I (United States 1917-1918) when U.S. soldiers were cared for at home and abroad by both the Army Nurse Corps (ANC) and the Navy Nurse Corps.

Just after the turn of the century, a time of reform for women, many females sought careers outside of their homes. Women from elite social backgrounds, the daughters of professionals or businessmen, as well as women from lower socioeconomic backgrounds, sought careers in nursing. Some wanted fulfilling jobs that would give them alternatives to being housewives and mothers. Others needed employment opportunities to support themselves and their families. With the introduction of modern

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155. Robert Wood Johnson Hospital, *Beginnings 1884 - 1984: Centennial 100 Years of Caring* (New Brunswick: Robert Wood Johnson Hospital, 1984), 10.

156. Al Maskin, "Nursing Schools in Hospitals Here Are Geared to Meet Demands of War," *New Brunswick Sunday Times*, 1944.

157. Ibid.

medical technology and skilled nursing care, public opinion about hospitals and medical treatments changed. The demand for nurses steadily increased.

A *Cranbury Press* article, dated July 19, 1918, describes the American Red Cross's (ARC) efforts to recruit nurses for the military. Mass recruitments for military nurses, who were deployed overseas to care for injured soldiers, evoked concerns that these recruitment efforts would deplete nursing resources at home. The ARC called on the public to urge women to enter training schools to become nurses for military or civilian hospitals, or visiting or public school nurses[158]

Nursing institutions sprang up all over the country, and New Jersey was no exception. Despite the huge demand for nurses, the application procedure and training process were rigid. In Middlesex County, requirements for admission into nursing schools were basically the same as most other hospital training programs across the country. Applications had to be made to the Sister Superior at St. Peter's Hospital and to the Nursing Supervisor at New Brunswick Hospital (Middlesex General) and Perth Amboy Hospital. At the turn of the century, most nurses, like doctors, received their training and clinical experience in hospitals. In exchange for their education, nursing students provided services for the hospital. The average monthly allowance for a nurse in training at St. Peter's, during the early 1930s, was ten dollars during three years of training.[159] According to Nayan Kothari and Palma Formica, "Admission to the program

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158. *The Cranbury Press*. "25,000 Nurses Asked to Enroll for War Service." July 19, 1918.

159. Louis L. de Guevara, "Nursing Called One of Noblest Professions," *New Brunswick Sunday times*, September 6, 1931.

was non-sectarian and depended more on the physical stamina and health of the candidate, in addition to a high school diploma."[160]

Sister Laverty O'Brien was the Superintendent of Nurses and the Head of the Nursing Training School at St Peter's Hospital during the early 1930s. In a 1931 interview with the *New Brunswick Sunday Times*, Sister O'Brien described the attributes the school looked for in potential applicants. "Nursing, is one of the noblest professions open to womanhood. Only those endowed by sterling moral character and a true conception of service should consider it. There is no place for selfishness in nursing"[161] Sister O'Brien interviewed thousands of young women who sought entrance into the school. The applicant had to be at least eighteen years old (average age ranged from eighteen to twenty-one) and candidates were high school graduates. Early schools did not accept married students for fear they would not be able to provide the commitment to the program or to the training requirements. Every candidate had to be in perfect health and had to submit to physical examinations by a physician, dentist, and an ear, nose and throat specialist to prove it.[162]

In addition to having good health, the candidate had to be of good character. As a part of the admission process applicants had to submit letters that attested to the candidates' "social acceptability" and their ability to conduct themselves in a "ladylike manner."[163] According to Sister O'Brien "A true nurse never questions the nature of a

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160. Kothari and Formica, *Century of Caring*, 13.

161. De Guevara, "Nursing Called,"

162. Ibid.

163. Rosenberg, *Care of Strangers*, 224.

task to which she is assigned. The harder it is the better she likes it. She is always eager to do without material comforts to help a patient."[164]

There were very few male nurses at the turn of the century. Women were seen as being more fit for this type of work because it was believed that they were more nurturing. "It seemed obvious to most contemporaries that women were considered better suited than men to nursing; their innate sensitivity would bring warmth and reassurance to the patient as it brought cleanliness and order to the ward."[165] Nursing superintendents maintained positions of great power and control, as hospitals were dependent upon them to supply the institution with the necessary nursing staff and skills. They reported directly to the institution's governing board.

For most American hospitals and nursing schools, class was not the only social entity that was considered regarding hospital and training school admissions. Race was also a powerful reality. By and large, treatment of black patients and potential black nursing school candidates mirrored the discriminatory practices of the larger society. Black patients usually occupied the least desirable locations in non-segregated hospitals (old wings, basements or attics) and they rarely occupied the same wards or rooms with white patients.[166] St. Peter's General Hospital, a religious institution, has historically professed its mission to provide medical care to anyone regardless of religious persuasion and ability to pay. The hospital's creed never included the word "race," but annual

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164. De Guevara, "Nursing Called."

165. Rosenberg, *Care of Strangers*, 217.

166. Ibid., 301.

reports which detailed patients' residence, occupation, and birthplace suggest that the patient population included African Americans.[167]

Historically, black nurses and doctors faced major challenges in their quests to join traditional medical professions. According to Mary Elizabeth Carnegie, in *The Path We Tread: Blacks in Nursing, 1854-1984,* although the term "nurse" was not applied to them, black women during the time of slavery "were expected to care for the sick in the families that owned them, breast-feed the white babies, and care for their own families, and fellow slaves."[168]

St. Peter's Hospital did not hire its first black physician (E. Collin Lewis, Sr., M.D.) until 1942. African American physicians were routinely denied staff privileges at all but a few hospitals in the state. Many of New Jersey's black physicians were active in the North Jersey Medical Society (founded 1908), during a time when most medical societies were segregated. It is not clear when any of the Middlesex County training schools admitted their first black nursing candidate. Even though the color of one's skin cannot always depict a person's race, most early photos of Middlesex County nursing school graduates do not appear to include students who were young ladies of color. Research confirms the admission of "Negro" students into the St. Peters' Hospital's nursing school during the 1950s, but no other literature could be found to confirm the

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167. St. Peter's General Hospital, *St. Peter's General Hospital - Thirteenth Report*, (New Brunswick: St. Peter's General Hospital, 1921), 14.

168. Mary Elizabeth. Carnegie, *The Path We Tread: Blacks in Nursing, 1854-1984* (Philadelphia: Lippincott, 1986), 1.

admission of African American students at the other Middlesex County training schools, during or prior to this period.[169]

Once a candidate was accepted to the Middlesex County nursing schools, the applicant usually went through a short probationary period, which averaged between four to six months. The "pre-clinical" or probationer students of the 1920s, 1930s and early 1940s spent most of their time attending lectures or demonstrations in the classroom or in the library studying. Their time on the ward was limited.[170] After successfully passing all examinations, the probationer would be formally accepted as a member of the regular nursing program. The early nurse training programs lasted about two to three years.

Early students learned quickly that nurses were just a step higher than domestic help in the hospital, but beneath physicians and private patients.[171] The nurse was "hand-maiden" and subordinate to the doctor.[172] Doctors were the authority figures. Expected to follow the doctors' orders, the student was not encouraged to think or act independently. Students were trained and not educated. In addition to caring for patients, early nurses scrubbed floors, cooked meals, cleaned, and dusted. In an apprenticeship type approach, student nurses were taught patient care by working side by side with a more experienced nurse. Early nurse training focused on the development of

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169. "Victory Over Race Discrimination Is in Sight for Student of Nursing: Muriel L. Jackson Due to Graduate at St. Peter's."

170. Maskin, "Nursing Schools."

171. Rosenberg, *Care of Strangers*, 235.

172. Sandy Jacobs Summers and Harry Jacobs Summer, "Media 'Nursing': Retiring the Handmaiden," *104, No. 2* 104, no. 2 (February 2004): 13.

manual skills learned by imitation.[173] These skills included changing bed linen, doing laundry, scrubbing floors, waiting on and bathing patients. Gradually students would learn to "change dressings, administer drugs and take temperatures."[174]

According to Rosenberg, early student nurses worked a minimum of sixty and seventy hours a week on the wards.[175] Early Perth Amboy nursing students worked 12 hours a day, were on call at night, and had half a day off a week.[176] Sister O'Brien's (1930s) students worked eight and a half hours of "arduous duties" daily and received only a half day free every week.[177]

Nursing students were expected to be impeccably dressed and neatly groomed. They were not allowed to wear anything that might excite the patient; this included jewelry. Probationers entering the St. Peter's General Hospital School of Nursing in 1923 were furnished with fabric to make their own uniforms in accordance with the school's specifications. The students were prohibited from wearing their uniforms outside the hospital. By mutual agreement the education provided by the school was equivalent to the service the student rendered.[178]

Like most training schools, Middlesex County nursing schools also provided students with food and shelter. Nurses' homes varied from hospital to hospital. Some

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173. Rosenberg, *Care of Strangers*, 227.

174. Ibid.

175. Ibid., 221.

176. "Perth Amboy: 60Years."

177. De Guevara, "Nursing Called."

178. St. Peter's General Hospital, *School of Nursing 1924*, 7.

students stayed in rooms in the hospital and others lived in comfortable quarters in separate buildings near or on hospital grounds.

After the probationary period, nursing training curricula consisted largely of ward work and didactic courses taught by hospital staff physicians and nursing superintendents. The physicians provided these educational services to the nurses for free, with the understanding that the labor of the students provided the needed skilled nursing care for their patients. Several physicians served on the staff of both St. Peter's General and Middlesex General Hospitals, during the 1920s, 1930s and early 1940s.[179]

At the turn of the century, nursing was not regulated and untrained nurses competed with graduates of training schools. Just as physicians struggled a century earlier to establish themselves as a medical profession, early modern nurses also struggled for autonomy and professionalization. Nurses however did not have the level of internal division that occurred between regular and sectarian physicians and they moved swiftly to establish organizational structures that promoted their profession.

Nurses became recognized professionals in America when standardized training methods for nurses, the granting of diplomas or degrees, and state licensing registrations and regulations were established. Public opinion about nursing and their growing market power also helped nurses to push forward on reforms that transformed their profession. As concerns about patients receiving inadequate nursing care from untrained nurses increased, many states passed nursing certification and licensing laws. In 1903, North Carolina, New York, New Jersey, and Virginia enacted the first bills concerning

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179. Maskin, "Nursing Schools."

registration for nurses.[180] According to Rosenberg, "American nursing leaders were demanding "increased classroom, decreased hours on the ward, a lengthened curriculum, and post graduate certification, by the end of the century,."[181] Doctors who opposed these ideas "saw the registration of nurses as a threat to their authority." If nurses were licensed, there would be potential conflicts of authority and nurses would disregard physician orders. [182] In addition, time spent in the classrooms inevitably limited the time spent caring for patients on the wards.

Some groups like the New Jersey State Nurses' Association (NJSNA), founded in 1901, at Newark City Hospital, pressed for reforms and developed networks of professional women across the state and the country. Irene Taylor Fallon (1860-1952) was the first president of the New Jersey State Nurses' Association.[183] She graduated in 1894 from Cooper Hospital School of Nursing in Camden. The goal of the NJSNA was to advance the nursing profession. During Fallon's term as president (1901-03), the association lobbied vigorously to establish a nurse registration law in New Jersey.[184] In April 1903, a bill to license nurses in New Jersey became the second such law in the nation. This registration law granted licenses to graduates of two-year hospital training

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180. Nursing World Org., "In Review," Nursingworld.org, accessed July 17, 2010, http://www.nursingworld.org/historicalreviewofnursing.

181. Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (Baltimore: Johns Hopkins University Press, 1987), 213.

182. Rosenberg, *Care of Strangers*, 234.

183. Women's Project of New Jersey, "Newark Maternity Hospital."

184. Joan N. Burstyn, *Past and Promise: Lives of New Jersey Women* 1866-1920 (Syracuse, NY: Syracuse University Press, 1997).

programs. In 1912, the bill to license nurses in New Jersey "was strengthened when Governor Woodrow Wilson signed into effect the law creating the Board of Nurse Examiners, giving nurses an autonomous regulatory board."[185]

Many schools of nursing prepared women to work as private duty nurses, and to work in industries, as well as in hospitals. Kilmer urged Middlesex County graduates to continue their education by taking post-graduate courses and to specialize in some branch of nursing. Many adopted public health as a specialty.[186]

Numerous nurse training schools closed when educational requirements for registration increased and they could not meet state standards, although others improved. We learned earlier that hospital training schools granted diplomas instead of college degrees. During the early twentieth century, universities began to develop departments of nursing, which offered students nursing degrees, instead of diplomas. Hospital boards also considered other issues such as the institutions' ability or inability to financially support the training programs, insufficient space for teaching facilities and limited living space for the students, before making the decision to close their programs. As a result, many hospital-based nursing schools closed. Middlesex General Hospital training school graduated its last class in 1959,[187] St. Peter's General Hospital Nursing School closed its

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185. Frances Ward, "New Jersey Nursing--the First One Hundred Years | New Jersey Nurse | Find Articles at BNET," Find Articles at BNET, accessed August 19, 2010, http://findarticles.com.

186. De Guevara, "Nursing Called."

187. AnneMarie Cook, "Nurses: Health Care Was Primitive, Salaries Were Low, Hospital Work Was Grueling in Bygone Days," *The Home News*, June 11, 1984.

doors in 1987,[188] and Perth Amboy General's nursing school recently closed its program in 2009.

No single change transformed the hospital's day-to-day workings more than the acceptance of trained nurses and nurse training schools. As Paul Starr points out, "Professional nursing, in short, emerged neither from medical discoveries nor from a program of hospital reform initiated by physicians; outsiders saw the need first."[189]

From the beginning of time women have always been seen as healers and have played significant roles in medicine throughout history. Conversely, the idea of women becoming physicians was very difficult for men, as well as the general public to accept, during the nineteenth and twentieth century. It was believed that women did not have the intellectual capacity or stamina to be physicians. The next few paragraphs will focus on the struggles and obstacles women in this country, state, and county faced as they tried to gain entrance into the medical profession, traditionally a man's field.

As we have seen, prior to the nineteenth century, the only role females had in medicine was that of home healer, nurse, or midwife. Women were not allowed to attend male dominated medical schools. In 1847, Harriet Hunt was the first woman to apply to Harvard Medical School, but her application was rejected. There were no women with M.D. degrees in the United States before 1849. In January 1849, Elizabeth Blackwell was the first American woman to receive a medical degree when she graduated from Geneva Medical College in New York. Blackwell, her sister Emily, and Maria

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188. St Peter's Medical Center, *Progress of Compassion*, I.

189. Starr, *Social Transformation*, 155.

Zakrzeska, also doctors, established the New York Infirmary for Women and Children, in 1857. It was the first hospital operated by women and the first to offer clinical training for women. The first African American woman to earn an M.D. degree was Rebecca Lee Crumpler in 1864 from New England Female Medical College. The University of Michigan was the first state medical school to formally admit women, beginning in 1870.[190]

In 1860, there were about 200 women physicians in the United States. By the end of the nineteenth century the number of women physicians had increased to more than 7,000.[191] At the start of the twentieth century, a number of medical schools were admitting women, although most of these were homeopathic or proprietary schools. A third of the women practicing in New Jersey during this time received their degrees from the Woman's Medical College of Pennsylvania, which was founded in 1850.[192]

In her article, "Women Physicians of New Jersey: The Early Era," Christine E. Haycock, M.D. notes that there were nineteen medical colleges for women between 1850 and 1895. As women began to be accepted into formerly all-male colleges, this number dropped to eight by 1900 and to two by 1910 (in New York and Philadelphia). Female physicians of this period usually developed practices in family medicine and pediatrics. Although women had practiced surgery in New Jersey, none was board certified until

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190. American Medical Association, "AMA - Women in Medicine History," American Medical Association, Women in Medicine Timeline, accessed June 10, 2010, http://www.ama-assn.org.

191. Katrina Baca, M.D., "Women in Medicine," Scott and White Org., accessed June 10, 2010, http://www.sw.org/web/researchAndEducation/iwcontent/public/tembel_health/en_us/pdf/WomenMed.pdf.

192. Reeds, *State of Health*, 39.

1961 when Anita Falla and Christine Haycock became the first female board certified general surgical specialists in the state.[193]

By 1900, there were approximately 100 women practicing medicine in New Jersey.[194] Despite the increase in the number of women graduating from medical school and entering the field of medicine during the early twentieth century, the social climate was still unaccepting of women doctors. They were often discriminated against by the public who would not avail themselves of the services of female practitioners, male physicians who would not refer patients to their female colleagues, landlords who would not rent them office space, and medical societies who would not grant them memberships. Against all odds, women physicians forged a presence in medicine, during the nineteenth century. Despite continuous pushback from their male colleges and the general public, many women physicians were able to establish satisfying careers during the twentieth century. These pioneers opened the doors to the medical profession and paved the way for female physicians after them.

Lucy Madana DeHart was the first female graduate physician to practice in New Jersey. DeHart graduated from New York Medical College and Hospital for Women. She started her practice in Jersey City in 1869. She was soon followed by her sister-in-law, Sarah DeHart, who studied medicine in New York and joined Madana (as she was preferred to be called) DeHart's practice around 1871. Madana DeHart had two daughters who became doctors, Florence DeHart and Clara DeHart Krans. Florence felt

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193. Christine E. Haycock, M.D., "Women Physicians of New Jersey: The Early Era," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 773.

194. Reeds, *State of Health*, 54.

pressured by her mother to become a physician and was not happy in the profession. She committed suicide on February 12, 1906, while working at the New Jersey State Home for Girls in Trenton. Clara was married to a physician and they opened a practice together in Plainfield around 1907. Krans was a gynecologist. She founded the New Jersey American Medical Women's Association to promote mutual support and friendship.[195]

Women's medical associations did not have much power politically, economically or professionally outside the ranks of the women's organization. It was important for female physicians to become members of the state and local medical societies. Medical Society membership afforded them important opportunities that they could not achieve on their own, such as hospital affiliations, exchange of information regarding innovative techniques and practice ideas, opportunities to publish papers and acceptance into the profession.

In her article, "The First Women to Join the County Medical Societies of New Jersey," Geraldine Hunter describes the medical societies' election process: "Physician applicants were nominated by colleagues; the executive and credentials committees voted on the application after forms were filed and letters of recommendation were completed." After physicians were elected to the county society, their names were submitted to the

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195. Christine E. Haycock, M.D., "Early Women Physicians in New Jersey," *New Jersey Medicine* 90, no. 1 (January 1993): 39.

state society. Once they were placed into nomination and no objections were voiced, the candidates were elected into the state society."[196]

Sarah F. Mackintosh, M.D., became the first woman member of a New Jersey county society (Passaic County Medical Society), on October 7, 1872, and in June 1873, the first woman member of Medical Society of New Jersey.[197]

Mackintosh graduated in 1872 from the Women's Medical College of the New York Infirmary and started a practice in Paterson with her husband James. After joining the Passaic County Medical Society, she became the county society reporter. Mackintosh presented a paper on the use of chloral hydrate to the membership of the state medical society in 1874.[198]

In 1816, five county medical societies were created in New Jersey. The Middlesex County Medical Society was created by eight area physicians on June 13, 1816. It wasn't until 76 years later that the Society elected its first woman member, Caroline Hempstead Marsh.[199] Marsh was born in Connecticut on July 27, 1866. In 1879, her father, Riverius Marsh, moved the family to New Brunswick, New Jersey, to start new employment after losing his position at the Ives Patent Lamp Co., New York City, when the firm failed. In 1886, Caroline Hempstead Marsh entered the Woman's

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196. Geraldine R. Hutner, MA, "Grace Under Pressure: The First Women to Join the County Medical Societies of New Jersey," *New Jersey Medicine* 87, no. 3 (March 1990): 190.

197. Ibid.

198. Ibid., 217.

199. Ibid., 216

Medical College of Pennsylvania and received her degree in 1890.[200] She was awarded licenses to practice in New Jersey and Pennsylvania in 1891 and soon thereafter applied and was accepted as a member of the Middlesex County Medical Society. Marsh traveled a great deal between New Jersey and Pennsylvania, practicing in both states. However, she was never accepted as a member of either the Cambria County Medical Society, in the county where she practiced, nor the state's Pennsylvania Medical Society. Marsh's married name was listed as Caroline H. Marsh-Wikle Farrell in the membership listing of the American Medical Association. Marsh died at the age of 59 in Pennsylvania, on January 15, 1922.[201]

Women continued to struggle for an equal place in medicine until the 1960s with the revival of feminism and liberal reforms.[202] Women were not the only ones facing challenges in establishing professional creditability during the late nineteenth. Male physicians were also experiencing difficulties in creating sovereignty as a profession.

Building a Profession Foundation through Education and Licensure

As we have seen, in the nineteenth century, American physicians were not held in particularly high regard. The profession was generally weak and divided. It was during the early twentieth century that "American physicians first recognized a formal

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200. Samuel T. Wiley, *Biographical and Portrait Cyclopedia of the Third Congressional District of New Jersey.*, PDF, Philadelphia: Biological Publishing Co., 1896.

201. Hutner, "Grace Under Pressure," 216

202. Regina Markel Morantz-Sanchez, *Sympathy & Science: Women Physicians in American Medicine* (Chapel Hill: University of North Carolina Press, 2000), 7.

distinction between disease as objectively defined by the physician and illness as subjectively experienced by the patient," according to Christopher Crenner in Private Practice.[203] With the advancement of science and medicine during the late-nineteenth century and the early twentieth century, physicians developed a growing confidence in their ability to diagnose and treat disease. Although technological progress had much to do with this new found self-assurance, it was the public's recognition of the legitimacy of modern scientific medicine that enabled physicians to build a professional foundation. As medicine evolved as a science, the profession rose to a position of "professional sovereignty," as sociologist Paul Starr terms it, which includes broad cultural authority, economic power, and political influence.[204] The acceptance of authority, according to Starr, signified "a surrender of private judgment."[205]Americans, growing more accepting of their physicians' knowledge and skills willingly surrendered their autonomy to the medical profession.[206]

By the late nineteenth century, American physicians succeeded in organizing medical schools and in developing some specialized fields of practice. As the number of well-trained regular doctors increased, medicine became more organized. Initially, the establishment of hospitals had more to do with charity than medicine. However, by the

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203. Christopher Crenner, *Private Practice: in the Early Twentieth-century Medical Office of Dr. Richard Cabot* (Baltimore: Johns Hopkins University Press, 2005), 9.

204. Starr, *Social Transformation*, 6.

205. Ibid., 10.

206. Ibid., 17.

turn of the century, medical care in hospital settings became more advanced and centralized as new medical technology and interventions were introduced.

According to Paul Starr, by 1920 the profession was able to preserve some level of professional autonomy by establishing viable organizational structures such as medical societies, licensing boards, medical legislation and medical schools [207]

The first medical school in the United States was chartered in Philadelphia in 1765.[208] Columbia University, founded in 1754 as King's College, in New York, established the second medical school, which began in 1767. The School of Medicine at King's College (College of Physicians and Surgeons) was the first American medical school to grant the Doctor of Medicine (M.D.) degree.[209]

Since there were no medical schools in the state, colonial New Jersey medicine men (and later in the nineteenth century, women) sought medical degrees from New York and Philadelphia. In the College of Philadelphia's first graduating class of ten students in 1768, there were two New Jersey residents that received Bachelor of Medicine degrees, Jonathan Elmer and John Lawrence. Jonathan Elmer went on to receive his Doctor of Medicine degree in 1771.[210]

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207. Ibid., 27.

208. University of Pennsylvania, "Overview," University of Pennsylvania || School of Medicine, accessed June 18, 2010, http://www.med.upenn.edu/overview.shtml.

209. Columbia University, "Columbia University: About Columbia," Columbia University in the City of New York, accessed June 18, 2010, http://www.columbia.edu/about_columbia/history.html.

210. Cowen, *Medicine and Health*, 8.

New Jersey's history of medical education is inconsistent. Queens College which later became Rutgers University (1825), in New Brunswick, awarded several medical degrees in 1792 and 1793, from 1812 to 1816, and1827 to 1835. A few of these degrees were honorary degrees. There is no record that any of the medical instruction took place at the New Brunswick campus. The so called New Jersey medical school programs were provided by practitioners and professors associated with the College of Physicians and Surgeons of Columbia University in New York, and housed in the New York medical school institutions. The legislature of the State of New York terminated the issuing of degrees from colleges that were not licensed in that state. From 1827 until 1954, there was no formal medical education in New Jersey.[211] Originally, American medical schools offered both a bachelor's and a doctoral degree in medicine. However, many students rarely came back for the doctorate degree after completing the one year bachelor's degree program. Any certificate from a medical institution made them eligible to practice medicine. The term of study for a year of medical school was only three to four months.[212] Institutions that raised their standards of education took a risk of losing students and potential revenue.

In an attempt to raise their profession's level of authority, physicians would approach a local college with a proposal to start a medical school. Colleges welcomed the opportunity to collaborate with the doctors with hopes that the medical schools would bring prestige to their institutions. However, since there were no universal standards or

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211. Ibid., 76.

212. Starr, *Social Transformation*, 43.

requirements for establishing proprietary medical schools or for the administration of these institutions, doctors with varying intents ranging from personal advantages to non-traditional medical practices, to monetary gains through the collection of student fees, to the elevation of the profession established medical schools all around the country.[213]

Between 1854 and 1890, New Jersey provided that anyone with a medical diploma from any institution that declared itself a medical school was allowed to practice in the state. As a result, botanic medicine, hydropathy, homeopathy and osteopathy all could readily be found in New Jersey. At the end of the nineteenth century, graduates from homeopathic medical schools accounted for about 300 of the state's 2,300 doctors. In 1902, a dozen osteopathy practitioners grew to more than 300 doctors three decades later."[214] Dentists and pharmacists also established their own schools and licensing boards as they grew apart from traditional medicine. In an effort to acquire the best physicians and reduce the number of practitioners that flooded the profession, many states, including New Jersey, raised the educational requirements and established state licensing boards.

Initially, the regular physicians tried to derail and delegitimize the homeopaths, eclectics and other sectarians, but the irregulars would have to be brought in as partners during the late nineteenth century licensing movement. Licensing was an attempt to weed out the "quacks" and other competitive undesirables. Conventional practitioners

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213. Ibid., 42.

214. Reeds, *State of Health*, 45.

and the homeopaths worked together to oppose a bill to license osteopaths in 1903.[215] Nevertheless, a bill was passed by the legislature in 1913 to license osteopathy. Other New Jersey physicians continued to fight against licensing osteopaths, but legislation passed in 1935 that allowed osteopathy the same practices and rights of the regular practitioners. Osteopaths who met certain educational or experience requirements were allowed to take the regular medical examinations in order to be licensed and practice in the state.[216] Eventually regular physicians and surgeons and osteopathic physicians and surgeons would be licensed under the control of New Jersey State Board of Medical Examiners.[217] Despite the collaborative licensing efforts with the conventional practitioners, the homeopaths and botanists soon disappeared.[218]

Other groups were able to establish their own boards. The Dental Board was created in 1873.[219] The State Board of Pharmacy was established in 1877. By 1920, graduation from a college of pharmacy was required and in 1935, a one year internship was required.[220] Another group that was able to establish their own board was the optometrists, when in 1914 a State Board of Optometry was established.[221]

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215. Cowen, *Medicine and Health*, 129.

216. Ibid., 130.

217. Ibid., 131.

218. Starr, *Social Transformation*, 229.

219. Cowen, *Medicine and Health*, 128.

220. Ibid., 129.

221. Ibid., 132.

At the turn of the century, most medical professionals were licensed by law in New Jersey; however, irregulars continued to practice in the state. New Jersey residents still had the option of seeing whom they wanted or whom they could afford. Medical ethics were primarily self-regulated until professional organizations were established to set standards for education and develop principles for practice. With the establishment of state medical boards, there was intent to protect the public from untrained practitioners and to provide assurance of a higher level of medical knowledge and competence.

In June 1876, representatives of twenty-two medical schools met in Philadelphia and formed the American Medical College Association (AMCA), an accrediting agency to ensure standards and reform medical colleges. The association got off to a rocky start, when its members couldn't agree on the appropriate steps to take in order to bring about improvements in medical education. Some of the colleges felt the requirements were too stringent and later dropped out. In 1890, the AMCA reorganized, changed its name to the Association of American Medical Colleges, and revised standards and curricula. [222] However, it still lacked licensing power. By the end of the century, most states had established medical licensing boards.

Medical education is the nucleus of the medical profession. The American Medical Association (AMA), founded by Nathan Smith Davis, MD and colleagues, in 1847, was established with the intent "to advance the science of medicine, to improve the

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222. Association of American Medical Colleges, "AAMC History," Association of American Medical Colleges (AAMC) – Tomorrow's Doctors. Tomorrow's Cures," Aamc.org, accessed June 19, 2010, http://www.aamc.org/about/ history.shtml.

standards for medical education, to develop a program of medical ethics, and to improve the health of the public." [223]

In 1904, the AMA formed the Council on Medical Education (CME) to raise educational requirements for physicians and standardize the requirements for medical licensure. [224] The CME invited Abraham Flexner of the Carnegie Foundation for the Advancement of Teaching to evaluate the status of medical education. The most revolutionary event that changed and improved medical education training was the Flexner Report. The Flexner Report, an in-depth study of medical education in the United States and Canada, was funded by the Carnegie Foundation for the Advancement of Teaching.[225] *Medical Education in the United States and Canada* was prepared and written by Abraham Flexner (1866-1959), member of the research staff of the Carnegie Foundation for the Advancement of Teaching, in 1910. Flexner was not a doctor, but an American educator. One hundred and fifty medical schools were visited and assessed.[226] The report pointed out that there was an "over-production of uneducated and ill trained medical practitioners" and called for the closing of inadequate medical colleges, which represented most of the existing schools in the America and Canada, including small rural

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223. American Medical Association, "About AMA » Our History," AMA-American Medical Association, accessed June 19, 2010, http://www.ama-assn.org/ama/pub/about-ama/our-history.shtml.

224. Ibid.

225. Ibid.

226. Abraham Flexner, *Medical Education in the United States and Canada; a Report to the Carnegie Foundation for the Advancement of Teaching*, report, 4th ed. (New York: Carnegie Foundation for the Advancement of Teaching, 1910), viii.

schools, African American schools and schools for women physicians.[227] State medical boards and legislatures used the report as a basis for closing medical schools. Prior to the report, American medical schools relied on lectures and provided little clinical training. Flexner proposed that medical school curricula incorporate biomedical sciences together with hands-on clinical training. He advocated for the standardization of medical education, higher admittance standards, and rigorous programs of study. The report accelerated reforms and standards in medical schools and increased the quality of physicians in the United States and Canada.

After the Flexner Report came out, New Jersey worked to improve medical standards in the state. Cowen describes these efforts in *Medicine and Health in New Jersey: A History*: "in 1915 a statue made one year of premedical education a requirement after July 1, 1919, and two years a requirement after July 1, 1920. Even more important was the requirement of a one-year internship after July 1, 1916."[228]

When technologic advances led to increased specialization in medicine, the doctor and patient relation changed. Patients were increasingly referred to consultants, which diminished the relationship with their personal physicians. With the integration of new medical practices and tools that were rapidly accepted by society, the public began to establish a new found respect for physicians and their increasingly sophisticated practices, during the early twentieth century. News of advanced medical practices was shared not only among medical professions, but also with the public, through local and

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227. Ibid., x.

228. Cowen, *Medicine and Health*, 128.

national magazines and newspapers. As discussed earlier, New Jersey doctors kept abreast of current medical practices and shared their own innovative work through the Medical Society of New Jersey.

In order to improve communication for membership and to promote quality scientific work, the board of trustees ordered the publication of a monthly journal (the *Journal of the Medical Society of New Jersey*, a refereed journal which replaced the publication of annual unedited transactions), under the direction of the Committee on Publication of the State Society, in July of 1904. Richard Newton, M.D. of Montclair was appointed the first editor and David English, of New Brunswick, served as editor from 1906 to 1924.[229]

As the medical profession rapidly advanced during the early twentieth century, it was necessary for the physicians to keep abreast of new diagnostic and treatment methods. District societies were urged to share their knowledge and new discoveries with the rest of the state through reports and correspondences sent to the state society. In addition to original articles submitted by members, the *Journal of the Medical Society of New Jersey* published lengthy recapitulations of the society's annual meetings; lectures on areas of specialties like surgery and gynecology presented by local members, as well as out-of-state physicians; articles reprinted from other state medical societies; reports of the Board of Health and Bureau of Vital Statistics of the State of New Jersey; reports of the county societies; and announcements of marriages, obituaries and other personal events. (Appendixes 4.B Local Medical Society Report and 4.C Nurse Training School)

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229. Arthur Krosnick, M.D., "The History of Medical Journalism in New Jersey," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 22.

The Middlesex County Medical Society reported its activities regularly to the state society; these reports were published in both the *Transactions of the Medical Society of New Jersey* and the *Journal of the Medical Society of New Jersey*. During the period covered by this study Middlesex County Medical Society members lectured on various medical topics at local district meetings and at the annual state society meetings. Many Middlesex County members also participated on local and state society committees. Middlesex County physicians, who presented papers on various medical topics at the quarterly MCMS meetings, also submitted them to the state society for publication in the journal. For example, clinical reports published in the August, 1909, issue included a paper on "Unusual Case of Appendicitis" by Frank M. Donohue, M.D. of New Brunswick, New Jersey and a paper on "Imperforate Anus" by Frank C. Henry M.D. from Perth Amboy, New Jersey.[230]

Despite the fact that New Jersey had no viable medical school until the 1950s, Middlesex County practitioners were still able to integrate new and innovative techniques and technologies into their practices. As mentioned earlier, with the integration of new medical interventions and tools that were rapidly accepted by society, the public began to establish a new-found respect for physicians and their increasingly sophisticated practices, during the early twentieth century. These developments transformed relations between doctors and patients. During the first half of the twentieth century, public demand for specific treatments and practitioners, as well as the shift from home to hospital influenced development of the medical profession in Middlesex County. The

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228. Medical Society of New Jersey, "Unusual Case of Appendicitis," *Journal of the Medical Society of New Jersey* VI, no. 3 (August 1909): 126.

advancement of professional medical organizations, improved regulations and licensing by the state also helped to change the landscape of medical practice in the county.

The next chapter will explore the contributions made by individuals who had some impact, whether large or small, on the evolution of medicine and the patient doctor relationship in Middlesex County.

CHAPTER 5

EARLY TWENTIETH CENTURY PIONEERS: CHANGING THE LANDSCAPE OF MEDICINE IN MIDDLESEX COUNTY

The nineteenth century was a period in which the American medical profession transitioned from a vocation which was based on little knowledge of the human body or etiology of disease and characterized by the use of aggressive and harmful treatments in the beginning to a modern medical profession that embraced scientific knowledge and new technologies at the end of the century. At the turn of the twentieth century the foundation for the medical profession such as medical societies, university-based medical schools, hospitals and other medical institutions, and licensing legislation had been laid.

As mentioned in previous chapters, during the first half of the twentieth century, New Jersey citizens changed their beliefs about their abilities to care for themselves medically and began to rely more on the skills of others. Public demand for specific treatments and specialized practitioners, as well as increased utilization of medical institutions, influenced the evolution of medicine in Middlesex County.

This chapter will explore the contributions made by a few key individuals, who through the establishment of social and professional medical organizations and institutions, the passing of legislation and the application of modern approaches to medical practice, helped to change the landscape of medicine in the county in the early twentieth century. This evolution of medical practice also changed the relationship between physician and patient.

The Country Doctor

During the late eighteenth and early nineteenth centuries, the country doctor in America was a vital part of his rural community. As active participants in the towns' social, religious and political activities, country doctors socialized and worshipped with the same people for whom they provided services. Many country physicians knew and served some of their patients for a lifetime. As general practitioners, country doctors had to address any and all medical problems presented to them. Medicine was not highly remunerative. Practitioners didn't make a lot of money and were often paid for their services with produce or livestock instead of cash.

This section of the chapter will focus on the country doctors of South Brunswick, a township in Middlesex County and in particular, the village of Dayton, to see how South Brunswick medical practitioners influence the evolution of medicine and patient-doctor relationships, not only in the township, but also in the county, during the period.

South Brunswick Township was incorporated by an act of the State Legislature in 1798. Fertile soil in the township attracted early settlers, who developed rural farming communities throughout the region.[1] During the eighteenth, nineteenth, and twentieth centuries, several villages emerged as the township grew.

Dayton, originally known as "The Cross Roads," is one of the villages of South Brunswick. In 1866, the name was changed from Cross Roads to Dayton, in honor of

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1. South Brunswick Township, "A History of South Brunswick Township," South Brunswick Township -- Welcome to South Brunswick, accessed January 3, 2007, http://www.twp.south-brunswick.nj.us.

William L. Dayton, an attorney for the Freehold and Jamesburg Agricultural Railroad, who settled a dispute the residents were having about where to place a railroad in town.[2] The railroad gave local residents and farmers access to distant markets. Around this time Dayton gained a resident physician.

Dr. Clarence Slack (1841-1923)

Dr. Clarence M. Slack, the first physician to practice in Dayton, New Jersey, was born in Hightstown, New Jersey, in 1841. He graduated from Jefferson Medical College in 1865. In 1865, Slack opened his Dayton practice in an unknown location and later moved his practice to a house on Georges Road in Dayton. According to members of the Dayton Village Citizens' Coalition, which is a nonprofit organization that strives to preserve and educate the public about the history of the village, this was also the site where Dr. Slack opened the first hospital in the village in 1867. Slack married Mary Elizabeth Conover and they had two daughters Hetty and Mary, who were born in Dayton.[3]

Dr. Slack was an active member in a number of organizations, including his church, the military (Figure 5.1) and the County Medical Society. According to W. Woodford Clayton, editor of the *History of Union and Middlesex Counties, New Jersey*, Slack served as president of the Middlesex County Medical Society in 1874.[4]

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2. Ibid.

3. Dayton Village Citizen's Coalition, "Doctors of Dayton," Daytonvillage.org, accessed December 10, 2010, http://www.daytonvillage.org/history/doctorsofdayon.html.

4. Clayton, *History of Union*, 534.

In 1883 Slack opened a practice with his nephew, Dr. Norton, a physician and druggist, on Livingston Avenue in New Brunswick. Dr. Marion Baldwin, a young physician from the Philadelphia area, took over Slack's practice in Dayton in the mid-1880s. However, within a few years of arriving in Dayton, Baldwin became sick and died of cancer. Middlesex County Medical Society records show that another physician, Dr. William V. Wilson, was a physician in Dayton for the years 1882, 1883, and 1884.[5] No additional information could be found on Wilson.

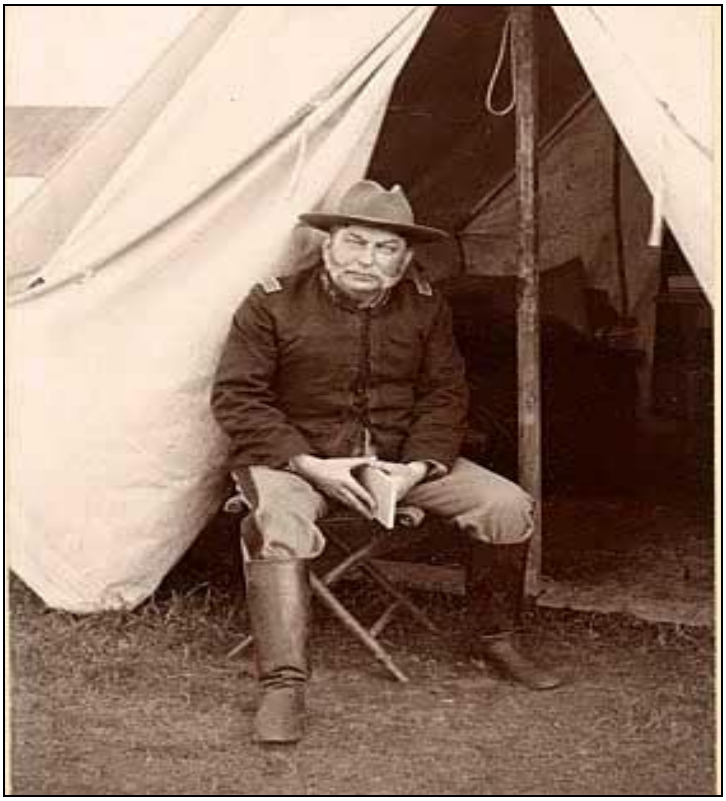

Figure 5.1. Dr. Clarence Slack during the Spanish American War.
Source: Dayton Village Coalition, Doctors of Dayton.
http://www.daytonvillage.org/history/doctorsofdayon.html.

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5. Ceil Leedom, *Dayton Physician*, March 5, 2006, Chronological data for William V. Wilson, Dayton.

In 1887, Slack sold the house to Dr. Edgar Wallace Carroll.[6] In 1920, he moved to Florida with his wife, and died in St. Petersburg at the age eighty-two on January 28, 1923.[7]

Dr. Edgar Carroll (1853-1934)

Dr. Edgar Carroll was born to Irish parents in Keene, Ohio. His father, Thomas Carroll, founded the Keene Academy, where young Edgar attended school. He had two brothers who were also physicians and another brother who was a pharmacist. Carroll, like Slack attended Jefferson Medical College in Philadelphia.[8]

According to Ms. Leedom, South Brunswick township historian, Carroll started his practice in Dayton around 1885. He was remembered as a "beloved country doctor," who served the residents of South Brunswick Township and surrounding towns for about forty-five years. In addition to being the South Brunswick Township physician, Carroll also served as the Middlesex County physician, from time to time for over twenty-five years. He was on the staff of St. Peter's Hospital in New Brunswick, and was an active member in the Middlesex County Medical Society.[9]

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6. Ceil Leedom, *Dayton's Doctors, Dr. Edgar Wallace Carroll*, November 2006, Biographical research, Dayton.

7. Ceil Leedom, *Dayton Physician, Dr. Clarence Mulford Slack*, November 2006, Biographical research, Dayton.

8. Dayton Village Citizen's Coalition, "Doctors of Dayton," Daytonvillage.org, accessed January 3, 2007, http://www.daytonvillage.org/history/doctorsofdayon.html.

9. Leedom, *Edgar Wallace Carroll*.

A photo of an elderly Carroll shows a slim built fellow with a well-groomed goatee and moderately thick mustache (Figure 1.2). He was a dapper dresser and could be seen around the countryside sporting a Derby hat and carrying a little black bag. He carried an assortment of colored pills in his black bag and was prepared to remedy a variety of ailments.[10] As a general practitioner, Carroll's care was comprehensive. The services he provided to the communities included, but were not limited to, delivering babies, attending to everyday aches and pains, and treating major diseases and injuries, many of which were related to farming accidents.

Figure 5.2. Dr. Edgar Carroll standing in front of the Slack-Carroll house – date unknown.
Source: Dayton Village Coalition, Doctors of Dayton. http://www.daytonvillage.org/history/doctorsofdayon.html.

10. Abraham Dobin, *Fertile Fields: Recollections and Reflections of a Busy Life* (South Brunswick: A.S. Barnes, 1975), 89.

Abraham Dobin, who grew up on a farm in Dayton, New Jersey, in the early 1900s, recalled in his book *Fertile Fields*; "He was an important part of the local community and supported the resident's medical needs by providing medical services in his office in Dayton or in their homes, where he would sometimes arrive by horse and buggy." According to Dobins, Carroll was admired for his integrity and "friendly and understanding" manner.[11]

Carroll served as Middlesex County physician at a salary of $1,200, in 1914.[12] In his role as county physician, Carroll testified as an expert witness in a number of court cases. In 1915, the *New York Times* published an article that described testimony Carroll provided during a case involving ten guards who were on trial for killing Alessandro Tessitore, a chemical company striker. The prosecutor claimed that "Tessitore was shot in the legs and as he ran away, he was deliberately shot in the back." Carroll testified that Tessitore received four wounds, three in the legs and one in the back. "It was to the last that death was due," he concluded.[13] On May 30, 1915, the *New York Times* reported that nine out of the ten guards were found guilty of manslaughter. The trial took place in New Brunswick and the jury was out for seventeen hours. The maximum penalty for manslaughter at the time was ten years in state prison and the minimum was five years.

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11. Ibid., 89.

12. Medical Society of New Jersey, "Medical Society of New Jersey, Personal Notes," *Journal of the Medical Society of New Jersey* 11 (February 1914): 99.

13. *The New York Times*, "Ten Strike Guards On Trial for Live," Http://query.nytimes.com/mem/archive-free/pdf, May 24, 1915, accessed February 18, 2010.

At the time of the last article the men were awaiting sentencing.[14] Carroll's medical expertise had extended beyond the dirt roads of the countryside into the county court rooms, where he and his profession had authority to influence trial decisions.

Carroll married Matilda Buckalew about 1890 and they had three children. Nathaniel was born in 1891, Margaretta in 1895, and Edgar Wallace in 1897.[15] Carroll's career resulted in many professional triumphs, but he also experienced personal heartbreak. In 1918, his only daughter, Margaretta, died of pneumonia at the age of twenty-three. Miss Carroll had been attending nursing training at St. Peter's Hospital prior to her illness.[16] According to South Brunswick Township historians, Carroll and his family were also active members in the Presbyterian Church in town.

Carroll was considerate of his patients' and neighbors' economic plight during the Great Depression. Just prior to his death, he asked his wife to mark all bills owed "paid in full."[17] Carroll practiced in an office in his home until his death in 1934. The family lived in the Carroll home in Dayton, until 1949.[18] (Figure 5.3).

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14. *New York Times*, "Convict 9 Deputies of Strike Killings," May 31, 1915, accessed February 18, 2010, Http://query.nytimes.com/mem/archive-free/pdf.

15. Dayton Village Citizen's Coalition, "Doctors of Dayton."

16. *The Cranbury Press*, "Margaretta E. Carroll," October 18, 1918, Front Page sec.

17. Dayton Village Citizen's Coalition, "Doctors of Dayton."

18. Leedom, *Edgar Wallace Carroll*.

Figure 5.3. Carroll family in front of the Slack-Carroll House.
Year unknown. Source: Dayton Village Coalition, Doctors of Dayton.
http://www.daytonvillage.org/history/doctorsofdayon.html.

The house where Drs. Slack and Carroll practiced and their families lived later became known as the "Slack-Carroll House" and still stands on its original site today at 354 Georges Road in the village of Dayton.[19] It was the first house built north of the intersection of Five Points, the section of town where five roads intersect. As previously mentioned, the house was known to be the first hospital in the village. According to township historians, the hospital had two hospital rooms, a waiting room, and an

19. Dayton Village Citizen's Coalition, "Doctors of Dayton."

examining room. The hospital also had the first indoor plumbing in town, with a zinc lined wooden tub.[20]

The house is a 2 ½ stories, 4-bay, L-Plan vernacular Italianate, popular between 1850 and 1870. (Figure 5.4)

Figure 5.4. The Slack-Carroll House in 2002. Source: Dayton Village Coalition, Doctors of Dayton. http://www.daytonvillage.org/history/doctorsofdayon.html.

In 1983, the township listed the Slack-Carroll house as a designated state historic site. The Slack-Carroll House remains in good shape today and for the most part is maintained and supported by township volunteers. It serves as a medical museum under the auspices of the Dayton Village Citizens' Coalition.

Joan Luckhardt, village historian and curator of the Slack-Carroll House museum, guided the author in a private tour of the house on January 16, 2007. A full ethnography

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20. Ibid.

of the visit can be found in Appendix 5.A. During the time of my visit, the coalition was holding an exhibit in the house on "Doctors of Dayton: Rural Medical Practice 1865-1930." The exhibit highlighted the life of country doctors, including Slack and Carroll. On exhibit were contemporary medical texts, instruments, and apparatuses that were used by physicians of this period.

The major business enterprises in Dayton during the late 1900s included taverns and hotels, a farming equipment warehouse, a general store, a nursery and a blacksmith. When modern modes of transportation like automobiles, trains and trolleys came to rural South Brunswick, residents began to travel to surrounding industrial cities like New Brunswick for commerce, entertainment and advanced medical treatments in modern hospitals.

By the early twentieth century, new models of practice began to enter the mainstream of American medicine influenced by scientific discoveries and technologies. Provision of medical care became more centralized as these new technologies and interventions were introduced in hospital settings. Realizing that one individual could not possibly know everything there was to know about practicing modern medicine, general practitioners, like the country doctors discussed earlier, began to turn to their colleagues, who were specializing in different fields of practice. Early specialists (i.e. surgeons, radiologists, and obstetricians) tended to concentrate in bigger cities with adequate hospital facilities. By the first decade of the twentieth century, patient care moved from the home to the physician's office, and then to larger institutions of medical care. The number of procedures such as surgeries performed in hospitals increased due to improved techniques, advanced equipment, accessibility to professional nursing, and safer settings.

The evolution of medicine in Middlesex County was influenced by this transition of medical care from the country doctor to specialized care that occurred in the early hospitals in New Brunswick and Perth Amboy. One of the specialists practicing in New Brunswick, during the early part of Carroll's career, was Dr. Francis Donohue, a surgeon.

City Doctors and Other Urban Citizens Changing the Practice of Medicine in Middlesex County

Dr. Francis Donohue (1859-1919)

Dr. Francis Donohue was born in New Brunswick on August 17, 1859. He graduated from St. Xavier's College in New York City, in 1875. He attended the New York University Medical College and graduated from there in 1881. After graduation, Donohue joined the practice of his preceptor, Dr. Clifford Morrogh, in New Brunswick on Albany Street. Donohue was a member, and for several years president, of the medical staff of the John Wells Memorial Hospital (Middlesex General Hospital, decades later named Robert Wood Johnson University Hospital).[21] Monsignor O'Grady, along with three local physicians, Donohue being one of them, founded what today is St. Peter's University Hospital, in 1907. Donohue was also among the first members of the St. Peter's Hospital medical staff and later president of the staff for many years.[22] He took great interest in the St. Peter's Hospital's nursing school and assisted in the training by providing lectures to the students. He was the main speaker at the school's first

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21. Medical Society of New Jersey, "Deaths: Donohue," *Journal of the Medical Society of New Jersey* XVI, no. 1 (July 1919): 255.

22. St Peter's Medical Center, *Progress of Compassion*, 2.

commencement exercise on June 1, 1910, where Kathryn Cafferty was the only graduate.[23] In addition, Dr. Donohue was consulting surgeon for Somerset Hospital in Somerville, surgeon for the Pennsylvania Railroad for the county, and the manager for the State Home for Boys. He was also affiliated with a number of financial institutions in New Brunswick.[24]

Dr. Donohue was an active member of the Middlesex County Medical Society, which he served twice as president, the Medical Society of New Jersey, the New Jersey Sanitary Association, and the American Medical Association.[25] Many Middlesex County Medical Society members participated on local and state society committees. Middlesex County physicians, who presented papers on various medical topics at the quarterly Middlesex County Medical Society meetings, would also submit their papers to the state society for publication in the *Transactions of the Medical Society of New Jersey*. In the 1903 it was reported that Dr. Donohue read a paper titled, "Alexander Operation in the Treatment of Retro-displacement of the Uterus."[26] Clinical reports published in the August 1909 edition of the *Journal of the Medical Society of New Jersey*, included a

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23. "St. Peter's Hospital Training School, New Brunswick," *Journal of the Medical Society of New Jersey* VII, no. 1 (July 1910): 99.

24. Medical Society of New Jersey, "Deaths: Donohue," 255.

25. Ibid.

26. Medical Society of New Jersey, "Alexander Operation in the Treatment of Retro-displacement of the Uterus," *Transactions of Medical Society of New Jersey*, 1903, 220.

paper on "Unusual Case of Appendicitis," "Reported by Frank M. Donohue, M.D. of New Brunswick, New Jersey."[27]

On June 21, 1916, then President Frank Donohue welcomed the members of the Middlesex County Medical Society and their wives and other invited guests to the Society's celebration of its centennial. He acknowledged the activities and achievements of the Middlesex County Medical Society over the years during his welcoming address and spoke fondly of members past and present.[28]

Donohue was married to Elizabeth B. Donohue and they had two daughters and a son, who shared his name. Dr. Donohue was a member of St. Peter's Church in New Brunswick.[29] After Dr. and Mrs. Donohue purchased a summer house in Cedar Crest near Bound Brook, they invited members of the Middlesex County Medical Society and others from Union and Somerset Counties to their home for the Middlesex County Medical Society's June meeting in 1919. After a brief business session, which included sharing of training experiences and advice for medical practice, the meeting evolved into a major social gathering. Members and invited guests thanked Dr. their hosts and for their generous hospitality. It was shortly after the June 1919 meeting that Donohue died at his summer home in Cedar Crest on June 28, 1919, at the age of 60.[30]

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27. Medical Society of New Jersey, "Unusual Case of Appendicitis," 126.

28. Medical Society of New Jersey, "County Medical Societies' Centennial Celebrations: Middlesex County Society," *Journal of the Medical Society of New Jersey*, September 1916, 483-502.

29. Medical Society of New Jersey, "Deaths: Donohue," 255.

30. Ibid.

On July 1, 1919, St. Peter's Hospital adopted a resolution in memory of Dr. Frank M. Donohue. The resolution professed the medical staff's admiration for his abilities as a surgeon and appreciation for "the courtesy, the kindness and the self-sacrificing spirit that he manifested to his friends, his patients and the community in general."[31] (Figure 5.5).

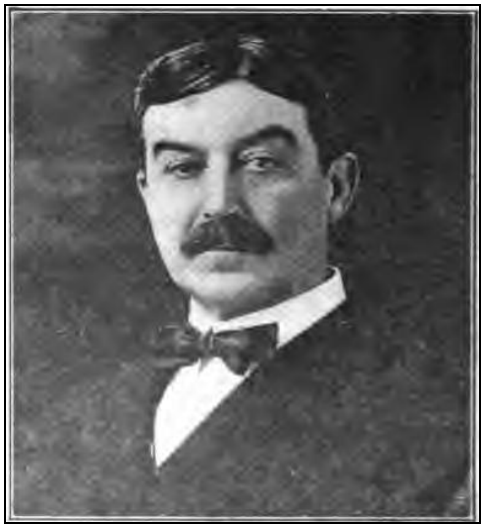

Figure 5.5. Frank M. Donohue, M.D.
Source: *Journal of the Medical Society of New Jersey* XVI, no. 1 (July 1919): 255.

After his death, Dr. Frederick W. Scott took over Dr. Donohue's office on Albany Street, in New Brunswick.[32]

Leaders within both the Middlesex County Medical Society and the Medical Society of New Jersey were instrumental in driving changes in medical practice, education and legislation for the county and the state during the early twentieth century.

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31. Medical Society of New Jersey, "In Memoriam: Frank M. Donohue, M.D.," *Journal of the Medical Society of New Jersey* XVI, no. 1 (August 1919): 297.

32. Medical Society of New Jersey, "Deaths: Donohue," 257

Another Middlesex County leader was David Combs English, who worked to improve communications between society members and promote scientific works through the *Journal of the Medical Society of New Jersey*, also helped to change the landscape of medicine in Middlesex County.

David Combs English (1842-1924)

David Combs English, son of a physician and pharmacist also named David Combs English, graduated from the College of Physicians and Surgeons of Columbia College in 1868. He shared a practice with Dr. Clifford Morrogh (1821-1882), an accomplished surgeon in New Brunswick.[33] Morrogh served as president of the Middlesex County Medical Society in 1858. He was also the first physician in the state to use chloroform during an operation.[34]

Dr. English served as treasurer for the Middlesex County Medical Society from 1872 to 1882.[35] He would later follow Morrogh's footsteps and take on the role of president after years of energetic participation in local Society activities. In Fred Roger's and A. Reasoner Sayre's *The Healing Art: a History of the Medical Society of New Jersey*, English is described as a "man of small stature, but great dignity and tireless energy."[36]

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33. Rutgers University Alexander Library, Special Collections/University Archives, *English, David Combs, 1842-1924*, Short biography., Rutgers University Alexander Library, Special Collections/University Archives, New Brunswick.

34. Rogers and Sayre, *Healing Art*, 69.

35. Clayton, *History of Union*, 524.

36. Rogers and Sayre, *Healing Art*, 179.

In his address to the members of the Medical Society of New Jersey in 1898, president English spoke of the Society's numerous accomplishments. However, realizing that there was still much more to be done, he called for better school health regulations. English believed that there was a need to improve the health of young people. By 1905, results from medical examinations in schools showed high percentages of students with vermin and contagious eye diseases in several cities in the state. These findings lead the way to physical fitness and basic hygiene programs in schools[37]

Prior to 1859, the transactions of the Medical Society of New Jersey were published as the *Transactions of the New Jersey Medical Society*. The Medical Society of New Jersey began to publish its transactions in annual volumes in 1859.[38] In 1903, the Medical Society of New Jersey instituted a Board of Trustees and special committees. Annual volumes of transactions were replaced with monthly journals. In an attempt to solicit the interest of young physicians, improve communication among members, and promote scientific works, the *Journal of the Medical Society of New Jersey*, under the direction of the Committee on Publication, began publication in September 1904. Dr. Richard Newton of Montclair was appointed the first editor.[39] Dr. David English served as its editor from 1906 to 1924.[40] The establishment and sustainability of the *Journal of the Medical Society of New Jersey* was an indication of

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37. Ibid., 165.

38. Cowen, *Medicine and Health*, 60.

39. Rogers and Sayre, *Healing Art*, 190.

40. Medical Society of New Jersey, "The Journal of the Medical Society of New Jersey," *The Journal of the Medical Society of New Jersey* 81, no. 9 (September 1984): 22.

medical progress in the state and helped to establish authority of the profession in the state.

Dr. English was elected to serve as the 104th president of the Medical Society of New Jersey in 1897.[41] In addition to being a physician and editor, English also assisted in founding the New Brunswick Y.M.C.A. He was a member and president of the New Jersey Sanitary Association and was on staff at the Middlesex County General Hospital (now Robert Wood Johnson University Hospital). English retired from active practice in 1922. He died in New Brunswick on September 19, 1924.

However, physicians were not the only ones who changed the landscape of medicine in Middlesex County during the early twentieth century. Any history of medicine in Middlesex County would be incomplete without the mention of Robert Wood Johnson.

Robert Wood Johnson (February 20, 1845 – February 7, 1910)

Robert Wood Johnson was a master entrepreneur, inspirational leader, public health advocate, and innovative thinker (Figure 5.6). Johnson was born in February 1845, in Carbondale, Pennsylvania, to parents Sylvester Johnson and Louisa Wood (some references list Mrs. Johnson as Frances Louisa Wood). The Johnson couple had eleven children; however the first child, a daughter, died at birth.[42] After sending two sons to

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41. Medical Society of New Jersey, "History of the Medical Society of New Jersey," Msnj.org, accessed August 2010, http: //www.msnj.org/uploads/History.pdf., 10

42. Lawrence G. Foster, *Robert Wood Johnson: the Gentleman Rebel* (State College, PA: Lillian Press, 1999), 7.

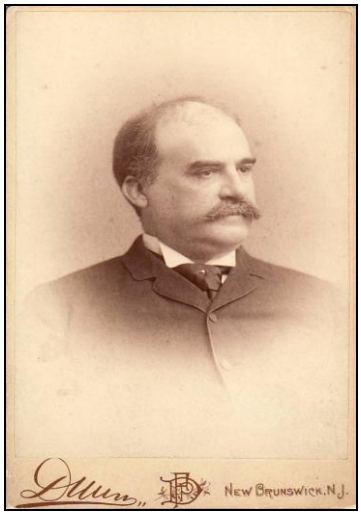

Figure 5.6. Robert Wood Johnson.
Source:Kilmer House,
http://www.kilmerhouse.com/Beginnings

fight in the Civil War, Sylvester and Louisa Johnson decided against sending a third child. Instead they sent their son Robert to Poughkeepsie, New York, to work with Louisa Johnson's cousin, James Wood, who owned an apothecary shop. Robert Wood Johnson was sixteen when he began his apprenticeship in this family-owned business. It was during this time that Johnson developed an interest in health care and pharmaceuticals. James Wood's business was called Wood & Tittamer. The store sold drugs, chemicals, paints, and perfumes among other items.[43]

When Johnson completed his apprenticeship in1864, he got a job as an order clerk in a wholesale drug firm, Rushton & Aspinwall, in Manhattan. In 1873, Johnson developed a business partnership with George Seabury and they named the company Seabury & Johnson. It was an equal partnership, but Seabury was designated as the company's president and Johnson was corporate secretary and sales manager. It was a

43. Ibid., 11.

successful business that specialized in medicinal plasters.[44] Medical plasters delivered medicine directly through the skin to generate heat.

At the 1876 Centennial Exposition in Philadelphia, Seabury & Johnson exhibited a new line of plaster products and won a prize. The Centennial Exposition was the first official World's Fair in United States. Sir Joseph Lister, an English surgeon and pioneer of antiseptic surgery was invited to do a presentation on antiseptic surgery, by the International Medical Congress, which organized a meeting as part of the Centennial Exhibition. Robert Johnson was in the audience to hear the speech and was inspired by what he heard.[45] Post-operative mortality rates were high in hospitals all across the country prior to the establishment of Sir Lister's antiseptic and sterile methods. Surgeons were contaminating their patients by going from one patient to the next without wearing gloves and by using unsterile instruments.[46] Intrigued by what he heard, Johnson gave a lot of thought to developing a sterile dressing to fight infection. However, those aspirations would have to be put on hold for a few more years. Johnson and Seabury could not agree on which direction the firm should take. Johnson wanted to mass-produce aseptic gauze and dressings for physicians to use in sterile surgery, but Seabury wanted to expand the company's medical plaster business.[47]

Despite the partners' disagreements, Seabury and Johnson continued to grow. In 1876, Seabury brought his brother Robert Seabury into the business and shortly

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44. Ibid., 16.

45. Ibid., 26.

46. Johnson and Johnson and Gurowitz, "Kilmer House."

47. Ibid.

thereafter, Robert Johnson brought in his brother Edward Mead Johnson, who began as a traveling salesman. In 1878, Robert Johnson's brother James joined the company. James Johnson's expertise was in improving the efficiency of the plaster-making machines.[48] The company continued to grow and in 1880, its manufacturing and production plant was moved to a larger plant in East Orange, New Jersey[49] (Figure 5.7).

Figure 5.7. Seabury & Johnson Employees, East Orange, NJ, late 1800s.
Source: Kilmer House: The Story Behind Johnson & Johnson and Its People, http://www.kilmerhouse.com/Seabury & Johnson.

It was also in 1880 that Robert Johnson married Ellen Cutler. Not much is known about Miss Cutler's background. The couple made their home in Elizabeth, New Jersey, and had one child, a daughter, Roberta Johnson. The couple was only married for four years. My research did not reveal any reason for why the marriage ended. Johnson

48. Foster, *Robert Wood Johnson*, 31.

49. Ibid., 35.

received custody of Roberta, but she went to live with Johnson's brother James and his family.[50]

Seabury and Johnson continued to have differences regarding the business. On July 18, 1885, Johnson resigned from the business and sold his half of the interest to Seabury. Payment was supposed to have been made mostly by promissory notes and Johnson had to agree not to enter the medical products business for ten years.[51] James Wood Johnson resigned from the company the same day as his brother. Edward Mead Johnson had already left the company in the spring of 1884.[52] When Seabury could not come through with the promissory note payments, Robert Wood Johnson was released from his agreement.

In 1886, with fourteen employees who had previously worked at the Seabury & Johnson plant in East Orange, James Wood Johnson and Edward Mead Johnson started a family-owned medical plaster business and named it the Johnson & Johnson Company.[53] The Johnson brothers' company struggled initially because they didn't have enough capital to keep the business afloat. Freed to join the medical and drug industry again, Robert Wood Johnson published an open letter to the drug trade, on September 23, 1886, announcing that he would be joining his brothers' drug company.[54] Johnson & Johnson was incorporated in 1887, with the three brothers, Robert Wood Johnson, James Wood

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50. Ibid., 36.

51. Ibid., 38.

52. Ibid., 37.

53. Ibid., 43.

54. Ibid., 45.

Johnson, and Edward Mead Johnson as the sole stockholders. They kept the name Johnson & Johnson, even after Robert Johnson joined the firm, feeling that the name Johnson & Johnson would be more marketable than Johnson & Johnson & Johnson. Robert Wood Johnson brought additional capital to the firm as well as innovative business skills and an exuberance that inspired others at the company.[55] The Johnson brothers, already pioneers in the manufacture of pharmaceutical plasters, became more proficient in making the product. They also pursued Robert Wood Johnson's dream of developing and commercially mass-producing sterile surgical dressings and sterile sutures.

In the next few years the Johnson & Johnson Company experienced tremendous growth and expansion. Robert Wood Johnson immersed himself in every facet of the business. He could be very persuasive and was known to have a bit of a temper. He was a stickler for details and was usually insistent on having things done his way. Despite his dogmatic approach to business and life in general, Johnson was well respected by the community in which he lived and worked.[56]

During a time when many workers were working in unsafe conditions and experienced abuse by their employers, Robert Wood Johnson established a "Company Welfare Department" in 1906. The Company Welfare Department provided medical, financial, and social supports for company employees.[57] Johnson understood early on that the company's success would be depended upon the contentment of their workers. Happy

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55. Johnson and Johnson and Gurowitz, "Kilmer House."

56. Foster, *Robert Wood Johnson*, 53.

57. Johnson and Johnson and Gurowitz, "Kilmer House."

employees were productive workers. Johnson believed that his employees had a right to good health care and that belief extended beyond the doors of his factories into the communities of New Brunswick. Johnson felt it was the company's responsibility to provide the best service they could possibly provide. He also held this high standard to all institutions, especially the two hospitals located in New Brunswick. Robert Johnson called for better organization of medical personnel in both hospitals. According to Johnson, in a 1931 document titled "Service to the Patient: A Discussion of New Brunswick Hospital Service and Proposals for its Modernization," it was simply not enough to construct buildings with attractive rooms and fill them with modern equipment; ["Much more important is a well organized, co-operative group of medical experts, supported by a trained nursing staff."][58] For many years, the Johnson and Johnson Company supplied both local hospitals with free bandages and dressings.

In addition to changing business partners when he joined his brother's firm, Johnson ventured into another personal partnership. On June 27, 1892 Robert Wood Johnson married Evangeline Brewster Armstrong, from Holley, in upstate New York.[59] They had three children, Robert Wood Johnson II (1893-1968), John Seward Johnson I (1895–1983), and Evangeline Johnson (1897-1990) (see in figure 5.8). Roberta, Robert Johnson's daughter from his previous marriage, joined the family.[60]

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58. Johnson II, *"Service to the Patient"*, 1.

59. Foster, *Robert Wood Johnson*, 65.

60. Ibid., 67.

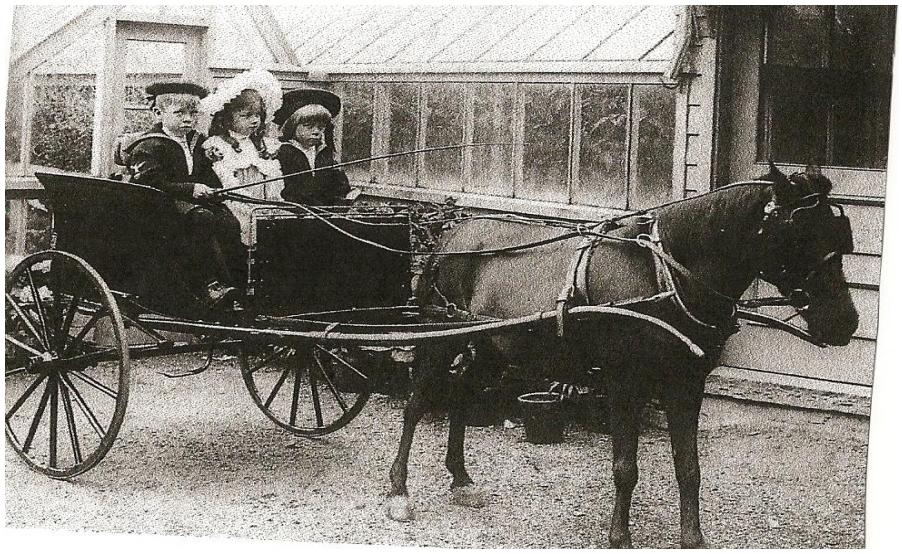

Figure 5.8. The Johnson children: Robert (*left*) Evangeline (*center*) and Seward (*right*) with their pony "Dandy."
Source: Lawrence G. Foster, Robert Wood Johnson: *The Gentleman Rebel*.

The family lived in a mansion called Gray Terrace, which was the biggest house in New Brunswick at the time. (Figure 5.9) Johnson often walked home from work in the afternoons to have lunch with his family. The family spent vacations in a summer house in Highland Park on a farm called Bellevue. The farm was once owned by the first known physician in Middlesex County, Dr. Henry Greenland.[61]

The family belonged to the Episcopal Church in town, but Johnson seldom attended. He did however spend many hours reading books on religion and philosophy.[62]

61. Ibid., 87.

62. Ibid., 83.

Figure 5.9. Gray Terrace was located on the corner of Hamilton Street and Easton Avenue in New Brunswick. Source: Kilmer House: The Story Behind Johnson & Johnson and Its People, http://www.kilmerhouse.com/Beginnings

Johnson enjoyed spending time with his family and teaching the children valuable life lessons. Often these lessons would include messages of how fortunate they were and how they should be appreciative for what they had. Robert Wood Johnson II spent a great deal of time with his father, accompanying him to business meetings and on hunting and fishing trips. According to Johnson's daughter Evangeline, "Bob had very little free childhood, as father always treated him like an adult. He was very anxious to have Bob grow up."[63]

Robert Wood Johnson, complaining of not feeling well, left work early on January 31, 1910. He was diagnosed with Bright's disease, a very serious illness that affected kidney function. There was no treatment for it. The family's doctor was Frank Donohue. Donohue made the initial diagnosis, but called in Dr. Edward Janeway, a well

63. Ibid., 84.

known diagnostician and pathologist from New York, for a second opinion. The diagnosis was of Bright's disease was reconfirmed.[64] All the doctors could do for Johnson was to make him comfortable. Robert Wood Johnson died, on February 7, 1910, leaving behind his wife and four children. The funeral was held on February 9, 1910. Over one thousand Johnson & Johnson employees gathered at the plant and walked to Gray Terrace to pay their respects.[65]

The board of directors named James Wood Johnson as the company's new president on February 18, 1910 James Johnson's leadership style was different from his brother's, as he was quieter and more less controlling. Nevertheless, James Johnson maintained the same company policies that were implemented by his brother.[66]

Robert Wood Johnson oldest son Robert was 16 years old at the time of his father's death and against family wishes joined his father's company. His first job was in the power house, where electric generators were stationed and used to generate electricity for the manufacturing factories.[67] He got along well with the factory workers. As an adult, Robert Wood Johnson II went on to become chairman of the company (1932-1963) and built Johnson & Johnson into the large and diversified global health care company it is today. In 1943, Johnson wrote the company's credo, which emphasized the company's

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64. Ibid., 105.

65. Ibid., 107.

66. Ibid., 109.

67. Johnson and Johnson and Gurowitz, "Kilmer House."

responsibility "to doctors, patients, customers, consumers, then employees, then to the community."[68]

In testament to Robert Wood Johnson Sr.'s skillful leadership abilities, he surrounded himself with people who supported his dreams and ideas and who had the expertise to help him reach his goals. One such person was his life-long friend and company employee Frederick Kilmer.

Frederick Barnett Kilmer (1851-1934)

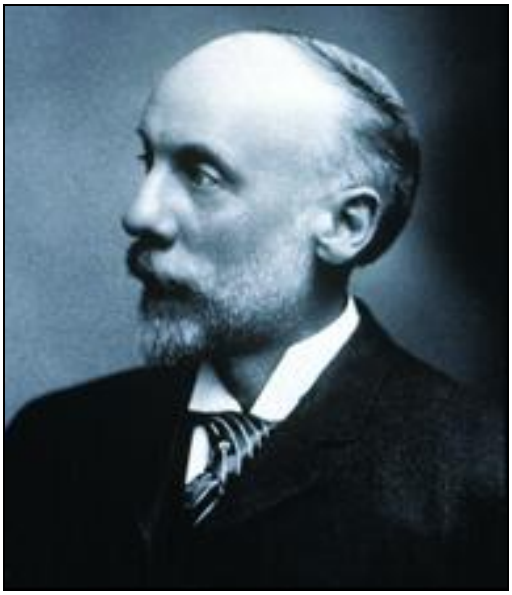

Figure 5.10. Frederick Barnett Kilmer.
Source: Kilmer House: Beginnings.
http://www.kilmerhouse.com/Beginnings.

Frederick Barnett Kilmer owned a local pharmacy in New Brunswick, New Jersey, when he met Robert Wood Johnson in early 1887. He was responsible for making many of the innovations in sterilized dressings and edited many of the medical manuals

68. Ibid.

and educational guides that were produced by the company for doctors, surgeons, nurses and the general public. Frederick Kilmer was the first scientific director at Johnson & Johnson and developed one of the earliest medical research laboratories in the country. (Figure 5.10).

Kilmer was born in Connecticut on December 11, 1851. He attended public schools in Binghamton, New York, and later attended Wyoming Seminary at Kingston, Pennsylvania. It has been asserted that Fred Kilmer graduated from the New York College of Pharmacy. However, according to Roy A. Bowers, historian of pharmacy, Kilmer's name does not appear on the lists of graduates for the New York College of Pharmacy during the period from 1870 to 1928. It has also been reported that Kilmer might have taken courses at Yale, Columbia and Rutgers Universities; however his attendance at these universities has not been confirmed. Despite these facts, Kilmer allowed writers to refer to him as "Dr." after 1900.[69] On the other hand, the literature does acknowledge that Fred Kilmer was awarded an honorary degree of Master of Pharmacy (Ph.M.) by the Philadelphia College of Pharmacy and Science in 1920, [70]

Fred Kilmer's involvement in the drug business in New Jersey began in Morristown. He later came to New Brunswick, where he owned and operated a drug store establishment, located at the corners of Albany and George Streets, for over ten years, until he sold the business in 1889.[71] (Figure 5.11).

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69. Bowers, "Frederick B. Kilmer," 52.

70. Ibid., 53.

71. Ibid.

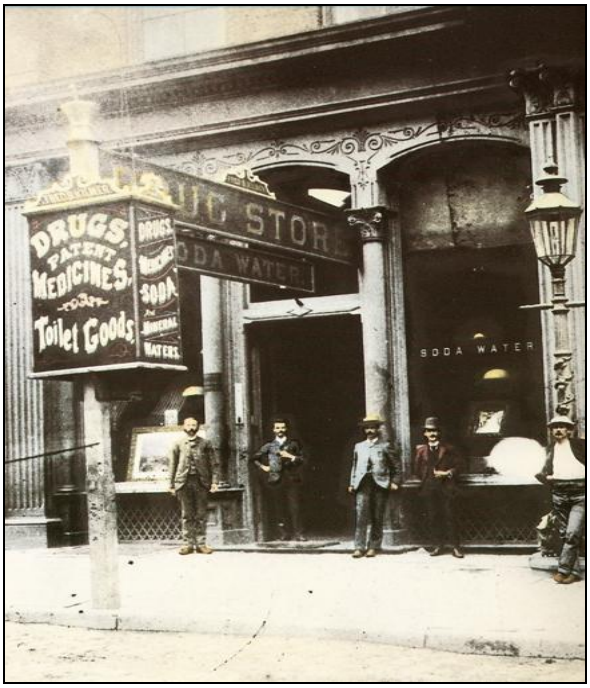

Figure 5.11. Fred Kilmer's drug store: The Opera House Pharmacy. Source: Kilmer House, http://www.kilmerhouse.com

In the 1880s, the Johnson & Johnson Company was working to spread the word about antiseptic surgery. As previously mentioned, the company's chair, Robert Wood Johnson, heard Sir Joseph Lister, the founder of antiseptic surgery, speak in Philadelphia in 1876 and as a result, the company published the *Modern Methods of Antiseptic Wound Treatment*. Edited by Fred Kilmer in 1888, this publication was widely recognized by physicians as a standard text on antiseptic practices and wound care information.[72] (Figure 5.12).

72. Johnson and Johnson and Gurowitz, "Fred Kilmer."

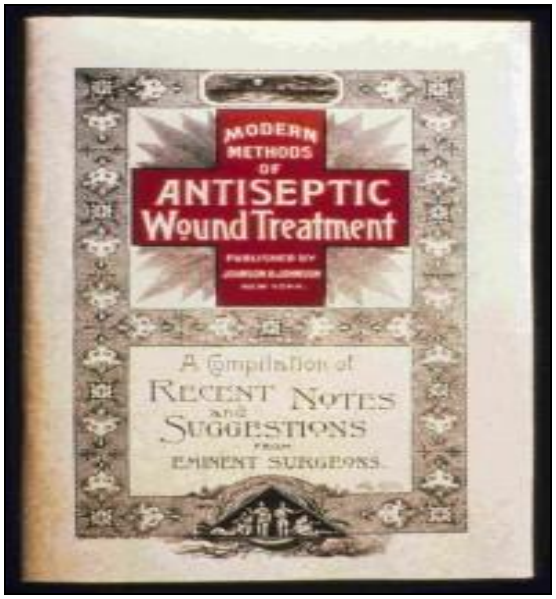

Figure 5.12. Modern Methods of Antiseptic Wound Treatment, 1888.
Source: Fred Kilmer, http://www.kilmerhouse.com.

When Fred Kilmer sold his pharmacy in 1889, he joined the Johnson & Johnson Company as the Director of the Scientific Laboratories. At Johnson & Johnson Fred Kilmer was in charge of a variety of programs and projects. Besides being a gifted scientist, Kilmer was also a talented writer. He used his skills to promote modern medicine manuals and educate consumers about public health issues. In addition to *Modern Methods of Antiseptic Wound Treatment,* Fred Kilmer edited a number of other publications at Johnson & Johnson including *Johnson's First Aid Manual,* which contained "Suggestions for Prompt Aid to the Injured In Accidents and Emergencies,"[73] *Red Cross Notes*, which was directed at the medical and pharmacy professions and

73. Fred Kilmer and Johnson and Johnson Company, eds., *Johnson's First Aid Manual: Suggestions for Prompt Aid to the Injured In Accidents and Emergencies*, Third ed. (New Brunswick: Johnson and Johnson Company, 1903).

frequently had articles about how to combat diseases, and the *Red Cross Messenger,* which was created to increase public awareness about disease prevention and public health.[74]

It was Fred Kilmer's suggestion to use talcum powder to smooth irritated skin, sparking the production of Johnson & Johnson's most famous product line, "Johnson's Baby Powder."[75]

Kilmer authored a string of original slogans, some of which were used in the company's advertisements and others such as, "Your Druggist is More Than a Merchant" and "Ask Your Druggist" were used in an effort to promote pharmacy as a profession.[76] Fred Kilmer worked for Johnson & Johnson's as the company's scientific director for forty-five years. [77]

Kilmer also served as an advisor to the New Brunswick Board of Health in the early 1900s. He collaborated with other board members, government officials, local politicians, and businessmen to improve sanitary conditions in New Brunswick. In a 1903 letter to Professor John B. Smith, who was the president of the New Brunswick Board of Health at the time, Kilmer discussed the need to clean New Brunswick's polluted water supplies. Kilmer suggested that "careful and frequent examinations of the

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74. Bowers, "Frederick B. Kilmer," 53.

75. Johnson & Johnson Company, "Johnson & Johnson History - Johnson & Johnson," Johnson & Johnson - Health Care Products & Pharmaceuticals, "under Company History," accessed March 21, 2008, http://www.jnj.com/connect/about-jnj/company-history/.

76. Bowers, "Frederick B. Kilmer," 54.

77. Johnson & Johnson, "Johnson & Johnson History."

water and active steps," would help resolve the problem.[78] Kilmer also served as president of the New Brunswick Board of Health and was instrumental in improving New Brunswick's public sanitation.

Along with Dr. Francis Donohue, Frederick Kilmer was a charter member of St. Peter's General Hospital's Board of Directors. He planned and instituted the first hospital monastery garden in the United States. Medicinal plants and herbs were planted in the garden and were used by the nurses in the study of medicine.[79] He also took great interest in the St. Peter's General Hospital's nursing training program by providing his support and contributing gifts to the school. Hundreds of books were donated to the library by Mr. and Mrs. Kilmer in memory of their son, Sgt. Alfred Joyce Kilmer, (December 6, 1886–July 30, 1918), who was an American journalist and poet, famous for his short poem "Trees." Alfred Joyce Kilmer was killed in action during the World War I.[80]

Fred Kilmer held professional memberships in numerous scientific associations in the United States and abroad. Locally, he was a member of the New Brunswick Historical Society, New Brunswick Scientific Society, American Chemical Society, American Institute of Chemical Engineers, American Public Health Association, and the American Drug Manufacturer's Association. Roy A. Bowers provides the following characterization of Fred Kilmer in his article, *Frederick B. Kilmer: A Notable New Jersey Pharmacist*: "He was 5'8" of medium build, blue-eyed, and blonde – then gray haired.

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78. Kilmer, "Polluted Water Supplies."

79. *Sunday Times* (New Brunswick), "New St. Peter's School of Nursing to Be Dedicated Today," October 15, 1939.

80. Bowers, "Frederick B. Kilmer," 54.

He was a smoker of cigars and a pipe, a teetotaler, an avid reader in his field and very careless about his appearance in his twilight years." He was "eccentric" and often misunderstood, but was his own man, according to Bowers. [81] In any case, Kilmer was a prominent figure in the Middlesex County community, who worked to advance pharmacy and the role of the pharmacist in the health care field.

Kilmer married Annie II. Kilburn (1849–1932), on December 25, 1871. (Figure 12) They had four children, Anda Frederick, (January 12, 1873), Ellen Annie, (September 12, 1875), Charles Willoughby, (March 17, 1880) and Alfred Joyce Kilmer, (December 6, 1886).[82] All four children died before their parents. Two of the children died in infancy, one took his own life, and as previously mentioned Alfred Joyce died in World War I.[83]

Kilmer was very close to his wife, who was a gifted speaker, writer, and musician (see in figure 5.13). The family home was located at 147 College Avenue, in New Brunswick. The site is now Stonier Hall, which is part of Rutgers University's campus.[84] He was a Republican and was a member of the Christ Episcopal Church, in New Brunswick.[85]

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81. Ibid., 55.

82. Wall and Pickersgill, *History of Middlesex*, 97.

83. Bowers, "Frederick B. Kilmer," 55.

84. Ibid., 54.

85. Wall and Pickersgill, *History of Middlesex*, 97.

Figure 5.13. Annie Kilmer holding a photo of her son and poet Joyce Kilmer. Kilmer was the first president of the St. Peter's Hospital's Auxiliary.
Source: Kilmer House http://www.kilmerhouse.com

Mrs. Kilmer died on January 2, 1932. Fred Kilmer died on December 28, 1934 and was buried among members of his family in Elmwood Cemetery in New Brunswick. On his tombstone is written: "I have fought a good fight, I have finished my course, I have kept the faith."[86]

Kilmer was a dedicated professional who worked with a number of other scientists, medical men, nurses and politicians to improve the health of Middlesex County residents. His collaborative partnership with John B. Smith helped to improve public sanitation in New Brunswick. The next few paragraphs will focus on the career of John Bernhardt Smith and his influence on the evolution of medicine in Middlesex County.

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86. Bowers, "Frederick B. Kilmer," 55.

John Bernhard Smith (1858-1912)

Figure 5.14. John Bernhard Smith Professor and Entomologist. Source: Rutgers University Dept. of Entomology, http://www.mosquito.rutgers.edu/early.htm

John Bernhardt Smith was born in New York City on November 21, 1858. He started his professional career as a lawyer (1880-1884), but later developed an interest and passion in insects (Figure 5.14). Without any formal scientific training he served as a special agent to the United States Department of Agriculture from 1884 to 1886. In 1886, he became an assistant curator of insects to the United States National Museum, which is now the Smithsonian Institution.[87] He started at Rutgers College as Professor of Entomology in 1889 and succeeded Reverend George D. Hulst, as New Jersey State

87. *New York Times*, "Noted Entomologist Dead: Prof. John B. Smith of Rutgers College Fought Mosquito Pest," *New York Times* (New Brunswick), March 13, 1912.

Entomologist, based at the New Jersey Agricultural Experiment Station (NJAES) on April 1, 1889.[88]

During the early twentieth century, New Jersey, like many other states across the country, was plagued by disease carrying mosquitoes. Salt marshes throughout the state generated enormous numbers of mosquitoes. Perhaps because of the vast meadowland marshes, New Jersey was saddled with the title of "Mosquito State."[89] In 1901, under Smith's direction, the NJAES in New Brunswick, studied the characteristic life cycles and habits of various species of mosquito. Strategies for mosquito control were also explored. Details of his findings were reported to the state and described in articles in local papers. Early mosquito control in New Jersey began with reducing places where mosquitoes could live. Smith suggested that breeding locations be drained as a possible solution for pest control. As a result of this study, in 1902 the state legislature passed an act authorizing and directing the NJAES to investigate and report on the habits of mosquitoes, their breeding places, and their relationship to diseases, and ways to control them. Ten thousand dollars was appropriated with this authorization.[90]

Over the next few years the work of the NJAES included mapping of breeding areas, narrowing ditches in marshes, and draining salt-marshes. In Smith's, *Report of the New Jersey State Agricultural Experiment Station upon the Mosquitoes* (1904), Smith concluded that mosquitoes bred in salt-marshes could fly several miles inland and posed

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88. Rutgers University Dept. of Entomology. "Early Work."

89. Cirillo, "John Bernhard Smith," 4.

90. Rutgers University Dept. of Entomology. "Early Work."

a serious health crisis for residents in the surrounding cities and town.[91] This new information suggested that the elimination of salt- marsh mosquitoes was more a state problem than a local one. However, it was quickly discovered that the state was not equipped to handle a problem of such magnitude and in 1904 the legislature vested local boards of health with authority to eliminate mosquito breeding places as public nuisances. The next year the legislature made it possible for communities with salt marshes within their borders to obtain state aid for treatment under the supervision of the NJAES.[92] Smith spearheaded a statewide campaign to control the mosquito. These efforts would eventually pay off in a significant decline in number of malaria-related deaths statewide.[93]

Smith's efforts influenced the New Jersey State Legislature to pass legislation that lead to the creation of organizations that would control mosquitoes and fund the staff and activities. On March, 21, 1912, Woodrow Wilson signed the bill authorizing the formation of mosquito commissions in New Jersey.[94]

Promoting the mosquito problem as a public health concern brought international recognition to Smith's work. He was an active member of a number of local, national and international professional organizations and associations. On March 12, 1912, Smith died

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91. Smith, *Report*.

92. Rutgers University Dept. of Entomology, "Early Work."

93. Vincent Cirillo, "John Bernhard Smith," 4.

94. G. M Patterson, John B. Smith Chronology, The Center for Vector Biology at Rutgers, the State University of New Jersey, accessed Sept 20, 2010, http://vectorbio.rutgers.edu/chronology.php

of Bright's disease, leaving behind a widow, a daughter, Gretchen, and a son, Hilman F., who was a junior at Rutgers College.[95]

Members of the medical and scientific professionals were not the only ones who influenced the evolution of medicine in Middlesex County. As several towns in Middlesex County experienced urbanization and rapid population growth during the latter part of the nineteenth century and the early part of the twentieth century, the practice of medicine became more specialized and professionalized. The institution of hospitals in the county changed the way its residents sought and received medical care. Care provided in a familiar environment, by the country doctor, supported by a whole host of family members and friends transitioned to medical treatment provided by a diverse group of strangers, using a variety of mechanical devices, in an unfamiliar and sterile environment. Yet, there was hope for cures and faith that one would get better after receiving care based on new science and technology that could only be provided in hospitals.

The charity and hospital movements that developed in Middlesex County during the late nineteenth century were usually spearheaded by prominent county men and women. Many of these prominent citizens organized themselves in associations, societies and other groups with the purpose of improving conditions for the poor, children, and the sick.

During the early 1880s, two separate groups, distinguished by gender, worked independently to establish a hospital in New Brunswick. It was noted in the chapter on

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95. *New York Times*, "Noted Entomologist."

Hospitals that the first hospital in Middlesex County was St. Peter's Hospital which opened in1872 and closed in 1874 due to economic difficulties. The two groups felt there was an urgent need for institutionalized medical care in the city. Prominent men from the community were successful in getting the New Brunswick City Hospital incorporated in 1884, but did not generate much movement in getting the hospital opened after that. The women from the community, spearheaded by the leadership of Grace Tileston Wells, did not wait for the men to establish a site for the hospital and raised the funds necessary to get the hospital opened in 1885.[96]

Grace Tileston Wells (-1928)

In 1883, the physicians in the town of New Brunswick provided a free course of lectures on "First Aid to the Injured," to the community. Inspired by what they heard several women from the community, under the direction of Grace Tileston Wells, met in the lecture hall of the First Presbyterian Church on George Street, on February 18, 1884, to organize the Ladies Hospital Aid Association. The purpose of the association was to start a hospital in New Brunswick. The group raised sufficient funds and in March, 1885, the Ladies Hospital Aid Association rented a small cottage on the corner of Commercial Avenue and Seaman Street to serve as the New Brunswick City Hospital. The men's group had incorporated the New Brunswick City Hospital in 1884. Soon after the Ladies Hospital Aid Association rented the cottage, they wrote to the Board of Directors of the

96. Middlesex General Hospital, *Beginnings*, 8.

New Brunswick City Hospital to announce the opening of the new facility and requested that they take responsibility for it.[97]

The first patient of the New Brunswick City Hospital, a victim of a railroad accident, was admitted on April 7, 1885. The Board assumed the lease for the building, as well as, the salary for the matron and in turn, asked the Association to be responsible for the "domestic arrangements" for the hospital.[98] It wasn't until March 28, 1887, however, that Mrs. Wells and several members of the Ladies Hospital Aid Association were appointed to the Board of the New Brunswick City Hospital.[99]

Wells and the women of the Ladies Hospital Aid Association were triumphant in their efforts to establish a hospital in town, but it wasn't long before the demand for services outgrew the capacity of the new hospital.

On July 5, 1888, Wells, president, made an offer to the board to build a new hospital with her own finances, with the stipulation that the new facility be named in memory of her late husband, Dr. John Wells. The hospital board accepted Mrs. Well's offer and on April 27, 1889, she presented the board with keys to the new John Wells Memorial Hospital.[100]

The John Wells Memorial Hospital had a bed capacity of fifteen. In 1899, a wing was added onto the hospital building, increasing capacity to twenty beds. [101] As the

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97. Ibid., 9.

98. Robert Wood Johnson, *A Look at the Past*.

99. Ibid.

100. Middlesex General Hospital, *Beginnings*, 10.

101. Ibid.

populations in New Brunswick and the surrounding towns grew, so did the capacity and clinical services in the New Brunswick hospital. In 1916, a new building was constructed expanding bed capacity to forty beds. On March 17, 1916, Mrs. Wells wrote to the hospital board with a request that the hospital's name be changed. She suggested "New Brunswick General Hospital." She offered this explanation: "I built the little hospital as a cottage hospital as it was all the town required. It has done good work. Now a larger hospital is needed and I do not wish to hamper the work." The board agreed and changed the hospital's name to Middlesex General Hospital.[102]

Wells was a member of the Board from 1887 until her death in 1928.[103] In a New *Brunswick Sunday Times* article entitled, "Late Mrs. John Wells Made Possible Start of Institution Now Middlesex Hospital," dated March 18, 1928, Mrs. Wells was described as a friend to New Brunswick and "a benefactor who did much for the welfare of not only . . . the city, but for communities in all parts of the county."[104] Decades later, a "Wells Society" was established by Robert Wood Johnson University Hospital, in honor of Mrs. Grace Tileston Wells. The Wells Society encourages charitable donations to support the

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102. Ibid.

103. Ibid., 16.

104. *Sunday Times*, "Late Mrs. John Wells Made Possible Start of Institution Now Middlesex Hospital," *Sunday Times* (New Brunswick), March 18, 1928.

hospital's mission.[105] On July 1, 1986 the hospital's name was changed to Robert Wood Johnson University Hospital.[106]

Like most hospitals opening around the country during the late nineteenth century, Middlesex County hospitals were initially established to care for the poor. However, it wasn't long before communities realized that there was an enormous need for hospitals in growing industrial cities, where high numbers of work-related, automobile and railroad accident injuries occurred. In these developing communities, many people lived in crowded conditions without families to care for them. Due to recent medical discoveries and the implementation of modern medical practices during the late nineteenth and the early twentieth centuries, the public's acceptance of institutionalized healthcare changed. Hospitals were no longer viewed as the absolute last resort for medical care and began serving all classes of people. New public opinion about hospitals helped to promote the establishment of these institutions and influenced how they were designed and staffed.

As we have learned from previous chapters, the women from several Middlesex County communities did not wait for the men to establish or manage hospitals in their neighborhoods. Women community leaders and volunteers raised funds to help build and furnish all three hospitals in Middlesex County. These farsighted women understood the medical needs of their communities and in most cases were the driving force that led to

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105. Robert Wood Johnson University Hospital Foundation, "RWJUH Foundation: Programs of Giving," The RWJ University Hospital Foundation: Home, under "The Wells Society: Remembering Our Beginnings," accessed February 17, 2009, http://www.rwjuhfdn.org/programs/index.html.

106. Robert Wood Johnson, *A Look at the Past*.

the establishment of hospitals in the county. Due to their tireless efforts through ladies hospital aid associations, ladies auxiliaries, women's guilds, and other groups, buildings were purchased or constructed, operating and patient rooms were furnished, special equipment was purchased, linens were provided, gifts were donated to nursing students, and patient meals were served. Through their fund raising campaigns (i.e. Perth Amboy's "Hospital Day Campaign" for which employees local industries were asked to contribute of a day's wages to the building of a new hospital) these ladies groups were able to accomplish many of the tasks previously mentioned.

Community leaders, both men and women, worked side by side with medical professionals in an effort to meet the medical needs and demands of their communities. However, without the support of these women's groups, the establishment of community hospitals might have taken much longer.

By providing a biographical sketch of a few predominant figures and the medical contributions they made to the heritage of medicine in Middlesex County, I demonstrated how their efforts influenced the practice of medicine and, inevitably, doctor-patient relationships in the communities they served. The biographical descriptions illuminate a few individuals' efforts to build authority in the medical professionalism, establish medical institutions, set policies through medical societies, and improve public health in Middlesex County.

Although the men and woman selected for this biographical section are not well-known, they are giants in the medical history of Middlesex County because of their legacy. Their efforts laid the foundation for medical practice in the county during a time when there were no other shoulders to stand upon. They were independent thinkers who

were able to rally others for the cause of improving health care for the communities they serviced, and in many ways they changed the landscape of medical practice in Middlesex County.

CHAPTER 6

CONCLUSION

The early twentieth century was a period of tremendous advancements in medicine and technology and as a result experienced a revolutionary change in the delivery of healthcare in America. Middlesex County medical practitioners were in tune with how illnesses were being addressed and how innovative medical techniques were being practiced nationally. The introduction of new diagnostic test procedures and technology changed the way they interacted with their patients. This period also witnessed the development of "authority" in the medical profession which resulted in new found respect from the public.[1]

According to Leiyu Shi and Douglas Singh, in *Delivering Health Care in America: A Systems Approach*, there are seven key factors that contributed to "the gradual transformation of medicine from a weak, insecure, and isolated trade into a profession of power and authority:" urbanization, science and technology, institutionalization, dependency, cohesiveness and organization, licensing and educational reform.[2] Shi and Singh explain that urbanization diminished traditional "family-based care," science and technology created greater acceptance and legitimized

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1. Starr, *Social Transformation*, 79.

2. Leiyu Shi and Douglas A. Singh, *Delivering Health Care in America: A Systems Approach* (Boston: Jones and Bartlett, 2004), 88.

the medical profession,[3] institutionalization increased the number of hospitals and enhanced "physicians' professional dominance," patients who felt that they could no longer manage their own medical needs developed a "dependency" on the medical professional's judgment and skills,[4] cohesiveness and organization of the medical profession helped to establish licensing laws,[5] "through licensing and upgrading of medical school standards, physicians obtained a clear monopoly on the practice of medicine," and educational reform helped to legitimize the profession's authority.[6]

In the preceding chapters I have described in great detail how all of these factors, key in the evolution of medicine during the late nineteenth and early twentieth centuries, helped shape the practice of medicine in Middlesex County. How these factors influenced the relationship between doctor and patient has also been demonstrated.

As discussed earlier, late nineteenth century and early twentieth century New Jersey citizens changed their beliefs about their abilities to care for themselves medically and began to rely more on the skills of others. The traditional early twentieth century family practitioner shifted the balance of power from the patient to the specialists. As urbanization and industrialization took hold of Middlesex County at the turn of the century, provision of medical care shifted from the patient's home to the doctor's office and medical institutions. The Middlesex County patients, who moved their medical care from their homes to medical institutions like the three Middlesex County hospitals

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3. Ibid.

4. Ibid., 90.

5. Ibid., 91.

6. Ibid., 93.

described in this project, lost their control over medical considerations to the medical expert and a new medical hierarchy of varying disciplines and responsibilities. Patient and doctor relationships changed over time in part due to the establishment of medical institutions and the adoption of new medical technologies.

As noted earlier, like most hospitals opening around the country, during the late nineteenth century, Middlesex County hospitals were initially established to care for the poor. However, it wasn't long before communities realized that there was an enormous need for hospitals in growing industrial cities, where high numbers of work-related, automobile and railroad accident injuries occurred. Additionally, in these developing communities many people lived in crowded conditions without families to care for them. The organization of medical institutions to care for the sick and the development of new medical technology, which gave physicians authoritative decision-making powers, transformed patient and doctor relationships in the county, as it did in other counties and cities across the country. With the implementation of modern medicine, the public's acceptance of institutionalized healthcare changed. Hospitals were no longer viewed as the absolute last resort for medical care and began serving all classes of people. New public opinions about hospitals as well as, the increased demand for specific treatments and practitioners helped to promote the establishment of these institutions.

According to Shi and Singh, American values as well as social, technological and economic factors have always been instrumental in shaping the structure of medical services and, further, that these elements are likely to shape its future.[7] Significant

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7. Ibid., 590.

barriers to access for certain populations still exist in the United States. "People without health insurances, minorities, low-income individuals, those with little formal education, or with special needs defined by disability and chronic illness continue to face greater barriers to access than the rest of the population."[8] Future directions of health care reform will be determined mainly by the same factors that contributed to the transformation of early twentieth century medicine. Additionally, as we have witnessed in the past, these changes will influence the provider and patient relationship. Just as the Middlesex County pioneers helped change the landscape of medical practice in the county during the early twentieth century, the contemporary medical community, policy makers, and the public must find ways to overcome the challenges of identifying and implementing strategies to improve the delivery of healthcare, which will effectively meet the needs of American citizens.

As emphasized consistently throughout this paper, the advancement of the medical profession in Middlesex County through the establishment of medical organizations, improved regulations and licensing by the state, application of educational reforms, establishment of medical institutions, and the public's demand for specialized medical care, all helped to change the landscape of medicine during this period of study. These changes also altered the way doctors and patients interacted. Therefore, I conclude that the advancement of medicine and the establishment of medical institutions transformed patient and doctor relationships in Middlesex County, New Jersey during the early twentieth century.

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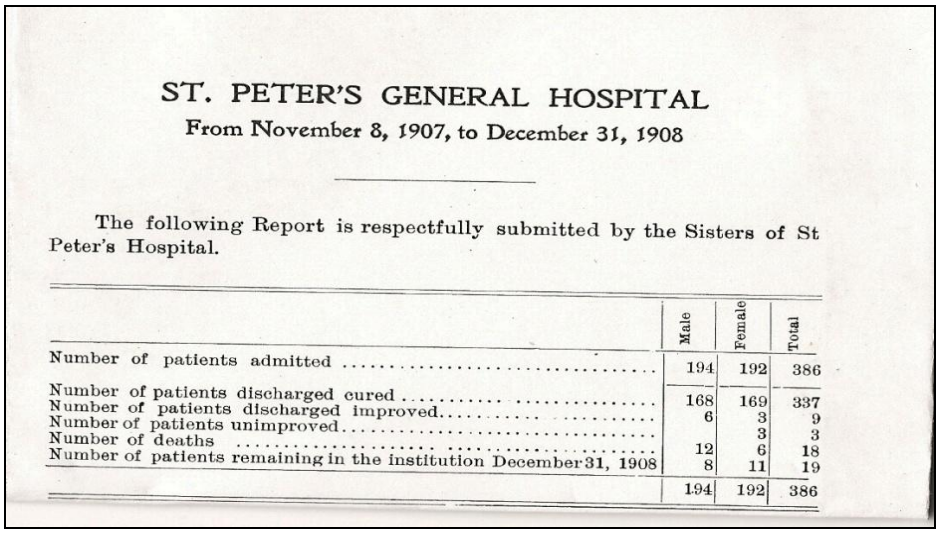
8. Ibid., 512.

APPENDIX A

THE EVOLUTION OF MIDDLESEX COUNTY MEDICAL INSTITUTIONS

(Relates to Chapter 3)



ST. PETER'S GENERAL HOSPITAL

From November 8, 1907, to December 31, 1908

The following Report is respectfully submitted by the Sisters of St Peter's Hospital.

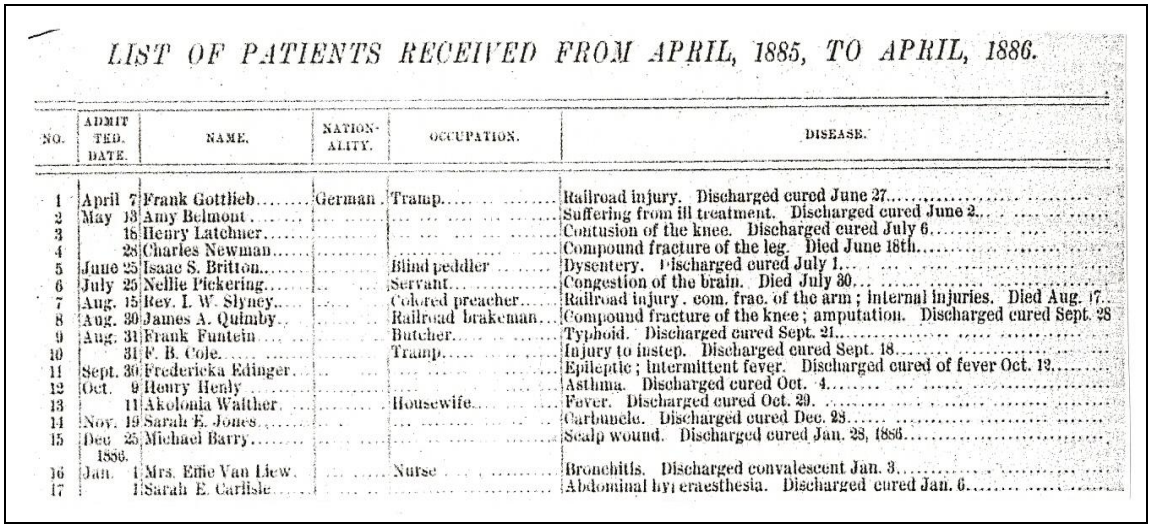
	Male	Female	Total
Number of patients admitted	194	192	386
Number of patients discharged cured	168	169	337
Number of patients discharged improved	6	3	9
Number of patients unimproved		3	3
Number of deaths	12	6	18
Number of patients remaining in the institution December 31, 1908	8	11	19
	194	192	386

St. Peter's Hospital patient admissions and discharges, reported in the first annual report. Source: St. Peter's General Hospital's First Annual Report (1907-1908).

APPENDIX B

LIST OF PATIENTS APRIL 1885 TO APRIL 1886

(Relates to Chapter 3)



LIST OF PATIENTS RECEIVED FROM APRIL, 1885, TO APRIL, 1886.

NO.	ADMITTED. DATE.	NAME.	NATIONALITY.	OCCUPATION.	DISEASE.
1	April 7	Frank Gottlieb	German	Tramp	Railroad injury. Discharged cured June 27
2	May 13	Amy Belmont			Suffering from ill treatment. Discharged cured June 2
3	15	Henry Latchner			Contusion of the knee. Discharged cured July 6
4	28	Charles Newman			Compound fracture of the leg. Died June 18th
5	June 25	Isaac S. Britton		Blind peddler	Dysentery. Discharged cured July 1
6	July 25	Nellie Pickering		Servant	Congestion of the brain. Died July 30
7	Aug. 15	Rev. I. W. Slyney		Colored preacher	Railroad injury. com. frac. of the arm; internal injuries. Died Aug. 17
8	Aug. 30	James A. Quimby		Railroad brakeman	Compound fracture of the knee; amputation. Discharged cured Sept. 28
9	Aug. 31	Frank Funtein		Butcher	Typhoid. Discharged cured Sept. 21
10	31	F. B. Cole		Tramp	Injury to instep. Discharged cured Sept. 18
11	Sept. 30	Fredericka Edinger			Epileptic; intermittent fever. Discharged cured of fever Oct. 13
12	Oct. 9	Henry Henly			Asthma. Discharged cured Oct. 4
13	11	Akelonia Walther		Housewife	Fever. Discharged cured Oct. 29
14	Nov. 19	Sarah E. Jones			Carbuncle. Discharged cured Dec. 28
15	Dec 25 1886.	Michael Barry			Scalp wound. Discharged cured Jan. 28, 1886
16	Jan. 1	Mrs. Effie Van Liew		Nurse	Bronchitis. Discharged convalescent Jan. 3
17	1	Sarah E. Carlisle			Abdominal hyperaesthesia. Discharged cured Jan. 6

New Brunswick City Hospital's first patient registry of admissions and diagnosis.
Source: Middlesex General Hospital, *Middlesex General Hospital, Beginnings (1884-1984): Centennial 100 Years of Caring* (New Brunswick: Middlesex General Hospital, 1984), 9.

APPENDIX C

THE MEDICAL PROFESSION IN MIDDLESEX COUNTY

EARLY TWENTIETH CENTURY

(Relates to Chapter 4)

Father John Medicine Customer Testimony
Source: The Cranbury Press; Date: Nov 26, 1915; Section: None; Page: 6

GRATEFUL MOTHER PRAISES FATHER JOHN'S MEDICINE

Tells How Her Little Girls Are Kept Well And Strong By Using This Old Fashioned Medicine

A Doctor's Prescription more than 50 Years in Use. Free from Alcohol or Dangerous Drugs. Builds New Strength.

The two little girls whose picture is shown herewith are the children of Mrs. Delvida Fortin of Brunswick, Me.

How Mrs. Fortin keeps her children well and strong she tells in her own words in a recent letter, and gives permission to quote as follows: "My children have taken Father John's Medicine during an attack of whooping cough and afterward when they were pale and run down. The medicine restored their health and I am pleased to endorse its value." (Signed) Mrs. Delvida Fortin, 26 Oak St., Brunswick, Me. Thousands of mothers praise Father John's Medicine as a tonic and body builder and for colds, throat and lung troubles, because they know of its value through many years of success. Father John's Medicine is a pure food medicine,—safe for all the family to take because it does not contain *alcohol or dangerous drugs.*

APPENDIX D

MIDDLESEX COUNTY MEDICAL SOCIETY REPORT

(Relates to Chapter 4)

Local Medical Societies Reports: Middlesex County Medical Society
Source: *Journal of the Medical Society of New Jersey,* Vol. VII No. 1 June 1910-May 1911; June 1910, 27.

MIDDLESEX COUNTY.

Howard C. Voorhees, M. D., Secretary.

The ninety-fourth annual meeting of the Middlesex County Medical Society was held at the Mansion House, New Brunswick, March 21, 1910, at 2:30 P. M.

Those present were: Drs. Albright, Gutmann, Voorhees, English, Carroll, Clark, Donohue, Ellis, Eulner, Fithian, Henry, Lippincott, Lund, Meacham, Meinzer, Morrison, Ramsay, Riva, Runyon, Schureman, Suydam, Treganowan, Wilson, Cooke, Saulsberry and Gruessner.

The members sat down to an excellent dinner, in the large dining-room of the Mansion House and a very pleasant time was spent in social intercourse and in enjoyment of the viands which had been liberally provided.

After dinner the members adjourned to the parlor, where president John C. Albright, of South Amboy, called the meeting to order, at 4 o'clock P. M. The first business was the election of officers, which resulted as follows:

President, Benjamin Gutmann, New Brunswick; vice-president, John L. Lund, Perth Amboy; treasurer, David C. English, New Brunswick; secretary, Howard C. Voorhees, New Brunswick; reporter, Arthur L. Smith, New Brunswick.

Delegates to the State Society: Drs. William E. Ramsay, Perth Amboy; Alfred L. Ellis, Metuchen, and John L. Lund, Perth Amboy. Alternates: Drs. J. L. MacDowell, Perth Amboy, and D. L. Morrison, New Brunswick.

The report of the treasurer, Dr. D. C. English, showed a very satisfactory state of the Society's finances—there being a good balance on hand.

Dr. William E. Ramsay, one of the Asemblymen from this county, gave a very interesting report of the Legislature's action on bills concerning which medical men were specially interested.

He spoke at length upon the Medical Practice Bill, No. 156, and told of the opposition it had encountered from the time of its introduction until it passed both houses of the Legislature, and he warmly upbraided Governor Fort's attitude.

Dr. D. L. Morrison moved that a vote of thanks be extended to Dr. Ramsay, for his earnest work for the profession and the public. It was seconded by Dr. Gutmann and others in strong words of commendation and unanimously adopted.

Dr. D. C. English moved that this society place itself on record as favoring the employment of a permanent legal counselor by the State Society, who may be consulted on all matters requiring legal advice, and who will appear as its counsel at hearings on legislative bills when necessary.

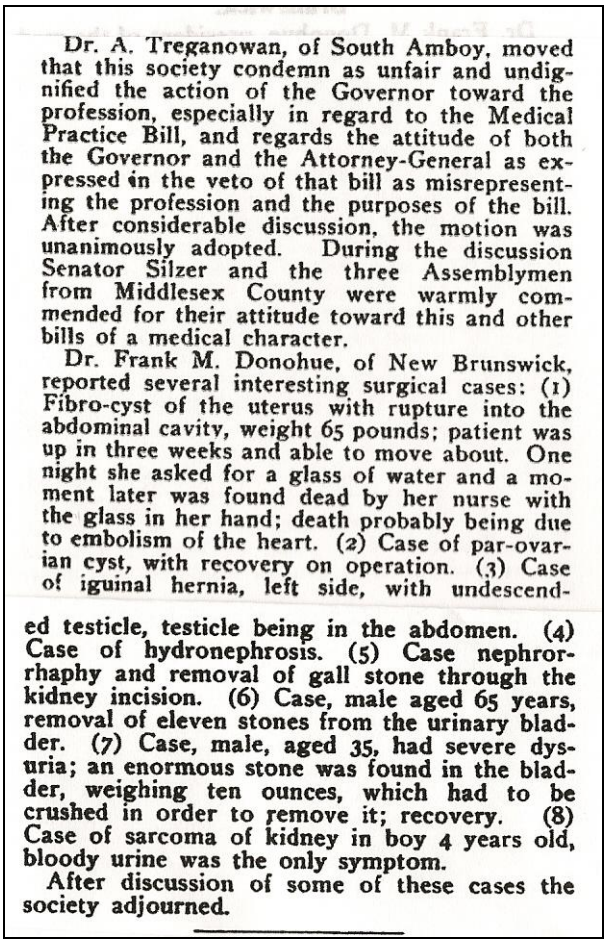
After discussion this matter was unanimously adopted.

APPENDIX E

LOCAL MEDICAL SOCIETY REPORT

(Relates to Chapter 4)

Journal of the Medical Society of New Jersey
Local Medical Societies reports
Middlesex County Medical Society



Dr. A. Treganowan, of South Amboy, moved that this society condemn as unfair and undignified the action of the Governor toward the profession, especially in regard to the Medical Practice Bill, and regards the attitude of both the Governor and the Attorney-General as expressed in the veto of that bill as misrepresenting the profession and the purposes of the bill. After considerable discussion, the motion was unanimously adopted. During the discussion Senator Silzer and the three Assemblymen from Middlesex County were warmly commended for their attitude toward this and other bills of a medical character.

Dr. Frank M. Donohue, of New Brunswick, reported several interesting surgical cases: (1) Fibro-cyst of the uterus with rupture into the abdominal cavity, weight 65 pounds; patient was up in three weeks and able to move about. One night she asked for a glass of water and a moment later was found dead by her nurse with the glass in her hand; death probably being due to embolism of the heart. (2) Case of par-ovarian cyst, with recovery on operation. (3) Case of iguinal hernia, left side, with undescended testicle, testicle being in the abdomen. (4) Case of hydronephrosis. (5) Case nephrorrhaphy and removal of gall stone through the kidney incision. (6) Case, male aged 65 years, removal of eleven stones from the urinary bladder. (7) Case, male, aged 35, had severe dysuria; an enormous stone was found in the bladder, weighing ten ounces, which had to be crushed in order to remove it; recovery. (8) Case of sarcoma of kidney in boy 4 years old, bloody urine was the only symptom.

After discussion of some of these cases the society adjourned.

APPENDIX F

ST PETER'S HOSPITAL TRAINING SCHOOL ARTICLE

(Relates to Chapter 4)

Journal of the Medical Society of New Jersey
Vol. VII No. 1 June 1910-May 1911, 99
St. Peter's Hospital Training School

St. Peters' Hospital Training School, New Brunswick.

Dr. Frank M. Donohue, president of the medical staff of St. Peter's Hospital, was the principal speaker at the first annual commencement exercises of the nurse's school of that institution in Columbia Hall, June 1st. The exercises were very interesting. Dr. Donohue spoke of studies the young ladies have to take before they receive a diploma as a trained nurse.

Miss Kathryn Cafferty was the only graduate. Besides the diploma and pin she also received several large bouquets of flowers from her many friends. On the platform with Miss Cafferty were the other nurses of the hospital, Monsignor O'Grady and the following members of the medical staff:

Dr. Laurence Runyon, Dr. J. Warren Rice. Dr. Frank M. Donohue, Dr. F. E. Riva and Dr. Howard C. Voorhees. Dr. Patrick O. Shannon presided.

The exercises opened with a solo entitled, "The Sea Is My Sweetheart," by Eugene W. Morris. A quartet composed of Mrs. George F. McCormick, Mrs. John P. Wall, J. Charles Bogan and James J. Finnan rendered two numbers.

Dr. Donohue in his address stated that this was the first graduation exercises held by St. Peter's Hospital since it was organized. When the class was first formed it was composed of six members, but all but one of the members had dropped out.

The speaker said upon a young lady making application to become a nurse the application is presented, the character proven and the applicant placed on probation for three months. During this period the young lady is permitted to go into different wards and see the dressing done.

After three months the applicant is admitted to the training school. She is given books to study and once a week hears a lecture by one of the members of the medical board. At the end of the course the student is given a review of her entire studies. This is followed by the final examination, which is a thorough one. After she passes she becomes a trained nurse.

Dr. Donohue explained what a benefit a trained nurse was to a physician and surgeon. He also gave some advice to the graduate, urging her to be faithful to the physician who is taking care of the patient which she is treating and never give words of discouragement.

He referred to the graduate as a bright student and wished her God-speed in her new profession.

Michael J. Smith sang "The Garden of Roses," and Dr. J. Warren Rice presented Miss Cafferty with the class pin. Dr. Rice made a brief address in which he wished the graduate much success in her new undertaking.

APPENDIX G

THE SLACK-CARROLL HOUSE: SITE TOUR

(Relates to Chapter 5)

The Slack-Carroll house is located at 354 Georges Road, Dayton, New Jersey, 08810. Site visit was conducted on January 16, 2007, 7:45PM.

I was very excited about my to visit the very site where Dr. Clarence M. Slack and Dr. Edgar Carroll provided medical care for South Brunswick residents during the late nineteenth and early twentieth centuries. One of the towns' historians and curators for the Slack-Carroll House, Joan Luckhardt, agreed to take me on a personal tour of the house.

The following description of the external features of the house can be found on the daytonvillage.org website: "The house is a 2 ½ story, 4-bay, L-Plan vernacular Italianate, popular between 1850 and 1870. It has cedar clapboard siding over a brick foundation; a slate gable roof with partial return; an arched attic window, three porches with the front and side porches showing Queen Anne details."[1]

The house had two front entrance ways. The door closest to the curb was the entrance to the main living quarters. Dr. Carroll and his family lived in this section of the

1. Dayton Village Coalition, Renovating History, http://www.daytonvillage.org/daytonvillage/slackcarrollhistory, accessed January 10, 2007.

house. Looking toward the facade of the house, the door that sat further back from the street and to the right of the main entrance opened into what use to be the waiting room. It was a small room. The room was longer in length than in width. I tried to imagine patients sitting in this room waiting to see Dr. Carroll. A wooden wheelchair from the period was positioned in the left corner of the waiting room. There was a back room behind the waiting room with a door that lead out to the backyard. Some of the plant life that was used for medicine by the physicians still grows in the backyard of the Slack-Carroll house.

The Dayton Historical Society hosted a medical exhibit at the house during the time of my visit. The exhibit was focused on the first two physicians who practiced medicine in the township, at the Slack-Carroll House. Posters with pictures of the two doctors and their families adored the waiting room. Glass casings in the waiting room and the back room held medical instruments, medical text books, medicine bottles, and dried plants from the era in which the physicians practiced. Luckhardt explained that the back room was the exam room. It was cold and windy that evening and the room was chilly. I wondered how the patients were kept warm while waiting to see Dr. Carroll.

Off from the waiting room there was a staircase that led up to what used to be the infirmary. The stairway was narrow and the stairs very deep. I wondered out loud how patients were able to maneuver the stairs, especially when they were very ill. My guide suggested that there may have been another entrance way through the main house. There were two rooms on this second floor level. The guide shared that this area was used as the hospital. Right at the top of the stairs there was a door that led to the bathroom. The bathroom was in need of repair and the door was kept locked for the safety of visitors,

Luckhardt explained. The bathroom had a bathtub and the first plumbing in town. The house has gone through a number of renovations with some of the construction closing off a few of the original pathways, according to the guide. The kitchen was in the basement in the 1800s.

Due to collaborative efforts between township residents and local businesses, the Slack-Carroll House was designated as a historic site. "In 1983, the Township designated the house as locally significant and listed it with the state as a historic site. Wawa donated the property to the Dayton Village Citizens' Coalition as a result of discussions between company and township officials and residents to see if something could be done to preserve the home."[2] At the time of this writing, board meetings were being held at the house on the Third Tuesday of the month by the Dayton Village Citizens' Coalition, and their partner South Brunswick Garden Club.

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2. Ibid.

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