". . . Putting no difference 'twixt rich and poor,
Plying with equal zeal the means of cure,
Not deeming it becoming to regard
Color or rank or person or reward . . ."
— "Physician's Character and Aims,"
Dr. Abraham Coles, Presidential Address, 1866

The outbreak of the Civil War in April, 1861, confronted physicians and laymen alike, on both sides of the Mason-Dixon line, with the realization that scarcely anyone had a first-hand knowledge of war. Relatively few had served in the War of 1812, and the Mexican War in the 1840's was chiefly a military maneuver of career officers and soldiers.

Five days after the firing on Fort Sumter, President Lincoln asked for 3,120 men from New Jersey, and 10,000 volunteered within a week. Physicians, of course, were among them.

At this time there were only ninety-eight men with M.D. degrees in the entire United States Military Medical Corps. By the end of the war, 199 medical men from New Jersey alone had served in the Volunteers and Regular Army and twenty-one in the Navy and the Marine Corps. Of this number, seventy-six were listed as surgeons, the rest as assistant surgeons.

Among the notables were Dr. Lewis W. Oakley of Elizabeth who would become president of The Medical Society of New Jersey in 1881. He served as surgeon to the Second and Fourth New Jersey Infantry Volunteers, participating between 1861 and 1864 in all the battles of the Potomac Army from Bull Run to Cold Harbor. In 1865 he was made Surgeon Brigadier General, New Jersey.

Dr. George M. Sternberg (1838-1915), a Surgeon-General of the U. S. Army and president of the American Medical Association in 1897-98, spent several years in New Jersey prior to entering military service in 1861. After teaching school in New Germantown, he was graduated from the College of Physicians and Surgeons in New York and practiced at Elizabeth until the Civil War. In that conflict, and during the Spanish American War, he distinguished himself in military and laboratory medicine.

Dr. Alexander N. Dougherty of Newark, who enlisted as surgeon of the Fourth Infantry Regiment, was to become, before the end of the war, Medical Director of the Right Grand Division of the Army of the Potomac, thus reaching a higher and more responsible post than was attained by any officer of the Volunteer Medical Staff. Another Essex County man, Dr. Gabriel Grant, was advanced from surgeon of the Second Infantry Regiment to Brigade Surgeon and later Medical Director of Hospitals at Madison, Indiana, where at one time he had over 2,700 patients under his care. Prior to enlistment he had made medical history by removing portions of the upper and lower jaws of a woman patient affected by osteomyelitic necrosis. An account of the case, with pictures, appeared in the *Transactions of The Medical Society of New Jersey* in 1860.

Through some of the bloodiest battles of the War Between the States, Dr. Addison W. Woodhull of Newark held the post of assistant surgeon with the Fifth New Jersey Infantry Volunteers (1861-62), then joined the Ninth New Jersey Volunteers from 1862 through the remainder of the war.

Dr. William B. Van Duyn of Trenton saw action in several Civil War battles and remained in the Army for another decade, participating during the later period in Indian campaigns in the West. He then settled in Trenton and was for many years the Trenton fire and police surgeon. He died in 1919 at the age of seventy-nine.

For Dr. Joseph B. Roe of Woodbury, the role of assistant surgeon in the Army from 1862 through 1865 was only the start of a varied public service career which took him to the New Jersey Assembly (1886-88), the state Senate (1888-91), and concluded with postmaster of Woodbury (1892-96).

Later generations, studying the Civil War, find it tinged with sentiment and romance, the drama of Margaret Mitchell's *Gone With the Wind* and the thrilling strains of Julia Ward Howe's *Battle Hymn of the Republic.* It had no story-book aura for the men who fought and died in it. For them, as for the fighting men of the twentieth century, war was aptly described by Sir Winston Churchill's phrase, "blood, sweat and tears."

Young Dr. Edward A. Pierson of Newark — descendant of that first Dr. and Reverend Abraham Pierson — met death at twenty-seven while he was serving as Navy surgeon aboard the man-of-war *Penobscot* (May 22, 1863). When a rebel steamer attempted to run the blockade off Wilmington, North Carolina, the *Penobscot* gave chase, catching the enemy fire from Fort Fisher. One shell exploded, killing the doctor in his operating room.

Death on the water befell another member of The Medical Society of New Jersey, Dr. Francis S. Weller of Passaic. He was serving as surgeon to the Ninth New Jersey Regiment Army Volunteers when they sailed into Hatteras Inlet, North Carolina, January 15, 1862. Field and staff officers went ashore to report to General Burnside, and while attempting to return to the ship, their boat capsized in the heavy surf. Although valiant rescue efforts were made by swimmers from the ship, Dr. Weller and several other officers were drowned.

There were other hazards besides the battlefield. Dr. J. Addison Freeman left his practice in Orange in 1862 to serve with the Thirteenth Infantry Regiment of New Jersey and survived three years of war to die of pneumonia at the Nashville, Tennessee, hospital where he was top-ranking administrator. Dr. John R. Hilton of Cumberland County, who joined the Second Regiment January 27, 1863, was dead less than two months later at White Oak Church, Virginia, of typhoid fever.

Dr. William W. L. Phillips of Trenton served as division surgeon with the First New Jersey Cavalry from 1861 until the war ended in 1865. He was quick to resume interest in the affairs of The Medical Society of New Jersey, recommending that a committee be appointed to compile a short history of the physicians of the state who had served in the war. Unfortunately the report was never completed. Another of his recommendations met with far greater success, for it was at a meeting in his offices at 52 West State Street, Trenton, that plans were made to form Mercer Hospital. The present hospital became a reality in 1895.

Dr. James T. Calhoun, upper left, of Rahway, N. J., was the operating surgeon for the amputation of General Daniel A. Sickles' leg at the field hospital at Gettysburg, Pa., July 3, 1863. Dr. Calhoun became medical director of the Third Army Corps, G.A.R.

The Sanitary Commission

Like physicians who survived the Revolutionary War, many would never regain full health. Some would swing a stiff knee, carry the scar of a Minié ball, or suffer recurrent malarial or typhoid fever the rest of their lives.

That conditions during the war were no worse was partly due to the attentions of the United States Sanitary Commission, forerunner of the American Red Cross. This group of civilians, patterned after the British Sanitary Commission of the Crimean War, was inspired to do for the soldiers what the government did not: raise hygienic standards and morale at camps, improve diet, care for the wounded, and coordinate the program of sending food and supplies. Doctors were among the Commission members who proposed camp locations, checked the water supply, and sewage disposals, recommended controls for contagious diseases, and sent inspectors to see that the Sanitary Commission regulations were obeyed. From June, 1861, until late 1863, the Commission was the main supplier of Army hospital needs. It brought about major advances in military medical procedures.

A properly organized Ambulance Corps, free from the control of the Quartermaster Corps, was essential, the Commission insisted, and finally won its point with federal legislation in 1864. Dr. Joseph Parrish of Burlington, and the *Medical and Surgical Reporter* he founded, were outspoken in supporting the Commission demands for better care of the wounded on the battlefields.

While every state, community, church and neighborhood was engaged in work on behalf of the soldiers or their dependents, the United States

Sanitary Commission sought a better integration of these activities by organizing a sub-Commission in each state. The plans for New Jersey's Commission were begun in November, 1863, at a meeting called by Dr. George Taylor, the Reverend Mr. G. O. Glavis, and Marcus L. Ward at the military hospital in Newark.

His experience in the United States Sanitary Commission for New Jersey remained vivid in his memory when Ward became governor of New Jersey in 1866, and prompted him to obtain legislation providing for a sanitary commission to report on matters of public health in the state. The commission, all members of The Medical Society of New Jersey, included Drs. Ezra M. Hunt, Metuchen, president; James B. Coleman, Trenton, secretary; Richard M. Cooper, Camden; Thomas Ryerson, Newton; and Isaac A. Nichols, Newark. The commission was a predecessor of the Health Commission and, eventually, the State Department of Health.

Added responsibilities came to most physicians during the Civil War years. Those who remained at home had to work longer hours. Even before the war, New Jersey had only about one doctor for every 1,200 people. During the war, the civilian physicians not only extended themselves to care for the patients of younger colleagues in uniform, but they also served on examining boards for enlistees, attended local sanitary commission meetings, and performed other home-front professional chores. They tried to keep abreast of military medicine with reports such as Dr. Abraham Coles' on hospital gangrene and Dr. Thomas F. Cullen's on the influence of the war upon the practice of medicine and surgery. Dr. Cullen advocated the collection and preservation of medical and surgical observations by surgeons of New Jersey regiments, enactment of laws securing rights of patients in military hospitals; improvement of ambulance service, and adoption of international laws rendering the medical staff of an army non-combatants.

For brief periods, the war came to the home front with the establishment of temporary military hospitals at Jersey City, Newark, Beverly, and – once again – the Barracks at Trenton. Community doctors donated their services in these hospitals.[1]

For physicians in the Delaware Bay area there was an added need for service when Fort Delaware, situated in the river opposite Salem, was converted to a prison for Confederate soldiers. In July, 1863, after the battle at Gettysburg, four to six times capacity had to be accommodated there, making conditions intolerable. Dr. S. Weir Mitchell, on a federal inspection trip from Philadelphia, noted twenty deaths a day from dysentery, and added, "For many of the prisoners there was more life *on* them than in them."

"Hospital gangrene" became a term as familiar to civilians as to medical men. It was applied to the infection that was omnipresent in hospitals where a large number of sick and wounded were crowded together. It was a condition easier to describe than define. Physicians could not agree on whether it was contagious, or the effect of atmosphere, too strong ointments, or too frequent dressings. They agreed that it occurred by direct application of poisonous diseased matter to a wound or ulcerated surface, and was sometimes generated through the air.

Their treatment was to destroy the diseased surface and correct the disorder of the system. Several caustics were recommended, particularly creosote, which had been used in the Crimean hospitals where it proved to be just as effective and less painful than nitric acid.[2]

After the Civil War, carbolic acid came into high favor as an antiseptic agent. It was used in compound fractures, to destroy vermin and warts, remove tartar from teeth, expel intestinal worms, arrest suppurative action on burns and scalds, and to treat diphtheria, conjunctivitis, diarrhea and numerous other ills in children. It was rated more effective than silver nitrate for gonorrhea and better than mercurial treatment for syphilitic chancres. Many physicians considered it the only proper treatment for cholera.

Joseph Lister, the famous British surgeon, applied Pasteur's discoveries and in the 1870's developed and won widespread acceptance of the carbolic-acid-spray technique in operating rooms. Excessive applications, as well as extravagant claims, led to some disappointments, but under Lister's aegis, a new era had dawned. Besides the use of strong antiseptic solutions, the medical profession began to give greater attention to basic hygiene.

Florence Nightingale is given credit for introducing a new system of nursing and sick-room care. From her leadership in the care of the wounded in the Crimean War came acceptance of hospital routines, female nurses, retreats and the rest camps for soldiers, and general acknowledgement that military M.D's and civilian M.D.'s should more often consult and work together.[3]

Dr. William Elmer of Cumberland County, in his presidential address before The Medical Society of New Jersey in 1861, praised the Nurses' Manual that Florence Nightingale had prepared because it emphasized the importance of fresh air and proper ventilation, "long recognized by the Society as essential to good health." Dr. Elmer also stressed the need for planning for adequate ventilation in homes, schools, churches and hospitals.

The woman's role

Miss Nightingale, "The lady with the lamp," had her counterparts in New Jersey. Shortly before the onset of the Civil War, Clara Barton left her position as a teacher in Bordentown for Washington, where she became prominent in nursing during the conflict, and later was named first president of the American Red Cross. She was also a champion of public school education for all.

Cornelia Hancock of Salem County also made her mark during the War Between the States. Oddly enough, the nursing career of this attractive young Quakeress was almost stifled by Dorothea Lynde Dix, who two decades earlier had fought so resolutely for the New Jersey State Mental Hospital.

Through the intercession of her brother-in-law, a Pennsylvania physician, Miss Hancock was allowed to volunteer for service. But, she reported in a letter home, she was at first resented by Miss Dix and others "on the score of youth and rosy cheeks." However, when she arrived at the front lines, the need for her services was so great that nothing more was said of her physical attributes.

So devoted to Miss Hancock were the hospitalized men at Gettysburg that they had a medal struck for her in 1863, as "a testimonial of regard for ministrations of mercy to the wounded soldiers. . . ." Her fame was such that in 1864, yearning for action, she was given a pass by Secretary of War Stanton permitting her to travel "anywhere in the lines of the Union Army." [4]

Hospitals for all the people

The military hospitals, which were of an emergency nature, and the continuing necessity of accommodating the sick and injured in the community, pointed up the need for medical facilities "for all the people."

Up to this time, a patient might be lodged temporarily at the home of a woman with a favorable reputation as a nurse. During epidemics, influential citizens would designate a private house as a temporary hospital. A so-called "pest house," for patients with contagious diseases, sometimes was located on the outskirts of a community.[5]

Lutheran Memorial Hospital in Newark was organized in 1857, but was not yet functioning in 1863 when a state Medical Society spokesman for that area deplored as a "burning shame" the lack of a single civilian hospital in a city able to support fifty or more churches.

Father Anthony Cauvin, first pastor of Our Lady of Grace Church, Hoboken, invited Franciscan Sisters of the Poor to establish a hospital in the community. It was started in January 1863, as St. Mary of Hoboken and was New Jersey's first public hospital. (Courtesy of St. Mary Hospital, Hoboken.)

Mother Frances Schervier of Aachen, Germany, founded the Order of Franciscan Sisters of the Poor. On a visit to the United States in 1868, she stopped first at Saint Mary Hospital. It was founded by Sisters of the Order. (Courtesy of St. Mary Hospital, Hoboken.)

New Jersey's first public hospital was St. Mary of Hoboken. It was begun in January, 1863, by four Franciscan Sisters of the Poor and one postulant. The Reverend Anthony Cauvin, first pastor of Our Lady of Grace Church, Hoboken, had indicated his hope for the establishment of a hospital in his New Jersey community. The need was acknowledged by Mrs. Sarah Peters of Cincinnati, a wealthy convert to the Roman Catholic faith and the daughter of Thomas Worthington, governor of Ohio.

After a personal tour of Hoboken, Mrs. Peters consulted the Superior of the Franciscan Sisters who had opened a hospital in Dayton, Ohio. Some months later, Father Cauvin received a letter from Mrs. Peters telling him that a group of nuns was prepared to start for Hoboken to undertake the establishment of the new hospital. Mrs. Peters wrote that they would need "only a suitable house, tolerably furnished with plain furniture (carpets are not wanted) and the rent paid for six months or a year." After that, she thought the nuns would be sufficiently acquainted with the locality to provide for their own maintenance.

A three-story brick house with twelve rooms was found, and $800 was collected by the ladies of the church's Altar Society to purchase twenty-eight beds and other furniture. A parishioner, Bryan Smith, paid the rent for one year and, with his mother and a sister, continued to make contributions for many years.

Because the hospital was close to the church, it was named St. Mary to honor "Our Lady Help of Christians," but the chapel and the convent were dedicated to the "Heart of Jesus" to comply with the wishes of Mother Frances Schervier, founder of the congregation. In 1868, she came from Aachen, Germany, on a visit to the United States, stopping first at St. Mary Hospital.

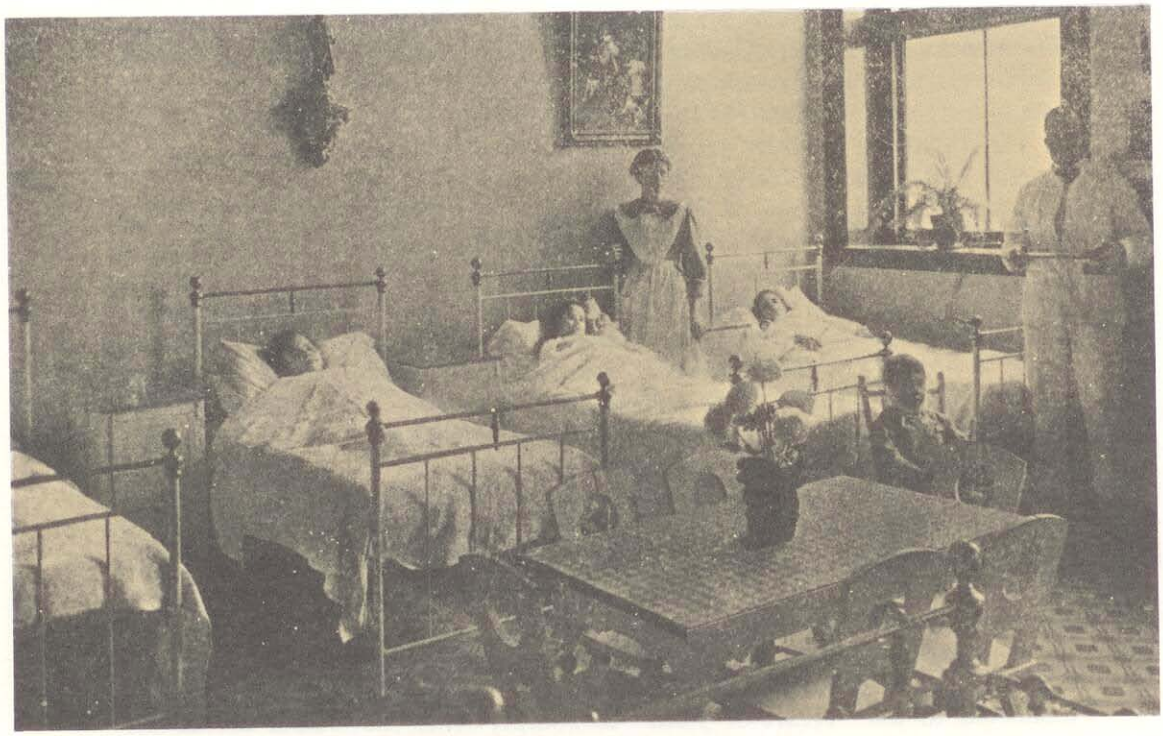
In its first year of operation, the hospital admitted thirteen patients, and the nuns took care of twenty children. Then the rising tide of immigration brought death-dealing plagues to the seaport community. Seamen with rags tied across their faces to ward off infection dragged dying men, women and children from ships and left them on the waterfront streets. As many as thirty victims were taken to St. Mary Hospital from the hold of one ship. A few years later, the first battle wounded from the Spanish-American War and veterans burning with malaria were carried down the gangplank on their way to the Hoboken hospital.

In July, 1918, St. Mary became Embarkation Hospital No. 1, and in 1943, when the fourth war touched St. Mary Hospital, the institution provided space for the training of the U. S. Cadet Nurse Corps.

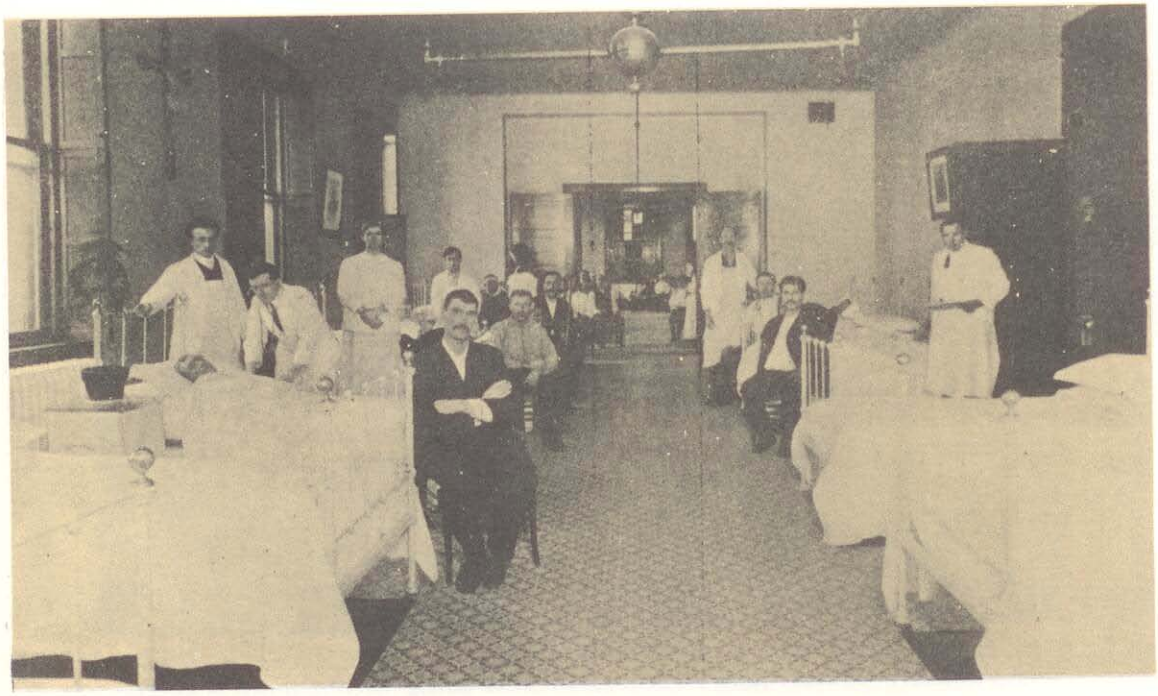
As the hospital completed its first century of service, a $61,000 grant from the Hill-Burton Act helped remodel the clinic into a diagnostic center, and in September, 1962, an approved School of Medical Technology, affiliated with Fairleigh Dickinson University, was opened at the venerable institution.

Dr. Romeo Chabert, a slender, handsome Englishman, was the hospital's first physician, serving from 1863 until 1904. The fourth president of the medical staff, from 1920 to 1951, was Dr. Joseph F. Londrigan, who was president of The Medical Society of New Jersey in 1944.

St. Francis Hospital, Jersey City, came into being within months of the establishment of St. Mary in Hoboken. St. Barnabas Hospital of Newark,

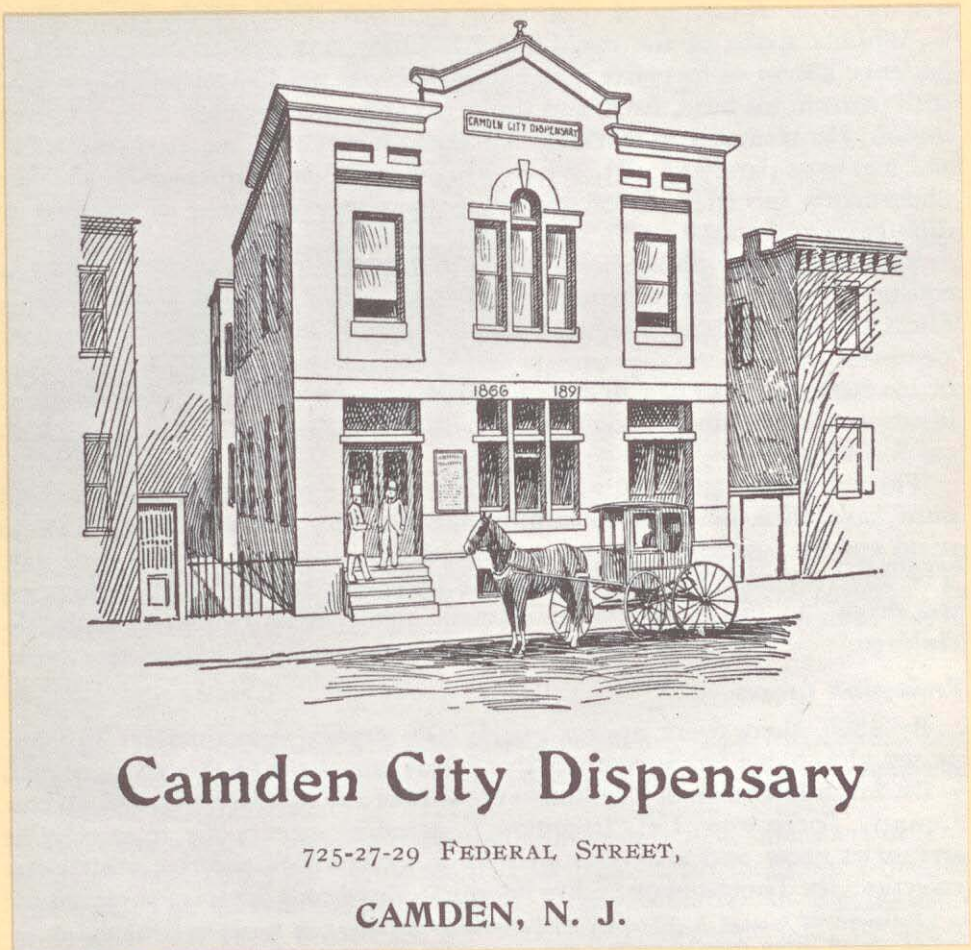


The Children's Ward, St. Mary Hospital, Hoboken, about fifty years after its founding in 1863.



Male Surgical Ward, St. Mary Hospital, Hoboken, about 1900.

Funds left from contributions to secure draft exemptions were made available in Camden in 1866 for the establishment of the first dispensary. It was intended to provide prompt treatment for workmen injured in nearby factories as well as for transients. The charitable foundation was under the supervision of the Camden City Medical Society.



founded by the Episcopalian church in 1864, cared for twenty-one patients in the first twelve months.[6]

Other hospitals soon followed. These institutions formed their own clubs and professional societies, holding weekly and monthly staff meetings. Some doctors protested they could not possibly attend all these, plus city, county and state meetings, and maintain their practice too.

The Civil War decade also saw dispensaries established in Newark, Jersey City, and Camden. The advent of steam cars and the growing demand for machine-made products meant more accidents and increasing numbers of injured workmen needing proper places for treatment.

Within a few years, however, the dispensary medical services, generally free of charge, were so gravely abused by "spongers" able to pay that controls had to be instituted so that charity would be limited to those really needing it.

Crippling from disease was not uncommon, apparently, for Dr. Alex Marcy of Camden reported that in Cape May County in 1860-61-62 there had been an epidemic of diphtheria followed by paralysis. Dr. Robert F. Whitely spoke of the rapidity with which one of his Passaic County patients, a man of forty-five in good health, was stricken in mid-September with pains in his head, back, and limbs, accompanied by high fever and sore throat. He returned to work after a week, but within ten days, his hands and feet were paralyzed. Dr. Whitely suggested that members of the Society undertake a special study of neurotoxic paralysis occurring as a sequel to diphtheria and scarlatina.[7]

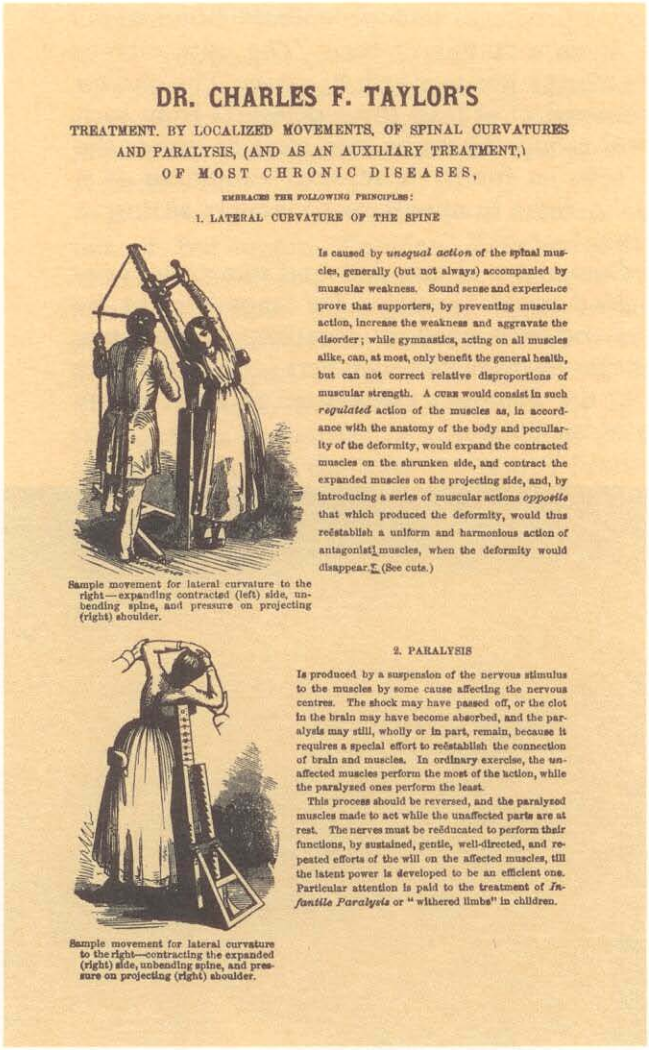
Some of the new public hospitals undoubtedly were expected to purchase equipment for treating patients suffering from paralysis and crippling diseases. Various devices were available, such as "Dr. Charles F. Taylor's treatment of localized movements of spinal curvature and paralysis." Two of his items were shown in a full-page display in 1863 and were the first illustrated advertising to accompany the printed *Transactions of The Medical Society of New Jersey.*

The equipment pictured was reminiscent of the New England stocks, and must have been almost as uncomfortable, for the patient was expected to stand and be "stretched" to proper posture for prolonged periods each day. The advertisement concluded with the statement that particular attention was given "to the treatment of infantile paralysis or 'withered limbs' in children."

Profession grows

By 1866, there were approximately 600 regular practitioners in New Jersey, although a few were not active. Only one of the M.D.'s was a woman — Dr. Sarah E. Lyman of Trenton — the wife of a regular physician of Mercer County. There were 150 "irregulars," including twenty-one females. The irregulars were variously classified as fifty-eight homeopaths; thirty-one eclectics; six Thomsonians*; five botanics; three root doctors; three cancer

* Followers of Samuel A. Thomson, indigenous to America and known as Thomsonians, revolted against heroic doses of calomel and other drugs in vogue during the early 1800's. Samuel C. F. Hahnemann's theories also were opposed to large doses of strong medicine. The latter sect, which arose in Europe, believed "like cures like," prescribing the indicated drug in minute amounts or high dilution. It was considered unethical for a regular practitioner to consult with either. If he did so, he might be reprimanded by his local or state Society, and if he persisted in such association, he might lose his membership in both bodies.



DR. CHARLES F. TAYLOR'S

TREATMENT, BY LOCALIZED MOVEMENTS, OF SPINAL CURVATURES AND PARALYSIS, (AND AS AN AUXILIARY TREATMENT,) OF MOST CHRONIC DISEASES,

EMBRACES THE FOLLOWING PRINCIPLES:

1. LATERAL CURVATURE OF THE SPINE

Is caused by *unequal action* of the spinal muscles, generally (but not always) accompanied by muscular weakness. Sound sense and experience prove that supporters, by preventing muscular action, increase the weakness and aggravate the disorder; while gymnastics, acting on all muscles alike, can, at most, only benefit the general health, but can not correct relative disproportions of muscular strength. A CURE would consist in such *regulated* action of the muscles as, in accordance with the anatomy of the body and peculiarity of the deformity, would expand the contracted muscles on the shrunken side, and contract the expanded muscles on the projecting side, and, by introducing a series of muscular actions *opposite* that which produced the deformity, would thus reëstablish a uniform and harmonious action of antagonistic muscles, when the deformity would disappear. (See cuts.)

Sample movement for lateral curvature to the right—expanding contracted (left) side, unbending spine, and pressure on projecting (right) shoulder.

2. PARALYSIS

Is produced by a suspension of the nervous stimulus to the muscles by some cause affecting the nervous centres. The shock may have passed off, or the clot in the brain may have become absorbed, and the paralysis may still, wholly or in part, remain, because it requires a special effort to reëstablish the connection of brain and muscles. In ordinary exercise, the unaffected muscles perform the most of the action, while the paralyzed ones perform the least.

This process should be reversed, and the paralyzed muscles made to act while the unaffected parts are at rest. The nerves must be reëducated to perform their functions, by sustained, gentle, well-directed, and repeated efforts of the will on the affected muscles, till the latent power is developed to be an efficient one. Particular attention is paid to the treatment of *Infantile Paralysis* or "withered limbs" in children.

Sample movement for lateral curvature to the right—contracting the expanded (right) side, unbending spine, and pressure on projecting (right) shoulder.

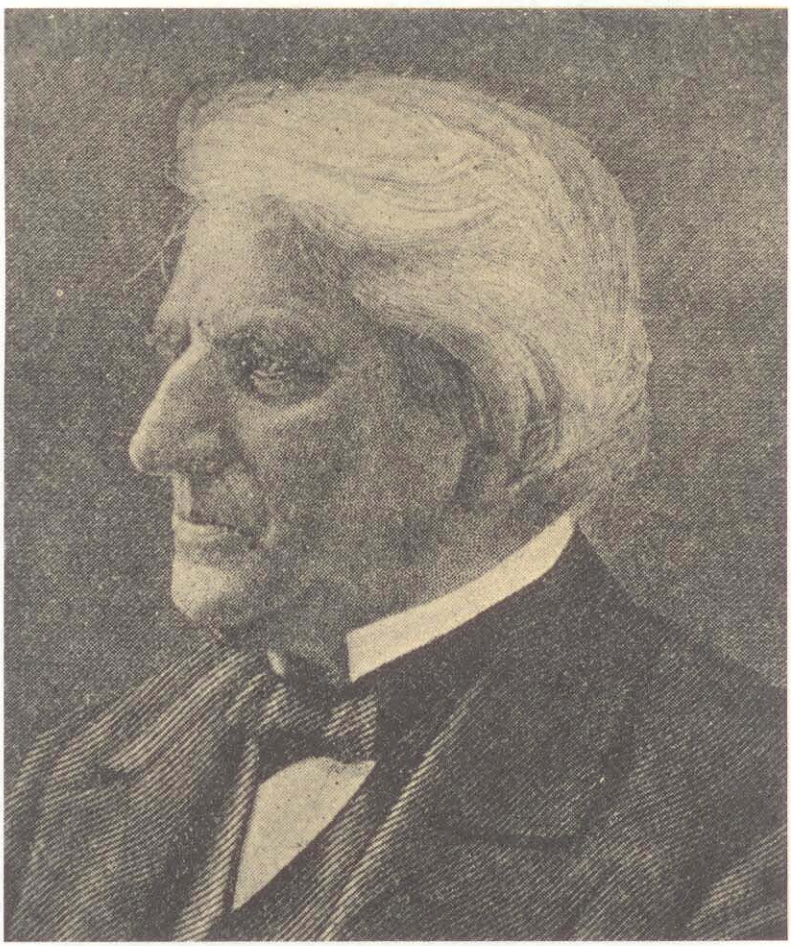
The first full-page illustrated advertising in the printed *Transactions of The Medical Society of New Jersey* appeared in 1863. It is uncertain whether the advertiser was offering a device for use in any physician's office or was soliciting referrals so that he could administer the treatment himself.

doctors; two electricians; two Swedish movement; one hydropath; one clairvoyant; one Indian doctor, and one inhalationist. Several others had no specific designation.[8]

With the war over and the centennial anniversary near, members of The Medical Society of New Jersey wanted its legal status established beyond question. The Charter of 1864, which became effective in the Society's centennial year 1866, recognized the Society as a corporate body by Act of Legislature, gave consideration to the functions of the Society and set up provisions which have needed few changes throughout the second century of the Society's existence.

The Society yielded its "special privileges and pecuniary immunities," desiring to be reorganized solely on a voluntary basis. The authority to confer the degree of Doctor of Medicine was retained, however. The charter provided that the Society be composed of at least three delegates from each county society elected by the local group. These in turn were to choose the officers of the state body and vote its funds. A rejected candidate or a disciplined member was given the right to appeal to councilors sitting as a Board of Censors for the Society.

With reports to the Standing Committee always slow and sometimes nonexistent, the new charter provided some incentive for improvement by making reporters of the district societies ex-officio members of the state Society, entitled to all the privileges of delegated members — provided they furnished their annual report to the Standing Committee at least twenty days before the annual meeting of the Society.



Dr. Abraham Coles, as president of The Medical Society of New Jersey in its centennial year, 1866, composed and delivered a long poem, "The Microcosm," as part of his address. He always associated medicine and religion and regarded his own profession as a sacred one.

Century-old Medical Society

The centennial observance of The Medical Society of New Jersey began on Tuesday, January 23, 1866, in Kirkpatrick Chapel on the Rutgers College Campus at New Brunswick. Dr. Abraham Coles of Newark was in the president's chair. Beside him was First Vice President Dr. B. Rush Bateman of Cedarville.

The front rows were filled with forty-six delegates representing the counties of Burlington, Camden, Cumberland, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Passaic, Somerset, Sussex and Warren.[9] Fourteen *Fellows* were present, along with delegates from corresponding societies in Connecticut, Maryland, New York and Pennsylvania, and guests, including lawyers, clergymen, editors and the faculty of Rutgers College.

One of the first motions was made by Dr. Ezra M. Hunt of Metuchen, asking that a committee be appointed to present to the executive and legislative branches of the state the public health needs of the citizens of New Jersey in the way of sanitary, hygienic, and charitable provisions.

There was so much business to be conducted in the day and a half allotted, that when a number of members congregated at Williams' Hotel on Tuesday evening, the delegates present were invited to give reports right there. Early in Wednesday's session, a resolution was passed, doubling the assessment of each member of the county societies from 50 cents to $1 annually.

The celebration ended with a dinner at Greer's Hall, also on campus. The menu was hearty enough to sustain the guests through eight formal toasts, each with a speaker's response!

During the afternoon, the Society heard highlights of its one-hundred-year history related by Dr. William Pierson, Sr., and the presidential address delivered by Dr. Coles. The fifty-three-year-old physician, poet and classical scholar had prepared his address as a hymn of more than 1,300 lines, entitled "The Microcosm." It was patterned after a Latin epic *De rerum natura* ("On the Nature of Things") composed by Lucretius about a century before Christ. The speaker prefaced his long narrative poem with an analysis so that the listeners could more readily follow from the beginning, when the coming of Man is foretold, through comments on each part of the human body, and concluding with a triumphant anticipation of the resurrection "when the dead in Christ shall rise with new bodies made like His."

In a portion captioned "Charity — Physician — Opiferque per Orbem Dicor," Dr. Coles used the Latin motto of the Society itself, following with the lines:

> O Ye devoted to the Healing Art
> By solemn consecration, set apart
> To be the ministers of God above
> In the sublime Activities of Love:
> Whose special function 'tis to give relief
> In the dark hours of suffering and of grief;
> Between the living and the dead, to stand
> Where fall the shafts of death on either hand;
> Without one thought of flight, to still maintain
> Perpetual battle with the Powers of Pain. . . .

In a later portion, entitled "Physician's Character and Aims — Science Progressive," Dr. Coles wrote:

O it is well that ye have hearts to feel
And ears not deaf to pity's soft appeal,
Putting no difference 'twixt rich and poor,
Plying with equal zeal the means for cure,
Not deeming it becoming to regard
Color or rank or person or reward.
'Knowledge is power,' and here 'tis power to save,
A power like God's to rescue from the grave.
Each Year adds something — many things ye know
Your sires knew not a Hundred Years ago;
Art grown to more, your sons will higher climb,
And make the Coming Centuries sublime.[10]

The postwar era

As in earlier wars, physicians benefited from association with others in the profession, from working together and exchanging medical observations, and from the opportunity to study the varying reactions of large numbers of men living together and exposed to the same wartime hardships. New Jersey practitioners had begun to be concerned with group needs before the war, as industrial processes multiplied, and with them, disabilities.

The better health of rural workers compared with factory workers was apparent from a study of those rejected for military service. A full century before President John F. Kennedy introduced his physical fitness program for the nation's youth, Dr. John R. Stevenson of Camden found that half the young men he examined were unfit for military duty and wondered why.

Dr. Stevenson served as enrolling surgeon for the First Congressional District, which covered most of Camden, Gloucester, Salem, Cumberland, Atlantic, and Cape May Counties. In that capacity he kept statistics on applicants for exemption from the draft. In a period of about six weeks in 1863, he examined 675 men and found 333 unfit for military duty.

He noted age, place of birth, occupation, height, weight and chest measurements. The men examined were chiefly between the ages of twenty and thirty-five, with a few unmarried men between thirty-five and forty-five. The average age was twenty-nine; the average height five feet, seven inches. Dr. Stevenson noted that the height of his examinees was above the average English standard, confirming the belief that Americans are relatively tall men. The smallest man he recorded was a German immigrant of four feet, ten and a half inches and weighing eighty-six pounds. The tallest was a New Jersey native who measured six feet, four and a half inches. The heaviest was also a native Jerseyman who was six feet tall and weighed 277 pounds. He was the only one of the 675 men examined who weighed over 200 pounds.

Dr. Stevenson found the most frequent disqualifying cause was hernia, for which fifty-eight men were rejected. Thirty rejectees had fractures, dislocations and/or diseases of large joints; twenty-one had tuberculosis; sixteen lacked sufficient teeth; fourteen suffered from asthma; fourteen had incapacitating injuries of hand or fingers; twelve had wounds and scars; twelve, heart irregularities, and eleven, hemorrhoids.

He found markedly superior health in the rural residents and was convinced that this should have the particular attention of medical men in New Jersey because the state's industrial development was annually assuming greater importance and the number of industrial workers was steadily increasing.[11]

The hat makers' disease

The problems of hat workers were among the first to be considered, in a study shortly before the Civil War began. During the winter of 1858-59, more than one hundred men in the Newark area who were engaged in the making of felt hats were treated for a disease that showed the characteristics of mercury poisoning with stomatitis. Their physician, Dr. J. Addison Freeman of Orange, would give his life as a surgeon in the Union Army. Dr. Freeman reported his findings on the felt workers to the members of The Medical Society of New Jersey in 1860.

All of the men involved showed symptoms that included swollen and ulcerated gums, loosened teeth, fetid breath, an abnormal flow of saliva, and tremors or shaking palsy. Each stopped work for a while and gradually recovered, without treatment or with only potassium iodide. In the spring and summer, when factory windows were open, the disease did not occur.

All evidence pointed to the introduction of mercury into the system, and Dr. Freeman believed the causative agent might be volatilized mercury. The workers blamed a new kind of verdigris or other dye. But men engaged in the actual dyeing process were not attacked.

Investigation proved the cause to be mercury and nitric acid used in preparing raw furs, cotton, wool and other substances. Poorer stock — using more cotton and wool — had been treated with extra mercury to improve the felting of the goods. In Newark, the doctor found, old hats and clothing were being re-processed into material for hats, and more mercury was used in such instances. When the new hat was exposed to high temperatures such as the hot iron, it released volatilized mercury.

Dr. Freeman had found the cause of the worker's disease. His next move was to share his findings so that physicians in other industrial areas would be alerted to the need for workrooms with high ceilings, proper ventilation and other provisions to safeguard workers' health. The facts were forwarded by the Society to the state's representatives in Congress so that appropriate federal legislation could be introduced.[12]

Glassworkers' disease

In less than ten years, another industrial health problem was reported, this one from Camden County. Dr. John W. Snowden of Waterford, who was to become Society president in 1882, noted that while glassblowers rarely suffered from tuberculosis (then called phthisis), pulmonary emphysema was common. The reverse was true among batch-makers who prepared and mixed the materials of which glass is composed, and among those who made the pots in which the glass was melted in furnaces. Few of the latter could follow their trade without lung trouble, and they left work after a few months, expectorating small masses of German clay with tuberculous

matter. Dr. Snowden believed the clay, in a fine powder and insoluble, was deposited on the tissue of the lung "where it served as a point of irritation around which the tubercle was first deposited." [13] A new method was called for that would reduce the amount of powdered clay inhaled by the workers.

Lead poisoning

At about the same time, Dr. Thomas P. Cullen of Camden reported *Colica Pectonum* among employees of a white lead manufacturing plant recently opened in the community. The company was using a secret process to shorten the time required to convert the sheet lead into carbonate. This involved placing the sheet lead, rolled in balls, into airtight chambers where they were exposed to the action of steam for two or three weeks. During this time, the workers injected acetic acid into the chamber through portholes made for this purpose. Although they used masks and a wet sponge over nose and mouth, the men still became sick with severe cramps, vomiting, constipation, and a characteristically distressed countenance. In many, a pigmented blue line formed along the margin of the gums.

Dr. Cullen treated them by using the newly-introduced hypodermic needle to inject morphine sulfate – one half to one grain doses two or three times in twenty-four hours. He also prescribed calomel, castor oil, enemas of oil, senna and sometimes oil of turpentine. "Hot fomentations" and poultices over the abdomen, supplemented with a blister over the epigastrium, were used to ease the pain. When the acute stage was past, potassium iodide was used to eliminate the poison from the system. As soon as the workmen returned to the factory, however, they suffered a relapse, with the second attack worse than the first.[14] The ultimate solution was apparent to Dr. Cullen and his colleagues: a change in the industrial process to reduce or eliminate the workers' exposure to lead poisoning. In ensuing years, The Medical Society of New Jersey helped effect legislation for the protection of workers. Still later came provisions for compensation from work-related disabilities.

Soothing waters

New Jersey's industrial growth and prosperity in the nineteenth century helped to account for the wide popularity of health spas and watering places. Although they were that era's equivalent of today's vacation resorts, the emphasis then was on the health-giving quality of the mineral waters. Historian Dr. Harry B. Weiss, in a book published in 1962 entitled *They Took to the Waters,* named and described springs and spas in fourteen New Jersey counties in the 1800's. Among the earliest such resorts in the state were those at Tinton Falls, Schooley's Mountain and Woodbridge. All of these had been patronized since before the Revolutionary War.

The chalybeate waters drew the well-to-do for rest and recreation as well as the treatment of ailments ranging from nervous exhaustion to eczema, indigestion and rheumatism. A few bathed in the waters or immersed their bodies in the mud beside the spring. Others found it sufficient to drink from the mineral springs or to walk near them; all noted the characteristic, sulphurous odor of the water and many thought it had a metallic taste.

Schooley's Mountain Mineral Spring was known to the Indians before it became a white man's health resort, around 1770. The Reverend Dr. Henry Melchior Muhlenberg, founder of the Lutheran Church in America, visited it at that time with some church elders. He wrote, "All of us drank eagerly from the spring and we felt that it gave us new life. The water tastes like aqua chalibeta mixed with a little vitriol." The health resort was still popular a century later when several meetings of The Medical Society of New Jersey were held at Heath House near the Schooley's Mountain Spring.

Dr. Stacy Budd of Burlington County advertised in the *Philadelphia Daily Advertiser* of July 2, 1792 his "excellent mineral springs" in the vicinity of Mount Holly. He claimed the water was pleasant to taste, and that it had been examined by several eminent physicians who found it highly impregnated with iron. Dr. Budd had a "commodius plunging bath" already erected and promised that, "if encouraged," he would immediately provide a shower bath, too. He offered convenient accommodations for those who chose to remain at the springs. Several visitors, he said, had been "relieved of rheumatism, hectic fever, etc., by bathing and drinking of this water."

In Passaic County, the many physicians of the Blachly family were honored by the name Blachly's Mineral Spring. After 1809, Dr. Ebenezer Blachly developed the site as a health resort, remodeling an old stone dwelling to accommodate the guests, and providing a spring house spacious enough to seat twelve.

On Dr. John Condict's property at Orange, his Orange Springs, around 1820, attracted as many as 500 visitors a day. One stage coach service picked up guests at their Newark homes, delivered them to the Springs, and returned them home. The round trip fare was 25 cents. Dr. Isaac Pierson was one of four who invested in the Springs in 1821.

In 1876, the Ocean House proprietor at Point Pleasant discovered a new spring while seeking an additional water supply for the hotel. It was named Manasquan Springs, and endorsements for its mineral waters came from Drs. Alex H. Marcy, Thomas F. Cullen and William A. Newell, the latter a former New Jersey governor. "Hay fever or autumnal catarrh"' was reputedly cured by the Manasquan Springs water, and it was said to provide a mild toning up for the liver and kidneys.[15]

As chairman of the Standing Committee, Dr. Stephen Wickes, in a rare display of humor, took notice of water cures and treatments when he recalled in a report to the Society that about 1850 the Oranges had been the center of the grand experiment. Invalids from all parts of the country came to its water-cure hospital where "the good old paths of sound medical truth were to be washed out by a flood of water." Conceding that water had a real value in some treatments, he contended that in others it was apt to produce local congestion, to exercise a generally depressing influence on the vital forces, and to have a sedative effect.

In a burst of candor, Dr. Wickes mentioned his own experiment fifteen years earlier when shower baths were a popular and fashionable luxury. He described a portable shower, constructed of a frame about two feet square and seven feet high, enclosed by oiled muslin. He considered himself fortunate to acquire it as payment of a $12 debt. "I had the fixture duly installed in my dressing room . . . and took a shower bath every morning

upon rising from bed. It was very severe, but everybody said it was healthy and I tried to think so.

"In about a fortnight, I was suffering from continual headache. I charged it to some error of diet, but it continued. It occurred to me the headache might be the effect of the cold water directly on my head; so I put on an oiled silk cap, and continued the bath, but the headache increased in severity. My appetite fled me, my general health was running down. . . . I was satisfied the shower bath would not do for me." [16]

Dr. Wickes was not the first member concerned with water treatments. As early as 1792, Society President Dr. Lewis Dunham had discussed his experiences with the beneficial effects of bathing, which he thought had been much neglected. Plunging the head into cold water, especially sea water, Dr. Dunham found, would do more than any other medicine for the cure of melancholy and madness.

"There is nothing more adapted to the cure of frigidity, when owing to a former excess of venery, than the cold bath," he added. It would, he alleged, also stop hemorrhage, gonorrhea, and the fluor albus (white vaginal discharge), and cure general impotency. Dr. Dunham mentioned, too, that with the uneven pressure of air and water, unless the head were submerged, all the air pressure might concentrate upon it and cause a headache.[17]

While some New Jersey physicians in the nineteenth century prescribed water treatments or visits to mineral springs, the time was approaching when water would receive far greater consideration as an important factor in safeguarding and improving public health.

The advent of public health

A New Jersey physician, Dr. Ezra Mundy Hunt of Metuchen, was a pioneer and leader in the public health movement in America. Service in the Civil War helped to impress upon him the need for greater attention to this phase of medical practice. Its tremendous significance was to be noted by world-renowned physician Sir William Osler (1849-1919) who classified public health – a knowledge of the mode of controlling epidemic diseases – as one of the three significant medical advances in the nineteenth century. (The introduction of anesthetics and the adoption of antiseptic methods in surgery were the others he named.) [18]

Dr. Hunt received his medical degree from the College of Physicians and Surgeons in New York City in 1852; he began practicing in his home community of Metuchen the following year. Then for an interval of two years he lectured on materia medica and therapeutics at the Vermont Medical College at Woodstock. In 1862, Dr. Hunt entered the Army as Assistant Surgeon of the Twenty-ninth New Jersey Infantry, and saw several battle fronts. Later, he was placed in charge of the Calvert Street Hospital in Baltimore. In 1864, shortly after his return to New Jersey, he took office as president of The Medical Society of New Jersey. Two years later, when the New Jersey Legislature established the State Sanitary Commission, he was named president of that body. Its work in warning of an anticipated cholera epidemic and suggesting preventive measures led to the creation of the State Health Commission in 1874. This, too, Dr. Hunt was asked to head. He became a charter member of the American Public Health Association

at its organization meeting at Long Branch in 1872 and was elected president in 1882. In 1877, he was instrumental in organizing the New Jersey State Board of Health, with five of the seven members drawn from The Medical Society of New Jersey. This board later became the State Department of Health.

The keeping of vital statistics on births, deaths and marriages — begun by the state Medical Society in 1820 — was recognized by Dr. Hunt and his colleagues to be of extreme importance in pointing the direction of necessary public health emphasis and control measures. A law enacted in 1887 called for a Bureau of Vital Statistics in the State Board of Health, and the following year, the office of State Registrar of Vital Statistics was established.

At that time, Dr. Hunt wrote on the importance of public health measures, "By the process of vaccination alone, thousands upon thousands have been rescued not only from death but from disfiguring disease."

Concerning the enforcement of sanitation, he said, "Cities in which all curative methods have failed to arrest prevalent disease, have been delivered therefrom by the removal of accumulated refuse, and it is not too much to say that were . . . the laws of hygiene applied with earnestness and efficiency, the aggregate of sickness in city and country would be reduced not less than 40 per cent, and that of premature death in proportion.

Dr. Ezra Mundy Hunt (1830-1894) of Metuchen was a state and national leader in the public health movement.

". . . Even from an economical point of view, such application of these laws is desirable, inasmuch as disease and mortality deduct from the industrial wealth of the nation. . . . *We know far more of the general and specific laws of health as applicable to individuals and to crowded communities than has yet found its way into practices or municipal regulations.*" [19]

Before his death in 1894, Dr. Hunt had instituted regular lectures on health to Trenton State College students preparing for the teaching profession, and had prepared a book, *Principles of Hygiene for the School and Home,* which the New Jersey Legislature presented to every teacher in the state. Some of his extensive writings on public health are still quoted, and his design for rural health service is recommended for study.[20]

The Atlantic County Medical Society

As public health measures gained increasing attention in more populated areas, the practitioners in remote Atlantic County were making a first effort to organize their medical society. It was one of their own colleagues, Dr. Jonathan Pitney, who had first appreciated the health-giving qualities of their seashore location. Dr. Pitney surrendered the bucolic pleasures of his home in rural Mendham and set out in 1820 for the barren reefs of Absecon, with his medical diploma from Columbia College in his saddlebags.

When he arrived at the tiny island in the Atlantic, he found it peopled by fishermen, clam diggers and beachcombers who lived in unpainted shacks and augmented a sea food diet by growing corn and raising livestock. It was an unprepossessing beginning for the glittering Atlantic City that would emerge from the fishing village.

Dr. Pitney fell in love with the bleak and lonely island, busying himself in many aspects of its development. He became its postmaster and notary public as well as its medical practitioner. He also began the practice of recording the shipwrecks on its shoals and led the fight for a warning beacon. This culminated successfully in 1857, with a congressional appropriation for the erection of Absecon Lighthouse.

The doctor was constantly impressed by the healthful environment of the island. After nearly thirty years of residence surrounded by salt water and bracing sea air, Dr. Pitney fired off a series of eleven articles to a Philadelphia newspaper, emphasizing the attractions of Absecon as a watering place.

Shore excursions

Partly as a result of these notices, the stock for the newly chartered railway line from Camden to Atlantic City was sold in a single day in Philadelphia. The iron rails were laid on July 1, 1854, and the first excursion train brought visitors soon afterwards. Not many years later, Absecon Island, re-named Atlantic City, had become one of the world's most famous resort cities.

Although Dr. Pitney, who died in 1869, is justly credited for developing the coastal territory, he was not the first medical practitioner in the area. According to Dr. William J. Carrington, who wrote about the early history of medicine in Atlantic County, the first arrival was Dr. Richard Collins, a native of Ireland. Dr. Collins purchased land near Port Republic and settled there in 1766. Since Gloucester then included present-day Atlantic

and Camden Counties, he is also claimed as the first resident physician of Gloucester County.

Another practitioner, Dr. Ezra Baker, moved from Tuckerton to Absecon in 1799, but he did not remain long. Elected to Congress, he also served as Collector of the Port of Great Egg Harbor from 1813 to 1817. He later moved to Ohio and became wealthy growing beans for the manufacture of castor oil.

One of the first resident physicians of Atlantic County got there by misdirection. Dr. Lewis Reed left his home in Millville in 1857 to set up practice in Weymouth, but he traveled too far east and arrived at Egg Harbor Station. The residents there persuaded him to stay. That very day a prominent member of the settlement had died from lack of medical attention. Dr. Reed was later elected mayor of the community, a post in which he served five terms. He was also appointed postmaster of Atlantic City by President Lincoln.

With a number of practitioners now at work in the pines and seashore area, they applied in 1864 for approval to organize a county society. Permission was granted, but the move proved premature, and it was not until after 1880 that the Atlantic County Medical Society began to function regularly.

Dr. Job B. Somers of Lynwood took office as the first president of the Atlantic County Medical Society in 1881. The others at the organization meeting were: Drs. Daniel B. Ingersoll of Mays Landing, Edmund H. Madden and T. B. Waters of Absecon, Theophilus Boysen of Egg Harbor, G. E. Abbott of Tuckahoe, William Boardman Reed, and Willard Wright of Atlantic City.

Drs. Somers and Madden were graduates of Jefferson Medical College; Drs. Ingersoll, Wright, Waters, Abbott, and Reed, of the University of Pennsylvania; and Dr. Boysen, of the University of Buffalo. (In the first decade of the twentieth century, Dr. Reed moved to Philadelphia where he was an early faculty member at the Temple University School of Medicine.)

Many of these men, and particularly Drs. Somers, Ingersoll, Boysen, Madden, Wright, and Reed, were often in public office, serving as mayors, members of local boards of health, or in other community service.

Almost a century later, another medical man, Dr. David P. Allman of Atlantic City, brought honor to the seashore county when he was elected president of the American Medical Association in 1956. In 1950, his wife, Katherine, held the office of president of the Woman's Auxiliary to the American Medical Association. The Allmans are the only couple in the history of organized medicine to achieve the leadership of their respective national medical associations.[21]

Union County Medical Society

Union was the second county to attempt a medical society in the 1860's. In their presentation to The Medical Society of New Jersey in 1869, fifteen physicians and surgeons of Union County certified their belief "that we can organize and sustain a Society beneficial to the interests of the profession." The signers were: Drs. Samuel Abernethy, William M. Whitehead, D. U. C. Hough, L. W. Oakley, Louis Braun, Elihu B. Silvers, T. L. Hough, J. S. Martin, William Gale, J. A. Petrie, Thomas Terrill, Jr., Eugene Wiley,

William Opdyke Selover, J. Otis Pinneo, and Alonzo Pettit.

The organization meeting was held in the Court House in Elizabeth on June 7, 1869, and Dr. Abernethy of Rahway was elected the first president; Dr. Martin of Elizabeth, vice president; Dr. Terrill, Jr. of Elizabeth, secretary; Dr. Fred A. Kinch of Westville, treasurer; and Dr. Whitehead of Elizabeth, reporter. The first essayist was Dr. Pinneo, who spoke on the subject of vaccine diseases. He was followed a year later by Dr. H. H. James, discussing the use of the thermometer in the treatment of disease.

Minutes of many societies have revealed an absorption with the immediate and sometimes trivial, while large issues — including wars — were given little or no notice. The minutes of one Union County Society meeting disclosed such minutiae. In the absence of the president, it was proposed that a member should read the dissertation the president had forwarded. Dr. Pinneo moved that the reading be postponed until the next meeting. Dr. Silvers, admitting he was anxious to get home to supper, promptly seconded the motion.

The members showed an awareness of public need, however, when it was brought to their attention that some communities in Union County did not require a death certificate. A committee was appointed to call upon the proper authorities and to point out the importance of such a document. Within a year Elizabeth was one of the cities with a new ordinance making mandatory the filing of a death certificate.[22]

The postwar years had brought their share of fads and diversions, but there had been real gains in the public health movement and in organized medicine. The next decade was to bring remarkable advances in another direction.