

CHAPTER 12

“The medical profession is the proper conservator of the health of the people. Its members are devoted to the study of the nature, causes and remedies of disease. Whatever advance has been made in our knowledge of disease, either in its prevention or cure, has been made by the profession.”

— Dr. Stephen Smith, 1866.¹

Long before America's public officials began conservation efforts in the early 1900's, the physicians of New Jersey were protesting pollution of streams and waterways and urging careful inspection of intended watersheds.

With the impetus of the public health movement, medical groups expanded their activities in this field. By 1894, the Essex County Medical Society had inspected the Clinton Reservoir in Passaic County and the new aqueduct system serving Essex County to discover and prevent contamination. Health officer Dr. Charles Lehlback closed seventy-seven of 137 wells in Newark because analysis revealed contamination.

Hudson County physicians also were reporting drinking water unfit for use. In 1894, a bacteria count of 47,743 to the cubic centimeter was found in a random specimen! Today, the presence of *any* coliform bacteria is presumed evidence of contamination, and the water is declared unpotable.²

As early as 1863, New Jersey men working near Philadelphia were troubled by a disease widely known as “Kensington Diarrhea,” traceable to the contaminated Kensington water works in Philadelphia. Repeatedly in the late 1800's, cities in New Jersey suffered epidemics which the local physicians traced to improper sewerage systems.

In the metropolitan sections of the state, tides carried Newark sewage up the Passaic River beyond the Jersey City and Newark water supplies. Similar problems occurred in many municipalities. New Jersey faced the difficulties of a population swelling faster than facilities could keep pace. Some credit the state's eminence in water purification and techniques to its early recognition of the need for wholesome drinking water.

In 1855, Elizabeth established the country's first charcoal, sand and gravel filter, and a half century later, in 1908, the Boonton Reservoir of the Jersey City Water Works was the first in the nation to introduce chlorination.

Writing of the establishment of boards of health in the state, in 1964, David L. Cowen remarked, “The work of the sanitarians in New Jersey seems to have been taken up by the physicians and the Medical Society from the start.”³

In the Hudson County report, Dr. James A. Exton declared, “Much has been said about the causes of defilement of the principal water supply, but one need only take a steam launch at Newark and ride to Passaic, noting the number of sewers emptying into the river, to become thoroughly enlightened.” He recommended the investigation of a sewage outlet for Bloomfield, Montclair, and the Oranges which was intended, within a month or

two, to empty on the west bank of the river only 500 feet from a most important intake.

Mercer County reporter Dr. Ira M. Shepherd of Trenton listed as the most important accomplishments in his area in 1894 the adoption of an ordinance to regulate plumbing and drainage of buildings and the disposal of garbage in a crematory.

Four years later, Dr. William J. Chandler of South Orange, backed by a unanimous vote of the Medical Society, recommended a law "to prevent defilement of watersheds, streams and lakes now in use or which may hereafter become necessary for supplying water for potable purposes."

Fifty years before medical research traced one cause of hepatitis to clams and oysters taken from polluted waters, Dr. Henry Mitchell of Asbury Park warned that typhoid bacillus and cholera vibrio could be conveyed by oysters and other shellfish taken from beds polluted with sewage. He recommended that sanitary supervision be extended to shellfish beds.⁴ Today, state-employed shellfish inspectors and conservation officers join in maintaining vigilance over the succulent natural resources off the Jersey shore.

Public health advances

The Medical Society of New Jersey convened at the Leland House in Long Branch in 1885. For the first time, there was an established local medical society in each of the twenty-one counties and a total membership of 577.

Fifteen years later, public-health-conscious Dr. Mitchell welcomed delegates to Asbury Park and complimented them on a membership of more than 800. He told them New Jerseyans had achieved an average longevity of fifty-nine years, and that while the total deaths from preventable diseases had averaged 10,347 for the past ten years, in 1899 the figure was 9,427. This saving of 920 lives was directly due, he said, to such public health measures as purifying water supplies, sterilizing milk, isolating infected persons, requiring systematic waste disposal, and preventing the sale of unwholesome food.

Some of the milestones in this public health campaign were the establishment of a State Sanitary Commission in 1866, with five of the seven members drawn from the Medical Society; opening of a public health laboratory in 1896 at Princeton; and legislation in 1899 to protect public water supplies.

In 1901, legislation was passed to prevent the sale of adulterated food and drugs, with enforcement in the hands of the State Board of Health. This agency also was made responsible for determining that drugs were compounded of the proper items and in the prescribed strength.

An ordinance of the state legislature in 1900 permitted any city to erect an isolation hospital to treat infectious diseases occurring anywhere in the county. This was immediately acted upon by Newark.

Health education

A second law in 1900, emanating directly from The Medical Society of New Jersey, required periodic medical inspection of schools. Two years before, Dr. David C. English of New Brunswick, as Society president, spoke

of the need to improve the health of young people. By 1905, several cities had introduced such school examinations. The results were revealing: Dr. Edward E. Worl of Newark, in 1905, reported excluding from classes 2,000 students — 27 per cent of those examined in a six-month period. Half of these had vermin; 16 per cent, contagious eye diseases; over 7 per cent had skin diseases, and 3 per cent, ringworm.

Physical fitness of youth was given fresh impetus. Dr. Joseph Tomlinson of Bridgeton felt schools should offer systematic exercise and the practical knowledge of basic hygiene.⁵

Mosquito war begins

If some physicians still doubted the extent to which mosquitoes could be blamed for the spread of disease, they were absolutely certain that drainage was essential. In 1881, when the Standing Committee had asked reporters in each county to gather opinions on the cause of intermittent and remittent fevers, their polls listed “stagnant pools,” “obstruction of natural water courses,” “vegetable poison communicated by air or water,” “defective sewerage,” and “bad cellars and sinks.” One added, “The cause may lie in the heavens above, the earth beneath, or the waters under the earth.”

Dr. Joseph Parrish described the extensive efforts under way in Burlington by 1883 to complete a system of drainage of contagious meadows, but he was not certain how much improvement in public health would result. “I am beginning to doubt the germ theory as applied to intermittent and other forms of malarial fever,” he said.

The role of a New Jersey nurse in the positive identification of the mosquito as the carrier of yellow fever was told by John T. Cunningham in *The New Jersey Sampler* (1964). The girl was Clara Louise Maass of East Orange, and in her honor the German Hospital at Newark, where she trained, changed its name. It is now the Clara Maass Hospital of Belleville.

In 1901, Miss Maass was among the volunteers working with Dr. Walter Reed and General William C. Gorgas in Cuba to prove that the mosquito was the cause of yellow fever. She was the only American woman to give her life in the cause, but in doing so, she helped prove beyond a doubt that the mosquito was the disease carrier. A letter from General Gorgas after her death said, “Miss Maass was a most excellent nurse. She died as the result of the mosquito bite. Large sums of money and many lives have been saved, and will yearly be saved, by this discovery of the manner of propagation of yellow fever.”

With mosquitoes finally identified as the cause of yellow fever and suspected as possible carriers of other diseases, the Medical Society’s Committee on Mosquitoes and Malaria in 1904 suggested that all members urge local boards of health to destroy mosquito-breeding areas. A year later, the Society triumphantly reported that the so-called Mosquito Bill of Professor John B. Smith, the State entomologist, had been signed by Governor Edward C. Stokes, and that an appropriation of \$350,000 had been made to meet the expense of draining mosquito marshes throughout the state.

The fund was to be spread over five years, with municipalities expected to provide additional monies in their areas. Although slow in the early period, the program accomplished enough to inspire a *New York Times*



Archives of the Union County Medical Society yielded the original of this Spanish-American War photograph. Dr. Charles H. Schlichter, of Elizabeth, second officer from left, first row, served in the capacity of First Lieutenant and Assistant Surgeon. He also served in World Wars I and II.

observation in 1926 that all the other states were turning to New Jersey to learn the method of mosquito extermination since the Garden State's campaign against the nuisance was so successful that millions of dollars had been added to taxable values.⁶

Typhoid outbreaks

The need for sanitary measures was apparent at the Camden County Almshouse when an epidemic of typhus fever was introduced in 1880 as a result of accepting a sick vagrant newly arrived from another state. Dr. Henry E. Branin of Blackwoodtown reported the disease had spread to every room of the second and third floors of the old building. (A new hospital building on the grounds was not yet ready for occupancy.) Between

November 24 and April 9, there were 103 cases at the almshouse, with thirty-three fatal. Recommendations based on this experience called for a law to prevent the migrating of tramps from one county almshouse to another; and a requirement that those coming to live at the almshouse be thoroughly washed and their clothes cleaned.⁷

Dr. J. D. Osborne of Newark discussed typhoid fever epidemics at a meeting in 1890 and was convinced that 99 per cent of the cases were caused by impure drinking water. This, he said, accounted for the prevalence of the cases in Newark and Jersey City. Burlington County had an outbreak in 1888 with about one hundred cases around Mount Holly; 6 per cent of these were fatal.

Dr. John W. Snowden of Waterford blamed Camden's smallpox epidemic in 1881 on the slowness of the local authorities to act upon physicians' recommendations for control and their offers to vaccinate everyone in the area if the city provided the vaccine.

There were epidemics of several diseases in the last twenty years of the nineteenth century, prompting Society officers to appoint a committee to locate sources of pure vaccine virus. The committee recommended the establishment of a vaccine farm, supervised by the State Board of Health, but improved commercial supplies made this move unnecessary.

Quarantine — forty days

With the later epidemics, physicians began to recommend a quarantine on households. Earlier, quarantine was chiefly applied to foreign ships, their passengers and cargoes. Dr. Henry A. Davidson, writing in the *Journal of The Medical Society of New Jersey* in April, 1958, explained that the term "quarantine" came from the Italian word for forty — denoting a forty-day period of isolation. "The idea was that some mystic miasma caused the disease," he said, "and in forty days that miasma would somehow be gone with the wind."

In 1851, at the International Sanitary Convention in Paris, it was agreed that a certified "clean bill of health" would be accepted for a ship without imposing quarantine. In 1860, New Jersey Society members read their Standing Committee's conviction that "from a consideration of the history and theory of quarantine, the principles upon which its practice is based are erroneous, and the enforcement of quarantine regulations

NOTICE!

THIS HOUSE CONTAINS
A CASE OF SMALLPOX!

When the danger from contagion has passed this Card will be removed. Per order

BOARD OF HEALTH,
of North Arlington, N. J.

Any Person Removing This Card Without Authority is Liable to a Fine of Twenty Dollars (\$20.00).

NOTICE!

THIS HOUSE CONTAINS A CASE OF
INFLUENZA!

When the danger from contagion has passed this Card will be removed. By order

BOARD OF HEALTH
OF NORTH ARLINGTON, N. J.

Any Person Removing This Card Without Authority is Liable to a Fine of Twenty (\$20.00) Dollars

This permit is issued only upon the presentation of a physician's certificate denoting the health of Applicant.

BOARD OF HEALTH
North Arlington, Bergen Co., N. J.

POLIOMYELITIS
(Infantile Paralysis)

To Whom it May Concern:

This is to certify that

Sex
Age
Height
Weight
Eyes
Hair

Date

of
has this day presented a physician's certificate denoting good health and that holder has not resided at any premises where poliomyelitis (infantile paralysis) has been reported or found.

..... Clerk

NOTICE!

THIS HOUSE CONTAINS

A Case of Measles!

When the danger from contagion has passed this Card will be removed. Per order

BOARD OF HEALTH,
of North Arlington, N. J.

Any Person Removing This Card Without Authority is Liable to a Fine of Twenty Dollars (\$20.00)

Quarantine placards were among the early measures in the public health programs begun in New Jersey communities in the late 1800's. These are reduced two-thirds in size from the originals provided by Donald S. Benson, Director of Public Relations, New Jersey Department of Health.

and restrictions, however stringent, is inadequate to prevent the origin or spread of epidemic disease; the committee subscribe to the opinion that internal sanitary arrangements, and not quarantine and sanitary lines, are the safeguards of nations."

Through the early 1900's, however, home quarantines were imposed for many diseases, although the six-week – forty day – interval was reduced, and some communities thought the children were better off in school than at home.

The problems of the speedy spread of contagious diseases from one continent to another were faced in 1933 by the first International Sanitary Convention for Aviation, and in 1946, responsibility was delegated to the World Health Organization for framing regulations to prevent diseases from leaping across the oceans.⁸

Antitoxin serum on trial

As the twentieth century approached, medical science offered hope for protection against the dreaded and often fatal diphtheria. In 1888, the mortality rate in New Jersey for diphtheria and croup was 14.8 per cent per 10,000. It had dropped to 4.8 per cent in 1900, only six years after the International Congress of Hygiene and Demography had brought antitoxin serum to the attention of the profession and five years after New Jersey physicians had begun using it widely. By 1960, diphtheria was annually reported as the cause of death in less than a half dozen cases, despite the state's growth to well over six million residents.⁹

The antitoxin preparation was indirectly an extension of Koch's work on cholera and typhoid. Three years after the serum was introduced, the annual meeting of The Medical Society of New Jersey featured a discussion of its effects and results.

Dr. Walter B. Johnson of Paterson said the percentage of recoveries was more than twice as great when the antitoxin serum was used. Dr. Alexander McAllister of Camden thought it was the duty of every physician to use the serum even before diphtheria was confirmed by the laboratory, since the success of the antitoxin depended on its early use in the disease.

Some cautious voices were heard, too. Dr. P. C. Barker of Morristown believed that antitoxin was a valuable remedy but one with a double edge. Dr. D. M. Ravenel of Princeton acknowledged that the two great counts against the antitoxin were that it caused albuminuria and destroyed red blood cells. He said it was well established, however, that a large percentage of the cases of diphtheria not treated by antitoxin showed albuminuria, and he thought the destruction of red blood cells was far from proved.

There was so much to be discussed between Monday evening and Wednesday noon of the 1896 meeting that the Society voted to forego the traditional banquet to allow more time for scientific work!

In the intervals between sessions, the medical men strolled along the Asbury Park beach or rocked on the wide hotel verandas, continuing their discussions informally. They cited the practical failure of Koch's "tuberculin" and some positive antipathy to Pasteur's treatment of rabies, but they reserved decision on diphtheria antitoxin. With the optimism basic to the profession, they continued to hope that a really effective control had been found. Their hopes were realized. In 1897, Dr. McAllister of Camden spoke again. He said collective investigations showed that even in operative cases of laryngeal diphtheria, 73 per cent recovered and only 39 per cent so treated required operation. Under the calomel treatment, only 27 per cent recovered and 90 per cent required intubation.

Dr. John Bruyère of Trenton carried the reports further in 1899, declaring that serum therapy, while still in its infancy, gave promise of brilliant results and that diphtheria antitoxin not only had immunizing qualities but was a veritable remedy, reducing mortality from 47 to 8 per cent.

State laboratory

The value of a bacteriological laboratory was clearly apparent with the new attention focused on diphtheria. However, few laymen appreciated the need for such scientific procedures. In 1896, Princeton University had reserved a building on its grounds for carrying out bacteriological research, but when the State Board of Health asked the legislature for an appropriation for maintenance, it was turned down. The Medical Society promptly appointed several physicians to call upon legislators and impress upon them the need for the laboratory.

Dr. D. M. Ravenel, who was in charge of the state laboratory, described its functions. Diagnoses of tuberculosis and diphtheria were the most essential work done, he said, since these were the two greatest enemies of the human race. Early recognition of either was important for determining proper treatment. The laboratory also was prepared to diagnose Asiatic cholera.

Rabies, he said, was diagnosed by injecting a rabbit with saliva from a suspected animal. "In this country," Dr. Ravenel added somewhat acidly, "its chief use is allaying fears of those bitten by frightened animals — and to check the spread of newspaper hydrophobia."

Dr. Ravenel said typhoid fever diagnosis was omitted because bacteriologists were not yet able to confirm with any degree of uniformity the presence or absence of the typhoid bacilli in a given water supply. Only the examination of water supplied for public use was undertaken at the laboratory.

Despite its importance to the medical profession, the laboratory appropriation was not voted for another year. In the meantime, a public-spirited citizen, Charles E. Green of Trenton, came to the rescue by personally providing the necessary money. Because New Jersey physicians demonstrated the safety of transmission of laboratory specimens through the mail, in February, 1896, postal authorities permitted such use of the mails, enabling speedier laboratory service and introducing a procedure now widely used throughout the world.¹⁰

In 1897, Dr. Daniel M. Skinner of Belleville, who had served as chairman of the committee appointed to call upon legislators, reported "mission accomplished." The state legislature had approved enough money to maintain the bacteriological laboratory at Princeton. Within a few years, the laboratory was moved to Trenton and has continued to function as an essential adjunct of the State Department of Health.

Experiences shared

For diseases that needed no laboratory diagnoses, there were suggestions for treatment to be shared with colleagues. Dr. Daniel A. Currie of Englewood said he directed patients with pneumonia to inhale two or three drops of amyl nitrite just as a chill was coming on in order to reduce it. In cases of rheumatism, he found eighteen drops of oil of wintergreen three times a day helped articular forms but had no effect on muscular rheumatism. Like many other physicians, he now used acetyl salicylic acid extensively with good effect in both forms of rheumatism.

The use of Dover's powder (ipecac and opium) was so widespread at this time that it would have been difficult to name a treatment in which it had not been tried.

Dr. William J. Chandler of South Orange noted that mercury bichloride solution was replacing iodoform as a dressing for wounds and also was being used as a throat spray. He also reported two experiences with tribromoethanol rectal anesthesia, but reserved decision because the apparatus had been hastily extemporized and allowed some escape of ether, thus wasting both time and material. The apparent advantages were the elimination of a sense of suffocation and of nausea, and the ease of operating on the face. Disadvantages included the danger of an overdose, retention of gas in the intestines, subsequent prostration and intestinal irritation.

In the 1890's, nephritis and diabetes were succeeding appendicitis in top priority interest among physicians. Society President Dr. John G. Ryerson of Boonton discussed chronic nephritis and the administration of lactose in its treatment. He believed kidney disease was no more frequent than before, but that diseases of the heart and other organs previously supposed to be of primary origin, were actually secondary to that of the kidney. Cirrhosis, apoplexy, pleurisy, emphysema, bronchitis and pneumonia, although occurring independently, in many cases followed disease of the kidneys, he said. For two years, Dr. Ryerson had used lactose, as much as forty grains in twelve hours, with excellent results. In checking medical literature, he found only two mentions of such use in the previous twenty-five years. While wanting additional time for observation, Dr. Ryerson saw abundant promise of good results from lactose.

Diabetes mellitus was the disease Dr. John C. Johnson of Blairstown was recording more frequently as a cause of death, although most medical men agreed that this probably reflected the greater accuracy of diagnostic tools rather than an actual increase in occurrence of the disease.

Through his forty-four years of practice, Dr. Johnson — Society president in 1867 — had kept mortality records, which showed that in 433 cases, the average age at death was a little over forty-six years. He had experienced two periods when epidemics prevailed: dysentery in 1863 and diphtheria in 1878. The extension of hygienic knowledge and the isolation of cases of contagious disease had greatly lessened mortality in later years, he said. Only tuberculosis remained in the lead.

Smoking affects heart

As early as 1881, Dr. Currie had begun to study “irritable heart” diseases. In some patients he thought the disease was brought on by too much smoking, constant use of alcohol, or both. This was true in both men and women, he said, “especially among those leading a high-pressure life.” He discovered no true heart disease except among smokers. This induced him to condemn “the pernicious habit of cigarette smoking as the cause of more indisposition and anemia with the young men of the present day than malaria.”

Dr. Levi Miller of Newton reported the death of a young lawyer in his community from aortic aneurysm, attributed to his using tobacco in excess.

For angina pectoris, Dr. James M. Ridge of Camden reported good results from amyl nitrite or chloroform inhalations during the paroxysms and nitroglycerin in the intervals between them.

Society members considered legislation as one kind of remedy for venereal disease. In Phillipsburg, where physicians formerly reported with some smugness that there had been no venereal disease in several years, gonorrhea and syphilis were rampant. Local physician Dr. John H. Griffith said it was because the town had become a railroad center with an influx of transient workers. Referring to a law in 1879 to blot out pleuro-pneumonia among cattle in New Jersey, he exclaimed, “If an act had been passed to prevent any person who had ever had any specific venereal disease from marrying and so propagating degenerated humans for future generations to take care of in jails, prisons, poor houses and asylums, such a law would have been a thousand-fold more beneficial to the human race than all the cattle laws combined.”

The impassioned doctor lost sight of the motivation behind the cattle laws, some of which were aimed at reducing the state’s No. 1 killer, tuberculosis. But eventually a pre-marital bloodtesting law resulted from the agitation of Dr. Griffith and others, who spoke forcefully on the subject of “innocent maidens made invalids by marriage to diseased men who fathered degenerate children.”

Inventions meet specific needs

While the X-ray was among the most spectacular medical inventions of the 1890’s, New Jersey physicians were devising better equipment for specific diseases. As soon as an item was tried and proved effective, it was introduced to the rest of the profession. Dr. Philander A. Harris of Paterson exhibited

the new portable operating table he had constructed along with new perforating forceps for establishing vaginal drainage; Dr. Talbot R. Chambers of East Orange presented a corset with a rubber shield in front for use in caked breasts. He also presented a bag with cured rubber outside and raw rubber inside which when drawn over the scrotum would contract and exert pressure. He said it had proved a far more efficient means of relieving pain in acute epididymitis or orchitis than the use of local poultices.

Dr. Walter B. Johnson of Paterson praised the Knapp Electrical Works of Chicago for a new medical rheostat it had introduced in combination with an induction coil, and fifty-cell galvanic battery. Dr. Johnson, who would become Society president in 1904, introduced his own portable-electromagnet for the removal of steel from the interior of the eyeball.

Exhibits help budget

From time to time, a few physicians had brought specimens in formaldehyde to county meetings and in 1898, with the innovation of a full three-day annual meeting, there were also displays of pathological specimens and new instruments.

With foreign as well as domestic firms asking to attend the annual meetings to display equipment for doctors' offices and hospital use, the Society designated a Committee of Arrangements to screen exhibitions of surgical instruments, medical publications, drugs and chemicals and to see that they did not become so obtrusive as to distract members from the business sessions. On the other hand, since the canny treasurer saw that the rental of exhibit space could help defray the costs of the meeting, delegates to the convention were urged to visit the exhibits — but not during meeting hours!

Tender loving care

In the twentieth century, scientific studies revealed that "tender loving care" was essential in the treatment of mentally disturbed children and adults, and in babies and invalids who failed to gain despite proper care and nourishment. The prelude to the *T. L. C.* prescription was a new philosophy toward the handicapped which gained steadily in the last years of the nineteenth century.

In 1887, the Reverend Mr. S. Olin Garrison used his Millville home to care for several feeble-minded children, and a year later he helped to establish the New Jersey Home for the Education and Care of Feeble-minded Children at Vineland, now the Vineland Training School. The idea began with his father, Stephen Garrison, who served in the state legislature in 1845 when appropriations were approved for the first State Lunatic Asylum. At that time, the elder Mr. Garrison applied for funds to establish an institution to care for feeble-minded children. It was not until 1888, however, that appropriations made possible the first such institution in New Jersey. In the same year, the second half of Mr. Garrison's request was fulfilled by the opening of the State Institution for Feeble-minded Women, across the road from the establishment for children.

Charged with the responsibility for managing both of these, Mr. Garrison asked for an assistant. He received Dr. Edward Ransom Johnstone of Indiana. Upon the death of Mr. Garrison in 1900, Dr. Johnstone carried

forward the ideas of the founder with such success that he and the Vineland Training School became known to social workers throughout the world.¹¹

The Village for Epileptics

In some respects, the plight of epileptics was the most pathetic of all. Dr. Thomas J. Smith of Bridgeton stressed this in his presidential address to the Society in 1897. He mentioned first his experience as a director in the Training School at Vineland, then he appealed for help for epileptics. Among other facets of the problem he stressed that epileptics often had more than ordinary intelligence and were highly sensitive to the impression their condition provoked. He estimated there were two such victims for every 1,000 people in New Jersey and advocated a special community for these unfortunates.¹²

The Medical Society proposed legislation for the establishment of an epileptic colony in New Jersey and in 1898 succeeded in having the law enacted with an initial appropriation of \$15,000.¹³

Skillman, Somerset County, was chosen for its central location and convenience to railroads, and from the first, "the Village" drew visitors from a considerable distance. Dr. Charles Emerick, superintendent of the Ohio Institution for the Feeble-minded, toured the Village twenty years after its establishment and later spoke to a joint meeting of the Medical Societies of Somerset, Mercer, Hunterdon and Middlesex Counties. "Ohio looks to New Jersey for many things in institutional work, especially in epileptic work," he said. Other states also regarded New Jersey as being in the front



Late in the nineteenth century, The Medical Society of New Jersey held annual meetings in various areas of the state. A favorite location for many years was the Monmouth House at Spring Lake.

ranks in the care of epileptics, feeble-minded and insane persons, according to Dr. Emerick.

From the concept introduced by the president of the Medical Society in 1897, services and studies at the institution had so expanded in scope that in 1953 a change of name was necessary for a more accurate designation of its operations. "The Village" became the New Jersey Neuro-Psychiatric Institute.¹⁴

Physicians and pharmacists

Like siblings who bicker and throw sand in their growing-up years, then develop into warm companions in maturity, the physicians and pharmacists of New Jersey came of age in their joint relationship during the final years of the last century.

In 1865, two physicians discussed the prescribing of medicines. Society President Dr. Ezra M. Hunt suggested, "In the preparation of medicines, use . . . justifiable tact. Study to make the prescription taste better, and take more pains to please the palate when it can be done without sacrificing strength or value. . . . There is now little need for nauseous potions, and no necessity for even a country doctor to be synonymous in the mind of a child or adult with asafetida and castor oil."

Dr. George W. Talson of Hudson County, reporting to the Standing Committee in the same year, remarked, "It is now generally conceded that physicians who want to retain patients must contrive to prepare remedies so as to remove the offensive taste." He said homeopaths had gained their foothold because of the heroic and nauseous doses once prescribed by regular practitioners. "Medicine is . . . never, per se, a good," he pointed out. "The true question is, which evil shall be chosen — the malady or the medicine? He alone vindicates the true dignity of the healing art and is most successful in the cure who, in the face of popular prejudice, insists on the use of medicines and remedial appliances which have acknowledged power — even if they don't taste good."¹⁵

In 1869, Dr. Thomas J. Corson of Trenton, during his presidency, said physicians should "support our brethren of the pestle and mortar" and write prescriptions that any druggist could read and compound. "No two professions are more closely allied or dependent," he said, "and both are equally honorable and equally necessary."¹⁶

Two years later, The Medical Society of New Jersey indicated its annoyance at medicine vendors and incompetents by asking the legislature to enact a law requiring that a dispenser of medicines, whether a principal or a clerk, be either a medical practitioner or a graduate of a recognized school of pharmacy; or, in lieu of that, pass an examination before a committee appointed by each county medical society, composed of one regular physician and two apothecaries, who were graduates in pharmacy.

The New Jersey Pharmaceutical Association began in 1870, and, like The Medical Society of New Jersey, it was the first such organization in the United States. In 1877, with the help of the Medical Society, it succeeded in getting regulatory legislation for higher professional standards, based on the Association's own code of ethics, adopted in 1872.

The law required prospective pharmacists to pass an examination given by the Board of Pharmacy. In succeeding years, the law was tightened so that by 1935, a pharmacist was required to have one year of experience after graduation from an approved four-year college of pharmacy.¹⁷

When the Pharmaceutical Association came of "legal age" in its twenty-first year, it sent Howard Prescott Reynolds of Cape May as the first delegate to The Medical Society of New Jersey. The physicians had convened for their annual meeting at the Heath House on Schooley's Mountain. When Mr. Reynolds was invited to address the group, he reminded them that his Association had originated at a conference with members of the Essex County Medical Society in 1870. He asked for the Society's help in obtaining needed legislation. He warned the practitioners of using patented "ready-made" prescriptions, citing a popular "Oats Essence" in which a member of the New Jersey Association — Dr. R. G. Eccles — discovered morphine although "Oats Essence" was advertised as a cure for the opium habit!

Mr. Reynolds also mentioned the recent marketing of chloral hydrate in hermetically sealed vials, each supposed to contain a dose of fifteen grains. But in the dozen vials tested, the content ranged from six to twenty-two grains. The pharmacist also saw danger in patent medicine because the invalid might decide he could doctor himself — and prescribe for his family and friends.¹⁸

Following Mr. Reynold's address, a committee was appointed to work with the Pharmaceutical Association in a plan to foster a more rational practice of therapeutics and pharmacy in so far as these branches of medical science are interdependent.

The code drawn by the joint committee included, first, that a physician has no moral right to discriminate in favor of one pharmacist to the detriment of another and, second, that a pharmacist who recommends drugs or medicines for specific remedial purposes exceeds the limits of his profession; conversely, the physician should avoid dispensing medicine himself; instead, if practicable, he should rely upon the pharmacist's technical skill.

Stating that the best interests of the patient were undoubtedly served by the physician's practice of rational therapeutics, a supreme effort of the pharmacist should be to complete the circle by supplying the demands of experimental and clinical teaching with eligible and trustworthy preparations.

It was the consensus that the pleasant relations between the two organizations should continue without formal action binding them in their ethical regulations.

In the seventy years since, this "gentleman's agreement" has proved adequate for countless endeavors of joint participation, through two world wars as well as the succeeding peace.

Homeopaths and others

An earlier period of medical practice that called for heroic doses — and heroic patients to withstand them — opened the way for homeopaths, Thomsonians, naturopaths, osteopaths, neuropaths, followers of Mary Baker Eddy and others. At the same time, the relaxed requirements for a medical license after 1854 allowed would-be practitioners to gain status simply by showing medical diplomas.

In the face of this situation, The Medical Society of New Jersey stiffened in its resolve. Evidence that a regular practitioner of medicine and surgery had consulted with any but colleagues of the same practice was cause for official investigation and possible expulsion from the Society. So strong was the group's feeling in this matter, that it took action against one of its best-known members, Dr. William A. Newell of Allentown, who had served two terms as governor of New Jersey.

Dr. Newell was graduated from Rutgers College in 1836 and had been awarded his M.D. degree by the University of Pennsylvania three years later. Although he successfully pioneered in 1843 in skin-grafting to form a new eyelid, he was to gain fame in a different field.

A sickly youth, he had lived for a year in Manahawkin with his uncle, Dr. Gustavus A. Hankinson. During that time, he saw a number of shipwrecks, whose victims, often unidentified, were buried in the Baptist churchyard adjoining his uncle's property. It appeared to the young man that many of these lives could have been saved by casting to the foundering ship a strong line on which passengers and crew could "ride" to shore.

Dr. Newell went into practice in Allentown, but was elected to Congress in 1847, where one of his friends and colleagues was Abraham Lincoln. In Washington, he worked tirelessly for funds to establish a lifesaving service, demonstrating to Congress apparatus he had constructed himself.

Primarily a man of medicine, he served as physician to Mr. Lincoln's family and attended former President John Quincy Adams in his final illness. In 1848, he won approval for his coastal rescue bill, which resulted in the United States Lifesaving Service. He served as superintendent of the Service from 1861 to 1864. Shortly afterwards, he was to be an official representative of New Jersey at the Lincoln funeral service.

Despite this eminence, his New Jersey medical colleagues did not hesitate to investigate charges in 1880 that Dr. Newell had consulted with a Thomsonian. Although he protested that there was a misunderstanding, other physicians testified to several instances of his unorthodox consultations. The Society ruled that "In all his affairs the physician should be above reproach," and the Committee on Medical Ethics determined that Dr. Newell "had been guilty of indiscretion, to say the least, and should receive the censure of the Society."

In the same year, he was appointed Governor of the Washington Territory by President Rutherford B. Hayes and served there four years, remaining in the State of Washington as resident physician at the Soldiers and Sailors Home. He later returned to his home in Allentown and died there in 1901 at the age of eighty-five.¹⁹

By 1900, it was apparent to members of the Medical Society that those unorthodox sects which had survived through two generations had been forced to keep pace with medical advances. Wisely, Dr. Wells P. Eagleton of Essex County, in 1909, recommended that the Society take the role of older brother and invite the homeopaths to join the organization. While their points of view had been coming closer together in many respects, they absolutely coincided on the necessity to guard the public from men who were calling themselves osteopaths but often practicing medicine in all its aspects.

The older organization's insistence upon adequate medical education for practitioners of osteopathy made it necessary for that group to apply to the Board of Medical Examiners and pass the same tests in materia medica, therapeutics and surgery given to those with an M.D. degree. The applicant who successfully passed the examination was entitled to a license for the practice of medicine and surgery.

Always assiduous in safeguarding and improving public health, the Society succeeded by the end of the nineteenth century in requiring physical examinations for school children, and in 1903 New Jersey became the first state to examine and license health officials and sanitary inspectors.

Industrial health

Efforts also were made to protect the workers in the state's growing industrial complex as specific diseases occurred. In 1899, Dr. George C. Laws of Paulsboro reported cases of "glonoinism" in men who worked in a Gibbstown explosives factory and absorbed nitroglycerin into their systems. Those employed filling cartridges suffered most, but other workers also showed irregular heart action, headache, nausea, vomiting, diarrhea and sometimes skin eruptions. Wives were affected from doing their husband's laundry and from direct contact. Their uterine functions became deranged, and they had an above average number of miscarriages and premature births. A baby carried in his father's arms for any length of time was prone to become sickly, and these infants lacked normal resistance to disease.²⁰

Colleagues in the state Medical Society were alerted to this and other new industrially-caused illnesses so that they could identify and trace them more readily and could advise community health officers where action was needed.

Achievements reviewed

As 1900 approached, members of the state Medical Society reviewed past achievements by organized medicine. The Camden County Society took pride in the opening of Cooper Hospital in Camden in 1887. Of its first 172 cases, ninety-five were surgical, ranging from compound and simple fractures of the skull and extremities, and cerebral and spinal concussions, to malignant and benign growths. Principal surgery included amputation at shoulder and hip joints; hysterectomy, ovariectomy, and trephining.

Hudson County reporter Dr. James A. Exton of Arlington reported a free dispensary established in Jersey City in 1883 through the philanthropy of Dr. L. J. Gordon. Treatments were furnished by ten doctors, each devoting part of his time to the new facility.

A disturbance occurred in Hudson County when a bogus medical and surgical college of New Jersey tried to open in Jersey City. Members of the Medical Society intervened and had the charter repealed.

On the brighter side, Dr. Stephen Morgan Disbrow praised Asbury Park for its noise-abatement policy. He said it was the only town in New Jersey where the voices of hucksters were not heard hawking their vegetables, crockery, fish and miscellany.

Another health measure in Asbury Park in the 1890's required milk sellers to obtain a license. Licenses were granted only to those who could prove their milk came from healthy cows and was clean and unadulterated.



This portable case of surgical instruments was used by Dr. Elmer H. Rogers (1858-1907) of Trenton, N. J.

The town also had installed a system of keeping records on its buildings, describing construction, size and condition of cellar, ventilation, water supply, and sicknesses that had occurred there. Local doctors believed the information would be useful to the community and also to physicians who planned to send patients there to convalesce.

Pure air should be assured

Dr. Horace G. Wetherill of Trenton had attributed the prevalence of catarrhs to the dust of the streets and wondered if it was not the freedom from dust that made the pine forests and seashore beneficial to pulmonary patients. Dr. Henry Mitchell of Asbury Park prophesied that the time was not far off when courts would rule that all conditions that impair the purity

of air are injurious to public health and render the individual less resistant to other health hazards.²¹

Consideration of fees

A new fee bill drawn in 1896 for the guidance of members suggested a charge of \$2 to \$5 if the distance exceeded one mile, with 50 cents added for each additional mile. For visits after 9 p.m., before 7 a. m., or in haste or extraordinary circumstances, the physician might charge double. In obstetrics, a normal delivery charge, including visits during the first week, ranged from \$15 to \$100. Resetting broken bones might range from \$10 to \$100 depending on the complexity of the case, and operations on the eye and ear varied from \$10 to \$500.

It was agreed that in New Jersey areas contiguous to New York City or Philadelphia, rates for medical attendance and surgical services should correspond. The Medical Society "earnestly recommended" that bills for professional services be rendered at least as often as once in three months, and indicated that more frequent payments, except in a prolonged case, were better for both patient and physician.

X-rays in use

The discovery of X-rays by the German physicist Wilhelm Konrad Roentgen in 1895 had a prompt appeal for New Jersey medical men. It soon became evident that these rays were important in the diagnosis and treatment of disease.

The fascination of the new machine, or his haste to compensate himself for its cost, was one Newark man's undoing, however. Members of the Newark Practitioners' Club, most of whom also belonged to the state Medical Society, found it necessary to expel a member in 1897 after he repeatedly disregarded warnings about publicizing in local papers his wonderful accomplishments by the use of X-ray.

A century ends

Dr. David C. English was a man of small stature, but his great dignity and tireless energy were apparent as he stood before the Society in 1898 as its president. In his frock coat and enormous moustache, he appeared the veritable father of the organization he so much respected — and was to represent through all the final years of his life as editor of its *Journal*.

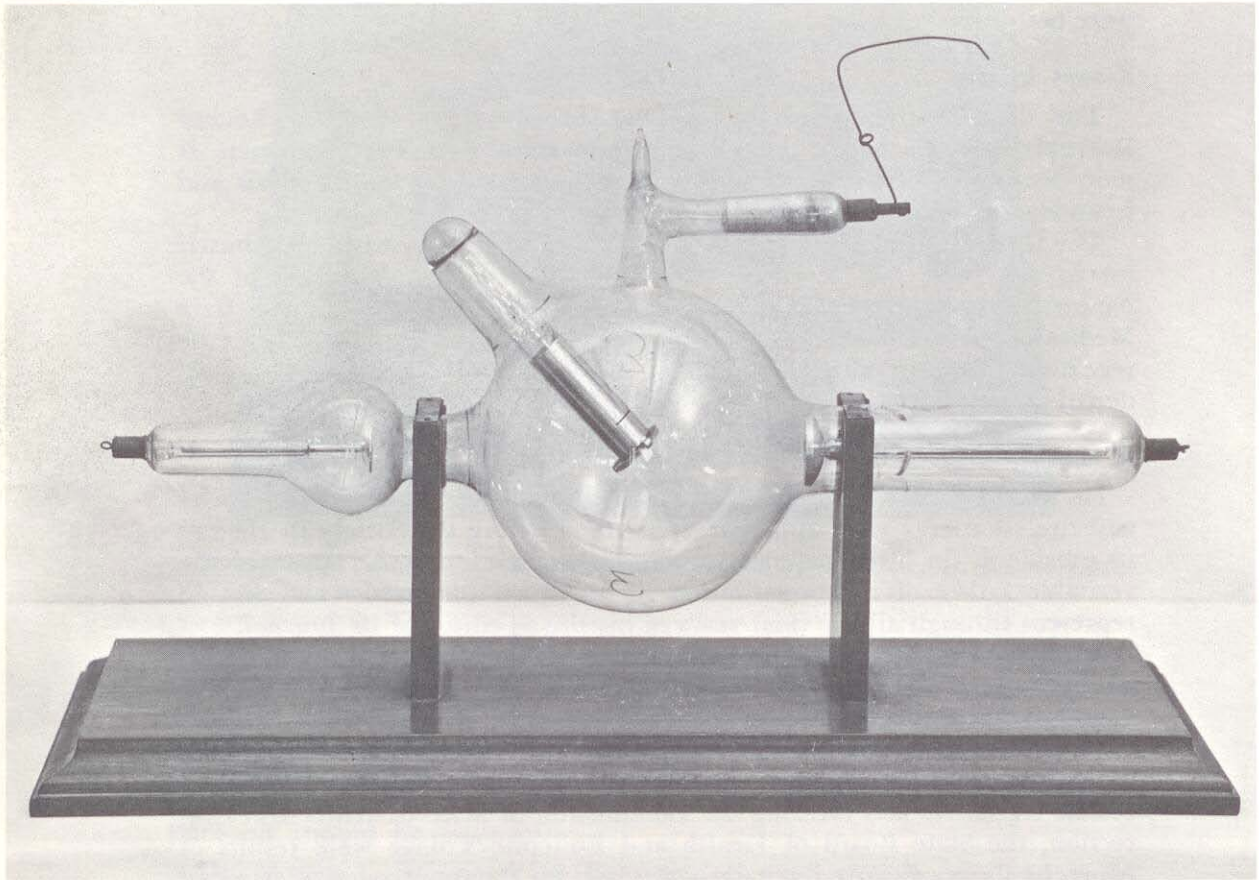
In his address he listed numerous accomplishments and current efforts of the Society. He placed at the top of these the State Hospital for the Insane at Trenton and its subsequent enlargement; a second State Hospital at Morris Plains and improvement in conditions in county almshouses where insane patients were kept.

The legislative acts creating the Commission of State Charities and Correction, the State Board of Health and Epileptic Village were results of efforts by the Society. It also had sought laws for the suppression of criminal abortion, introduced measures for the prevention of blindness in young children and urged provisions for better school health regulation. Through the Society, the control and eradication of bovine tuberculosis were under way, and regulations for milk handling and distribution assured a safe,

wholesome product. The Society also helped bring about more competent dispensing of medicine and focused attention on the need for better methods of securing expert medical testimony.

The late 1890's — with their introduction of X-ray, the isolation of radium, the recognition of ultra-violet light and other discoveries — made the preceding decades seem almost primitive.

One thing was apparent to all the members of the Society: there was still much to be done for better health in New Jersey. The twentieth century would bring new challenge and new discovery.



This 1906 gas X-ray tube was used by Dr. Winthrop Davison, Mercer Hospital, Trenton. It was composed of a vacuum-reducing device, containing asbestos, and a seal-off tip projecting from the bulb portion of the tube. It had an aluminum cathode and anode, and platinum target (anti-cathode).