

CHAPTER 14

"The simple conclusion is that the perpetuation of the life and power of a nation depends upon the preservation of the physical and moral health of its individual citizens. Yet we have not realized the possibilities that lie in national action."

— Dr. Dowling Benjamin, 1909.

Few Americans anticipated the country's involvement in World War I, yet thoughtful New Jersey physicians might have noted that the Medical Society's important anniversaries were often punctuated by war: the tenth anniversary saw the start of the Revolutionary War in 1776; the twenty-fifth, in 1791, while little disturbed by Indian uprisings on the upper Ohio River, did have a few New Jersey physicians with the troops there; the fiftieth anniversary, in 1816, followed immediately after the treaty ending the War of 1812, and the one-hundredth anniversary, in 1866, marked the end of the Civil War. The 1891 convention was held with the Spanish-American conflict just seven years away. And in 1916, the Society held its 150th conclave with the clouds of World War I hanging heavy over Europe.

The New Monterey Hotel at Asbury Park was the site of the 150th anniversary meeting. On June 21, 355 physicians gathered at the resort city. Total membership in the twenty-one county societies had reached 1,684 and there seemed to be just cause for celebration.

President Woodrow Wilson had sent regrets that affairs of state held him in Washington, so New Jersey's Governor James F. Fielder and his wife were to be the guests of honor at the banquet. Within hours of the dinner, however, Dr. William J. Chandler was notified that the governor could not attend because he had to go to Sea Girt to complete arrangements for the arriving state troops enroute to the Mexican border to quell a reported uprising there.

The topics of the three-day Society sessions were relatively complacent — the education of nurses; recent advancements in the knowledge of cancer; the morbidity of childhood; and prognosis and treatment of kidney diseases. But the governor's absence was an ominous portent.

In less than a year, the United States was involved in the first World War. Young men were daily confronted with ubiquitous placards bearing the piercing eyes and pointing finger of Uncle Sam wanting "you." John Philip Sousa's military bands were impelling; and there was a "we'll-show-'em" spirit of adventure. Everyone was singing George M. Cohan's "Over There," and young men were eager to be among the Yanks "... coming over there."

America declared war on April 6, 1917, and on June 14, the first fourteen transports left Hoboken for Europe. The first ambulance company from New Jersey followed two months later, leaving Sea Girt for France on August 24. Included were nine motor ambulances, twelve horse-drawn vehicles, three motorcycles with side cars, a runabout, and three horse-drawn transports. Among the officers were Drs. Peter P. Rafferty of Red Bank, H. B. Chalfont of Mullica Hill, W. P. Chalfont of Sewell, J. J. Rowland of Highlands, H. A. Wallhauser of Newark, T. K. Lewis of Camden and W. S. Bull of Cranbury.

The Board of Medical Examiners for the Medical Reserve Corps of New Jersey was initially composed of Drs. David A. Kraker, Newark; August Adrian Strasser, Arlington; Harrison S. Martland, Newark; Martin W. Reddan, Trenton; H. F. Dowd, Newark; Joseph MacDonald, Jr., East Orange, and John C. McCoy of Paterson.

Few of them retained their civilian status for long. By the time the war was over, Dr. Strasser had died in service. General Pershing had presented a citation to Dr. Martland for exceptional, meritorious and conspicuous service at the A.E.F. hospital center at Vichy, France, and Dr. McCoy was cited for his services as commanding officer of the American Red Cross Hospital at Château-Thierry. There, from June through August, 1918, "although hampered by insufficient personnel and equipment, he rendered invaluable service in caring for a large number of wounded from the Battle of the Marne."

Dr. Reddan became the first president of a new society, "The Medical Men from the State of New Jersey at Camp Greenleaf, M.O.T.C., Sanitary Co., No. 1, Fort Oglethorpe, Ga." There were more than thirty "charter" members. Dr. Ralph H. Hunt of East Orange was vice president and Dr. Edward B. Rogers of Collingswood, secretary. Dr. Kraker was another member of the Camp Greenleaf group. His sister, Teresa, a nurse graduated from The Johns Hopkins University Hospital, was with the Red Cross in France, and a younger brother, Jerome, interrupted college to serve as an Air Force photographer.

The first woman physician to go to France from New Jersey was Dr. Mabel H. F. Bancroft of East Orange.

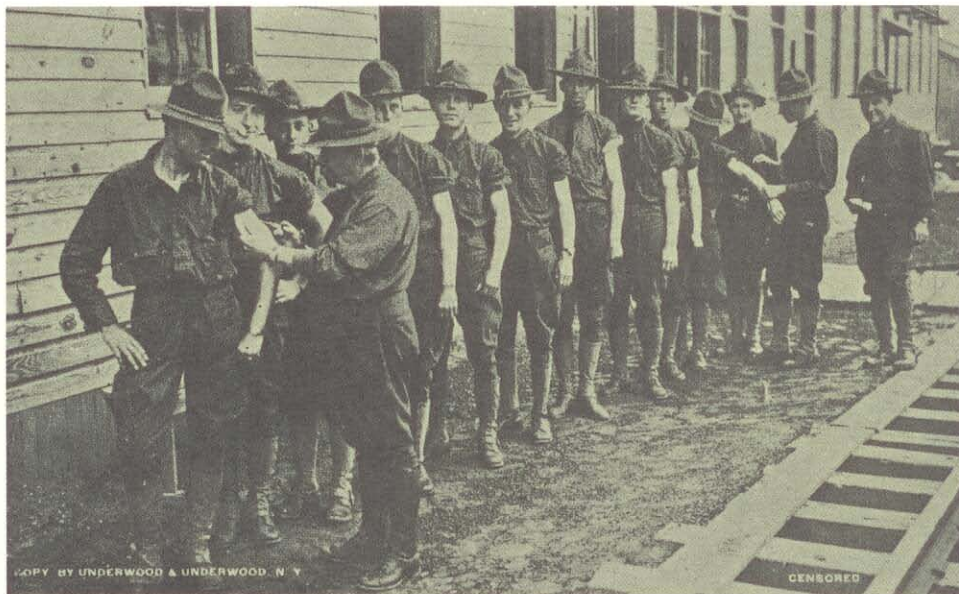
Several New Jersey physicians were recognized for gallantry and exceptional service: Dr. Robert N. MacGuffie of Passaic received the British Military Cross for gallantry and devotion to duty under shell and machine gun fire in the front line, and Dr. Russell W. Johnson of Jersey City received the French Croix-de-Guerre for his work in the Red Cross surgical dispensary at Beauvais, France.

Dr. James John Lee Young of Newark, a veteran of the Spanish American War, served with the Sixth Infantry in France and was injured while attending the wounded in his first aid station in the trenches. Front-line heroism also was exhibited by Dr. Elam F. Srygley of Greystone Park during two days in October, 1918, when his platoon was being heavily gassed and he twice left the shelter of the dressing station to give first aid on the front line. Dr. Thomas M. Barber of Morristown was cited for saving four wounded under enemy fire and re-establishing his first aid station in a new shell hole after the existing one was destroyed by enemy attack.

Dr. Paul M. Andreae of Jersey City, who entered the Naval Medical Reserve Corps, was rescued after his ship was sunk by a submarine; Dr. Abraham J. Gordon of Newark was held prisoner by the Germans; and several New Jersey physicians met death at the front. Dr. John Edward Williams of Roselle Park died in France of typhoid fever, and Dr. Sidney Pearson Lewis of Jersey City was killed on the Somme battlefield. Others who died in military service were Drs. James MacFarland of Burlington, James B. Griswold of Morristown and Otto C. Thompson of Lakewood.



The first hospital facility was in use almost as soon as Camp Dix (now Fort Dix) began operation July 16, 1917, near Wrightstown, N. J. The present-day Walson Army Hospital was dedicated on March 15, 1960. It was then described as the most modern medical facility in the country and a "showplace" medical center. It had 500 beds and served a military and dependent population of approximately 105,000 people at Fort Dix and McGuire Air Force Base, plus military personnel and their dependents in smaller installations in the general area, and retired military personnel. Professional services included Departments of Surgery, Medicine, Psychiatry and Neurology, and various Hospital Clinics. A residency program was provided for military doctors. (The photographs and information were supplied by George H. Haertel, Lt. Colonel, Infantry Information Officer, Fort Dix, N. J.)



The reverse side of this World War I postcard indicated it was printed by the YMCA. An explanation of the picture read: "Life at Camp Dix. Inoculation means vexation for a few weeks but the petty disturbances are far overshadowed by the great good done by the injection of the few million 'bugs' that ward off disease." (Courtesy of George H. Haertel, Lt. Colonel, Infantry Information Officer, Fort Dix, N. J.)



Walson Army Hospital, Fort Dix, N. J.

On the home front, New Jersey became an increasingly vital source of war materiel. Workers swarmed to the busy factories from rural areas and from other states.

Hospitals in wartime

Close to 10,000 hospital beds in New Jersey were requisitioned by the War Department for military patients. Assignments were made at St. Mary in Hoboken and St. Francis in Jersey City; at North Hudson and Hudson County Hospitals; at Camps Merritt, Dix, Colonia, Lakewood and Cape May.¹

The Medical Society Committee on Hospitals had visited forty-seven civilian facilities in the state and found many had made the improvements suggested on earlier visits. A pamphlet was provided listing the minimum standards for hospitals as adopted by the State Board of Medical Examiners. The Examining Board could not accept interns applying from hospitals that failed to meet these standards. The basic requirements also were useful in determining the hospital's qualifications as an approved teaching institution for nurses.

The Medical Society made New Jersey the first state to specify hospital standards and to have appropriate enabling legislation. The Society also recommended the establishment of a State Hospital Association composed of two representatives of the lay board and two of the medical staff from each standardized hospital in the state, while continuing the Hospital Standardization Committee within the state Medical Society.

Following New Jersey's lead, the A.M.A. undertook the criteria for interns, general hospital administration, and standardization.²

Dr. William Gray Schauffler of Lakewood was president of the Medical Society in 1917. Since he was on military duty, his address was read by a colleague. The report he prepared in one respect paralleled that of Civil War days. Too many young people were in poor physical condition, he found, and physicians in the future must give greater attention to preventive medicine, especially to family and school hygiene.

He credited proper inoculation for almost ending smallpox, typhoid and paratyphoid fevers in the Army and Navy, and he expected the same would be true in the civilian population as soon as federal and state authorities enforced the laws. Even venereal disease was yielding to prophylaxis, and particularly to treatment with the newly discovered Salvarsan ("606").

While Dr. Schauffler saw still greater need for better physical fitness, the good results of past efforts were evident. New Jersey had the lowest percentage of rejectees of any state, with less than 2 per cent, compared with 5.8 per cent for the nation as a whole. In some southern states, rejections ran above 17 per cent.³

The "flu" epidemic

New Jersey was managing valiantly as an "arsenal of democracy," contending with food shortages, heatless days and lightless nights, until the epidemic known as Spanish influenza struck in the fall of 1918. It attacked more than 300,000 in New Jersey, killing 17,000. Only one-fifth that number of New Jerseyans died in battle.⁴ Dr. Henry A. Davidson of Cedar Grove, reviewing the records in 1957, called the Spanish influenza pandemic of 1918 "the greatest medical holocaust in history." In less than one hundred days, the disease killed 12,000 civilians in New Jersey. Ten times more fatal than the "Great War" which killed 53,000 Americans in combat, influenza claimed 530,000 victims.

Some reports said the first steamer bearing influenza carriers docked at Boston, others said New York. The disease was already raging in parts of Europe. It may have started in Spain — hence its name — or been brought into France by Chinese imported to replace the French workers at war. Once it reached America, it spread rapidly along the Atlantic seaboard, then across the country.

A description of the symptoms related a sudden and violent onset with chill, fever, headache, pain in the back and legs and a sense of intense prostration. . . . Victims were literally stricken in their tracks. Individuals at work were utterly overcome. Mental symptoms were seen in all grades from torpor to mania. The patient looked prostrated. The face was suffused and might be cyanotic. Eyes were red and swollen, the skin dusky, the lips

thick. One New Jersey physician said, "It was a common occurrence for me to be in conversation with a man in his usual health, and in less than five days, meet him at the autopsy table."

In one day in Newark, October 26, 1918, there were seventy-nine influenza deaths. In that week, Newark, with a total population of 300,000, recorded 400 deaths from influenza. Pneumonia and other complications frequently followed the flu.⁵ For pregnant women, an attack was almost invariably fatal, and the greatest number of deaths for both men and women occurred in the years between twenty and thirty. Young children made the best recovery. Fatigue was a particular factor, physicians found, and accounted for the slowest recovery. The disease was so rapid and so disastrous that panicky municipal officials reacted irrationally, banning places of amusement, large public gatherings, churches, schools and saloons, but permitting factories with their thousands of employees working in close contact to operate six and even seven days a week, full time, around-the-clock.

Coincidentally with influenza, encephalitis appeared. Scientists have shown they were two different diseases, sometimes confused at the outset because their early symptoms were similar.

Lacking any other means of protection, a mother would hang a bag of asafetida around the neck of each of her children. Many adults carried a bottle of camphor and frequently sniffed the fumes; some wore face masks.

When the epidemic broke out in Jersey City, Mayor Frank Hague assigned the medical director, Dr. John Nevin, to investigate and recommend control measures. Dr. John Von der Lieth, a noted bacteriologist, and officers from the health department joined in investigations that indicated raw fruits and vegetables were carriers of influenza, as well as pneumonia and tuberculosis. Signs were posted prohibiting spitting, and housewives were urged to peel or thoroughly scrub raw foods. Some towns introduced sprinkler systems along the main streets to overcome the germ-carrying dust.

Compounding the problem was the critical shortage of civilian physicians and other medical personnel. Before the end of World War I, about 1,000 New Jersey physicians had enlisted. More than 500 of them were members of The Medical Society of New Jersey.⁶

Poliomyelitis

The influenza pandemic was so widespread and devastating that it almost erased memories of New Jersey's worst epidemic of poliomyelitis, then more often called infantile paralysis. In 1916, the State Department of Health recorded 4,055 cases with 1,181 deaths. The disease had been widespread in New York City earlier, and fear was so great that guards were placed at New Jersey crossings to stop the entrance of anyone under sixteen without a medical certificate testifying that he had not been exposed to polio recently. No concern was evidenced for people over sixteen because it was then regarded as solely a child's disease.

Almost half the state's polio cases were reported from Essex County and more than one-third from Newark. The highest case rate in any of the 266 sanitary districts of the state was in South Brunswick Township, Middlesex County, where one of every one hundred persons in the community was affected. Doctors felt certain there were many cases so mild that they were

not recognized. These were considered an important factor in spreading the disease.

In the treatment of polio, some New Jersey physicians in 1916 recommended the use of warm salt water baths and "an absence of all meddling therapeutics, whether physical or medicinal." Convalescence, they said, should be under the supervision of an orthopedist, with treatments consisting of gentle massage, mild exercise, and braces.

Dr. Henry L. Coit's constant attendance during the polio epidemic led to his exhaustion and fatal pneumonia, but his sacrifice probably spared many youngsters from severe crippling. At the outset of the epidemic, Dr. Coit helped raise money and hired a specialist from Boston to train New Jersey nurses in the massage and muscle-training treatments to be given polio victims.

Maternal-child welfare

Another aspect of the growing concern for babies and children after World War I was the continuing program for maternal-child welfare. It had begun before the war and was resumed as promptly as physicians returned to undertake it.

The problems of pregnant women in wartime were given special consideration in 1916 when Dr. Emery Marvel of Atlantic City asked physicians' wives to help strengthen the morale of expectant mothers.

Members of the Medical Society from the earliest days had sought ways to prevent criminal abortion. In 1872, they were responsible for the passage of a law making such abortion a criminal act punishable by heavy fine and imprisonment.

A more widespread threat to the population was ignorance. The Society steadily waged war on untrained midwives and at the same time sought a reduction in the fatalities from puerperal fever which were far too numerous even among physicians' cases.

In the early 1900's, as the new immigrants settled among others of their ethnic group, they married and had babies. The young woman who spoke little English followed the Old World custom of calling upon a midwife. For a frightened, homesick girl, the older woman represented the mother or older sister she would have depended upon in her home land.

Members of the Society saw that the midwife's role might continue inviolate for many years. The solution was to train the midwife so that she became a helper in the fight against puerperal fever, neonatal conjunctivitis and other threats to the well-being of the mother and child.

In Hudson County, Dr. G. F. Pitts was not inclined to give midwives all the blame for the cities' increased death rate from puerperal fever. "It seems as if this, like cholera infantum, ought to be dropped from the list of fatal maladies," he said, "but on the contrary, it is fast becoming a bugbear and perfect dread to our pregnant women. . . . The physician must see that he is perfectly innocuous, and conveys no poison in his person or clothing."

Early obstetrics

Male attendants for women in childbirth were not common before the mid-nineteenth century, although Dr. William Shippen, Jr., who had graduated in medicine at Edinburgh, Scotland, returned to Philadelphia and

delivered his first lectures on obstetrics in 1762. About the same time, Dr. John V. B. Tennent of Freehold, a medical graduate of Leyden, Holland, began instruction in the subject in New York and held the first chair in obstetrics there. Shippen and Tennent were both graduates of Princeton College.⁷

The invention of the obstetrical forceps by Peter Chamberlen of England, early in the seventeenth century, improved the handling of difficult deliveries. Various models followed, after Jean Palfyn, a surgeon of Ghent, Belgium, reintroduced the use of forceps in 1720.⁸

Older practitioners were still using the "straight" forceps, a rigid shank with one curve suited to the child's head, in the late 1800's. By 1900, a double-curved design was in general use, the blades conforming to both the child's head and the mother's pelvis.⁹

Dr. Thomas W. Harvey, Sr. of Orange recalled that when he started practice in 1878, cesarean section was scarcely considered. "Difficult labor meant version, forceps or craniotomy," he said. "Long forceps, blunt hook and a cephalotribe were instruments in frequent use and found in all obstetric kits."¹⁰

In 1892, the State Board of Medical Examiners, led by Dr. William Perry Watson, and with the cooperation of the state Medical Society, secured passage of an initial law to regulate the practice of midwifery in New Jersey. It was one of the earliest such measures in the United States.¹¹

Some qualified and were certified as midwives, but this did not end the problem. Others practiced in their own neighborhood or rural district without training or certification, knowing that the law was almost never enforced.

New Jersey Senator Joseph S. Frelinghuysen, later a member of the United States Senate, was one of several generations of a family that served as public officials and staunch supporters of organized medicine. In 1909, on behalf of the Medical Society, Senator Frelinghuysen introduced a more extensive law concerning midwifery in New Jersey. It called for a certificate or diploma from a legally incorporated school of midwifery and required that examination questions be answered in English. The subjects included anatomy of the female pelvis and generative organs; diagnosis and management of pregnancy; diagnosis of fetal presentation and position; mechanism and management of normal labor; management of the puerperium; sepsis and antisepsis in relation to labor; special care of the bed and lying-in room and care of the newborn.

Loss of license was threatened for the midwife who failed to secure the immediate services of a regular physician when any abnormal signs appeared in either the mother or infant. Licenses also could be revoked or denied for persistent inebriety, practice of criminal abortion, neglect or refusal to provide proper information to health officers, and other causes pertaining to safety and health in mother and baby. Again, however, lack of training schools made the law impossible to enforce.

Dr. Siegfried Husserl of Newark felt that the answer was a midwife association rather than attendance at a required course of lectures. About 1912, he inaugurated the New Jersey State Midwife Association, starting with fifty

members. Where other agencies had given up because the women would not attend, this voluntary association had a good number regularly present.

After four years' experience with the voluntary training school for midwives, Dr. Husserl and his assistant, Dr. H. B. Kessler, convinced that bedside instruction was a necessity, connected the school with a maternity hospital, offering three lectures weekly on general nursing, infant's hygiene and obstetrics, with the lectures given in English, German, Italian and Polish. The women were asked to give twelve hours of service weekly for two years, alternating monthly during the day or night.

Dr. Husserl believed that reduction of infant mortality was chiefly dependent on proper prenatal and postnatal care, including constitutional considerations and breast feeding. "The midwife is a relative necessity and by modern education could be a powerful factor," he said.¹²

Dr. Thomas W. Harvey, Sr. addressed his colleagues in 1917 as The Medical Society of New Jersey completed 150 years of organized effort to cure disease and safeguard health. He urged improved maternal and child care as the most significant undertaking the Society could select. An estimated 24,000 women in the United States were then dying each year in childbirth, and 150,000 more became invalids. "If we were to stop with these figures, the Medical Society could not honor itself better than to get behind a movement to reduce them," he said. "But more than that, 200,000 children die annually in the first year of life. I do not believe many of us are aware of the necessity for prenatal and postnatal care for the prevention of this staggering loss of life of parturient mother and child," Dr. Harvey concluded. He then introduced his recommendations for a reorganization of the obstetrical service in the state.¹³

Dr. Joel W. Fithian of Camden in 1915 had discussed obstetrics with other members of the Medical Society. Said he, "We rave over fresh air, have tuberculosis exhibits and clinics for child welfare, and grow hysterical over eugenics, but obstetrics is the field of preventive medicine left almost untouched. . . . Infection is the greatest danger to the lying-in woman, and no doctor who is not familiar with the latest technique in surgical knowledge should attempt to take care of obstetrical cases." He believed the remedy for the high maternal death rate was better hospital facilities.

Dr. Maria M. Vinton of East Orange thought the answer for the home cases was either enough women physicians or acceptance of midwifery. In the latter she saw great improvement in competence since the training requirements had gone into effect following the law of 1909.

Another woman practitioner, Dr. Emma M. Richardson of Camden, suggested free medical care where necessary to assure proper prenatal services. Referring to courts where a person without counsel is assigned a lawyer, Dr. Richardson asked, "Why not give the expectant mother the same opportunity in defending her health when she is bringing forth future citizens?"¹⁴

From their earliest sessions, members of the Medical Society had reported unusual deliveries, speculated on whether a mother could "mark" her unborn child and recorded the frequency of extra-uterine pregnancies. Dr. B. Rush Bateman, Society president in 1866, reviewed his thirty years of practice in Cumberland County and made special mention of having delivered five hermaphrodites in one family.¹⁵

Dr. O. H. Sproul of Flemington in 1892 summarized his records of 1,500 cases of labor with a total of 1,509 babies, including eighty-four still births, 138 delivered by forceps and fifteen by version. Seven maternal deaths resulted; two from puerperal fever and two because the patient had tuberculosis; one from mitral heart disease, one from ruptured uterus and one from placenta praevia. The time of delivery was so evenly divided between day and night that Dr. Sproul would not confirm the prevalent belief that nearly all calls came at night.¹⁶

Early in the twentieth century, Drs. William W. Kain of Camden and James V. Jaso of East Orange had separate theories for determining sex before birth. Both involved odd and even months in the menstrual cycle in relation to the birth of previous children.

Experience plus techniques

It was time, the Medical Society decided, to combine individual experience and modern techniques to assure better maternal-child health in New Jersey. Two men were particularly noteworthy in their efforts at the time. One was Dr. Theodor Teimer, born in Pilsen, Bohemia. He received his degree in medicine in 1898 from the University of Vienna and came to Newark a few months later.

Internal medicine was Dr. Teimer's specialty, and for many years he was responsible for making Newark a city with one of the lowest death rates from diabetes in America.¹⁷ He was an organizer and pathfinder in fields later cultivated by special research laboratories. In addition to his own specialty, Dr. Teimer was an ardent believer in the value of medical gatherings where doctors could meet informally and exchange opinions on professional problems. In 1915, he was appointed a member of the Newark Board of Health and worked actively to promote public health programs.

Dr. Arthur W. Bingham of Orange and Dr. Teimer are credited with initiating the maternal welfare movement in New Jersey. Late in his career, when Dr. Bingham was honored with the presentation of the Edward J. Ill Award from the Academy of Medicine, it was said of him, "He did not drive people, he coaxed, he educated, he persuaded, he showed. Never complacent about human shortcomings, particularly in himself, Dr. Bingham had infinite patience with the shortcomings of others, and was endlessly hopeful of betterment."

Dr. Bingham received his medical degree from the College of Physicians and Surgeons in New York in 1896, and was subsequently appointed chief obstetrician at the Orange Memorial Hospital. One of his colleagues referred to his "long vision," explaining that Dr. Bingham first put in order the service that he was responsible for in a single hospital, then he sought improvement in his own county; next, willingly took on a state-wide burden, and finally contributed to the program of maternal welfare all over the United States.

The first step was the establishment of the Medical Commission for Maternal Welfare by the Essex County Medical Society in 1924, with Dr. Bingham as chairman. Education and prevention were the main features of the program. Prenatal committee work followed the pattern Dr. Bingham

had established two years earlier at the Maternal Center of the Oranges. During the first eleven years of the Essex County Medical Society's Maternal Welfare Commission, maternal mortality was reduced from 6.9 to 4.4 per 1,000 live births, and in Newark from 7.4 to 4.5 per 1,000. New Jersey was one of eleven states with an infant mortality rate at an all-time low. Eager to improve the state-wide record, New Jersey was the first to comply with President Herbert C. Hoover's request for a conference in each state on Child Welfare. The Society also sent delegates to the White House Conference on Child Health and Protection in November, 1930.¹⁸

The Medical Society of New Jersey established a State Maternal Welfare Committee in 1931 with Dr. Bingham as chairman. In March, 1936, the Medical Society and the State Department of Health unified their efforts in an intensive campaign for maternal and child health. Qualified consultants, paid by the Department of Health, were available to those in general practice, and lectures, literature and a field physician were provided in each county. The dramatic accomplishments are told in two sets of figures: in 1931, there was an average of 5.9 deaths per 1,000 live births, in 1951, the rate was 0.6 deaths per 1,000. By the later date, deliveries in the home were rare indeed.¹⁹

One of the first steps taken by the Maternal Welfare Committee of the Medical Society was to recommend a set of rules for the management of obstetrical cases in hospitals. These included rubber gloves to be worn for all examinations and deliveries, with a five-minute scrub-up preceding the gloves; as few vaginal and rectal examinations as possible; masks to be worn by all personnel during examination and delivery; transferral of cases with infection out of the maternity department; normal babies to be on a regular feeding routine; use of pituitrin only when the physician was present and the patient ready to be delivered. Instances when a competent consultant would be required were specified, including prolonged labor, need for cesarean, occiput posterior presentation, and other complications.²⁰

Dr. Bingham's vision never lost sight of the common pitfalls along the way. For a number of years, he prepared a regular *Journal* item entitled "Lesson from a Death Certificate." Always succinctly stated, a typical one appeared in December, 1940:

A Lesson from a Death Certificate

Patient delivered at home. Immediately after delivery of the baby the physician left the home, leaving delivery of placenta to a woman who was helping.

Patient complained of increasing dyspnea and died two hours later.

Lesson obvious.

A. W. Bingham, M.D.²¹

State and city agencies working for child health also had an important role in the declining mortality rates. The State Department of Health in 1915 was one of the first to establish a Division of Child Hygiene; in 1918, the state appropriated \$125,000 for its work — the largest amount allocated by any state for maternal-child health up to that time.

Under the direction of Dr. Julius Levy of Newark, the division introduced a number of important services, including more public health nurses and centers where new mothers could have their babies regularly examined and

immunized and where the women themselves could be given instruction in child care and feeding. At that time, no other state had the so-called "Baby Keep Well Stations." Today, facilities similar to New Jersey's Child Health Stations are world-wide. Legislation provided for the inspection and licensing of maternity homes, day nurseries and other facilities caring for children.

In his colorful fashion, Dr. Charles Vaughn Craster focused attention on child health while serving as Newark Health Officer from 1916 until 1951. One technique was the gift of baby bibs bearing the warning: "Don't Kiss Me; I Might Get Sick."²²

Five years after the state Society began its maternal welfare program, Dr. Robert E. Wright of East Orange noted that even in that short time New Jersey was already fifth in the nation in low maternal death rates. He reminded his colleagues that a few years earlier New Jersey had been criticized for spending more money on infant welfare than any other state in the nation — this was a total figure, not a per-capita rating, he added. "Now," Dr. Wright beamed, "in the light of our national rating, it appears to have been a good investment."

Gynecological surgery

While direct attention to mother and child undoubtedly was the primary cause of the lowered mortality rates, improvements in gynecological surgery were an important factor, too. In 1875, Dr. A. M. Edwards of Newark suggested more accurate diagnosis could be made by use of the microscope to study vaginal discharges. Five years later, Dr. Edward J. Ill began operating procedures that made him nationally famous as a pioneer in gynecological surgery. Beginning about 1860, New Jersey surgeons had operated for ovarian tumors, diseased uteri and other causes, but records indicate that Dr. Ill was the first to have continuing and extensive surgical experience of this type with consistently good results.²³

The notable work of physicians and specialists in all parts of the state contributed to the achievements of the Maternal Welfare Committee, and newspapers in the 1920's and '30's began to describe New Jersey as "one of the country's safest states for babies." Society President Dr. Watson B. Morris in 1941 said accomplishments in the maternal welfare field had made New Jersey the envy of the world.²⁴

By the middle years of the twentieth century, The Medical Society of New Jersey could direct its attention to related areas in maternal welfare — the role of the hospital; the justification for cesarean section; and the cause of congenital malformations.

The Society's Advisory Committee on Child Health set standards in 1940 for the care of premature babies. The Committee classed all prematures as emergencies and advised hospitals to have a premature service. When such provision had been made, and specific recommendations carried out, the Committee proposed an approved list of hospitals with premature centers, advising that when a premature birth was expected, the service should be notified in advance. Oxygen, incubators, heated beds with temperature control and specially trained nurses were among the requisites for the service.²⁵

Dr. Philip Levine of Newark, in 1935, began to carry forward initial discoveries made at the Rockefeller Institute in connection with blood factors such as the anti-Rh factor and others affecting the fetus and newborn.

In 1947, Drs. James Francis Norton and Edith D. Mangone at the Margaret Hague Maternity Hospital in Jersey City suggested the greatest hope for further reduction in maternal mortality rates was in controlling puerperal infection, eclampsia, hemorrhage, rheumatic heart disease, and rupture of the uterus.

In the same year, members of the Society specializing in the field were invited to become charter members of the New Jersey Obstetrical and Gynecological Society.

Drs. Theodore D. Spritzer of Dunellen and Eva R. Sargent of North Plainfield, in 1962, jointly introduced a discussion of the Malstrom vacuum extractor as a safe and relatively non-traumatic substitute for forceps. Dr. Samuel C. Southard of Ventnor reported a severe case of erythroblastosis fetalis requiring six exchange blood transfusions. The disease, which is characterized in the newborn by anemia, jaundice, enlargement of the liver and spleen, and general edema, brought further comment from Dr. Sol Browdy of Trenton. He advocated broader prenatal testing of both parents.

The international tragedy, in the early 1960's, of malformed babies resulting from the prenatal use of the drug thalidomide in Europe, opened new fields for study in the potential dangers any drug may have on the developing fetus.

With the united efforts of the Medical Society, physicians, health officers, nurses, hospital and laboratory specialists, maternal and child welfare progressed in the span of two centuries from superstition and ignorance to a present-day level which scientists have said is approaching the irreducible minimum mortality rate.²⁶

Medical defense

Not everyone appreciated the merit of physicians. As malpractice suits began to be filed in every state at the turn of the century, Dr. Frederick H. Wiggin, delegate from the New York State Society, remarked to New Jersey associates, "Eventually we hope to protect our members more effectually against malpractice suits which are becoming alarmingly common. It seems to be a fashionable way for some to pay their physician's bill."²⁷

In 1906, the Committee on Medical Defense proposed that in specified situations, the Society assume the cost of medical defense of its members. Three years later, after considerable debate, such defense was approved by the Society.

Many members already carried insurance, at a cost of about \$10 a year, as a protection against malpractice suits. But having the Society undertake defense of a member was an immediate indication that the physician was believed to be innocent and was willing to have the charges aired rather than agree to a settlement to avoid publicity.

The Society itself made an investigation before employing an attorney to defend a member at Society expense. A first requisite was that the physician be in good standing in both the county and state Societies, with all dues and assessments paid. The attorney's fee was limited to \$250. If the case went

to a higher court, the Board of Trustees fixed the expense to be allowed. Under no circumstances would the Society pay any sums awarded in settlement, compromise, or by verdict or otherwise against any member sued for alleged malpractice.

As soon as the Society employed legal counsel in defense of its members, cases diminished. After the first year of the Society's Medical Defense Act, eight suits had been introduced, one was withdrawn, two nonsuited, four gave prospects of never coming to trial, and one had been lost. The last one was a charge of assault and battery against a Paterson physician brought by a woman who claimed he had engaged a dentist to extract ten of her teeth without her consent in a case of optic neuritis. The initial claim for \$1,500 was reduced by the jury to \$500, and finally, by the judge, to \$250.

Noticeable delays and postponements on the part of complainants occurred in less than two years after the Society began defense of members. Dr. Thomas N. Gray of East Orange, chairman of the Medical Defense Committee, concluded that "the animus in these suits is blackmail, the black-mailer weakening upon finding the state Society defending."²⁸ The *Passaic Daily News* and other papers recognized the motives of those who threatened suit and refused to publish pre-trial charges against physicians.

In 1911, Alfred C. Wall of Jersey City was employed as legal counsel to the Society. By 1921, cases were so infrequent that the Society abandoned the practice of medical defense, recommending instead that each member carry individual liability insurance, through a company investigated and recommended by the Society's Medical Defense and Insurance Committee.

Other insurance protection

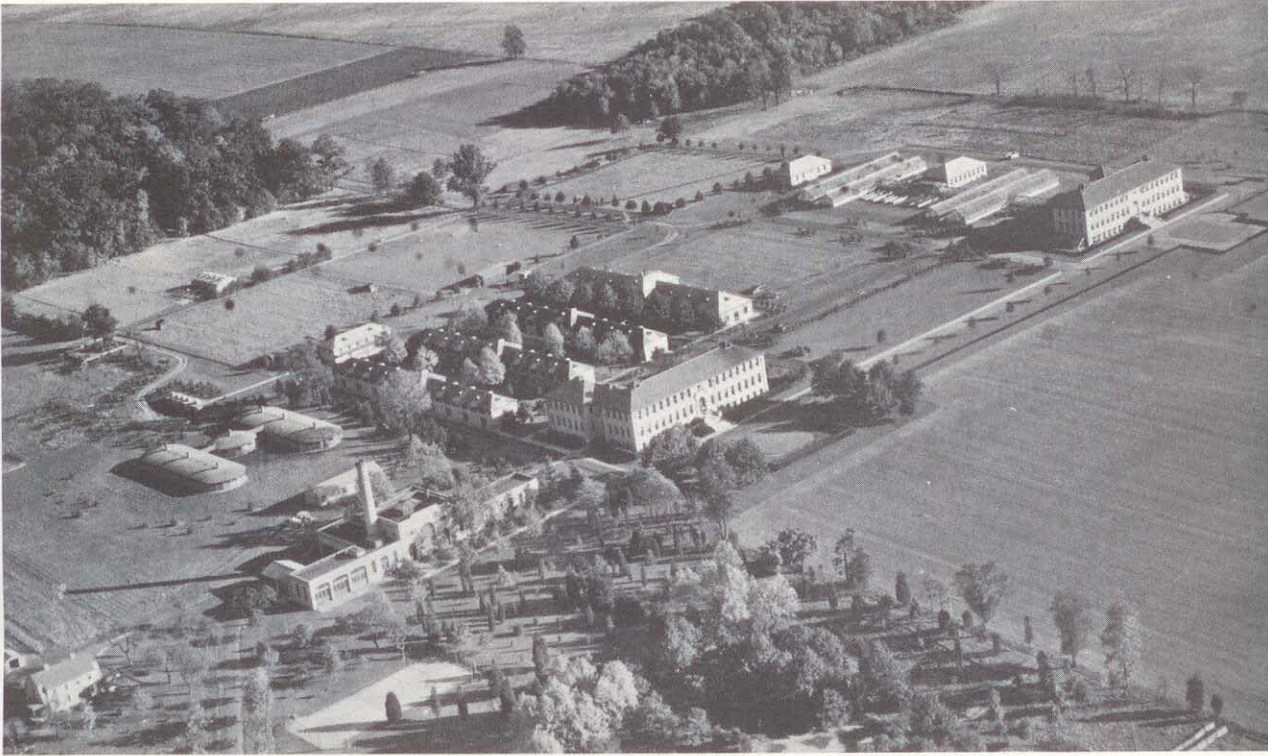
Insurance against a variety of contingencies was becoming popular in the early 1900's. Henry Ford gave impetus to the need for one kind. After mass production of cars began in 1903, doctors turned to "gas buggies," and car insurance agents seemed as numerous as "flivvers."

At this time, statistics-minded Dr. Frank Wilcox Pinneo of Essex County began a thirty-year chairmanship of the Society's insurance committees, analyzing costs and contracts for his colleagues and recommending the company that offered the best group protection, first in automobile and later also in health and personal disability.

Anti-vivisectionists

While the Medical Society sought new ways to control and prevent disease and improve health, there were persistent, small distractions such as the need to protect the public from unqualified practitioners, patent medicine vendors, and the often misguided citizens' groups. Among these last were the ardent anti-vivisectionists. After 1900, they introduced numerous legislative bills designed to stop all research involving live animals.

While he was president of the New Jersey Sanitary Association in 1907, Dr. Gordon K. Dickinson of Jersey City, referring to the efforts of anti-vivisectionists, declared, "If all information derived through experimentation on live animals and in the laboratory were to be blotted out, the retrocession would be tremendous."²⁹



The medical laboratories of the Rockefeller Institute were begun at Princeton in 1905; its Division of Animal and Plant Pathology was established there in 1916. In 1951, after the Division had been moved to New York, the buildings comprised part of the Forrestal Research Center of Princeton University.

The Medical Society began counterattacks and in 1908 urged each member of every county medical society to explain to legislators what the proposed anti-vivisection bill would mean to medical science.

Journal editor Dr. English asserted that vivisection had done more than any other method of investigation to advance medical knowledge of physiological and pathological processes, and of the means for the prevention, control and cure of disease. He was convinced that restriction of its practice would retard future progress and cost the lives of countless human beings. This deeply religious physician wrote, "We yield to no one in our abhorrence of brutality toward the lower animals. We are in sympathy with the work of the society for prevention of cruelty toward them, but far better that a hundred dogs be sacrificed — without cruelty or undue suffering — than one human life be sacrificed for lack of the knowledge vivisection would give us."

The Medical Society was joined by research scientists from the Rockefeller Institute for Medical Research at Princeton, professors from the medical colleges of New York City and Philadelphia, and from Rutgers and Princeton Universities in opposing before the New Jersey Legislature the proposed anti-vivisection bill of 1908. They testified that vivisection studies had helped in the control of typhus fever, smallpox, plague, rabies, yellow fever, and diphtheria. Serum therapy, they added, was giving great promise in scarlet fever and tuberculosis, but further testing was necessary to perfect treatments.

During its years in New Jersey (1914-1950), and since its removal to New York City, the Rockefeller Institute has made noteworthy contributions to

medical knowledge. A conviction that there were often strong similarities in disease processes in animals and humans led the Institute to extensive studies of animals that resulted in new understanding of blood components, enzymes, viruses and such diseases as malaria and influenza.³⁰

Among the brilliant scientists at the Institute, one of the greatest in the early years was Dr. Theobald Smith, who joined the group at Princeton in 1915 at the age of fifty-six. He remained at Rockefeller Institute until his retirement, not long before his death in 1934 at the age of seventy-five. His former home, now part of the Forrester Research Center of Princeton University, is designated the *Theobald Smith House* in his honor.

While still in his thirties, Dr. Smith was called by Harvard to be the first incumbent of the endowed chair of comparative pathology, and by the Commonwealth of Massachusetts to be its director of the Antitoxin and Vaccine Laboratory. There he demonstrated the immunization properties of toxin-antitoxin mixtures and improved methods for the production of diphtheria toxin.³¹

Among Dr. Smith's New Jersey contemporaries in scientific research were Drs. Richard E. Shope, virologist, and John H. Northrop and Wendell M. Stanley, biochemists. Working at the Rockefeller Institute, they made important contributions to modern medicine.

Eye protection

The protection of sight also occupied physicians during the early years of the twentieth century. Greater appreciation of the total health involvement in eye strain, eyes out of focus and imperfect vision prompted increased attention to eye examinations, fitting of glasses and related services. High medical standards were sought and obtained for those treating patients with eye diseases or impairments. Newark was acclaimed as an eye and ear center in this period, largely because of the work of such exceptional members of the Society as Drs. Charles J. Kipp and Wells P. Eagleton.

End-of-war legislation

As physicians put away their World War I uniforms and resumed civilian dress, some had to agree with other returning G.I.'s who felt something had been slipped over on them while they were away. It was the Volstead Act — prohibition — which became federal law on January 16, 1920. In the next decade, New Jersey's coastline became an active base for rum runners, and "bathtub gin" caused new illnesses and disability.