

Changing Conceptions of Public Health

A Centennial History of the
Rhode Island Department of Health

1878-1978



by Wendy Yondorf & Harry Hoberman

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Providence, R.I., 1978

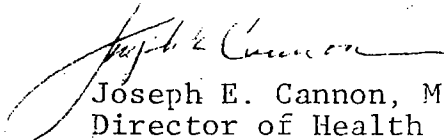


FOREWORD

The interest aroused by our earlier publication of the Government of Health: The Formation of the Rhode Island State Board of Health, and the occurrence of our Department's centennial year, have suggested the sponsorship of this short history of the development of state functions in public health over the past century. The two authors, just graduated from Brown University, devoted many weeks of careful research to its production, and many of us in the Department have learned much from the manuscript.

In the interests of conciseness and technical accuracy, members of the staff of the Department have edited, and in some instances rewritten portions of the manuscript, without, we hope, much violence to the main intent of the authors.

It is our hope that this initial summary may serve as a starting point for others who may wish to examine in more depth particular aspects of our history.



Joseph E. Cannon, M.D., M.P.H.
Director of Health

November 1978

PREFACE

When the Board of Health was formed in 1878, it was merely an appendage of the infant public health movement as it was emerging in Rhode Island. During the hundred years of evolution which followed, the Board of Health and its successors, the Public Health Commission and the Department of Health grew to encompass increasingly the direction and the administration of public health in the State.

If one divides the history of the Department into three approximately equal time-periods, one can relate its development to the overall development of public health in each period. In the first period the Board was largely learning the game, in the second implementing a myriad of new programs, and in the third, reacting to explosive expansion of the state of the art, and preparing for its eventual role as the central administrative and planning agency of the State.

In each time period, we have included a short summary of the socio-economic and political background, and the changes that took place in public health. Of course, certain trends overstep the bounds of the selected time-periods, but we feel that we have been able at least to embed the Department's development in both national and Rhode Island history. In each period, we have included a summary of the main changes taking place in the Department, and have followed with two chapters treating the details of some of the more important individual functions which were being discharged. In some instances we have overstepped temporal boundaries in the interests of clarity and continuity. Some functions which have remained essentially unchanged from earlier periods have not been carried forward into the later descriptions.

The history arose out of Howard Frumkin's "Government of Health",¹ originally a Brown University honors thesis, adopted for publication by the Department of Health. This exploration of the events and situations leading to the origins of the Board of Health in 1878, led the Department to retain him as consultant for the production of this centennial history. He, in turn, contracted with us to research and write the original draft of this work. It has further been extensively edited, and somewhat abbreviated, by the staff of the Department of Health.

The help and encouragement of many individuals is gratefully acknowledged, first and foremost the assistance of Mr. Frumkin in the preliminary organization of the project. Dr. Cannon, and his staff both active, and retired, gave freely of their time and experience, and professors Albert Wessen, and Elmer Cornwell at Brown gave further advice and assistance. The staffs of the Rhode Island Medical Library, the Sturges Library in the Department of Health, the Rockefeller Library at Brown and the Rhode Island Historical Society Library provided indispensable help.

Finally, our typists, Michele Perron, and Larry Shtassel, and our families and many friends deserve thanks for their encouragement, support, and practical assistance.



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SECTION I - 1873-1910

CHAPTER ONE

BACKGROUND HISTORY

In his study of the origins of the Rhode Island Board of Health, Frumkin¹ explored the social, economic, political and scientific character of the period which led, in 1873, to the Board's formation. The early period of the Board's activity is best understood against the background of the same contemporary forces.

In the years following the Civil War, the United States entered an era of unprecedented industrial growth. The trend toward urbanization accelerated after 1860, and the proportion of the nation's population living in urban areas doubled, reaching 40 percent by 1900². The Northeast developed as the most important manufacturing section of the country because of the existence of abundant and mobile labor supply, availability of investment capital, well-developed transportation, and the tools of the industrial revolution.

By the last decade of the 19th century, a wave of nationalism permeated the country. Anti-immigration laws arose under the influence of organized labor and racial purists, and import tariffs arose to favor domestic industry. During the latter years of the 19th century, increases in government spending continued, reflecting an era of prosperity.

The impact of the industrial revolution was especially strong in the Nation's smallest state in the post-Civil War years. Since the late 18th century, textiles and jewelry had been Rhode Island's largest industries, and these came into their heyday in the latter part of the 19th. Indeed, by 1880 Rhode Island led the country in the production of costume jewelry, and three major industrial cities, Pawtucket, Woonsocket, and Central Falls were incorporated during the 1880's.

In spite of its political and social conservatism, Rhode Island enacted a large quantity of progressive legislation between 1870 and 1895. The legislature established a State Board of Education (1870) and a Compulsory Education Act (1887), abolished imprisonment for debt (1870), established judicial reform (1893) and factory inspection (1894), and opened the forerunner of the University of Rhode Island (1887). During this period, the legislature met alternately in Rhode Island's two capital cities, Providence and Newport. The establishment of a single capital in Providence in 1900 was a recognition of the concentration of political power, economic strength and population density in the northern part of the State.

The Republican Party dominated Rhode Island politics in the years after the Civil War. Indeed, throughout the 19th century and the first third of the 20th, the Senate was predominantly Republican as was the House of Representatives. The Democratic Party, predominantly representing the laboring class was severely splintered by the State's many ethnic factions, and failed to attain

real political power, and restrictive voting requirements, based in certain cities on property ownership, tended to favor continuing Republican predominance. In Providence, with its large immigrant population, about 60 percent of the population were disenfranchised at the turn of the century.³

From 1856 to as recently as 1932, Democratic governors served only eight years, and even then were without much influence since the principal powers resided in the legislative branch of government. The governor lacked veto-power, could not himself order reports and investigations without legislative authorization, and his appointive powers were sharply limited by the "Brayton Law". This statute provided that the governor's appointments, if not confirmed after three days, could be replaced by individuals selected by the Senate.⁴ In truth, power rested primarily in the hands of Republican political bosses, who represented mainly those with substantial control of private capital.

Charles R. Brayton, "a corpulent, affable, almost blind man of blueblood Rhode Island stock",⁵ was the paradigm of a Republican boss at the turn of the century. He served as a lobbyist for the New Haven Railroad, and both lobbyist and chief counsel for the consolidated railroad and electric car system in and around Providence. Without official government status, he nonetheless maintained a post of operations in the State House office of the High Sheriff of Providence. A shrewd and calculating man, Brayton kept the Democrats out of political control by playing one immigrant faction off against another, and by the purchase of votes and loyalty. Together with his close friend of many years, the powerful Senator Nelson Aldrich who remained in office for thirty years from 1831, a strong influence was exerted in politics at both the state and national levels.

In 1904, after visiting the State, Lincoln Steffans in his political expose, characterized Rhode Island politics as "notorious, acknowledged, and shameful". "Rhode Island," he stated, "is a state for sale - and cheap."⁶ His words, better than any, depict part of the story, at least the political part, of a state caught up in its own prosperity and corruption. The economic and political climate of the period 1878-1910 had an effect on the development of the Rhode Island Board of Health fully as great as the social and scientific developments of the time.

THE RISE OF BACTERIOLOGY

The period under discussion spanned the years during which the communicability of disease at last became established as fact, and the microbiological basis understood. The International Sanitary Conferences in Europe,⁵ where understanding of these matters was more advanced than in the United States, were still in doubt as to the early evidences as to the cause and communicability of cholera, plague and yellow fever in the year that the Board of Health was established, and it was to be two or three decades before the matter came to rest, even on that side of the Atlantic Ocean. In this country, and perhaps especially in New England, the notion that the mere elimination of personal and municipal filth would suffice to eradicate disease was still firmly imbedded.⁶

The rising tide of bacteriological knowledge and method was slow in reaching the New World, and the first public health laboratory in the nation, established in Rhode Island, was not to appear until 1914. It is interesting, however, that antiseptic surgery (Listerism) had begun to appear in the United States as early as the 1860's, its acceptance being based rather on good results rather than acceptance of any theoretical basis. By the early 1880's such infections as anthrax, typhoid fever and tuberculosis were recognized as bacterial in origin, and their agents had been isolated.

These and many other advances laid the groundwork for some of the earliest progress in disease prevention. Scientists had by then convinced the health-related community that the biological sources of infection must be controlled if the spread of communicable disease was to be prevented.

Fortunately, the new consequences of the concepts and tools of bacteriology had a good match to the older programs of sanitation which were undergirded by a new theoretical basis. By 1910, then, the United States, and Rhode Island were well on the way to effective use of the products of Bacteriological advance in the development of programs to check the spread of many of man's oldest and most destructive diseases.

THE RISE OF HEALTH SERVICES REGULATION

Regulation, initially in the field of environmental sanitation and quarantine, was an important feature of any Board of Health from the very first. But in the period 1873-1910, and perhaps as important in shaping public health activity as was bacteriology, there was the growth of attempts to improve the standards of health services by professional regulation through programs of licensure. This arose, as a matter of fact, not from any public outcry, or pressure, but rather from the interplay of forces among practitioners.

In a time when the the understanding of disease was so elementary by any modern standard, there was good reason for the existence of many schools of thought in the healing arts. Each gave fierce loyalty to its particular concepts of the cause and treatment of disease, but claims to superiority over others were tenuous.

History tends to refer to the major and ultimately most influential of these factions as the "regulars" and the rest as "irregulars". The "regulars" may well have shared more characteristics, social, educational, and others, with the Republican majority than did their competitors, and this, more than objective scientific truth, may well have been the source of their predominant influence.

With a combination of altruism and self-interest the medical societies of the "regulars" had had their own programs of licensure for many years in certain localities. These were clearly a source of irritation to the "irregulars", and this may be part of the reason for the Rhode Island Medical Society to have undertaken a

series of efforts over a decade or more to obtain the passage of a state statute vesting medical licensing authority in the State, through the Board of Health. This was finally accomplished in 1895, some years after it had been applied to dentists.

The State of Kansas, actually, had taken the lead as early as 1870, and furnished the model to sister states. However,

requirements for graduation from medical school or simply the acquisition of a medical diploma, were very lax in those days. As a result, the 1870 medical practice act did not serve as much of a regulatory device among doctors of the state....⁸

As early as the 1830's there had been a general feeling that the standards of medical education needed attention. The Illinois Board of Health had begun to list approved schools, and other states began to approach the problem. In the succeeding decades, the American Association of Medical Colleges, and later the American Medical Association applied their energies to the problem. It was not until 1910, however, that the investigations of Abraham Flexner unmasked the inadequacy of most medical schools, some of which were unabashed diploma mills, and precipitated a situation where the schools scrambled for respectability and university connections, or went out of business. The effect of this, however, was not felt until the period after 1910.

The consequence of these developments was to confirm the position of the "regulars", and in retrospect it appears that they were indeed closer to the main stream of scientific thought and development, and consequently furnished the best channel available for progress towards later scientific developments in medicine and public health.

SECTION I - 1878-1910

CHAPTER TWO

THE BOARD OF HEALTH -- THE EARLY YEARS

On April 11th, 1878, the Rhode Island Senate took up a bill, already passed by the House, to establish a State Board of Health. After only a few changes, the bill was passed and became law.* On the 22nd of the month, Governor VanZandt administered the oath to the first six members, Doctors David King, Charles H. Fisher, George W. Jenckes, and Albert G. Sprague, and Messrs. Elisha Dyer, Jr., and William T.C. Wardwell. King was elected Chairman, and Fisher, Secretary.

The 1878 law established the Board's procedures and public duties. Of the six members, three were required to be physician-members of medical societies, and two members were required to be from Providence, and the other four from each of the four other counties. Full terms in office were to be six years, and meetings were required to convene at least every three months. The Secretary was to be a physician elected by the Board, and he alone was compensated for his services with a salary of \$1200 per year. Not only did he direct and supervise the Board's activity, in fact he personally carried out most of its work. He kept records of all transactions and maintained contact both with the local municipal health departments of the State, but also with other state boards.

The Act further defined the responsibilities of the Board:

The Board shall take cognizance of the interests of life and health among the citizens of the State; they shall make investigations into the causes of disease, and especially of epidemics and endemics among the people, the sources of mortality, the effects of localities, employments, conditions and circumstances on the public health, and shall faithfully do all in their power to ascertain the causes and the best means for the prevention of disease of any kind in the State. They shall publish and circulate, from time to time, such information as they may deem to be important and useful for diffusion among the people of the State, and shall investigate and give advice in relation to such subjects relating to the public health....

The General Assembly had, in fact, brought into being a beneficent but essentially powerless authority. Although the Board could investigate, collect information, and make suggestions in relation to human and animal health, it had neither the authority to establish regulations nor the power to enforce them. It was a group with a common interest in improving the public health, who conducted studies and compiled figures, but whose recommendations were without force.

*The background leading up to the eventual passage of the bill is described in detail in Frumkin's "Government of Health"¹

This lack of authority would appear to reflect general attitudes at the state and national levels. In its first three decades it was clear that the Board was viewed as being without political importance. Even at its inception the Board was "anything but a hot potato"¹ and one notes that the discussions leading to the passage of the act lacked evidence of strong feelings.

Powerless Boards of Health were common in New England. Barbara Rosenkrantz⁶ writes about the Massachusetts Board of Health, formed in 1869: "The State Board of Health began with no power of its own, and in many ways it remained powerless." Rhode Island's tradition of fierce municipal independence was not conducive to a powerful State Board, and at the national level public health activity lacked vigor.

The first Secretary, Fisher, was unsuccessful in broadening the Board's powers, but expressed concern about the concentration of regulatory function in the towns and cities. Local health officials were often mainly untutored in health matters, and in Fisher's words: "In several towns the health officer is merely a nuisance inspector and may be engaged in the occupation of a grocer, plumber or undertaker."

The first specific authority in the enforcement of law relating to health was not granted to the Board until 1893, Fisher's last year in office. The Board was then given the authority to institute summary proceedings, with the consent of the Governor, to prevent the introduction and spread of infectious diseases in Rhode Island.

Board meetings were largely occupied with the Secretary's accounts of health in the State. These were assembled into a book-length annual report to the General assembly, and were heavily based on the responses to the circulars sent to each city and town asking information on disease prevalence, sanitary conditions, and actions to improve health. Included also were accounts of sanitary inspections, activities of the Board's Cattle Commission, vital statistics, pending legislation, and conferences and meetings attended by the Secretary.

Between 1878 and 1910 the board was stable in membership and action. Over a period of 28 years, only 13 new members replaced those who had retired or died. Membership was increased to seven. It seems that it was assumed that the Secretary served until death or retirement, and the position changed only once in the period, due to Fisher's death.

Under Fisher, a Monthly Bulletin was developed and maintained reporting on mortality, sanitary improvements, and meteorological data. Essays, by physicians and Board Members, dealing with disease prevention, and personal and social hygiene were published frequently, often reflecting the Secretary's rather florid literary style.

Fisher's death on October 21, 1893 after fifteen busy years in office was followed by the appointment of Dr. Gardner T. Swarts as successor. He took over the post with relative ease, even main-

taining the continuity of the Monthly Bulletin, although the November and December issues had to be combined. Swarts had previously served as Medical Inspector for the Providence Health Department, and as a well trained bacteriologist had developed a pioneer laboratory serving the needs of contagious disease control. After experience with the 1895 Medical Practice Act he was appointed Secretary and Treasurer of the Confederation of New England States Medical Examining and Licensing Boards at its first meeting. He played an important part in the Confederation's development of reciprocity in acceptance of credentials for medical practice.

Although Swarts was a more glamorous and recognized figure among physicians than was Fisher, the position on the board offered him, like Fisher, little opportunity for creativity. The Secretary acted closely within the limits defined by the State. Both Secretaries, too, fell under the shadow of Providence's distinguished Superintendent of Health, Dr. Charles V. Chapin.

Chapin was the first health officer in the State to have knowledge both of the traditional methods of attacking disease by cleansing the environment, and also the newer knowledge of the bacterial agents of disease. He introduced the products of the advances made by Pasteur and Koch and uprooted the dogma, both in Rhode Island and in the United States that disease arose de novo out of filth. Still he appreciated the value of pure water, and adequate sewage disposal and never lost his interest in environmental sanitation.

The Board of Health benefited greatly by location in Chapin's city. Swarts, one of his proteges, published many of his works in the Annual Reports. As a member of the Medical Society, Chapin was well known to the physician members of the board, and his influence was felt in many ways.

By the turn of the century, the Board had attained some considerable effectiveness in controlling communicable disease, but its power arose not out of statutory strength, but rather from the public respect for the growing competence of the men identified with its efforts.

SECTION I - 1878-1910

CHAPTER THREE

DEPARTMENTAL FUNCTIONS

Three principal functions of the Board of Health at its formation were programs of sanitation, prevention of the spread of disease, and the collection of vital statistics. Despite the importance of the first two, the Board, through much of the period from 1878 to 1910 lacked both the power and the initiative to make a real impact in sanitation and disease control, but performed exceptionally well the tedious task of collecting and tabulating the vital statistics of the State.

SANITATION

The promotion of sanitation and hygiene, both personal and public, was regarded as the Board's most important duty. In 1878, the Secretary, Dr. Charles Fisher wrote:

the first and the continuing leading object of a state board of health should be the general enlightenment of the people in sanitary knowledge so that they may... perceive the necessity of the earnest observance and enforcement of good sanitary laws and regulations, as the foundation of success, in the promotion of health and longevity.

The Board should act as a central board in giving enlightened direction to all labors of a sanitary character...

Sanitary action was, after all, in the early years of the Board, the only known way to fight disease. The orthodox physician in the Medical Society believed in a direct connection between good hygiene and "the moral, social, and pecuniary condition of individuals and the State." The sanitarian was respected as a worker in the great field of moral reform, like the teetotaler, the educator, and the clergyman:

The sanitarian holds that if a man is provided with pure air, good food, and health exercise, he will then be in a bodily condition which will produce no craving for the stimulus of alcohol, which will open his intellect to the influences of education, and which will make him better able to receive and to appreciate the truths of religion.

Despite this early recognition of the importance of sanitary measures, the Board appears to have exerted only a small influence in sanitation during its initial decade. Fisher, in 1893, stated that the Board had not obtained its desired results both due to lack of statutory and financial provisions for enforcement and due to lack of cooperation on the part of state and municipal officials.

In 1887, the General Assembly assigned to the Board the duty of investigating and reporting as to whether refuse and filth from manufacturing establishments, in the Providence River, were the cause of disease among humans. No financial appropriation was made, however, and consequently the study was extremely limited. This occasioned one of the most stinging reports of Fisher's career, pointing out that to have done the job effectively, the Assembly should have granted financial support as had been done in other states. Some three years before Fisher's death in office, which occurred in 1893, he had begun to parcel out some of his investigative duties in sanitation to other members of the Board, and by the turn of the century the Board was given some limited powers to enforce hygienic conditions.

The most prominent of the Board's activities in the field of sanitation was the dissemination of public information, including the means of disposal of garbage and sewage on land or in the water. In addition, inspection of buildings and the abatement of nuisances was being carried out. The Annual Reports were required by statute to include an account "of the measures taken each year by municipal authorities, corporations, or individuals for the promotion of the health of the communities under their respective supervision or control" (Section 83-6 of the General Laws). To this end, the Secretary solicited annual information from each city and town concerning removal of unsanitary conditions, the abatement of nuisances, the introduction of public water supplies, the construction of sewers, and a variety of other health-related items.

Garbage disposal was a municipal responsibility, under local ordinances. The Board played only an advisory role, and in the Annual Reports, described methods including feeding to cattle and swine, use in the rural areas as fertilizer or dumping at sea. (Fisher did not commend the quality of fish fed on such material as compared to beef or pork.) Incineration, however, was described as the "disposal par excellence".

Through the year 1896, the Board did not have control of the water supplies of the State. Several investigations of the rivers were conducted, however, and in 1884, Samuel M. Gray, Providence City Engineer and a member of the Board, alerted it to the far-reaching damage that could result if the crude sewage of Providence continued to be emptied into the Providence River at Fields Point:

It will inevitably cause a nuisance, to the injury not only of the dwellers within the city, but to the occupants of many of the shore resorts and residences bordering the Providence River and Narragansett Bay, and will seriously damage, if not destroy, many of the valuable oyster beds which now line the shores.

Gray recommended that either the sewage and filthy liquids be kept out of the Providence River, or that they be clarified before being permitted to enter the river. The latter could be accomplished, so he stated, by cleansing the riverbed from all deposits of filth. His recommendations, and, in 1891, those of Samuel Young concerning sources

of pollution of the Pawtuxet River were not heeded. Young stated, "these waters have received a large amount of polluting materials which might have been disposed of without any burdensome expense." Fisher attempted several times to get the General Assembly to give the Board supervision over the streams of the State since it had become clear that the sanitarian and the bacteriologist should be working together to establish cleanliness and safety of water supplies. As early as 1894, the Board was conducting its own bacteriological analyses of water, and they continued to act as a central monitoring and advisory board for municipal health workers.

Finally, in 1897, the General Assembly gave the Board control of the sources of Woonsocket's water supply, and in the following year they were able to require the East Providence Water Company to install a mechanical filter to improve the quality of water being taken from the Ten Mile River. In 1900, the Board was granted a supplementary appropriation of \$2,500 to study the presumably potable waters of the State, and certain sewage disposal plants. By 1904, the Board was at last given authority to levy a per diem fine if offenders failed to remove offending matter which might impair water quality. But 1911 was to come before the Assembly gave the Board responsibility for establishing a standard of water purity for the state.⁹ The 1904 law, important as it was, came late, since by 1886 the Massachusetts Board of Health had been given oversight of all the State's inland waters.

Other sanitary activities in which the Board engaged included inspection of public buildings and dairy farms. When inspection of hotels and boarding houses was first authorized in 1888 the effectiveness of the statute was largely negated by making the inspections optional, but this was later corrected. 1905 saw the authorization of inspection of sanitary conditions on farms which produced milk for public consumption.

Throughout the period, the Annual Reports contained articles on methods of hygiene and sanitation for public information. One finds such titles as: "The Ventilation of School Houses", "Sewerage of the Dwelling", and "Proper Disposition of the Excreta of Intestines and Kidneys".

DISEASE CONTROL

Of course the environmental controls referred to above had the objective of controlling disease, but as in most fields at that time, the more direct measures for the control of contagious diseases was almost entirely in the hands of the city and town authorities during the Board's initial fifteen years. Again, the Board served primarily as an advisory council for the town health officers, performed investigations, collected data on the prevalence of diseases, and published educational material on their control.

It was the local authorities that enforced quarantine regulations, especially to prevent the entry of infected personnel or goods from vessels in the ports and harbors, removed infected persons with

a "contagious distemper", placarded buildings infected with small-pox, and enforced an 1887 law restricting funerals in deaths thought to involve contagion. The towns also provided free vaccinations, records of which were kept by the town clerks.¹⁰

The Board of Health, then, only served to provide liaison with the state government, and to advise communities on the requirements of state statutes. For example, in 1879, concerned about a schooner in the Jamestown Harbor, Governor VanZandt called attention of the Board to the necessity of advising the towns in the appointment of health officers and the establishment of quarantine regulations.

Many physicians were concerned about the Board's lack of the necessary powers to deal effectively with promotion of the public health. The Rhode Island Medical Society, in 1886, appointed doctors H.R. Storer, E.M. Snow, and G.T. Swarts to propose to the General Assembly that the Board be given powers to control epidemics. They asked specifically for the Board to be given authority, through its secretary, to investigate and restrain outbreaks of such zymotic diseases as cholera, yellow fever, diphtheria, and others, with an appropriation of \$500 for the cost. The Senate passed the bill, but it died in the House Finance Committee and was indefinitely postponed. It was not until 1893, the year of Fisher's death, that authority was granted to institute summary proceedings to prevent the introduction and spread of infectious diseases.

In the 1880's and early '90's there was still active controversy over the validity of the "germ theory" of disease as represented in Rhode Island by the distinguished health officer of Providence, Charles V. Chapin. The Board sat rather passively between the sanitarian of the traditional type and the bacteriologist, but eventually assumed a more active role. For example, in the 1890's it participated actively in the striking down of a movement favoring the abolition of compulsory vaccination of school children. The Board's Annual Report for 1881 contains a treatise by Chapin stating that there was no direct relationship between malarial fever and imperfect sewage disposal. A few years later, Chapin generalized this observation to most infectious diseases, and concluded that it was not logical for health officials to be so engrossed with elaborate measures against a "relatively harmless filth".¹¹

Chapin's attempt to shift the focus of the activities of health officers from primarily aesthetic concerns to those clearly of a health nature was sharply resisted. He, however, persisted in shifting his own emphasis from sanitary engineering and nuisance abatement to specific measures against particular diseases, and to scientific investigation. It was he who conducted the first attacks against communicable disease in Rhode Island, using fumigation, steam disinfection, and aseptic nursing techniques in the hospitals.

Chapin was about a decade ahead of his time in local public health terms. In about 1885, the Board began to employ specific bacteriological methods against infectious diseases, but continued to emphasize sanitary methods with a potential for disease control including the regulation of water supplies and disposal of sewage.

Since 1798, when Jenner first introduced vaccination against smallpox as a substitute for "variolation", there had been controversy. In 1894, Samuel Darling and a group of traditional sanitarians attempted to obtain repeal of Rhode Island's long-standing compulsory vaccination law for school children. In this they had the support and assistance of a member of the British Anti-Vaccination Association. It was the strong opposition by the Medical Society and the Board of Health that the bill was defeated. They contended that they could not see evidence of infringement on personal rights, and marshalled evidence of the positive results which had been obtained. The defeat of this bill not only marked a victory for small pox prevention, but was symbolic of the decline of the older viewpoints on disease causation, and the emergence of the Board as a positive force in prevention.

Mandatory reporting of disease was still long in the future, but at first in the Annual Reports, and later in bulletins published monthly, the Board attempted to estimate the prevalence of acute diseases in the State. Originally by annual requests to town officials, and later by monthly contacts with medical practitioners crude estimates of disease frequency and descriptions of conditions affecting disease patterns were published. From time to time, the Secretary made special reports of particular diseases for public information both in the annual and monthly publications.

Up until 1910, consumption (tuberculosis) was very prevalent, and caused the highest mortality rates. Under Fisher, some statistics were published, but it was not until Swartz succeeded him upon his death that real studies of the disease, and of diphtheria as well were begun. By this time (1894) there was no longer doubt as to the relationship between the disease and Koch's tubercle bacillus. The Board began at this time to receive occasional special appropriations for tuberculosis, and Swartz established a laboratory that furnished diagnostic bacteriological study of sputum for tuberculosis and throat cultures for diphtheria.

The Board's first efforts at compiling a catalog of deaths and living cases of tuberculosis in the 1890's lasted only a few years. In 1903, however, under Chapin's stimulus, tuberculosis was made subject to mandatory reporting to the local health departments, and in 1909 to the State Board.

Swartz had long favored the establishment of a sanatorium for consumptives in the State, and had visited the institutions already in place in Massachusetts. Through his efforts, in March of 1902, the General Assembly created a commission to study the matter, and about a year later the commission was authorized to proceed to erect such an institution. It was opened in late 1905 at Wallum Lake, and by the end of the first year had admitted 48 patients and discharged one.¹² The Sanatorium was unusual for its day in that the patients did not regard it as a place to which to retire and die; rather they could, in convalescence look forward to the conduct of a relatively normal life in the sanatorium community, and even to being discharged with their disease arrested.

Beginning in 1894, the Board received their first appropriation for diphtheria which permitted a program of free diphtheria anti-toxin for the indigent, and the first state-based program of diagnostic cultures for the Klebs-Loeffler bacillus, following by only a month the establishment of a municipal program in New York City.

Like cholera, typhoid fever was commonly understood to be frequently water-borne and in 1895, physicians in Pawtucket, Lincoln, Cumberland and East Providence reported an unusual outbreak of a disease suspicious of typhoid fever. Swarts related the disease to the fact that the four communities shared a water supply derived from a stream called Abbott Run, and went on to establish the disease as typhoid fever. He recommended the cleaning of the filters at the pumping station as the only recourse then available. Five years later the Board began to offer the Widal Test on blood, for diagnosis, and made free typhoid vaccine available for the indigent.

Among the disease outbreaks mentioned in the Annual Reports of the time, one sees malaria in 1881, influenza in 1890, small pox in 1901, animal rabies in 1901, and a number of isolated reports including leprosy and other less common conditions. Swarts, in 1903, commented on a trend, which has continued since, for cancer and heart disease to be responsible for an increasing proportion of total deaths. Tuberculosis, pneumonia, and cholera infantum were still the main killers up to 1910.

VITAL STATISTICS

Vital statistics - the collection of birth, death, marriage, and divorce records has a long history in Rhode Island, in fact, in 1857 it was said that there was "no city in this country in which the returns, particularly those of death, were so complete and correct as in Providence."¹¹ Under the city's Superintendent of Health, Edwin Snow, this standard of excellence was maintained for a quarter of a century. The Board of Health took up the challenge of extending this work to the entire state, and this became and remained one of their highest-priority functions.

The registration of births, deaths and marriages in any community, stated Secretary Fisher, indicated the social and physical "vitality" of the people, and he frequently quoted Benjamin Franklin who had said, "Public health is public wealth." A conviction of the basic importance of these figures to illuminate the health status and needs of a community has sustained the interest in the collection of vital statistics up to the present day. Moreover, the records have served the cultural interests of genealogy, and the legal ones of proof of descent - of hereditary rights and entitlements. The figures also furnished the basis "for determining the expectations of life at different ages, and are therefore the basis of life insurance, beneficial and annuity associations."

Collection of marriage statistics was less difficult than deaths and births. In 1884, marriages were tabulated according to place of birth of each spouse (American or other), by season of marriage, and by the ages of the couple.

Births were listed by native or foreign-born status of each parent, by the birth-order of the child, (i.e. first, second, third, etc., in the family) and the number of stillbirths was included. Infants born to black parents were thought to have special significance and were reported separately. Assembly of the data was difficult until an 1895 statute required a monthly report from all physicians and midwives of births that they had attended, giving the required facts.

Deaths were initially counted on the basis of a regular periodic circularization of physicians asking facts about deaths known to them, and it was not until 1897 that regular reports of all deaths by the physician or medical examiner became mandatory. Reporting was complicated by problems of diagnosis, classification, multiple causes, and often extraneous factors. For example, when the town of Lincoln, in 1901, had an outbreak of smallpox, persons exposed who were workers in the textile mills often arranged for the misrepresentation of the cause of death for fear that the required period of quarantine would result in loss of jobs.

From the beginning, deaths were exhaustively subclassified by town or city of residence, sex, age, parentage, occupation and cause of death. After 1880, deaths were reported for each community in the monthly bulletin - a process requiring a great deal of hand tabulation. When Swarts became Secretary in 1894, he obtained authority to rent a "Hollerith tabulating machine" and the age of machine-processing had begun.

In 1878 life tables showed a 52 year life expectancy at birth, and an expectation of about 45 years of "productive" life. The short life expectancy was heavily influenced by infant mortality which was in the range of 140-150 at that period. This meant that only about 35% of live born infants survived to the age of one.

SECTION I - 1879-1901

CHAPTER FOUR

DEPARTMENTAL FUNCTIONS (Continued)

Additional functions of the Rhode Island Board of Health during this early period included the control of diseases of cattle and other animals, the investigation of food and drug adulteration, and the responsibility for the administration of the 1895 Medical Practice Act.

ANIMAL DISEASES

Weak as the Board was at its outset in the control of human disease, its inheritance of the already well-developed duties of the former Board of Cattle Commissioners assured it of a pre-determined role in the control of disease in domestic animals, especially cattle. This already developed program at once became the Board's most time-consuming function. For example, in 1888, Secretary Fisher reported that he had spent 174 days on activities attributable to the former Cattle Commission, and stated, "The amount of vigilance and labor required in the protection of the domestic animals of the State from the spread of contagious diseases can scarcely be appreciated by the average citizen."

What may today seem a disproportionate emphasis on animal disease is better understood if one considers that the horse was still the prime means of transportation, and cattle were of great economic importance since they were crucial in food production, and also were becoming understood as the source of certain human diseases. Not only did this activity tax the Board's energy, but it also called for a large share of the annual appropriation, for example, 16% of the 1878 budget went to this function.

Certain cattle diseases were heavily prevalent in Rhode Island, for example, bovine tuberculosis, and on the other hand some were threats only by importation from other areas, notably pleuro-pneumonia, "Texas fever" and rinderpest. The control rested in part on the identification of infected animals which would then be destroyed. This required the cooperation of the animals' owners, and this was especially difficult to obtain in the absence of strong statutes and a system of compensation for the loss. In the early days neither of these were present, and the program suffered accordingly.

Prevention of importation of infected animals was even more difficult, since the State had little or no authority in the matter of quarantine. In 1882, the Federal government, recognizing that this was a problem in interstate commerce, took a hand, and set up two quarantine stations, one in Waltham, Massachusetts for the southern New England area, and another in Deering, Maine for the north. In addition, the U.S. Treasury Cattle Commission provided facilities to hold cattle during the quarantine period. In the interests of cooperation with this program, the Rhode Island General Assembly in 1887 made pleuro-pneumonia reportable.

In the case of horses, the most important problem was glanders, (also known as farcy), a highly infectious disease that is normally fatal in animals and occasionally transmitted to man. Failure to report this disease, which was common in Rhode Island was punishable by a fine of \$300, or imprisonment up to one year. Despite this, animals with the disease continued to go unreported since compensation was not authorized. Dealers and owners of infected horses often tried to sell them as quickly as possible. It was noted that traveling circuses often brought glandered horses into the State.

As early as 1882, Fisher noted a declining prevalence of glanders, together with a high rate of reporting. The Board had posted the symptoms of acute and chronic glanders in public places and this was thought to have alerted many previously ignorant owners to the disease in their horses, and owners began to be wary of spread to healthy horses in their herds. The Board also arranged for cleaning up of watering troughs, and stalls and stables, as well as free burial of dead animals in the case of indigent owners.

In addition to the major animal diseases mentioned, there are entries in the records of the '80's and '90's indicating concern with meningitis, catarrhal influenza, horse distemper, and "hoose" or lungworm in horses. Some cases of anthrax and cowpox occurred in cattle, and there were outbreaks of hog cholera among swine. In many instances the personnel of the Society for the Prevention of Cruelty to Animals assisted the Board in the location and handling of infected animals.

Outbreaks of rabies among domestic dogs were frequently seen, and there was constant need to administer the Pasteur vaccine to individuals that had been bitten. Cattle, too, were bitten and had to be destroyed.

A new State agency, the Board of Agriculture was created by the General Assembly in 1893, and thereafter the Board laid down some of its previous functions and directed its attention mainly to animal diseases communicable to man. Interest in milk and milk products grew, and interest in equine animals diminished.

FOOD AND DRUG CONTROL

Lacking specific authority, the Board's early functions in this area in its early years was largely based on the interests of Secretary Fisher. A State Board of Pharmacy already existed, with responsibility for the registration of pharmacists, and the investigation of mislabeled drugs. Fisher clearly did not think this adequate, and felt that regulation of foods was also necessary, and was particularly concerned with the misuse of opium and its derivatives.

Adulteration of foods was evidently more the rule than the exception. Fischer wrote, "But few, if any articles in everyday use for food or drink escape adulteration." Milk, vinegar, molasses, sugar, butter, and many other foods were targets of his interest, and he also campaigned against the sale of contaminated ice, and diseased or corrupted meats.

In 1893, Professor John H. Appleton at Brown University examined 11 samples of ice, and reported that one of the samples "smelled like urine". As the Board had no laboratory capability of its own, Appleton also carried out several other studies ranging from tests of wall-paper for arsenic, and of candy concerning which public doubts had been expressed.

At Fisher's death, Swarts continued efforts to regulate food and drugs, but it was not until 1906 that statutes were passed that regulated the sale of meats, and of certain narcotics. The sale of corrupted or diseased meat or fish was prohibited, and inspectors of beef and pork were appointed.

Circulars addressed to the towns and cities had established that there was a problem of addiction to opiates and cocaine, and some 20 years after Fisher had voiced his concern, the legislature enacted regulatory statutes.

The first pharmacist (in those days, a druggist) was added to the Board of Health in 1908. Board member, Dr. John C. Budlong had died, thus creating a vacancy, and the Senate favored filling this with a druggist for his guidance in food and drug matters. At the same time the Homeopathic Society petitioned the Senate for the appointment of a Homeopathic physician to fill the vacancy. The board was enlarged from six to seven members in response to these pressures, and both requests were accommodated.

PROFESSIONAL REGULATION

The passage of the Medical Practice Act in 1895 has been mentioned in an earlier chapter as a sort of milestone. It required some sixteen years of effort on the part of the Medical Society to bring this about, and even then, the dentists had been subjected to licensure first in 1888. The idea of some sort of standardization was by no means new, but its final assignment as a state function was slow in coming. Among the factors which seem to have been persuasive was the concern felt by physicians over the "itinerant quacks" which tended to visit the urban centers repeatedly.

According to the Board's reports, the failure of the bills in earlier years resulted from the fact that the largest portion of the representation in the General Assembly came from rural areas where "the population could not be expected to be familiar with the imposition and chicanery which was practiced in the larger cities." Some legislators, too, felt that the bill was an effort of a particular group of practitioners to monopolize medical practice.

When the act was passed, Rhode Island ceased to be one of the seven remaining states lacking protection from the itinerant and the untrained, and the state had until then been a favorite stopping place for such persons. They tended to guarantee cure and it was stated that such individuals "remain as long as they can stand the importunities of their patients, and then go to reap another harvest in some state which opens its arms to them as this one had done in the past."

The act required bona fide residence, and certification by the Board of Health. This certification required either a diploma from a reputable medical college, evidence of acceptable practice before the first of January 1892, or successful passage of an examination by the Board.¹³

The Board at once became very busy, and by virtue of 16 special meetings in the first year licensed 480 individuals, all but 44 on the basis of a satisfactory diploma. In the following few years, the Board was frequently in the courts, prosecuting alleged violators. Schools of medical thought quickly became an issue, and the State Supreme Court ruled that discrimination by schools of thought was not permissible. Homeopathy, in particular, was favored by this ruling. Faith healing, by Christian Scientists likewise became a source of contention, and the courts held that their method was not medical practice as "popularly understood".

Amendment of the act in 1901 made examination a mandatory part of the process of licensure, for those presenting diplomas, and the exemption of pre-1892 practitioners was dropped. Further amendments and regulations adopted by the Board successively plugged additional loopholes as they became evident. For example, when it came to light that impersonation occasionally took place, applicants were required to present their photographs when applying for examination.

This regulatory function was destined to grow over the years expanding to involve a number of health professionals and sub-professionals, including some whose relationship to health was distinctly tenuous.

OTHER FUNCTIONS

To complete the picture of this time-period, it is necessary to mention a number of miscellaneous activities in which the Board was engaged. Some of which were only indirectly or tangentially related to health. For example, throughout most of the period annual summaries of meteorological data were published in some detail.

Chapin, in Providence, had already made inspection of school children a regular function, and the Board followed his lead. They also attempted basic health education through the monthly Bulletin which was said to reach 1000 teachers. This was given emphasis when, in 1885, the General Assembly established a requirement for instruction in physiology and hygiene. In 1906 an oculist was appointed to test the eyes of the school children and follow-up services were provided when needed. Glasses were provided gratis when families could not afford them.

The sanitary conditions in barber shops and the safety and sanitation of steamboats was added to the Board's responsibilities by the 1903 legislative session, and licensure by examination for barbers was established.

By exchange of documents and publication with other states and countries, and by inheritance of an occasional private collection, the Board gradually developed a health library. For example, they exchanged their annual reports with those of 22 other states, and they received from the superintendents of health in some 38 cities. Vital statistics were also exchanged with Italy, Germany, Austria, and Ireland.

By 1910, after 32 years of development, the Rhode Island Board of Health had barely reached adolescence. The foundations for a modern public health agency had been laid, but often shaped by external forces, rather than by the Board's own initiative. They were the quiet beneficiaries of the bacteriological advances of the day, often introduced to the State through Charles Chapin. Like all governmental agencies at all times and in all places, they were the creatures of statute, often, as in the case of the Medical Practice Act, resulting from the efforts of others.

The social and especially the political climate of the day and the relatively low level of public interest combined to produce slow development. Clearly, the General Assembly had little interest in endowing the Board with broad powers. The Board then, remained a dedicated group which did its best job accordingly to the opportunities and needs of the moment, and had done relatively little to extend the scope of its own activities.

SECTION II - 1910-1940

CHAPTER FIVE

THE BACKGROUND OF THE PERIOD

The span of years between 1910 and 1940 is not easily characterized. It was a time of national movements in different directions, movements separated by the major upheavals of World War I and the Depression. In Rhode Island, this time saw the superimposition of national movements on the idiosyncracies of local affairs, particularly those political in nature.

To begin with, 1910 represents the midstream of the Progressivist Era. Between the years 1910 and 1914, during the administrations of Presidents Taft and Wilson, a number of social, political, and economic reforms were effected. In the health field, two major events in 1912 were the creation of the U.S. Children's Bureau (aimed at preventing the exploitation of child labor initially) and the passage of the Public Health Service Act (still the basic federal health statute of today through continual amendment.) Other labor protection laws were passed and a limited recognition of unions occurred. A certain amount of "trust-busting" took place. With a graduated personal income tax now certified as constitutional by the 16th Amendment (1913), an internal source of federal income was found to offset the loss of revenue from reduction of tariffs. In general, then, the Progressivist Era was marked by an increased federal regulation of social and economic affairs, which particularly reflected the adjustment of government to an industrialized society.

After World War I, the decade of the twenties was marked by booming business and industrial growth, based on increased technology and the developing efficiency of management practices. The adoption of the 13th constitutional amendment in 1919 (Prohibition) was followed by law-breaking, bribery, corruption and the rise of gangsterism. (Whatever else its results, Prohibition seems to have been almost solely responsible for a 50% decline in the Rhode Island death rate from cirrhosis of the liver in the 1920-1925 period, by contrast with the rate in the preceding and succeeding 20 years.) The Teapot Dome scandal, involving sale of federal oil reserves, was the "Watergate" of the 20's and seriously shook public confidence in governmental officials. Rising immigration of Eastern Europeans, Jews and Italians motivated another wave of nativism, and the Bolshevik Revolution found its reaction in an intensive Red-hunt under federal guidance. With these exceptions, however, federal regulation of and concern with economic and industrial life relaxed markedly in the post-World War I era.

The collapse of the stock market in 1929 and the subsequent Depression, ushered in the "New Deal". By 1933, between 14 and 16 million persons were out of work, and federal efforts were aimed at "Relief, Recovery and Reform". The administration of Franklin D. Roosevelt produced the National Industrial Recovery Act, the Agricultural Act, the Fair Labor Standards Act, the Public Works Administra-

tion and, most importantly, the Social Security Act (1935) which included provisions for a comprehensive system to insure greater security in old age and against sickness and unemployment.

Locally, Rhode Island's substantial industrialization set the stage for numerous strikes. In particular, the years after World War I saw strikes in the telephone industry, street railways, and a nine-month strike of 18,000 textile workers in 1922. In those same years, in response to the recession immediately following the war, many of the textile mills began to move southward to areas of cheaper labor costs. For Rhode Island, a slight recovery and subsequent overexpansion left the state especially vulnerable to the crash of 1929. The Depression hit Rhode Island severely as a consequence of the industrial nature of the state; businesses failed and serious personal and social deprivations occurred.

Politically, in Rhode Island between 1910 and 1940, there was a decline of Republican hegemony. The working class in the state became increasingly powerful and the competing interests of ethnic groups (Italians, French Canadians, Yankee Protestants to name the major ones) figured more and more prominently in political affairs. Consequently, politics became very much a matter of ethnic-social class coalitions, engendering a tremendous amount of patronage and favoritism in government by the Democrats as well as the Republicans. This situation was particularly adverse to the development of effective administration of government programs at the state level.

Shortly after Charles Brayton's death in 1909, the first significant political changes occurred. The House of Representatives was increased to 100 seats, and the seats were reapportioned to take into account the increased urbanization of the state. At the same time, the Governor was given veto power over legislation. Then, in 1911, the annual election of state officers was changed to a biennial basis.

Two particular political events in Rhode Island stand out in the period from 1910 to 1940; the first because it captures the flavor of Rhode Island politics, the second because it represents the turning point in political action in the state, both party-wise and in terms of governmental administration. The General Assembly sessions of 1923 and 1924 were stormy, in part reflecting the interplay between a Democratic administration and a strongly Republican legislature. Frustrated in attempts to secure a constitutional convention, the Democrats filibustered for six months in the Senate until a Republican-arranged "stink-bomb" broke up the session. The Republicans then moved in a body to Rutland, Massachusetts, thus preventing a quorum for the balance of the session.¹⁴⁻¹⁵

Probably the most significant political event of the period in Rhode Island took place on January 1, 1935. In 1932, Theodore Francis Green, a Democrat, had been elected Governor, behind a coalition of various ethnic and economic groups (largely Roman Catholic and/or foreign-born Democrats). At the start of a second term in January 1935, Green effectively took control of the state for the Democrats in what was called Rhode Island's "bloodless revolution". By a series of pro-

cedural and political manipulations, Green and the Democrats won control of the Senate when recounts of ballots shifted two contested elections into the Democratic camp. Since control of the House had already been won, this produced the first completely Democrat-controlled government in Rhode Island history. Within a short 14 minutes after the Senate decisions were announced, Green was able to secure legislative approval of a number of bills which cleared Republican appointees out of State offices. Thus, the Supreme Court of the state was vacated, and the Reorganization Act of 1935 merged some 80 separate state commissions, including the State Public Health Commission, into 10 executive departments. With this action and the repeal of the Brayton Law of 1901 (which happened later that same month), Governor Green saw the locus of power (and patronage) in Rhode Island shifted from the legislative to the executive branch of government.⁴

THE CHANGING FORCES IN PUBLIC HEALTH

For public health, the years between 1910 and 1940 were especially significant. In many important ways, this was the beginning of the modern era of public health, a time when many major problems of contemporary public health became recognized, and the major structure and methods of public health were elaborated. Two themes in particular stood out in the development of public health, providing the forces which shaped the movement: the change in disease prevalence and the formal development of public health as a professional discipline.

During the formative period of public health services in the United States (from approximately 1869 to 1900), the control and prevention of infectious disease had been the predominant concern. Diseases such as tuberculosis, diphtheria, cholera and typhoid fever plagued the population, particularly the more crowded urban areas. As McKeown¹⁶ has pointed out

The incidence, age distribution, and in some cases the epidemic character of the infection, inevitably etched themselves in public consciousness to the relative exclusion of other interests.

Mortality from infections was so high in infancy and childhood that congenital causes of death and disability seemed relatively unimportant. With so many deaths from epidemic or communicable disease, degenerative diseases of older persons had been considerably less prominent both in terms of incidence and mortality.

However, from 1900 on, a gradual change occurred. Infectious disease, while remaining an important object of public health interest, slowly succumbed to control and, in a number of cases, prevention. In Public Health and the State, Rosenkranz has pointed out that while in 1910 only one primarily degenerative disease, (heart disease), was listed among the first five causes of death, only one communicable disease (pneumonia) remained on that list by 1930.⁶

Clearly, the years between 1910 and 1940 saw the results of the efforts of sanitary reformers and public health officials of previous years. With diseases like smallpox and diphtheria, a specific measure (immunization) appears to have made the most significant contribution towards prevention.¹⁶ Other diseases like cholera and typhus (a water-borne and louse-borne disease) declined largely due to improved personal hygienic standards and to control of the contamination of water, milk, and food. Tuberculosis, by far the greatest killer of the 19th century, decreased tremendously, from a national death rate of 326.2 per thousand persons in 1830 to one of 148.0 per thousand persons in 1913.¹⁷ The decline in tuberculosis, according to McKeown was caused not so much by specific medical or sanitary measures, but simply by the rising standard of living during this period and the accompanying changes in environmental conditions.

The declining death rates from infectious disease were most evident in the dramatic decrease in mortality in early childhood, a striking feature of the period after 1900. In this decline, one sees the confluence of a number of the previously mentioned factors: the rising standard of living, immunization programs, personal medical services concerned with maternity and child welfare, school health programs and further sanitary reforms.¹⁶

The successes of bacteriologically-inspired medicine and sanitary reform "has altered radically the age distribution of the population; it has changed completely the nature of the diseases which shorten life and make it unpleasant". With death and case-fatality rates much lower, the attention of public health officials was to a considerably greater extent focused on other dimensions of ill health; for example, illness and disability.¹⁶

As fewer and fewer persons succumbed to infectious disease in early life, more and more survived far into adulthood to be attacked by diseases characteristic of older age groups. Thus, cardiovascular and renal disorders, cancer, and accidents loomed much larger as a cause of disability and death in the United States. Heart disease has been the leading cause of death in this country since before World War I.¹⁸ Cancer, which in 1900 had accounted for fewer than 4% of deaths, would by 1976 be responsible for 23% or nearly one death in four in Rhode Island. (Frequent changes in the classification of diseases and deaths introduce factors which prevent a detailed comparison, however.) Additionally, not only did more people suffer from degenerative diseases in later life, but they tended to remain impaired for prolonged periods even with appropriate treatment. Consequently, the conception of health services had to be enlarged to further emphasize the idea of long-term care of the disabled, both in and out of institutions.

By 1925, 49 state and regional licensing boards required candidates for medical examinations to be graduates of a medical college. Profiting by the results of the Flexner Report, the American Medical Association was able to strengthen its position as the voice of American physicians, and through its Journal exerted a potent force in shaping the scientific and professional values of doctors in a uniform direction.²

Similarly, nursing became recognized as a health profession during this period, and attempts were made to standardize nursing care as well as medical care. Thus, in 1912, nurses also became subject to state licensing boards. Moreover, the nurses, like their medical colleagues, commenced the development of standards for the profession through their own organizations. The Rhode Island Nurses Club, for example, had its first meeting in 1918; by 1920, a New England Association of Industrial Nurses was meeting.¹⁹ As for education, a standard curricular guide, published by the National League of Nursing Education, was adopted by Rhode Island Hospital before 1937 as a "measuring rod" for its own curriculum.²⁰ In the first quarter of the twentieth century, many health professions were working towards uniform sets of values and practices.

At the same time, as public health officials were responding to the change in disease concerns, other changes were occurring which tended to standardize modern public health practice. On the federal governmental level, a number of agencies were established to deal with health matters, and several pieces of far-reaching public health legislation passed which are discussed in later pages. At the same time, on a professional level, the movement which had begun at the end of the 19th century to establish common standards of education and medical care among the variety of health care personnel reached fruition.

The landmark Flexner Report from the Carnegie Foundation exerted a tremendous influence on medical education, both by closing sub-standard medical schools and by forcing other schools to raise their curricular requirements and broaden medical training to include both clinical and basic science experience. By 1915, according to Stevens,² a standardized medical educational system existed and the unification of the profession was, to all intents and purposes, complete. Further standardization of the profession was accomplished through the invocation of state controls.

More important than the growth of professionalism to the organization of public health in this country was the increasing role of the federal government in health matters. During the 30-year period between 1910 and 1940, the federal government commenced programs dealing with several categories of public health problems and the health needs of particular population groups.

In 1912, President Taft signed a bill creating a Children's Bureau in the Department of Labor - part of the larger movement for reform noted earlier. The Bureau was "to investigate and report upon... all matters pertaining to the welfare of children and children's life among all classes of people."²¹ The United States entry into World War I forced the federal government to provide care on a large scale for the armed services and set the stage for the post war provision of health services to veterans of all wars even for conditions not associated with experience in the armed services. Thus, the development of the Veterans Administration represented one further step in federal involvement in health care.

The most important contribution to public health on the part of the federal government was through its grants-in-aid programs. The Chamberlain-Kahn Act, passed in 1918 to assist states in fighting the spread of venereal disease, was the first grant-in-aid act. Next, as an outgrowth of studies on infant and maternal mortality, the Shephard-Towner Act of 1921 was passed by Congress to promote maternal and infant health care. Although the Shephard-Towner Act expired in 1929, it was reenacted on a much more ambitious scale in 1935 as Title V of the Social Security Act, authorizing grants to states for maternal and child health, child welfare and crippled children.²² In addition, Title IV of that Act provided grants for strengthening state and local health departments.

The grants-in-aid program looms as the predominant influence on public health care in this country during this period, particularly as it affected the course of development of public health. When the federal government provided money, a universally needed commodity, for certain programs, these were the programs that would be instituted. One notes in comparing the history of the departments of health in Rhode Island and Kansas. For example, the remarkably parallel development of public health programs in venereal disease, maternal and child health and others, indicated the uniformity created despite geographic and demographic differences. As a consequence of these programs, certain interests became standard components of state public health programs.

In short then, it seems clear that the period between 1910 and 1940 was an especially significant one for state public health agencies. Not only did disease concerns shift, and a standardization of the health professional occur, but most importantly, the federal government commenced to provide program guidance and extensive funds, constituting an incentive towards particular directions in the latter development of modern public health.

SECTION II - 1910-1940

CHAPTER SIX

FROM BOARD TO DEPARTMENT: YEARS OF EVOLUTION

The organization of public health work in Rhode Island was characterized primarily by the evolutionary nature of both its structure and functions in the 30 years from 1910 to 1940. As to functions, the change resulted from a combination of factors. There was the recognition of altering disease patterns and of the need for improving and extending public health services; there was the general acceptance and application of medical theories and techniques on a scale hitherto lacking; and there was the impetus provided by the federal public health involvement, especially from the funds made available to the state. Specific functions in the 1910-1940 period will be taken up in some detail in the two succeeding chapters.

Structurally, the developments of this period were in part a required response to external political developments, and in part an internal response to the demands of an expansion of areas of concern and increasing provision of services. At the start of the period (1910) the Board still consisted of seven appointed members, who in turn elected a Secretary, serving also as an ex officio Board member. In 1914, the Secretary was also designated Commissioner of Public Health and State Registrar of Vital Statistics. Minor changes followed: the title of Chairman became that of President, serving as chairman; and Board members who had hitherto received only traveling expenses, were allowed a fee of \$10.00 per meeting.

Stability of membership continued as in the past. For example, the Rev. George L. Locke resigned in 1917 after almost 25 years on the Board; and in July of that year the Board selected Dr. Byron U. Richards as its third Secretary in close to 40 years, replacing Dr. Swarts. Swarts in his 23 years of service had done a commendable job in expanding the reputation of the Board. While he may have lacked the creative leadership of a Chapin, he had done an effective job of organizing the Board's concerns and in performing the myriad activities assigned to the Secretary.

From the end of World War I in 1918, there began a continuing series of changes in the organization and structure of the Board. Motivated at times by what appeared to have been primarily political decisions, these changes also clearly emphasized that the part-time Board of the 1878-1910 period was unable to cope effectively with the changing times.

In 1918, a Senate bill proposed to consolidate 11 boards and commissions under the direct control of the Board. No legislative action resulted, despite support for the idea from a commission appointed by the Governor. However, in 1919, the General Assembly did mandate creation of three divisions into which Board functions were to be organized: Vital Statistics, Venereal Disease and Child Welfare. While the Venereal Disease division appeared to be a direct response to the availability of federal funds from the Chamberlain-Kahn Act, the Child Welfare division antedated by two years the federal Shepard-

Towner Act and its grants-in-aid. This emphasis on child welfare almost certainly resulted from Chapin's leadership, for he had established a Division of Child Hygiene in the Providence Health Department as early as 1912. The additions of a pathology and bacteriology division and one for chemistry and sanitary engineering, as well as the appointment of a field inspector for the Medical Practice Act were further changes.

By 1922, the Board for the first time had established committees on expenditure, law enforcement, and publications and education, as well as an Executive Committee. It had become a top-level administrative body supervising the functioning of a number of operating divisions and there had developed a distinct two-tier division of activity, one at the administrative level and the other, a series of service and operating agencies.

The Board joined in the reviving interest in public health organization, and in 1928, after a year-long study of the merger of all state agencies having any connection with public health, a Board resolution was adopted to the effect "that it is the opinion of the Rhode Island State Board of Health that all matters pertaining to public health be placed under the control and supervision of the State Board of Health."

The General Assembly responded, but not wholly in the spirit of the Board proposal. In 1929, the State Board of Health was abolished. In its place was created a Public Health Commission of five members, three of whom were appointed from the former membership of the Board. The Secretary, appointed by the Commission, also held the title of Director of Public Health and was ex officio the state registrar of vital statistics. The powers of the Director were circumscribed, however, by the need for Commission approval at its monthly meetings before he could take action on matters of any consequence.

The new Commission Secretary and Director of Public Health was Lester A. Round. Round had a distinguished background in public health. He had received his B.S. (1910) and Ph.D. (1914) at Brown, studying under Frederic P. Gorham, a student and coworker with Chapin. While pursuing his graduate studies, Round had worked as assistant bacteriologist, biologist, and inspector of oyster houses for the State Shellfish Commission. In addition, he was employed by both the Providence City Board of Health and the State Board of Health as an assistant bacteriologist and special investigator. In 1913, he attended the Harvard School of Engineering and became a member of the first class of the Harvard School of Public Health.²² Finally, before beginning his pathology work with the Board, Round spent four years (1914-1918) with the federal government as a bacteriologist at the Federal Bureau of Chemistry. In Round, then, Rhode Island obtained its first public health leader well versed in the elements of public health.

Round served as Director of Public Health from 1929 to 1936, through the heart of the Depression. During his term, a Rural Hygiene was created to extend to rural communities the same health services that had long benefited the cities. A high point of his tenure came in 1931 when he was able to persuade the General Assembly to give the Commission the power of approval over the appointment of local health officers. While the times worked against any significant expansion

of activities and in fact forced retrenchments in some areas, Round brought distinction to the Commission in at least two areas. The Vital Statistics records, a major source of pride for the first 30 years of state public health work, were by 1929 considered little more than a joke by experts elsewhere. Yet, by 1934 a committee of the American Public Health Association found Rhode Island statistics "far ahead" of those of any other state.

The Board, even in the 1800's had established pioneer laboratories, but in 1914 had developed the first comprehensive state-operated public laboratory under its first State Pathologist, Dr. Harry S. Bernstein. Under Round the laboratory first began to provide medico-legal services, performing important services to the Attorney General, and the State Police.

Radical organizational change came early in 1935 with the "Bloodless Revolution" following the 1934 re-election of Governor Green.⁴ The Public Health Commission was abolished and an executive-type Department of Health was created in its stead. Nine divisions were established within the Department, and the administrative division included four bureaus in the key areas of preventable diseases, maternal and child health, crippled children, and industrial hygiene. While politically motivated, the entire executive organization in Rhode Island was in line with general principles of public administration, which had been most noticeably illustrated by the recent re-organization in New York under Governor Al Smith.

Nevertheless, an unsettled period ensued in which Round was succeeded by Dr. Edward A. McLaughlin, who in turn was succeeded by Round under Republican Governor Vanderbilt in 1939, with Round again being replaced by McLaughlin in 1941 when Democratic gubernatorial control was reinstated under Governor J. Howard McGrath. Round, who had feuded with McLaughlin (and vice versa) since his first removal as Director had served as chief of the State Laboratory under McLaughlin (by appointment of the Governor), had been dismissed by McLaughlin, and had returned as director of the division of vital statistics (again by appointment of the Governor) when McLaughlin reappeared as Director under Governor McGrath.

Despite the part-time nature of Director McLaughlin's position, his continuance in private medical practice, and a "veritable orgy of patronage",²² progress was evident in the new, reorganized Department. The reorganization had given the Director a freedom of action previously constrained by the need for monthly approval by the former Public Health Commission, and thus the potential for innovation and leadership of that office was established. The creation of district health units was one of the most important administrative results that followed the 1935 reorganization. Three district health units (Woonsocket; Peace Dale; and Bristol) were created, extending the Department's influence more directly into 32 of the 39 municipalities of the state. Staffed by a state health officer, a sanitarian, a public health nurse and a clerk, each district offered full time health services to augment and aid local health officers. In particular, the district offices provided venereal disease clinics,

maternal and children's services, and health education activities. Their creation was an important move towards the improvement and extension of health services toward levels provided in the less populous areas of the state.

Under the further Vanderbilt Reorganization of 1939, the Department acquired the state tuberculosis sanatorium, the sanitary control of milk between farm and consumer, and sanitary control over shellfish grounds and packaging plants. One inappropriate activity, athletic control, was transferred from the Department to become the responsibility of Business Regulation. The unsettled personnel and patronage problems created by the 1935 and 1939 reorganizations were reduced to a great extent with the passage of a State Civil Service Act in 1940.

Once a matter of virtual political indifference, the organization of the health function was caught up along with other executive agencies in the swirl of organization change from 1929 through the early 1940's. A large share of this change was the result of the Department's expanded functions and the consequent necessity for improved organization and administration. As for "politics", the Department was no more hurt by the 1934-1941 changes than were other executive agencies, and in fact, may be seen in retrospect to have been passing through a period of change that was essential to the eventual assumption of state-wide responsibility, which will be dealt with in a later chapter.

Between 1910 and 1940, the former Board had evolved from a plural to a single-headed agency; had seen its employees increase from little more than one full time Secretary to around 250 workers, and had undergone major expansions of its functions and services, growing from a state support level of less than \$20,000 a year to nearly \$900,000 annually.

SECTION II - 1910-1940

CHAPTER SEVEN

DEPARTMENTAL FUNCTIONS

Public health activities in Rhode Island expanded greatly between 1910 and 1940 in quantity as well as in quality. While the early Board had concerned itself largely with studying the problems of health in the state, the later Board and its descendants attacked those problems more and more directly. This chapter on departmental functions focuses on those health care services that best characterized the nature of public health in Rhode Island in the years from 1910 to 1940: general disease control, venereal disease control, and maternal and child health.

GENERAL DISEASE CONTROL

There were wide differences between the early Board of Health and later state agencies in their manner of dealing with disease. Constrained by lack of appropriations and statutory power, the early Board was confined largely to studies of particular diseases and to the distribution of free diphtheria toxin-antitoxin to private physicians. By contrast, the later Board, as a result of rising prestige and the professionalization of public health, assumed more and more responsibility for the direct control of diseases, particularly those of an infectious nature.

Between 1910 and 1932, no administrative structure existed within the Board or the Commission which succeeded it to control specific diseases, and such measures were left to the Secretary. In 1913, the General Assembly extended the Quarantine Act to give the Board power to define communicable disease and spelled out more explicit rules for isolation and disinfection. Then in 1915, the Board obtained authority to prohibit the use of common drinking cups and towels in public places. Finally in 1925, the Board authorized Secretary Richards to make arrangements to secure the services of an epidemiologist, the expenses to be shared equally by the Board and the Rockefeller Foundation. Augustus G. Gigger, the Board bacteriologist, was promoted to this position. His duties were to study contagious diseases as reported in the various parts of the state, to concern himself immediately with any specific outbreaks, and to advise local health officers on the methodology of disease control.

The major pandemic of modern times occurred towards the end of 1918, when influenza spread from Western Europe to the United States and over 400,000 deaths resulted nationwide. In Rhode Island the disease attacked over 30,000 persons and was responsible for 2,306 deaths. The Board, unconvinced of the value of any sera or vaccines, chose not to distribute them. It resorted principally to closing certain public places (such as movie theatres) and to distributing of 10,000 leaflets on "How to Keep Well". Through emergency appropriations from the Public Health Service, the Board did obtain personnel from the Volunteer Medical Service, and the Red Cross to assist in the care of the ill. After a brief recurrence of influenza in 1919, the epidemic subsided.

Generally, both morbidity and mortality from communicable diseases declined in Rhode Island during the '20's, reflecting the national trend described earlier. The success of the early programs of vaccination, immunization, and sanitary reform became obvious. By 1924, Rhode Island had the lowest morbidity and mortality rate for smallpox of any state in the country. Similarly, in the case of typhoid fever, the State had the lowest death rate of all the states both in 1922 and 1928. It could be said by 1937, "This disease has become one of comparatively little significance in the state."

The most outstanding success in the fight against disease in Rhode Island occurred through the program to conquer diphtheria. The Board had for some time made toxin-antitoxin available for immunization available. However, by around 1920, large numbers of cases of diphtheria were still being reported, apparently, physicians were not making effective use of the immunizing agent. The Board secured the authority to conduct a program of immunizations, and in 1922, Dr. Paul F. Thompson began a project that would occupy over 24 years of his life: immunizing children against diphtheria. By 1927, mortality from diphtheria throughout the state had decreased 68% below the 1920 rates; in 1928, there were more calls for immunization from communities than the Board had money to answer. By that same year, while the incidence of diphtheria was rising considerably throughout the country, not a single immunized child had died or even been ill with the disease in Rhode Island. Thus, the campaign of the Rhode Island Board of Health against diphtheria was judged a tremendous success, demonstrating the value of immunization.

The Board was far less successful in dealing with tuberculosis, still the major killer in the first quarter of the 20th century.¹⁷ Several reasons help to account for this. To begin with, while the tubercle bacillus had been isolated, no technique of immunization was available. In addition, the General Assembly had seen fit to place the State Sanatorium for Tuberculosis under the aegis of a separate Board of Governors and later under the State Department of Public Welfare. Consequently, a bifurcation in responsibility for fighting tuberculosis was created which continued for many years. The Board repeatedly requested funds to do more than study tuberculosis, asking particularly for the establishment of a Division of Tuberculosis control, but the request always fell on deaf ears in the General Assembly.

Rhode Island had only two laws dealing with tuberculosis in 1920. The first required all cases of tuberculosis to be reported to the Board of Health, while the second required the isolation of any disease victim who refused to take precautions for the protection of others. The sum and substance of the Board's efforts against tuberculosis were to encourage the reporting of the disease, to analyze sputa for tubercle bacilli in its laboratory, to distribute a circular entitled "Advice to Patients Having Tuberculosis of Lungs", and finally, to provide sputum cups and paper napkins free of charge.

A 1920 study¹⁷ of "The Tuberculosis Problem in Rhode Island" revealed that the enforcement of the state laws regarding tuberculosis left much to be desired. It was calculated that about 6,000 cases of tuberculosis existed while only about 1,000 cases were reported.

Evidently the reporting law was not taken seriously by the State's physicians. The report noted that the task of combating tuberculosis had been left to the initiative of private organizations. Concluding that a complete program of tuberculosis must be centered about the "inspired leadership" of the constituted health authorities, the study stated:

it is more than time that legislation and municipal councils should be awakened to their responsibility in regard to this grave health problem.

A follow-up study made in 1933 indicated that little change had occurred in State public health work with tuberculosis. The major responsibility for controlling the disease still rested not in the state and local health agencies, but rather with the Executive Secretary of the Providence Tuberculosis League and the Director of the State Sanatorium. Still, in spite of the ineffectiveness of the Board of Health in dealing with tuberculosis, and due largely to the general improvement in living conditions, the death rate from tuberculosis in Rhode Island declined by 43% in the first 20 years of the 20th century. Finally, as a result of the 1939 departmental reorganization, administration of the State Sanatorium was transferred to the Department of Health and the efforts at controlling tuberculosis became somewhat more centralized.

The decrease in communicable disease incidence continued into the 1930's. Surprisingly, the overall death rate in Rhode Island maintained its decline even during the Depression. In 1932, the Public Health Commission established a Division of Communicable Diseases, composed of an epidemiologist-director, an immunologist (Dr. Thompson), a nurse and two clerks. Later that year, the funding for the epidemiologist was discontinued and Dr. Grover, the Director of the Division of Rural Hygiene assumed that position as well. A Bureau of Preventable Disease was created in the 1936 Reorganization Act, including communicable disease control, the District Health Units, and the Division of Industrial Hygiene. Under the new Bureau, the district health units became the focus of the Department's efforts at disease control. With the change of directors in 1939, the Division of Industrial Hygiene was removed from its supervision.

The decline in incidence of infectious disease forced a reconsideration of the concept of disease itself. By 1924, the average life span in Rhode Island was 10.3 years longer than it had been in 1915. From 1910 on, the degenerative diseases slowly began to assume greater impact. As the population grew older, and the death rate from communicable diseases dropped, degenerative diseases gradually came to predominate as causes of death. Heart disease and tuberculosis jockeyed for the position of number one killer between 1910 and 1920. After 1920, no question remained: heart disease and cancer became the principal agents of death. Between 1900 and 1936, mortality from heart disease increased from 7.4% to 29.8% of total deaths. Additionally, the consequences of modern technology became apparent in other mortality experience. In 1928, the Board reported that, "Accidents due to the use of automobiles have become a very serious mat-

ter." Such accidents produced more deaths (132) than occurred in the state from diphtheria, scarlet fever, whooping cough, measles, anthrax, tetanus, infantile paralysis and typhoid fever combined. (The high motor vehicle related death rates, approaching 20 per 100,000 population at that period, have not been seen since.)

In short, the causes of death had changed significantly from the early years of the Board. As Round described it, originally public health was concerned solely with infectious diseases. However, he noted, modern public health had to reject this myopic earlier view and develop an enlarged conception of public health wherein any diseases or health problems that were increasing or causing deaths would be seen as deserving of public health attention.

Despite those prophetic words, public health agencies in Rhode Island responded slowly to the changes in disease experience. It was not until 1930 that a study of cancer mortality was first conducted. While at this time Secretary Round had urged the establishment of a cancer registry to assemble and study all obtainable information relating to cancer, it was in 1941 that the General Assembly finally made cancer a reportable disease and appropriated \$15,000 to further the control of cancer (the reporting requirement was abolished about 25 years later). With these funds, a Bureau of Cancer Control was begun with Director McLaughlin as acting chief and three tumor clinics were established at Rhode Island Hospital, St. Joseph's Hospital, and Pawtucket Memorial Hospital.

VENEREAL DISEASE CONTROL

For many years, venereal disease was viewed not as a "biological" disease, but rather as a social disease with secondary biological aspects. Consequently, although it was recognized as a public health problem it was not given the attention accorded to more "respectable" diseases, but rather cast into a special category of its own. When the control of venereal disease became viewed as a public health function in its own right it was due largely to the fact that federal funds to support treatment became available.

National interest in venereal disease awoke in 1918, when the War and Navy Departments became concerned at the large numbers of soldiers and recruits who were unfit for service because of venereal disease. The Public Health Service began a campaign of telegrams, urging state boards of health to make venereal disease reportable and quarantinable and to commence programs of education at once. At the same time, Congress, responding to the apparent crisis, passed the Chamberlain-Kahn Act, providing the first public health grants-in aid. In June, 1918, the Rhode Island Board of Health established a Division of Venereal Disease, the Director's salary to be paid half by the Board and half by the U.S. Public Health Service. In its first year the Chamberlain-Kahn Act made almost \$6,000 available to the Board.

Rhode Island in 1919 had the highest rate of reported venereal disease of any state in New England. However, venereal disease was hardly an important or popular issue in the legislature. During the second year of the Division's existence, the General Assembly refused

to appropriate matching funds. Only by combining \$2,500 from the Governor's War Emergency Fund and \$3,400 from the Board's own budget was the venereal disease program saved. That same year (1919) several bills on controlling venereal disease were killed in committees in the Legislature.

The early fight against venereal disease had a number of components. Under existing legislation, the Board was able to authorize the reporting of syphilis, gonorrhea, and chancroid. An intensive educational campaign was conducted, largely through film. Additionally, 35,000 copies of the Army's pamphlet of "Keeping Fit to Fight" were distributed and 276 manuals of treatment were mailed to physicians. Six treatment clinics were established: three in Providence, and one each in Pawtucket, Newport, and Woonsocket through which free arsphenimine supplied by the Public Health Service was distributed. The Board urged clergymen to preach "forceful sermons" on specially set aside "Health Sundays". Finally, warnings about venereal disease were posted in toilets in every railroad station in Rhode Island and in public comfort stations and bath houses in the larger cities.

In 1921, the General Assembly passed a venereal disease control law, but only after the Director of the Division of Venereal Disease had pleaded with legislators for assistance in fighting the "terrible scourge", arguing that without additional legislation,

Our school standards are to be lowered, our industrial efficiency retarded, and our blind, feeble-minded and insane institutions filled with life wrecks from venereal disease.

Under the new law, the Division was able to bring in hundreds of infectious cases for compulsory treatment until they were rendered noninfectious.

A growing aspect of the program to control venereal disease was that of enforcement practices in the criminal field. Between 1919 and 1923, the Board tried repeatedly to get injunction and abatement bills (antiprostitution bills) passed by the Legislature. Repeatedly, it failed, complaining that Rhode Island "continues in allowing the murky winds of prostitution to fan into flame, venereal disease everywhere." Finally, in 1924, the General Assembly passed such a bill, and in conjunction with State and local police, an endeavor was made to clean up the houses of prostitution. The Division apparently conducted "undercover" investigations of vice conditions and turned its reports over to the State police. By 1928, the Division could report that the "roadhouse situation in Rhode Island shows marked improvement", and at the six treatment centers in 1928, visits for examination, advice, and treatment rose to over 15,000.

During the Depression, the incidence of venereal disease increased steadily. With little work to be found, sex commercialism increased. The free clinics were overwhelmed, and the Division began distributing drugs free to rural physicians. A particularly significant year for the fight against venereal disease was 1935, because it marked the

incorporation of the Division of Venereal Disease into the Bureau of Preventable Diseases. Syphilis and gonorrhoea were now officially regarded as communicable diseases capable of prevention like other infectious diseases.

By 1937, a marked advance could be claimed in the enlightenment of the general public to the dangers of venereal disease; Rhode Island was "in the front ranks of states with organized and centralized programs to control diseases."^{2 3}

In 1938, two events occurred which gave a further boost to Rhode Island's attempt to control venereal disease. On the national level, the Venereal Disease Control Act of 1938 provided the Public Health Service with additional funds for state programs. The Department of Health received over \$12,000, allowing for the distribution of free drugs to private physicians for the treatment of reported cases of syphilis. Locally, the General Assembly authorized compulsory pre-marital examination and prenatal blood testing for venereal disease, a move the State Board of Health had requested 10 years earlier. With the passage of this law, Rhode Island rose to the forefront of the states in the fight to control venereal disease.

MATERNAL AND CHILD HEALTH

The twentieth century had been marked by an unprecedented interest in the welfare of children, comparable indeed to the great periods of inspiration in art, in religion, and in letters which have occurred at different times in past centuries.^{2 4}

So stated one public health official writing in the early part of the century. While the writer may have exaggerated somewhat, certainly the increasing attention paid to child hygiene was significant event in the history of public health, both generally and in Rhode Island. Between 1900 and 1930, infant mortality in the State was reduced by over 60%. Round called this "one of the most astonishing accomplishments of modern sanitary science." By 1936, despite the effects of the Depression, both infant and maternal death rates had been reduced to their lowest levels ever. Clearly, then, the first third of this century saw major strides toward improving and maintaining the health of children and their mothers.

Charles V. Chapin had established a Division of Child Hygiene in the Providence Health Department as early as 1912. The state Board of Health followed, creating a Division of Child Welfare headed by Elizabeth M. Gardiner, M.D., in 1919, under legislative mandate. The Division operated through the efforts of its director, a field worker and a secretary; its plan was essentially to serve an educational role, stressing the benefits of prenatal care, breast-feeding, infant hygiene and the close supervision of preschool children. With the addition of funds from the Shepard-Towner Act (passed in 1921), the Division turned more towards preventive field work to cut down the infant and maternal death rates. Even in these few short years of existence the Division seemed to have had some effect: between 1917 and 1922, the average infant mortality declined from 107.5 per 1,000 to 87.2 per 1,000 live births, while the rate of maternal deaths decreased from 6.3 per 1,000 to 5.5 per 1,000.

After four years of service, Dr. Gardiner resigned and was replaced by Marion A. Gleason, M.D., who would serve some 14 years. By 1923, approximately 6,181 babies were being visited annually. An important addition to the Division's work had been made -- the meeting of immigrant steamers at the State Pier and the examination of all children for possible health problems. The number of field workers increased year-by-year through rising federal appropriations; by 1925, eight field workers were at work.

Despite the increased number of field workers, the Division concentrated its activities largely in and around Rhode Island's larger communities. It was estimated that the Division reached 31% of the State's population, the rest being either in rural areas or covered by local health organizations.

The major activity of the Division remained education, especially in regard to the correction of existing health defects in children. Well-baby conferences, frequently conducted by local physicians, were a significant part of the Division's attempt to insure good hygiene. By 1928, 25 different pieces of literature (on diet and nutrition, infant care, prospective mothering, and so on) were being distributed. Later that year, the Division cooperated with the Children's Bureau of the U.S. Department of Labor on a study of maternal death. Finally, in 1929, the Division assisted the Department of Labor in a program to immunize preschool children as well as school children.

The Division of Child Welfare became the Division of Child Hygiene in 1929; the change of name was intended to bring the title closer to the Division's activities and to prevent confusion with the Children's Bureau of the State Public Welfare Commission. The General Assembly, in 1931, required the Division to extend its child hygiene program to the cities of Warwick and Pawtucket and the towns of Cumberland and Lincoln (yet provided no additional appropriations). Dr. Gleason, following the Health Recovery Conference held in Washington, D.C. in 1933, organized a Child Health Maintenance Committee. The Committee attempted to combat the effects of the Depression on children by coordinating activities in towns and cities to reach undernourished children.

A landmark year for the Division was 1936. In addition to the Reorganization Act, Title V of the Social Security Act provided \$20,000 for maternal and child health services to be matched by Rhode Island. A dramatic increase in staff occurred. Whereas, in 1935, there had been only 10 persons in the Division, a year later there were 30, including school physicians, an orthopedic surgeon, a part-time dentist and a dental hygienist, and 14 nurses. Besides the increase in personnel, the appropriations were used to extend to rural areas the programs of home visiting and child hygiene clinics, to begin a tuberculin testing campaign in high schools, to immunize against whooping cough and to develop a dental program.

Still another consequence of the Social Security Act was the establishment of a Crippled Children's Division, under the Bureau of Child Hygiene. Under Title V, Part 2, appropriations were provided through the National Children's Bureau to establish a program of

services for children who were crippled or suffering from conditions which led to crippling. In Rhode Island, the money was used to locate and treat crippled children, particularly to provide surgical operations and braces when parents were unable to afford them. In 1936, the Division was able to identify 1,596 crippled children, but could treat only 29 of them. However, by the next year, out of 1,679 identified children, the Division had 479 under direct supervision.

Dr. Gleason resigned in 1937, and her assistant, Dr. Francis Corrigan, became Director. By 1937, the Bureau was offering to every physician the services of a pediatrician or obstetrician as a consultant for any indigent cases not in the hospital. In the Reorganization of 1939, the Bureau once again became the Division of Child Welfare. However, in the Reorganization, with its financial cutbacks, the Division lost its physicians; the Director of the Division of Industrial Hygiene was forced to fill in. Nonetheless, the Division continued its activities as best it could. By 1940, the immunization program had been expanded so that all but four cities and towns were visited twice a year for the immunization of both pre-school and school children.

Through the years, the Division of Child Welfare continued to be successful in securing Federal money. Almost 50% of the funding of the Division came from federal agencies. In general, the area of maternal and child health care received the largest amount of funding for a web of separate, but interconnected activities. As could be expected, the realm of maternal and child health care activities continued to expand throughout the years.

SECTION II - 1910-1940

CHAPTER EIGHT

DEPARTMENTAL FUNCTIONS: (concluded)

While a number of new public health activities appeared between 1910 and 1940, certain departmental functions were carried over from the early days of the State Board of Health. The areas of professional regulation, laboratory services and sanitary engineering and chemistry were all begun during the first 30 years of the Board's operation. However, each of these activities developed considerably further during the general expansion of public health care from 1912 and on. As public health work became increasingly professional, a gradual extension and sophistication of these functions occurred as well.

PROFESSIONAL REGULATION

The area of professional regulation was to undergo a tremendous expansion between 1910 and 1940, a direct reflection of increasing concern with health services. Generally, as public health became a recognized component of governmental responsibility, citizens looked more and more to the State's public health agencies to ensure quality in the ranks of the health practitioners, as well as to fight disease itself. In particular, after the release of the Flexner report in 1910, entry into the medical profession became a matter of specific standards.

In Rhode Island, the expansion of professional regulation began in 1912, when the General Assembly created a Board of Examiners for Nurses and provided for the registration of nurses. The professional regulatory activities of the Board of Health remained somewhat constant for awhile, although in 1914, the Medical Practice Act was amended to make it mandatory to have a year of internship before a license to practice medicine was given. By 1917 (and much against the wishes of the Board), the General Assembly had authorized Boards of Examiners in osteopathy and chiropody and appointed the Board of Health to supervise their operation. In 1918, the Board was directed by the Legislature to make rules for the regulation and licensing of the practice of midwifery. In 1927, an examining board in chiropractic was established as well. With these, and the nurse examiners Board, the Board of Health was supervising four boards in addition to licensing M.D. physicians. In 1928, the Board asked to be relieved of its examining duties and its request was denied.

Throughout these years, the Board had been actively pursuing violators of the Medical Practice Act. In 1917, an inspector was hired by the Board to "assist the Secretary in the investigation of cases of alleged illegal practice of medicine." The field inspector became the investigator and enforcer of medical care standards and professional regulation.

Some 45 cases of suspected violation were investigated in 1922, for example. Out of those eventually charged, four were found guilty and one innocent, while eight left the state and six continued to practice under indictment on serious charges. Interestingly enough,

the largest number of prosecutions for many years was for the alleged performance of abortions. However, a common problem for prosecutions under the Medical Practice Act was the delay caused by the appeal process. Secretary Richards noted, in 1925, that the Board was embarrassed by the fact that those convicted of illegal practice by the lower courts often remained in practice for as long as seven years owing to the length of the appeal process. By 1936 a candidate for license as a physician had to be a graduate of a grade "A" medical school approved by the Board, have served a one-year internship at a hospital accredited by the AMA, and was required to submit to an examination in medicine conducted by the Board.

By the time of the Reorganization Act of 1936, the number of examining boards in health-related areas had increased considerably. The Act placed 11 such boards within a Division of Examiners under the aegis of the Department of Health. They were Barbering, Chiropody, Chiropractic, Dentistry, Embalming, Hairdressing, Medicine, Nursing, Optometry, Osteopathy, and Pharmacy. In addition, a separate Board of Examiners in Medicine was established to perform the medical licensing and regulatory formerly performed by the public health authority itself.

The Division of Examiners became the Division of Professional Regulation in 1939. At this point, the chief of the Division became the administrative officer for all boards within the Division. The following year, a scandal broke out regarding the licensing of chiropractors. As the headline of the Providence Journal put it: "Forgery, Irregularities Found in '35-'38 Chiropractic Licenses, Old Record Altered to Let Unexamined Person Be Licensed."²⁵ All the records of the former Board of Examiners in Chiropractic had somehow disappeared. Director Round took on a special counsel to prosecute violators; Dr. McLaughlin, the former Director, was called in to assist. Investigations and hearings followed. Eventually, criminal prosecutions resulted. Later that same year the General Assembly tightened up entry into several health professions by passing the Basic Science Act. The Act provided that

no person shall be permitted to take an examination for license to practice medicine, osteopathy, dentistry or chiropractic unless they have received from the Board of Examiners in the Basic Sciences a certificate of ability in anatomy, physiology, pathology, chemistry, and bacteriology.

And so the period ended on a note of increased supervision over the regulation of health professionals.

LABORATORY SERVICES

The distinction made between "laboratory services" and "sanitary chemistry", was a somewhat tenuous differentiation, one that the Rhode Island public health agencies were often fairly confused about themselves. Laboratory services were regarded as that work in pathology and bacteriology that related to disease concerns; sanitary chemistry largely pertained to the analysis of inorganic material. However, as shall be seen, these functions were never clearly distinguished in public health, but for many years they continued to be treated as separate functions.

As was indicated earlier, the Board's first laboratory was established in 1888 and until 1900, performed the sole functions of examining cultures for tuberculosis and diphtheria, and were then expanded to include the processing of the Widal test for typhoid. In 1913 examinations for malarial and Neisser infections were added. The first comprehensive laboratory under a chief pathologist was established in 1914 and by 1917, was staffed by a pathologist, an assistant pathologist, a chemist and sanitary engineer, a physiological chemist and an assistant chemist.

In 1919, the laboratory was split into two Divisions. In one Division, that of Chemistry and Sanitary Engineering, were placed all the chemists and sanitary engineers, including the diagnostic chemist. The other Division, Pathology and Bacteriology, retained its two pathologists, and added an assistant bacteriologist and serologist, along with several clerks. In the following years, the Pathology Lab acquired another bacteriologist (1923) and an epidemiologist (1925).

Essentially, the Division of Pathology and Bacteriology continued the laboratory's earlier work in diagnostic testing. Its work grew to include blood counts, pneumococcus typings, analysis of intestinal contents, bacteriological, pathological, and cytological examinations of urine and feces, and of body fluids for bacteria and parasites. Beginning in 1915, the pathology lab studies specimens of tissue removed surgically or at autopsy (by 1928, it was receiving almost 1,000 such specimens). It also provided examination of material for hospitals without pathologists or without lab facilities and from minor operations performed in physicians' offices. In 1919, the pathology lab assisted the City of Providence in an emergency attempt to find typhoid carriers among food carriers of the city. Generally, from 1920 on, the amount of general bacteriology work increased more than any other activity of the Division; for example, between 1926 and 1927, there was a 63% increase in submitted specimens.

In 1928, after years of complaint about inadequate quarters, the laboratory moved into what was then known as the new State Office Building. With its new lab, the Division of Pathology and Bacteriology acquired twice as much working space and a private examining room. By 1931, Dr. Round, then still chief pathologist, as well as Director of Public Health, could claim, "at the present time, all types of laboratory procedures in the diagnosis and control of disease are available to physicians of Rhode Island." In 1931, as well, Dr. Round achieved a small coup for the pathology lab by removing the diagnostic chemistry and toxicology sections from the Division of Chemistry and Sanitary Engineering and making them part of the Division of Pathology. Now, all important biological diagnostic functions were merged.

The Pathology lab had expanded greatly by 1932; its staff then included two pathologists, four bacteriologists, one toxicologist, 1 serologist, four chemists and assorted clerks and technical assistants. The Reorganization Act of 1936 hardly affected the work of the pathology laboratory except that it now began to perform the laboratory analyses for the Division of Food and Drugs. A Division of Laboratories was simply created administratively with a pathology laboratory and a chemical laboratory. The Division performed the following

functions: Diagnostic, Bacteriology, Serology, Pathology, Diagnostic Chemistry (urine and blood analysis), Food and Drug, Toxicology (later the Division of Scientific Crime Detection) and Chemical Laboratory (water analysis). With the passage of the law requiring compulsory premarital examination for venereal disease (1938), the Division of Laboratories gained authority to license those laboratories in the state offering to provide the necessary tests. Although the Division's legal control did not extend to all state laboratories, this was an important first step in standardizing health laboratory work. In 1940, a Laboratory Consultant was appointed to assume the responsibilities of the examination of private clinical laboratories.

SANITARY ENGINEERING AND CHEMISTRY

The Division of Sanitary Engineering and Chemistry was, as noted, created when the Laboratory of the Board of Health was divided in 1919. At that time, the Division was composed of a Director who was a chemist and sanitary engineer and three other chemists: a physiological chemist, an assistant chemist for diagnostic work and an assistant chemist for water analysis. A year later, the staff would be increased by the addition of two assistants: a biologist and a urologist. For the next 12 years, the Division was to perform a diverse mix of functions for the Department. Beyond simple sanitary engineering, the Division operated in several areas. The diagnostic chemist conducted chemical examinations of samples of urine, blood, breast milk, and feces submitted by private physicians. In addition, in 1919 he was authorized to undertake work for the Commission of Shellfisheries and also to make chemical analyses of tissues sent in by the various medical examiners of the state. By 1928, the total number of samples coming into the diagnostic laboratory was nearly 24,000. The number had been increasing for years, particularly in the area of urinalysis, owing largely to the increased number of physicians and chiropractors making use of the laboratory service. By 1929, there were a large number of requests for the determination of lead in the urine of painters and other tradesmen exposed to lead. The diagnostic chemist also played an important educational role by training chemists for other health agencies; in 1926, technicians from St. Joseph's Hospital, the Homeopathic Hospital and the State Hospital for Mental Diseases were taught to perform simple tests that had previously been done by the Division.

A toxicologist was added to the Division in 1928. While certain toxicological services had been provided by persons in the Division before, the appointment signified the rising importance of this work in the public health field. The toxicologist's services were quickly taken advantage of as the various medical examiners of the state and the Attorney General's office began to submit material for investigation. An important consequence of the 1928 move, was that the stomach content analysis, previously performed outside of the state, could now be done at the laboratory. A few years later, however, in 1931, the majority of the biological work of the Division of Chemistry and Sanitary Engineering, including both the toxicologist and the diagnostic chemist, was transferred to the Division of Pathology and Bacteriology.

The main concern of the Division throughout this period remained with sanitary engineering and chemistry. Consequently, the Division focused in improving sanitation in Rhode Island, although its sense of that term was considerably less broad than the early sanitary reformers. Essentially, the Division was involved in supervising public water supplies and certain other public facilities. The Division examined the water supply of dairy farms, the drinking water supplies of industrial plants, and the private wells, roadside wells, and springs used by tourists, state and municipal park systems. Furthermore, it conducted a continuous campaign to abolish all cross connections between drinking water supplies and non-potable water supplies.

Until 1927, the Sanitary Engineer of the Board also served as the sanitary engineer to the Commission on Shellfisheries and the Board of Purification of Water. In addition, the Sanitary Engineer advised state and municipal officials and private citizens on questions of water supply and sanitation; by 1928, this occupied the time of three trained and one untrained assistant. The Division also provided aid to Federal agencies. It worked with the U.S. Geological Survey in investigating the mineral properties of water in various parts of the state, especially with regard to the use of such water for industrial purposes; in concert with the Public Health Service, it certified the quality of water supplies on trains and boats in interstate traffic.

The Sanitary Engineer had other inspection responsibilities. The General Assembly, in 1928, gave the Board the power to make regulations regarding the sanitation of swimming pools and summer and tourist camps as well; it was left to the Sanitary Engineer to enforce those regulations. In 1931, the Division's inspection powers were increased; its scope now included camp grounds, public bath houses, bathing beaches and public amusement resorts. As always, the Sanitary Engineer was responsible for the investigation of nuisances, particularly odors from industries and improper disposal of waste.

With the Reorganization Act of 1936, major changes occurred in the division of sanitary responsibilities, largely because of the incorporation of the Board of Purification of Waters within the Department of Health. To eliminate a duplication of activities two new divisions were created. The Division of Purification of Water was authorized to regulate or prohibit the pollution of waters in the state. However, it was not given supervision of drinking water supplies nor was it given the power to prohibit the establishment of new sources of pollution. The Division of Sanitary Inspection continued most of the activities of the former Division of Sanitary Engineering, especially those of an investigatory nature.

Pollution control was a problematic function in the 30's, much as it had always been. Water pollution had been increasing through the years and, in particular, oil spills began to occur more and more frequently. Unfortunately, as Walter Shea, then Chief of the Division of Purification of Waters, pointed out, the problem of controlling water pollution was, "one of attempting to remedy a condition, at great public expense, which, though long standing, had ceased to cause general alarm."

Moreover, at least two problems hampered enforcement. The State Attorney General, an elective officer who was responsible for enforcing pollution violations, often had significant political interest in not alienating a town or community through prosecution. Additionally, there were limits to a community's assets and its ability to clean up its pollution.

The hurricane of September, 1938 necessitated emergency action by the Division of Sanitary Inspection as all sources of drinking water had to be investigated. With the help of the Division, most areas of the State were able to come up with emergency systems of drinkable water, and no significant waterborne disease was reported. A year later, the Division of Sanitary Inspection was charged with enforcing a new law requiring prescribed methods of sterilization of utensils for serving food and drink. In the 1939 reorganization, a new Division of Sanitary Engineering was established. The new Division assumed the functions of several earlier divisions: the Division of the Purification of Water, the Division of Sanitary Inspection, the Sanitary Engineering and Chemistry Laboratory section of the Division of Laboratories, the Division of Food and Drugs, and the Bureau of Industrial Hygiene. The reorganization, although brought about by budgetary limitations, meant that for the first time, all matters of environmental sanitation in the State were subject to unified supervision.

FOOD AND DRUG CONTROL

Another late-comer to the Department of Health was the Division of Food and Drugs. Although a Board of Food and Drug Commissioners had been established in 1910, it was not until 1936 that the Board was merged with the new Department. The Division of Food and Drugs was responsible for maintaining purity in foods and drugs by prohibiting the manufacture, sale or distribution of adulterated or misbranded food and drugs. It set minimum standards of strength, purity and quality and defined the degree of specific adulterations. The Division shared with the Division of Sanitary Inspection a special agent for inspection, who was responsible for the inspection of food (particularly meat) and beverages. Among the items of special interest to the Division of Food and Drugs were ice cream, olive oil (which was frequently replaced by cotton or tea seed oil), hamburger meat and meat tenderizers. Later that year, after the hurricane and subsequent flood, the Division inspected and condemned huge quantities of damaged food.

SECTION III - 1941-1978

CHAPTER NINE

BACKGROUND OF THE PERIOD*

The period after 1940 was marked by an increasing complexity of the country's problems, with heavy involvement in foreign affairs, and sociopolitical pressures at home. The major commitment to human services which had begun during the Roosevelt years, weakened in the years after World War II, to be reborn again in the sixties.

The dominant event of the forties was the Second World War, which, among other things, effectively broke the hold of the "Great Depression" on the nation, and business and industry geared up to meet the heavy demands of the "war effort". Federal control of the national economy increased, and it expanded greatly in consequence.

With the restoration of peace, President Truman continued much of Roosevelt's "New Deal" under his "Fair Deal". However, the post-war imperatives of foreign policy required much of his attention. The 1947 Marshall Plan, and the 1949 establishment of the North Atlantic Treaty Organization were important developments. In Truman's second term, the "Cold War", and the military involvement in Korea were associated with a period of increased anti-communist feeling, publicly displayed in the actions of the House Committee on un-American Activities.

Eisenhower's years were relatively inactive. Internationally, the shadow-boxing of the cold war continued, and the pace of social change slowed to a standstill. There was little or no initiative towards expanded human services in the fifties as far as the executive branch was concerned. Such social change as occurred tended to be promoted by Supreme Court decisions, notably its ruling against racial segregation in public schools in the case of Brown vs. the Board of Education in Topeka, Kansas.

In 1961, John F. Kennedy was elected to the presidency on a platform which promised increased human services, but most proposals did not gain congressional approval. After Kennedy's assassination the "Great Society" programs of Lyndon Johnson met with more success, and there appeared the Civil Rights Acts, the Voting Rights Act, an \$11 billion tax reduction, a number of anti-poverty bills, governmental support for medical care costs under the Social Security Act, and many others. Inflation was increasing steadily and the expanding national governmental functions required increasing federal expenditure. At the same time there was a return to a war-time economy as the Vietnam involvement escalated, and public opinion became sharply polarized in relation to the war itself and many related issues.

*National and State History derived from standard Encyclopedia sources.

The Nixon and Ford years saw withdrawal from Vietnam, and the joint problems of inflation and economic recession. Some of the efforts to resolve these problems led to cutbacks in a number of the human service programs of the sixties.

Abortion, which had been either illegal or sharply restricted throughout the country began in the 60's to be reconsidered in many quarters. The "Roe vs. Wade" decision of the U.S. Supreme Court in 1973, invalidated most state statutes, and the interruption of pregnancy in the first trimester attained a certain legitimacy. However, in 1978, the issue is far from settled, and lines are sharply drawn between those willing to approve the procedure, and those deeply disturbed by it.

In this period, too, severe damage was done to the prestige and the reputation of government at all levels. The loss of public confidence in government which followed the Watergate scandals produced some attitudes which are not diminished in the latter part of the seventies and public concerns with "right to know" and with individual privacy have given rise to tangled legislation.

From 1941 to date, the fortunes of Rhode Island have followed national trends. Wartime prosperity in the fifties was increased by the establishment of North America's largest naval air base at Quonset Point. The Naval activities here and at Newport were a sufficiently large part of Rhode Island's economy, that their abolition as part of the severe cutbacks of the seventies precipitated a period of economic crisis.

During the early years the overriding strength of the Rhode Island Democratic Party remained unbroken, and there was relative political calm. The earlier trend toward reorganization of government continued at a slow pace, and one notes the creation of a Department of Administration, a Rhode Island Development Council, and a new Board of Education in 1951. The trend toward professionalism in government was occurring in Rhode Island as elsewhere, but initially rather slowly.

1962 saw a three-term break in the Democratic hold on the governorship but not of the legislature with the administration of John H. Chafee, a Republican. But from 1968 to date with the Licht, Noel and Garrahy administrations the Democratic Party again controlled the governorship.

These late years were lean ones economically, and an already strained economy was struck a heavy blow by the withdrawal of naval programs at Quonset and Newport, as mentioned above. This involved termination of employment of some 3600 Rhode Islanders, and the loss of military personnel representing a payroll of \$200 million annually.

If social and political changes were marked during the 37-year period, health changes were explosive. Both technologically and organizationally, medicine and public health underwent revolutionary development.

Importantly, this period marked the beginning of the antibiotic era, and this development, along with the extension of immunization capability into new areas, profoundly changed the patterns of disease and death in the population, and equally profoundly influenced public expectation of benefit from the health care system. The combination of these high expectations and rapidly rising costs produced a paradoxical situation where on the one hand, there were more people delivering more effective, health services to a larger part of the population, and on the other, a new public feeling of dissatisfaction with the process.

Major public concern with the costs of care had been signalled by the activity of the Committee on the Costs of Medical Care on the national scene in the early 1930's. By 1940, the hospitals, in particular, were threatened by inability to meet rising charges. Under this stimulus, the "Blue Cross" hospital insurance plans blossomed all across the country, nowhere more vigorously than in Rhode Island. "Blue Shield" plans designed largely to insure against the high costs of the surgeon's services followed and one began to hear the now-familiar term "third party payment". Along with new systems of payment new regulatory mechanisms appeared. These are discussed in a later chapter.

This period saw the war-stimulated achievements of the nuclear physicist generate new diagnostic and therapeutic techniques in the area of nuclear medicine. In these years, too, heart surgery, which many had earlier viewed as an impossibility, became almost commonplace. Organ transplantation, once only a dream, became a reality.

New drugs, and new uses for older agents, appeared in great numbers, producing new needs for testing and control. New psychotropic drugs, in particular, exerted a profound influence on the management of mental health problems. Institutional censuses in the mental hospitals dropped while ambulatory psychiatric management of persons remaining in the community became a reality.

New types of health manpower emerged. New ethical dilemmas were uncovered, and new legal problems relating to health care came into being.

Overall there was a tendency to organize health care in larger units. Health care administration, and public health functions in particular, were shifting their primary point of focus from the municipal level to the state at the opening of our century and were shifting markedly to the federal level at its close. Many of the remaining state functions are now carried out under federal regulations or guidelines, and with federal financial participation. Even beyond this, since World War II, nations have recognized sufficient common concerns to lead to participation in the World Health Organization which, despite its lack of authority, further exemplifies the trend.

Many of these changes were commencing before the 1940's, and 1918 and 1938 federal sponsorship and funds had been available for direct health services in maternal and child health and venereal disease control, and a few other categorical programs. Many of these programs continued to be funded from federal sources throughout the period and the developing Social Security System furnished much of the framework.

While the federal government maintained its support of direct public health services, in 1935 it moved into a new area of health care, that of health care facilities. In that year Congress passed the "Hill-Burton Act", and the federal government began investing in hospital construction, stimulating rapid growth in the number of hospitals.

The concern which had produced the committee on the costs of medical care in the 1930's increased as the system expanded, technology developed and care became more hospital-centered. Costs became a very significant problem, especially for the elderly and the poor. In consequence, a new phase of public health began: the attempt to provide access to the health care system for those persons unable to afford care on their own.

In 1960, the federal government moved into the health financing field with the passage of amendments to the Social Security Act. The changes under Title I of the Act, known as the Kerr-Mills Act provided grants to enable each state:

to furnish medical assistance on behalf of aged individuals who are recipients of old age assistance but whose incomes and resources are insufficient to meet the costs of necessary medical services.³

Federal participation was between 50% and 80% of the program costs.

Five years later, in 1965, two particularly important Titles were added to the Social Security Act. Under Title XVII, "Health Insurance for the Aged" or Medicare as it came to be known, a national program of health insurance for the aged was established. This program provided basic protection against the costs of hospital and related post-hospital services. Similarly, Title XIX, "Grants to the States for Medical Assistance Programs", was created. Medicaid, as it was known, expanded the Kerr-Mills medical assistance program to groups other than the elderly. A single new program of medical assistance for persons receiving federally-aided public assistance was established. Eligibility was extended to medically indigent persons (i.e. blind, disabled, or elderly persons not on welfare) and to all needy children under 21.

The growing health concern of the public had a further fallout in other national health-related legislation. A current selected list of such legislation published by the Department of Health shows five major federal statutes in the whole century preceding the forties. In the 1940's there were four, four in the 1950's, twenty-three in the 1960's, and thirty-nine in the first eight years of the 1970's. The profound effect of these on the form and functions of the Department of Health will become apparent in some of the discussions which follow.

No discussion of the scene in this third portion of our history would be complete without some mention of the role played by Rhode Island's outstanding congressman, John E. Fogarty. His energetic sponsorship of many health programs supporting research and development

was a major factor in producing the era where "grantmanship" first became a word, and investigative and developmental activity in the whole health field blossomed as never before. At one time there was a strong suspicion that federal dollars for research exceeded the ability to recruit qualified researchers, and it was said that John Fogarty laid more bricks vicariously as a congressman than ever could have been possible in his original role as a bricklayer. When he died in the late 1960's there were already indications of a tightening of the federal purse-strings.

Early in the period there was a feeling of some complacency on environmental issues, and there was an assumption that our public health systems had this matter under a high degree of control. With the ensuing years, however, both the public and the professionals working in the field recognized whole new aspects to the exposures which occur in the general and occupational environment involving air, water, food, drugs, radiation and others.

Public concern for Health was further demonstrated throughout this period by the development of many new voluntary health-related agencies in the fields of professional and public education, planning, and individual and community service. Foundations and associations devoted to new disease categories sprouted in large numbers and older organizations grew and prospered. The older philanthropy of the wealthy was replaced by that of the small contributor, and there was expansion of federated fund-raising, and of tax benefits designed as incentives for contribution. Over time, governmental and voluntary agencies have carved out particular areas of function, and a working partnership has tended to develop.

One further event profoundly influencing the health services of Rhode Island was the development of a program of medical education at Brown University. Originally conceived as a six-year pre-clinical curriculum leading to a degree of Master of Medical Science, it was inaugurated in 1961. It carried the student from college freshman to the mid-point of the Medical School curriculum, allowing the student to enter the third year of a regular four-year medical school. By 1970, after a prolonged period of internal discussion, the University decided to offer a seven-year curriculum leading to the M.D. degree. The effect of this program on health services in Rhode Island was profound. It brought to the hospitals an influx of first-rank full-time physicians with both teaching and clinical responsibilities, it revitalized the programs of internships and residencies, and had extensive effects on related health programs throughout the State. At the same time that it contained features which, although they upgraded the quality and sophistication of health-related services, also increased their cost, thereby adding to the problems of health planning and regulation which are dealt with in a later chapter.

These, then, are a few of the factors which set the stage for the third phase of development of the Rhode Island Department of Health from the 1940's to the conclusion of its first century.

SECTION III - 1941-1978

CHAPTER TEN

THE DEPARTMENT OF HEALTH COMES OF AGE

As public health grew and matured, so also did the Rhode Island Department of Health. With the passage of time, many old patterns were challenged, many new statutes were adopted and reorganizations followed. This was a time when the merits of high level professionalism became increasingly evident. It was a period when the city-state character of Rhode Island was recognized and led to the consolidation of services, particularly health, at the State level. As in all states, the focus of public health leadership shifted towards the federal level, and yet increasing attention to the needs and concerns of the individual citizen required many readjustments of policy, form, and function. Economic pressures put an end to the care-free days of unplanned pragmatic development in the whole health field, and the interrelated functions of planning and regulation came into increasing prominence.

In 1941, the fifteen divisions of the Department were housed without crowding on the third floor of the State Office Building. Many of the functions that were later to become State responsibilities were discharged, if at all, by the varying activity of the health workers of the thirty-nine cities and towns, with assistance in many localities by the three State field offices. Each of the divisions enjoyed a partial autonomy, resulting from the fact that each was independently responsible to the part-time director. Even if one included part-time professionals, the total work force was only about 250 individuals. The State Health Department budget was just under \$680,000, 70% of which was for the State Sanatorium at Wallum Lake, later to be named for its distinguished superintendent, Dr. U.E. Zambarano. In addition to the state appropriation, federal grants of \$193,111 were available.

Even in the early 1940's, when most functions were geared to war-time pressures, some voices were being raised advocating reorganization, but very little change disturbed the established patterns. By 1950 the pressures toward change had become more urgent. Then, as now, investigative reporting played its part, and a sharply critical major article in the Providence Journal²⁶ is given credit for a major influence. This article dealt with a number of aspects of the policies, staffing, organization, and cost-effectiveness of the Department, and compared it unfavorably to those in some of the neighboring states.

Governor Dennis Roberts and the General Assembly initiated a number of changes in 1951, including the transfer of responsibility for mental health and alcoholism programs and the State Tuberculosis Sanitarium to the Department of Social Welfare. As a consequence, the Department of Health became a smaller operation.

Director McLaughlin, at the same time, undertook some modest re-organization within the Department. The Division of Vital Statistics, which had not published an annual report for a decade, was revitalized, and a mechanism for budgeting and fiscal administration was established.

When, in 1959, under Governor Christopher DeSesto, a full-time director, Dr. Jeremiah A. Dailey was appointed, he found many needs for change. He was particularly unhappy about the State's non-competitive salary scale. In fact it was stated:

Rhode Island ranks 47th among the states in the level of salaries for public health personnel. Mississippi is the only state with a lower level. If adequate personnel is to be retained, salaries must be raised.²⁷

Public health nurses employed by the State were then receiving at least \$600 less than the rather low payments by other agencies, and many laboratory technicians resigned to take the more remunerative positions available in private clinical laboratories or in the Veterans Administration. It had been impossible to recruit a sanitary engineer over a ten-year period. Salary adjustments have occurred periodically but the problem still remains, despite the unionization of Department employees in 1945.

By the end of his brief two-year service, Dr. Dailey had accomplished some important changes in the organization of the Department having arranged the divisions in four groups responsible to him through assistant directors, making greater managerial control possible.

The decade of the 1960's was a time of an accelerating change. Governor Notte announced in 1960 the appointment of Dr. Joseph E. Cannon to succeed Dr. Dailey. The directorship was redefined legislatively to be a five-year appointment (only corresponding with a new governor's term once in a decade) and now required a degree in Public Health. These changes were designed to underscore the professional nature of the position, and make it more immune to political pressures.

Dr. Cannon, a Rhode Island native, a Brown University graduate with an M.D. cum laude from Tufts and an M.P.H. from Harvard, had retired after ten years of Army service, and had been Chief of the Colorado Health Department's Division of Hospitals and Disease Control. He had returned to his home state to become Director for Curative Services of the Department of Social Welfare. That his choice as Director of Health was an appropriate one is testified to be Dr. Cannon's continued service under four additional governors, and his position of respect among the Directors and Commissioners of health in other states.

Among the many changes which took place in the 1960's one deserves particular mention. This was the decision to consolidate all municipal health services under the central State agency. The idea

was not new. It had been strongly hinted at in a 1944 study of state health departments by Haven Emerson, for the American Public Health Association.²⁸ Some three years later it was more forcefully put forward by consultants to the State Tax Commission, and two years later even more specifically by the Institute of Public Administration which in 1959 recommended:

Rhode Island is, for practical purposes, a single metropolitan area and because of the concentration of its basic health facilities and environmental problems, the State as a whole is a logical service area for health administration. The State can serve easily as a single health unit with appropriate smaller districts for particular functions.²⁹

The State Fiscal Commission went even further, proposing the total state takeover of all local health services.

Initially, these proposals were a bit radical for their time, but change was clearly needed, and the raising of revenues for local health services was becoming increasingly difficult. Some were recommending grants-in-aid to localities from state funds, and others suggested other forms of the sharing of state tax revenues. In 1954 the General Assembly had authorized three State health districts from which the localities could, with some financial assistance, purchase services, but this had not proved effective.

The State entered the 1960's with the problem still unsolved. The United States Public Health Service, at Dr. Cannon's request, carried out yet another study and favored consolidation. By this time, too, the Providence City Hospital (later named in honor of Providence's distinguished health officer, Dr. Charles V. Chapin) was serving the communicable disease needs of the entire state, at city expense. This, and the influence of the large Providence contingent in the General Assembly, with strong support from the Providence Journal, carried the day when, at length, a consolidation bill was filed.

The bill, passed in 1964, was made effective July first 1966 and specified a 25 month period for full implementation. Services which had previously been fragmented and inconsistent were now to be united under a common set of policies, and about a hundred employees of local health departments took the state civil service examinations which would qualify them for transfer to State service.

Consolidation had a great effect on the size of the Department, which began to outgrow its home in the State Office Building, and it became necessary to relocate many of the divisions in rented quarters in downtown Providence. The expanded responsibilities in food protection and sanitation lent new importance to the existing field offices.

This period of scattering of office locations, with its attendant handicap to internal communication finally ended in January of 1971 when the new four-story Health Department Building later named in honor of the Director, was completed, and all central operations except for the Division of Laboratories were again under a single

roof. The Laboratories, which had been making do with the old departmental space in the State Office Building, finally moved into new and well-designed facilities in their own new building as the completion of the Department's first full century took place.

Shifts of function and responsibility characterized much of the 1960's and 70's. There were continuing waves of reorganization in the Department itself and the state services generally. There had been some discussion of the wisdom of a combined state Department of Health, Education and Welfare, mirroring the national development, but this sort of monolithic structure was not welcomed in the legislature. Instead there followed a decision to subdivide the Department of Social Welfare into three new major Departments, Social and Rehabilitative Services (SRS), Mental Health, Retardation and Hospitals (MHRH), and Corrections. As a consequence of the negotiations attending this change, responsibility for Retardation, which had been assigned to the Department of Health in 1967, went over to MHRH, and the licensure of Nursing and Personal Care Homes, came from Welfare to Health.

In 1973, also the Office of the Chief Medical Examiner was legislatively redesigned, requiring leadership of individuals trained in the field of forensic pathology, and providing a Medical Examiner's Commission with power to promulgate regulations, to hear appeals, and to advise on "matters of public concern". This function was transferred from the office of the Attorney General to the Department of Health, and finally occupied new quarters in a specially designed section of the new Laboratory Building.

In the 1977 legislative session one further major relocation of function was ordered, when the Department of Natural Resources and three environment-related divisions of the Department of Health were combined to form a new Department of Environmental Management, this latter change probably reflecting the increased public awareness of and concern with environmental issues.

Laboratory services had, of course, grown as the needs and knowledge of medicine and public health expanded. The 1964 Act making tests of newborns for phenylketonuria mandatory, for example, necessitated a new laboratory function. Later growth of concerns with congenital rubella, pesticides, gonorrhea screening of females, and several others produced further change. At the same time, the inclusion of provisions for third-party payment for clinical laboratory services to private patients permitted the laboratories to suspend many tests which had been offered gratis in support of medical practice.

The early separation between disease-control laboratory services and ones concerned with sanitation persisted until nearly the end of the century, and although the two functions existed side by side in the same area, they tended to retain separate administration. In the mid-1970's, however, partly in prospect of a new laboratory building, they were brought together under a single Assistant Director.

One internal management decision, gradual rather than dramatic in its effect came into play in the latter 1960's and continues to have effect. This was a considered decision to move away from the provision

of direct services to individuals, replacing them by contracting-out to the private sector. The intent has been to strengthen total services by avoiding duplication of effort, and at the same time to provide a mechanism of implementing planning decisions involving the private sector by financial incentives and administrative support.

One prominent result of this decision was the complete abandonment of direct patient care by the previously large contingent of state-employed public health nurses, and the strengthening of the visiting nurse associations across the state, which have been influenced to a series of mergers reducing the number of agencies from 27 to 9 with consequent gains in effective and efficient management.

Similarly, services in the area of maternal and child health, many of which had been provided directly by department personnel, have been altered until they represent a complex network of contract services extending throughout the state. The central function of obtaining federal support for many of these services has been an important factor in growth.

At the close of its initial century, we see a professionally staffed, highly organized department with an annual budget close to fifteen million dollars, employing almost 500 full-time persons plus a number of consultants, and advisory councils on a part-time basis.



SECTION III - 1941-1978

CHAPTER ELEVEN

HEALTH PROMOTION AND DISEASE CONTROL

So far, discussion of this final stage of the Department's first century has examined the national and local scenes, the growth of Public Health, and the corresponding growth of Rhode Island's Department. It remains to look more closely at some of the principal broad functions that the Department has served during these changing times. The most basic function over the entire history has been that of health promotion and disease control, the subject of the present chapter. Further on we will deal with some of the newer emphases in the fields of planning and regulation of health services.

Health promotion has always involved an attempt to control those environmental influences that impinge on the individual, and at the same time to favor the individual, and at the same time to favor the individual's ability to withstand those influences. At the beginning of this time period we were in something of a smug condition, feeling that the book on environmental control had already been written, and that it was only necessary to continue to apply the lessons of the past in already traditional ways. No one who lived through any large portion of these times, however, can have failed to see the vast increase in public concern with the general environment and that of the occupational setting. New appreciation of the risks attending ionizing radiation appeared, along with new sources of such risks. A new view of the role of environmental factors in the production of Cancer emerged and program after program related to control of these appeared.

Environmental concern, followed the emphasis of medicine generally, away from communicable disease into the more newly emphasized areas of cancer, heart disease, stroke and other important disease of later life.

The most exciting part of this period's story, however, can be written in terms of the control of infection. Many of the old scourges, tuberculosis, diphtheria, diarrheal disease, and others, had shown marked decreases in the earlier part of the 20th century. Many of these improvements were not easy to explain, and seem to have been manifestations of general hygiene (a word less heard today) improved nutrition, housing improvements, and certainly favorable change in sanitation. However, during the late 1940's the side-by-side developments of chemotherapy and immunization produced further change, to the point where many of our previously dread epidemic diseases have all but disappeared. The old emphasis on Quarantine and control of contacts generally, which preoccupied the earlier epidemiologist, was replaced by a vigilant surveillance and a fostering of immunization.

New diagnostic tools and new forms of treatment appeared in considerable numbers, and the bacterial infections began to yield to antibiotics, while populations were made more immune to many of the viral illnesses. Medicine at this time began to desert its traditional, largely supportive, role, and to assume certain concrete therapeutic tasks.

A few concrete examples will serve to illustrate the changes which were occurring. Rheumatic fever, that old familiar killer, which "licked the joints, but bit the heart" had already been linked to streptococcal infections, but it required the advent of the sulfonamide drugs, later largely replaced by penicillin to produce the rarity of the disease today. When expense made it difficult to get the drugs to certain important target populations, public health organizations and clinic services made these available at public expense. As in many other instances, increased specific treatment capability made specific diagnosis mandatory, and the clinical laboratories, especially those of the Health Department set up special arrangements to make throat cultures for the streptococcus readily available to all.

A less successful story must be told concerning another common bacterial infection, Gonorrhea. At the start of the time period we are discussing, and especially toward the close of World War II, the expected wartime outbreaks of both Syphilis and Gonorrhea were taking place, and for the first time really practical treatment with penicillin became a reality. Syphilis had been treated in those who could tolerate the protracted and uncomfortable months of treatment with arsenicals and bismuth, and Gonorrhea with unsatisfactory local measures. Now it became practical to take rapid action in ways that most of those infected could be expected to tolerate. In consequence, there was a marked fall in both the major venereal infections for some time. Continuing efforts with systematic serological testing and the aggressive identification and follow-up of contacts continued. Both the rapid treatment centers and the other control techniques became the subject of large state-federal collaborative activity. But success led to a shift of national interest away from these diseases and federal supports were reduced or withdrawn.

Unhappily, despite a continuing drop in Syphilis incidence, Gonorrhea is again present in poorly controlled epidemic form as the Department's first century ends. Better surveillance techniques have increased the apparent numbers to some extent, and there have been evidences that most cases tend sooner or later to come under effective treatment, with the result that some of the old complications of urethral stricture, salpingitis, and many others are infrequent as compared to earlier days. Some of the changes in sexual mores which have characterized the 1960's and 70's in particular and the availability of new contraceptive agents have probably played a part, and Gonorrhea is now no respecter of socioeconomic class.

Control of venereal disease was further facilitated in 1967 when legislation recommended by the Department was enacted, making legal the treatment of minors without parental permission. This, combined with an aggressive program of field-work, advertising, telephone "Hot-lines", educational efforts in the schools, and other activities have probably served to contain the epidemic of gonorrhea, but no one is yet happy with the result. We have at least learned how much more than an effective method of treatment is required.

Many other successes, near-successes, and near-failures could be cited. There are important gains to be noted, for example, in such former major killers as tuberculosis, diarrheal diseases, and pneumonia.

Even those diseases amenable to antibiotic treatment continue to raise problems as antibiotic resistant strains emerge. Nor have the antibiotics provided means of control of the viral diseases. It has remained for the science of immunology to attack these continuing problems, as many new vaccines have been developed.

Poliomyelitis provides one particularly striking example. This virus had visited Rhode Island periodically in recurrent epidemic form, and left death and disability in its wake. Most control efforts centered around attempts to lessen exposure, but these had been hampered by a lack of firm knowledge as to the means by which transmission took place. Much emphasis was being laid upon treatment to lessen the disability. One recalls from that period the efforts of the late Sister Elizabeth Kenney to counter what she felt was a mistaken tendency to immobilize affected limbs. Her physical therapy techniques were much discussed through the 1940's and early 50's. The fact that President Roosevelt had survived a severe attack in the 1920's with marked residual paralysis caused him to take a special interest, and the programs of the National Foundation for Infantile Paralysis benefited in consequence, as did many other national and local efforts at treatment and control.

The new era for "Polio" began after years of immunological activity ending with a final period of "in-fighting" between the advocates of killed vaccine (especially Jonas Salk) and those who favored a live attenuated type (as that of Albert Sabin). The National Foundation elected at this time to sponsor the extensive field trials of the Salk vaccine in 1954. In April 1955, in the glaring light of nationwide publicity the report of the trials was followed by licensure of the product, and there was a general mood of triumphant excitement over the new possibilities of a final victory over the disease. In a matter of days, the mood was shattered as the "Cutter Incident" shook public confidence severely. This was an event involving the identification of 204 cases of vaccine-associated paralytic disease, with 5% mortality, related to seven lots of vaccine from the Cutter Laboratories which were found to contain live virus.

Despite this set-back, and with only occasional public programs by Rhode Island's municipal health departments, by early 1960, it appeared that nearly half of the State's population had received the required three injections. But in June, Rhode Island was the site of the nation's largest outbreak of the year, eventually reaching 103 cases.

Under this stimulus, the Department mounted an intensive series of mass programs of immunization which appeared to have partially aborted the epidemic. These were continued during the next two years, and in October of 1961 the State's last case was recorded.

Meantime, Sabin's continuing enthusiasm led to extensive trials of the oral attenuated live vaccine both in this country and abroad, and in August of 1961 the vaccine, which was already in use in many parts of the world, was licensed in the United States. In Rhode Island, as elsewhere, the conclusion became inescapable that the Sabin vaccine was the method of choice, and in 1963, with leadership from the Department and wide support and participation by the medical profession and the community at large, a massive "End Polio" campaign was carried out, resulting in a very high level of immunization of the State's population.

Since then, with no further cases in the state, and in fact, almost none in the entire country, there remains the problem of maintaining a satisfactory level of immunity in the absence of the stimulus of continuing presence of manifest disease.

With the licensure of effective vaccines for Measles and Rubella further mass programs were carried out in 1966 and 1969, respectively, and programs of surveillance and public reminders have been continued for all the available effective vaccines, including tetanus, pertussis, diphtheria, and until near-eradication in the entire world, smallpox.

In 1976 a nationwide crash program of immunization against a threatened epidemic of Influenza due to the "Swine" strain of the virus came to a sudden halt in Rhode Island after the immunization of about 323,000 individuals, because national surveillance had detected a relationship of the vaccination to the rare paralytic Guillain Barre' syndrome. Fortunately, the influenza epidemic never appeared. The episode, however, is worthy of particular mention because of the emergency of a new emphasis on the legal liability of all concerned, including manufacturer, public health official, and the professional persons administering the vaccine. The public impact of this may well have a lasting effect on the acceptability of mass immunization programs.

Much more could be said concerning the developments in control of communicable disease, but the background of many changes that were taking place in the patterns of disease has been suggested with a consequent shift in the priorities of Public Health. Through the entire period of the 1940's to 70's the balance of emphasis has been shifting toward the non-communicable diseases and, as the population ages, the problems of the elderly.

Even in the 40's the observation had become commonplace that heart disease had become the cause of the largest group of deaths, and that cancer and stroke were not far behind. Together they were the cause of about 45% of deaths, accidental death rates were high but declining, Cirrhosis of the liver had recovered from the drop in death rates which had followed the adoption of national prohibition of alcoholic beverages, and was staging its continuing post-repeal increase.

Cancer, in particular, seems to have been the center of special interest both nationally and locally. Screening for uterine cancer using the Papanicolaou smear technique had commenced in some states as early as 1950. Rhode Island's program, with federal support was established in 1955 as a combined effort of the Department's recently established Division of Cancer Control and the department of Pathology of the Rhode Island Hospital. The effort yielded about 2% positive tests in the first two thousand cases, and further screening under a variety of auspices has continued throughout the balance of the period.

Major cancer control programs continued, with particularly strong emphasis at the Rhode Island and Roger Williams Hospitals, and were further stimulated by the development of teaching and research activities as Brown University entered the field of medical education.

By 1975, it had become evident that although most of the essential components of a community-wide cancer control program were present, they lacked liaison, communication, and over-all planning. Consequently, an effort was made to convene a Cancer Control Board consisting of those agencies and individuals throughout the State having interests or functions relating to cancer. The group was able to obtain a two-year planning grant from the National Cancer Institute, and following the planning phase, a 6-million dollar five year grant for implementation. As the Department's centennial ends, programs aimed at treatment, rehabilitation, detection, prevention, and overall evaluation are being set up, both as functions of the Department and of a variety of agencies and institutions throughout the State.

This attention to cancer has lent particular emphasis to the re-awakening of environmental concerns, and has caused new emphasis on occupational exposures to carcinogenic agents, on air and water pollution, on food additives, and on ionizing radiation. Programs in all these areas have received increasing emphasis and often special funding over the period of the 1960's and 70's.

The publication, in 1969, of the Surgeon General's report on a major study of smoking and health led to special emphasis on this matter both because of its demonstrated relationship to pulmonary diseases, cancer in particular, and to coronary heart disease, and a variety of other conditions. By the late 70's one hears the statement from a variety of authoritative sources, that the exposure to tobacco smoke is the number one preventable health risk.

Despite the major emphasis on cancer, heart disease has not been neglected. The federal heart disease investigation at Framingham, Massachusetts, and a number of other similar epidemiological studies have identified specific risk factors, particularly serum lipids including cholesterol, elevated blood pressure, and cigarette smoking. This, and a variety of other influences have led to a new emphasis on the individual's responsibility for his own health. A generation before this might have been labeled as personal "hygiene", but at this writing it is common to point out the importance of "life style"... However named, the emphasis is now being laid upon nutrition, exercise, smoking, alcohol consumption, and a number of other components of a healthy and long life. The star of "health education" is rising in consequence. No one, however, is deceived into thinking that modification of human behavior is an objective easily attained.

New methods for the treatment of hypertension, appearing in the 1950's and 60's lent new interest to the detection of early hypertension, and as it became clearer that there were definite benefits resulting from continuing treatment, community programs became a frequent subject of funding from federal sources, and the Department became a channel for several such programs.

While these adult health programs were being carried out, there was continuing action and development in the field of maternal and child health. To the early emphasis on maternity services and well-child conferences there were added, year by year, special immunization programs, crippled children's services, programs for the detec-

tion of congenital metabolic disease, genetic counseling, family planning, special nutrition for expectant mothers, a mobile pediatric van to bring service to undermanned areas, and many others. The special interest in pediatric cardiology which arose in consequence of the new developments of cardiac surgery in the 1950's began to wane somewhat as rheumatic fever declined. Early in the period, many of these functions were discharged directly by Department personnel, but as time went on, they were more and more delegated to the private sector by subcontract.

Beginning with the 91st Congress in 1970, there commenced a period of multiple federal acts concerned with specific health problems, and one notes, among others, programs for drug abuse, lead poisoning, cancer, sickle cell anemia, Cooley's anemia, child abuse, sudden infant death, alcohol abuse, diabetes, arthritis, family planning, and a host of others. Each of these, in one degree or another involved the health system of Rhode Island in its implementation, and the multiplicity of program responsibilities of the Department expanded accordingly.

The same period marked the rise of "consumerism" from its minor position in earlier years to a major groundswell. Many continuing functions of the Department were markedly stimulated by the new interest and demands of consumers, and their demands to join in the decision-making processes of health care became more and more insistent.

Clearly, then, priorities of disease control and the magnitude of the activity involved underwent radical change from the time of World War I to the latter 1970's .

SECTION III - 1941-1978

CHAPTER TWELVE

REGULATION AND PLANNING

Regulation under statutory authority has been, from the first, the business of any health department. Early concerns with sanitation laws antedated by many years the knowledge of how filth gave rise to disease, and when the "germ theory" of disease became established, quarantine laws were added, and regulations for the reporting of disease became mandatory. Interest in the quality of health services led to the licensure of dentists in 1888 and physicians in 1895, followed by similar regulatory responsibility relating to other health occupations and professions. Later, in the 1930's, health facilities, starting with nursing homes and hospitals were added.

By 1940, some sixteen occupations, some of which had only remote, if any, relationship with health were subject to licensure, and food, drugs, water, milk, pharmacies, clinical laboratories, and many other things were coming under scrutiny by the Department, as the legislators added new regulatory statutes year by year.

By 1964, 17 professions were subject to licensure by the Department, and in 1970 nursing home administrators and psychologists were added. In the same year, the Medical Practice Act was amended to permit licensure of physicians who had three years of medical school, rather than the previous three and one half. Additionally the practice of optometry was redefined to permit the use of diagnostic drugs after an approved course in pharmacology.

A program of certification for physician assistants was created by statute in 1975, and after a long series of meetings of a special commission an act establishing a Board of Medical Review, outside the Department, was established. This Board was in response to a strong concern over the increasing problems of medical malpractice litigation, and had authority to investigate a wide spectrum of unprofessional activity and to suspend or remove licenses.

The last time the total of Departmental regulatory functions of all types were subjected to a general inventory. applying to the year '72-'73, there were 78 different functions that were subject to formal licensure, 13 additional functions which required certification, 9 required permits, and a further 17 which required periodic inspection. Each of these regulated activities involved multiple workers, facilities, businesses, or items of equipment. For example, the inspection of public restaurants and other food service establishments involved some 3,300 separate operations. The function of nurse-licensure involved over 8,000 individuals.

One regulatory division, that of Food and Drug Control was split in 1968 into two, a Division of Drug Control and one of Food Protection and Sanitation. This developed against a background of increased importance of both areas. The expansion of the dimensions of drug abuse

later led to a major statute in the area of "controlled substances" markedly expanding the functions and authority of the Department in regulation of the licit and illicit use of drugs. At the same time the needs for consumer protection from adulterated, contaminated or misbranded foods had become more urgent.

It is no exaggeration to say that in the mid 1970's no person in the State was unaffected by these regulatory activities, some in more than a single instance.

This growth, however, was merely an expansion in scope and volume of regulatory activities already well-established. The period was, however, marked by some further activities which either entered new territory or was aimed at new problems.

It had become clear that control of federal funds to assist hospital construction (see Hill-Burton program, below) was a means of channeling hospital development towards over-all goals...It was only partially effective from the regulatory standpoint, however, as illustrated by the case of the Fogarty Hospital. There had been, in Woonsocket, in addition to the Woonsocket Hospital, a small institution, the Mercy Hospital, which has arisen largely as a result of conflicts within the staff of the larger institution. In 1962 it was proposed to construct a new small voluntary general hospital to replace the Mercy, located in North Smithfield. Planners felt that there was insufficient evidence of need for the additional beds in the area, and consequently Hill-Burton funds were denied, and the Department advised against the project. However, with assistance from the late Congressman, John E. Fogarty, the sponsors were able to obtain funds under the "accelerated public works" program, and the hospital was constructed, with the consequence that the small unit of beds carried with it the need for supporting administrative, laboratory, and other services which would have been provided at less cost if the additional beds (had they been needed) had been added to the nearby Woonsocket Hospital.

Concern with the costs of care had been evident for a decade or two by 1940, but the rising costs of all health services, and more particularly hospital care, became a major preoccupation in the 1960's and 1970's, almost bordering on panic. In 1966 the General Assembly created a Commission to "Study Hospital Room-rates" which undertook a considerable amount of investigation. It became clear that hospital charges were a quite precise reflection of the costs which were incurred by the hospitals, and that not all costs were subject to reduction, or even containment.

One clear component of increasing cost, however, was found to be the injudicious, irrational, or duplicative capital expenditure which was encouraged, rather than controlled by the forces of third-party payment as then organized. The Commission's report gave rise to the enactment, in 1968, of the Nation's second "certificate of need" statute, which provided, by amendment of the law on hospital licensure, not only an authority and obligation for the Department to review and approve or deny proposals for capital expenditures defined as large, but also it required hospitals to file an annual long and short-range plan, and to provide any data needed by the licensing authority in the discharge of the responsibilities involved. Also created was a "Health

Services Council", an appointed body of 19 persons constituting an advisory body to the Director of Health in matters arising under the certificate of need process.

It is necessary, at this point, to pause to point out that many of the regulatory functions of the Department, being linked to licensure, were often a too-strong authority for actual use. It was similar to the authority of a judge with only the death penalty to administer. Consequently, some of the third-party payment mechanisms which can apply sanctions quantitatively through reimbursement tend to be more potent regulatory authorities in fact.

In 1973 and 1974, the Certificate of Need process was extended by further acts to cover, not only hospitals, but "Health Care Corporations" (Health Maintenance Organizations) and Nursing and Personal Care Homes. These regulatory mechanisms became in effect, the implementation arm of the planning process.

The increasing concern over costs, and the enactment of new third-party payment systems under the Social Security amendments of 1965 ("Medicare" title 18, and "Medicaid" title 19) brought with them further regulatory responsibility, delegated to the State through contract mechanisms. Hospitals, for example, to be certified for Medicare reimbursement required accreditation, either by the State, or as was the case in all the hospitals in Rhode Island, by the Joint Commission for Hospital Accreditation, with additional requirements for a qualifying Utilization Review Committee of the medical staff. Supervision of this latter function was later reassigned to the newly-developed Professional Standards Review Organization which was authorized by federal statute in 1974. At the same time, the Department of Social and Rehabilitative Services, which had the fiscal responsibility for the Medicaid program, sub-contracted the inspection of nursing and personal care homes, and the periodic review of the appropriateness of patient placement (the "medical review team" function) to the Department of Health.

These functions required that the Department extensively review and update its standards for licensure of health facilities. The whole question of the quality of long-term care programs came under repeated scrutiny, especially in the 1970's and became a potent political issue. Small nursing homes in converted dwellings began to disappear as standards tightened, and were replaced with larger units of modern construction, and long-term hospital and institutional care for the chronically ill, the mentally ill, and the retarded began to be increasingly replaced by smaller noninstitutional in the community.

An early manifestation of the tightening of regulations was the voluntary closing in 1966 of the State's last proprietary hospital which suspended activity voluntarily when it became clear that it could no longer qualify for licensure.

An ostensibly qualitative concern, based primarily on a fiscal problem, produced still another important change in the process of professional regulation. By 1974 or '75 physicians, hospitals, and other elements of the health care mechanism, were in a state of consternation over the rising costs of professional liability (Malpractice)

insurance premiums, which had resulted from a marked increase in claims, and in the size of the awards granted by the courts. This had reached the point where it constituted a sufficient issue to be featured in the gubernatorial campaign of Governor Garrahy. The commission which was appointed to study the matter covered a mountain of material, and emerged with a draft bill which not only addressed the malpractice issue itself, but also the broader aspects of quality assurance in medical care, and medical disciplinary action. The passage of this legislation gave rise to the Medical Review Board, an independent body charged with the investigative and disciplinary functions related to alleged misconduct or other professional shortcomings of the physician. This replaced the former disciplinary functions of the Board of Examiners in Medicine, a component of the Department, which then retained only the function of initial licensure. At the Department's centennial point, the function is too new for evaluation.

The Department lagged somewhat in the field of Occupational Health, which was undermanned and underfinanced, and in consequence could only react to complaints, rather than carry out routine surveillance. Moreover, in the field of environmental radiation, it lacked the support of a specific regulatory statute. Finally, the 1977 legislative session adopted an act which made Rhode Island the 49th state to enact such a statute.

Drug control became a special problem in the 1960's, as drug-abuse, especially among the young, expanded. In 1974 the state adopted an expanded drug control statute supplementing the federal regulation of "controlled substances", and requiring registration by the Department of all those individuals or organizations that produce, distribute, or prescribe drugs. At the close of the Department's first writing, it remains incompletely implemented.

We have mentioned earlier that 1977 also saw the removal of certain environmental regulatory activities to a new Department of Environmental Control. This placed the responsibility for the air and the waters of the state outside the Department's jurisdiction, but retained in the Department matters of water supply, public and private, and the occupational environment.

Such, then, is a brief account of regulatory developments in this third and final portion of the Department's history. It remains to discuss a much newer, but closely related function, of planning.

Planning is such a logical element of the provision of health care that it is easy to forget how recent it is. Until the 1940's health services and facilities developed in a sort of free-floating pragmatic mode, responding to all the forces impinging on the system in the community without reference to any over-all aim. For a long time, this was considered to be a manifestation of the "American Way" and to impose planning smacked of socialism. But in the period following World War II, it became ever more obvious that such a view was becoming a very expensive luxury.

While there had been many evidences of concern about planless development, real organized planning may be said to have commenced with passage of the "Hospital Survey and Construction Act of 1946" by the 79th Congress, a statute usually referred to by the names of its sponsors as the Hill-Burton Act.

This statute, with the many later amendments and the progressive development of regulations was destined to be the core of the health facilities planning process for the succeeding three decades. Its original, and rather narrow purpose was to provide a rational basis for planning and funding hospital facilities for under-served areas, and to permit hospital development to keep pace with population changes. Some said later that the process had resulted in an over-production of small hospitals in rural areas, and perhaps a general over-building of the most expensive component of the health-care system, the hospital bed. As the years progressed, there emerged a tendency to broaden the program in recognition of other needs for construction, and priorities tended to be adjusted to feature ambulatory care facilities, long-term care hospitals and nursing homes, units devoted to mental health, alcoholism, and many other types of institutions.

The Act, as it developed, had certain strengths. Its mandate of annual plans based on actual data set a pattern which influenced the planning process at state levels throughout the nation. It caused state health departments to maintain a body of individuals skilled in planning and the evaluation of plans submitted by others. The Act further recognized that the stage of development and the needs would inevitably be different in each state, and instead of imposing overall federal plans, provide a mechanism for review of state plans and guidelines for their production.

The successful implementation of plans, in general, depends upon persuasion, incentives, and legal authority, either singly or in combination. In retrospect, the weakness of Hill-Burton was that it possessed only the first two, and had a rather narrow focus within the health care system. Nevertheless, the Hill-Burton era was marked by considerable accomplishment, and planning changed very little until late in the 1960's.

The multiplicity of special categorical health legislation which was being enacted nationally, however, was giving rise to new sources of stimulus to the planning process within the Department and there were growing needs for internal program planning. The developing interest in consumer participation was also leading to the growth of nongovernmental planning bodies based in the community, and the establishment of the voluntary Health Planning Council in 1965 was a particular example of this trend.

The status quo came to an abrupt end with the activity of the 89th Congress, in its 1965 and 1966 sessions. Many will remember this Congress for its long-debated amendments to the Social Security Act, which constituted titles 18 and 19 of that statute, better known, respectively, as Medicare and Medicaid, which have already been referred to. While not in themselves related to planning, the resulting changes in health care mechanisms, their costs and their use, posed constantly growing problems for the planner.

Two pieces of legislation, however, were directly involved with planning, one, the Heart Disease Cancer and Stroke Amendments of 1965, and the other the Comprehensive Health Planning and Public Health Service Amendments of 1966. The former was usually referred to as the "Regional Medical Program" (RMP) and the latter as Comprehensive Health Planning (CHP).

The foundation of RMP were laid under the Johnson administration, when the "DeBaKey Commission" suggested the establishment of centers of excellence for the treatment of the three major causes of death, Heart Disease, Cancer, and Stroke, with the aim of making the products of new research activities available to the people. There followed a period maneuvering on the part of medical schools and other institutions to capture control of these planned centers, and many were dubious about the outcome. Fortunately, after further consideration, the act that was finally passed mandated planning and development, with only demonstration programs of treatment, and with a broadening of the focus to include "and allied diseases".

As the name implied, the programs were to be regional, rather than based on strict geopolitical boundaries. Rhode Island eventually became a part of the "Tri-State" program based in Boston and including Massachusetts and New Hampshire. This was an effort that was largely professionally staffed, with some disregard for the rising tide of consumerism. The strength of this program lay in its funding, as it was well-provided with funds to be granted to the submitted programs that met their approval. It developed as a complex multilevel bureaucracy with a multiplicity of advisory and policy-making bodies, and a staff of highly qualified professionals.

The following year, CHP was born. There was a new tendency to move away from multiple categorical federal grants to the states, each with a single limited purpose. It had become clear that these grants had the effect of imposing a federal plan of expenditure on each state, without reference to its special needs. The decision to move towards block grants or discretionary funds carried with it the implication that the state should have a mechanism to exercise the discretion involved. In tune with the temper of the times, the plan contemplated a major input from consumers, through community-based regional planning bodies comparable in many ways to the Health Planning Council already existing in Rhode Island. These were nicknamed "b" agencies for the section of the act authorizing them. (Rhode Island had no real need for regional subdivision, and accordingly never had a "b" agency.) The final common pathway for planning was the "a" agency at the State level which was supposed to be responsible for an overall state plan against which it would hold up the proposals emanating from the community, submitted to them for review and comment.

The basic concept of this type of planning was sufficiently sound that it survived in a later system, as we will discuss presently. CHP, however, suffered from a number of weaknesses. Its terms of reference were vague, even its overall purpose was conceived variously by many of those involved. The funds over which it had control, though substantial, were still not large enough to be a source of great strength, and authority was restricted to review and comment rather than to approval. CHP, and its funds, however, laid the groundwork for the development of a uniquely inclusive health data system for Rhode Island.

The period of coexistence of RMP and CHP, involves events less than ten years old at the end of the Department's first century, and accordingly evaluation and identification of significance is difficult and subject. However, neither program persisted to the end of the period, and one might at least be permitted to attempt to find some of the reasons.

We have already seen that during the 1960's planning functions were being established both in the governmental and private sectors. Planning developments were, it must be admitted themselves unplanned and duplicative. The advent of CHP and RMP represented add-ons to an already complex mechanism. That modicum of progress toward common objectives took place is surprising. Within the Department, which already had well-developed planning mechanisms in place, CHP was tolerated rather than supported with enthusiasm, and one suspects that this was not uncommon in other states. Most of the incumbents of the Chief's role in CHP tended to feel that since the program encompassed, in theory, the education and welfare functions as well as Health that a location within a particular department was a source of weakness, and many states had attached this function directly to the office of the Governor. This was not done in Rhode Island.

One could, in fact, look upon some of these planning developments as competitive, but if so it becomes difficult to say who was the winner. By the early 1970's the weaknesses of the whole planning mixture were becoming evident, and in 1974 what must be the final chapter of this continued story was the passage of Public Law 93-641, the National Health Planning and Resources Development Act. This complex and far-reaching act has assumed the residual functions of Hill-Burton, CHP and RMP, but at the time of writing is not fully implemented anywhere. Accordingly, it can be described in general and in brief, but its evaluation must await later historians.

In its earliest drafts, the proposed legislation in effect tended to place final authority for the expenditure of governmental funds in non-governmental hands. This sidestep out of the usual patterns of representative government was a measure of the extreme pressure for consumer involvement which had developed. As it finally became law, this had been modified, and the product, though more complex, had more than a similarity to the patterns of CHP. There was mandated a community based function, the Health Services Agency (HSA), closely analogous to the "b" agency and State function like the "a". In Rhode Island, it was again clear that the idea of subdivision of the State had little merit, and at the Department's initiative a waiver provision was written into the law which exempted Rhode Island, and a handful of similarly organized areas from the need for a separate HSA, this function being discharged by the State Agency. Also mandated was an advisory council, the Statewide Health Coordinating Council (SHCC), a body to be constituted to represent all elements of the provider community and general population. The formula for this proved extremely difficult to follow, and considerable pressure, and many criticisms were encountered.

The federal regulations and guidelines for the administration of the program have also proved to be slow of development and difficult to follow. Members of the department's much-expanded planning staff are responsible for the preparation of a comprehensive overall state plan, an annual implementation plan, a medical facilities plan and many steps in gaining final designation and approval. Fortunately Rhode Island had come far enough in its earlier planning mechanisms that it already possessed many qualifying elements such as data systems, a certificate of need program and others.

There are already signs of need for amendment of some of the provisions of the original act, and it remains for the future to tell the story of its actual record of accomplishment.

CHAPTER THIRTEEN

A NEW CENTURY OF PUBLIC HEALTH BEGINS

(A Final Comment by the Department of Health)

With the passing of the first century of the operation of the Department, we have seen it grow from its simple beginnings as a small board with limited functions and little or no authority, becoming a large professional organization. Year by year, as we have seen, its functions have grown, with authority based on a complex statutory fabric. We have seen the demise of municipal health departments, as the central State Department assumed responsibility and authority over their functions.

We have seen vast growth in the knowledge and techniques available to workers in the health field, profoundly changing the capabilities of the health worker, and with this, the growth of high, perhaps unrealistically high, public expectations. We have seen the rise of concern over rapidly increasing costs in the field of health services, and the resulting development of new systems of payment, both private and public, and with this, the accompanying expansion of regulation of the system.

We find ourselves, on the threshold of a second century, wondering what the future may hold. To forecast requires a certain temerity, but the temptation to prophesy is irresistible. Knowing that much that we foresee may be unwelcome, still there are certain well-established trends which can form a basis to project some of the changes that will presumably characterize the next generation or two.

Among these trends, the most predictable of all are the all-but-certain continuing problems with cost, access, quality, and equitable distribution of care. One can hardly doubt that as health care becomes more firmly established as one of the individual's basic rights, there will be need for further changes in systems of delivery, and of payment. The questions of how soon, and in what form remain unanswered, but it seems very probable that the next decade or two will see the United States join with most other countries of the World in making basic health care a government responsibility. It seems unlikely that this will happen all at once in a revolutionary fashion, but far more likely that the process will evolve gradually, by a sort of patch-work approach to the principal problems one by one. Every country that has gone down this road, barring those which have experienced a general social revolution, has developed its national services by extension of the system already in place. There seems no reason to doubt that we will do likewise.

Along with the predictable growth of government involvement, we can expect to see a gradual diminution of proprietary profit-making activities. With this, one can expect a further growth of rate-setting for institutions, and a trend toward salaried roles for health professionals with fee-for-service arrangements becoming less and less common. None of this will come easily and emotions will run high as change takes place.

A growth of regional networks of services, interrelated with one another will doubtless tend to develop, with considerable central authority over their development, function and operation.

One can hope that the ultimate system which emerges will be simple, cost-effective, and equitable. It seems overwhelmingly likely, however, that much duplicative over-bureaucratization will appear and require re-thinking. Many other false starts and errors will surely occur. The close of another century may well not see a stable system with no further need for major change. Perhaps one should not expect any such complex human enterprise as this to become static or entirely satisfactory.

The allocation of functions within the body of health workers will surely continue to change. Despite the current interest in the preparation of physicians for family practice, scientific progress and costs of education can be expected, in the longer term, to create a top level of physicians with highly specialized skills well beyond those demanded today, leaving to other health professionals the responsibility for first-contact primary care.

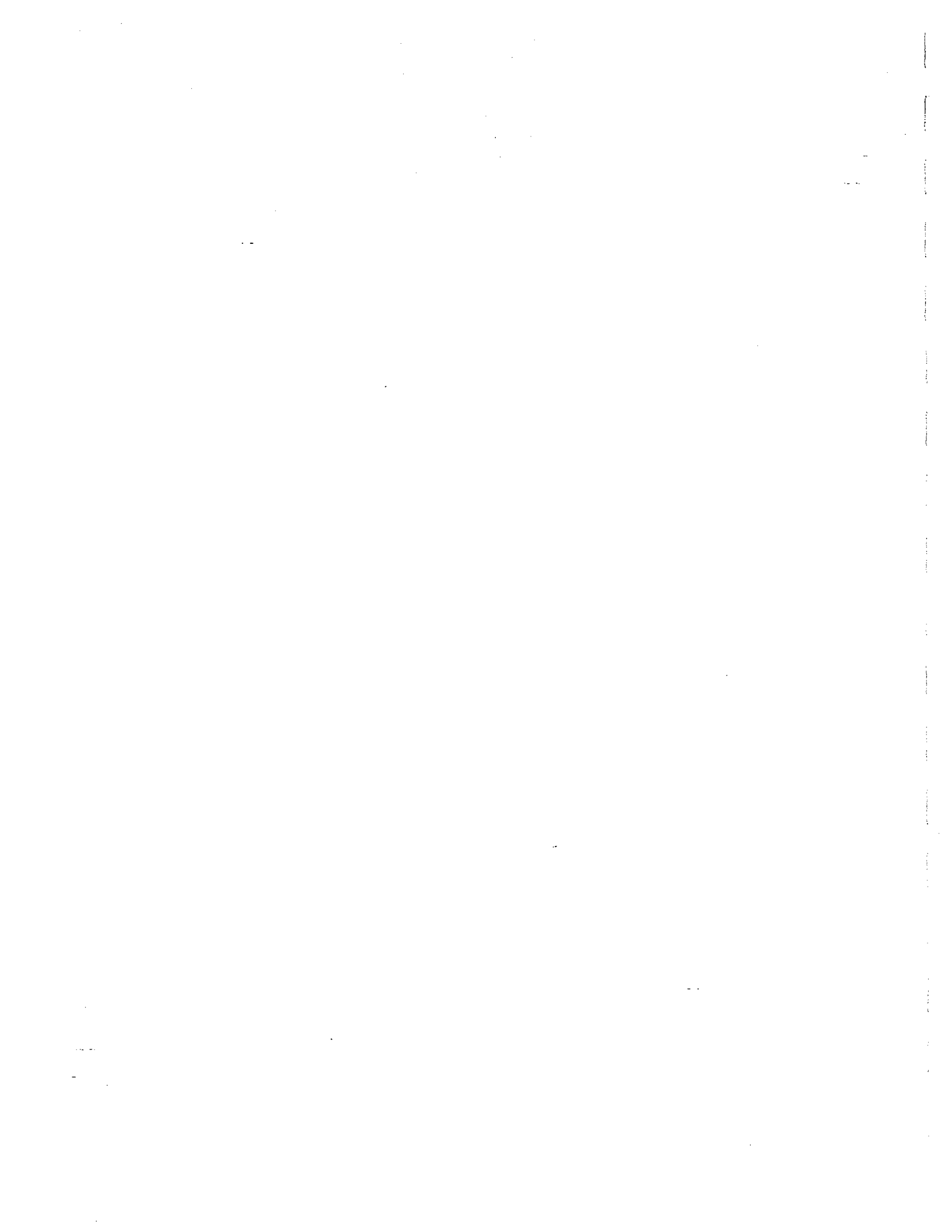
A second area of confident prediction leads us to expect much more scientific and technological advance. Which of our problems will be first to fall is not clear, but if one thinks of the current principal causes of death, Heart Disease, Cancer, and Stroke, one suspects that if a "break-through" is in the near future, it is most likely to be in the field of cancer. Man's growing ability to look within the cell and to probe the mysteries of genetic material, of DNA and RNA, holds forth the possibility of some overall solution to the cancer problem, perhaps in a few short years. Viral diseases, too, will probably soon yield to some of the insights that are arising in this field. At the same time, the prospects of genetic engineering will continue to pose new ethical questions which will require attention for many years.

If, let us say, an overall solution to cancer appears, one can confidently expect heart disease rates to increase. Immortality is not in prospect, but one can hope that less and less mortality will attend our productive years. More and more of our population will be elderly, and not only will their care become a problem, but their support will need to be improved. New definitions of retirement age, and new views of who is sufficiently elderly to become dependent will be required.

We will be probably be shocked many times by the reemergence of old health problems which we thought were defeated. From time to time, despite our best efforts, we will have visits from epidemic diseases for which effective immunization is available. It will be hard to continue our interest in our presumably defeated enemies, and we will occasionally find that we have let our guard down.

Population growth, and attendant industrial expansion will continue to create new problems, and man will more and more chafe against the finite space and resources of planet earth. The surveillance and control of our environment, and the conservation of resources will become more and more urgent.

One expects that there will be increasing tendency to place the primary responsibility for health on the individual, insofar as we are able to identify the varying risks attending choices of styles of life. Our very limited success in modifying health-related behavior to date, however, suggests that there will be many problems in trying to influence individuals to select long term health benefits ahead of short term satisfactions. Our knowledge of what constitutes preventive behavior is spotty and vague at many points, and one can hope that the growth of further knowledge of the determinants of disease and premature death will one day allow us to draft a more convincing behavioral prescription.

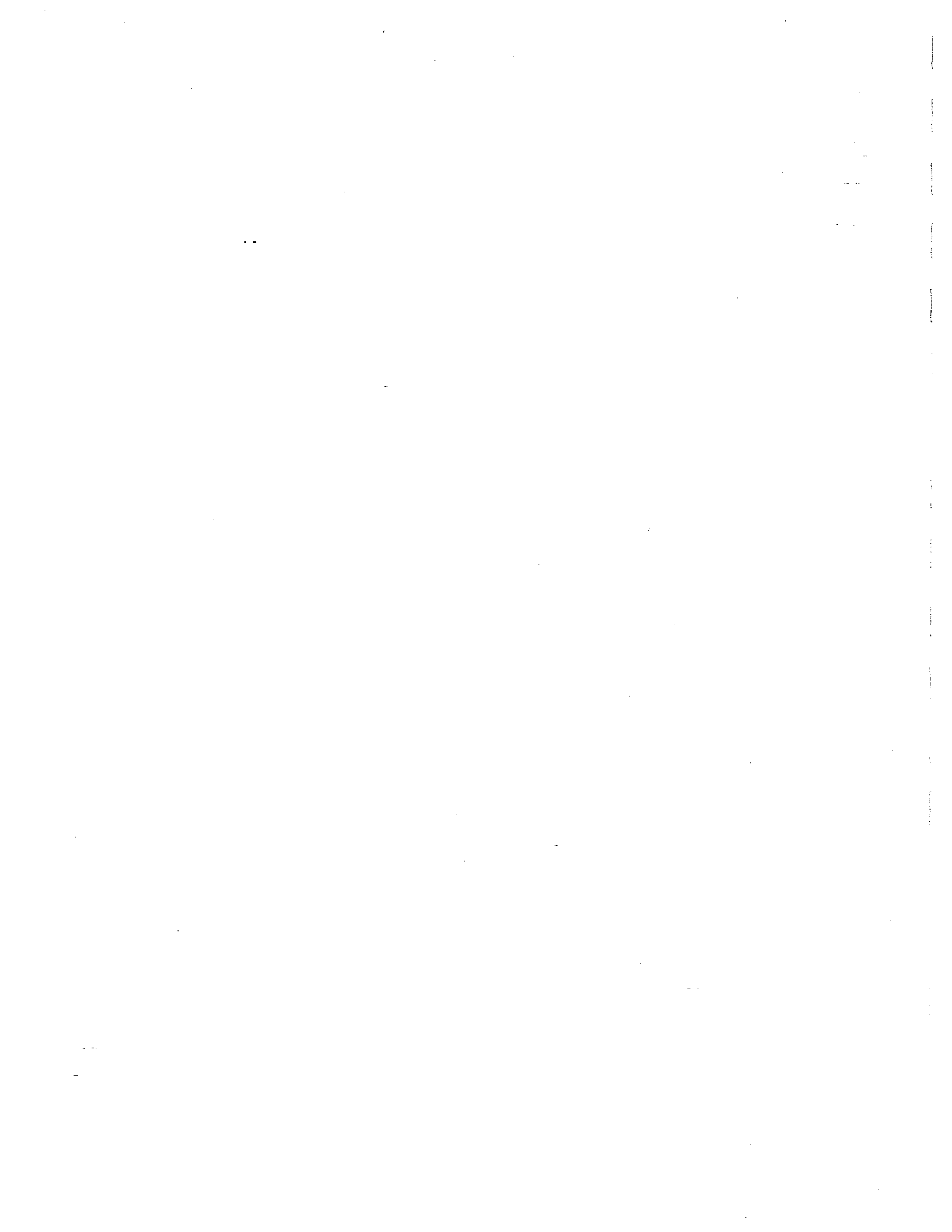


NOTE ON SOURCES*

Throughout the production of this history we have been heavily indebted to the Annual Reports of the Rhode Island Board of Health from 1878 to 1928, to the later annual reports of the Rhode Island Public Health Commission from 1929 to 1935 and to the Reports of the Rhode Island Department of Health extending from 1935 to the present. We have also had frequent recourse to a variety of occasional publications of the Department of Health, and to personal interviews with its staff, both active and retired. No attempt will be made to refer to these sources individually. In those instances where we have had the assistance of specific texts and journals, these will be numerically indicated according to the following list of references:

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