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TWENTY-FIRST BIENNIAL REPORT

OF THE

NORTH CAROLINA

STATE BOARD OF HEALTH

JULY 1, 1924 - JUNE 30, 1926
Members of the State Board of Health

Elected by the North Carolina Medical Society

Cyrus Thompson, M.D.
Term expires 1931

D. A. Stanton, M.D.
Term expires 1931

W. S. Rankin, M.D.
Term expires 1929

Thomas E. Anderson, M.D.
Term expires 1929

Appointed by the Governor

Richard H. Lewis, M.D., LL.D.
Term expires 1931

E. J. Tucker, D.D.S.
Term expires 1931

James P. Stowe, Ph.G.
Terms expires 1927

J. Howell Way, M.D.
Term expires 1929

A. J. Crowell, M.D.
Term expires 1929
Letter of Transmittal

Raleigh, N. C., December 1, 1926.

His Excellency, A. W. McLean,
Governor of North Carolina.

My Dear Sir:—Under authority of chapter 118, Article 1, section 7050, Consolidated Statutes of North Carolina, I have the honor to submit the Biennial Report of the State Board of Health for the period July 1, 1924, to June 30, 1926.

Very respectfully yours,

Chas. O'H. Laughinghouse,
Secretary and Treasurer.
Preface

Ten years ago the experiment was tried of including in the Biennial Report only that information not easily obtainable from other sources, and of omitting information largely of details and statistics of little general interest. The experiment proved so satisfactory that the same principles have since been followed. In the present report the arrangement by fairly independent sub-divisions is continued, so that it is possible to read and understand any part of the report without reading the entire report. An annual report of the vital statistics records of the State is now being issued.
Public Health Work in North Carolina

In the seventies Dr. Thomas Fanning Wood, of Wilmington, caught the vision of the possibilities of public health work to North Carolina. How fully he grasped the far-reaching consequences of his idea, how clearly he saw the ever-growing hosts of lives saved as a result of his vision and inspiration, we shall never know. We do know that the vision never left him, and that under its sway he worked, through the Medical Journal which he edited and through the North Carolina State Medical Society, until his influence reached the people of the State in their General Assembly of 1877, with the effect that on February 12, 1877, the North Carolina State Board of Health was born. Ours was the twelfth State board of health to be established.

Without treating the development of the newly-established board with that thoroughness that could be termed history, we think it enough to set down here in chronological order the principal events in the life and growth of the North Carolina State Board of Health.

1877. Board created. Consisted in the beginning of entire State Medical Society. Society acted through a committee. Annual appropriation, $100.

1878. First educational pamphlet issued. Subject, "Timely Aid for the Drowned and Suffocated." Annual appropriation, $100.

1879. The General Assembly reconstituted the Board of Health. Made it to consist of nine members: six appointed by the Governor, three elected by the State Medical Society. Term of office, five years. Dr. Thomas F. Wood elected first Secretary of the Board, May 21. Other legislative provisions: (1) Chemical examination of water, and (2) organization of county boards of health, composed of all regular practicing physicians and, in addition, the mayor of the county town, the chairman of the board of county commissioners, and the county surveyor. Four educational pamphlets issued. Subjects: "Disinfection, Drainage, Drinking-water, and Disinfectants;" "Sanitary Engineering;" "Methods of Performing Post-mortem Examinations;" "Limitation and Prevention of Diphtheria." Annual appropriation, $200.

1881. General Assembly passed a law requiring registration of vital statistics at annual tax listing; law ineffective. Annual appropriation, $200.

1885. General Assembly made county boards of health more efficient; allowed printing privileges not to exceed $250 annually. Annual appropriation, $2,000.


1888. Yellow fever epidemic in Florida and refugees to Western North Carolina demonstrated value of a Board of Health to cope with situation. Annual appropriation, $2,000.
1892. Dr. Thomas F. Wood, the Secretary of the Board, died August 22. Dr. Richard H. Lewis elected Secretary to succeed Dr. Thomas F. Wood, September 7. Annual appropriation, $2,000.

1893. Legislative provisions: (1) Laws improving the reporting of contagious diseases, (2) the protection of school children from epidemics, (3) protecting the purity of public water supplies, and (4) regulation of common carriers. Legislature provided that Governor appoint five of the nine members of the Board of Health, that the State Medical Society elect four, and that the term of office of the members of the State Board of Health be reduced from five to two years. The $250 printing limit was removed. Pamphlet on quarantine and disinfection was prepared and reprinted by many of the State papers. Annual appropriation, $2,000.

1894. A number of public health conferences were arranged and held in different towns of the State. Bulletin was increased from a mailing list of 800 to 1,200. Annual appropriation, $2,000.

1895. Dr. Albert Anderson and Dr. W. T. Pate were elected bacteriologists for the board. Annual appropriation, $2,000.

1896. Board passed a resolution requiring chemical and bacteriological examinations of municipal water supplies. Dr. Venable of Chapel Hill, undertook the chemical examination, and Drs. Anderson and Pate the bacteriological examination. Board also directed Mr. John C. Chase, the engineer member, to inspect all municipal water plants in the State. Annual appropriation, $2,000.

1897. General Assembly enacted law requiring county superintendents of health to be elected by county commissioners, and reduced term of office to one year. Annual appropriation, $2,000.

1899. General Assembly improved the laws protecting public water supplies. Smallpox prevailed extensively in the State. Dr. Henry F. Long, and later, on Dr. Long's resignation, Dr. Joshua Tayloe were employed to travel over the State, consulting with and advising the local sanitary authorities as to proper means for protecting the public. Annual appropriation, $2,000.

1900. State Board of Agriculture, on request of State Board of Health, agreed to examine samples of water from public water supplies until Board of Health could provide its own examiner. Annual appropriation, $2,000.

1901. State Board of Embalmers, with representatives of State Board of Health, established. County health work placed in the hands of county sanitary committees composed of county commissioners and two physicians which commissioners elected to serve with them. Term of office of county superintendent of health made two years. Annual appropriation, $2,000.

1903. General Assembly enacted law permitting Board of Health to charge $5 for each analysis of a public water supply, this fee to be used in paying Department of Agriculture for services of examiner. Dr. C. W. Stiles, U. S. P. H. S., before the State Medical Society at Hot Springs, called attention to prevalence of hookworm disease in the South. Dr. J. L. Nicholson and Dr. W. S. Rankin, working under State Board of Health during fall
of 1903 and spring of 1904, showed great prevalence of this disease in North Carolina. Annual appropriation, $2,000.

1904. A stenographer was employed. One hundred and twenty thousand pamphlets on tuberculosis were printed and distributed. There was a renewal and an extension of coöperative work between the Board of Health and the State press, a number of articles dealing with hygienic and sanitary subjects being furnished the papers and published in them. Annual appropriation, $2,000.

1905. General Assembly established State Laboratory of Hygiene; imposed water tax of $64 on all public water companies; voted $600 annually for support of Laboratory. Small appropriation made it necessary for the Department of Agriculture to continue to assist State Board of Health. Annual appropriation, $2,600.

1906. The North Carolina Association for the Study and Prevention of Tuberculosis was organized. Annual appropriation, $2,600.

1907. Two thousand dollars appropriated for the State Laboratory of Hygiene. Pasteur treatment provided. State Sanatorium for treatment of tuberculosis founded: $15,000 appropriated for permanent improvements and $5,000 for maintenance. A law requiring the separation of tuberculous prisoners from other prisoners was enacted. Annual appropriation, $4,000.

1908. January 1, Dr. C. A. Shore became Director of State Laboratory of Hygiene. Annual appropriation, $4,000.

1909. General Assembly provided for (1) whole-time State Health Officer; (2) collection of vital statistics of towns having a population of 1,000 or over; (3) that all public water companies file plans and specifications of their plants with the State Board of Health, and that the State Board of Health pass necessary rules and regulations for the care of public watersheds and plants and furnish such rules and regulations and other advice to those having charge of public water supplies; (5) that counties provide free diphtheria antitoxin for county indigents, and (6) that the maintenance appropriation for the Sanatorium be increased from $5,000 to $7,500, and an additional $30,000 be granted for permanent improvements. Dr. Richard H. Lewis resigned as Secretary of the Board, and Dr. W. S. Rankin was elected as his successor, beginning his official work July 1. Annual appropriation, $10,500.

1910. General effort to interest the people and State organizations in public health work. Bulletin increased from 3,500 edition to 10,500 edition. Addresses on public health work delivered to Conference of County Superintendents of Schools, State Federation of Women's Clubs, State Press Association, and Sanitary Sunday observed in April. Dr. John A. Ferrell elected, February, Assistant Secretary for Hookworm Eradication; began work under State Board of Health and Rockefeller Sanitary Commission. First effort in the eradication of hookworm disease was to interest school teachers, in the disease and through their assistance examine and treat the children, and thereby reach the community. Three bottled spring waters sold on the market examined, found polluted, and public attention called to the pollution. Annual appropriation, $10,500.
1911. Legislature established county boards of health to take the place of the county sanitary committees; county board of health composed of chairman board of county commissioners, county superintendent of schools, mayor of county town, and two physicians selected by the three county officials to serve with them. Legislature also abolished quarantine for smallpox and improved the quarantine laws. One thousand dollars annually appropriated to contract with antitoxin manufacturers for State supply of high-grade diphtheria antitoxin, with result that price of antitoxin was cut to one-fourth former price, saving the citizens of the State over $30,000 annually. Bulletin increased from 11,500 copies to 20,000 copies each edition; closer cooperation with press of State developed; regular weekly press articles prepared and sent to papers; increase in numbers of popular pamphlets for distribution. Hookworm work this year largely educational through the school forces and investigative through county dispensaries; thousands of children found infected and treated. Strong sentiment began to make itself felt for better health work by counties, four counties employing whole-time county health officers. Maintenance appropriation for State Sanatorium increased to $12,500, with $20,000 voted for permanent improvements. Annual appropriation, $22,500.

1912. Bulletin increased to 40,000 edition; number of popular pamphlets dealing with different diseases increased; press work improved; educational work of Board along all lines amplified. Secretary of Board of Health called attention of conjoint meeting of State Medical Society and State Board of Health to the relative importance of health problems and the bearing of this subject upon the proper apportionment of health funds; instrumental in passing a resolution to the effect that pellagra was an interstate problem, not a State problem, and requesting the Federal Government to deal with pellagra as a Federal problem; resolution responsible, to considerable extent, for successful effort on part of Hon. John M. Faison's securing Congressional appropriation of $45,000 for the study of pellagra by the Federal Government. Hookworm work extended and county funds appropriated to supplement State and Rockefeller Foundation for this work. Annual appropriation, $22,500.

1913. General Assembly passed Model Vital Statistics Law with $10,000 appropriation for its enforcement. County superintendents of health changed to either county physician or county health officer. Educational efforts of Board continued and enlarged. Hookworm work along same line as year before increased in amount. Dr. John A. Ferrell resigned as Assistant Secretary to accept position with the central office of the Rockefeller Sanitary Commission in Washington, D. C. Dr. C. L. Pridgen succeeded Dr. Ferrell. The movement for improved county health work had by this time resulted in ten counties electing whole-time county health officers. The State Sanatorium for Treatment of Tuberculosis turned over by Extra Session of 1913 to the management of State Board of Health. Annual appropriation, $40,500.
1914. Preceding work of the Board continued. Board of Health took over management of Sanatorium; started out under many difficulties on account of the institution owing many debts and the appropriation being limited. Hookworm work changed to community work directed to the installation of sanitary privies in all homes. Laboratory began to produce and distribute free antityphoid vaccine. Dr. C. L. Pridgen resigned as Director Hookworm Eradication, and Dr. W. P. Jacocks succeeded him. Annual appropriation, $40,500.

1915. General Assembly makes State vital statistics law conform to National model by requiring burial permits in rural communities; enacts legislation permitting county commissioners and towns and cities to appropriate money for support of tuberculous citizens in State Sanatorium; provides $15,000 for purchase and building of antitoxin plant; appropriates $60,000 for payment of Sanatorium debts and new buildings and other improvements, and $25,000 annually for maintenance and $10,000 for extension anti-tuberculosis work. Educational work greatly extended: Bulletin now 47,000; traveling public health exhibit shown at fairs and other assemblages; press work greatly developed through employment of journalist for whole time; stock lectures with lantern slides supplied public speakers in different parts of the State; community soil pollution work under Dr. W. P. Jacocks stops in May, and Bureau of County Health Work with Dr. G. M. Cooper at its head, succeeds, beginning work in June. Considerable amount of work done for improvement of prison conditions. The unit system of county health work gets a good start: over 52,000 people given three complete vaccinations against typhoid fever, and medical inspection of schools put on in one county. Annual appropriation, $50,500.

1916. North Carolina was admitted to the Registration Area for deaths. To the educational agencies of the Board was added a self-supporting moving picture health show. Many saw this show during the year, and, seeing, believed in health work as never before. Bulletin had to be discontinued temporarily for lack of printing funds, but before discontinuance reached 51,000 edition. Co-operation with University in developing a plan and putting on a home post-graduate course in medicine, giving first course to 169 doctors. Put into operation an optional system of hotel inspection, with grading and publishing scores. Continued unit system of county health work, giving three anti-typhoid injections to 48,000, making 100,000 immunized in summers of 1915 and 1916. Did complete medical inspection of five counties and with inspection a large amount of educational work as to sanitary and hygienic living. Secured effort by Federal Children's Bureau to develop unit of child hygiene work, the Bureau using two employees to work in Cumberland and Swain counties for about eight months. Laboratory of Hygiene buys land and erects its own building. Sanatorium making a decided impression on the State. Annual appropriation, $55,500.
1917. The General Assembly passed the following important health legislation: Chapter 263, entitled "An act to prevent and control the occurrence of certain infectious diseases in North Carolina;" chapter 244, entitled "An act to provide for the physical examination of the school children of the State at regular intervals;" chapter 276, entitled "An act for the coöperative and effective development of rural sanitation;" chapter 257, entitled "An act to prevent blindness in infancy, designating certain powers and duties and otherwise providing for the enforcement of this act;" chapter 66, entitled "An act to provide for the sanitary inspection and conduct of hotels and restaurants;" chapter 286, entitled "An act to regulate the treatment, handling and work of prisoners."

Following the enactment of this legislation, administrative machinery, consisting of a Bureau of Epidemiology under the direction of Dr. A. McR. Crouch, a Bureau for the Medical Inspection of Schools under the direction of Dr. Geo. M. Cooper, and a Bureau for County Health Work, under the direction of Dr. B. E. Washburn, was established. Dr. Washburn, an officer of the International Health Board, was loaned to the State without cost and the International Health Board, in addition to furnishing Dr. Washburn, appropriated $15,000 annually for rural sanitation in accordance with the provisions of chapter 276.

The United States Public Health Service in February, 1917, detailed Dr. K. E. Miller to study county health work in different sections of the country and to establish for demonstration purposes, in Edgecombe County, department of health on an economic basis easily within the financial reach of the average county.

The State Laboratory of Hygiene moved into its own building January 15, 1917.

The State was admitted to the registration area of the Union for births in January, 1917, the Bureau of the Census having found after investigation that our birth registration was 96 per cent. complete.

The special campaign against typhoid fever begun so satisfactorily in 1915, was continued. Free vaccination of the people, however, was interfered with by the difficulty in securing medical officers to do the work, the preparedness program of the Government having caused many physicians and nurses to enter the Army and Navy; nevertheless, a total of 30,000 citizens of the State were vaccinated as a direct result of the Board's activities, and many thousands of others were vaccinated by the physicians of the State as a result of the educational work of the Board directed to impressing the people with the value of vaccination as a means of prevention for typhoid fever.

In December, 1917, life extension work as developed by the Life Extension Institute of New York, which consisted briefly of the free physical examination of interested citizens for the purpose of advising them as to their physical condition and needed hygienic reform and medical treatment, was begun on a county basis. The funds necessary for this work were appropriated
partly by the State and partly by the counties in which the life extension work was carried out. Dr. Amzi J. Ellington, who at the time was a resident physician in the New York City Hospital and who had during his residency in that institution studied the methods of the Life Extension Institute under Dr. Eugene Lyman Fisk, was employed and placed in charge of the work. Life extension work was carried out in Vance, Alamance, Lenoir and Robeson counties, and resulted in the full physical examination of 4,000 citizens. This work was very favorably received, and the outlook for its continued development seemed excellent when, with the declaration of war and the call for physicians to enter the military service of the country, Dr. Ellington enlisted in the Medical Corps of the Army. For this reason, and for the further reason that it has been almost impossible to secure health officers during the past two years, the work was not resumed.

The educational work of the State Board of Health consisted in the issuance of eight Bulletins, each monthly edition amounting to 45,000, and a daily newspaper health article. The Bureau continued its moving picture show exhibit and, in addition, prepared probably the best three-dimension educational exhibit in the United States. In 1917 the following exhibits were given: motion picture entertainments, 236; traveling public health exhibits, 32; special exhibits, 58; stereopticon entertainments, 3—to a total of 95,000 people. Arrangements were made for the preparation of newspaper plate, which was sent to and extensively used by 202 papers having a total circulation of 303,000. A large part of this newspaper material was prepared by the well-known authority and publicist in matters of sanitary and hygienic education, Dr. W. A. Brady, of Elmira, New York.

The annual appropriation for the State Board of Health was $60,772.16. The annual appropriation for the State Laboratory of Hygiene was $12,500, and this, in addition to $9,087.22 in fees permitted under the laws of the State to be paid to the Laboratory for special work, provided the Laboratory with a total annual budget of $21,587.22.

1918. Much of the work this year was influenced by the war and had to do with preparedness. The State Health Officer visited Washington, at the request of the Council of National Defense and as chairman of a committee of State Health Officers, on a number of occasions for conferences with respect to preparedness measures, provisions for the control of venereal diseases, arrangements for coordinating the control of infectious diseases in the civilian population with their control in cantonments, and to arrange, if possible, with the Public Health Service and the Surgeon-General of the Army for preserving the personnel of State health departments during the war. The State Health Officer also made a visit to the States of South Carolina, Georgia, Alabama and Florida for the Council of National Defense in order, if possible, to interest the Governor, the State Board of Health, and the State Council of Defense in venereal disease control.
Considerable time was given to assisting Major John W. Long, Medical Aide to the Governor, in the work of organizing the Medical Advisory Boards and in interesting physicians in entering the medical service of the Army and Navy, and, later in the year, in inducing the physicians of the State to become members of the Volunteer Medical Service Corps.

Partly as a result of these activities, the Surgeon-General of the Army assigned Major Joseph J. Kinyoun to assist the State Board of Health in the control of communicable diseases, the Board being under no financial obligation for Major Kinyoun's assistance; and as a result of the successful termination of the activities of various interests looking to a more effective control of venereal diseases, the Kahn-Chamberlain Bill passed Congress, and made available to the State of North Carolina, and without condition $23,988.61 for venereal disease work.

The Laboratory during this year began the distribution of a high grade of diphtheria anti-toxin.

The Bureau of Medical Inspection of Schools developed, and with a degree of success that we may say established, free dental clinics for the public schools of the State. The Bureau also developed to a successful extent an arrangement in the form of adenoid and tonsil clubs for the practical and economic treatment of public school children suffering from these defects.

The Bureau of Epidemiology employed two third-year medical students, equipped them with motorcycles, and put them into the field to investigate infringements of the quarantine law. Sufficient convictions were obtained to impress the medical profession with the determination of the State to enforce its health laws, and a fairly satisfactory compliance with the laws regarding the reporting of communicable diseases was brought about.

The Bureau of Venereal Diseases, paid for by the Federal appropriation, was established in September under the directorship of Dr. James A. Keiger, of Charlotte, N. C.

Mr. Warren H. Booker, for the last seven years the efficient director of the Bureau of Engineering and Education, left in September for Red Cross work in France, the work of his bureau being continued, with the exception of the engineering work, by Mr. Ronald B. Wilson. As a result of Mr. Booker's leaving, certain funds became available, and a Bureau of Infant Hygiene, under the directorship of Mrs. Kate Brew Vaughan, was organized late in 1918.

Perhaps the most outstanding feature of the health work during the year 1918 was the epidemic of influenza. The epidemic began early in October and caused in October alone 6,056 deaths; in November 2,133 deaths; and in December 1,497 deaths, a total during the last three months of 9,686 deaths.

The annual appropriation for the State Board of Health for 1918 was $73,210.38.

The annual appropriation for the State Laboratory of Hygiene was $12,500. The Laboratory, during this year, collected $8,532.48
in fees for special work, so that the total income of the Laboratory for this year was $21,032.48.

1919. The General Assembly passed the following important health legislation: Chapter 71, entitled "An act to prevent the spread of disease from insanitary privies;" chapter 192, entitled "An act to provide for the physical examination and treatment of the school children of the State at regular intervals;" chapter 206, entitled "An act for the prevention of venereal diseases;" chapter 213, entitled "An act to require the provision of adequate sanitary equipment for public schools;" chapter 214, entitled "An act to obtain reports of persons infected with venereal diseases;" chapter 215, entitled "An act for the repression of prostitution;" and chapter 288, entitled "An act to amend chapter 671, Public-Local Laws of 1913, relating to the injunction and abatement of certain nuisances."

The Bureau of Engineering and Inspection was organized in April. The engineering work of the Board had been suspended with the resignation of Mr. Warren H. Booker in September, 1918, Mr. Booker having gone to France to engage in tuberculosis work under the direction of the Red Cross. Between September, 1918, and April, 1919, the engineering problems coming before the Board had been referred and very kindly and effectively taken care of by Col. J. L. Ludlow of Winston-Salem. Mr. H. E. Miller, an engineer and a graduate of the University of Michigan, was placed in charge of the new bureau, and his brother, Dr. K. E. Miller, of the United States Public Health Service, was detailed by the Service to assist him in the organization of his work. Mr. H. E. Miller and Dr. K. E. Miller spent the spring and summer and a part of the fall in studying various types of privies, in preparing plans for the construction and maintenance of privies, and in preparing the necessary notices and literature to inform the people of the objects and requirements of the new privy law.

On May 1st Dr. A. J. Warren, health officer of Rowan County, was appointed to and accepted the position of Assistant Secretary of the Board.

On July 1st Mr. R. B. Wilson accepted the position of Director of Public Health Education.

On August 1st Dr. A. McR. Crouch, Director of the Bureau of Epidemiology, resigned to accept a position with the city of Wilmington. Dr. F. M. Register, whole-time health officer of Northampton County, succeeded Dr. Crouch as director of the bureau.

In September Dr. J. R. Gordon, Director of the Bureau of Vital Statistics since 1914, resigned on account of impaired health, and on October 1st the Bureau of Epidemiology and the Bureau of Vital Statistics were combined and placed under the direction of Dr. Register.

In September Mrs. Kate Brew Vaughan, Director of the Bureau of Infant Hygiene, resigned. The bureau was reorganized under an understanding with the American Red Cross and was enlarged to include, in addition to infant hygiene, the problem of public
health nursing, the name of the bureau being changed to that of "Bureau of Public Health Nursing and Infant Hygiene." Under the agreement with the Red Cross this bureau was to have an available appropriation of $12,000 a year, half of which was to be furnished by the American Red Cross and half by the State Board of Health. The personnel of the bureau and its plan of work, under the agreement, was made contingent upon the approval of both participating agencies, the American Red Cross and the State Board of Health. In December Miss Rose M. Ehrenfeld took charge of the new bureau and began its organization and work.

On October 1st Dr. Jas. A. Keiger, Director of the Bureau of Venereal Diseases, resigned and Dr. Millard Knowlton was appointed to succeed him.

The typhoid campaign carried on during the summer through previous years, was continued in the summer of 1919, using third-year medical students, furnished either with automobile or motorcycle for getting about. Campaigns were carried out in the following counties: Bertie, Cabarrus, Chatham, Chowan, Columbus, Craven, Hertford, Iredell, Johnston, Lincoln, Onslow, Pasquotank, Perquimans, Randolph, Richmond, Rockingham, Stanly, Union, Warren, Wayne. A total of 49,076 were given complete vaccinations.

The educational work of the Board consisted of the publication of a 48,000 monthly edition of the Bulletin, and the distribution of about 350,000 pieces of public health literature.

The funds available during this fiscal year amounted to $198,549.14, of which $102,301.98 was from State appropriations and the remainder from outside sources.

The appropriation for the State Laboratory of Hygiene for this year was $28,500; in addition to this, the Laboratory collected in fees for special work, for anti-toxin, and in water taxes a total of $14,344.02, making a total of $42,844.02 available for work of Laboratory.

1920. During this year there was a Special Session of the General Assembly, lasting twenty days and held in the latter part of August. This Special Session passed an act amending the vital statistics law, making the fees for local registrars 50 cents instead of 25 cents for each certificate properly filed with the State Board of Health.

On January 1st Dr. B. E. Washburn, who had had general direction of the cooperative county health work and who had rendered most acceptable service, was recalled by the International Health Board and detailed to take charge of their interests in Jamaica. Dr. K. E. Miller, of the United States Public Health Service, who had been detailed in January, 1917, to organize a model county health department in Edgecombe County and then, in 1919, to assist his brother, Mr. H. E. Miller, in organizing the work of the new Bureau of Engineering and Inspection, to which was assigned the duty of enforcing the State-wide privy act,
succeeded Dr. Washburn as Director of the Bureau of County Health Work.

In January a co-operative effort with the United States Public Health Service and the International Health Board to demonstrate the possibilities and advantages of the eradication of malaria from certain towns and cities in the eastern part of the State was begun. The terms of coöperation were that the International Health Board and the State Board of Health were to pay one-half of the expenses of the local work and the town or city in which the work was done the other half, the Public Health Service furnishing, as its part, expert supervising personnel. The towns and cities chosen for this work were Goldsboro, Farmville, and Greenville, the budgets for each municipality being, respectively: Goldsboro, $13,670.98; Farmville, $5,000; and Greenville, $9,000, a total investment in this work of $27,670.98. Mr. A. W. Fuchs, Associate Sanitary Engineer, was detailed by the Service to have supervision of the work.

In February Dr. A. J. Warren, Assistant Secretary of the State Board of Health, resigned his position in order to accept the appointment of city health officer of Charlotte, N. C.

In the winter and spring of 1920, the North Carolina Landowners Association, under the progressive leadership of Mr. W. A. McGirt, of Wilmington, undertook a very extensive educational campaign against malaria, which was carried on through the public schools of thirty-eight counties in Eastern North Carolina. A series of county and State prizes for the best essay on malaria by public school children were offered as an inducement to the school children to interest and inform themselves, and, indirectly, their parents, with regard to the importance of this disease. To make possible this work by the school children 75,000 malaria catechisms, prepared by Dr. H. R. Carter, of the United States Public Health Service, were distributed through the public schools of the eastern part of the State to the school children. Thousands of essays were written, and it is reasonable to believe that the campaign was one of the most successful public health educational attempts yet undertaken.

In June it was found advisable to separate the Bureau of Epidemiology and the Bureau of Vital Statistics which had, on account of the scarcity of health officers, been placed under the directorship of a single bureau chief, Dr. F. M. Register. Dr. Register was appointed Director of the Bureau of Vital Statistics and Dr. J. S. Mitchener was appointed Director of the Bureau of Epidemiology.

In April the Interdepartmental Social Hygiene Board assigned to the State Board of Health several workers for making a study of vice conditions in North Carolina towns and cities and for taking such steps as were found expedient for decreasing prostitution. This group of workers was withdrawn in September, on account of differences developing between them and Dr. Knowlton, chief of the Bureau of Venereal Diseases, with the understanding
that another group of workers would be assigned to this work at a later date.

In June arrangements were made with the United States Public Health Service and the American Social Hygiene Association for the development of an elaborate educational unit on sex hygiene and venereal diseases designed to reach rural meetings through the use of picture films and a portable truck. An outfit consisting of several lectures and a moving picture truck began work in Cumberland County in August, and from its very beginning met a most cordial reception and gave every promise of developing into one of the most useful agencies for dealing with the venereal disease problem.

During the year the anti-typhoid vaccination campaign was continued in Alamance, Bladen, Columbus, Duplin, Franklin, Gaston, Harnett, and Mecklenburg counties. Coöperative campaigns, in which the counties furnished the working personnel, were also carried on in Anson, Johnston and Rutherford counties. A total of 29,435 citizens have been vaccinated against the disease, and this does not include Columbus County, in which the work was just beginning when this report was completed.

The educational work of the State Board of Health during this year consisted of a 48,000 monthly edition of the State Board of Health Bulletin and the distribution of approximately 350,000 pieces of public health literature.

The funds available during this fiscal year amounted to $342,284.33, of which $176,152.61 was State appropriation and the remainder from outside sources.

The appropriation for the State Laboratory of Hygiene for this year was $25,000; in addition to this, the Laboratory collected in fees for special work, for antitoxin and in water taxes, a total of $13,698.89, making a total of $38,698.89 available for the work of the Laboratory. The above amount being insufficient, the Special Session of the Legislature authorized a loan of $15,000 to enable the work of the Laboratory to be carried on, making a total of $53,698.89 available for the work of the Laboratory during this year.

1921. The Legislature meeting early in January of this year was asked by the Board to amend the State law restricting the salary of the executive officer of the Board to $3,000 annually, so as to make the salary $5,000. Such an amendment was passed. A further request from the Board was that legislation be enacted removing the inspection tax of forty cents from privies coming under the supervision of the Board of Health. Such an amendment to the State-wide Privy Law was also enacted. A bill was introduced in this session of the General Assembly under the initiative of Hon. Emmet H. Bellamy requiring a physical examination of all applicants for marriage and making issuance of license contingent upon the physical qualifications of the applicant. The State Board of Health approved and supported Mr. Bellamy's bill, realizing, as did the author of the bill, that the proposed legislation was but a step in the right direction and was,
therefore, rather loosely drawn and left many things to be desired. The bill finally passed in amended form as chapter 129, Public Laws of 1921.

The general health of the State for 1921, as indicated in the vital statistical records for that year, published by the United States Bureau of the Census, was good, and there was an improvement in reduced death rates for a number of diseases, as well as a reduction in the general death rate over previous years.

Another general condition of State-wide importance with a vital bearing on the work of the Board of Health which had to be taken into account was a considerable amount of misunderstanding between respective groups of the medical profession and the Board of Health regarding matters of policy. Many physicians, men in good standing professionally and men with high civic ideals, seemed to feel that the Board of Health had no well-considered and reasonable objectives in the field of public health as it is related to that of private practice. This general condition was responsible for the Board of Health seeking and availing itself of opportunities to meet the profession, both in county, district and State societies, and to discuss with the profession what it conceived to be the proper relation between public health activities and professional practice. This subject was presented to and considered by the State Medical Society in its conjoint meeting with the State Board of Health at Pinehurst in April, 1921. See transactions Medical Society of the State of North Carolina, pages 472-506. As a result of these various conferences between representative men engaged in public health work and the profession, the general condition of misunderstanding and some little friction had disappeared to a large extent by the latter part of the year. Nevertheless, the results of contact between those engaged in social medicine and private practice were such as to encourage further conferences and efforts to bring about a fuller recognition of mutual interests on the part of the public and the profession, and the ultimate adoption of a program of relations which would be to the mutual advantage of both parties.

Perhaps the most important change inaugurated in State health administration during this year was the adoption of a cost basis for standardizing and measuring the efficiency of public health work in those counties in which the State participated financially. This new principle is fully described in the State Board of Health Bulletin for January, 1922, and a further discussion of cost basis for public health work is unnecessary here except, perhaps, to say that it is apparently at least one of the first attempts to introduce the cost system of industry into government.

The Bureau of Venereal Diseases, in charge of Dr. Millard Knowlton, established as a part of the war-time activities of the Board in cooperation with the Bureau of Venereal Diseases of the Federal Government, was combined with and made a part of the work of the Bureau of Epidemiology, under the general direction of Dr. J. S. Mitchener.
Funds available for the year included: State appropriation, $275,000; miscellaneous receipts, $164,184.42; total, $439,184.42.

1922. In order to bring the records of this department into harmony with those of other State departments, in accordance with the act of the General Assembly of 1921, changing the fiscal year of the State so as to begin on July 1st each year, this report ends with June 30, 1922. It, therefore, covers a period of nineteen months; one full fiscal year from December 1, 1920, to November 30, 1921; seven months from December 1, 1921, to June 30, 1922. Effective February 1, the American Red Cross Society abrogated the agreement existing since 1919 by which it jointly financed with the Board of Health, the Bureau of Public Health Nursing and Infant Hygiene. This bureau was reorganized April 1 as the Bureau of Maternity and Infancy, for its maintenance the State receiving $27,259.66 annually from the United States Government in accordance with the Sheppard-Towner Act for the promotion of the welfare of mothers and infants. Dr. K. P. B. Bonner of Morehead City, was secured as the director of the reorganized Bureau, with Miss Rose M. Ehrenfeld as supervisor of nursing and Mrs. T. W. Bickett in charge of educational work.

The funds available during this period, and their distribution, were seven-twelths of the amounts set out under the tabulation for 1921.

The appropriation for the State Laboratory of Hygiene for the nineteen months between December 1, 1920, and June 30, 1922, was $87,083.33; in addition to this, the Laboratory collected in fees for special work, for anti-toxin, and in water taxes, a total of $30,872.51, making a total of $117,955.84 available for the work of the Laboratory.

1922-23. In order to further develop local responsibility for the protection and promotion of the public health, and to quicken local initiative, a policy of decentralization was adopted by the Board. To carry out this policy there were made several changes in the organization of the Board's executive staff. The Bureau of County Health Work was discontinued. The Bureau of Epidemiology was combined with the Bureau of Vital Statistics. Dr. G. M. Cooper, director of the Bureau of Medical Inspection of Schools, was appointed Assistant Secretary, and Dr. J. S. Mitchener, director of the Bureau of Epidemiology, was transferred to the Bureau of Medical Inspection of Schools. Dr. K. E. Miller, who for four years had been loaned to the Board by the United States Public Health Service, and had directed the work of the Bureau of County Health Work, was recalled for duty elsewhere. The State was divided into four districts with Dr. E. F. Long, Dr. H. A. Taylor, Dr. M. L. Ilsley, and Miss Rose M. Ehrenfeld as district directors. This plan of organization became effective in the early spring of 1923 and was continued through the calendar year.

Six vacancies in the membership of the Board occurred during the year, four by expiration of term, and two by resignation. The terms of Dr. J. Howell Way of Waynesville, and Dr. A. J. Crowell of Charlotte, appointed by the Governor, expired, and
they were respectively appointed to succeed themselves. The terms of Dr. Charles O'H. Laughinghouse of Greenville, and Dr. Thomas E. Anderson of Statesville, elected by the State Medical Society, expired, and they were respectively re-elected. Mr. Charles E. Waddell of Asheville, appointed by the Governor in 1921, resigned and as his successor the Governor appointed Mr. James P. Stowe of Charlotte. Dr. F. R. Harris resigned to become health officer of Vance County, and to fill the unexpired term the Board elected Dr. D. A. Stanton of High Point. Dr. J. Howell Way was re-elected president of the Board.

The General Assembly of 1923 made provision for the constantly growing work of the Board, approving the budget as submitted and appropriating for the Board the sum of $425,000. Legislation enacted included an act to provide for the sanitary manufacture of bedding, to create an independent board of directors for the State Sanatorium, and to provide sanatorium facilities for tuberculosis convicts.

The important new development during the year was the beginning of malaria control work in certain counties of the coastal plain area of the State. Through the courtesy of the International Health Board a member of its field staff, Dr. H. A. Taylor, was loaned to the Board for the purpose of making preliminary surveys, and areas in Lenoir and Pamlico Counties were selected for investigation. The results showed Pamlico County to be suitable for the initial demonstration, and a unit for the investigation and control of malaria was organized with Dr. Taylor as the director, the budget being contributed forty per cent. by the county, forty per cent. by the State, and twenty per cent. by the International Health Board. The progress of the work, and the results achieved, proved so satisfactory that in January, 1923, an additional unit was organized in Beaufort County, and in May Craven and Bladen counties were added to the list. Detailed résumés of this work is given elsewhere in this report, but it should be stated here that the success of the intensive malaria control measures has been even greater than was anticipated. While specializing on malaria control measures, the county units have at the same time carried on a general program of public health work. The International Health Board has continued its co-operative aid in giving twenty per cent. of the unit budget, and has continued the loan of Dr. Taylor, who has directed the work.

In June the resignation of Dr. J. S. Mitchener as director of the Bureau of Medical Inspection of Schools was accepted, and Dr. Roy C. Mitchell, who had been engaged in special educational field work, was appointed to the vacancy.

1923-24. The Committee on Municipal Health Department Practice of the American Public Health Association requested the Secretary of the Board to become field director for the Committee in making a study of municipal health practices in the United States for the purpose of working out with and for the Committee a basis or set of principles on and through which city health departments could be given classification or grading, and further for
giving such additional time as might be needed in assisting such departments in improving their organization and provision for work. The request was brought before a special meeting of the Executive Committee of the Board, and it directed the Secretary to take advantage of the opportunity offered to become acquainted intimately and broadly with health administration in the cities of the country, and at the same time continue to exercise general supervision of, and executive control over, the work of the Board. In January the Secretary established official headquarters in New York City for the work of the Committee, and the general organization of the executive staff of the Board was continued with the Assistant Secretary, Dr. G. M. Cooper, as administrative or director. During the period of his absence the Secretary has kept in close touch with the work of the Board through frequent reports and a number of visits to the office for conferences with members of the staff.

For the more efficient administration of the field activities of the Board the four districts into which the State has been divided the previous were consolidated into two, with Dr. E. F. Long and Dr. H. A. Taylor as Deputy State Health Officers, as directors, assisted respectively by Dr. C. N. Sisk, formerly health officer of Forsyth County, and Dr. George Collins, formerly health officer of Mecklenburg County.

At the annual meeting for the Board in April further steps were taken towards making effective the policy of decentralization adopted the previous year. This policy looks, in a broad way, to the diminishing of State personnel and the use of funds so made available for stimulating and paying county personnel, either whole or part time, to do work which formerly had been in all probability incorporated and carried on by full-time personnel employed by the Board. It was directed by the Board that all machinery and resources of the Bureau of Maternity and Infancy and of the Bureau of Medical Inspection of schools be converted into county machinery and resources, either full-time or part-time, the transformation to be brought about gradually to become effective not later than January 1, 1925.

During the year a plan for the more adequate sanitary control of public milk supplies in the State was formulated. The development of this important new undertaking was assigned to the Bureau of Engineering and Inspection. Mr. Malcolm Lewis, a graduate of Massachusetts Institute of Technology, and with about seven years of experience in public health work, was secured for this particular unit of work. As developed at the present time this service has been largely an advisory one, the various municipalities having at their command the aid of the Board in improving local milk supply conditions.

The malaria control campaign in the coastal plain area was enlarged by the addition of organized units in Columbus, Brunswick, and Hyde counties, making a total of seven counties in the State specializing on this plan of health work. The cooperative aid of the International Health Board was continued.
During the year Dr. Roy C. Mitchell, director of the Bureau of Medical Inspection of Schools, resigned. The work of the Bureau was continued under the supervision of the Assistant Secretary. Dr. M. L. Ilsley and Miss Rose M. Ehrenfeld, both district directors, resigned, and effective with the end of the fiscal year Dr. K. P. B. Bonner, director of the Bureau of Maternity and Infancy, resigned.

The appropriation by the General Assembly was $275,000 and $300,000 respectively for the two years of the biennium. For the Laboratory of Hygiene the appropriation was $75,000 annually.

The Present Biennium

During the period covered by this report the work of the Board was directed by Dr. G. M. Cooper as Acting Secretary. For the first year of the biennium the Secretary and State Health Officer, Dr. W. S. Rankin, was serving as field director of the Committee on Municipal Health Department Practices of the American Public Health Association. He was consequently away from the office practically all of the time. In June, 1925, Dr. Rankin resigned to accept the directorship of the Hospital and Orphanage Division of the Duke Foundation.

The Acting Secretary during the biennium had the aid of the Executive Committee of the Board in frequent meetings. The general plans and policies of the Board were continued. These are set forth in detail under the several divisions.

The appropriation to the Board was for 1924-5, $340,000 and for 1925-6, $319,644. For the Laboratory of Hygiene the appropriation was $70,000 annually.
THE NORTH CAROLINA STATE BOARD OF HEALTH

Its Organization, Problems, Methods of Administration, and Principles of Public Health Work

The North Carolina State Board of Health was created by an Act of the General Assembly of 1877. The appropriation for the work of the Board under the original Act was $100 annually. In the forty-seven years of its existence the Board has from time to time had its powers enlarged and its duties increased. For the fiscal year ending June 30, 1925, the appropriation for the work of the Board was $455,000, exclusive of that made for permanent improvements and maintenance for the State Sanatorium for the treatment of tuberculosis, and the educational work of that institution.

The North Carolina State Board of Health consists of the Board proper, composed of nine members, and the executive staff, which varies from time to time.

Of the Board proper, five members are appointed by the Governor of the State, and four are elected by the State Medical Society. The term of office is six years, and the terms are so arranged that not more than four vacancies will occur in any one year.

The organization of the Board embodies two important administrative principles: First, stability of organization and permanency of policies; second, the partnership of the State and the medical profession in the conservation of human life.

The stability of the organization of the Board of Health depends fundamentally upon the freedom of the Board from political changes brought about by either party or factional changes in the State government. The divorcement of the State Board of Health from politics depends largely upon the manner of selecting the members of the Board. Sudden or marked changes in the personnel of the Board under the present plan of organization are impossible. This is true, first, because the members of the Board of Health are appointed for terms of six years and their terms of service expire, not in the same years, but in different years. The appointment of new members of the Board, is therefore, gradual and not sudden. In the second place, the personnel of the Board of Health is selected by two parties: one, the Governor, and the other, the State Medical Society. It is far less likely that two parties naming a Board would be dominated by political considerations than where one party names the Board. This division of the appointive and elective power, and this provision for the gradual exercise of that power by two parties guarantee the State Board of Health against the sudden changes of personnel and policy associated with a purely political organization. The State Board of Health is stable; its individual members come and go, but as an organized body it has continuity.

This stability and continuity of organization is the responsible factor for the permanency of policies adopted by the Board. Political boards elected or appointed for two or four years are naturally inclined to adopt two- or four-year policies, to attempt to make the best showing possible during the short term of their official life. Their administrative thoughts and plans are largely defined by the time limitations of their administra-
tion. This is not true of self-perpetuating bodies such as the Board of Health, that, as legally constituted, has no limit to its life.

The second administrative principle embodied in the organization of the State Board of Health is the recognition by the State of the fundamental relation of the medical profession to the work of disease prevention and the conservation of human life. The State recognizes the debt of society to that profession by which nearly all of the experimentation and discovery on which disease prevention is based, with the exception of the work of Pasteur, was contributed; the interest of organized medicine in the conservation of human life and the peculiar ability of organized medicine to advise the State as to the methods of disease prevention; and the necessity of securing from the medical profession first information in regard to the occurrence of deaths and their causes, and the appearance of epidemics.

The executive staff of the Board consists of the executive officer and the heads of various bureaus or special divisions organized for the more efficient administration of policies and programs adopted by the Board.

The executive officer is the Secretary of the Board, and State Health Officer. He is elected by the Board for a term of six years. The duties of the office require that this official should be a man with technical training and experience, and, therefore, should be selected on account of his technical rather than of his political qualifications. It is, therefore, right that he should be selected by a specially qualified committee, that is, the State Board of Health, and not be elected in a general election, as would be the case if the office were a political one. The six-year term of office is in accordance with the idea of permanency of policies. The law requires that the Secretary, and State Health Officer, shall be a registered physician in the State, and that he shall not engage in private practice, but devote his time and energy to the work of the Board.

The work of the State Board of Health is large and varied, and is, therefore, apportioned among a number of bureaus, or special divisions, each directed by an administrative head chosen for his special training and ability. These bureaus in the present organization of the Board consist of the following: The State Laboratory of Hygiene, to examine water and diagnostic specimens, and to produce and distribute biological products, vaccines, and sera; the Bureau of Vital Statistics, to secure, correct, tabulate, and publish information as to distribution and causes of deaths, and as to distribution of births; to secure reports of communicable diseases and epidemics, and direct measures for their control; the Bureau of Medical Inspection of Schools, to develop public interest in the health of school children as it is related to their education, and to stimulate more adequate treatment for their most common defects; the Bureau of County Health Work, to interest county authorities in providing efficient county health departments, and to advise with, correlate, and assist such departments; the Bureau of Maternity and Infancy, to develop a higher degree of public intelligence regarding the importance and the care of the problems of maternity and infancy; the Bureau of Engineering and Inspection, to exercise supervision over the construction and maintenance of public water supplies and sewerage, to inspect and enforce sanitary conditions of privies, jails, public institutions, hotels, etc. The Bureau of Tuberculosis is now administered as the Extension Division of the State Sanatorium for the
treatment of tuberculosis, which is operated under the direction of a special board of directors.

The correlation of the work of the several bureaus, to insure a harmonious and efficient administration of the work of the Board, is through the supervision and direction of the executive officer of the Board. The division of the executive staff into special bureaus has the advantage of giving individualism to the work of each bureau and thereby creating a laudable pride and a healthy rivalry among the various bureau directors. While each bureau is separate and independent of other bureaus, the work of the entire executive staff is coördinated, the work of the Board being given compactness by the relation of the bureaus to one another through the executive officer of the Board. The administrative heads of the several bureaus, or directors, are selected by the executive officer of the Board, their terms of service being dependent only upon their success or failure in discharging their duties.

There are naturally many problems and duties which cannot be assigned to any of the special bureaus, which by their nature must be under the immediate direction of the executive officer. These may be briefly stated as follows: (1) to assume primary responsibility for the enforcement of the more important State health laws; (2) to consider and determine, with the advice and consent of the Board, what should be the more important public health policies of the State; (3) to secure the needed legislation that will make possible the adoption of desirable health policies; (4) to supervise and assist in the execution of established policies.

The enforcement of law rests, in a general way and broadly, upon the judicial machinery of the State. On the other hand, it is not only the privilege but the duty of any citizen to see that the violation of any law is brought to the attention of the courts and dealt with. The more thorough understanding of the purposes and the character of the public health laws and the keener appreciation of their importance imposes in a special way upon the executive officer of the State Board of Health the duty of seeing that these particular laws are fully complied with.

The duty of considering and formulating for the action of the Board what should be the more important public health policies of the State rests largely with the executive officer of the Board on account of its primary and general responsibility for the development of an effective program of human conservation.

After the Board has considered and definitely decided upon a course of action it becomes the duty of the executive officer to bring to the attention of the people generally the need of the course of action approved by the Board, and to so inform, interest, and appeal to the public, and reflexively and directly to the General Assembly as to secure legislative approval and provision for the public health policies which have been adopted by the State Board of Health.

The efficiency of any agency is conditioned largely upon the personnel who are employed in its activities. The responsibility of finding and securing persons properly qualified by native endowments, training, and experience to direct the special bureaus or divisions entrusted with carrying out the established policies of the Board rests largely upon the executive officer.
As has been heretofore pointed out, the organization of the executive work of the Board embraces a number of special bureaus which are held responsible for some definite State health policy, and which are so organized as to be independent of each other. Naturally, these bureaus and divisions in the character of their work are closely related and some means of coördinating their activities is necessary. This means, the executive officer supplies.

The majority of the calls by letter or person upon the Board for service can be and are referred to the special bureaus of the Board concerned directly with the sort of service called for in the letter or by the visitor. However, there are a number of calls upon the Board for services that are general in character, or not provided for by some special agency. These services necessarily have to be supplied by the executive officer.

The interest and support of the people in public health is in proportion to their understanding of the problem. To reach people, therefore, with information as to what the public health needs of the State are and how the Board purposes to meet the needs is, of all the Board's duties, the most fundamental and the most important. Moreover, the educational work of the Board is of a general character, dealing with the interests of all the bureaus or special divisions and, therefore, belongs largely to the executive officer whose interest is not particular but general with respect to all health problems.

The duty of receiving, disbursing, and accounting for the public moneys provided for the work of the Board is a duty that rests primarily upon the executive officer because of his primary and general responsibility for the interests of the Board.

The methods of work followed depend largely upon the character of the duties which the executive officer seeks to discharge. For this reason it is well in the discussion of methods to relate them to the special duties of the executive officer as above set forth.

Investigations as to the violations of the more important health laws of the State and the initiating of prosecutions where violations are found, are carried out largely as a part of the special activities of the Bureaus of Vital Statistics and Engineering and Inspection. These bureaus maintain a field force of inspectors, which vary in number but average about twelve full-time officers. The responsibility falls upon the executive officer to see that the bureaus fearlessly and without discrimination enforce the important laws entrusted to their execution. The larger work of the executive officer in law enforcement, however, concerns itself with bringing to public attention the principal State health laws and the needs of their careful observance, and in this way building up a public sentiment favorable to the observance of public health laws and sympathetic with the judicial machinery in imposing penalties upon those who violate them.

In determining the public health policies for the State it is necessary: (a) that the executive officer secure information through special and regular reports on the vital statistics of the State, and in this way to be fully cognizant at all times of the vital conditions of the State as shown by the State's birth rate, the State's general death rate, the State's special death rates for certain diseases, the State's death rates by counties, by races, and by seasons; (b) that he secure information, through public
health literature, books and periodicals, as to the more recent developments and discoveries in public health work; (c) that then by keeping in touch through conferences with other State health officers and Federal health officers, be thoroughly conversant with the methods and accomplishments of other State departments of health, and that he be alert to those larger interstate movements, especially those related to action by the Federal government, in order that whenever and wherever possible these larger movements may be influenced to the advantage of this State.

To secure the necessary measures and appropriations for the development of the State health policies the people are informed, through bulletins, the newspapers, exhibits, and public addresses, as to vital conditions and as to necessary measures and appropriations for favorably influencing the vitality and physical efficiency of North Carolina people. In this way the effort is made to develop a favorable public sentiment for the development of the more important public health policies. The executive officer further seeks to find and interest certain individuals, qualified by heart and head and position, for influencing, introducing, and supporting in the General Assembly needed legislation.

To find and secure, with the available means, a personnel for the bureau, division or agency of the Board that is to be relied upon for carrying into successful execution some special and important public health policy calls for an acquaintance with those who are in touch with men qualified for such positions, and a judgment of men on the part of the executive officer. This judgment of men by which an administrative officer selects his assistants is, of course, basic in the success or failure of an administration.

In giving assistance to members of the executive staff charged with carrying out certain public health policies the executive officer attempts to keep in close touch with the work of each bureau or division through regular monthly reports, special reports, and conferences from time to time. Consideration for the right amount of assistance—not too much and not too little—is regarded as important. Too much supervision tends to smother individuality; on the other hand, too little supervision not infrequently results in a useless waste of time and funds.

The general work of the Board is a matter largely of correspondence and conference. The correspondence is extensive both in volume and variety, and personal callers at the office of the Board require a considerable time devoted to conferences.

For reaching the people with information on health problems which they need, and which is necessary to secure their interest in and their support of the policies of the Board several means are in use. Primarily there is The Health Bulletin, issued monthly throughout the year, consisting of from sixteen to sixty-four pages. This is sent free to any citizen requesting it, and the circulation monthly is now 58,000 copies. In addition there are issued special pamphlets on the more important health problems, information is disseminated through the newspapers by means of specially written articles, and public addresses, often illustrated with either stereopticon slides or motion pictures, are given.

The bookkeeping for all the bureaus or divisions is done in the executive office by means of a system approved by the State Auditor, and all purchases are made through one purchasing agent.
The State of North Carolina is composed of one hundred counties, of separate and self-governing political entities. In the administration of the public health policies of the State there are certain duties and responsibilities which are recognized as devolving upon the State, through its established agency, the State Board of Health. There are certain other duties and responsibilities which are recognized as devolving upon the county, through its established agency, the County Board of Health. In a democratic government such as North Carolina, where local self-government by the people is firmly established as a basic principle, it is necessary to keep in mind and regard scrupulously these distinctions.

The State is rightly held responsible by all other States for the condition of its death rate. In discharging this responsibility two main avenues of service lie open.

First, the State should assume those public health activities that can be carried on, practically speaking, only on a State-wide scale and through State administrative machinery. Second, the State should make use of its central position and federated authority to tactfully, progressively, and persistently lead, but not drive, the counties to a clearer recognition of their opportunities, privileges, duties, and responsibilities for local health conditions.

Without entering into a discussion of the more important State-wide public health activities they may be classified and listed as follows:

First, activities of common interest to all the counties and impracticable of county handling, such as:
1. State supervision over communicable diseases, for the reason that infection and contagion do not respect county boundaries.
2. The registration of births and deaths according to a standard system, for the reason that birth rates and death rates as between counties to have comparative value must be established by uniform practices.
3. The protection of the purity of streams from which public water supplies are taken, for the reason that many streams flow through several counties before reaching the one or the ones whose citizens make use of such for domestic purposes.

Second, activities which for economic reasons, for rendering unnecessary duplication and multiplication of officials, machinery, and equipment, belong properly to the State, such as:
1. The preparation, publication, and distribution of educational bulletins, pamphlets, and leaflets needed in public health administration, for the reason that the additional expense necessary for each county to prepare, publish and distribute such material would be alike unnecessary and extravagant.
2. Maintenance of common laboratory facilities by the State for the same reason as that for maintaining central common equipment for the preparation of educational equipment.

Third, activities concerned with disease factors of such exceptional importance that the State cannot neglect them and at the same time carry the responsibility for a State-wide reduction in death rates, such as:
1. A State policy for dealing with tuberculosis.
2. A State policy for dealing with venereal diseases.
3. A State policy for dealing with the factors of infant mortality.
4. A State policy for dealing with the common defects of school children.
The county can be made to understand that, after the State has gone its full length in dealing with public health conditions by general measures, the county may do much more in a local and more intense manner for the preservation and promotion of its own health conditions—just as the intelligent individual, after both State and county have done all in their power to protect his health, may still do much more for himself than both governments combined. The State through its established agency co-operates on a definite plan in aiding the individual county to assume and efficiently discharge the purely local duties and responsibilities by both personal service and financial help.

Through the forty-seven years of its existence the State Board of Health has consistently developed in the scope of its service to the people, and has in proportion grown in scope of organization and in amount of money expended in its work. It began with no paid personnel and an appropriation of $100. Today it has an executive officer with eight assistants in charge of special phases of the work; and the necessary additional clerical personnel, having an annual appropriation of $455,000. The outstanding achievements of the Board have been the marked reduction in the general death rate, and the increased vitality of the people through the practical eradication of smallpox, typhoid fever, hookworm disease, and the winning fight being waged against malaria and tuberculosis. For three consecutive years the State has had the highest birth rate in the United States, and at the same time has maintained a death rate lower than that of the country as a whole.
STATE LABORATORY OF HYGIENE

The following is a Report of the Work of the State Laboratory of Hygiene Covering the Period July 1, 1924—June 30, 1926

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Vaccines and Antitoxins Made and Distributed:

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</tr>
<tr>
<td>Pasteur Treatments</td>
<td>3,582</td>
<td>$45,020.00</td>
</tr>
<tr>
<td>Doses of Typhoid Vaccine</td>
<td>1,485,836</td>
<td>$742,918.00</td>
</tr>
<tr>
<td>Doses of Toxin-Antitoxin</td>
<td>412,333</td>
<td>$31,868.50</td>
</tr>
<tr>
<td>Doses of Smallpox Vaccine</td>
<td>448,261</td>
<td>$67,239.65</td>
</tr>
<tr>
<td>Number of Schick Tests</td>
<td>162,300</td>
<td>$127,750.00</td>
</tr>
<tr>
<td>Number of Schick Control Tests</td>
<td>255,583</td>
<td>$16,404,000</td>
</tr>
<tr>
<td>Fasciculosis Vaccine</td>
<td>63,737</td>
<td>$39,004.00</td>
</tr>
<tr>
<td>Syringes Scarlet Fever Antitoxin Distributed</td>
<td>129</td>
<td>$239.00</td>
</tr>
</tbody>
</table>

No attempt is made, nor can be made, to estimate the value of the preservation of life and health which may have been accomplished by the work just outlined, but some of the results can be given a definite and accurate financial value. If there had been no State Laboratory of Hygiene in existence, this work would have cost the citizens of the State the following amounts:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>78,433 Wassermann tests</td>
<td>$392,165.00</td>
</tr>
<tr>
<td>9,004 Water examinations</td>
<td>$45,020.00</td>
</tr>
<tr>
<td>39,204 Other examinations average</td>
<td>$75,510.00</td>
</tr>
<tr>
<td>1,485,836 Doses of typhoid vaccine</td>
<td>$742,918.00</td>
</tr>
<tr>
<td>63,737 Doses of pertussis vaccine</td>
<td>$31,868.50</td>
</tr>
<tr>
<td>448,261 Doses of smallpox vaccine</td>
<td>$67,239.65</td>
</tr>
<tr>
<td>412,333 Doses of toxin-antitoxin</td>
<td>$206,166.50</td>
</tr>
<tr>
<td>3,582 Pasteur antirabic treatments</td>
<td>$89,550.00</td>
</tr>
</tbody>
</table>
3,246 Schick tests ..............................................@ $1.50 $ 4,869.00
2,555 Schick control tests .....................................@ 1.50 3,832.50
255,583 Ampules of neo-arsphenamine ......................@ 1.00 255,583.00

Tetanus antitoxin:
9,572 1,500 unit packages .........................@ $3.50 $ 33,502.00
417 5,000 unit packages .......................@ 6.00 2,502.00

36,002.00

Scarlet fever antitoxin:
48 Therapeutic doses ......................@ $6.00 $ 288.00
81 Prophylactic doses .....................@ 3.00 243.00

531.00

Diphtheria antitoxin:
4,901 1,000 unit packages .........................@ $2.00 $ 9,802.00
503 3,000 unit packages .........................@ 3.50 1,760.50
3,264 5,000 unit packages .........................@ 5.00 16,320.00
25,732 10,000 unit packages ..................@ 7.50 192,990.00

220,872.50

Total ..................................................$2,172,127.65

Receipts are as follows:
Appropriation ........................................$141,500.00
Water Tax ............................................ 20,123.85
Sales Biological Products ...................... 38,311.10
Fees ............................................... 2,893.32

$202,828.27
REPORT FOR THE BUREAU OF VITAL STATISTICS AND DIVISIONS OF EPIDEMIOLOGY AND VENEREAL DISEASES

Bureau of Vital Statistics

Since the biennial report of 1923-1924, there has been taken from the Bureau of Vital Statistics, the distribution of silver nitrate, registration of midwives, and the Bureau of Venereal Diseases.

While the Bureau of Vital Statistics and the Bureau of Epidemiology have a separate function, the whole is classified more or less together, especially as to number of letters sent out, and the general routine of office work. Other than this, the activities of each division will be taken up separately.

Practically all field work for the Bureau of Vital Statistics and Epidemiology is done by the Director.

We will first take up the work of the registration of the births and deaths occurring in North Carolina.

Character of Work

OBJECTIVES

The objective of the Bureau of Vital Statistics is to secure a permanent record of the more important facts concerning the birth and death of every citizen of the State of North Carolina, and from such records to prepare card indices and tabular classifications in such manner as to make readily available on inquiry the following information:

1. (a) The total number of births occurring annually in the State; (b) the birth rate of the State, that is, the number of births per thousand of the population; (c) the birth rates by races, white and colored; (d) the number of illegitimate births; (e) the number of stillbirths attended by midwives; (g) the number of white births attended by physicians; (h) the number of white births attended by midwives; (i) the number of colored births attended by physicians; (j) the number of colored births attended by midwives; (k) all of the foregoing data as to births with respect to each county and city. These facts permit of comparisons of one part of the State with another, of the birth rate of the two races, and of the birth rate of this State with that of the other States and other countries. Such information is necessary in forming conclusions as to vital conditions in North Carolina and in the enactment of suitable legislation for dealing with these conditions.

2. (a) The number of deaths occurring in the State of North Carolina annually; (b) the death rate, that is, the number of deaths per thousand of the population; (c) the number of deaths, by races, and the death rates by races in North Carolina; (d) the number of deaths among infants and young children as compared with the births, and the total deaths as compared with the total births, with net gain in population; (e) the total number of deaths by months and year from each of the 209 causes appearing in the International List of Causes of Death; (f) the number of deaths according to age and to occupation; (g) the number of deaths according to age and the causes of death; (h) the number of “seasonal” deaths according to months; (i) all of the foregoing data classified according to
county, town and city. This information is absolutely necessary to understand vital conditions in the State; to know where health work is needed, against what causes of death health measures should be directed, and whether the work of health departments is associated with a decrease or no decrease in death rates.

3. Under one and two, information necessary for the public welfare and available under the operation of the vital statistics law has been briefly indicated. But the vital statistics law not only supplies information to legislatures, state and county commissioners, and other administrative bodies, which is necessary for framing conservation measures for human life, but it also records facts which may at any time become of great value to the individual. In matters of tracing ancestry, birth records are invaluable; also in matters of proving age where the fact of age is in question, as for voting, as for the right to marry, as for the right to enter certain industries, as to entering school, as to liability for military service, etc.

METHODS

The Bureau of Vital Statistics secures the birth and death certificates for the births and deaths occurring in North Carolina through approximately fourteen hundred and fifty local registrars, appointed by the chairman of the boards of county commissioners for the various townships and by the mayors for the various incorporated towns and cities of the State. The duties and powers of the local registrars are defined in Consolidated Statutes, section 7113. The county pays the local registrars fifty cents for each birth and death certificate furnished by them to the office of the State Registrar at Raleigh. The vital statistics law makes it the duty of the doctors and midwives in attendance on a birth to file a birth certificate with the local registrar of the district in which the birth occurs and makes the undertaker, or person acting as undertaker, responsible for the filing of the death certificate. The birth and death certificates filed with the local registrars of the State are sent to the Bureau of Vital Statistics on the fifth of the month succeeding the month in which the birth or death occurred. The certificates received in the office of the Bureau of Vital Statistics are examined carefully, and if incorrect or incomplete (as a large per cent of them are) effort is made to secure the information necessary to complete them. Every parent of a legitimate child whose birth is reported is sent a card advising them of the date of birth and whether or not name appears on the certificate. This gives the parent an opportunity to send in to the office the name of the child, in case it does not appear on the certificate, or to make such change in name or date of birth necessary to make certificate an accurate record of birth. The certificates are then classified and tabulated according to county, townships and registration districts, according to races, according to age at death, according to cause of death, according to death rates and birth rates, etc., in order to make readily available upon request, the information mentioned under the heading of Objective.

ROUTINE WORK

The routine work in the registration of births and deaths is indicated in the following table. This covers period from July 1, 1924, through June 30, 1926, inclusive.
Letters and postals received ........................................... 35,735
Casket dealers reports received ........................................ 8,165
Supplementals received .................................................. 3,630
Name cards received ...................................................... 14,865
Violation blanks received ................................................ 114
Acceptance papers received .............................................. 2,909
Report cards received from local registrars ......................... 23,251
Letters written .................................................................. 25,484
Form letters sent ................................................................ 66,926
Postal cards sent .................................................................. 140,300
Packages of supplies sent ................................................... 13,918

INDEXING:
Cards made ................................................................. 264,790
Cards proofread ............................................................... 249,915
Cards assorted ................................................................... 232,882
Cards filed .......................................................................... 245,332
Credit certificates sent local registrars ................................. 4,130
Certified copies made ....................................................... 5,506
Tables made ...................................................................... 366
Cards punched and proofread .......................................... 69,023
Transcripts made and proofread .................................... 194,423
Cards furnished Dr. McCain, giving information as to deaths from tuberculosis, monthly .................................................. 5,321
Epidemiology forms made .................................................. 432
Tabulation of births ........................................................... 5,800
Number certificates made in triplicate ................................ 7,285
Sheets written .................................................................... 16,272

CERTIFICATES RECEIVED:
Births .............................................................................. 172,996
Deaths .............................................................................. 67,309
Stillbirths .......................................................................... 16,678

*Total ............................................................................ 256,983

Names checked on Undertakers reports with D. C. ............... 14,845
Nitrate sent ....................................................................... 4,786

RESULTS OBTAINED

Of course there is always a large per cent of routine work that is impossible to put in a report of this kind, and without going into unnecessary detail, it may be said that the objective of this Bureau, as aforesaid, has been reached, and that all of the information with its vital bearing upon the public health needs of the State and with the public health accomplishments of the State is readily and completely available.

As a mere indication of the practicable value of the work of the registration of births and deaths, we may point out the fact that the birth rate of North Carolina is very high, the highest in the United States, and that the death rate in North Carolina, notwithstanding the high birth rate, giving

*This total includes letters and postals received for our other divisions.
us an exceptionally large age group of tender years with high fatalities, is exceptionally low, one of the lowest of any State on the Atlantic or Gulf Coast. To be brief, the vital records of the State show that North Carolina is one of the healthiest States in the Union.

DIVISION OF EPIDEMIOLOGY

Character of Work

OBJECTIVES

To prevent and control the occurrence of whooping cough, measles, diphtheria, scarlet fever, infantile paralysis, cerebro-spinal meningitis, chickenpox, septic sore throat, German measles, smallpox, typhoid fever, trachoma, syphilis, chancroid, gonorrhea, and ophthalmia neonatorum.

METHODS

Section 1—The County Unit

A quarantine officer for each county and city having a separate health department in the State is appointed to be the Bureau’s representative in the local field. His duties are as follows:

(a) To secure reports from parents, teachers, and physicians of all communicable diseases.
(b) To keep an accurate record in his office of all reports.
(c) To transmit all reports daily to the Division.
(d) To supply the parent, guardian, or householder, when the disease is reported, with rules and regulations governing that person, with a placard to be posted on the house, and with a pamphlet descriptive of the disease, its dangers, cause, mode of infection, and methods of control.
(e) To inform the teachers in the community where the disease exists that the disease is present, and to supply them with rules and regulations governing the school, and with a pamphlet descriptive of the disease, its dangers, cause, mode of spread, and methods of control, to be distributed through the children to the parents represented in the school.
(f) To make the presence and locations of the disease known to the public by publishing notices in the county paper when the disease appears and advising means of prevention.
(g) To furnish householders forms to report diseases in their community which have not been previously reported.
(h) To investigate all cases of suspected contagions which have not been reported to determine the nature of the disease.
(i) To enforce the laws, rules and regulations governing the control of communicable diseases.
(j) To make monthly reports to the Division of Epidemiology of all the work, educational, administrative, or otherwise done during the month.

Compiled Monthly Report of County Quarantine Officers

July 1, 1924, to June 30, 1926

Cases reported by householder ........................................ 9,028
Cases reported by nurses and health officers ..................... 14,192
Cases reported by physicians ......................................... 39,277
Cases reported by teachers ........................................... 2,156
Total number of cases reported .................................................. 64,919
Homes placarded ........................................................................ 45,093
Articles published ........................................................................ 372
Teachers certificates ...................................................................... 3,744
Indictments .................................................................................. 173

Section 2—The State Unit

To give the reader a fair idea of the work done by this Division, we have grouped the work under the following heads: (1) General office work not included in office work mentioned in report previously; (2) special work for the prevention of typhoid fever; (3) special work for the prevention of diphtheria; (4) special work for the prevention of venereal diseases; (5) special work for the prevention of sore eyes in the newborn.

I. Office Work

The daily reports of each of the communicable diseases are recorded by the Bureau of Vital Statistics—Epidemiology Division—by the counties in which they occur. These are permanent records of the Bureau and they show the number, location and increase or decrease in the number of cases of each disease from month to month and year to year.

Weekly telegraphic and monthly written reports of all cases of infection and contagious diseases reported are made to the Surgeon-General, United States Public Health Service, Washington, D. C.

Charts are kept showing number of deaths and number of cases, by months, from each of the communicable diseases.

Monthly reports of the quarantine officers are given a detailed examination by the Director, and where it is deemed necessary, letters are written to the quarantine officer and the county commissioners of the non-performance of duty.

All report cards, blank forms, educational posters, placards and literature on the reportable diseases, and all rules and regulations governing the control of the diseases, are prepared and distributed to the various quarantine officers of the State by this Division.

Summary of Office Work

Circular letters .............................................................................157,119
Oaths of office .............................................................................. 32
Bulletins sent ................................................................................ 107,452
Packages of supplies sent .............................................................. 1,352

II. Special Work for Prevention of Typhoid

Campaigns for giving free treatment to prevent typhoid fever and diphtheria are conducted in different counties of the State.

The Division of Epidemiology circularizes the county and furnishes advertising materials to the county for the mailing list made up from the tax books—(The Division makes up mailing list from the records of births in the county, filed with the Bureau of Vital Statistics.)

The Division of Epidemiology pays for all clerical help needed in the counties to get out advertising, and pays for newspaper advertisements, etc.

Physicians who participate in these campaigns are paid $1/2 cents a single dose. Physicians make reports to the Division on forms supplied for the
purpose. These are checked and certifications sent to the County Commissioners.

Work for 1924 campaigns was completed in June, 1924, and included in the twentieth biennial report.

In 1925, eighteen campaigns were conducted in the following counties:

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking Three Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Avery</td>
<td>2,537</td>
</tr>
<tr>
<td>2. Beaufort</td>
<td>No Report*</td>
</tr>
<tr>
<td>3. Chowan</td>
<td>494</td>
</tr>
<tr>
<td>4. Gates</td>
<td>1,593</td>
</tr>
<tr>
<td>5. Hertford</td>
<td>6,490</td>
</tr>
<tr>
<td>6. Hoke</td>
<td>No Report*</td>
</tr>
<tr>
<td>7. Iredell</td>
<td>19,029</td>
</tr>
<tr>
<td>8. Lee</td>
<td>2,756</td>
</tr>
<tr>
<td>9. McDowell</td>
<td>3,652</td>
</tr>
<tr>
<td>10. Mitchell</td>
<td>1,219</td>
</tr>
<tr>
<td>11. Onslow</td>
<td>1,985</td>
</tr>
<tr>
<td>12. Pasquotank</td>
<td>No report*</td>
</tr>
<tr>
<td>13. Scotland</td>
<td>4,189</td>
</tr>
<tr>
<td>14. Stokes</td>
<td>4,827</td>
</tr>
<tr>
<td>15. Union</td>
<td>No report</td>
</tr>
<tr>
<td>16. Watauga</td>
<td>4,491</td>
</tr>
<tr>
<td>17. Yadkin</td>
<td>7,151</td>
</tr>
<tr>
<td>18. Yancey</td>
<td>7,833</td>
</tr>
</tbody>
</table>

Total: 74,460

In May and June, 1926, the following counties were circularized for campaigns against typhoid fever: Alamance, Catawba, Chatham, Dare, Forsyth, Lincoln, Martin, Montgomery, Moore, Person, Randolph, Rockingham, Wayne.

III. SPECIAL WORK FOR THE PREVENTION OF DIPHTHERIA

Toxin-antitoxin campaigns for the prevention of diphtheria were conducted in 1924 and 1925, simultaneously with the typhoid campaigns. Work for campaigns for 1924 was practically completed in 1925. The counties and number taking complete treatments are listed in the following tables. Children between six months and six years were advised to take the treatment as in this age group seventy-five per cent of our deaths from diphtheria occur and most of the children are susceptible to the disease.

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking Three Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Avery</td>
<td>265</td>
</tr>
<tr>
<td>2. Beaufort</td>
<td>No report*</td>
</tr>
<tr>
<td>3. Chowan</td>
<td>38</td>
</tr>
<tr>
<td>4. Gates</td>
<td>188</td>
</tr>
<tr>
<td>5. Hertford</td>
<td>488</td>
</tr>
</tbody>
</table>

*Whole time counties.
County                     | No. Taking Three Doses  
---|---
6. Hoke                     | No report*               
7. Iredell                   | 1,758                    
8. Lee                      | 723                      
9. McDowell                 | 1,109                    
10. Mitchell                | 350                      
11. Onslow                  | 775                      
12. Pasquotank              | No. report*              
13. Scotland                | 561                      
14. Stokes                  | 1,291                    
15. Union                   | No report*               
16. Watauga                 | 200                      
17. Yadkin                  | 1,512                    
18. Yancey                  | 1,002                    

Total                        | 10,260                   

Thirteen counties, Alamance, Catawba, Chatham, Dare, Forsyth, Lincoln, Martin, Montgomery, Moore, Person, Randolph, Rockingham, and Wayne were circularized in May and June, 1926, for toxin-antitoxin campaign.

IV. Venereal Disease Division

Since 1924 the distribution of neo-arsphenamine has been under the State Laboratory of Hygiene. The Federal appropriation for this work has been discontinued, so no education or remedial work has been carried on by this Bureau. However, we receive a large number of letters asking for bulletins, pamphlets and advice. These are all carefully answered and bulletins and pamphlets are mailed to those requesting them.

There has been reported to this office the following number of cases of venereal diseases:

- Gonorrhea                  | 4,683
- Syphilis                   | 6,372
- Chancroid                  | 358
- Balanitis                  | 5

*Whole time counties.
WORK OF THE BUREAU OF MEDICAL INSPECTION
OF SCHOOLS

Character of Work

OBJECTIVES

The object of the work of the Bureau of Medical Inspection of Schools
is (1) to arouse the teachers of the elementary schools of North Carolina
to the necessity of making the same efforts to each the children things they
should know for the development of their bodies and for the protection of
their health that they make for their intellectual advancement; (2) to
discover the children who have remediable defects, and to have them treated
while curable and before the condition becomes chronic.

METHODS

In order to explain the methods of work in this department it is necessary
to consider the methods in relation to the objectives.

METHOD FOR OBJECTIVE 1. Written instructions for teachers have been
prepared, covering every phase of medical inspection of school children.
Cards for recording the exact history and results of the preliminary
physical examination of each child have been prepared. All this literature
has been placed in the hands of the teachers, county by county, as the
work progressed. Lectures by competent physicians and specially trained
nurses and others have been made direct to teachers individually in small
groups and in large institute gatherings. Competent officials have made
examinations of children in the presence of teachers to demonstrate by
example the need for the examination, the purpose, and how to do it.
Health talks in simple language have been made to the children from the
first grade up. Leaflets and pamphlets on health subjects, simply written,
have been placed in their hands.

METHOD FOR OBJECTIVE 2. The methods devised to discover the defective
children are: (a) The teacher, after consultation with the parents when
necessary, and after personal study of each child, records on a prepared
card the findings of such preliminary examination; (b) The cards are sent
to the Bureau of Medical Inspection of Schools of the State Board of
Health at Raleigh. The Bureau has competent agents, who carefully study
and classify these cards into two groups, those representing supposedly
normal or supposedly defective children. Immediately following this study,
this agent, generally a trained nurse, visits the county and makes a re-
examination of all children reported suffering from common defects:
(c) Those of the children thought to be greatly in need of medical, surgical
or dental service are advised of the fact, together with their parents, but
before treatment is finally arranged for, competent medical examination is
made; (d) Special arrangements are made for club operations and dental
treatment, results of which are described under the head of Results Ob-
tained of this department.

ROUTINE WORK

Articles written—Bulletin, 28; words ........................................... 15,500
Other publications, 3; words .................................................. 2,380
Pieces of literature distributed .............................................850,000
FORCE EMPLOYED

Director of Bureau, one part-time physician, one full-time field supervisor of dentists, seven full-time dentists, seven full-time trained nurses, six part-time trained nurses, one part-time anesthetist, one part-time truck driver and hospital orderly, one part-time clerk, one part-time stenographer.

BUDGET

Annual amount allotted from Executive Department .................. $10,000.00
Annual amount allotted from special State funds ..................... 50,000.00
Amount received from counties ........................................... 6,924.00

RESULTS OBTAINED

Some of the tangible results of the work of this department may be enumerated as follows:

1. Through the system of medical inspection organized and maintained by this department for finding defective school children, 60,668 children have received free dental treatment in the public-school clinics during this period, paid for entirely by funds expended through this division of the State Board of Health; 54,130 permanent fillings have been placed, thereby saving that many permanent teeth, which would have been otherwise lost. The economic value of this specific assistance, as well as the educational influence on those children treated, and the more than 9,600 additional children examined by the dentists, but not treated, cannot be worth less than $10 per child treated, or $606,680. The dental clinics were conducted in seventy-two counties.

2. Following up the preliminary examination first made by the teachers and reported on the proper cards, specially trained nurses sent out by this department have re-examined 171,905 school children. These children had been reported by the teachers as possibly suffering from common defects. Most of them were found to have one or more of the common physical defects, such as decayed teeth and diseased throats. No possible estimate of the immense educational value can be placed on this service to public-school children by teachers and nurses.

3. Tonsil and adenoid clubs have been originated and put into operation by this bureau for the purpose of following the examinations with treatment when needed. This activity has embraced twenty-seven counties in which clinics have been held. A total of 3,714 school children have been operated on in these clinics. The financial equivalent of one of these operations, negotiated through private methods, without considering the far-reaching effect on the whole life of the child of neglecting to have this important operation done, cannot be less than $50. In fact, the operation alone costs more in many places of the State. Thus the total money value of 3,714 successful operations is certainly not less than $185,700. But the most important consideration is that a very small percentage of the children so essentially helped could even have had the opportunity otherwise.
MALARIA CONTROL

The Department created for the Investigation and Control of malarial fevers is financed jointly by the State Board of Health and the International Health Board. The main and primary object of the Department is to confine its efforts to studying the prevalence, geographic distribution of malarial fevers, factors responsible for transmission and to suggest to county health departments the most economical means of control. There is a secondary object of perhaps even greater importance which has guided the department in formulating its policies; this is the stimulation of a permanent interest and activity in the administration of public health activities whereby disease prevention can be carried on economically and on a large scale by free and generous support of full time county health departments.

The department thus created has been instrumental in the organization of two additional county health units, thus making a total of nine county health departments whose duty it is to carry on control measures wherever the disease is prevalent enough to justify the effort and the expenditure of public funds.

The policies pertaining to the organization and conduct of the departments undertaking malaria control are determined by the State Board of Health. The details pertaining to county organization has been delegated to a staff member of the International Health Board, who is executive head of the departments and who directs the field activities of the newly created county organizations in the control of the disease.

Main Objectives

County organizations created by joint funds of the International Health Board, State Board of Health, and counties for the investigation and control of malarial fevers, have the prime objectives in view

1. Geographic distribution of the disease.
2. The incidence of the disease and the extent to which it is a menace to the health and economic efficiency of the people.
3. Factors responsible for transmission and spread.
4. The possibility of controlling the disease within the economic reach of the people.

In order to explain the procedure followed by each county health organization the methods and relation to the objectives as advised by the department will be considered.

Method for Objective One

MALARIA A RURAL DISEASE: Malaria is essentially a rural disease for the reason that the mosquitoes held responsible for the transmission of the disease are essentially a rural species and any reduction in the incidence of the disease will benefit the rural more than the urban population. The serious loss from the disease is not due to the costs of treatment and deaths, but rather to the loss of efficiency of labor, loss in net crop productions and in the predisposition to other and more fatal diseases.

Certain biological facts concerning the malarial mosquitoes explains the rural nature of the disease. While the mosquitoes which have been incriminated as the principal vectors of the disease are domestic in their adult habits, they may be considered only partially domestic in their breeding
habits as natural and permanent collections of surface water are more often selected for breeding areas. The larvae of anopheles will thrive best in natural collections of water, such as, slowly running streams, edges of shallow ponds, barrow pits, and seepage areas. Permanent water collections of this nature are common to rural and not to urban districts. The density of anopheles may be said to be in direct proportion to the opportunities offered for propagation. That malaria is essentially a rural disease is demonstrated by its disappearance from areas where the land has been drained and brought under cultivation.

Since the reduction in the density of malarial mosquitoes is in direct ratio to the reduction in collections of surface water in which the mosquitoes may breed, the control of the disease through the application of anti-mosquito measures in the aquatic stage is biological in scope.

Method Used in Determining Prevalence and Geographic Distribution

On completion of the organization of the departments, the health officers seek to outline or determine the areas of concentration of the disease in their respective counties, and, in view of the fact that malaria is essentially a rural disease, control measures are confined principally to the rural section and small villages of the county. The first step of the departments has been to gather data as to the apparent prevalence of the disease in the county by the examination of school children between the ages of 2 and 12 for enlarged spleens, the taking of history indices as to positive or negative malaria, the establishing of blood indices and the securing of mortality statistics from the State Board of Health. From the data elicited during this preliminary survey, the health officer obtains a fairly accurate idea as to the prevalence and distribution of the disease in his respective county. From such records it is naturally shown that certain foci of infection exist in the county and are the only areas requiring immediate control measures. Having established the area or areas where the disease is most prevalent, the department prepares a survey, or spot map, showing each home thereon in relation to permanent collections of water, with special reference to those streams breeding malaria mosquitoes. In areas where anti-mosquito measures are considered feasible, all the collections of water are indicated on the survey map and character indicated as to whether permanent or temporary. The density of mosquitoes in relation to occupied houses is a feature, also of the department. From the data elicited during this survey the health officer is in a position to determine the most feasible and economical measures of control which in the tidewater section consists of a combination of all measures at our command.

Examination of Children for Splenomylogy

In order to elicit the smaller degree of enlargement and the better to determine the exact degree of enlargement in children, it is necessary to place the child in a recumbent position with the thighs and legs flexed. The examiner sits at the right side of the child with the head of the latter on the examiner's left. The child's clothing or belt is loosened so that the hand of the examiner can be freely placed upon the bare skin, below and above the costal margin on the left side of the abdomen.

First the region between the costal margin and the umbilicus and between the umbilicus and pelvis is palpated for the detection of splenic
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North Carolina Board of Health

MALARIA
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<td>Swain</td>
<td>13,660</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transylvania</td>
<td>9,629</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tyrrell</td>
<td>4,849</td>
<td>1</td>
<td>20.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union</td>
<td>36,454</td>
<td>2</td>
<td>5.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vance</td>
<td>23,320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wake</td>
<td>76,998</td>
<td>2</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warren</td>
<td>21,798</td>
<td>1</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>11,485</td>
<td>4</td>
<td>34.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watauga</td>
<td>13,620</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wayne</td>
<td>44,867</td>
<td>8</td>
<td>17.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilkes</td>
<td>33,009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilson</td>
<td>38,134</td>
<td>1</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yadkin</td>
<td>16,540</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yancey</td>
<td>15,560</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total** | 2,614,335 | 172 | 6.5 | 2,649,982 | 177 | 6.6 | 2,686,325 | 151 | 5.6 | 2,722,669 | 123 | 4.5 | 2,811,969 | 123 | 4.3 |

*August 16, 1926.*
enlargement of the greater degree. If the spleen cannot be detected the child is instructed to take a deep breath. The examiner places the tips of the fingers of his right hand on the abdomen just below the costal margin and makes slight but not deep pressure just at the time the child takes a deep breath. If the spleen is enlarged it may be felt as it descends being pushed down by the diaphragm during deep inspiration. Care must be taken not to press too deeply for then the descending margin of the spleen may not be felt. Spleens that are readily palpable or of the higher degrees of enlargement may be detected without the necessity of the child’s taking a deep breath.

The spleen may be palpated more easily in children between the years of two and twelve than those younger or older.

The following classes of spleens are used:

1. Negative on deep inspiration.
2. Palpable on deep inspiration.
3. Palpable on normal inspiration but not one finger’s-breadth below the costal margin.
4. One finger’s-breadth below the costal margin on normal inspiration.
5. Two finger’s-breadth below the costal margin on normal inspiration.
6. Three finger’s-breadth below the costal margin on normal inspiration.

History Index as to Positive or Negative Malaria

For this purpose house to house surveys are made and the presence or absence of malaria is recorded for each individual for the two preceding years. Case histories are accepted as positive only when the individual gives a history of repeated periodicity.

Parasitic Index

As a further means of arriving at a conclusion as to the prevalence of the disease in a county, a parasitic index is established. For this purpose a thick, with a corresponding thin smear is taken from each person, willing to have it done. As the smears are taken they are numbered with the ordinary soft lead pencil by writing direct into the dried blood the serial number of the individual, which corresponds to the history index number. Thick smears are examined fifteen minutes and then five minutes before calling negative.

Intensive Mosquito Survey

The next step toward arriving at a solution of the mosquito problem in places where anti-mosquito measures are thought to be applicable consist in intensive surveys for the breeding places, in the collections of water indicated on the survey map. This is accomplished by one collecting adult mosquitoes from regular collecting stations, second, by collecting Larvae and Pupae and breeding them out. All collections made are classified as to species, character of water from which collected, whether permanent or temporary, and day of collection.
Method of Objective Three

From the data elicited during the preliminary survey to determine the incidence and geographical distribution of the disease and biological factors responsible for transmission. The Health Officers, through the association of the general director, determines what plan of procedure to make in formulating their program of control.

Results Accomplished During the Organization Period of the Bureau

It is physically impossible, with the present personnel, to resurvey all counties undertaking measures for the investigation and control of malaria fevers, as well as placing the department at a prohibitive cost, I am therefore giving only one concrete example of what a county organization may expect in the way of reducing the incidence of the disease when the attack is made in an intensive way.

Resurvey of South Creek Section

BEAUFORT COUNTY

South Creek is a small settlement located in the extreme southeastern part of Beaufort County, North Carolina, on an arm of the Pamlico River. The community is situated in a small tongue of land which divides an arm of the river into two branches, called Bond Creek and Muddy Creek. Neither of these creeks is more than a mile in length. From the broad northern point, the tongue gradually widens until at a distance of approximately 1½ miles it is a little over a mile wide. The land is quite level, as it is in all this region, and is only a few feet above sea level. The ground water level is only 6 feet below the surface. Three or four small branches, which cut across the area, drain the excess water into the creeks. If these were kept in good condition, the natural drainage of the land would probably be fairly good. At the time this survey was made, these branches were almost completely dry, owing to long continued drought.

Following is given the average precipitation for the past five years in Wenona and New Bern, two towns situated in opposite directions from South Creek, in adjoining counties. No records are kept in Beaufort County.

<table>
<thead>
<tr>
<th>Year</th>
<th>Wenona</th>
<th>New Bern</th>
<th>Belhaven</th>
</tr>
</thead>
<tbody>
<tr>
<td>1921</td>
<td>46.93</td>
<td>43.96-12.34</td>
<td>44.42-3.06</td>
</tr>
<tr>
<td>1922</td>
<td>55.05</td>
<td>64.19- 7.87</td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td>45.24</td>
<td>52.17- 4.13</td>
<td>40.86-6.62</td>
</tr>
<tr>
<td>1924</td>
<td>65.08</td>
<td>71.30-15</td>
<td></td>
</tr>
<tr>
<td>1925</td>
<td>44.89</td>
<td>41.08-15.71</td>
<td></td>
</tr>
</tbody>
</table>

The average rainfall is around 50 inches. In 1922, the precipitation was in excess of normal, as it also was in 1924. The year 1925 was a dry year, and 1926 promises to be the same. Summer rains are scattered through the three months, and average about 19 inches.

The mean summer temperature is 78.5, approximately; the first frost usually occurs in October and the last in April. Temperatures as low as 20 F, are rare in winter.

The population of South Creek has recently been depleted. Until 1923 there was a sawmill in the village, which gave employment to a good many people. The shutting down of this mill owing to scarcity of timber, threw
them out of employment. In 1925, owing to a severe local hailstorm, the farmers lost absolutely their entire crops, and many migrated to other localities. About ½ of the houses are now unoccupied. The present occupation of the remaining inhabitants are farming and fishing.

The principal crops are corn and cotton, but the boll weevil has invaded this section as well as the rest of the State. Much of the land is cut over timber land, on which nothing is grown. My impression is that not over ¼ the available land is under cultivation, and even this estimate may be high.

Past History of Malaria

The South Creek section has always been known as a bad malarial region. Accounts of blackwater fever are common, while, according to the inhabitants, every fall saw a visitation of the disease to a majority of the inhabitants. Of more interest than these accounts, are the doctor's reports. Dr. John Bonner, now Health Officer of Beaufort County, for many years lived in Aurora, and did most of the practice of South Creek. His interest in malaria, his principal source of income, led him to keep records of his calls for several years. His records show, that in the years 1920 to 1922, inclusive, there was a large number of calls for malaria every week, especially in September and October. The peak was reached in October, 1922, when in one week, he visited 45 new patients with malaria.

In January, 1923, the newly-organized Health Department of Beaufort County, began a vigorous county-wide campaign against malaria. Blood examinations made on about 7,000 inhabitants of the county, showed a general average of 45% positive. In the South Creek section, of 239 white people examined 99, or 42% were positive; 78% were tertian, 20% aestivo-autumnal, and 1% quartan. In the negro colored school, of 43 children examined, 30 were positive, a rate of 70%. During the succeeding summer and fall, the people were urged to take quinine according to Bass' treatment. According to my census, 56 people now present took the entire course of treatments, while 12 took part of the course. Some of them have continued taking treatments every year since that time. The county did not distribute the quinine free, but the people had to buy it. At the instance of the Health Officer, all storekeepers in the county agreed to sell it at cost. Immediately its price dropped from $1.50 or more to an average of 80 cents, and sales began to climb. There are three storekeepers in South Creek. They estimate their sales as follows:

<table>
<thead>
<tr>
<th></th>
<th>1922</th>
<th>1923</th>
<th>1926 to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store No. 1</td>
<td>2</td>
<td>16-18</td>
<td>less than three pounds.</td>
</tr>
<tr>
<td>Store No. 2</td>
<td>2</td>
<td>15-20</td>
<td>none.</td>
</tr>
<tr>
<td>Store No. 3</td>
<td>1.5</td>
<td>11-12</td>
<td>about 1 pound.</td>
</tr>
</tbody>
</table>

From total sales of approximately five pounds in 1922, the amount rose in 1925 to over 42 pounds from these three stores alone. The price of quinine was somewhat less in Aurora, and it is reasonable to suppose that some quinine was bought in that town. At the same time the sale of chill tonics fell off, and only a little is sold now. If it did nothing else, this campaign certainly popularized the use of quinine.
Referring again to Dr. Bonner's records it will be seen that in 1923, at no time did his calls rise above seven per week, even in the season of greatest transmission. In 1924, the highest number seen was 12, in one week in October. Records for 1925 are not available, but the general impression is that there was very little malaria there the past season. This is probably true, especially since it was a year of deficient rainfall.

Present Survey

The present survey was undertaken during the second week in August, 1926, for the purpose of determining the amount of malaria present, and the opportunities for its transmission, and the reasons for any change that may have occurred.

The survey was made by a house-to-house canvass, and the following information was secured:

Name, age, sex, race, length of residence in locality, history of acute malaria within past year, type of house and condition of screens, and history of intensive quinine treatment.

At the same time, spleen examination was made on all children under 15 years of age, and blood smears were taken from approximately half the people. After the history was concluded, the house was carefully searched for adult mosquitoes.

Results of Survey

A total of 161 persons were taken in the census, from 41 occupied houses. Seven occupied houses were not taken in the census, since the occupants were not at home when the census was made. Of this number 120 were whites, and 41 negroes. Separation was not made into the sexes, since this was not deemed important.

The following gave a history of at least one chill, followed by fever and sweating, since March, 1925. Since the use of quinine is so general, and is taken for almost any ailment, it was difficult to elicit a history of more than three or four chills from anyone.

<table>
<thead>
<tr>
<th>Age</th>
<th>Number Examined</th>
<th>Spleen Palpable</th>
<th>Blood Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>2-4</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>5-9</td>
<td>25</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>10-14</td>
<td>31</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>15-19</td>
<td>11</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>20-39</td>
<td>41</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>40 up</td>
<td>38</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>161</td>
<td>61</td>
<td>7 11.5%</td>
</tr>
</tbody>
</table>

Whites, 22, Negroes, 8, and equally distributed through all ages. It is quite possible that some of these histories were not malarial.

Following are the results of the blood and spleen examinations:
All spleens except one were only palpable on inspiration. The one was one finger's-breadth below the costal margin. A spleen rate of 11.5% indicates only a very moderate degree of endemicity. This is borne out by the results of the blood examinations, with only one positive out of 82 examined. It must be remembered, of course, that the malaria curve usually does not begin to rise until the first of August, and that this survey was made in an abnormally dry season as well.

Nevertheless, it seems clear that there is only a small amount of malaria present when the survey was made, and that this condition has prevailed for the past few years.

**Distribution of Positive Cases—(Spleen and Blood)**

When spotted on the map of the area, it is seen that four of the eight cases are grouped in the center of greatest population, near the point of land, and, at least at the time of the survey, fairly distant from any breeding places for mosquitoes. Two more cases occur in the same point, but somewhat removed from the other four, and these are situated near several large ditches, which at the time of survey were dry. The ditches are not shown in the map. The two remaining cases are scattered. One palpable spleen occurred in a house which is reported to have had several cases of blackwater fever in the past few years. The last case occurred in March, 1926, according to the doctor's report, but the child was not prostrated, and soon recovered. This child is still taking quinine regularly.

**Length of Residence of Positives**

All eight positive cases (spleen and blood) have lived in the area all their lives. The one blood positive case was in a boy just three years old, whose mother, when the blood was taken, said she was sure the boy had malaria. We had been giving him small doses of quinine, but had stopped it some time previous to our visit.

**Comparison of Findings in 1923 and 1926, in Those People Present Both Years**

From the original records of the 1923 work, I secured the results of the blood examinations in those people who were still present at the time of the survey in 1926. Following is a summary of the results:

<table>
<thead>
<tr>
<th></th>
<th>1923</th>
<th>1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both Years</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>No. Cases Present</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>No. Neg.</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Positive</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Pos. Vivax</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Pos. Falcip.</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Pos. Quart.</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Spleen Blood</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Pos.</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

The 1926 figures should not be expressed in percentages, since these people, all of whom were examined in 1923, were not all examined in 1926. There is, however, a marked reduction in the incidence of malaria in these two years.

**Adult Mosquito Catches**

At the same time that the census was made, opportunity was taken to look for mosquitoes in the houses. Twenty-two of the total of 41 houses were carefully searched. A total of four anophelines, all quadrimaculatus, were found. Two of these were found in house No. 1, and two in house No. 2. These may have come from a ditch just outside the area which was not searched for larvae.
Probable Causes for Decrease in Malaria in the Area

While it is impossible to state the exact amount of malaria which used to be present, there seems to be no doubt that formerly the disease was very prevalent. The fact that 45% of the people of the county were found with parasites is indicative of this especially during the autumn. It also seems to be true that the incidence of malaria has decreased remarkably in the past three or four years. I shall now take up some of the possible causes of this decrease.

1. Intensive Quinine Treatments in 1923 and Succeeding Years.

As already described, examination in 1923 showed 45% of the people with one or more classes of malaria parasites in their blood. The indications are that the intensive treatment was successful. Fifty-six (56) people now present took the full course of treatment prescribed, and 12 others completed part of the course.

In addition to the 1923 campaign, in 1924 and again in 1925, blood smears were made from a large number of people in the area, and those positive were urged to take treatment. The fact that quinine sales increased about 10 times in 1923 indicates that a large amount was used.

The intensive treatments of 1923 doubtless sterilized the blood of a fairly large percentage of the population that year, and the treatments of the succeeding years did the same thing for a lesser number. Even in the presence of the vector in considerable numbers, this must have had an effect in reducing the transmission. The rainfall of 1923 was only slightly below normal, probably not enough so to influence the amount of anophelines breeding. It is the consensus of opinion that quinine treatments was the greatest single factor in reducing malaria in that year, although it alone probably cannot be held responsible for the decrease.

Perhaps the greatest good from this campaign, however, was the popularization of quinine in adequate doses for chills. The lessons learned that year have certainly not been forgotten. It is common to find people who are now taking quinine every autumn, because they were taught to do so by the health officials. They also use it whenever they have a chill, instead of chill tonic; and they use it in large enough doses to have a therapeutic effect.

2. Rainfall.

The rainfall in 1923 was slightly below normal; that of 1924 fifteen inches above normal, and a slight increase in the amount of malaria probably occurred, but 1925, and 1926 have been years of abnormally low rainfall. At the time of the 1926 survey, all the usual water courses were dry, or practically so. Conditions were distinctly unfavorable for mosquito breeding, and as a consequence the mosquito index was undoubtedly low and hence transmission was perhaps almost nil. It would be interesting to see what effect the late August rains will have on breeding.

3. Drainage.

While a drainage district has been formed and is in operation in an adjoining area, the value of the land does not permit such a district to be formed in South Creek. As stated elsewhere, natural drainage is probably good except in a few low-lying areas, and this drainage has been
favored by a few well-placed ditches which have been dug. Once a year these ditches are cleaned out by the farmers, but during all the rest of the year they are not touched. These ditches, however, have been there for many years and had no known effect on malaria incidence before 1923.

4. Screening.

At the time of the survey, the condition of the house and screens was noted. The following table gives the results:

<table>
<thead>
<tr>
<th></th>
<th>Tight House</th>
<th>Tight Screens</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;</td>
<td>Poor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Fair House</td>
<td></td>
<td>Poor Screens</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Poor House</td>
<td></td>
<td>Poor Screens</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Total Houses</td>
<td></td>
<td></td>
<td>41</td>
</tr>
</tbody>
</table>

Information was also sought as to the length of time the screens had been installed. The following answers were obtained to our queries:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 yr.</td>
<td>2 yrs.</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

In addition, three owners stated they had had screens ever since they had lived in the house, or up to three years.

Most of the newer screens noticed were of 16" mesh. The storekeeper said they had stocked the finer mesh since 1923, when they were asked to do so by the Health Officer. They also stated that more screening had been sold after the malaria campaign. However, most of the people stated they used the screens for protection against flies.

It is seen from the above tables that a majority of the householders have been screened for many years, and that now over half of the houses may be considered satisfactorily protected. Whether this was so or not before 1923, it is impossible to say, but it is probable that conditions are better now than they were before 1923.

In an effort to ascertain whether the presence of screens had an effect on the presence of malaria at the time of the work in 1923, the 69 persons present in both 1923 and 1926 were classified according to the length of time they had had their houses screened.

Following is a summary of the tabulation:

<table>
<thead>
<tr>
<th></th>
<th>1923</th>
<th>No. % Pos. 1926</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with screens more than 5 years</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Cases in houses with screens more than 5 years</td>
<td>29</td>
<td>57</td>
</tr>
<tr>
<td>People with screens less than 5 years, or none</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Cases in houses with screens less than 5 years</td>
<td>8</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>37</td>
</tr>
<tr>
<td>People with good screens</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Pos. in houses with good screens</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>People with poor or no screens</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Pos. in houses with poor or no screens</td>
<td>18</td>
<td>64</td>
</tr>
</tbody>
</table>

The length of time screens had been installed seemed to have little influence on malaria incidence in 1923, but the condition of the screens is
not included in this calculation. When one takes into account the present condition of screens, and 1923 incidence of malaria, it is seen that these with poor screens had a greater incidence of malaria, 64% as compared to 47%. This is a significant difference, but is not as large as one would expect.

From the available data, it is impossible to evaluate the role of screening in the reduction of malaria. One feels that the screens have been an important factor, but their value is not shown in these tables.

Summary of Factors in Malaria Reduction

It is probable that all the above factors have had a part in the evident reduction of malaria since 1922. Deficient rainfall has been of great importance in 1925 and 1926; the very general use of screens, and a change to a finer mesh, has undoubtedly saved many people from being bitten by mosquitoes; while the intensive quinine treatments of 1923 and succeeding years were undoubtedly greatest benefit. It seems justifiable to assume that wholesale use of quinine reduced the parasitic rate so low that the other protective factors, screens, deficient precipitation, etc., which has been partially ineffective before on account of universal prevalence, were able to make their influence felt in a lesser malaria incidence.

Summary

A short survey of a small area in Beaufort County showed a 11% spleen, and 1.5% blood rate, where malaria had been very prevalent only a few years before. Of the conditions apparently responsible for this decline in malaria incidence, it seemed probable that an intensive treatment campaign in 1923, with follow-up campaign in succeeding years, had reduced the parasite rate to so low a level that the other factors, screens, deficient rainfall, etc., were able to exert their influence and keep the rate low.
REPORT OF THE BUREAU OF MATERNITY AND INFANCY

July 1, 1924—June 30, 1926

This Department is principally concerned with the hygiene of Maternity and Infancy including midwife control. It operates under and is financed through the provisions of the Federal Sheppard-Towner Act. The total appropriation is $49,518.32, divided between the Federal Government and the State in the amounts of $27,259.66 and $22,259.66, respectively. The justification for such an expenditure is revealed by the excessively high infant mortality rate in this State. Approximately 25% of all the deaths occur during the period from birth to two years of age. A knowledge of the elementary principles of infant hygiene would prevent a great portion of these deaths. The large proportion of still-births indicates a need for more intelligent prenatal care.

BUREAU STAFF

Director of Bureau, an assistant director, secretary-stenographer and clerk. The director of the Bureau has entire supervision of the department and directs all other members of the staff.

FIELD STAFF

A Field Supervisor of Clinics (Pediatrician) and Four Nurses

To the field supervisor of clinics is assigned the duties of assisting county health officers and physicians in the conduct of clinics and aiding in obtaining precise methods of physical examination of mothers and children. In addition he is assigned the duties of training maternity and infancy nurses and in giving necessary instructions to midwives. The four state nurses act in the capacity of demonstrators, assisting in the establishment of routine methods and familiarizing county nurses with their specific duties.

PLAN OF WORK

Operating under the provisions of the Sheppard-Towner Act, financial assistance is given a county that desires to undertake a program of maternity and infancy work, conditioned upon the work being done in accordance with plans approved by the State Board of Health. The public health officer of each county directs and has entire supervision of all activities. The State Board of Health cooperates with the health officer by providing the services of the field supervisors of clinics and a nurse to assist. The county provides at least one nurse whose duties are restricted to those items of work directly related to Maternal and Infant Welfare. The physicians of each county assist the health officer in conducting clinics for the physical examination of mothers and children.

The main objectives sought are: First, the physical examination of the midwives and instruction in the performance of their duties. Second, intelligent care of expectant mothers. And, third, clinics for the physical examination of children under the age of six years.
METHODS

Midwife Control and Instruction

The importance of midwife control is shown by the fact that midwives deliver more than 30% of the babies of North Carolina and that more than 5,000 midwives are in active practice.

The objects sought in midwife instruction are: First, to teach them cleanliness in conducting a case of labor, and second, to teach them when to call a physician to take the case.

Midwives are given periodic physical examinations to see that they are physically fit and free of dangerous communicable disease. A physician gives a course of lectures to them on the hygienic care of the expectant mother, and danger signs during pregnancy and labor. The nurses conduct classes for detail instruction in the care of a normal case of labor. Midwives are shown by practical demonstration how to cleanse hands and arms, how to prepare patient for delivery and how to care for mother and baby after delivery.

Prenatal Care

Instructions to expectant mothers are given individually and in group conference. Blood pressure is taken and examination of urine is made. Those cases that show any abnormality are referred to a physician for observation and treatment. Hygienic literature pertaining to pregnancy is supplied to the expectant mother. A series of letters on prenatal care covering each month of pregnancy have been prepared and are sent by mail each month from the county health office or from the office of the State Board of Health.

Infant and Child Hygiene

Instruction in Infant and Child Hygiene is provided by two methods. First, by direct contact through the medium of physicians and nurses and second, by correspondence.

Direct contact is established by the nurse in visiting the home. Here, instructions are given the mother, pertinent literature distributed, and physical inspection of children made. Children with noticeable defects or abnormalities are invited, through the parents to attend a clinic at the most convenient location or to consult the family physician.

The child health conferences or clinics are conducted to make a physical examination of the child as completely as can be done in clinics of this character. The physicians conducting the clinic advise the mothers as to the general hygienic and dietetic management of the children. The attention of the mother is directed to any defects found and she is advised as to their correction. Communicable diseases and methods of preventing them are discussed.

Particular effort is made to secure the correction of defects in children before they enter school as thereby not only a physical but an inestimable economic advantage is derived.

Such contacts between the mother and the physician creates an intelligent and cordial relationship that produces better prenatal, obstetrical and infant care.
DIPHTHERIA CAMPAIGN

Introduction: As justification for a special educational campaign toward diphtheria prevention in North Carolina, and especially as applying to prevention in early childhood, the following facts relative to the three communicable diseases that are most amenable to prevention by vaccination are submitted.

Cases reported: 1920-1924

Diphtheria 25,460
Smallpox 14,082
Typhoid Fever 8,810

There were 4,095 cases of diphtheria reported in the State during 1924, 2,135 of which were in children under six, or of pre-school age; 1,628 in individuals over pre-school age; 232 cases, ages not given.

Deaths reported: 1920-1924

Diphtheria 1,815
Smallpox 93
Typhoid Fever 1,465

The annual death rate from diphtheria in the State for the five-year period, 1920-1924, is 15.6 per hundred thousand. The annual death rate in the State from typhoid fever for this period is 11.0. During this five-year period 77% of the deaths from diphtheria were in pre-school children.

Plan of Work: Contracts were made with the county commissioners of five counties. These contracts provided for the payment of the physicians at the rate of 50 cents per child of pre-school age immunized, one-half of which sum to be reimbursed by the State Board of Health, in an amount not to exceed $400.00 in any county. The contracts also provided for advertisement of the campaign by the State Board of Health.

Results: A total of 3,600 children of pre-school age were given three injections of toxin-antitoxin. As a result of extensive advertisement and explicit explanation to the physicians of the age limit prescribed, very little vaccinating was done in individuals other than children of pre-school age.

The following is a tabulated summary of all vaccinations made:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>3,152</td>
</tr>
<tr>
<td>5-10</td>
<td>1,019</td>
</tr>
<tr>
<td>10-15</td>
<td>377</td>
</tr>
<tr>
<td>15-20</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>4,568</td>
</tr>
</tbody>
</table>

Statistical Report

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-natal cases registered</td>
<td>12,497</td>
</tr>
<tr>
<td>Babies registered</td>
<td>36,762</td>
</tr>
<tr>
<td>Home conferences, mothers</td>
<td>61,313</td>
</tr>
<tr>
<td>Office or individual conferences, mothers</td>
<td>8,440</td>
</tr>
<tr>
<td>Group conferences, mothers (attendance)</td>
<td>12,288</td>
</tr>
<tr>
<td>Complete urine analysis secured</td>
<td>6,181</td>
</tr>
<tr>
<td>Midwives instructed (6 weeks’ course)</td>
<td>1,973</td>
</tr>
<tr>
<td>Prenatal and baby conference (attendance)</td>
<td>21,641</td>
</tr>
<tr>
<td>Pre-school children registered</td>
<td>5,469</td>
</tr>
<tr>
<td>Wassermanns collected</td>
<td>1,973</td>
</tr>
<tr>
<td>Pre-natal letters mailed out</td>
<td>83,699</td>
</tr>
<tr>
<td>Pieces of literature distributed</td>
<td>209,308</td>
</tr>
<tr>
<td>Number boxes silver nitrate distributed</td>
<td>17,256</td>
</tr>
<tr>
<td>Number midwives registered with Bureau</td>
<td>6,500</td>
</tr>
</tbody>
</table>
CO-OPERATIVE COUNTY HEALTH WORK

During the biennium gratifying progress was made in the development of county health departments. The number so organized increased from twenty-six to thirty-four. These comprise approximately fifty per cent of the population of the State. Not only has the number thus increased, but there has also been a marked expansion in the services afforded by these county health departments and an increased efficiency has been achieved. In addition to the counties which have joined the State Board of Health in its coöperative plan of work there are others maintaining county public health nursing service, one with an efficient health department, and five cities. The total, therefore, means that there has been provided for the promotion and protection of the public health in North Carolina a service for more than one-half of the population.

The plan of coöperation offered by the State Board of Health is simple. It comprises financial aid not to exceed $2,500 annually, and the assistance of staff representatives in planning and executing local programs. The financial aid is available to any county which will agree to appropriate a sum annually to match a like amount to be supplied by the State Board of Health for the purpose of establishing and maintaining a whole-time county health department, headed by a physician devoting full time to the work. A maximum of $2,500 annually is available from the State. Of this sum, $1,000 is given to the coöperating county unconditionally. The remainder, $1,500 annually, is payable on condition that the county health department shall produce items of public health work in unit cost value equivalent to this total cash expenditures of the department.

The financial aid of the State Board of Health is not conditioned upon the development of some particular plan of work. Each county may originate its own plan of work to suit its own needs, with or without assistance and advice of the State Board of Health. Having decided upon those items of public health work which are to be stressed, the State Board of Health conditions its financial aid upon the county health department's keeping a record of the items of work which it performs and reporting to the State Board of Health monthly what work it has accomplished with the funds expended, in order that the State Board of Health may account to the General Assembly not only for what was spent, but, which is far more important, for what was accomplished with the money expended.

In addition to the financial aid the functions of the State Board of Health in its relation with coöperative county health departments may be briefly summarized as follows:

1. Furnishes record forms, report forms, and available educational literature in such quantity as may be needed.
2. Has a staff representative visit each coöperative county department at intervals for conference with the health officer, for advice and assistance in promoting the county program.
3. Instructs the staff of local county departments in financing, record-keeping, preparations of budgets and reports.
4. Offers assistance of staff representatives in planning and developing general and special units of work, demonstrations, educational exhibits, clinics, laboratories, etc.
5. Offers representatives from staff for conferences with local boards of health, county medical societies, or other representative groups or agencies.

6. Checks the records of each cooperating county health department with reports and statements of work accomplished as submitted, verifying selected records on file by visits to home of families for whom services were rendered.

The counties now maintaining whole-time health departments under this cooperative arrangement are Bladen, Beaufort, Bertie, Brunswick, Buncombe, Cabarrus, Carteret, Columbus, Craven, Cumberland, Davidson, Durham, Edgecombe, Forsyth, Granville, Halifax, Henderson, Johnston, Lenoir, Mecklenburg, New Hanover, North Hampton, Pamlico, Pitt, Richmond, Robeson, Rowan, Rutherford, Sampson, Surry, Vance, Wake, Wayne, Wilkes, Wilson.

DETAIL REPORT OF WORK

The following shows in detail the amount of work accomplished by these county departments during the two-year period, showing each item of work, its unit cost value, the total number, and the total cost equivalent of each of the period.

<table>
<thead>
<tr>
<th>COMMUNICABLE DISEASE CONTROL</th>
<th>Unit</th>
<th>Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. CONTAGIOUS DISEASES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarantine by mail</td>
<td>.50</td>
<td>6,822</td>
<td>$ 3,411.00</td>
<td></td>
</tr>
<tr>
<td>Quarantine by visit</td>
<td>1.50</td>
<td>30,422</td>
<td>45,633.00</td>
<td></td>
</tr>
<tr>
<td>Visit to and instruction of schools</td>
<td>2.00</td>
<td>4,125</td>
<td>8,250.00</td>
<td></td>
</tr>
<tr>
<td>Instruction of schools through teachers</td>
<td>1.00</td>
<td>2,341</td>
<td>2,341.00</td>
<td></td>
</tr>
<tr>
<td>Epidemiological investigation</td>
<td>1.50</td>
<td>10,786</td>
<td>16,179.00</td>
<td></td>
</tr>
<tr>
<td>Vaccination, typhoid, complete</td>
<td>.50</td>
<td>161,546</td>
<td>80,773.00</td>
<td></td>
</tr>
<tr>
<td>Vaccination, smallpox</td>
<td>.25</td>
<td>104,627</td>
<td>26,156.75</td>
<td></td>
</tr>
<tr>
<td>Toxin-antitoxin, complete</td>
<td>.75</td>
<td>49,509</td>
<td>37,131.75</td>
<td></td>
</tr>
<tr>
<td>Children Schick Tested</td>
<td>.40</td>
<td>63,454</td>
<td>25,381.60</td>
<td></td>
</tr>
<tr>
<td>Vaccination, pertussis, complete</td>
<td>.50</td>
<td>2,173</td>
<td>1,086.50</td>
<td></td>
</tr>
<tr>
<td>Lecture course, number attending</td>
<td>.10</td>
<td>73,111</td>
<td>7,311.10</td>
<td></td>
</tr>
</tbody>
</table>

| **2. VENEREAL DISEASE CONTROL:** |      |      |        |                 |
| Cases Reported                | .25  |  7,478 | 1,869.50 |
| Cases returned for treatment  |  4.00 |  769  | 3,076.00 |
| Treatments, indigent cases    |  2.50 | 54,020 | 135,050.00 |
| Mercurial Inunction           |  2.00 |  1,987 | 3,974.00 |

| **3. TUBERCULOSIS CONTROL:**   |      |      |        |                 |
| Cases registered              | .25  |  1,642 | 410.50 |
| Tuberculous homes visited and instructed | 1.00 | 11,555 | 11,555.00 |
| Organization, clinics, number examined | 1.00 |  4,689 | 4,689.00 |
| Admission to Tuberculosis Institution | 5.00 |  526  | 2,630.00 |

**HYGIENE**

1. **INFANT AND MATERNAL HYGENE:**

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal cases registered</td>
<td>.25</td>
<td>6,245</td>
<td>1,561.25</td>
<td></td>
</tr>
<tr>
<td>Babies registered</td>
<td>.25</td>
<td>21,086</td>
<td>5,271.50</td>
<td></td>
</tr>
<tr>
<td>Home conferences, mothers</td>
<td>1.00</td>
<td>51,398</td>
<td>51,398.00</td>
<td></td>
</tr>
<tr>
<td>Office or individual conferences, mothers</td>
<td>.25</td>
<td>5,987</td>
<td>1,496.75</td>
<td></td>
</tr>
<tr>
<td>Group conferences, mothers, number present</td>
<td>.25</td>
<td>4,776</td>
<td>1,194.00</td>
<td></td>
</tr>
<tr>
<td>Women completing standard course</td>
<td>3.00</td>
<td>384</td>
<td>1,152.00</td>
<td></td>
</tr>
<tr>
<td>Midwives completing 6-hour course</td>
<td>4.00</td>
<td>1,261</td>
<td>5,044.00</td>
<td></td>
</tr>
<tr>
<td>Children certificated, Little Mothers' League</td>
<td>3.00</td>
<td>235</td>
<td>705.00</td>
<td></td>
</tr>
</tbody>
</table>
2. SCHOOL HYGIENE:

<table>
<thead>
<tr>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonsil and Adenoid operations</td>
<td>$5.00</td>
<td>6,752</td>
</tr>
<tr>
<td>Children treated, dental defects</td>
<td>2.00</td>
<td>49,259</td>
</tr>
<tr>
<td>Refractive errors corrected</td>
<td>1.00</td>
<td>1,695</td>
</tr>
<tr>
<td>Orthopedic corrections</td>
<td>5.00</td>
<td>519</td>
</tr>
<tr>
<td>Nutritional corrections (Crusaders only)</td>
<td>1.00</td>
<td>837</td>
</tr>
<tr>
<td>Pages, Modern Health Crusade</td>
<td>.20</td>
<td>22,901</td>
</tr>
</tbody>
</table>

Examinations, school children:
- Primary: .25 | 188,076 | 47,019.00 |
- Final: .50 | 64,018 | 32,009.00 |
- Excluded from school, scabies: .25 | 3,113 | 778.25 |
- Excluded from school, pediculosis: .25 | 2,034 | 508.50 |

3. EXAMINATION—LIFE EXTENSION

By health officer: 2.00 | 3,909 | 7,818.00 |
In dispensary: 1.00 | 9,427 | 9,427.00 |

4. LABORATORY WORK:

| Widal Test | .30 | 99 | 49.50 |
| Throat Culture | 1.00 | 7,428 | 7,428.00 |
| Throat Swab | .50 | 7,528 | 3,744.00 |
| Feces examination, for parasites | .50 | 3,228 | 1,614.00 |
| Sputum examination, for tuberculosis | 1.00 | 551 | 551.00 |
| Blood for malaria | 1.00 | 5,768 | 5,768.00 |
| Milk analysis | 2.00 | 8,038 | 16,076.00 |
| Babcock test alone | .50 | 1,796 | 898.00 |
| Water analysis (public supply) | 1.00 | 3,718 | 3,718.00 |
| Urine analysis | 1.00 | 11,282 | 11,282.00 |
| Albumen test, prenatal case | .35 | 1,883 | 659.05 |
| Pus, for gonococci | 1.00 | 1,077 | 1,077.00 |
| Specimens sent to State Laboratory | .50 | 23,678 | 11,839.00 |
| Examination for Rabies | 1.50 | 74 | 111.00 |
| Wassermann Tests | 1.50 | 633 | 949.50 |
| Lactic acid milk (quarts) | .15 | 6,582 | 987.30 |

SANITATION

1. EXCRETA DISPOSAL:

| Urban privies, licensed | .50 | 23,152 | 11,576.00 |
| Urban privies, maintenance, repair | .50 | 15,827 | 7,913.50 |
| Sewer connections | 2.50 | 7,595 | 18,987.50 |
| Rural privies constructed | 5.00 | 6,112 | 30,560.00 |
2. PRIVATE WATER SUPPLIES:
   Protected against surface pollution .......................... $5.00

3. ABATEMENT OF NUISANCES:
   Minor .......................................................... .50
   Major, hours spent ............................................ 1.00

   FOOD CONTROL

1. INSPECTIONS:
   Dairy .......................................................... 1.00
   Abattoir ....................................................... 1.00
   Hotel, restaurant, market .................................... .50

2. EXAMINATIONS AND TESTS OF ANIMALS:
   Ante mortem (when temperature taken) ....................... .25
   Post mortem (viscera attached) .............................. .25
   Cows tuberculin tested ...................................... 1.50
   Quinine Stations installed ................................ 5.00
   Homes visited and instructed ............................ 1.00

   MALARIA CONTROL MEASURES

1. STERILIZATION OF CARRIERS BY QUININE:
   Complete sterilization, 8 weeks ........................... 2.00
   Sterilization, 4 weeks ..................................... 1.50
   Prophylactic treatment .................................... 1.00
   Quinine Stations installed ................................. 5.00
   Homes visited and instructed ............................ 1.00

2. PROTECTION AGAINST THE INSECT HOST
   Homes screened ............................................... 5.00
   Mosquito bars used ......................................... 1.00
   Ditching installed .......................................... .05
   Ponds and streams stocked, minnows ....................... 5.00
   Surveys (complete) ......................................... 15.00

   FIELD ACTIVITIES
   Smears obtained at schools ................................ .30
   Smears obtained at public gatherings .................... .30
   Smears obtained on house to house visits ............... .30

   LABORATORY
   Smear examination, routine field ........................... .50
   Smear examination, office ................................... .50
   Differential cell count .................................... 1.50
   Smears sent to district laboratories ....................,.50

   EDUCATIONAL
   Lecture, public ................................................ 3.00
   Public exhibits .............................................. 2.00
   Field instruction .......................................... 2.00
   School instruction ........................................... 5.00
   Official groups instruction ............................... 5.00
   Instruction to parents by mail .......................... .15

   MISCELLANEOUS

1. CONFERENCES—HEALTH OFFICER:
   Office ................................................................... .50
   Official (group) ................................................. 1.50

2. CONVICTIONS:
   Violation of Health Laws .................................... 5.00

   TRANSPORTATION
   Car-miles .................................................... 1.00
   Health officer-miles ......................................... .05
   Nurse-miles ..................................................... .025
   Sanitary Inspector-miles ................................. .025

   COST EQUIVALENT
   $2,390.00
   $29,337.00
   $5,111.00
   $26,276.00
   $791.50
   $20,396.50
   $10,491.00
   $2,085.00
   $3,000.00
   $2,480.00
   $3,200.00
   $1,049.10
   $3,542.00
   $22,709.50
   $48.00
   $483.00
   $264.00
   $32.00
   $2,240.00
   $2,820.00
   $625.00
   $6,249.60
   $15,033.50
   $2,349.00
   $5,090.00
   $148,398.60
   $28,383.80
   $16,510.23
   $7,506.45
<table>
<thead>
<tr>
<th>County</th>
<th>Budget</th>
<th>Expenditures</th>
<th>Cost Equivalent Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaufort</td>
<td>$14,368.58</td>
<td>$22,602.30</td>
<td>$45,593.44</td>
</tr>
<tr>
<td>Bertie</td>
<td>7,500.00</td>
<td>6,875.94</td>
<td>15,266.55</td>
</tr>
<tr>
<td>Bladen</td>
<td>10,250.00</td>
<td>10,111.22</td>
<td>16,031.70</td>
</tr>
<tr>
<td>Brunswick</td>
<td>15,000.00</td>
<td>15,175.08</td>
<td>43,870.28</td>
</tr>
<tr>
<td>Buncombe</td>
<td>21,500.00</td>
<td>21,251.86</td>
<td>59,098.57</td>
</tr>
<tr>
<td>Cabarrus</td>
<td>22,185.06</td>
<td>20,096.09</td>
<td>29,030.50</td>
</tr>
<tr>
<td>Carteret</td>
<td>2,750.00</td>
<td>2,248.29</td>
<td>2,994.60</td>
</tr>
<tr>
<td>Columbus</td>
<td>15,000.00</td>
<td>15,231.37</td>
<td>29,299.85</td>
</tr>
<tr>
<td>Craven</td>
<td>12,386.58</td>
<td>12,421.50</td>
<td>28,917.05</td>
</tr>
<tr>
<td>Cumberland</td>
<td>13,421.34</td>
<td>14,370.27</td>
<td>33,813.17</td>
</tr>
<tr>
<td>Davidson</td>
<td>17,060.87</td>
<td>18,517.73</td>
<td>26,942.10</td>
</tr>
<tr>
<td>Durham</td>
<td>32,971.33</td>
<td>83,608.73</td>
<td>129,285.72</td>
</tr>
<tr>
<td>Edgecombe</td>
<td>13,804.60</td>
<td>12,080.09</td>
<td>23,075.68</td>
</tr>
<tr>
<td>Forsyth</td>
<td>35,006.15</td>
<td>41,339.83</td>
<td>90,489.75</td>
</tr>
<tr>
<td>Granville</td>
<td>17,248.07</td>
<td>12,271.65</td>
<td>21,846.92</td>
</tr>
<tr>
<td>Halifax</td>
<td>17,400.33</td>
<td>20,368.33</td>
<td>36,513.18</td>
</tr>
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Note—Carteret—Organized February 22, 1926.
Durham—Figures cover from September 1, 1924.
Johnston—Organized February 1, 1925.
New Hanover—Figures cover from February 1, 1926.
Northampton—Discontinued September-December, 1924.
Rutherford—Organized July 1, 1924.
Surry—Discontinued from January 1, 1920, to July 15, 1926.
Richmond—Organized October 1, 1924.
THE BUREAU OF SANITARY ENGINEERING AND INSPECTION

Character of Work

The work of this bureau deals with municipal sanitation in its several phases and falls within three general classifications as follows:

1. Sanitary Inspection. (Active field work begun October, 1919.)
2. Sanitary Engineering. (Active field work begun May, 1921.)
3. Milk Sanitation. (Active field work begun April, 1924.)
4. Shellfish Sanitation. (Field work begun October 1, 1925.)

The sanitary inspection work includes enforcement of the State Sanitary Privy law and the State Hotel law, the inspection of State institutions and miscellaneous sanitary inspections. The principal work of this section is the supervision of construction and maintenance of privies for the 122,000 homes that come within the meaning of the State Sanitary Privy law.

The sanitary engineering work includes review and approval of plans for waterworks and sewerage system improvements, and supervision of the operation of these systems with regard to the sanitary quality of water supplies. There are under supervision 238 public water supply and sewerage systems, representing a capital investment of $50,000,000 and an annual operation cost of $5,000,000, serving a population of 781,582 persons, or 28.37 per cent of the population of the State.

The milk sanitation work is entirely advisory in nature and consists of rendering advice and assistance to municipalities in connection with local milk sanitation problems.

The shellfish sanitation work is conducted coöperatively with the Fisheries Commission by a trained sanitary biologist under the direction of this bureau. This work involves laboratory examinations of water in growing areas, sanitary surveys of these areas, and sanitary inspection and regulation of the shucking and handling of shellfish.

Objective

The objective of this bureau is to aid in the reduction of disease, more particularly those diseases recognized to be of fecal origin or the so-called "filth-borne diseases" such as syphoid fever, diarrhea and dysentery.

The objective may be amplified with regard to the four general classifications of the work of the bureau respectively as follows:

Sanitary Inspection Division

1. The prevention of disease caused by insanitary disposal of excreta.
2. Improved sanitary management of hotels and cafes.
3. Improved sanitary management of State institutions.
4. Improved sanitation in other matters affecting the public health.

Sanitary Engineering Division

1. More extensive public water supply and sewerage service for municipalities throughout the State.
2. Effective public health protection in the design, construction, maintenance, and operation of all public water supply and sewerage systems.

Milk Sanitation Division

1. More widespread sanitary regulation of milk supplies by local health agencies.
2. Development of uniform standards of milk sanitation which will promote its production and consumption through increased public confidence in its safety.

3. Effective public health protection through the efficient sanitation of municipal milk supplies.

Shellfish Sanitation Division

1. The sanitary protection of shellfish growing areas and standard regulations of shellfish handling to:
   (a) Prevent the spread of disease from the consumption of shellfish grown in polluted water, or from shellfish bearing the germs of contagious disease due to insanitary methods of handling; and,
   (b) Aid in stabilizing the North Carolina shellfish industry by establishing the public confidence in the safety of this important food product.

Methods

1. Rigid enforcement of the sanitary laws assigned to this bureau for execution.

2. The conduct of all work, including law enforcement, on the principles of successful salesmanship.

In more detail with respect to the general classifications of work the methods practical are:

Sanitary Inspection Division

1. Rigid enforcement of the State Sanitary Privy law with respect to the sanitary construction and maintenance of privies in accordance with the regulations adopted by the State Board of Health under the provision of this act. This is done through a force of sanitary inspectors consisting of ten inspectors and two supervisors. Each supervisor does hotel and cafe inspections and handles special investigations and complaints in the section of the State assigned as his territory. One supervisor does jail and convict camp regulation, executing the duties of both the State Board of Health and the Welfare Department. Less than half of his time is devoted to sanitary inspection activities for the State Board of Health. The inspectors distribute sanitation literature, inspect privies, cite defects of privy construction and maintenance, advise and show property owners and tenants with regard to sanitary construction and maintenance of privies, issue notices for compliance with the law, and when unable to secure compliance with reasonable effort after the expiration of notice issued they prosecute the violator in the magistrate's court. They secure the adoption of local ordinances requiring connection to the public sewerage system where available and assist in the enforcement of these ordinances. They stimulate the installation of public water supply and sewerage systems and concessions in the enforcement of the privy law are allowed towns undertaking these sanitary improvements.

2. Hotels and cafes are inspected and rated and the provisions of the hotel and cafe law are rigidly enforced. In extreme cases of violation the violators are given the privilege of closing up temporarily for improvement, closing up permanently, or submitting to prosecution for violation of the law.

3. The State institutions are inspected and reports with recommendations are submitted to the boards of directors.

4. Many miscellaneous matters of sanitation in which the public health is to some extent involved require attention. These inspections are usually
made in connection with and for the assistance of local officials. They include such problems as swimming pools, markets, slaughter pens, drainage, and the common nuisance complaints with regard to which local officials request advice and information.

Sanitary Engineering Division

1. Every possible opportunity for the stimulation of public sentiment for the installation of public water supply and sewerage systems is embraced. In this connection conferences are held with local officials and mass meetings of the citizens are addressed in the interest of obtaining bond issues to carry out these improvements. The most potent factor, however, in this connection is the work of the sanitary inspectors described above, in connection with enforcement of the Sanitary Privy law.

2. All the public water supply systems have been thoroughly investigated for the purpose of determining the status of the respective systems with regard to public health protection afforded and the extent of improvement necessary to afford adequate protection. Local officials have been shown the necessity of these improvements through the submission of reports with recommendations based on a comparison of the various features of the local system with similar features of the better equipped systems in the State. By means of further contact with local officials through the field engineers the importance of going forward with essential improvements is further impressed.

3. In passing upon plans for all waterworks and sewerage improvements, new systems, extensions to existing systems, and improvements to existing systems, safe standards established by modern waterworks and sewerage practice are rigidly adhered to. All action taken in this connection is based upon accepted standards of practice subscribed to by the leading consulting engineers of the State and employed in their own designs. The complete cooperation of the engineering profession has been an invaluable asset to the success of this feature of the work.

4. The operation of filtration plants and other water purification and treatment devices has been given especial attention with regard to securing more efficient purification results, and hence more effective public health protection. The same methods employed in securing improvement in plant equipment have been employed in this connection and in addition intensive training has been given the plant operators by the field engineers. Wherever possible especially trained and experienced personnel has been secured, and in other instances the best qualified operator that the situation would afford has been secured and trained by the field engineers.

The training given by the field engineers is supplemented by a correspondence course designed to correct the more common operation defects, recognizing the technical limitations of the average small filter plant operator.

Milk Sanitation Division

1. A standard form of milk sanitation ordinance has been prepared, embodying the best practice in the regulation of milk supplies. This ordinance is furnished to local officials desiring such information. In addition, local officials are assisted in making preliminary surveys, organizing the work of enforcing the ordinance, establishing the necessary laboratory control, advising dairymen and pasteurization plant operators with
regard to the most practicable and economical methods of complying with the ordinance and in such other ways as will be of assistance in establishing more widespread and more efficient municipal regulation of local milk supplies.

2. The same service offered to municipalities for the establishment of new milk control units, as outlined above, is offered to existing units who desire to harmonize their milk sanitation requirements with the standard. All cities are advised to adopt the standard form of milk regulation in the interest of establishing uniform standards of milk sanitation that will be comparable on the same basis for all municipalities. This is done to establish a universal or standard unit of measure as a basis to enable the evaluation of the protection afforded by milk sanitation. Thus more uniformly effective results may be attained, and the public confidence increased in the safety afforded by municipal regulation of the milk supply.

Moreover, in cities having the same standards a temporary shortage in the milk supply of one can be made up from a surplus in another without nullifying the milk sanitation regulations, since these are the same in both places.

Shellfish Sanitation Division

The Fisheries Commission boat "Pamlico" has been refitted with a laboratory and equipment sufficient to make routine bacteriological tests of water in shellfish growing areas, and bacteriological examination of the shellfish at the beds, and as handled in preparation for market.

The work is conducted by a sanitary biologist detailed by the State Board of Health. In view of the economic importance of this work in connection with stabilizing the shellfish industry the cost of the laboratory equipment, the cost of operation of the boat and the salary and subsistence of the biologist in charge, are charged to the Fisheries Commission budget.

A system of certificates issued for any growing area conforming to the sanitary requirements as determined by sanitary survey and laboratory examinations is used.

Special certificates are also issued to all shucking house operators whose equipment and methods are found by inspection and test to conform to the regulations.

Since the Fisheries Commission offices are most convenient as the headquarters for this activity, these joint Fisheries Commission and State Board of Health certificates are issued from that office.

RESULTS OBTAINED

Sanitary Inspection Division

1. The enforcement of the State Sanitary Privy law has been carried forward on a basis of requiring complete conformance to the regulations. This program is sufficiently advanced now to permit undertaking effective maintenance supervision necessary to secure the full sanitary protection benefit provided by the statute.

The scope of activities and degree of accomplishment may be briefly illustrated by figure 1 to 4 inclusive.
Figure 1 shows the distribution of population which is significant for all the activities of this bureau which are all in connection with urban and semi-urban communities. It will be observed from the third line of the chart of Fig. 1 that the population served by the Sanitary Privy law and public sewerage facilities is 1,149,017, and by the sixth line it will be observed that 310,718 of this number are not even included in the
population of any incorporated community. Although North Carolina is credited with an urban population of 422,900, only 15% of the total, actually 41% of the total population is urban with respect to the sanitary problems incident to concentrated population groups in cities, towns and villages.
Figure 2 shows ratios of water supply and sewerage to privies, as of 1919 and 1925 respectively, illustrating the tremendous increase in sewerage service, and decrease in privies, as a result of the enforcement of the privy law and increased interest in improved home sanitation.

The first line in the chart of Fig. 3 shows total number privies in existence under the jurisdiction of the sanitary privy law in 1919. The second line shows the number of these privies replaced by sanitary privies in accordance with the regulations, the remainder were replaced by sewer connections as follows: by connections to new sewerage systems installed since 1919, shown in the third line, by sewer connections in extensions to systems existing in 1919 as shown in the fourth line.

Of the total 122,060 privies 63,319 were not even within the corporate limits of any incorporated community, as shown in the fifth line, while only 58,741 as shown in line 6 or 48% were inside the corporate limits of incorporated communities.
Figure 4 shows in line 2 and remaining lines the number of each type of privy included in the total number of improved sanitary privies as shown in line 1.
## The Public Water Supply

### January

#### Ground Water Supplies

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<td>Forsyth</td>
<td>1153</td>
<td>Wilsonville</td>
<td>821</td>
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<td>Cordova</td>
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<tr>
<td>Edenton</td>
<td>2771</td>
<td>Kompassa</td>
<td>6000</td>
<td>Wilsonville</td>
<td>821</td>
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<td></td>
</tr>
<tr>
<td>Elm City</td>
<td>721</td>
<td>Kompassa</td>
<td>6000</td>
<td>Wilsonville</td>
<td>821</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+Chlorinated</td>
<td></td>
<td>Kompassa</td>
<td>6000</td>
<td>Wilsonville</td>
<td>821</td>
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#### Sterilized Liquid Chlorine

<table>
<thead>
<tr>
<th>Town</th>
<th>Pop</th>
<th>Town</th>
<th>Pop</th>
<th>Town</th>
<th>Pop</th>
<th>Town</th>
<th>Pop</th>
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</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>310</td>
<td>Elm City</td>
<td>721</td>
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<td>821</td>
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<tr>
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<tr>
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<td>6000</td>
<td>Wilsonville</td>
<td>821</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+Chlorinated</td>
<td></td>
<td>Kompassa</td>
<td>6000</td>
<td>Wilsonville</td>
<td>821</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### BUREAU OF SANITARY ENGINEERING

#### North Carolina State

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**Explanation of Map**

Each supply is represented on the map by an appropriate symbol indicating the source of the supply, and kind of treatment, if any, practiced. The symbols used are listed with definitions in the legend at the right.

Each supply, together with the population of the community served, is also listed under appropriate group headings at the left, indicating the source of supply, and kind of treatment practiced.

Under the heading, “Recapitulation,” in the lower right-hand corner, will be found a summary. In the first column the various types of supplies with reference to source and kind of treatment are indicated. In the second column is shown respectively the number of communities served by each type. The third column shows the percentage ratio of the number of communities served by any
### Laboratory Control of Filtration

#### Chemicals and Bacteriological

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>1047</td>
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<tr>
<td>Mobile</td>
<td>2306</td>
</tr>
<tr>
<td>Anniston</td>
<td>3210</td>
</tr>
<tr>
<td>Bessemer</td>
<td>2999</td>
</tr>
<tr>
<td>Burlington</td>
<td>6224</td>
</tr>
<tr>
<td>Charleston</td>
<td>5800</td>
</tr>
<tr>
<td>Concord</td>
<td>10497</td>
</tr>
<tr>
<td>Dana</td>
<td>5834</td>
</tr>
<tr>
<td>Durham</td>
<td>42656</td>
</tr>
<tr>
<td>Fayetteville</td>
<td>9125</td>
</tr>
<tr>
<td>Forest City</td>
<td>2472</td>
</tr>
<tr>
<td>Gadsden</td>
<td>4343</td>
</tr>
<tr>
<td>Hiram</td>
<td>5616</td>
</tr>
<tr>
<td>Huntsville</td>
<td>4204</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>3651</td>
</tr>
<tr>
<td>Mobile</td>
<td>6670</td>
</tr>
<tr>
<td>Montgomery</td>
<td>24038</td>
</tr>
<tr>
<td>Sand Springs</td>
<td>2981</td>
</tr>
<tr>
<td>Tuscalo</td>
<td>1647</td>
</tr>
<tr>
<td>Vestavia</td>
<td>8051</td>
</tr>
<tr>
<td>Washington</td>
<td>5904</td>
</tr>
<tr>
<td>Wilcox</td>
<td>2807</td>
</tr>
<tr>
<td>Tuscalo</td>
<td>1049</td>
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</table>

#### Chemicals

- Alabama: Gomseril
- Mobile: Lombril
- Anniston: Lombril
- Bessemer: Lombril
- Burlington: Lombril
- Charleston: Lombril
- Concord: Lombril
- Dana: Lombril
- Durham: Lombril
- Fayetteville: Lombril
- Forest City: Lombril
- Gadsden: Lombril
- Hiram: Lombril
- Huntsville: Lombril
- Jacksonville: Lombril
- Mobile: Lombril
- Montgomery: Lombril
- Sand Springs: Lombril
- Tuscalo: Lombril
- Vestavia: Lombril
- Washington: Lombril
- Wilcox: Lombril
- Tuscalo: Lombril

#### Bacteriological

- Alabama: Gomseril
- Mobile: Lombril
- Anniston: Lombril
- Bessemer: Lombril
- Burlington: Lombril
- Charleston: Lombril
- Concord: Lombril
- Dana: Lombril
- Durham: Lombril
- Fayetteville: Lombril
- Forest City: Lombril
- Gadsden: Lombril
- Hiram: Lombril
- Huntsville: Lombril
- Jacksonville: Lombril
- Mobile: Lombril
- Montgomery: Lombril
- Sand Springs: Lombril
- Tuscalo: Lombril
- Vestavia: Lombril
- Washington: Lombril
- Wilcox: Lombril
- Tuscalo: Lombril

### Recapitulation

<table>
<thead>
<tr>
<th>Type of Supply</th>
<th>Per-Cent Number Total Population</th>
<th>Per-Cent Population</th>
<th>Per-Cent Chemical</th>
<th>Per-Cent Bacteriological</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow Ground</td>
<td>22.0</td>
<td>11.58</td>
<td>11.33</td>
<td>11.33</td>
</tr>
<tr>
<td>Deep-Shallow Ground</td>
<td>44.0</td>
<td>21.20</td>
<td>10.89</td>
<td>10.89</td>
</tr>
<tr>
<td>Filtered Surface</td>
<td>24.0</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Unfiltered Surface</td>
<td>7.0</td>
<td>6.2</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Unfiltered, not chlorinated</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Shallow Ground, chlorinated</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Deep-Shallow Ground, chlorinated</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Filtered Surface, chlorinated</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Chemical control</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>

### Inspecting and Inspection of Health

given type as compared to the total number of communities enjoying public water-supply service. The fourth column shows the total population served by each type of supply. The fifth column shows the percentage ratio of total population served by each type of supply as compared to the total combined population of all communities that have public water-supply service.

Under the heading, "Laboratory Control," are listed the filtered water supplies in which the purification process is regulated and conducted under constant laboratory supervision at the plant, chemical testing and bacteriological testing respectively. In some plants only chemical testing of the untreated and treated water are practiced, while in other instances both chemical and bacteriological testing are practiced. In all instances where bacteriological testing is practiced, chemical tests are also conducted.
Sanitary Engineering Division

1. The following table is a summary of the most important water supply improvements. In connection with this table see Fig. 5, the water supply map of North Carolina as of January 1, 1926.

**TABLE I**

<table>
<thead>
<tr>
<th>ALL WATER SUPPLIES:</th>
<th>7-1-24</th>
<th>7-1-26</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supplies under supervision</td>
<td>168</td>
<td>238?</td>
<td>70</td>
</tr>
<tr>
<td>Population thus served</td>
<td>725,000</td>
<td>818,000</td>
<td>93,000</td>
</tr>
<tr>
<td>Total population of the State served</td>
<td>28.3%</td>
<td>28.37%</td>
<td></td>
</tr>
<tr>
<td>Total population incorporated towns served</td>
<td>97.0%</td>
<td>97.0%</td>
<td></td>
</tr>
<tr>
<td>Capital invested</td>
<td>$31,000,000</td>
<td>$37,000,000</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Annual cost operation</td>
<td>3,000,000</td>
<td>3,750,000</td>
<td>750,000</td>
</tr>
<tr>
<td>Projects completed or under construction</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population thus served</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FILTER PLANTS:

| Number plants under supervision | *63     | *173*  | 19   |
| Population thus served | 514,530 | 573,442 | 58,912 |
| Population under trained operation and Lab. control | 24     | 38     | 14   |
| Population thus served | 359,390 | 401,653 | 112,263 |
| Filter plants improved |       |        |      |
| Population thus served |        |        |      |
| Sterilization equipment provided | 63     | 73     | 10   |

UNFILTERED SURFACE SUPPLIES:

| Number supplies under supervision | 24     | 27     | 3    |
| Population served | 69,094 | 66,916 | 3,178 |
| Number complied sterilization regulations | 19     | 25     | 6    |
| Population served | 63,253 | 65,388 | 2,135 |

GROUND WATER SUPPLIES:

| Number supplies under supervision | 76     | 138    | 62   |
| Population served | 138,881 | 177,642 | 38,761 |

SEWERAGE:

| Number systems | 168    | 234    | 66   |
| Population served | 725,000 | 806,000 | 81,000 |
| Cost new systems and treatment works |       | $1,750,000 |      |
| Population affected |        | 131,275 |      |
| New projects approved |        | 39     |      |

Figure 6 shows relationship between extent of water supply service in 1919 and 1925 respectively, taken on the basis of the 1925 population in each case, which does not show increase in population but increase in ratio of service. The second portion of the chart shows actual increased number of water supply systems.

2. State Board of Health supervision has been an aid in safeguarding against incompetent engineering service which the smaller towns, particularly those employing engineering service for the first time, usually secure on the “bargain counter” principle.

3. All of the projects have been laid out in accordance with the best recognized principles of modern municipal engineering practice. It is a noteworthy fact that all of this work has been handled by North Carolina engineers except a few of the minor improvements, whereas it is cus-

* 5 of these plants each serve 2 towns.
† 8 of these plants each serve 2 towns.
‡ Includes industrial village supplies not listed January 1, 1926.
torary for municipalities in other states to call in outside engineers of national standing for the more extensive projects. The work conducted by North Carolina engineers, however, will not suffer by any comparison.

4. No requirements have been made of municipalities in excess of those essential to adequate water supply protection. In view of the magnitude of the aggregate investment in water supply and sewerage, it will be recognized that this constitutes a responsibility upon the State Board of Health second only to safeguarding the safety of public water supplies. Furthermore, this has a strictly health significance, because the sanitary development of a city depends upon its standing in the bond market.

5. Thirty-eight plants serving a population of 501,000 or 77% of all the population served by filtered water supply are now operated on the best scientific basis in a manner capable of maintaining the full effectiveness in purification for which the plants were designed. The operators in charge of the plants are trained in the technical principles involved. In the regulation of the treatment process they are guided by the results of regular chemical and bacteriological tests, which they make themselves at the plant.

Figure 7 shows improvement in the equipment of filter plants rated against the ideal on a basis giving credit for each item of equipment. The rating of many of the plants shown in this chart are reduced by deductions for cross connections with industrial fire protections and other items really chargeable to the distribution system and not properly chargeable against the plant. The heavy black portions of lines show percentage improvement since 1921.
On a scoring basis similar to that of Fig. 7 the heavy black lines of Fig. 8 show percentage improvement in operation and adequacy of control and regulation of filter plants since 1921.

Milk Sanitation Division

In 1924 the division coöperated with the local health agency in the investigation and control of a milk-borne epidemic of typhoid fever which resulted in 25 cases and 1 death.

The population figures used in this report are based on the reports of the U. S. Bureau of the Census, for 1920, and are given as of July 1. It is known that in the cases of several of the larger cities these figures are too small, due to recent expansion of the city limits. They are, however, the only figures of reliable accuracy at present available. Summer and winter resorts, and college towns, have lower populations than seems reasonable since tourists and students are enumerated in the returns from the cities in which they have their home.

In 1924 there were 61 cities in the State having populations of 2,500 and over, which were regarded as of practicable size to support and carry out efficiently a milk sanitation program. For further convenience these 61 cities were divided into three groups as follows: Group A, population 5,000 and over; Group B, population 3,000 to 5,000; and Group C, population 2,500 to 3,000. The total population of these groups for both 1924 and 1926 and the population served by milk ordinances is shown in the following table No. II and graphically represented by the shaded circles in Figure 9.

**TABLE II**

Local Milk Ordinances in Effect 1924

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
<th>GROUP C</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities With Population Over 5,000</td>
<td>3,000 to 5,000</td>
<td>2,500 to 3,000</td>
<td>All Over 2,500</td>
</tr>
<tr>
<td>No.</td>
<td>Population Total</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Milk Ordinance in Effect</td>
<td>20</td>
<td>405,745</td>
<td>83.1</td>
</tr>
<tr>
<td>No Milk Ordinance</td>
<td>10</td>
<td>82,240</td>
<td>16.9</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>487,985</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Standard Milk Ordinance Adoptions and Other Local Milk Ordinances in Effect 1926

| Changed Previous Ordinance | 16 | 308,807 | 60.1 | 1 | 4,862 | 7.3 | 17 | 313,669 | 50.8 |
| Adopted as First Milk Ordinance | 7* | 65,024 | 12.7 | 5 | 20,241 | 30.2 | 2 | 2,585 | 7.0 | 14* | 87,850 | 14.2 |
| Total, Standard Milk Ordinance | 23* | 373,831 | 72.8 | 6 | 25,103 | 37.5 | 2 | 2,585 | 7.0 | 31* | 401,519 | 65.0 |
| Other Local Milk Ordinance | 4 | 119,033 | 23.2 | | | | | 4 | 119,033 | 19.3 |
| Total, All Milk Ordinances | 27* | 492,864 | 96.0 | 6 | 25,103 | 37.5 | 2 | 2,585 | 7.0 | 35* | 520,552 | 84.3 |
| No Milk Ordinance | 3 | 20,642 | 4.0 | 11 | 41,951 | 62.5 | 12 | 34,277 | 93.0 | 26 | 96,870 | 15.7 |
| Total | 30* | 513,506 | 100.0 | 17 | 67,054 | 100.0 | 14 | 36,862 | 100.0 | 61 | 617,422 | 100.0 |

*Includes five small cities administered as one unit. Actual number of cities four more than this number.
FIG. 9

CLASS A  CLASS B  CLASS C  TOTAL

1924

1926

ADOPTED STANDARD MILK ORDINANCE
HAVE SOME MILK ORDINANCE
NO MILK ORDINANCE

STANDARD MILK ORDINANCE ADOPTIONS AND OTHER MILK ORDINANCES IN EFFECT
An associate milk specialist of the United States Public Health Service co-operated with the division during 1926 in the establishment of a city milk supply sanitation rating for each of the cities in the State which had adopted the Standard Milk Ordinance. These cities were in all stages of development of milk control from recent adoption of the ordinance to full and efficient enforcement of over a year's duration. Milk sanitation ratings were made as of 1924 for 10 cities whose records supplied the necessary data, thus rating the milk supplies of these cities before the Standard Milk Ordinance went into effect. The average rating of the ten cities for 1924 was 54.0%; and for 1926 was 72.8%, showing an improvement in the efficiency of milk control by the enforcement of the Standard Milk Ordinance of 18.8%. In eight of the ten cities figures for the average daily sales of milk were available for both 1924 and 1926. In 1924 the average of daily sales of milk in these eight cities was 4,212 gallons, in 1926 it was 4,549 gallons, or a gain of 8% over 1924. Knowing the general conditions that existed in 1924 it is safe to say that similar improvement has been made by those cities for which no pre-ordinance rating data is available.

It should be noted that the Standard Milk Ordinance is not confined to this State. First adopted by the State of Alabama in 1923, and approved by North Carolina in 1924, it has now been adopted or approved by Virginia, Kentucky, Missouri, Tennessee, Arkansas, South Carolina, Mississippi, Louisiana and Texas. In these 10 states 109 cities have adopted and are now working under the same Standard Milk Ordinance, word for word, and is in effect in the 35 cities of North Carolina. There are 2 cities in Georgia and one in Minnesota which have adopted the ordinance independently of adoption by the State. In these days of large milk shipments by rail over long distances such a unification of standards and ordinances is essential to the successful maintenance of the quality and safety of the milk supply. It is significant that the Standard Milk Ordinance as already in effect was adopted by the 1926 Conference of State and Territorial Health Officers as standard for the United States.

Recent research work on pasteurization machinery carried on by a national official agency has disclosed many defects in existing plant equipment, seriously reducing the reliability of results, heretofore tacitly assumed. The equipment manufacturers are co-operating by making such changes as will eliminate the defects and insure reliability of the pasteurization process. The problems are mainly of an engineering nature to prevent valve leaks, to provide for adequate sterilization, to prevent formation of foam, to insure even heating of every drop of the milk to be pasteurized to the temperature and for the time indicated by the recording thermometer. Such defects are being studied and remedied as fast as possible in the pasteurization plants throughout the State by this division.

Shellfish Sanitation Division

1. Complete sanitary surveys of the shellfish growing areas have been made. In connection with these surveys bacteriological examination of the water at numerous points over the areas have been made. As a further check large numbers of bacteriological examinations of shellfish taken directly from the waters have been made.

These surveys disclosed the fact that with the exception of portions
MAP SHOWING DISTRIBUTION OF SHELLFISH PRODUCTION AND OYSTER SHUCKING HOUSES ALONG THE COAST OF NORTH CAROLINA

LEGEND

- OYSTERS
- CLAMS
- OYSTERS AND CLAMS
- CANNING PLANT
- SHUCKING HOUSE

Note: Numerical values in squares denote number of Shucking Houses

Scale: 1 inch = 20 miles

State Board of Health
Raleigh
TY PHOID FEVER RATE

Fig. 11
of Wrightsville Sound and portions of Morehead and Beaufort harbors the waters of the entire growing areas are in excellent sanitary condition. Restrictions have been imposed and are enforced prohibiting the taking of shellfish, from the above cited exceptional areas, for use as food products.

2. By frequent inspection and education work, the shucking houses have been made to conform to the sanitary regulations adopted by the State Board of Health and Fisheries Commission and approved by the U. S. Public Health Service.

3. The execution of these regulations and control measures has protected and established the safety of shellfish from North Carolina waters.

4. Definitely establishing the safety of the North Carolina shellfish products, has re-established public confidence in the safety of this product of one of the States most important industries, and has provided a definite clearance for these products in the markets. Without these control measures and the system of sanitary certificates issued to shippers there would be no market for the North Carolina shellfish products. These measures have saved the shellfish industry in North Carolina and placed it on a much more stable basis than existed prior to the typhoid scare and consequent demoralization of the shellfish market in 1924. (Also see Fisheries Commission report, particularly with regard to the economic significance of shellfish control measures.)

Summary

The activities of this bureau directed along the various lines of sanitation have been instrumental in accomplishing a marked reduction in the typhoid death rate, shown in the charts, Fig. 11.

In addition to the significance of the marked trend toward reduction, it is particularly significant to note that prior to the State-wide activities in sanitation, particularly the enforcement of the Sanitary Privy law, begun in 1919, the urban rates were 50\% greater than the rural rates, and that in 1925 the urban rates are only 60\% of the rural rates. This changed ratio is almost entirely the result of improved sanitation.

A further significant fact is that in 1925 there was a marked increase in typhoid death rates throughout the entire country, but in North Carolina, the rates continued to decline.

While tremendous reduction in the typhoid fever death rates has been accomplished, the rates can be still further reduced. This requires maintaining the present measures at a high stage of effectiveness, and undertaking still further measures. In this connection, milk sanitation work should be further extended, the sanitation of summer camps and all resort and vacation centers should be rigidly controlled, the sanitation of roadside water supplies and other semi-public water supplies should be rigidly controlled, and to meet the growing complexity of the sewage disposal and water purification problems, facing the municipalities of the State, stream pollution investigation and the systematic study and control of sewage treatment works should be carried out with adequate provision for this feature being made a major activity.
MEETINGS OF THE BOARD

MEETING OF THE EXECUTIVE COMMITTEE OF THE
STATE BOARD OF HEALTH

RALEIGH, SEPTEMBER, 1924.

All members of the Executive Committee were present, and Doctor Way presided.

The Secretary read the minutes of the last meeting and reported upon the action that had been taken with reference to the following matters considered at the last meeting in June, namely, the action of the Board with reference to a request from Carteret County for payment for certain operations for enlarged tonsils and adenoids among the school children of the county; the matter of interest regarding which the North Carolina Pharmaceutical Association had expressed itself; the request of Florence Williams that she be considered for a position with the State Board of Health, and the action of the Board with reference to Doctor Mitchener's salary request. After slight amendments to the minutes of the last meeting, the minutes were approved.

The Secretary then stated that the important business on which he desired the consideration of the Executive Committee was the legislative matter of the Board for the fiscal years 1925-26 and 1926-27. The following budget was then presented and considered item by item and with one or two small changes approved:

BUDGET

July 1, 1925, to June 30, 1926

<table>
<thead>
<tr>
<th>Department</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Department</td>
<td>$21,500</td>
</tr>
<tr>
<td>Bureau of Education</td>
<td>18,000</td>
</tr>
<tr>
<td>Vital Statistics</td>
<td>20,000</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>10,000</td>
</tr>
<tr>
<td>Engineering and Inspection</td>
<td>63,500</td>
</tr>
<tr>
<td>School Inspection</td>
<td>10,000</td>
</tr>
<tr>
<td>Maternity and Infancy</td>
<td>22,250</td>
</tr>
<tr>
<td>County Financial Assistance (general)</td>
<td>105,000</td>
</tr>
<tr>
<td>County Financial Assistance (malaria)</td>
<td>32,000</td>
</tr>
<tr>
<td>Supervision and Training County Work</td>
<td>15,000</td>
</tr>
<tr>
<td>Visual Education Work for Counties</td>
<td>9,000</td>
</tr>
<tr>
<td>Printing</td>
<td>36,000</td>
</tr>
<tr>
<td>Physical Examinations (new work)</td>
<td>25,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$387,250</strong></td>
</tr>
<tr>
<td>School Fund</td>
<td>50,000</td>
</tr>
</tbody>
</table>

**GRAND TOTAL** $437,250

<table>
<thead>
<tr>
<th>Department</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Department Proper</td>
<td>$165,250</td>
</tr>
<tr>
<td>County Assistance</td>
<td>161,000</td>
</tr>
<tr>
<td>Printing</td>
<td>36,000</td>
</tr>
<tr>
<td>New Work</td>
<td>25,000</td>
</tr>
<tr>
<td>School Work</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$437,250</strong></td>
</tr>
</tbody>
</table>
BUDGET
July 1, 1926, to June 30, 1927

Executive Department ............................................. $21,500
 Bureau of Education .............................................. 18,000
 Vital Statistics .................................................... 20,000
 Epidemiology ....................................................... 10,000
 Engineering and Inspection ..................................... 63,500
 School Inspection ................................................... 10,000
 Maternity and Infancy (general) ............................... 22,250
 County Financial Assistance (malaria) ....................... 32,000
 Supervision and Training County Work ....................... 15,000
 Visual Educational Work for Counties ......................... 9,000
 Printing ............................................................ 36,000
 Physical Examinations (new work) ............................ 25,000

Total ............................................................................. $412,250
 School Fund ............................................................ 50,000

GRAND TOTAL .................................................................. $462,250

Health Department Proper ........................................ $165,250
 County Assistance ...................................................... 186,000
 Printing ....................................................................... 36,000
 New Work .................................................................... 25,000
 School Work ............................................................. 50,000

TOTAL ............................................................................. $462,250

The Secretary then brought to the attention of the Board several requests for salary increases by different members of the staff. The Executive Committee expressed itself as adverse to increasing any salaries at this time, and the feeling seemed to be shared by all members of the Committee that no salary increases should be made until the action of the next General Assembly with reference to the budget of the Board, as well as the fiscal policy of the State generally, should be known. For this reason the Executive Committee declined to consider any requests for salary increases until the meeting of the Board following the adjournment of the General Assembly of 1925.

In connection with requests for salary increases, the Executive Committee adopted the following resolution: "That any increase in salaries of officers or employees of the Board of Health, where the increase involves a salary in excess of $2,000 annually, be referred to the Board for its action rather than left to the action of its Executive Officer." The Executive Committee further directed the Secretary of the Board to present to it at its spring meeting a statement of salaries now in effect for various officers of State Boards and Departments of Health for the States of the Union, so that any action that it might take with reference to salary increases could be taken in the light of prevailing practices throughout the country.

Doctor Shore appeared before the Executive Committee and requested the approval of the Committee for submitting an annual budget of $75,000 to the Budget Committee. Doctor Shore further stated that there was a balance of about $30,000 from collections on hand at the beginning of the present fiscal year, and that the State Treasurer and Auditor had agreed to allow the balance to be credited to available funds for the labo-
MEETING OF THE EXECUTIVE COMMITTEE OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., JANUARY 12, 1925.

All members of the Executive Committee, to-wit, Dr. Laughinghouse, Dr. Lewis, and Dr. Way, were present, Dr. Way presiding.

The Secretary reported his hearing before the Budget Commission of January 2 and asked the approval of the Executive Committee in the reduction of the budget previously presented, amounting in all to a reduction of $55,000 on the budget for the fiscal year '25 and '26, and a reduction of $50,000 on the budget previously presented for the fiscal year '26 and '27. The Secretary stated fully the reason why he thought the Board should be content with the reduced budget. The action of the Secretary in requesting the approval of the reduced budget by the Budget Commission was approved.

The Committee then discussed the advisability and means for securing by legislation the removal of statutory limitations of the Secretary's salary. The Committee ordered the Secretary to draft a bill as follows:

"A BILL TO BE ENTITLED AN ACT TO AMEND CHAPTER 118,
ARTICLE 1, SECTION 7053 OF THE CONSOLIDATED STATUTES
AS AMENDED BY CHAPTER 130 OF THE PUBLIC LAWS OF 1921,
FIXING THE SALARY OF THE SECRETARY OF THE STATE
BOARD OF HEALTH.

"The General Assembly of North Carolina do enact:

"Section 1. That the words 'not to exceed three thousand dollars' occurring in lines thirteen and fourteen of section 7053 of the Consolidated Statutes, as amended by chapter 130, Public Laws of 1921, shall be stricken out.

"Sec. 2. All laws and clauses of laws in conflict with this act are hereby repealed.

"Sec. 3. This act shall be in force from and after its ratification."

The Committee then requested its Chairman, Dr. Way, to confer with Honorable Walter Murphy, chairman of the Appropriations Committee of the House, and ask his advice with reference to his introducing the proposed bill in this session of the General Assembly. The Committee also requested Dr. Lewis, one of its members living in Raleigh, to see Mr. Murphy, if possible, with reference to the proposed amendment to the law fixing the salary of the Secretary. The Committee also requested the Secretary to arrange an appointment with Governor McLean early in the session and to lay before him frankly and without recommendation the present conditions as they are related to the remuneration of the Secretary of the Board.

The Executive Committee then considered fully what possible relation it might bear, what possible interest it might have in the development of local hospitals made possible through the Duke endowment. It was the sense of the Committee that only two pieces of legislation with reference
to the development of local hospitals would be needed at the hands of the present General Assembly. One piece of legislation should be an enabling act permitting counties, towns, or cities to vote bonds for the construction and maintenance of local public hospitals. The Committee found such a law already on the statute books and felt that with some slight amendment all the legislation of this character needed was already in existence. The other piece of legislation which the Committee thought advisable to take steps to bring about was a law appropriating a small sum available to local public hospitals on condition that other funds were available for the treatment of free cases, and on such further conditions as should be determined by the North Carolina State Board of Health. The Committee further directed that the Secretary of the Board should ascertain as far as possible the intentions of those in charge of the Duke endowment with reference to assistance in the development of local public hospitals, in order that he might more intelligently lend himself to securing such legislation as might be needed for the participation of the State in encouraging and assisting in the development of local public hospitals.

The Secretary of the Board then discussed with the Committee the matter of legislation designed to provide more economic and more adequate health provisions for public school children. The Committee left this last matter in the hands of the Secretary with the understanding that he should confer with the State Superintendent of Public Instruction with reference to drafting a bill and presenting it at the present session of the General Assembly.

The Committee then adjourned.

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH

RALEIGH, N. C., MARCH 27, 1925.

All members of the Committee were present.

The Secretary reviewed the recent session of the Legislature with reference to public health legislation. He called attention particularly to the decrease in public health appropriations for printing and county extension work. The Secretary pointed out that he did not know as yet just how much reduction in the printing appropriation had been made, as he had not been able to secure a copy of the bill. He understood that all printing for State purposes had been provided for in one general bill and the State Board of Health allowed a certain per cent of the total amount for printing, which he further understood would be in the neighborhood of $15,000 or $16,000.

With reference to the decrease in the extension funds for county health work, the Secretary made the following statement: That in preparing the budget in September, 1924, for the next two fiscal years, an increase of about 12 per cent had been requested; that in December, when he appeared before the Budget Commission and after it was apparent that the State had developed a considerable deficit during the last two years and all increases in appropriations for State purposes were questionable and doubtful, the Secretary asked the Budget Commission to eliminate certain items from the budget as it was submitted in September, these items being those relating to new and additional work and the elimination of which reduced
the budget for the first fiscal year, that is, 1925-1926 to $332,000 exclusive of the appropriation for the Laboratory and the appropriation from the Department of Education for the medical inspection of schools; and for the second fiscal year to $348,000 exclusive of the two special appropriations. The Secretary further stated that when the report of the Budget Commission was published sometime in January and it appeared from a newspaper account that the Board of Health had sustained a considerable loss in appropriation over that which it had asked for, that upon examining the official report of the Budget Commission it was found that the Budget Commission had stated that it had given the Board of Health exactly what it had asked for and the intention of the Budget Commission appeared to be to grant the budget as requested by the Secretary in his appearance before the Commission in December; that in further looking into the discrepancy between the amount requested and the amount granted, the Secretary found that the Budget Commission had provided for the printing in the general printing bill, and in doing so had excluded the appropriation of $34,000 requested for printing from the State Board of Health appropriation, and that the Budget Commission having considered the $50,000 requested for medical inspection of schools heretofore paid out of the funds of the Department of Education as included in the $332,000 total appropriation in excluding it from the appropriation granted the Board of Health and requiring the Department of Education to pay it in as a special appropriation, had reduced the appropriation of the Board $50,000 below what the Secretary had asked for. It was apparent that the mistake was made by the Budget Commission in considering the $332,000 requested for the first fiscal year and the $348,000 requested for the second fiscal year as including the $50,000 paid over to the Board of Health by the Department of Education when that sum should not have been considered as included in the total appropriation asked for, but as exclusive of it. On ascertaining the mistake that had occurred, the Secretary saw the chairman of the House Appropriation Committee, Hon. Walter Murphy, and Mr. Carl K. Hill, secretary of the Budget Commission, and was told that the mistake would almost certainly be corrected in the consideration of the Budget report by the Appropriation Committee. In appearing before the Appropriation Committee, the Secretary pointed out the discrepancy between the request of the Board and the amount allowed by the Budget Commission and how the mistake had probably occurred. On leaving the Appropriation Committee, the Secretary felt reasonably assured that the $50,000, in which sum the appropriation requested by the Board was short, would be restored. Unfortunately only half that amount was finally restored so that the Board of Health received $25,000 less than the appropriation requested for general purposes, and sustained with all other departments, and perhaps an equal amount, a cut in the fund allowed for printing.

Doctor Rankin stated to the Executive Committee that the loss of $25,000 for field service plus the severe loss in funds for printing would probably necessitate some reorganization and probably the dropping of two or three officers but that the loss would not seriously affect the carrying on of any of the essential policies of the Board. The Secretary stated that it would probably be necessary to drop the work of Doctor Byrd, who had been
serving several counties in holding infant clinics. Doctor Rankin stated that he and Doctor Taylor had for sometime been doubtful of the value of the work in which Doctor Byrd is engaged and that they both felt that it could be dropped, at least for a time, without any serious impairment of the health interest. The Secretary pointed out at the same time that Doctor Byrd's work was maintained by joint funds from the State and Federal Government and that these funds existed in a good surplus at present so that saving through the cessation of Doctor Byrd's work would be saving where it was least needed.

The Secretary further pointed out that it would probably be necessary at the beginning of the fiscal year to discontinue the work of two of the field supervisors, Doctor Collins and Doctor Sisk. He stated that he hoped the Board might find some county opening for Doctor Collins, and would probably use Doctor Sisk in the development of a county health department which could be used as a training camp for health officers after the manner of the Covington County Health Department maintained in Alabama jointly by the State Board of Health of that State and the International Health Board under the able direction of Doctor Smiley. If such an arrangement could be made for the utilization of Doctor Sisk the expense connected with his work would be partly borne by the county in which he worked.

The Secretary stated further that a saving could be effected by discontinuing the office of assistant secretary and using the assistant secretary either as one of three field directors, possibly in charge of the school work in the field, or in charge of the educational work of the Board, which would permit the present director of the bureau, Doctor Townsend, to take over the school work.

The Secretary then stated that he was thoroughly of the opinion, and his opinion was concurred in by both Doctor Taylor and Doctor Long, that it would be necessary to go back to the specialized plan of supervision; that is to say, the field officers, instead of having their work divided by districts, should have their work divided by functions—one field director being responsible for communicable disease control throughout the State, another for medical inspection of schools, and a third for supervising maternity and infancy work. The Executive Committee appeared favorable to this change in organization.

Doctor Rankin stated that while he was considering recommending these changes, he himself would not put them into effect until his successor was elected, and until his successor could be consulted. The Secretary pointed out that with these changes, the small decrease in the appropriations of the Board would not seriously affect its essential policies.

The Executive Committee then considered at considerable length the question of a successor to the present secretary when he should resign sometime during the spring. While the matter was fully considered, no definite action was taken. The Executive Committee had the advantage of a conference with the Governor on the question of a state health officer during a delightful luncheon served at the Mansion. The Governor was very much interested, and assured the Board of his desire to cooperate in the fullest manner possible in finding a suitable man to accept the office.
MINUTES ANNUAL MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

PIINEHURST, N. C., APRIL 28, 1925.

The Board met at nine o'clock in the evening, and all members were present, except Doctors Lewis and Anderson. Doctor Anderson came in before the meeting adjourned.

The Minutes of the last meeting, which the Secretary had abstracted, were gone over and approved. The Secretary also presented an abstract of the Minutes of the meetings of the Executive Committee which had been held since the last meeting of the Board. These Minutes were also approved.

Dr. Charles O'H. Laughinghouse moved that the Secretary be directed to send a telegram to Dr. Richard H. Lewis, expressing regret at his absence and conveying an expression of the respect and affection of the Board. The telegram was sent.

The President of the Board suggested that the Secretary write the heads of all the institutions to whom the resolutions adopted in the annual meeting of the State Board of Health in 1924, with regard to vaccination against smallpox, had been sent, and inquire what per cent of the institutional population had been vaccinated.

Doctor Laughinghouse presented a request from the Secretary of the Board of County Commissioners of Lenoir County and a similar request from the County Superintendent of Schools of Lenoir County, asking that the State Board of Health rescind its resolution with reference to including in its contract with participating counties a condition that the county health officer in a county in which the Board participated should not employ at public expense a relative by blood or marriage. After considerable discussion of the matter, it was moved and unanimously voted that the Board of Health should maintain its original position with respect to this matter. It was further moved and carried that the Secretary write the Chairman of the Board of County Commissioners in Lenoir County and the County Superintendent of Schools, sending to each of these officers a copy of the county contract together with a copy of the resolution previously adopted by the Board, and that he write these officers that it was the sense of the Board that its position as expressed in the contract and in the resolution was sound and should be adhered to.

Dr. Chas. O'H. Laughinghouse then presented the following resolution from the Eighth District Nurses Association:

"Resolution adopted by the Eighth District Nurses' Association to be presented to North Carolina Board of Health.

"Whereas, it has come to the attention of this Association that certain counties in the State have adopted the practice of engaging the services of other than graduate and registered nurses to carry on the work of the professional nurse in public health work; and

"Whereas, it is the sense of this Association that such practice is detrimental to the best interest of public health and State medicine; and

"Whereas, it is the sense of this Association that such practice is not in harmony with that of the United States Public Health Service or North Carolina's Board of Health; now therefore be it

"Resolved by the Eighth District Nurses' Association of North Carolina to request North Carolina's Board of Health to adopt and adhere to the policy of employing graduate and registered nurses only for all public health service required of the nursing profession."
"Unanimously adopted at Tarboro, N. C., this 14th day of April, 1925, and the adoption carries with it the order to submit these resolutions to the Executive Officer of the State Board of Health at Raleigh.

"(Signed) EDNA McKEE, R. N., Pres. 8th District Nurses Association,

"(Signed) MARY SHAW, R. N., Secretary 8th District Nurses' Association."

After an explanation of the resolution, it was moved and carried that the Board approve the position taken by the nurses, and that the Board instruct its Executive Officer to incorporate in future contracts with cooperating counties a condition prohibiting the employment of persons other than graduate nurses to perform any of the duties of the public health nurse.

It was further moved and carried that the secretary be instructed to write the officers of the Eighth District Nurses Association and to notify them of the action of the Board on the resolution which they had presented, and to express the Board's appreciation for their having called its attention to the matter.

The Secretary of the Board then presented the following letter, addressed to the President of the Board:

Dr. J. Howell Way, President,
North Carolina State Board of Health,
Pinehurst, N. C.

Dear Dr. Way:

"I present herewith my resignation as secretary of the North Carolina State Board of Health, and I respectfully request that the Board accept my resignation as effective on and after June 1, 1925.

"For the exceptional opportunity to serve the people of my State for a period of sixteen years as their State Health Officer, and for its never-failing and generous assistance in helping me to use that opportunity to the extent of my limitations, I shall be always deeply sensible and profoundly grateful to the North Carolina State Board of Health.

"With the highest respect and with genuine esteem, I am,

Very sincerely yours,

(Signed) W. S. RANKIN,
Secretary."

Doctor Tucker, Doctor Crowell, and other members of the Board were most generous in expressing their appreciation of the services of the Secretary and their regrets that he found it necessary to give up his work with the Board.

Doctor Rankin stated that the pain that he would otherwise feel in severing his relations with the Board was much relieved on account of the fact that his future work would in all probability be carried on in the very closest relation with the work of the Board of Health, and that in resigning as secretary of the Board he did not have the feeling of separation, but one of the closest future associations.

It was moved and carried that the Secretary's resignation, effective June 1, be accepted.

It was moved and carried that the President appoint a committee to draft suitable resolutions expressing the appreciation of the Board for the
services of Dr. W. S. Rankin. The President appointed as such a committee Doctors Laughinghouse, Thompson, and Crowell.

The President of the Board then read the following letter from Dr. Richard H. Lewis:

"Raleigh, N. C., April 27, 1925.

N. C. State Board of Health,
Pinehurst, N. C.

Gentlemen:

"To my great regret I am unable on account of my infirmities to attend your meeting at which you are to transact business of the greatest importance to our State—the election of a secretary to succeed Dr. Rankin. Not being able to participate in person, I am writing to ask, if it be admissible, the privilege of repeating a service rendered to the Board and the people of our State sixteen years ago when I nominated Dr. Rankin as my own successor, a service that has filled my mind and heart with ever increasing pride and satisfaction as the years have passed. It is needless to express my deep regret that he feels constrained to resign even to undertake other allied work of greater importance.

"With your consent, therefore, I place in nomination for the position of secretary and treasurer and State Health Officer, Dr. Charles O'Hagan Laughinghouse, and ask that my ballot be cast for him.

"You all know him so well that it seems almost superfluous to enumerate the qualities that fit him preeminently to carry on successfully the great work that Dr. Rankin has built up, his ability, his character, his outstanding reputation in the profession, his gifts as a speaker in personal appearances, substance and manner, his long service on the Board and his deep interest in everything relating to the public health.

"I fully realize the sacrifice, financial and otherwise, that the severance of his present connections to accept our meagre salary would entail, but I wish in coming to a conclusion he may be actuated by the same spirit of loyalty and patriotism that carried him to France and in that high spirit accept the command of the forces engaged in the far nobler warfare against disease and death, which I feel sure you will offer him unanimously. His reward while materially small would be great in the deep and abiding satisfaction which nothing could take away that would come from unselfish devotion on a large scale to his fellowmen. I sincerely hope he will accept the responsibility.

Faithfully yours,
(Signed) RICHARD H. LEWIS."

After reading the above letter, the President gave a full account of the many efforts which he, the Executive Officer, and the Executive Committee had made since the early part of the year when it became known that Doctor Rankin would sign to take up work with the Duke Foundation, to find a successor. The President of the Board and most of the members of the Board expressed freely their conviction that if Doctor Laughinghouse could be induced to accept the position of State Health Officer, he was of all men ideally qualified for the work. On account of the fact that Doctor Laughinghouse was not in a position to reach a final decision as to whether or not he could accept the position of Executive Officer of the Board, it was moved and carried that further consideration of the matter of electing a successor to Doctor Rankin be deferred until a called meeting of the Board sometime during the latter part of May.

The Secretary of the State Board of Health then called attention to the excellent services rendered under rather difficult circumstances by the assistant secretary, Dr. G. M. Cooper, during his absence in 1924, and requested that the Board instruct him to make a suitable entry in the
minutes, expressing the appreciation of the Board for his services. It was moved and carried that the Secretary be instructed to draft a suitable expression of appreciation and to submit it to the members of the Board for their signature at the meeting of the Board to be held the latter part of May, and that such an expression be made a part of the minutes of the Board and a copy thereof be furnished Doctor Cooper.

A motion to adjourn was then made and carried, an understanding having been reached that the Board would meet the following day, April 29, at eleven-thirty.

MINUTES ANNUAL MEETING OF THE NORTH CAROLINA STATE BOARD OF HEALTH

PINEHURST, N. C., APRIL 29, 1925.

All members of the Board were present, Doctor Way presiding.

Doctor Laughinghouse introduced the following resolution and moved its adoption, which was duly seconded and carried:

"April 28, 1925.

"Whereas, on this date Dr. Watson S. Rankin has tendered his resignation as executive officer of this Board, which position he has held since 1909, and

"Whereas, he is soon to enter service as executive officer of the department made by the Duke Foundation for the development of orphanages and hospitals in this and a sister state, and

"Whereas, Dr. Watson S. Rankin has developed the State Board of Health from a department of comparative insignificance to an organization of such magnificence and achievement that it has become a model for the rest of civilization, and

"Whereas, as in the building of the Board to its present standards he has given out such evidences of high character, ability, and personal magnetism as to win the admiration, confidence, esteem and affection of this Board; now therefore be it

"Resolved, that the Board spread upon its records an expression of regret for the resignation of Dr. Rankin, a guarantee of cooperation with him in his new field, and a pledge of personal confidence, respect, and love to him as a man and as a citizen of these United States.

(Signed) CHAS. O'H. LAUGHINGHOUSE,
A. J. CROWELL,
CYRUS THOMPSON."

Mr. Stowe expressed the appreciation of the druggists in being represented on the North Carolina State Board of Health, and said that it was the desire of the druggists, if possible, to have a larger and more definite share in the public health work of the State. To this end he asked the consideration of the Board as to what the druggists might do, and stated that the druggists would appreciate definite suggestions as to how they might serve the State in a larger way in its public health activities. He suggested that they might assist more largely in the keeping and distribution of biological products.

Mr. Stowe also requested that the Board of Health define its policy with reference to recommending the use of paper cups or sterilized glasses at soda fountains. He stated that the practices in different towns and cities varied so much that the stabilizing influence of the Board in making some recommendation on this matter would be very helpful.
It was moved and seconded that Mr. Stowe be requested to ask the North Carolina Pharmaceutical Association to appoint a committee to make a thorough study of this subject, and to report the latter to the State Board of Health, including in that report certain definite recommendations which they would like to have the Board consider.

A motion to adjourn was made and carried, the Board then meeting in conjoint session with the North Carolina State Medical Society where the further minutes of the Board were taken by the Society’s stenographer and included in the transactions of the Society.

MINUTES MEETING OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., MAY 30, 1925.

All members of the Board were present, except Doctor Crowell, President J. Howell Way presiding.

The minutes of the last meeting were reported and approved.

The Secretary stated that the first matter for the consideration of the Board was the selection of an Executive Officer to take charge of the interests of the Board on and after June 1.

President Way interrupted the consideration of this matter to read a telegram from Dr. A. J. Crowell, stating that he regretted that it was impossible for him to be present. After reading the telegram, Doctor Way stated that Doctor Crowell could not be present on account of having gone to Atlantic City to attend the meeting of the American Medical Association at which meeting important matters relating to urology were under consideration and to the discussion of which Doctor Crowell would undoubtedly make valuable contributions in the way of discussion. Doctor Way stated that the work which Doctor Crowell had been doing, particularly with reference to ureteral surgery, was of an exceptionally high order and had brought him into conspicuous prominence with the specialists of that branch of medicine throughout the country.

In considering the election of a Secretary, it was the sense of several members of the Board that the opinion of the Attorney-General be asked as to the right of the Board to designate someone to act as Secretary pending the election of a Secretary at some later date. The President and the Secretary of the Board were requested to get in touch with the office of the Attorney-General to secure an opinion as to the right of the Board to designate someone to act as Secretary pending the election of a Secretary. The President and Secretary of the Board discussed the matter with the Assistant Attorney-General Frank Nash, and obtained from him the following opinion:

"May 30, 1925.

"Dr. J. Howell Way, President,
N. C. State Board of Health.
Raleigh, N. C.

"Dear Sir:

"In the matter of the election of a Secretary of the State Board of Health.

"The State Board of Health shall have a President, a Secretary, who shall also be Treasurer, and an Executive Committee, said committee to have such powers and duties as may be assigned it by the Board of Health... The Secretary-Treasurer shall be elected from the registered
physicians of the State, and shall serve six years. . . . The Secretary shall be the executive officer of the Board and shall under its direction devote his entire time to public health work and shall be known as the State Health Officer.

"These, stated briefly, are the provisions of Section 7053 of the Consolidated Statutes in relation to the election of a Secretary of the State Board of Health.

"It appears that from circumstances not necessary to be recapitulated in this letter, it is not proper, in the opinion of the Board of Health, to elect a Secretary of that Board as State Health Officer at present. Upon this you inquire of this office whether or not that Board has authority to appoint a temporary Health Officer pending further investigation by the Board as to who they should elect permanent Secretary. We think that this is one of the powers which are necessarily involved in the constitution of the State Board of Health. It is important that someone should in the interim perform the functions of the Secretary and as it is not possible at the present time to fill the vacancy permanently, we think that this course may be adopted by the Board.

Yours very truly,
(Signed) FRANK NASH,
Asst. Attorney-General."

This opinion was later read to the Board and the following motion offered:

Moved that Dr. George M. Cooper be designated to perform the duties of the Secretary of the State Board of Health pending the election of a Secretary. The motion was seconded and unanimously carried.

The following motion was then offered:

Moved that during the time that Dr. George M. Cooper shall perform the duties of Secretary of the State Board of Health, he shall receive the compensation allowed the Secretary. This motion was duly seconded and unanimously carried.

The Secretary then offered a resolution which he had been directed by the Board at its meeting in Pinehurst in April to prepare. The resolution offered was as follows:

Resolution Adopted by the North Carolina State Board of Health Expressing its Appreciation for the Services of Dr. George M. Cooper.

Whereas, during the absence of the Secretary in 1923-24, Dr. George M. Cooper, as Acting Secretary of the North Carolina State Board of Health, rendered most conscientious, faithful, and efficient services, altogether satisfactory and in harmony with his splendid record as an officer of this Board during the last ten years; now therefore be it

Resolved, that the North Carolina State Board of Health hereby expresses its genuine appreciation to Dr. Cooper for his long and efficient service in general and his services as Acting Secretary during the past year in particular, and in evidence of this appreciation and as a token of its high regard for him both as a man and as a citizen, directs that this resolution be spread upon the minutes of the Board, and that a copy of the resolution, with the autograph of each of the members of the Board attached, be presented to Dr. Cooper.

The resolution was duly seconded and unanimously carried.

The next matter discussed was the possible relation that might develop between the interests of the State Board of Health and the hospital interests of the Duke Foundation. The following resolution adopted by the State Medical Society was read:

"Dr. J. Howell Way, Waynesville, N. C., representative of the Haywood County Medical Society in the House of Delegates at the recent meeting of the State Medical Society at Pinehurst, introduced the following:
"Whereas, the Medical Society of the State of North Carolina is deeply conscious of the munificence, beneficence, and power for good, contained in the purposes and plans of the Duke Foundation; whereas, it is realized that as a State organization created to prolong life, prevent disease, ameliorate the handicaps of the sick, and promote human welfare in general, the Medical Society of the State of North Carolina and the Duke Foundation are profoundly sympathetic in purpose and ideal; whereas, the Medical Society of the State of North Carolina is deeply grateful and filled with exceeding pride on account of the fact that the Duke Foundation has come to the State through the ability, generosity, and Godliness of motive possessed and put into action by one of the State's own sons,

"Now, therefore, be it resolved that the Medical Society of the State of North Carolina in regular annual session assembled does hereby express to Mr. James B. Duke its sincere appreciation and gratitude for his unparalleled service to all classes and conditions of men who now and in the future are to make the citizenship of North Carolina.

"2. That the Medical Society of the State of North Carolina pledges its support, unstinted cooperation and continuous assistance to the Duke Foundation in developing and perfecting the purposes and ideals for which the Duke Foundation was created.

"3. That it hereby requests our State Board of Health to make available to the Duke Foundation the use of its offices, staff, and personnel, whenever in the judgment of the Directors of that Foundation and the State Board of Health all or part of the machinery of the Board of Health can be of service, either individually or in a cooperative way.

"Unanimously adopted."

After some discussion, the following motion was made:

Moved that in accordance with a resolution adopted by the North Carolina State Medical Society at its meeting at Pinehurst, which is hereby made a part of the minutes of this Board, the Executive Officer of the State Board of Health be requested to make such arrangements with the representative of the Duke Foundation in charge of their hospital interests or other interests related to or influencing public health activities in North Carolina, with respect to office facilities, including the use of the office as a mailing and forwarding address, the library facilities of the office, filing provisions, and the clerical force of the office, as may appear to him to be to the mutual advantage of the North Carolina State Board of Health and the Duke Foundation, provided, however, that any expense incurred on the part of the State in the extension of the aforesaid privileges to the representative of the Duke Foundation shall be charged against the Foundation and the State reimbursed for such expense.

This motion was duly seconded and unanimously carried.

At this point the meeting of the Board was suspended, and the Executive force filed into the office and presented to the retiring Secretary, through appropriate remarks by the President of the Board, a beautiful watch as a tribute of their affectionate regard. The Secretary expressed his very deep appreciation to the Executive force for the watch and for the beautiful sentiment which it contained, and which he stated he would always carry in most affectionate remembrance. The Secretary, in transcribing this portion of the minutes of the meeting, fully realizes that the minute very inadequately describes what took place in the emotions of himself and his friends.

The Secretary then discussed with the Board the present status of the work of the State Board of Health and the arrangement for the continuation of the work during the summer. The Secretary stated that on account of a surplus of funds for carrying on maternity and infancy work, which funds had been contributed by both Federal and State Governments, that several officers whose salaries and expenses have heretofore been
borne by funds set aside for county health work, had been detailed to do
work which would fall within the program of the maternity and infancy
work of the Federal Government so that their salaries and expenses could
be paid out of the funds for maternity and infancy work instead of the
more restricted funds for county health work. The Secretary stated that
in all probability the Board of Health would be able to retain and carry
over into its next year's budget a surplus of the maternity and infancy
appropriation for this year. He stated that this would certainly be pos-
sible, provided all of the Federal funds could be obtained before the first
of July, and that he had already taken steps to bring this about.

The Secretary further stated that on account of the cut in the appro-
priation for printing it was planned to use some of this year's surplus in
providing standard forms and other printing which will be used during
the next six months, and in that way to relieve the strain on the restricted
printing appropriation.

The Secretary called attention to a request from the Bureau of Vital
Statistics that the allotment of funds for the work of that Bureau be
increased from $20,000 to $22,500 annually. The Secretary suggested that
the Board direct its executive officer to get in touch with the Bureau of
the Census of the Federal Government and request that Bureau to send
someone to carefully go over the work of the Bureau of Vital Statistics,
and to report to the Executive Officer of the Board the efficiency and
economy with which that work is being handled. The Secretary further
stated that he had requested Dr. F. M. Register, director of the Bureau
of Vital Statistics, to lay before him a statement showing the cost per
certificate received and handled by the three states—North Carolina, South
Carolina, and Virginia.

It was moved that the Board approve the course taken and suggested
by the Secretary, and that the Executive Officer of the Board be requested
to later report to the Board the results of this action. This motion was
duly seconded and carried.

Doctor Lewis then offered a resolution taking cognizance of Doctor
Rankin's presence as Executive Officer of the Board at its last meeting,
and expressing the appreciation of the Board for his services. The Board
of Health requested Doctor Lewis to inscribe the resolution in his own
handwriting in the minutes of the Board, and this service Doctor Lewis
stated he would be very glad to perform.

"A minute of appreciation of the retiring Secretary of the State Board
of Health offered by Dr. Richard H. Lewis and unanimously accepted by
the Board with the request that the mover write it out in his own hand
on paper to fit into the record of its proceedings.

"Before the adjournment of this the last meeting concluding the sixteen
years of service of our Secretary and Treasurer, Dr. Watson S. Rankin,
the State Board of Health desire to put on record their appreciation of
both the Health Officer and the man himself.

"We regard with much pride and satisfaction the good work he has
done for the cause of the public health not only in our own state and
nation but in countries across the seas.

"By his intellectual ability, his originality, enterprise, energy, earnest-
ness, enthusiasm, engaging personality and his whole-hearted consecration
to the welfare of his fellow men he has accomplished such results as to
place him in the very front rank of the progressive and constructive
leaders in preventive medicine of our country; and has built a monument
in the grateful hearts of our people, saved so largely by his efforts from
sickness and death, that will appeal to his generous nature far more than any material honor.

"While it is with deep regret that we give him up, we are much gratified to know that his new work, devoted still to the sick and suffering, is so closely allied to our own and that there will be cordial cooperation between us.

"As we separate we wish him to take with him the memory of the pleasant and harmonious relations existing between us all through the sixteen years and the full assurance not only of our admiration and esteem but also of the warm personal affection of all of us, and our very good wish for his health, success and happiness."

A motion to adjourn was then made and carried.

MINUTES MEETING OF EXECUTIVE COMMITTEE OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., SEPTEMBER 30, 1925.

On account of the physical debility of Dr. Lewis the meeting was held at the home of Dr. R. H. Lewis. On the invitation of the President of the Board and the Acting Secretary, Dr. W. S. Rankin was present at the meeting.

The Acting Secretary brought to the attention of the Committee the fact that there is no fireproof storage for the vital statistics records of the State Board of Health, which is specifically required by the law. This matter had already been called to the attention of the Governor as Chairman of the Committee on Building and Grounds, and the correspondence concerning the matter is in the records, in the files of the Executive Office. The Board instructed the Acting Secretary to write a letter to the Governor as Chairman of the Committee on Building and Grounds, calling his attention again to the urgent necessity for immediate action in providing sufficient storage space in a fireproof building to take care of all of the permanent records. The Acting Secretary was directed to emphasize the fact that the Board has accomplished everything it can accomplish in meeting this need, and that the interest of the State Board of Health is, first, to secure adequate fireproof storage for the permanent records of the Board, more especially the vital statistical records of births and deaths, or, second, to obtain from the Buildings and Grounds Committee a definite statement of relief from further responsibility in case of loss of these records by fire or otherwise.

The Board considered fully "Regulations Governing the Gathering and Handling of Shellfish" and "Rules and Regulations Governing the Operation of Oyster Shucking and Packing Houses" as prepared by Mr. H. E. Miller, director of the Bureau of Sanitary Engineering and Inspection, at the request of the Acting Secretary. The Board endorsed these rules and regulations with recommendations to the Fisheries Commission for their adoption in order to make the procedure unquestionably legal in its execution. The Board further directed the Acting Secretary and Mr. Miller to modify these rules and regulations in any detail as may be found necessary in actual practice. The rules and regulations endorsed are as follows:

Regulations Governing the Gathering and Handling of Shellfish

Oysters, clams or other shellfish shall be taken only from such waters as have been found upon inspection to be free from such pollution as would render the oysters, clams or other shellfish dangerous to health. A certificate that these regulations have been complied with will be issued
by the State Board of Health upon application by any person, firm or corporation taking or intending to take oysters, clams or other shellfish from North Carolina waters. Violation of any of these regulations with respect to any area, shall constitute sufficient cause for revoking the certificate for that area.

Oysters and clams may be taken from restricted areas for relaying during the period April 15 to May 15, under special permit.

Removal of oysters or clams for relaying during the period April 15 to May 15 shall be allowed only by special authority and under direct supervision of the Commissioner.

Floating or storing of oysters in waters is not allowed.

Oysters shall not be carried on the decks or in the holds of vessels after removal from beds for a longer period than sixty hours in October and April and one week during the months of November to March.

Boats used in the collection and transportation of oysters and clams shall be kept in a clean and sanitary condition at all times. Oysters and clams shall be so stored that they will at no time come in contact with bilge water.

Boats used in collecting and transporting oysters and clams shall not be washed with polluted harbor water.

Owners of all vessels in which men work continuously for more than one hour and which are engaged in the handling of oysters or clams from the planting grounds or in the vicinity of floats upon which oysters are or may be laid out, must provide their vessels with suitable receptacles in which the excreta, both solids and liquids, of persons using such boats shall be received and the contents of such receptacles shall be disposed of either through an approved sewerage system or by incineration or by burial in the ground at points sufficiently removed from the banks of streams to prevent pollution of the waters thereof.

Oyster and clam shippers shall keep their wharves, storehouses and shipping houses in a clean and sanitary condition at all times.

Oyster or clams or other shellfish intended for sale as food must be so kept that they do not become contaminated.

Shell oysters or clams for the retail trade shall be packed in tight new head barrels, new boxes or new sacks plainly marked with the name and address or identification mark of the shipper.

All railroad cars, trucks or boats in which oysters or clams are shipped in sacks must be clean. All such cars, trucks or boats shall be subject to proper inspection.

The producer shall furnish the receiver a true record of source or sources from which shellfish are taken, which record, together with the name or license number of the producer shall be kept by the receiver. The receiver shall also keep a record of all lots shipped, showing date, destination and source from which they were obtained. These records shall be subject to inspection by the proper authorities.

The above shall apply equally to shipper of shell and shucked stock.

Rules and Regulations Governing the Operation of Oyster Shucking and Packing Houses

No person, firm or corporation shall operate or conduct an establishment for the shucking of oysters within the State of North Carolina until he, they, or it shall have complied with these regulations and the establishment has been inspected by the State Board of Health.

All establishments in North Carolina for the shucking and packing of oysters, clams and other shellfish shall conform to the following regulations. Certificate to operate will be issued only after sanitary inspection by the State Board of Health shows that the plan complies with these regulations.

1. Application for such inspection shall be made in writing by the person, firm or corporation submitting the application. All certificates of inspection shall be posted in a conspicuous place in the shucking plant. Violation of any of these regulations shall constitute sufficient cause for the permit to be revoked.
2. Every building or room used as a shucking house shall be constructed and equipped as hereinafter provided, and the operations carried on in such building or rooms shall be conducted in such manner that the purity and wholesomeness of the shellfish handled therein shall not be impaired.

3. Storage rooms and bins for unshucked oysters must be so constructed as to prevent contact of the oysters with drainage.

4. All rooms in which shucked oysters are packed, stored, washed or otherwise handled shall be separate and apart from rooms in which oysters are opened.

5. All shucking houses shall be adequately lighted and ventilated and shall be provided with an abundant supply of cold water under pressure and of hot water or steam. During the fly season all windows and doors of shucking and packing rooms shall be provided with screens.

6. All shucking houses shall be provided with suitable toilet and lavatories. Soap and individual towels shall be provided for use of employees.

7. All shucking houses must be provided with adequate drainage to lead all waste liquids outside of the building, and into a suitable sewer or sewerage disposal system, or to some other points where they can be disposed of without creating a nuisance.

8. Rooms in which oysters are shucked and in which oysters are washed and packed shall be provided with a type of floor which will allow for proper drainage and which can be readily cleaned.

9. Shucking benches constructed of smooth, hard material which can be readily cleansed must be provided. Such benches shall be kept in a clean condition, thoroughly washed at least daily.

10. All utensils and containers in which shucked oysters are placed or come in contact with must be of non-corrodible metal of such construction that they may be readily cleansed and must be thoroughly cleansed and sterilized by means of steam or boiling water immediately before being used.

11. Knives used by shuckers must be subjected to the same treatment.

12. Shucked oysters may be washed with water from a supply approved by the State Board of Health for a period not in excess of three minutes. If blower is used it shall be thoroughly cleansed after each blowing. Water for washing oysters is not permitted to be dipped from barrels or other receptacles.

13. The soaking of shucked oysters in fresh or salt water is prohibited.

14. All containers in which shucked oysters are shipped shall be washed and sterilized before being filled.

15. All containers in which shucked oysters are shipped shall be plainly marked with the name and address or identification mark of the shipper or packer, plainly stamped in surface of the container.

16. Shucked oysters shall be packed in containers sealed in such a manner as to make tampering easily discernible.

17. Cans in which shucked oysters are shipped must not be used a second time for this purpose unless the type of container has been approved by the State Board of Health.

18. The container must be cleansed and sterilized immediately before refilling.

19. Raw, shucked oysters offered for shipment must be packed in closed containers and thoroughly iced.

20. Oysters must not be packed in contact with ice.

21. Shucked oysters must be shipped the same day they are opened, unless stored at a temperature of 45° F. or below, or packed in shipping containers and thoroughly iced.

22. The outer clothing worn by persons engaged in shucking, washing or packing oysters shall be of material which can be easily cleansed and kept as clean as the nature of their work will permit.

23. Employees must wash their hands thoroughly before beginning work and after each visit to the toilet.

24. No person with infectious wound in the hands or on the arms shall be permitted to open or handle oysters.
25. No person who has a contagious or infectious disease or who is a carrier of a contagious disease shall be permitted to engage in the handling of oysters, clams and other shellfish or shall be permitted to enter a shucking house or packing plant.

The Acting Secretary asked the Executive Committee to establish a definite policy for his guidance with reference to the requests of various members of the staff in attendance on professional and scientific meetings outside the State. The Committee directed that (1) the chief executive officer of the Board or his deputy, the Director of the State Laboratory of Hygiene, the Director of the Bureau of Vital Statistics and the Director of the Bureau of Engineering or his deputy be required to attend the annual sessions of the American Public Health Association; (2) that the chief executive officer of the Board or his deputy be required to attend the Annual Conference of the State and Provincial Boards of Health of North America and the Annual Conference of the Surgeon-General with the state and territorial health officials; (3) that the chief executive officer of the Board or his deputy be required unless excused by the Executive Committee to attend the Section on Preventive Medicine and Industrial Hygiene of the American Medical Association; (4) that the Director of the Bureau of Sanitary Engineering and Inspection or his deputy be required to attend the annual meeting of the American Association of Sanitary Engineers; (5) that staff attendance upon all other meetings outside of the State shall be only allowed when request has been submitted to and approved by both the executive officer and President of the Board.

The resolution adopted by the State Board of Health at its regular annual meeting in Raleigh on April 15, 1924, and reading as follows:

"Resolved, that in future contracts with cooperating county health departments a condition be included as a part of the contract which would prohibit the expenditure of the funds of the health department for salaries or remuneration for piece work for any employee of the health department who is related by blood or marriage to either the health officer or members of the local board of health" was amended by the addition of the following:

"It is hereby ordered that the above resolution on and after October 1, 1925, be applicable in its entirety to any official or employee of the State Board of Health."

The Acting Secretary was advised to proceed in making investigations of outbreaks of typhoid fever and other contagious diseases in the State in accordance with the outline stated to the Committee by Dr. Rankin. This outline leaves the Acting Secretary and the staff responsible for making any investigations necessary for the control of typhoid fever and other communicable diseases in the State whenever and wherever such outbreaks occur. No official action was deemed necessary by the Committee.

After a full discussion concerning the necessity for a malaria control policy applying to the whole State with especial reference to surveys necessary to be made in the neighborhood of impounded and proposed impounded water projects, the Committee advised (1) that the Acting Secretary prepare a series of rules and regulations to be placed before companies responsible for impounding water, to be put into effect for the protection of people living in the vicinity of such proposed projects, the Committee to act on these rules and regulations at the next meeting, and after that action such rules and regulations to be submitted to the com-
panies with the request that they carry into effect the provisions of these rules and regulations. (2) The Committee directed the Acting Secretary to proceed with plans submitted to the International Health Board in the nature of a budget for the proposed handling of this work for 1926. The Committee authorized the Acting Secretary to carry out the policies outlined and to employ such professional and engineering assistance as necessary, provided such action be in accordance with the permission of the State Budget Bureau.

The Committee discussed the advisability of making any change in its policy concerning the procedure of the sanitary inspectors requiring inflexibility in the construction of sanitary privies, and also with reference to traveling carpenters. After considerable discussion, it was decided by the Committee to leave these matters to the judgment of the director of the Bureau of Sanitary Engineering and Inspection, with instructions to confer with the Acting Secretary in all matters involving any controversy in the execution of the Sanitary Privy Law.

The Committee discussed the proposal for research work in the matter of soil pollution arising from the use of pit privies in the State and deferred any action on this matter pending later and more definite recommendations.

At the conclusion of the business session Dr. Way most graciously tendered to Dr. Rankin a sterling silver service, the gift of the individual members of the State Board of Health, as a token of their esteem and as a remembrance on their part for the sixteen years happy and congenial association while Secretary of the State Board of Health. Dr. Rankin gracefully and gratefully acknowledged the exquisite gift.

MINUTES MEETING OF EXECUTIVE COMMITTEE OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., JANUARY 6, 1926.

The Executive Committee met at the office of the Board on January 6, 1926, Drs. Way and Laughinghouse being present, the other member of the Committee, Dr. R. H. Lewis, being unable, on account of illness, to attend the meeting.

The Committee discussed the importance to the industrial interest of the State of North Carolina of identifying North Carolina oysters on the market of the world as a definite product of the State of North Carolina, and that permanent names for this product should be agreed upon by either the State Oyster and Fisheries Commission or other parties responsible for such a move. The products, as shipped, should have a definite name attached which shall be permanent, and indicate the character and source of the product. The Committee also requested the Acting Secretary to procure from Mr. Miller's office as soon as possible the necessary information for filling in the blanks in the resolution concerning the certification of oysters, adopted or recommended at the September 30 meeting of the Committee. This action is necessary in order for the records to be complete.

The Acting Secretary presented the matter of the resignation of Dr. E. F. Long and his acceptance of the same, effective December 31, 1925. The Committee approved the acceptance and ordered that certain corre-
spondence and signed statements from Dr. C. W. Armstrong, health officer of Rowan County, having a direct bearing on Dr. Long's resignation be filed in the permanent records with the copies of the resignation and its acceptance by the Acting Secretary.

The Acting Secretary explained in detail the necessity for a visit to the Surgeon-General's office in Washington in order to obtain from him a statement as to how far the Public Health Service of the U. S. Government, or of the State Government of North Carolina, should in his opinion go toward the work of malaria control in and near impounded water projects in the State of North Carolina. The Committee approved this proposal and recommended that it be carried out as early as possible and subsequently taken up with the Governor for his approval in order that whatever work is necessary for the coming summer be instituted at once.

The Acting Secretary was able to report very little progress made on the matter of securing permanent fireproof vaults above ground, properly situated for the storing of vital statistics records. The only progress that has been made is an active negotiation with the Governor and General Metts. It is hoped that this matter will be safely disposed of at an early date, by the erection and storage in a safe vault of these records.

The Committee authorized the Acting Secretary to employ an expert epidemiologist at once if a properly qualified man can be induced to take the place at the salary offered; and allowed by the State Salary and Wage Commission.

Dr. Laughinghouse brought to the attention of the Committee, by request, the application of Dr. R. S. McGeachy, Kinston, for a position on the staff of the State Board of Health. No action was taken on this application and no recommendations made.

The Committee adopted resolutions prepared by Mr. Miller, at the request of the Acting Secretary and incorporating suggestions offered by the latter, on the subject of tourist camp regulations, to be effective in the State of North Carolina the following summer and thereafter. The Committee deemed best not to undertake to establish grades or to work out a system of grades to apply in the beginning of this work but left that matter open in order to secure some necessary practical experience in applying these regulations, the grading to be instituted and submitted to the Committee for their subsequent approval. The following regulations were adopted:

I. Location:

1. **Topography and Drainage:** The camp shall be located on ground normally dry, of such topography as to readily permit the complete drainage of storm water, and remote from standing water likely to breed mosquitoes.

2. The surroundings of the camp shall be free from piles of manure or garbage, exposed sewage or privy filth or other insanitary conditions, which would promote fly breeding or be conducive to the spread of infectious disease.

II. Milk, Water and Food:

1. The milk supply shall conform to the requirements of the Standard Milk Ordinance for Grade A Raw as a minimum, where milk produced under the provisions of the Standard Ordinance regulations is available, and where milk so produced is not available shall, as a minimum requirement conform to such provisions of the Standard Milk Ordinance for Grade A Raw as are subject to determination by sanitary inspection.

2. (a) The water supply shall be obtained from an approved public
water supply system when available, and in other instances shall be obtained from a source, not considered dangerous or potentially dangerous as determined by sanitary survey made by a representative of the State Board of Health and by bacteriological examination of one or more samples of water tested by the State Laboratory of Hygiene.

(b) Individual drinking cups or fountains approved by the State Board of Health shall be provided.

3. The protection, storage, handling and serving of food shall conform to the following:

**Dining Room**

1. (a) Windows must be kept clean. (b) Windows and doors must be effectively screened.
2. Floors, walls and ceilings must be free from dirt, and dust and otherwise be kept clean.
3. (a) Table linen must be clean. (b) In the case of bare topped tables the surfaces must be washed down thoroughly after each meal and kept clean for the succeeding meal.
4. Tableware must be free from grease and kept clean for service.
5. Food which is moldy, stale, tainted or otherwise deteriorated shall not be served to guests.
6. (a) Flies in the dining room shall be eliminated as far as possible. (b) Practical measures for fly elimination, such as fly paper, sprays, fly swatters, etc., shall be practiced.

**Kitchen and Pantry**

1. (a) Kitchen windows shall equal at least one-eighth of the floor space. (b) Kitchen windows shall be kept clean. (c) Windows and doors shall be effectively screened.
2. Floors, walls and ceilings shall be kept clean and free from dirt, dust, cobwebs, collections of grease and other indications of carelessness.
3. (a) Dishes and tableware must be washed in clean hot water with soap or cleanser and subsequently rinsed in boiling water. (b) Cloths used for drying dishes and tableware shall be clean. (c) Clean dishes and tableware shall be stored in clean cupboards protected from dust and dirt.
4. (a) Rodents, flies, roaches and other insects shall be eliminated. (b) Traps, fly paper and such other measures shall be utilized to assist in the elimination of rodents, flies and insects.
5. Cupboards shall be kept clean, and free from musty, stale or offensive odors.
6. Refrigerators, ice boxes, and other places where foods are stored shall be kept clean and free from musty, putrescent or other disagreeable odors.
7. Food shall be prepared and handled in a sanitary manner and shall be kept under cover, except raw vegetables which are to be cooked, at all times when not in process of preparation or cooking.

**Servants**

1. The management shall hold a medical certificate given by a reputable physician or health officer for each and every cook and waiter employed, certifying that the servant is free from tuberculosis, syphilis, and any other transmissible disease in infectious state, and is not a typhoid carrier.
2. Servants handling food must be clean, both with regard to their person and clothing.
3. Cooks and other kitchen help should wear clean, white caps and coats or special dress.
4. Waiters or waitresses should wear clean white coats or special dress.

**III. Sleeping Quarters:**

1. Windows or wall openings shall be equal in area to one-eighth floor space.
2. Air space in the proportion of 500 cubic feet for each intended occupant shall be provided.
3. Sleeping quarters shall be effectively screened against mosquitoes where mosquitoes are present. Mosquito netting over each bed may be
used in tent camps and other camps occupied for periods not in excess of two weeks.

(4) Crockery must be kept clean and provided in sufficient amount for each person for quarters not conveniently located with respect to toilet facilities. Beds must be placed at least 2 feet from one another when there is more than one bed in a room and so arranged that the air can circulate freely under each.

(5) Two sheets shall be provided for each bed. The top sheet shall be not less than 90 inches in length and shall be folded back at the head of the bed over the other covering for at least 6 inches. All sheets shall be made of sufficient width and length to tuck under the mattress.

(6) All pillow slips and sheets after being used by one guest must be washed and ironed before used by another guest, a clean set being furnished each succeeding guest. In any case, bed linen shall be changed at least once each week.

(7) The quarters shall be kept in clean neat condition.

(8) Vermin, bugs and roaches, in sleeping rooms must be eliminated.

(9) Every room, after being occupied by any one known or suspected to be suffering from tuberculosis, diphtheria, or any contagious disease, must be thoroughly disinfected as prescribed by the State Board of Health before further occupancy; and every room, after being occupied by any one known or suspected to be suffering from measles or whooping cough, must be thoroughly aired for twenty-four (24) hours before subsequent occupancy.

IV. Sewerage and Waste Disposal:

1. (a) Conveniently accessible toilets, kept clean and well ventilated, for both sex, sufficient in number or capacity to provide one stool for every 25 persons or fraction thereof for each sex, shall be provided.

   (b) The excreta shall be disposed of by connection to the public sewerage system when available, by disposal through system of sewage treatment, approved by the State Board of Health, or by means of sanitary privies constructed and maintained in accordance with the State Board of Health regulations for the construction and maintenance of privies.

2. (a) Garbage shall be disposed of at least twice each week or oftener if the receptacles become filled, by incineration, by burial with at least 6 inches cover of earth, or may be removed by farmers for feeding.

   (b) Garbage must be placed in covered garbage cans, which shall be kept covered.

3. Trash and rubbish shall be collected in receptacles provided for the purpose and shall be buried or dumped at a remote location, at least once each week or as often as the receptacles becomes filled.

V. Camp Surroundings:

The camp and the surrounding area, under the jurisdiction of the management shall be kept clean and in a sanitary condition at all times when the premises are occupied.

SUMMER CAMP
Inspection and Grading Record

<table>
<thead>
<tr>
<th>Camp</th>
<th>Location</th>
<th>Mgr. or Director</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Boys</td>
<td>Girls</td>
<td>Chaperones or Instructors</td>
<td>Servants</td>
</tr>
</tbody>
</table>

Item of Sanitation

I

1. Topography and drainage

2. Surroundings

II

1. Milk supply (Grade according to dairy regulations)
   (a) Water supply—Satisfactory sanitary survey and Lab. record
   (b) Individual drinking cups

2. Food preparation and food handling
Dining Room

1. (a) Windows clean
   (b) Windows effectively screened
2. Floors, walls, and ceilings
3. (a) Table linen
   (b) Bare-topped tables
4. Tableware
5. Food
6. (a) Flies
   (b) Practical measures for elimination of flies

Kitchen and Pantry

1. (a) Windows, area
   (b) Windows, clean
   (c) Windows effectively screened
2. Floors, walls and ceilings
3. (a) Dish washing
   (b) Dish drying
   (c) Storage of dishes
4. (a) Free from rodents, flies and insects
   (b) Traps and other practical elimination measures practiced
5. Cupboards clean
6. Refrigerators and ice boxes clean and free from odors
7. Food prepared and handled in clean and sanitary manner

Servants

1. Windows and wall openings equal ¼ floor space
2. Air space—500 cu. ft. occupant
3. Sleeping quarters screened against mosquitoes
4. Toilet facilities
5. Bed spacing
6. Changing and cleanliness
7. Quarters kept clean and heat
8. Vermin absent
9. Disinfection and airing of rooms

IV

Sewerage and Waste Disposal

1. (a) Toilets conveniently accessible
   Kept clean and well-ventilated
   For both sex
   One stool for each 25 persons
   (b) Excreta disposed in safe approved manner
2. (a) Garbage removal and disposal
   (b) Kept in covered garbage cans
3. Trash and rubbish, collection
   Disposal

V

Camp surroundings maintained in sanitary condition

The Committee adopted the following resolution concerning the recent death of Mr. A. M. Surratt, for several years a trusted employee of the State Board of Health:

"Whereas, A. M. Surratt has served the State Board of Health as sanitary inspector from October 1, 1919, which was the date when the first sanitary inspectors went on duty, until October 26, 1925, the date of his death, and

"Whereas, at the time of his death he was the only sanitary inspector who held the record of continuous service since October 1, 1919, a period of six years and 25 days, and
“Whereas, in his consistent, conscientious discharge of duty, with a spirit of deepest devotion and loyalty to the State Board of Health, and the cause of sanitation, he has taught the lesson of sanitation so thoroughly and well, that the service he has rendered the State stands out as a glowing tribute, to him in his chosen profession, as a teacher of sanitation, and shall live after him, even to benefit future generations and long after his name has been forgotten.

“Now Therefore be it Resolved, that the State Board of Health recognizes and appreciates the valuable service rendered by A. M. Surratt and the spirit of loyalty and devotion with which he safeguarded and promoted the interests of the State Board of Health in the advancement of sanitation and public health, and

“Be it Resolved Further, that this resolution be spread upon the minutes and that the Acting Secretary be instructed to forward a copy of this resolution to Mrs. A. M. Surratt.

“Adopted by the State Board of Health, in session at Raleigh, this the 6th day of January, 1926.”

Mr. Miller was authorized, in company with the Acting Secretary, to present to the Salary and Wage Commission his argument for some salary adjustment and advancement of some of the employees of his office.

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE NORTH CAROLINA STATE BOARD OF HEALTH

FAYETTEVILLE, N. C., FEBRUARY 16, 1926.

The Executive Committee met at the Prince Charles Hotel, at Fayetteville, pursuant to call by Dr. Way, on February 16, 1926, Doctors Way and Laughinghouse being present.

The Committee discussed with the Acting Secretary many matters of detail and of more or less importance in the administration of affairs of the State Board of Health as a whole.

The Committee approved the extension of the county subsidy plans to include New Hanover County, which was executed, effective February 1.

The Committee issued the following order to the Acting Secretary:

“At the meeting of the Executive Committee, called this day, it is ordered that the Secretary of the State Board of Health carefully supervise the proof of all articles submitted by the staff or others for publication in the Monthly Bulletin prior to the same being sent to the printers.”

The Committee manifested intense interest in the apparent display of fine team work at present manifested by the different members of the staff of the State Board of Health.

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., APRIL 20, 1926.

The Executive Committee met at the central office of the State Board of Health in regular session on Tuesday, April 20, 1926, Doctors Way and Laughinghouse being present. Dr. Lewis was unable to be present on account of illness.

The minutes of the call meeting, held on February 16, were read and approved.

The Committee left to the discretion of the Acting Secretary the method of enforcement of the instructions relative to the carrying out of the
Committee's wishes concerning the articles published in the Monthly Bulletin.

The Committee was informed by the Acting Secretary of the changes effective in the Vital Statistics Department, beginning March 1, through which the transcribing of copies of birth and death certificates of the U. S. Bureau of the Census is being done in the office as a part of regular routine work by the clerical force of the department, instead of being done as piece work and therefore with extra compensation as heretofore. The Committee voted its approval of this change.

On motion of Dr. Laughinghouse, the Committee instructed the Acting Secretary, to be accompanied by Mr. Miller, to see the Governor with reference to getting the State institutions to comply with the law relating to the installation of water and sewerage, with especial reference to new buildings.

The Committee also issued instructions that the question of the school building status existing at present be also discussed with the Governor at the same time, pointing out to him the present status of providing sewerage and water facilities in the enlarged building program for schools going on all over the State now, with a view to having provided the means for an engineer to be used by the State Board of Health to handle the sewerage disposal and water supply facilities for schools to avoid conditions now arising.

At the former regular meeting of the Board the Committee adopted the regulations concerning summer camps, leaving the preparation of a score card over for adoption at a later meeting. Therefore the Committee recommended that no score be used but that summer camps be "approved" or "disapproved" as in the case of jails and convict camps, and that suitable cards be posted.

As it has been several years since a revisal of the rules and regulations governing the sanitary requirements of jails and convict camps was adopted by the Board and a revisal of the existing rules and regulations have become imperative, the Committee adopted the following rules and regulations, which from this date on supersede the rules and regulations hereinbefore in effect.

**REGULATIONS GOVERNING THE SANITARY MANAGEMENT OF JAILS**

(Adopted by the Executive Committee of the North Carolina State Board of Health, April 20, 1926, under provisions of ________________________ ________________________________.)

All jails shall be constructed and maintained in compliance with the regulations hereinafter prescribed.

Upon inspection of a jail the inspector shall approve, if all the regulations are being complied with. The card "Approved Jail" shall then be posted in a conspicuous place designated by the inspector. If any of the regulations are not being complied with, then the inspector shall disapprove and the card "Disapproved Jail" shall be posted in a conspicuous place designated by the inspector.

Reinspections may be had upon written request by the officials responsible for the conduct of the jail.
Building

1. (a) All new jail buildings constructed shall be fireproof structures.
   (b) All jails shall be free from any fire hazards and dangers.
2. Heating arrangements shall be provided to keep the jail comfortably
   warm during cold weather.
3. (a) The building shall be provided with sufficient compartments to the
   races, sexes and youthful prisoners shall be separated in their
   quarters.
   (b) At least five separate and distinct compartments shall be provided.
   (c) Isolation room for the sick should be provided.
4. (a) At least 500 cu. ft. air space shall be provided for each person and
   (b) At least 2 sq. ft. window spacing or grating shall be provided for
   each person, for ventilation and light arranged to give an equal
   distribution of light and ventilation over the jail.
5. Proper drainage facilities shall be provided to drain floors, equipment
   and the building.
6. Adequate lighting so arranged as to permit reading ordinary news
   print without straining the eyes shall be provided.

II

Sewerage and Waste Disposal

1. (a) Convenient and accessible toilets shall be provided for each sex,
   kept clean and well-ventilated.
   (b) The excreta shall be disposed of by connecting to the public sewer-
   age system of sewerage treatment approved by the North Caro-
   lina State Board of Health, or by means of a sanitary privy con-
   structed and maintained in accordance with the regulations of the
   State Board of Health.
2. (a) All garbage shall be placed in covered garbage cans and kept
   covered at all times except when garbage is being placed in or
   removed from the can.
   (b) All garbage collected shall be disposed of at least three times a
   week.
   (c) Particles of meats, breads and foods shall not be scattered about
   the jail building or surroundings.
   (d) Garbage collected may be disposed of by incineration, by burial
   at some remote place with at least 6-inch cover of earth or it may
   be removed for farm feeding when handled in a sanitary manner.
   (e) Trash and rubbish shall be collected in receptacles provided for
   that purpose and shall be burned or dumped at a remote location
   at least once a week or as often as the receptacles become filled.

III

Sanitation and Surroundings

1. (a) All walls, floors and ceilings of the jail shall be kept free from
   dust, dirt, cobwebs, mold, slime, filth, greases and bad odors.
   (b) Spitting on the walls, floors and building shall not be permitted.
   (c) The jail shall be maintained in a sanitary condition, and otherwise
   kept clean.
2. (a) The jail and surrounding area under the jurisdiction of the manage-
   ment shall be kept clean and in a sanitary condition at all times,
   free from standing water, rubbish or filth of any kind.

IV

Beds, Bedding and Furniture

1. (a) Individual cots or beds shall be provided for prisoners and arranged
   for free circulation of air under each.
   (b) Each bed or cot shall be provided with a mattress or tick filled with
   straw (if tick, straw must be removed as often as necessary to
   keep clean), and covered with either slips or sheets.
(c) Sheets or slips shall be kept clean at all times and any slip or sheet previously used shall not be used on cot or bed for another prisoner until it has been washed and cleaned before using.
(d) Sufficient bedding shall be provided to keep prisoners warm and comfortable.
(e) All bedding and bed clothing shall be kept clean and free from dirt, filth and vermin and shall be aired in the sun at least once per week, weather permitting.

2. (a) Seats or benches sufficient for seating all prisoners shall be provided.
(b) Adequate cuspidor facilities shall be provided and shall be emptied and cleaned at least daily.

V

Bathing
1. The jail shall be provided with sufficient and accessible running water bath facilities for both sexes.

VI

Water Supply
1. The water supply conveniently located shall be obtained from an approved public water supply when available and in other instances shall be obtained from a source not considered dangerous or potentially dangerous as determined by a sanitary survey by a representative of the State Board of Health and by bacteriological examination of one or more samples of water tested by the State Laboratory of Hygiene.
2. (a) The water supply must be free from the possibility of contamination by surface drainage.
(b) Privies, stables, hog and chicken pens must be located at least 100 feet from the water supply and under no circumstances shall they be on the slope above or draining towards it.
3. Protection for spring.
(a) When the supply is a spring it must be protected from surface drainage by a ditch or wall around it on the slope above.
(b) It must be concreted or walled up with an overflow pipe, to prevent contamination by dipping with soiled vessels.
4. Protection for well:
(a) When a well is used for water supply it must be fitted with a pump properly and tightly adjusted through a waterproof platform which shall be raised and drain away from pump.
(b) The watering trough for stock must be at least 25 ft. from the well platform and on slope below.
(c) Surroundings must be free from standing water.
5. Individual water supply.
(a) A cooler or closed container with a spigot shall be provided.
(b) Under no circumstances shall the common dipper or cup be used.
(c) Each prisoner and guard must use own individual cup.

VII

Clothing
1. (a) Sufficient clothing for prisoners suitable for the season shall be provided. At least one change of underclothing and outerclothing shall be furnished per week per prisoner.
(b) Long nightshirts or sleeping garments should be furnished.

VIII

Diet
A properly-balanced and adequate diet for prisoners shall be provided. In order for a diet to be properly-balanced, it should contain during the 24 hours a quantity of PROTEIN, FAT, and STARCH. Protein is found largely in the following foods: lean meats, fish, cheese, butter, eggs and dried beans. Fat in fat meats, butter and milk. Starches in cereals,
potatoes, rice, grits and breads. In addition to all other foods, at least one meal during each day should contain one or more green vegetables or fruit.

Diet for sick prisoners shall be provided as prescribed by the physician in charge.

IX

Prevention of Contagious Diseases

1. Smallpox: All prisoners shall be vaccinated against smallpox within thirty days after admission, provided they do not show a scar of a very recent successful vaccination.

2. Venereal Diseases: All prisoners who have syphilis, chancroid, or gonorrhea in an infectious stage, shall be isolated to the extent of using separate bathing equipment, eating and drinking utensils and bed clothing. Wearing apparel, towels and bed clothing used by such prisoners shall be handled and laundered separately from that of other prisoners and shall be boiled in laundering. All such prisoners shall be constantly under the care of the physician in charge until rendered non-infectious.

3. Tuberculosis: The officer in charge shall constantly observe all prisoners for symptoms of tuberculosis, such as cough, expectoration, hemorrhage, night sweats, loss of weight, etc., and when a prisoner shows any indication of having tuberculosis, he shall immediately have the prisoner examined by the physician in charge. If the physician makes a diagnosis of tuberculosis, the prisoner shall be sent to the State Farm or to the State Sanatorium as provided for in Section 7213 and 7220, A, B, C, D, E and F, Consolidated Statutes. If the physician is unable to make a diagnosis and has reasons to suspect the existence of tuberculosis, the prisoner shall be isolated in the county jail until a definite diagnosis can be made.

4. Typhoid Fever: All prisoners shall be vaccinated against typhoid fever on admission and a record of the vaccination shall be entered upon the record of physical examination of prisoners, kept by the jail supervisor. Prisoners being transferred from one county to another shall be vaccinated before leaving their original point of confinement and the supervisor of the jail to which they are being transferred shall be furnished with evidence that they have been vaccinated within three years.

X

Physical Records

All prisoners shall be given a physical examination within forty-eight hours after admission as prescribed in Section 7218, Consolidated Statutes. This examination shall be recorded upon forms prepared or approved by the North Carolina State Board of Health. A record of the prisoner’s physical condition shall be kept on file at the jail. A record of a physical examination upon admission to jail may be transmitted to the supervisor of the prison camp, and will be accepted in lieu of an examination made upon admission to the camp.

REGULATIONS GOVERNING THE SANITARY MANAGEMENT OF CONVICT PRISON CAMPS

(Adopted by the Executive Committee of the North Carolina State Board of Health, April 20, 1926, under provisions of __________)

All convict prison camps shall be constructed and maintained in compliance with the regulations hereinafter prescribed.

Upon inspection of a convict camp the inspector shall approve, if all the regulations are being complied with. The card “Approved Prison Camp” shall then be posted in a conspicuous place designated by the inspector. If any of the regulations are not being complied with, then the inspector
shall disapprove the card "Disapproved Convict Camp" shall be posted in a conspicuous place designated by the inspector.

Reinspections may be had upon written request by the officials responsible for the conduct of the convict prison camp.

CONVICT PRISON CAMP

I

Location

In the location of a convict prison camp, whether of temporary or permanent nature, designated for the occupancy of convicts, the following points shall be observed:

1. Topography:
   (a) Ground normally dry, preferably sandy top soil. Ground natural elevation such as will permit complete drainage of storm water.

2. Surroundings:
   (a) Remote from standing water, swamps, and marshes likely to breed mosquitoes.
   (b) Free from piles of manure, garbage, exposed sewage or privy filth or any other insanitary condition which would promote fly breeding, obnoxious odors or be conducive to the spread of infectious disease.
   (c) No camp shall be located on or near a location where there is an insanitary condition over which the superintendent of the prison camp has no control.

II

Water Supply

1. The water supply, conveniently located, shall be obtained from an approved public water supply when available and in other instances shall be obtained from a source not considered dangerous or potentially dangerous as determined by a sanitary survey by a representative of the State Board of Health and by bacteriological examination of one or more samples of water tested by the State Laboratory of Hygiene.

2. (a) The water supply must be free from the possibility of contamination of surface drainage.
   (b) Privies, stables, hog and chicken pens must be located at least 100 feet from the water supply and under no circumstances shall they be on the slope above and draining towards it.

3. Protection for spring:
   (a) When the supply is a spring it must be protected from surface drainage by a ditch or wall around it on the slope above.
   (b) It must be concreted or walled up with overflow pipe, to prevent contamination by dipping with soiled vessels.

4. Protection for well:
   (a) When a well is used for water supply it must be fitted with a pump properly and tightly adjusted through a water proof platform which shall be raised and drain away from pump.
   (b) The watering trough for stock must be at least 25 feet from the platform of the well and on slope below.
   (c) Surroundings free from standing water.

5. Individual water supply:
   (a) A cooler or closed container with a spigot shall be provided.
   (b) Under no circumstances shall the common dipper or cup be used.
   (c) Each prisoner and guard must use own individual cup.

III

Sewerage and Waste Disposal

1. (a) Convenient accessible toilets shall be provided, kept clean and well ventilated.
   (b) The excreta shall be disposed of by connecting to the public sewerage system when available, by disposal through system of sewage
treatment, approved by the State Board of Health, or by means of sanitary privies constructed in accordance with the State Board of Health regulations for the construction and maintenance of privies.

2. (a) Garbage shall be disposed of at least twice a week or oftener, if the receptacles become filled, by incineration, by burial with at least 6 inches cover of earth, or may be removed by farmers for feeding.
   (b) If used at camp for feeding, it must be handled in a sanitary manner and under no circumstances shall it be scattered about or left in piles or heaps to decompose or become putrid.
   (c) Garbage must be placed in covered garbage cans, which shall be kept covered.

3. Trash and rubbish shall be collected in receptacles provided for the purpose and shall be burned or dumped at a remote location, at least once a week or oftener as the receptacles become filled.

IV
Quarters

A. Mess Hall:
1. Mess Hall construction and maintenance shall conform to the following:
   (a) Adequate to accommodate all prisoners.
   (b) Provided with sufficient table and seating facilities to accommodate all prisoners.
   (c) Window space or light at least 1.8 of floor space.
   (d) Windows must be kept clean.
   (e) Windows and doors must be kept effectively screened.

2. Tables must be clean. If bare top table and surface must be washed thoroughly after each meal and kept clean for the succeeding meal.

3. (a) Sufficient tableware shall be provided for the table and each prisoner furnished with plate, cup, saucer, knife, fork and spoon.
   (b) The tableware shall be maintained in good order at all times.
   (c) Tableware shall be kept clean and free from grease for each succeeding meal.

4. Flies shall be eliminated from the mess hall. Practical measures for fly elimination such as proper screening, fly paper, sprays, fly swatters, etc., shall be practiced.

5. Separation of the races must be provided for in both mess hall and sleeping quarters.

B. Kitchen and Pantry:
1. Adequate provisions shall be provided for kitchen and pantry and shall be adhered to.
   (a) Kitchen windows shall equal ¼ of floor space.
   (b) Kitchen windows shall be kept clean.
   (c) Windows and doors shall be effectively screened.

2. (a) Rodents, flies, roaches and other insects must be utilized to assist in their elimination.

3. Cupboard, refrigerators, boxes or vessels where food is kept and handled shall be properly covered and kept clean, and free from old, slime or offensive odors.

4. (a) Dishes and table ware must be washed in clean hot water with soap or cleanser and subsequently rinsed in boiling water.
   (b) Cloths used for drying dishes and tableware shall be clean.
   (c) Clean dishes and tableware shall be protected from dust and dirt.

5. Food shall be prepared and handled in a sanitary manner and shall be kept under cover at all times when not in process of preparation or cooking, except raw vegetables, which are to be cooked.

6. Men with communicable diseases or addicted to any disgusting habits must under no circumstances be used as cooks or food handlers.

C. Sleeping Quarters:
The type of building or structure provided for under the requirements of Chapter 163, Public Laws of 1925, shall be adhered to.

1. Structure safe and free from danger and fire hazard.
2. 500 cubic feet air space provided for each prisoner.
3. 2 square feet ventilation for each prisoner.
4. Protection against cold, hot or inclement weather.
5. Structure arranged for the maximum sunlight in winter and shade in summer.
6. (a) Individual cots or bunks for prisoners and recognized as much superior from a health and decency standpoint, to the platform bunk system, and as soon as practicable they must be installed.
   (b) Each bed must be provided with two sheets or slips, a pillow, pillow case and sufficient blankets for comfort. The sheets must be sufficiently long to tuck well under the mattress and for the top sheet to fold back six inches.
   (c) Where straw ticks are used the straw must be changed at frequent intervals.
   (d) Beds must not be less than six feet in length.
   (e) No more than one prisoner shall occupy a single bed, or
   (f) Two for a double bed.
   (g) Beds must be so arranged as to permit free circulation of air under them.
   (h) Beds and bed clothing must be aired and sunned regularly when weather permits.
7. Sufficient heating arrangements shall be provided to keep the quarters comfortably warm during cold weather.

D. Doors and Windows:
   The doors, windows and openings shall be effectively screened where mosquitoes are prevalent. The wire shall be 16 meshes to the inch.

E. Walls, Floors and Ceilings:
   The walls, floors and ceilings must be kept clean and free from cobwebs, dirt, filth and spitting.

F. Lighting:
   Adequate lighting so arranged as to permit reading ordinary news print without straining the eyes shall be provided.

V
Bathing
1. (a) Each prisoner must be provided with an individual wash basin, soap and towel.
   (b) Adequate facilities for bathing in running water shall be provided and each prisoner shall have at least one general bath per week.
   (c) In cold weather provisions for warm water must be provided.
2. No excuse will be accepted for the presence of vermin.

VI
Clothing
1. (a) Sufficient and seasonable clothing with sufficient dry changes to protect the prisoners' health shall be provided.
   (b) At least one clean change of under clothing and top clothing shall be furnished per week per prisoner.
   (c) Long nightshirts or sleeping garments shall be furnished and their use compelled.
2. A clothing supply room shall be provided.

VII
Diet
A properly balanced and adequate diet for prisoners shall be provided. In order for a diet to be properly balanced, it should contain during the 24 hours a quantity of PROTEIN FAT. and STARCH. Protein is found largely in the following foods: lean meats, fish, cheese, butter, eggs, and dried beans. Fat in fat meats, butter and milk. Starches in cereals, potatoes, rice, grits and breads. In addition to all other foods, at least
one meal during each day should contain one or more green vegetables or fruit.

Diet for sick prisoners shall be provided as prescribed by the physician in charge.

VIII

Prevention of Contagious Diseases

1. Smallpox: All prisoners shall be vaccinated against smallpox within thirty days after admission, provided they do not show a scar of a very recent successful vaccination.

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3. Tuberculosis: The officer in charge shall constantly observe all prisoners for symptoms of tuberculosis, such as cough, expectoration, hemorrhage, night sweats, loss of weight, etc., and when a prisoner shows any indication of having tuberculosis, he shall immediately have the prisoner examined by the physician in charge. If the physician makes a diagnosis of tuberculosis, the prisoner shall be sent to the State Farm or to the State Sanatorium as provided for in Sections 7213 and 7220, A-B-C-D-E and F, Consolidated Statutes. If the physician is unable to make a diagnosis and has reasons to suspect the existence of tuberculosis, the prisoner shall be isolated in the county jail until a definite diagnosis can be made.

4. Typhoid Fever: All prisoners shall be vaccinated at the time of the occurrence of typhoid fever in the vicinity of the camp, or the vicinity in which convicts are being worked. Also, all prisoners not having a record on file in the camp showing they have been vaccinated within three years shall be vaccinated against typhoid fever on admission, and a record of the vaccination shall be entered upon the record of physical examination of prisoners, kept by the prison supervisor. Convicts being transferred from one county to another shall be vaccinated before leaving their original point of confinement and the supervisor of the camp to which they are being transferred shall be furnished with evidence that they have been vaccinated within three years.

IX

Physical Records

All prisoners shall be given a physical examination within forty-eight hours after admission as prescribed in Section 7218, Consolidated Statutes. This examination shall be recorded upon forms prepared or approved by the North Carolina State Board of Health. A record of the prisoner's physical condition shall be kept on file at the prison camp. A record of a physical examination upon admission to jail may be transmitted to the supervisor of the prison camp, and will be accepted in lieu of an examination made upon admission to the camp.

The Acting Secretary was instructed to consult the Governor about the submission of the rules and regulations to the Governor and his council and if the Governor did not object and thought best then the Acting Secretary is to send copies to each of the superior court judges of the State, also to the chief justice of the supreme court for comment and suggestions. If on waiting a reasonable length of time the judges do not adversely criticise, then the rules and regulations are to stand as adopted.

The Committee discussed with a great deal of interest the orders issued from the Governor's office simultaneous with the meeting of the State Child Welfare Commission, one of the members of which is the Acting
Secretary of the State Board of Health, requiring the aforementioned Commission to make a survey of the condition of women in industry.

The Acting Secretary presented tentative plans for an appeal to the State Salary and Wage Commission, to be presented to that body sometime in June, asking for a re-classification of some of the employees of the Board.

MINUTES OF THE MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

WRIGHTSVILLE BEACH, N. C., JUNE 14, 1926.

The meeting was called to order by the President, Dr. J. Howell Way. All members were present except Dr. Richard H. Lewis, who was unable to be present on account of illness.

Immediately after calling the meeting to order the President read the following telegram from Governor Angus W. McLean:

"Have been anxious to talk with you and Dr. Rankin about election of state health officer. Communicated with Dr. Rankin and learned that he is in hospital recovering from injury and it will be week or ten days before he can recover. Unless there is some immediate need trust that you can postpone matter for week or ten days, until I can see you. Warm regards."

On motion of Dr. Laughinghouse the Board unanimously adopted the following resolution:

"Moved that the President of the Board of Health be instructed to accede to the Governor's request to delay the election of the State Health Officer until such a time as will meet the Governor's preference and convenience as indicated by the Governor's telegram to the President of the Board."

Dr. Laughinghouse made a report on the recent meeting at Atlantic City of the State and Provincial Health Officers of North America, in which he in company with the Acting Secretary participated. He reported that there was great interest in the Control of Rabies and that the expert opinion expressed to the Meeting was in conformity with the views and advice of Dr. Shore himself, that vaccination of dogs was dangerous and undependable. The Board, on request of Dr. Laughinghouse, instructed the Acting Secretary to request Dr. Shore to investigate fully the use of blood serum in the immunization of measles, which was so interestingly discussed at the Atlantic City Meeting.

The Board commended the Acting Secretary for his participation as an acting member of the State Child Welfare Commission in the selection of Mrs. J. Henry Highsmith as Associate Director of the work of the Survey of Women in Industry as ordered by Governor McLean. The Board also instructed the Acting Secretary to write a letter to Mrs. McKee, President of the State Federation of Women's Clubs; Mrs. Kate Burr Johnson and Superintendent A. T. Allen notifying them of their approval of the selection of Mrs. Highsmith.

On motion of Dr. Laughinghouse the Board expressed its full approval of the conduct of the office by the Acting Secretary during his past term of office, since June 1, 1925.

The Acting Secretary read several excerpts from the report of Dr. Thomas Parran of the U. S. Public Health Service, following his survey of the Board's epidemiological work, which was undertaken at the request of the Acting Secretary. In conformance with some of Dr. Parran's recommendations the Board resolved:
1. “That a minimum period of quarantine be from now on prescribed by the State Board of Health for each disease, and that the quarantine officer be given discretion in determining whether or not quarantine should be maintained for an additional period.

2. “That the Board prepare and authorize the use of ‘Suspected Contagion—Keep Out’—placard for use by physicians before a diagnosis is made and a report required.

3. “That bacillary dysentery be reportable on and after August 1, 1926.

4. “That malaria be reportable on and after August 1, 1926. The specific details to be worked out by the Acting Secretary and others.

5. “That the quarantine period for scarlet fever be reduced from 28 days to 21 days. The literature and instructions to conform to the lessor requirement, especially by striking out in Rule 1 line 14 in Rules Governing Parents in Scarlet Fever the word twenty-eight and inserting in lieu thereof the word twenty-one.

6. “That a study of the smallpox situation in North Carolina with especial reference to the ‘No Quarantine Law’ be made by the Acting Secretary or by some one designated by him and a report with recommendations be made at a subsequent meeting of the Board.

7. “That a record be made here of the fact that at the request of the Acting Secretary several months prior to the Parran visit, the Executive Committee authorized the employment of a first-class trained epidemiologist. The Board adopted the Committee’s recommendation.

8. “That the Acting Secretary have prepared a report covering all available data for Board’s consideration at a coming meeting with reference to requiring reports of tuberculosis direct to the State Board of Health as are all other communicable diseases. Also the control procedures against this disease to be considered a Board responsibility.”

The following resolution was passed by the Board: That in “Rules of the North Carolina State Board of Health Governing the Transportation of the Dead” in Rule 1, line one the words “smallpox or” be struck out; and that in Rule 2, line two the word “smallpox” be inserted after the word “anthrax.”

The Superior Court Judges having offered no criticism in response to the Acting Secretary’s letter sent to them as per instruction issued by the Committee on April 20, 1926, the Board unanimously voted the adoption of the Rules and Regulations for the Sanitary and Hygienic Management of Convict Camps and Jails, as recorded in the Minutes of the Meeting of the Executive Committee on April 20, 1926.

Mr. Stowe discussed question of the Board adopting a resolution in form of recommendation concerning drinking cup regulations. After a lengthy discussion the Board requested the Acting Secretary to prepare data setting forth sterilizing requirements, exact temperature and length of time required for properly sterilizing drinking glasses, preparatory to the Board’s adopting a suitable resolution as requested by Mr. Stowe at the special meeting to be called in a few days.

MINUTES OF THE MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

WRIGHTSVILLE BEACH, N. C., JUNE 15, 1926.

The meeting was called to order by the President, Dr. J. Howell Way. All members were present except Dr. Lewis. Minutes of last meeting read and approved.

The Board received a report by Dr. Tucker about the exhibit sent to the meeting of the North Carolina Dental Society in Richmond in April. The exhibit was attended by Drs. Johnson and Tucker of the State Board of
Health, and by Dr. E. A. Branch of the Wake County Board of Health. The exhibit was well received, and the Board advised that the same exhibit be sent to Philadelphia to the coming meeting of the National Dental Society in August.

Resolutions expressing sympathy of Board to Drs. Lewis and Rankin were unanimously adopted and the Acting Secretary was instructed to send telegrams to each Wednesday A. M. Following are copies of telegrams sent to Drs. Lewis and Rankin:

"State Board of Health in annual meeting notes with sorry the vacant place caused by your absence. Board extends sympathy to you in your trying illness and is sincerely trustful that you may long be spared to continue your inestimable service to the Board and the State."

"State Board of Health in annual meeting learns with deepest regret of your unfortunate accident. Board congratulates you on escaping more serious injury and sends love and hope for speedy recovery."

The Board unanimously re-elected Mr. J. M. Harry of Charlotte, as a member of the State Board of Embalming Examiners for a term of five years. The Acting Secretary was instructed to officially inform Mr. Wm. Vogler, Winston-Salem, secretary of the Board, of this action.

The Acting Secretary presented synopsis of proposal to ask for re-classification of certain members of the staff to be presented to the State Salary and Wage Commission at its regular quarterly meeting in Raleigh, June 18. The plans were approved by the Board.

There being no further business the Board adjourned.

MINUTES OF THE MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

RALEIGH, N. C., JUNE 21, 1926.

The Board was called to order by President Way, with a quorum present. Members present being Drs. Way, Anderson, Laughinghouse, Thompson, Tucker and Stanton.

Resignation as a member of the Board of Dr. Laughinghouse was presented as follows:

"Wrightsville Beach, N. C.,

June 15, 1926.

To Dr. J. Howell Way,

President Board of Health for North Carolina.

Dear Dr. Way:

I hereby tender my resignation as a member of the State Board of Health.

Respectfully,

CHAS. O'H. LAUGHINGHOUSE."

Upon motion of Dr. Stanton, seconded by Dr. Thompson, the resignation was unanimously accepted.

To fill the unexpired term of Dr. Laughinghouse, 1929, Dr. Tucker nominated Dr. W. S. Rankin. Nomination was seconded by every member present and Dr. Rankin was unanimously elected. Dr. Rankin was thereupon introduced into the meeting and advised by the President of his election and made an appropriate response, expressing his pleasure. Dr.
Rankin was made member of the Executive Committee to succeed Dr. Laughinghouse.

The following communication from Mr. James P. Stowe was then presented:

"Charlotte, N. C.,
June 19, 1926.

Dr. J. Howell Way,
Raleigh, N. C.

My Dear Doctor:

"Doctor Cooper’s telegram came today calling your meeting for Monday 21st. I am leaving tomorrow night for New York and will be unable to meet with you and assure you and the board members I regret it very much as your meetings are always interesting and pleasant to me. I want to ask you not to take any action on my request from the druggists at this time other than to ascertain through the laboratories the temperature it will require for proper sterilization of drinking glasses.

"With kindest regards to you and all members of the Board, I am
Yours very truly,
JAS. P. STOWE."

The President announced that the election of a Secretary was in order. Dr. Thompson nominated for Secretary Dr. Chas. O’H Laughinghouse to fill the unexpired term of Dr. W. S. Rankin. The nomination was seconded by Drs. Stanton, Anderson and Tucker. Dr. R. H. Lewis, who was prevented from attending the meeting on account of illness, upon being called on the telephone, voiced his pleasure over the nomination of Dr. Laughinghouse for Secretary and asked the privilege of having his vote recorded for him. The President of the Board then presented the following letter from Dr. A. J. Crowell:

"Wrightsville Beach, N. C.,
June 16, 1926.

Dr. J. Howell Way,
President N. C. State Board Health,
Waynesville, N. C.

My Dear Sir:

"Greatly to my regret I am leaving today for post-graduate study in Europe, hence it will be impossible for me to be present at your announced special session of the State Board of Health in a few days to elect Dr. Rankin’s successor as Secretary of the Board.

"I hereby give you my proxy and direct that you cast my vote unreservedly and continuously for Dr. Charles O’H. Laughinghouse for Secretary of the Board of Health.

A. J. CROWELL."

Upon vote Dr. Laughinghouse was unanimously elected Secretary of the State Board of Health for the term expiring Tuesday, April 19, 1927, he to assume the duties of Secretary and State Health Officer October 1, 1926.

The following resolution presented by Dr. Thompson and seconded by Dr. Tucker was adopted:

"The Board hereby puts upon record its appreciation of the very faithful and efficient services of Dr. G. M. Cooper, Acting Secretary of the Board, and designate him to continue in the same position, under the same conditions as have obtained during the past year, until Dr. Laughinghouse, the newly elected Secretary, shall assume the duties of the office."
Dr. Laughinghouse was introduced and addressed the members of the Board, voicing his appreciation of the honor and responsibility conferred. He also expressed his sincere appreciation of the superior services rendered by the Acting Secretary, Dr. G. M. Cooper, ranking its value to the State as second only to that of Dr. Rankin and Dr. R. H. Lewis.

Dr. Anderson addressed the Board, eulogizing Dr. Cooper's interest and successful service.

Dr. Tucker introduced the following resolution, which was adopted:

"Recognizing the importance of oral hygiene, be it resolved that the State Board of Health provide a suitable course of lectures on this subject, to be delivered to the student body of the Teachers Colleges within the confines of the State. Carried."

The Board thereupon adjourned.