Biennial Report of the North Carolina State Board of Health

Volume 20 (1922 – 1924)

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TWENTIETH BIENNIAL REPORT

OF THE

NORTH CAROLINA
STATE BOARD OF HEALTH

JULY 1, 1922 - JUNE 30, 1924

RALEIGH
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1924
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Members of the State Board of Health

Elected by the North Carolina Medical Society

Cyrus Thompson, M.D.
Term expires 1925
D. A. Stanton, M.D.
Term expires 1925
Charles O'H. Laughinghouse, 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 1925
E. J. Tucker, D.D.S.
Term expires 1925
James P. Stowe, Ph.G.
Term 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, 1924.

His Excellency, Cameron Morrison,
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, 1922, to June 30, 1924.

Very respectfully yours,

W. S. Rankin, M.D.,
Secretary and Treasurer.
Eight 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 cooperative 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, $2,000.

1906. The North Carolina Association for the Study and Prevention of Tuberculosis was organized. Annual appropriation, $2,000.

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 anti-typhoid vaccine. Dr. C. L. Prudgen 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 anti-toxin 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. Cooperation 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 cooperative 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. McL. 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 306,000. 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 Kinyaum'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 antitoxin.

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 266, 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 antitoxin, and in water taxes a total of $14,344.92, making a total of $42,844.92 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 cooperative 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 cooperation 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, North Carolina.

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. Cooperative 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 first 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 $27,239.66 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. Bouner, 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-twelfths 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 antitoxin, and in water taxes, a total of $30,872.51, making a total of $117,955.84 available for the work of the Laboratory.

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 County 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 resumes 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 cooperative 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 had 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 diminish-
ing 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.

FINANCIAL STATEMENT

1922 - 1923

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The appropriation for the State Laboratory of Hygiene, not included in the above, was $75,000 for each of the two years.
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 administration. 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 coordinated, 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 varies in number but averages 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, or 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 responsibili-
ties 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 com-
bined. The State through its established agency coöperates 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.
THE INVESTMENT IN PUBLIC HEALTH

North Carolina now ranks sixth among the States in the amount of money expended in the protection and promotion of the health of its people. This State has the enviable distinction of having established the first county health department in the United States. It now stands second in the number of such agencies, Ohio having the honor of first place. In view of the money and energy that is being spent in the State it is pertinent to review the results that are being achieved.

In 1922 the general death rate of the State was 11.6 per thousand of population as compared with a rate of 11.9 for the registration area. This showed a slight increase in both the State and the registration area as compared with the previous year. The birth rate for the State for the same period was 30.9 per thousand of population while for the registration area the rate was 22.3 per thousand. This was a decrease of 3.4 per thousand for the State and 2.1 per thousand for the registration area.

In 1923 the death rate for the registration area increased, moving up to 12.3 per thousand of population. The death rate of the State remained the same as the previous year, 11.6. Birth rates were generally lower, being one per thousand of population less in the registration area than for the previous year. In the State the birth rate was 30.0, or 0.9 per thousand less than for the previous year. For the two years the State again maintained its lead of the highest birth rate in the Union.

The system of protected public water supplies, the enforcement of the sanitary privy law, and the large number of citizens taking the typhoid vaccine have combined to bring the death rate from typhoid fever to the lowest point in the history of the State, the rate for 1923 being 9.9 per 100,000 of population. The tuberculosis rate continues to show a gratifying decrease, the death rate for 1923 being 9.47 per 100,000 of population, a reduction of more than one-half in ten years.

SPECIFIC RETURNS

Item 1—The State Laboratory of Hygiene made diagnostic examinations and furnished biological products to the citizens of the State to a total value of $1,556,301.80. That is, if this State agency had not been in existence, the work done by it at current commercial rates would have cost that sum. The diagnostic examinations included analyses of water, Wassermann blood tests, and nearly thirty thousand bacteriological examinations, and the manufacture and distribution of typhoid, diphtheria, smallpox, and autogenous vaccines, diphtheria and tetanus antitoxins, and antirabic treatments. No attempt is made to estimate the value of the preservation of life and health which may have been accomplished by this work. An accurate financial value can be calculated. The appropriation for the support of the laboratory was $75,000 annually. On the investment made by the State a cash dividend of $10.37 was made on each dollar of investment.

Item 2—During the past two years the State Board of Health through its officers and in cooperation with the physicians of the State, has given complete anti-typhoid vaccinations to 281,411 citizens. These immunization treatments without the activity of the Board would have cost $2.00 each, or a total of $562,822. During the same period 79,533 children were given
have been reexamined by specially trained physicians or nurses, those being children reported by the teachers as probably suffering from one or more common defects. Of those discovered through this reexamination to be suffering with diseased tonsils or adenoids 4,910 were operated upon in clinics conducted by the Board at a cost not exceeding $12.50 for each patient, while approximately one-half the number received treatment entirely free. The ordinary cost would have been not less than $35.00 each, so that a net saving of $141,363 resulted.

Item 6—In clinics under the direction of the Board there were given 31,494 treatments to persons suffering with venereal diseases, at a cost value of $62,988.

Item 7—Thirty counties of the State have been interested in establishing and maintaining county health departments with adequate budgets and efficient personnel. To the aid of these departments, the Board has contributed at the rate of $2,500 annually. The total expenditures of the thirty county departments during the biennium has been $493,165.68 and the cost value of work accomplished was $832,547.22.

Item 8—The Board has been able to interest outside agencies in financially aiding the promotion of health work in the State. Among the contributing agencies have been the Children’s Bureau of the United States Department of Labor, the International Health Board, the United States Public Health Service, the Bureau of the Census of the United States Department of Commerce, and the counties of the State. The total sum so secured has been for the biennium $511,798.
CASH DIVIDENDS PAID

For the biennium the appropriation made by the General Assembly for the work of the Board was $775,000. On this investment the Board has been able to secure an additional amount of $511,798 from other agencies, and in addition has been able on major items of work to show a return in value of $4,164,888. The dividend paid in cash value to the citizens of the State has been at the rate of $6.03 for every dollar appropriated.

DIVIDENDS IN VITALITY

There are certain dividends paid by public health work which cannot be reduced to a dollar and cents value, but which are none the less definite. While the cash dividends which are ascertainable have been highly gratifying, there has been a much greater earning in terms of vitality. The reduction in the general death rate, the prevention of sickness from communicable diseases, represent not only an enormous cash saving, but an even larger saving in terms of human welfare and happiness. The steady progress being made towards the elimination of typhoid fever, diphtheria, smallpox; the marked reduction in the deaths from tuberculosis; the decreased infant death rates; these all mean an actual cash saving effected in bills incurred, and even more in the saving of wages earned and continued life and health.

INTANGIBLE DIVIDENDS

There are many important items of work of the Board which will not admit of being grouped among those earning a cash dividend, or among those directly earning a vital dividend. Yet these items are essential, and they earn a return of such a nature that it may be listed only as intangible. A few of these are here given:

Item 1—During the biennium the Bureau of Vital Statistics has supervised and directed the work of 1,450 local registrars; has kept in close touch with the 2,300 physicians of the State, the 4,000 midwives, and the 600 casket dealers, which includes those immediately concerned in a business way with births and deaths; has recorded and classified, according to location, county, town, township, according to race, age, and according to 205 causes of death certificates for 66,666 deaths, 171,843 births, and 15,134 stillbirths. This is the bookkeeping work of the Board. To do intelligent work it is essential to know how many deaths there are annually, where they occur, their cause, and the age and race of the decedents. To know the natural growth of the population, the location of the growth, and the race, is equally as essential. The records, moreover, have an important legal value.

Item 2—There are now under the supervision of the Board 151 water supply systems serving 711,538 people and valued at approximately $40,000,000. During the biennium 32 new water supply and sewerage systems were installed, the plans for these being examined and approved; of the 63 filter plants in the State, 26 were built new (either completed or under construction), 12 were rebuilt, 4 had minor improvements partially satisfying standard practice, 11 were authorized to be rebuilt and engineer employed. This represents almost complete reconstruction of the State water purification facilities since 1921.
Item 3—In the effort to reduce the high maternal and infant death rate 13,670 expectant mothers were aided through a system of correspondence and carefully prepared literature in protecting themselves and their unborn babies against the dangers of pregnancy and labor, and advised as to the care of their infants. Through representatives of the board, either physicians or nurses, 28,635 home demonstrations were given. 1,159 mothers attended special classes for instruction, 1,433 midwives completed a special course of instruction designed to render them more proficient in their service, 20 prenatal clinics were established, 26,006 mothers registered their babies for the purpose of securing special information and advice, and 109,632 ampoules of silver nitrate solution were supplied to physicians and midwives to protect the eyes of the new-born from blindness.

Item 4—A total of 149,885 cases of contagious diseases have been quarantined and reasonable restrictions placed upon these foci of infection. In each case full information with regard to the cause of the disease, methods of prevention, and precautions against communicating it to others has been supplied, and it is not unreasonable to estimate that these efforts have resulted in effecting a reduction of not less than ten per cent in the occurrence of these diseases, with a consequent saving in days of sickness suffered and loss of life.

Item 5—The main educational campaign of the Board has consisted in the publication of the Health Bulletin monthly, usually consisting of 32-pages and with a circulation of 58,000 copies. At the same time 2,230,500 specially prepared pieces of literature on various health subjects have been distributed.

Item 6—The Board has aided financially, and with advice and supervision, the establishment and maintenance of health departments in thirty counties, serving a population of nearly one-half of the total of the State. Included in this is a special malaria control program in seven of the Eastern counties.
STATE LABORATORY OF HYGIENE

A Brief Outline of the Work Done by the State Laboratory of Hygiene from July 1, 1922, to July 1, 1924

Bacteriological examinations made .................................................. 29,473
Wassermann blood tests ................................................................. 55,907
Water analyses ................................................................................. 8,226
Diphtheria antitoxin distributed (units) ............................................ 395,301,000
Tetanus antitoxin distributed (units) ................................................ 7,621,000
Pasteur antirabic treatments ............................................................. 2,042
Typhoid vaccine (doses) ................................................................. 1,106,293
Diphtheria vaccine (toxin-antitoxin) ................................................ 263,162
Smallpox vaccine ............................................................................ 487,872
Whooping cough vaccine ................................................................. 76,327
Autogenous vaccine .......................................................................... 139

No attempt is made to estimate the value of the preservation of life and health which may have been accomplished by the work outlined above, but it can be given an accurate financial value. If there were no State Laboratory of Hygiene this work would have cost the citizens of the State the following amounts:

29,473 bacteriological examinations @ $2.50 (averaged) .................. $73,682.50
55,907 Wassermann blood tests @ $5.00 (averaged) ......................... 279,535.00
8,226 water analyses @ $5.00 (averaged) ........................................ 41,130.00

Diphtheria antitoxin:
9,937 1,000 unit packages @ $1.50 .................. $14,905.50
1,064 3,000 unit packages @ 3.50 .................. 3,724.00
6,564 5,000 unit packages @ 5.00 .................. 32,820.00
34,069 10,000 unit packages @ 7.50 ............... 255,511.50

306,967.00

4,963 1,500 unit packages tetanus antitoxin @ $3.50 .................. 17,357.05
2,042 Pasteur treatments @ $20.00 .............................................. 40,840.00
1,106,293 doses typhoid vaccine @ .50c ...................................... 553,246.50
263,162 doses toxin-antitoxin @ .50c ........................................... 131,581.00
487,872 doses smallpox vaccine @ .15c ....................................... 73,180.80
76,327 doses whooping cough vaccine @ .50c ............................. 38,163.50
139 autogenous vaccines @ $5.00 .................................................. 695.00

Total ................................................................. $1,556,391.80
COOPERATIVE COUNTY HEALTH WORK

Twenty-six counties, representing thirty-seven per cent of the total population of the State, are included in the cooperative plan of public health work. These figures do not include the counties whose programs specialize in malaria control work; the counties having only whole-time nursing service, nor the cities and counties having whole-time public health organizations which are not embraced in the State Board of Health's cooperative plan of work.

The State Board of Health contributes the sum of $2,500 annually to the county which establishes and maintains a full-time health department, and which itself expends at least an equal sum. However, only $1,000 of the State's appropriation is contributed unconditionally, the remaining $1,500 being conditioned on the ability of the county health department to produce in cost items of work the equivalent of the total expenditures of the department. The material assistance 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 with or without the assistance of the State Board of Health, as the county may choose. The material assistance of the State Board of Health is conditioned 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.

Functions of the State Board of Health in Its Relation with Cooperative County Health Departments

1. Furnishes record forms, report forms, and available literature in any desired quantity.

8. Visits each cooperative county health department at regular intervals, usually about once each month, for conference with the health officer.

3. Instructs the staff of local cooperative county health departments in financing, record-keeping, preparation of budgets and reports.

4. Offers assistance in planning and developing general and special units of work, demonstrations, educational exhibits, clinics, laboratories, etc.

5. Is available at any time for conferences with local boards of health, county medical societies, or other representative agencies.

6. Checks the records of each cooperating county health department with reports and statements of production submitted, and verifies selected records on file by visiting the homes of families for whom services were rendered.

7. Examines the monthly statistical and financial reports, and promptly returns for correction, if errors are found.

8. Prepares and distributes itemized quarterly statements of expenditures and production, showing in detail the rating of each cooperative health department, and the average production in tabulated form to the State press, all county officials, the officials of professional, social, civic, and religious organizations, and a selected list of representative citizens of each county in which a cooperative county health department is maintained. The printed
quarterly statement is accompanied by an explanatory letter calling attention to relative values of public health activities, comparisons of efficient and inefficient service, and inviting the public to compare the relative efficiency of their own and other departments, as contrasted with each other, and the average rating.

REPORT OF THE DEPARTMENT FOR THE INVESTIGATION AND CONTROL OF MALARIA

The department created for the investigation and control of malaria has been instrumental during the period in organizing seven local county health departments, whose duty it is to carry on control measures wherever the disease is prevalent enough to justify the effort and expenditure of money. While the primary object of the department, created by joint funds of the State Board of Health and International Health Board, is the organization of county health departments, the mapping out the malaria problem within the malaria zone, and the instruction of employees of local health departments in measures for the control of the disease, there is a secondary object of perhaps even greater importance and which has guided the department in formulating its policies: this is the stimulation of a permanent interest and activity in public health work in general, and the local demonstration of methods whereby disease prevention can be carried on economically and on a large scale by a free and generous support of full-time local health departments.

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.

The subordinate county staffs are organized into four units, a county health organization, consisting of a full-time medical director (county health officer), two field nurses, one microscopist, and clerical assistant. Each department, with the health officer acting as executive head, assumes full responsibility for intensive control measures in their respective counties, and while there are certain mandatory activities to be cared for by each health department, effort is made to direct seventy-five per cent of the effort of each department toward the control of malarial fevers. The management of all seven of the departments known as “counties doing malaria work,” the supervision of all financial transactions, and the purchasing of all supplies, are functions of the office of Central Administration. At the central office there is a clerical assistant, who has immediate charge of the bookkeeping and who concerns herself directly with the clerical features of this work.

In order to secure a friendly and cordial relationship between the county health departments and governing officials of the counties, the medical director of each county was, on recommendation by the General Director, elected by the County Boards of Health, to the office of County Health Officer. This action has its weight in having the departments considered as permanent organizations in health work and in getting the laity accustomed to the functions and purposes of full-time health departments.
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. To determine the incidence of the disease and the extent to which it is a menace to the health and economic efficiency of the people.
2. Factors responsible for the transmission and spread of the disease.
3. The possibility of controlling the disease at a cost within the economic reach of the people.

In order to explain the methods of work of the various county health departments, it is necessary to consider the methods in relation to the objectives.

Method for Objective One

The first and primary object of the county health departments is to determine the incidence and distribution of the disease in the counties. This is done by preparing for the purpose survey maps of the territories under investigation, locating each home thereon with special reference to the breeding of mosquitoes, listing the population, taking a history index as to the prevalence of the disease during the two preceding years, examination of school children between the ages of 2 to 12 for enlarged spleens, taking blood smears for a parasitic index, and the securing of morbidity and mortality statistics from the State Health Department. Each case of malaria was indicated on the "Survey or Spot Map" prepared, denoting at the same time on the family record or index card, the name, age, sex, color, duration of disease, history of previous malaria and probable source of infection.

History Index as to Positive or Negative Malaria

House to house visits are made for the purpose of recording the presence or absence of malaria for each individual during the two preceding years. Case histories are recorded as positive only in case of individuals giving a history of repeated periodicity.

Method of Examination of the Spleens of Children

In order to elicit the smaller degrees 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 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.

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.

Preparation of Smears

The end (pad side) of the little finger is pricked very quickly, after having been cleansed, a large drop of blood expressed by means of slight pressure, this is collected in the center of the slide No. 1. The corner edge of a second slide is used, maneuvering in a circular manner so as to form a circular thick film about one-fourth of an inch in diameter. The rotation movement is continued until the edges of the film begin drying, thus the thick films are prepared. Then a second drop of blood is expressed and collected on the edge of the thick film side. This is slightly pressed against the polished surface of the other slide, and the blood allowed to spread evenly over its surface: then by a quick pushing movement the blood is spread over approximately two thirds of its surface, forming a thin film. Both slides are then allowed to dry and by means of a soft lead pencil the patient's serial number is written directly into the film of the blood. The carbon thus deposited, not being affected by either acids or stains makes for a permanent label, complete record of the patient's house, name, race, age, sex, color, and serial number, which corresponds with the number on the history index, recent ingestion of quinine and recent clinical manifestation of malaria.

Method of Dehemoglobinizing Thick Blood Films

At the beginning of the laboratory studies, an attempt was made to dissolve out the hemoglobin from the thick by use of distilled water, but smears prepared under filed conditions required a fixing agent at the time of decolorization to prevent the blood from slipping from the slide. If distilled water is used only a few slides at a time should be prepared and great care exercised
not to let them remain in water too long. The steps followed in the dehydro-
globinizing process is as follows:

1. Slides are placed in Coplon Staining jars.
2. The jars are filled with 70 per cent methylic alcohol, to which 2 per cent
   H. C. L. was added.
3. Slides remain in acid alcohol until all traces of the hemoglobin has
disappeared.
4. Slides are then removed and washed in running water for 10 to 15
   minutes to neutralize the acid present.
5. Slides are allowed to dry, in preparation for staining.

The stains usually employed belong to two classes, (1) Those which stain
the protoplasm and nucleus the same color, (2) Those which by tinting the
two structures differently, differentiate the two structures. For the thick films
only the later is successfully employed.

**Method for Objective Two**

The preliminary epidemiological work to determine the incidence, seasonal
distribution and concentration of the disease usually show clearly that certain
localities in the counties are malarial centers. The next step is an intensive
mosquito survey of the areas showing relatively high rate of infection as indi-
cated on the spot or survey map.

**Method of Biological Study in Relation to Endemic Foci of Infection**

Wherever possible a general division of the breeding places for mosquitoes
in a territory is made and classed into, first, natural or breeding places of
choice, which include such collections of water as shallow margins of swamps,
slowly moving streams, permanent ponds, seepage areas, ditches, etc., and
second, artificial or breeding places of necessity or accident, such as water
barrels, street gutters, horse troughs, stump holes, etc., and indicated on the
survey map within half a mile distance of any home, indicating the character
of each, whether controllable or uncontrollable.

**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 Pupa 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 for 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 for-
mulating their program of control.
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<td>Lenoir</td>
<td>14,990.47</td>
<td>23,179.98</td>
<td>34,606.09</td>
<td>1.49</td>
</tr>
<tr>
<td>Mecklenburg</td>
<td>19,326.62</td>
<td>19,058.03</td>
<td>34,998.69</td>
<td>1.83</td>
</tr>
<tr>
<td>Northampton</td>
<td>11,872.75</td>
<td>10,332.96</td>
<td>13,030.65</td>
<td>1.26</td>
</tr>
<tr>
<td>Pamlico</td>
<td>14,563.39</td>
<td>10,041.11</td>
<td>23,340.30</td>
<td>2.33</td>
</tr>
<tr>
<td>Pitt</td>
<td>17,015.50</td>
<td>13,919.05</td>
<td>27,769.22</td>
<td>1.99</td>
</tr>
<tr>
<td>Robeson</td>
<td>11,787.98</td>
<td>12,860.09</td>
<td>19,895.20</td>
<td>1.55</td>
</tr>
<tr>
<td>Rowan</td>
<td>21,024.81</td>
<td>25,439.69</td>
<td>39,144.07</td>
<td>1.37</td>
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<tr>
<td>Sampson</td>
<td>12,700.00</td>
<td>11,931.80</td>
<td>19,695.48</td>
<td>1.65</td>
</tr>
<tr>
<td>Surry</td>
<td>16,192.81</td>
<td>15,423.83</td>
<td>22,879.48</td>
<td>1.48</td>
</tr>
<tr>
<td>Vance</td>
<td>15,831.52</td>
<td>15,954.70</td>
<td>25,513.95</td>
<td>1.59</td>
</tr>
<tr>
<td>Wake</td>
<td>59,159.13</td>
<td>59,030.70</td>
<td>111,844.33</td>
<td>1.90</td>
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<tr>
<td>Wayne</td>
<td>23,428.45</td>
<td>22,482.58</td>
<td>45,787.43</td>
<td>2.04</td>
</tr>
<tr>
<td>Wilkes</td>
<td>8,589.85</td>
<td>9,065.62</td>
<td>11,623.15</td>
<td>1.28</td>
</tr>
<tr>
<td>Wilson</td>
<td>20,510.49</td>
<td>22,748.75</td>
<td>28,657.03</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Total: $494,344.48 $493,165.68 $832,517.22 $1.65

1*Department organized January 1, 1923.
2*Department organized January 1, 1924.
3*Department organized August 15, 1923.
4*Department organized September 1, 1922, discontinued March 1, 1923.
5*Department organized May 21, 1923.
6*Department organized January 1, 1924.
# DETAIL REPORT OF WORK

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

## COMMUNICABLE DISEASE CONTROL

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CONTAGIOUS DISEASES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarantine by Mail</td>
<td>.50</td>
<td>24,923</td>
<td>$12,461.50</td>
</tr>
<tr>
<td>Quarantine by Visit</td>
<td>1.50</td>
<td>43,708</td>
<td>65,582.00</td>
</tr>
<tr>
<td>Visit to and instruction of schools</td>
<td>2.00</td>
<td>3,501</td>
<td>7,008.00</td>
</tr>
<tr>
<td>Instruction of schools through teachers</td>
<td>1.00</td>
<td>3,931</td>
<td>3,931.00</td>
</tr>
<tr>
<td>Epidemiological Investigation</td>
<td>1.50</td>
<td>9,931</td>
<td>15,396.50</td>
</tr>
<tr>
<td>Vaccination, typhoid, complete</td>
<td>.50</td>
<td>110,687</td>
<td>65,343.50</td>
</tr>
<tr>
<td>Vaccination, smallpox</td>
<td>.25</td>
<td>89,727</td>
<td>22,431.75</td>
</tr>
<tr>
<td>Toxin-antitoxin, complete</td>
<td>.75</td>
<td>33,569</td>
<td>25,176.75</td>
</tr>
<tr>
<td>Children Schick tested</td>
<td>.40</td>
<td>2,964</td>
<td>1,185.60</td>
</tr>
<tr>
<td>Vaccination, pertussis, complete</td>
<td>.50</td>
<td>2,571</td>
<td>1,285.50</td>
</tr>
<tr>
<td>Lecture course, number attending</td>
<td>.10</td>
<td>9,842</td>
<td>984.20</td>
</tr>
<tr>
<td>2. VENEREAL DISEASE CONTROL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cases reported</td>
<td>.25</td>
<td>5,273</td>
<td>1,318.25</td>
</tr>
<tr>
<td>Cases returned for treatment</td>
<td>4.00</td>
<td>561</td>
<td>2,244.00</td>
</tr>
<tr>
<td>Treatments, indigent cases</td>
<td>2.50</td>
<td>21,408</td>
<td>53,520.00</td>
</tr>
<tr>
<td>Mercurial Inunctions</td>
<td>2.00</td>
<td>681</td>
<td>1,362.00</td>
</tr>
<tr>
<td>V. D. prescriptions inspected</td>
<td>1.00</td>
<td>50</td>
<td>50.00</td>
</tr>
<tr>
<td>3. TUBERCULOSIS CONTROL:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cases registered</td>
<td>.25</td>
<td>905</td>
<td>226.25</td>
</tr>
<tr>
<td>Tuberculous homes visited and instructed</td>
<td>1.00</td>
<td>4,445</td>
<td>4,445.00</td>
</tr>
<tr>
<td>Organization, clinic, number examined</td>
<td>1.00</td>
<td>3,638</td>
<td>3,638.00</td>
</tr>
<tr>
<td>Admission to Tuberculosis Institution</td>
<td>5.00</td>
<td>184</td>
<td>920.00</td>
</tr>
<tr>
<td>Tuberculosis examinations</td>
<td>1.00</td>
<td>54</td>
<td>54.00</td>
</tr>
</tbody>
</table>

## HYGIENE

1. INFANT AND MATERNAL HYGIENE:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal cases registered</td>
<td>.25</td>
<td>4,238</td>
<td>1,064.50</td>
</tr>
<tr>
<td>Babies registered</td>
<td>.25</td>
<td>11,766</td>
<td>2,911.50</td>
</tr>
<tr>
<td>Home conferences, mothers</td>
<td>1.00</td>
<td>23,687</td>
<td>23,687.00</td>
</tr>
<tr>
<td>Office or individual conferences, mothers</td>
<td>.25</td>
<td>2,437</td>
<td>609.25</td>
</tr>
<tr>
<td>Group conferences, mothers; number present</td>
<td>.25</td>
<td>2,923</td>
<td>730.75</td>
</tr>
<tr>
<td>Women completing standard course</td>
<td>3.00</td>
<td>401</td>
<td>1,212.00</td>
</tr>
<tr>
<td>Midwives completing 6-hour course</td>
<td>4.00</td>
<td>1,292</td>
<td>5,166.00</td>
</tr>
<tr>
<td>Children certified, Little Mothers' League</td>
<td>3.00</td>
<td>959</td>
<td>2,877.00</td>
</tr>
</tbody>
</table>

2. SCHOOL HYGIENE:

<table>
<thead>
<tr>
<th>Item Description</th>
<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>4,768</td>
<td>23,816.00</td>
</tr>
<tr>
<td>Children treated, dental defects</td>
<td>2.00</td>
<td>40,110</td>
<td>80,220.00</td>
</tr>
<tr>
<td>Refractive errors corrected</td>
<td>1.00</td>
<td>2,237</td>
<td>2,237.00</td>
</tr>
<tr>
<td>Orthopedic corrections</td>
<td>5.00</td>
<td>83</td>
<td>415.00</td>
</tr>
<tr>
<td>Nutritional correction (crusaders only)</td>
<td>1.00</td>
<td>710</td>
<td>710.00</td>
</tr>
<tr>
<td>Pages, Modern Health Crusade</td>
<td>.20</td>
<td>16,653</td>
<td>3,327.00</td>
</tr>
<tr>
<td>Examinations, school children, including pre-school ages 2 to 6:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>.25</td>
<td>122,120</td>
<td>30,530.00</td>
</tr>
<tr>
<td>Final</td>
<td>.50</td>
<td>46,848</td>
<td>23,424.00</td>
</tr>
<tr>
<td>Excluded from school, account of scabies</td>
<td>.25</td>
<td>1,664</td>
<td>416.00</td>
</tr>
<tr>
<td>Excluded from school, account pediculosis</td>
<td>.25</td>
<td>1,536</td>
<td>384.00</td>
</tr>
</tbody>
</table>
## MEDICAL AND LABORATORY SERVICES

<table>
<thead>
<tr>
<th>VISITS:</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jail</td>
<td>$1.50</td>
<td>3,747</td>
<td>$5,620.50</td>
</tr>
<tr>
<td>Convict Camp</td>
<td>1.50</td>
<td>1,999</td>
<td>2,948.50</td>
</tr>
<tr>
<td>County Home</td>
<td>1.50</td>
<td>3,188</td>
<td>4,737.00</td>
</tr>
<tr>
<td>Hookworm Treatment</td>
<td>.25</td>
<td>4,087</td>
<td>1,246.75</td>
</tr>
<tr>
<td>Consultations, professional</td>
<td>1.50</td>
<td>1,008</td>
<td>1,512.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXAMINATIONS, Special:</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prisoners</td>
<td>1.00</td>
<td>3,339</td>
<td>3,339.00</td>
</tr>
<tr>
<td>Marriage</td>
<td>1.00</td>
<td>6,471</td>
<td>6,471.00</td>
</tr>
<tr>
<td>Teachers</td>
<td>1.00</td>
<td>4,554</td>
<td>4,554.00</td>
</tr>
<tr>
<td>Child for Industry</td>
<td>.50</td>
<td>7,254</td>
<td>3,622.00</td>
</tr>
<tr>
<td>Food Handlers</td>
<td>1.00</td>
<td>1,996</td>
<td>1,996.00</td>
</tr>
<tr>
<td>Examination by court order</td>
<td>2.00</td>
<td>221</td>
<td>448.00</td>
</tr>
<tr>
<td>Admission to institution</td>
<td>1.50</td>
<td>584</td>
<td>876.00</td>
</tr>
<tr>
<td>For lunacy</td>
<td>2.00</td>
<td>767</td>
<td>1,534.00</td>
</tr>
<tr>
<td>Postmortem</td>
<td>5.00</td>
<td>39</td>
<td>195.00</td>
</tr>
<tr>
<td>Coroner’s inquest</td>
<td>5.00</td>
<td>31</td>
<td>155.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EXAMINATIONS, LIFE EXTENSION:</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>By health officer</td>
<td>2.00</td>
<td>3,415</td>
<td>6,830.00</td>
</tr>
<tr>
<td>In dispensary</td>
<td>1.00</td>
<td>1,759</td>
<td>1,759.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LABORATORY WORK:</th>
<th>Unit Cost</th>
<th>Number</th>
<th>Cost Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widal Test</td>
<td>.50</td>
<td>63</td>
<td>31.50</td>
</tr>
<tr>
<td>Throat Culture</td>
<td>1.00</td>
<td>6,012</td>
<td>6,012.00</td>
</tr>
<tr>
<td>Throat Swab</td>
<td>.50</td>
<td>5,003</td>
<td>2,501.50</td>
</tr>
<tr>
<td>Feces examination, for parasites</td>
<td>.50</td>
<td>4,784</td>
<td>2,392.00</td>
</tr>
<tr>
<td>Sputum examination, for tuberculosis</td>
<td>1.00</td>
<td>223</td>
<td>223.00</td>
</tr>
<tr>
<td>Blood, for malaria</td>
<td>1.00</td>
<td>1,197</td>
<td>1,197.00</td>
</tr>
<tr>
<td>Milk Analysis</td>
<td>2.00</td>
<td>2,765</td>
<td>5,530.00</td>
</tr>
<tr>
<td>Babcock test alone</td>
<td>.50</td>
<td>1,205</td>
<td>602.50</td>
</tr>
<tr>
<td>Water analysis (public supply)</td>
<td>1.00</td>
<td>1,368</td>
<td>1,368.00</td>
</tr>
<tr>
<td>Urine analysis</td>
<td>1.00</td>
<td>4,386</td>
<td>4,386.00</td>
</tr>
<tr>
<td>Albumen test, prenatal cases</td>
<td>.35</td>
<td>61</td>
<td>22.40</td>
</tr>
<tr>
<td>Pus, for gonococci</td>
<td>1.00</td>
<td>736</td>
<td>736.00</td>
</tr>
<tr>
<td>Specimens sent to State Laboratory</td>
<td>.50</td>
<td>17,591</td>
<td>8,795.50</td>
</tr>
<tr>
<td>Examination for Rabies</td>
<td>1.50</td>
<td>61</td>
<td>91.50</td>
</tr>
<tr>
<td>Wassermann Tests</td>
<td>1.50</td>
<td>952</td>
<td>1,428.00</td>
</tr>
<tr>
<td>Lactic Acid Milk (quarts)</td>
<td>.15</td>
<td>4,695½</td>
<td>704.78</td>
</tr>
</tbody>
</table>

## SANITATION

### 1. EXCRETA DISPOSAL:
- Urban privies licensed: .50 10,630 5,115.00
- Urban privies, maintenance, repair: .50 11,450 5,725.00
- Sewer connections: 2.50 3,452 8,630.00
- Rural privies constructed: 5.00 2,533 12,665.00

### 2. PRIVATE WATER SUPPLIES:
- Protected against surface pollution: 5.00 257 1,183.00

### 3. ABATEMENT OF NUISANCES:
- Minor: .50 29,584 14,792.00
- Major, hours spent: 1.00 2,594 2,594.00

## FOOD CONTROL

### 1. INSPECTIONS:
- Dairy: 1.00 3,317 3,317.00
- Abattoir: 1.00 533 533.00
- Hotel, restaurant, market: .50 27,213 13,606.50
## 2. EXAMINATIONS AND TESTS OF ANIMALS:

- **Ante mortem (when temperatures are taken):**
  - Cost: $0.25
  - Number: 571
  - Equivalent: $142.75
- **Post mortem, viscera attached:**
  - Cost: $0.25
  - Number: 38,515
  - Equivalent: $9,828.75
- **Cows tuberculin tested:**
  - Cost: $1.50
  - Number: 2,818
  - Equivalent: $3,327.00

### MALARIA CONTROL MEASURES

#### 1. STERILIZATION OF CARRIERS BY QUININE:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete sterilization, 8-weeks</td>
<td>$2.00</td>
<td>5,560</td>
<td>$11,120.00</td>
</tr>
<tr>
<td>Sterilization, 4-weeks</td>
<td>$1.50</td>
<td>308</td>
<td>$462.00</td>
</tr>
<tr>
<td>Prophylactic treatment</td>
<td>$1.00</td>
<td>4,829</td>
<td>$4,829.00</td>
</tr>
<tr>
<td>Quinine stations installed</td>
<td>$5.00</td>
<td>47</td>
<td>$235.00</td>
</tr>
<tr>
<td>Homes visited and instructed</td>
<td>$1.00</td>
<td>10,490</td>
<td>$10,490.00</td>
</tr>
</tbody>
</table>

#### 2. PROTECTION AGAINST THE INSECT HOST:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houses screened</td>
<td>$5.00</td>
<td>126</td>
<td>$630.00</td>
</tr>
<tr>
<td>Mosquito bars used</td>
<td>$1.00</td>
<td>5</td>
<td>$5.00</td>
</tr>
<tr>
<td>Ditching installed</td>
<td>$0.65</td>
<td>100</td>
<td>$5.00</td>
</tr>
<tr>
<td>Ponds and streams stocked with top-feeding minnows</td>
<td>$5.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveys (complete)</td>
<td>$15.00</td>
<td>3</td>
<td>$45.00</td>
</tr>
</tbody>
</table>

### FIELD ACTIVITIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smears obtained at schools</td>
<td>$0.30</td>
<td>31,485</td>
<td>$10,345.50</td>
</tr>
<tr>
<td>Smears obtained at public gatherings</td>
<td>$0.30</td>
<td>2,249</td>
<td>$671.70</td>
</tr>
<tr>
<td>Smears obtained on house-to-house visits</td>
<td>$0.30</td>
<td>12,914</td>
<td>$3,874.20</td>
</tr>
</tbody>
</table>

### LABORATORY

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smear examination, routine field</td>
<td>$0.50</td>
<td>26,881</td>
<td>$13,440.50</td>
</tr>
<tr>
<td>Smear examination, office</td>
<td>$0.50</td>
<td>18,314</td>
<td>$9,157.00</td>
</tr>
<tr>
<td>Differential cell count</td>
<td>$1.50</td>
<td>25</td>
<td>$42.00</td>
</tr>
<tr>
<td>Smears sent to district laboratories</td>
<td>$0.50</td>
<td>2,549</td>
<td>$1,271.50</td>
</tr>
</tbody>
</table>

### EDUCATIONAL

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to and instruction of schools</td>
<td>$1.50</td>
<td>108</td>
<td>$162.00</td>
</tr>
<tr>
<td>Lecture, public</td>
<td>$3.00</td>
<td>129</td>
<td>$357.00</td>
</tr>
<tr>
<td>Public exhibits</td>
<td>$2.00</td>
<td>1</td>
<td>$2.00</td>
</tr>
<tr>
<td>Field instruction</td>
<td>$2.00</td>
<td>74</td>
<td>$148.00</td>
</tr>
<tr>
<td>School instruction</td>
<td>$5.00</td>
<td>543</td>
<td>$2,715.00</td>
</tr>
<tr>
<td>Official groups instruction</td>
<td>$5.00</td>
<td>10</td>
<td>$50.00</td>
</tr>
<tr>
<td>Instruction to parents by mail</td>
<td>$0.15</td>
<td>35,502</td>
<td>$5,325.30</td>
</tr>
</tbody>
</table>

### MISCELLANEOUS

#### 1. CONFERENCES, HEALTH OFFICERS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>$0.50</td>
<td>12,158</td>
<td>$6,079.00</td>
</tr>
<tr>
<td>Official (group)</td>
<td>$1.50</td>
<td>1,088</td>
<td>$1,632.00</td>
</tr>
</tbody>
</table>

#### 2. CONVICTIONS:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violation of health laws</td>
<td>$0.00</td>
<td>734</td>
<td>$3,670.00</td>
</tr>
</tbody>
</table>

### TRANSPORTATION

#### 1. MILEAGE (OFFICIAL BUSINESS):

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Number</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car-miles</td>
<td>$0.10</td>
<td>328,801</td>
<td>$32,800.10</td>
</tr>
<tr>
<td>Health officer-miles</td>
<td>$0.05</td>
<td>390,716</td>
<td>$19,535.80</td>
</tr>
<tr>
<td>Nurse-miles</td>
<td>$0.02125</td>
<td>333,787</td>
<td>$7,314.67</td>
</tr>
<tr>
<td>Sanitary inspector-miles</td>
<td>$0.02125</td>
<td>126,093</td>
<td>$3,152.33</td>
</tr>
</tbody>
</table>
REPORT FOR THE BUREAU OF VITAL STATISTICS AND
DIVISIONS OF EPIDEMIOLOGY AND
VENREAL DISEASE

Bureau of Vital Statistics

Since the biennial report of 1921-1922, there has been added to the Bureau of Vital Statistics, the work of the former Bureau of Epidemiology, the distribution of silver nitrate and registration of midwives, and the Bureau of Venereal Diseases. While each of these divisions has 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 its division is done by the District Health Officers and their assistants.

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 physicians; (f) 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 depart-
ments 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 legisla-
tures, 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 mid-
wives 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 legiti-
mate 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, 1922, through June 30, 1924, inclusive.

Letters and postals received.................................................. 35,335
Casket dealers reports received.............................................. 9,087
Supplemental reports received................................................ 3,063
Name cards received.............................................................. 17,919
Violation blanks received....................................................... 150
Acceptance papers received................................................... 147
Report cards received from local registrars............................. 27,019
Letters written........................................................................... 21,323
Form letters sent......................................................................... 37,750
Postal cards sent......................................................................... 155,809
Packages of supplies sent......................................................... 9,107

INDEXING:

Cards made.................................................................................. 248,244
Cards proofread........................................................................... 212,817
Cards assorted............................................................................. 209,070
Cards filed................................................................................... 253,512

PERMANENT INDEX:

Birth cards checked before being copied on sheets....................... 76,539
Cards copied on sheets to be bound in book form (75 names to sheet) 76,539
Credit certificates sent local registrars....................................... 3,367
Certified copies made.................................................................... 5,284
Tables made.................................................................................. 331
Cards punched and proofread...................................................... 54,435
Transcripts of certificates of birth and death made and furnished to the Bureau of the Census........................... 221,703
Cards furnished Dr. McCain, giving information as to deaths from tuberculosis, monthly................................. 4,288
Number certificates made in triplicate........................................ 5,800
Names checked on undertaker reports with death certificates.... 6,691

CERTIFICATES RECEIVED:

Births ......................................................................................... 171,843
Deaths ....................................................................................... 66,666
Stillbirths .................................................................................... 15,134

*Total......................................................................................... 253,643

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

*This total includes letters and postals received for our other divisions.
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 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
(Including the Work of Venereal Disease Division)

Character of Work

OBJECTIVES

To prevent and control the occurrence of whooping cough, measles, diphtheria, scarlet fever, infantile paralysis, cerebro-spinal meningitis, chicken-pox, septic sore throat, German measles, smallpox, typhoid fever, trachoma, syphilis, chancreoid, 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 diseases 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 contagious 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, 1922, to June 30, 1924**

Cases reported by householder ........................................... 28,557
Cases reported by nurses and health officers .......................... 24,961
Cases reported by physicians ........................................... 87,939
Cases reported by teachers ............................................... 8,428
Total number of cases reported ........................................ 149,885
Homes placarded .................................................................. 117,202
Articles published ............................................................. 640
Teachers certificates ................................................................ 12,322
Indictments ............................................................................ 195

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.

**1. 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 ................................................................. 230,776
Oaths of office ...................................................................... 26
Bulletins sent ....................................................................... 273,256
Packages of supplies sent ................................................... 6,283
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 $1.3 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.

In 1922, twenty-five campaigns were conducted in the following counties:

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alleghany</td>
<td>350</td>
</tr>
<tr>
<td>Anson</td>
<td>2,142</td>
</tr>
<tr>
<td>Avery</td>
<td>1,511</td>
</tr>
<tr>
<td>Beaufort</td>
<td>908</td>
</tr>
<tr>
<td>Chowan</td>
<td>2,232</td>
</tr>
<tr>
<td>Cleveland</td>
<td>2,142</td>
</tr>
<tr>
<td>Duplin</td>
<td>5,394</td>
</tr>
<tr>
<td>Gaston</td>
<td>6,548</td>
</tr>
<tr>
<td>Gates</td>
<td>1,082</td>
</tr>
<tr>
<td>Harnett</td>
<td>2,113</td>
</tr>
<tr>
<td>Hertford</td>
<td>3,226</td>
</tr>
<tr>
<td>Iredell</td>
<td>9,795</td>
</tr>
<tr>
<td>Lee</td>
<td>2,263</td>
</tr>
<tr>
<td>Mitchell</td>
<td>2,165</td>
</tr>
<tr>
<td>Moore</td>
<td>825</td>
</tr>
<tr>
<td>Montgomery</td>
<td>187</td>
</tr>
<tr>
<td>McDowell</td>
<td>2,434</td>
</tr>
<tr>
<td>Nash</td>
<td>1,478</td>
</tr>
<tr>
<td>Randolph</td>
<td>2,988</td>
</tr>
<tr>
<td>Scotland</td>
<td>3,619</td>
</tr>
<tr>
<td>Stokes</td>
<td>3,105</td>
</tr>
<tr>
<td>Union</td>
<td>9,566</td>
</tr>
<tr>
<td>Washington</td>
<td>1,974</td>
</tr>
<tr>
<td>Yadkin</td>
<td>3,474</td>
</tr>
<tr>
<td>Yancey</td>
<td>2,534</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74,460</strong></td>
</tr>
</tbody>
</table>

**Note:** Work done in Montgomery County was done by Dr. Daligny without the aid of the State Board of Health.

In 1923 sixteen campaigns were conducted in the following counties:

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamance</td>
<td>6,313</td>
</tr>
<tr>
<td>Anson</td>
<td>1,273</td>
</tr>
<tr>
<td>Catawba</td>
<td>8,905</td>
</tr>
<tr>
<td>Chatham</td>
<td>3,579</td>
</tr>
</tbody>
</table>
### Fifth Biennial Report

#### No. Taking Three Doses

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henderson</td>
<td>1,510</td>
</tr>
<tr>
<td>Jackson</td>
<td>3,490</td>
</tr>
<tr>
<td>Johnston</td>
<td>7,602</td>
</tr>
<tr>
<td>Lincoln</td>
<td>4,322</td>
</tr>
<tr>
<td>Orange</td>
<td>2,204</td>
</tr>
<tr>
<td>Person</td>
<td>4,979</td>
</tr>
<tr>
<td>Richmond</td>
<td>2,207</td>
</tr>
<tr>
<td>Rockingham</td>
<td>3,237</td>
</tr>
<tr>
<td>Rutherford</td>
<td>3,922</td>
</tr>
<tr>
<td>Swain</td>
<td>4,484</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47,837</strong></td>
</tr>
</tbody>
</table>

Campaigns were conducted in two Whole-Time Counties, Beaufort and Brunswick and same assistance given them from this office.

In May and June 1924, the following counties were circularized for campaigns against typhoid fever. Reports of vaccinations to date are listed opposite county. Eighteen counties put on campaigns against typhoid fever this year.

#### No. Taking Three Doses

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander</td>
<td>3,338</td>
</tr>
<tr>
<td>Caldwell</td>
<td>6,474</td>
</tr>
<tr>
<td>Caswell</td>
<td>3,258</td>
</tr>
<tr>
<td>Chowan</td>
<td>40</td>
</tr>
<tr>
<td>Clay</td>
<td>1,288</td>
</tr>
<tr>
<td>Davie</td>
<td>2,389</td>
</tr>
<tr>
<td>Greene</td>
<td>8,077</td>
</tr>
<tr>
<td>Harnett</td>
<td>4,239</td>
</tr>
<tr>
<td>Martin</td>
<td>3,525</td>
</tr>
<tr>
<td>Perquimans</td>
<td>3,250</td>
</tr>
<tr>
<td>Stanly</td>
<td>6,630</td>
</tr>
<tr>
<td>Warren</td>
<td>5,919</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48,427</strong></td>
</tr>
</tbody>
</table>

The same assistance was given the following Whole-Time Counties:

- Beaufort
- Burke
- Forsyth
- Henderson
- Wake
- Forsyth
- Wayne

#### III. Special Work for the Prevention of Diphtheria

Toxin-antitoxin campaigns for the prevention of diphtheria were conducted in 1922 and 1923 and 1924, simultaneously with the typhoid campaigns. Work for campaigns for 1924 was practically completed July 1, 1924. 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.
The same assistance was given the following Whole-Time Counties:

Beaufort

Brunswick

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking Three Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alexander</td>
<td>854</td>
</tr>
<tr>
<td>2. Caldwell</td>
<td>1,427</td>
</tr>
<tr>
<td>3. Caswell</td>
<td>2,361</td>
</tr>
<tr>
<td>4. Chowan</td>
<td>294</td>
</tr>
</tbody>
</table>
The same assistance was given the following Whole-Time Counties:

<table>
<thead>
<tr>
<th>County</th>
<th>No. Taking Three Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Clay</td>
<td>242</td>
</tr>
<tr>
<td>6. Davie</td>
<td>581</td>
</tr>
<tr>
<td>7. Greene</td>
<td>3,513</td>
</tr>
<tr>
<td>8. Harnett</td>
<td>1,781</td>
</tr>
<tr>
<td>9. Martin</td>
<td>774</td>
</tr>
<tr>
<td>10. Perquimans</td>
<td>363</td>
</tr>
<tr>
<td>11. Stanly</td>
<td>1,664</td>
</tr>
<tr>
<td>12. Warren</td>
<td>780</td>
</tr>
<tr>
<td>Total</td>
<td>14,634</td>
</tr>
</tbody>
</table>

IV. VENEREAL DISEASE DIVISION

The effort to control venereal diseases has been along two lines—educational and remedial. The educational work is being done principally in the whole-time health counties, and by the Whole-Time Health Officers. The remedial work is confined principally to the clinics. From this office a large number of letters are received asking for bulletins, pamphlets and advice. These are all carefully answered and bulletins and pamphlets mailed out to those requesting them.

Summary of Venereal Disease Work.

I. Medical:

- Ampules of arsphenamine distributed (approximately) .................. 31,103
- Venereal disease reports received from physicians .................... 14,176
  - Gonorrhea .................................. 6,237
  - Syphilis .................................... 7,495
  - Chancroid .................................... 435
  - Balanitis ................................... 9

II. City Clinics:

- Number city clinics, (July, 1922-July, 1924) ......................... 6
- Number cases under treatment ...................................... 6,290
  - Gonorrhea .................................. 1,806
  - Syphilis .................................... 4,300
  - Chancroid .................................... 184
- Number of visits to clinics for treatment, examination or advice .... 30,346

III. Cooperative Clinics:

- Number Cooperative clinics ........................................... 15
- Number Wassermanns taken ............................................ 12,073
- Number Wassermanns positive ........................................ 2,718
- Number doses arsphenamine administered ................................ 16,838
- Number hypodermics of mercury ...................................... 2,215
- Number treatments for gonorrhea, chancroid, etc. .................... 1,148
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 teach 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 reexamination 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 Obtained of this department.
Twentieth Biennial Report

ROUTINE WORK
(Twenty-four-months period, ending June 30, 1924)
(July 1, 1922-June 30, 1924)

Letters received ........................................... 6,319
Letters written—Individual .................................. 3,956
      Multigraph ........................................... 18,754

Total .................................................. 22,710
Articles written—Bulletin, 5; words ................................ 8,948
      Other publications, 6; words ................................ 4,943
Pamphlets prepared, 0; words ........................................ 0
Days spent out of the office on official business .................. 89
Pieces of literature distributed .................................. 845,306
Addresses delivered—Number .................................. 2,090
      Attendance......................................... 129,649

MONTHLY AVERAGE

Letters received ........................................... 263
Letters written—Individual .................................. 165
      Multigraph ........................................... 781

Total .................................................. 946
Days spent out of office on official business .................. 4
Pieces of literature distributed .................................. 35,221
Addresses delivered—Number .................................. 87
      Attendance......................................... 5,402

FORCE EMPLOYED

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

BUDGET

Annual amount allotted from Executive Department .................. $ 20,000
Annual amount allotted from special State funds .................. 100,000
Amount received from counties .................................. 9,391.22

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, 54,830 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; 52,207 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 10,511 additional children examined by
the dentists, but not treated, cannot be worth less than $10 per child treated,
or $522,070. The dental clinics were conducted in eighty-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 depart-
ment have reexamined 115,166 school children. These children had been re-
ported 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 forty-eight counties in which clinics have been held. A total of 4,910 school children have been operated on in these clinics without the loss of a single life. 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 4,910 successful operations is certainly not less than $245,500. But the most important consideration is that a very small percentage of the children so essentially helped could even have had the opportunity otherwise.
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.)

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 130,000 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 169 public water supply and sewerage systems, representing a capital investment of $42,000,000 and an annual operation cost of $3,000,000, serving a population of 724,955 persons, or 26.3 per cent of the population of the State.

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

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 disease," such as typhoid fever, diarrhea and dysentery.

The objective may be amplified with regard to the three 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 supply by local health agencies.
2. Effective public health protection in the sanitary regulation of municipal milk supplies.
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 practiced 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 provisions of this act. This is done through a force of sanitary inspectors consisting of ten inspectors and one supervisor. They 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 submissions 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 water works and sewerage improvements, new systems, extensions to existing systems, and improvements to existing systems, safe standards established by modern water works 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 supply. This ordinance is furnished to local officials desiring information along this line. In addition the local officials are assisted in connection with preliminary surveys of the problem, organization of the work in carrying out the ordinance, establishing the necessary laboratory control, advising the dairymen with regard to the most practical and economical methods of compliance with the ordinance, and in such other respects as will be of aid in establishing more widespread municipal regulation of the local milk supply.

2. The same service offered to municipalities for the establishment of new milk control units, as outlined above, is offered in connection with the standardization or improvement of existing units. All cities are advised to adopt the standard form of milk regulation, not necessarily on the basis that the standard ordinance is better than the present ordinance in force, for in some instances it is essentially the same as the present ordinance while in other instances it is greatly superior, but in the interest of establishing standards of milk sanitation that are comparable on the same basis for municipalities throughout the State. This measure is adopted as a means of establishing a universal or standard unit of measure in the evaluation of protection afforded by milk sanitation. In this manner more uniformly effective results may be obtained and the public confidence in safety afforded by municipal regulation of milk supply may be increased which will stimulate more widespread regulation of milk supply by local health agencies.
### ROUTINE WORK

#### Office Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters and postals received</td>
<td>10,422</td>
</tr>
<tr>
<td>Letters written</td>
<td>4,374</td>
</tr>
<tr>
<td>Articles multigraphed</td>
<td>45,625</td>
</tr>
<tr>
<td>Magazines and bulletins received and reviewed</td>
<td>352</td>
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<tr>
<td>Articles written</td>
<td>33</td>
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<tr>
<td>Forms, etc., prepared</td>
<td>251</td>
</tr>
<tr>
<td>Telegrams received</td>
<td>357</td>
</tr>
<tr>
<td>Telegrams sent</td>
<td>251</td>
</tr>
<tr>
<td>Watershed inspection reports received and examined</td>
<td>34</td>
</tr>
<tr>
<td>Water analysis reports received and reviewed</td>
<td>75</td>
</tr>
<tr>
<td>Pamphlets, leaflets, bulletins distributed</td>
<td>86,211</td>
</tr>
<tr>
<td>Articles copied</td>
<td>310</td>
</tr>
<tr>
<td>Reports on water supply investigations written</td>
<td>47</td>
</tr>
<tr>
<td>Plans and specifications approved (water)</td>
<td>44</td>
</tr>
<tr>
<td>Plans and specifications approved (sewerage)</td>
<td>49</td>
</tr>
<tr>
<td>Days out of office on official business (director)</td>
<td>236</td>
</tr>
<tr>
<td>Hours spent in conference</td>
<td>597</td>
</tr>
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</table>

#### Field Activities

**Sanitary Inspection Division:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number privies inspected</td>
<td>154,600</td>
</tr>
<tr>
<td>Number prosecutions under provisions of privy law</td>
<td>1,382</td>
</tr>
<tr>
<td>Number sewer connections secured by inspectors</td>
<td>5,268</td>
</tr>
<tr>
<td>Number septic tank installations secured by inspectors</td>
<td>132</td>
</tr>
<tr>
<td>Number hotels and cafes inspected</td>
<td>1,098</td>
</tr>
<tr>
<td>Number hotels and cafes rated</td>
<td>439</td>
</tr>
<tr>
<td>Number hotels and cafes closed</td>
<td>20</td>
</tr>
<tr>
<td>Number prosecutions for violation of hotel and cafe law</td>
<td>77</td>
</tr>
<tr>
<td>Number State Institutions inspected</td>
<td>19</td>
</tr>
<tr>
<td>Number jails and convict camps inspected</td>
<td>55</td>
</tr>
<tr>
<td>Number inspections bedding law enforcement (6 months)</td>
<td>164</td>
</tr>
<tr>
<td>Miscellaneous inspections and investigations of complaints, privies, swimming pools, slaughter pens, drainage conditions, abatement of nuisances, etc.</td>
<td>528</td>
</tr>
</tbody>
</table>

**Engineering Division:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field inspections and conferences (water supply)</td>
<td>1,139</td>
</tr>
<tr>
<td>Number periods training operators (exceeding one day each)</td>
<td>123</td>
</tr>
<tr>
<td>Number field inspections and conferences (sewerage)</td>
<td>180</td>
</tr>
</tbody>
</table>

**Milk Sanitation Division:** (Field work this Division begun April, 1924.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field visits and conferences local health officers</td>
<td>177</td>
</tr>
<tr>
<td>Dairy inspections</td>
<td>238</td>
</tr>
<tr>
<td>Pasteurization plant inspections</td>
<td>23</td>
</tr>
<tr>
<td>Study and assistance local laboratory problems</td>
<td>22</td>
</tr>
</tbody>
</table>

#### MONTHLY AVERAGE

#### Office Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters and postals received</td>
<td>434</td>
</tr>
<tr>
<td>Letters written</td>
<td>182</td>
</tr>
<tr>
<td>Articles multigraphed</td>
<td>1,901</td>
</tr>
<tr>
<td>Magazines and bulletins received and reviewed</td>
<td>15</td>
</tr>
<tr>
<td>Articles written</td>
<td>1</td>
</tr>
<tr>
<td>Forms, etc., prepared</td>
<td>10</td>
</tr>
</tbody>
</table>
Telégramas enviados ........................................... 14
Informe de visitas sanitarias recibidos y revisados .............. 1
Informe de análisis de agua recibidos y revisados ................ 31
Pamphletos, folletos, boletines distribuidos ....................... 3,592
Licencias, carteles ilegales y otros suministros .................. 5,829
Artículos copiados .............................................. 15
Informes sobre investigaciones de suministro de agua ............ 2
Planos y especificaciones aprobadas (aguas)......................... 2
Planos y especificaciones aprobadas (seweraje) ..................... 2
Días de ausencia en el trabajouciﬁcial (director) ................. 10
Horas pasadas en conferencias .................................. 24

**Field Activities**

**Sanitary Inspection Division:**

Número de privies inspeccionados ................................ 6,441
Número de procesamientos bajo la privy ley ......................... 58
Número de conexiones de drenaje sacadas por inspectores ........ 219
Número de sistemas de tanque septic instalados sacados por inspectores 6
Número de hoteles y cafés inspeccionados ........................ 42
Número de hoteles y cafés clasificados ............................ 18
Número de procesamientos por violación de hotel y cafés ley .... 3
Número de instituciones estatales inspeccionadas .................. 1
Número de prisiones y campos laborales inspeccionados .......... 2
Misceláneas inspecciones y investigaciones de quejas, privies, piscinas, baños de aguas, instalaciones de drenaje etc. ........ 22

**Engineering Division:**

Field inspections and conferences (water supply) ................. 47
Number periods training operators (exceeding one day each) ...... 5
Number field inspections and conferences (sewerage) ............... 8

**Results Obtained**

1. Doscientos y veinte-octavo decesos de febre typhóide en ciudades incorporadas fueron evitados en los años 1922 y 1923 como comparado con los decesos de febre typhóide en ciudades incorporadas en 1918, el año antes de que la ley sanitaria privy fue enmendada.

2. Los registros de decesos de diarrea y enteritis (en dos años de edad) no son separados en urban y aldeas, pero utilizando el mismo ratio como obtenido para febre typhóide, hubo una reducción de 578 decesos de estas enfermedades en las ciudades incorporadas para los dos años 1922 y 1923.

3. El tercer resultado obtenido es la prevención de cualquier epidemia de febre typhóide. Una epidemia de febre typhóide en la capital de Carolina del Norte sería verdaderamente resultar en 50 a 100 decesos.

   Basado en el aceptado número de 700 días de enfermedad por cada muerte la reducción de febre typhóide, diarrea y enteritis decesos en ciudades incorporadas resultaron en la prevención de 564,000 días de enfermedad y el ahorro de 806 vidas. Usando los aceptados números de $2.00 costo por día de enfermedad y el valor de una vida humana situado en $4,000 el ahorro total económico alcanza $4,352,400.

   Reconociendo que la vacunación antifegue y otras actividades de salud ha habido un papel en la reducción de decesos de estas enfermedades y en orden para ser un tanto conservador, la mitad de los créditos se considerará como mejorado para mejoramiento municipal sanitación. Hay que considerar, por lo tanto, al crédito de las actividades de este bureau, $2,176,200 en ahorro económico a Carolina del Norte por 1922 y 1923 o una media de $1,088,100 por año.
The sanitation improvements accomplished under the three general classifications of work which have resulted in the economic conservation cited above are respectively:

Sanitary Inspection Division

1. The work of the sanitary inspectors has been increased 25 per cent in effectiveness. (Last biennial period 66 per cent of all privies passed by inspectors met all the requirements of the sanitary privy law. This percentage has been increased to 91 per cent for this biennial period.)

2. The installation of 5,268 sewer connections and 132 residential sewerage systems secured by the inspectors. This does not include any installations for which inspectors were not directly responsible.

3. The installation of 32 new water supply and sewerage systems.

Sanitary Engineering Division

1. The present status of the total 63 filter plants with reference to modern standards of construction and equipment is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>7-1-22</th>
<th>7-1-24</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supplies under supervision</td>
<td>137</td>
<td>168</td>
<td>31</td>
</tr>
<tr>
<td>Population thus served</td>
<td>600,000</td>
<td>725,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Total population of the State served</td>
<td>23.4%</td>
<td>28.3%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Total population of incorporated towns served</td>
<td>80.0%</td>
<td>97.0%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Capital invested</td>
<td>$25,000,000</td>
<td>$31,000,000</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Annual cost operation</td>
<td>2,500,000</td>
<td>3,000,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Projects completed or under construction</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population thus served</td>
<td></td>
<td></td>
<td>361,471</td>
</tr>
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</table>

FILTER PLANTS:

<table>
<thead>
<tr>
<th>Category</th>
<th>7-1-22</th>
<th>7-1-24</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number plants under supervision</td>
<td>49*</td>
<td>63†</td>
<td>14</td>
</tr>
<tr>
<td>Population thus served</td>
<td>415,560</td>
<td>511,530</td>
<td>95,970</td>
</tr>
<tr>
<td>Plants under trained operation and Laboratory control</td>
<td>2</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Population thus served</td>
<td>79,730</td>
<td>339,390</td>
<td>259,660</td>
</tr>
<tr>
<td>Filter plants improved</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population thus served</td>
<td></td>
<td></td>
<td>207,762</td>
</tr>
<tr>
<td>Sterilization equipment provided</td>
<td>37</td>
<td>63</td>
<td>26</td>
</tr>
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</table>

UNFILTERED SURFACE SUPPLIES:

<table>
<thead>
<tr>
<th>Category</th>
<th>7-1-22</th>
<th>7-1-24</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number supplies under supervision</td>
<td>22</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Population served</td>
<td>67,639</td>
<td>69,091</td>
<td>1,452</td>
</tr>
<tr>
<td>Number complied sterilization regulations</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Population served</td>
<td>14,576</td>
<td>63,253</td>
<td>48,677</td>
</tr>
</tbody>
</table>

* 2 of these filter plants each serve two towns.
† 5 of these plants each serve two towns.
GROUND WATER SUPPLIES:

<table>
<thead>
<tr>
<th></th>
<th>7-1-22</th>
<th>7-1-24</th>
<th>Gain</th>
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</thead>
<tbody>
<tr>
<td>Number supplies under supervision</td>
<td>61</td>
<td>76</td>
<td>12</td>
</tr>
<tr>
<td>Population served</td>
<td>116,500</td>
<td>138,881</td>
<td>22,381</td>
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</table>

SEWERAGE:

<table>
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<tr>
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<th>7-1-22</th>
<th>7-1-24</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number systems</td>
<td>137</td>
<td>168</td>
<td>31</td>
</tr>
<tr>
<td>Population served</td>
<td>600,000</td>
<td>725,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Cost, new systems and treatment works</td>
<td>1,000,000</td>
<td>$1,000,000</td>
<td></td>
</tr>
<tr>
<td>Population affected</td>
<td></td>
<td>105,000</td>
<td></td>
</tr>
</tbody>
</table>

2. Municipalities have been safeguarded 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 customary 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. A specific illustration is one town with a population of about 900, located in the foot-hills of the mountains which is now installing a sewerage system but would have been absolutely unable to do so if treatment had been required. Treatment in this case may be necessary some time but is not essential now.

5. Twenty-four filter plants serving a population of 559,390 or 70 per cent 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.

Milk Sanitation

In 1923 a milk-borne epidemic of typhoid fever resulting in 96 cases and seven deaths was investigated and the local health agency was given assistance in control measures.

Milk sanitation as a separate piece of work has been so recently undertaken that there is little as yet to report. In an effort to prevent recurrence of incidents similar to the one cited above, a comprehensive form of milk regulation suitable for adoption by local health agencies has been recommended to local health officers. These regulations have been adopted and are actually in operation in Mount Airy and Rocky Mount and they are receiving favorable consideration by other cities where early action is expected.
BUREAU OF MATERNITY AND INFANCY

From July 1, 1922 to July 1, 1924 this bureau was under the direction of a director who is a physician. As its name indicates, it is chiefly concerned with the hygiene of maternity and infancy. As organized, it has functioned under the direct control of the director, has two coordinating divisions, each under the direction of a division chief. One of these chiefs has been concerned with the educational features of the work, and the other with the direction of the nursing program involved in connection with the work. The activities of this bureau were limited to items approved by the Children's Bureau at Washington that has in charge the administration of the Sheppard-Towner Act. This bureau has had the responsibility for handling and distributing the solution of silver nitrate for the use of midwives and physicians in caring for the eyes of the new-born in the prevention of blindness, and it has also had charge of the registration of midwives. This registration, by the way, has simply meant registration and in no wise means license; and the certificate simply means that the midwife has registered, but has nothing to do with the qualifications possessed by the midwives.

Bureau Staff

Director of bureau, two division chiefs, chief stenographer, assistant stenographer and clerk.

Field Staff

Six nurses, three physicians who are pediatricians.

Aims and Purposes

The object of the work is to conserve and promote the welfare of expectant mothers and of infants. It is the desire of this Bureau to reduce preventable deaths in these classes to the vanishing point and to assure those spared a more comfortable physical state. That there is an urgent need for this work cannot be doubted since approximately 25 per cent of all the deaths in the State occur in the short period from birth to the close of the second year. There are two significant facts in connection with the infant mortality: the relatively high mortality in rural counties, in some cases amounting to 50 per cent or more of the total, and the large proportion of still-births in the total deaths. The high rural infant mortality is obviously due to a lack of the knowledge of the underlying principles of infant care. The high mortality at birth is to a great degree due to a lack of prenatal education.

Methods

These may be said to be educational in character, since the success of all public health procedure is dependent upon raising the general average of the knowledge of the whole citizenship upon these questions. This educational campaign is being undertaken in three different ways: (a) educational literature mailed from the Bureau, press articles, and publications; (b) lectures delivered by representatives of the Bureau to the public; (c) county programs that contemplate a permanent restricted plan of work having to do with maternity and infancy items only and in charge of a nurse specially trained in this work.
Routine Work

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters received</td>
<td>12,867</td>
</tr>
<tr>
<td>Letters sent</td>
<td>10,559</td>
</tr>
<tr>
<td>Telegrams received</td>
<td>84</td>
</tr>
<tr>
<td>Telegrams sent</td>
<td>118</td>
</tr>
<tr>
<td>Prenatal letters sent</td>
<td>99,242</td>
</tr>
<tr>
<td>Form letters sent</td>
<td>7,287</td>
</tr>
<tr>
<td>Circular letters sent nurses</td>
<td>79</td>
</tr>
<tr>
<td>Circular letters to physicians</td>
<td>1,765</td>
</tr>
<tr>
<td>Pamphlets and bulletins received</td>
<td>572</td>
</tr>
<tr>
<td>Pieces of literature sent mothers</td>
<td>181,796</td>
</tr>
<tr>
<td>Instruction bulletins sent midwives</td>
<td>11,875</td>
</tr>
<tr>
<td>Midwives registered</td>
<td>3,899</td>
</tr>
<tr>
<td>Packages silver nitrate solution sent</td>
<td>18,272</td>
</tr>
<tr>
<td>Prenatal cases registered with Bureau</td>
<td>13,670</td>
</tr>
<tr>
<td>Babies registered with Bureau</td>
<td>26,006</td>
</tr>
</tbody>
</table>

Budget

The funds for the annual support of the Bureau are derived from two sources:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina State Board of Health</td>
<td>$22,259.66</td>
</tr>
<tr>
<td>Federal Government</td>
<td>$27,259.66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$49,519.32</strong></td>
</tr>
</tbody>
</table>

Exhibit of Special Activities

1. Children's Health Conference
   (a) Total number children examined 188

2. Prenatal Conferences
   (a) Total number mothers in attendance 5
   (b) Total number mothers examined 1

3. Mothers' classes
   (a) Total number mothers in attendance 1,159

4. Midwives classes
   (a) Total number midwives in attendance 1,433
   (b) Number of midwives completing course 1,433

5. Nutrition classes for preschool children
   (a) Corrections made 535

6. Little Mothers' League classes
   (a) Girls instructed 3,664

7. Home demonstrations (by Co. M. and L. nurses) 28,635

8. Children's Health Centers established 21

9. Prenatal clinics established 20

10. Talks and lectures by members of State Staff 239 to 48,573 people

Summary of Work of County Public Health Nurses

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxin-antitoxin administered</td>
<td>22,674</td>
</tr>
<tr>
<td>Home conferences with mothers</td>
<td>17,897</td>
</tr>
<tr>
<td>Group, office or individual conferences with mothers</td>
<td>18,042</td>
</tr>
<tr>
<td>Urine analysis</td>
<td>5,996</td>
</tr>
<tr>
<td>Women completing H. H. course</td>
<td>1,730</td>
</tr>
<tr>
<td>Girls certified Little Mothers League</td>
<td>3,664</td>
</tr>
<tr>
<td>Nutritional corrections secured</td>
<td>1,009</td>
</tr>
<tr>
<td>Pages: Modern Health Crusade</td>
<td>40,160</td>
</tr>
<tr>
<td>Rural privies constructed</td>
<td>1,604</td>
</tr>
<tr>
<td>Car miles (nurse transportation)</td>
<td>67,914</td>
</tr>
<tr>
<td>Nurse miles (traveled by county nurses)</td>
<td>293,893</td>
</tr>
</tbody>
</table>

Number of counties having nurses, etc., during the period July 1st, 1922, to July 1st, 1924 17
MINUTES OF THE BOARD

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

Raleigh, N. C., December 28, 1922.

The members of the Executive Committee present were Doctors Way and Laughinghouse.

Mr. F. O. Bowman, representing the North Carolina State Pharmaceutical Association, appeared before the Committee and discussed certain features of the legislative program of his Association. He asked the Executive Committee to approve the principle of a bill designed to restrict the sales of certain remedies to registered pharmacists and to exclude the sale of such remedies from merchants not specially trained in pharmacy, except under conditions to be determined by the North Carolina Board of Examiners in Pharmacy. The principle of this bill seemed to be based upon the recognition of pharmacy as a profession and designed to preserve the rights of the profession. It was moved and carried that the Executive Committee approve the principle of such a bill. In a further discussion of matters of mutual interest with respect to the State Board of Health and the pharmacists of the State Mr. Bowman stated that he had not heard recent complaints from druggists against the practices and policies of the Board.

The Secretary of the Board then discussed with the Executive Committee the proposed budget of the State Board of Health for the next two fiscal years, and also the policy of the Board with respect to the development of local county health work and the relation of the Board to such work.

(Signed) W. S. Rankin, Secretary.

MINUTES SPECIAL MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

Raleigh, N. C., December 29, 1922.

President Way called the meeting to order. All members of the Board were present except Doctors Harris and Lewis and Mr. Waddell.

The Secretary, on request of Doctor Way, stated that the purpose of the meeting was to consider matters of legislation and policy.

The first matter presented to the Board was the general budget as indicated on budget sheet in the files, triplicates of which have been filed with the appropriation committees of the House and Senate. The budget was fully considered and a motion that it be approved was put and unanimously carried.

The Secretary, in connection with the budget outlined to the Board a proposed plan for establishing within the next twelve or eighteen months five district offices, the five district officers to have supervision and responsibility for the development of public health work in the various counties assigned them. The Secretary further stated that all communications with the local or county governments would, following the establishment of the district offices take place through the district office, and that various bureaus of the Board entrusted with special problems would coordinate their interests
and communications with local health departments through, and only through, the district officers. The Secretary stated that such an arrangement was necessary in order (1) to prevent conflicts of interest between various bureaus of the Board entrusted with special problems; and (2) to avoid duplication of work and workers. The Secretary further stated that in connection with the district officer plan the International Health Board of New York had agreed to partially support financially such an arrangement to the extent of $9,300 for the ensuing year. The members of the Board received this proposition favorably and it was moved and unanimously carried that the proposal of the Secretary with respect to the establishment of district offices be approved.

Dr. C. A. Shore, the Director of the State Laboratory of Hygiene, presented his proposed budget for the next two fiscal years. A number of questions were asked, indicating the interest of the Board, and after considerable discussion and much highly favorable comment on the work under Doctor Shore's direction, a motion to approve the budget, as submitted, was offered and unanimously carried. The Laboratory budget as approved by the Board amounted to a total of $75,000 annually. It was further understood that Doctor Shore would request the appropriation committee to make an additional appropriation of $10,000 annually to take the place of the tax on public water supplies, and that in the event the appropriation committee favorably considered such a proposition an amendment to the existing law would be introduced abolishing the present tax of $64 annually on public water supplies.

In the absence of Doctor McBrayer, the President of the Board offered the budget for the Sanatorium for the next two fiscal years. The budget follows:

NORTH CAROLINA SANATORIUM
SANATORIUM, N. C.

LIST OF REQUIREMENTS UNDER PERMANENT IMPROVEMENTS FOR CONSIDERATION
BY BUDGET COMMISSION, 1923

Item 1. Completion of Colored Division, Main Building, Kitchen, Dining Room, Cold Storage and Office equipment, X-Ray and Laboratory equipment $120,000
Item 2. Furniture and furnishings, Negro Division 10,000
Item 3. Electric lines from farm house to buildings, dairy, light, power, telephone lines from power house to building repaired and rebuilt, yard lighting 9,200
Item 4. Fire protection, water mains and sewer system 15,000
Item 5. Three small cottages for negro help 6,000
Item 6. Power house equipment, laundry equipment, repairing, replacing and additions to equipment 100,000
Item 7. Landscape work, walks and drives 10,000
Item 8. Dairy unit (52 cows) 6,000
Item 9. Three attendants' cottages 12,000
Item 10. Physician's residence 10,000
Item 11. Nurses' home 25,000
Item 12. Children's pavilion, including kitchen, dining room, equipment, nurses and teachers corridors, school room, play room, sleeping porches, etc. 150,000
Item 13. General repairs 10,000
Item 14. Fire-proofing East Wing, Main Building 40,000

Total $523,200
In connection with the budget offered the President of the Board reported a visit to the Sanatorium on the 26th and 27th of December. He stated that he had looked into the work of the Sanatorium very thoroughly and was favorably impressed with what was being done. The President of the Board felt highly gratified that the Board had assumed the initiative in recommending institutional provisions for negro consumptives and was well pleased with the present developments in process at the Sanatorium for the treatment of negro consumptives. The President further expressed himself as being very favorably impressed with the morale of the patients in the Sanatorium, and stated that the records of the institution could not, in his judgment, be improved upon. Dr. Way called especial attention to the importance of securing a landscape engineer at an early date and beginning the work of improving the grounds of the Sanatorium. Doctor Way, in the course of his visit to the Sanatorium, had a conference with a Mr. Graham, who felt that his property had been damaged by the establishment of the Negro Sanatorium close to his line. Doctor Way stated that his conference with Mr. Graham was agreeable and that neither he nor Mr. Graham could suggest any action which the Board might take in order to relieve Mr. Graham of any fear of possible damage to his property on account of the nearness of the Negro Sanatorium.

After considerable discussion of the Sanatorium budget motion was made and, unanimously carried that the budget be approved.

A letter to the President of the Board enclosing a copy of a letter to the Governor from Mr. Chas. E. Waddell was then presented by the President. In his letter to the Governor Mr. Waddell withdrew his resignation which he had filed some time ago with the Governor. The various members of the Board expressed themselves as highly gratified with Mr. Waddell’s decision to remain on the Board and directed the Secretary to write Mr. Waddell apprising him of their delight with his action in withdrawing his resignation and expressing the hope that he could be with them in the next meeting of the Board.

The Secretary then stated to the Board that there would be, with their approval, several legislative proposals presented to the General Assembly of 1923. One of these would be an act to empower the Board to adopt reasonable rules and regulations for the sanitary regulation of impounded waters and their immediate surroundings; a second would be an act to empower the Board to pass reasonable rules and regulations for the sanitary control of railway coaches and stations. The Secretary called attention to a proposed bill which had been drawn by Dr. K. P. B. Bonner designed to repeal a part of the existing law relating to midwives and to establish new legislation for that purpose. The Secretary stated that there were certain features of Doctor Bonner’s bill with which he was not in thorough sympathy, but that he thought a conference between himself and Doctor Bonner would serve to straighten out any matters of difference. A motion was then made and carried that the bill be referred to the Secretary and Doctor Bonner for adjustment.

A motion to adjourn was offered and carried.

(Signed) W. S. Rankin, Secretary.
MINUTES MEETING OF THE NORTH CAROLINA STATE BOARD
OF HEALTH WITH THE EXECUTIVE STAFF

ASHEVILLE, N. C., APRIL 13, 1923, 2 P. M.

The members of the Board that were present were President Way and Doctors Laughinghouse, Thompson, Tucker and Anderson. The members of the staff present at this meeting were Doctors Long, Mitchener, Register, Bonner, Mitchell and Hisley and Mr. Miller and Miss Ehrenfeld.

The meeting began at 2 p. m. and lasted until 5:30, the entire afternoon being consumed in a discussion of the principles of a standard plan of county health work involving the establishment of a list of authorized items of work with a cost value for each item. After pointing out the main features of the coöperative plan of work the Secretary stated that it was necessary for the Board to be able to reach a larger group of interested citizens in each county with respect to the work of the county health officer, the present relation of the Board being too narrow, involving official relations largely restricted to the staff officer in charge of county health work and the whole time health officer of the county. The Secretary stated that beginning either in May or June it would be the practice of the Board to issue a monthly statement of the work performed in each county, as compared with the amount of work accomplished in the average county, and furnish such statement to the newspapers and to a representative group of county citizens in each one of the coöperative counties.

After a full discussion of the present plan of work, with general approval of the underlying principles, the meeting recessed until 8:30 p. m.

APRIL 13, 8:30 P. M.

The Board re-convened at 8:30 p. m. with all those present who attended the afternoon session.

The Board took up each established item of work, with the credit allowed therefor, and made a number of changes to be considered with the coöperative county health officers the next morning.

Dr. Thompson moved that the Board require the staff not only to check the method of recording and reporting work performed, but also to check, either by correspondence with or by actual visit to the homes of persons for whom the records of the county health officer claim service had been rendered, to ascertain the accuracy of the statements and records of the county health officer. This motion was fully discussed and finally unanimously voted.

APRIL 14, 1923, 9 A.M.

The Board and executive staff met to continue their consideration of the various items of county health work, but more especially to consider the matter of creating certain items of an educational nature with established credits therefor. In regard to this matter it was finally decided to refer, without prejudice, to the county health officers the matter of establishing educational items and credits.

The meeting adjourned at 10:15 for a joint meeting with the county health officers.
April 14, 10:30 A.M.

The State Board of Health, the executive staff, and county health officers met for a conference on desirable changes in the list of established items and credits for county health work. Dr. Laughinghouse presided at the joint meeting.

Dr. S. E. Buchanan reported for the health officers what they considered to be desirable changes in the established items and credits. Dr. Rankin reported on the same subject for the State Board of Health and the executive staff. After the two reports had been made, a motion appointing a reference committee which would take the two reports—the one from the county health officers and the other from the State Board of Health and executive staff—and submit a joint report, was carried.

The joint committee appointed consisted of Doctors Buchanan, Bulla, and Armstrong for the health officers, and Doctors Rankin and Tucker for the State Board of Health. The joint committee submitted its report at 4 p.m., and the joint conference adopted the list of established items and credits, to be effective on and after July 1st, as indicated on the blank form, which, as an addendum, is attached to and made a part of these minutes.

(Signed) W. S. Rankin, Secretary.

MINUTES ANNUAL MEETING OF THE NORTH CAROLINA
STATE BOARD OF HEALTH

Asheville, N. C., April 17, 1923, 3:30 p.m.

The Board met at 3:30 p.m. President Way called the Board to order, and other members present were Doctors Laughinghouse, Thompson, Tucker, Anderson, and Crowell.

The secretary stated that the first order of business was the election of a president, Dr. Way's term having expired with the expiration of his membership on the Board. The Secretary then read a telegram from the Governor, as follows: "On 12th, reappointed Dr. J. Howell Way and A. J. Crowell; also appointed James P. Stowe to fill unexpired term of Charles E. Waddell, resigned." Following the reading of the telegram announcing the reappointment of Doctors Way and Crowell to succeed themselves, Dr. Tucker nominated Dr. Way to succeed himself as President of the Board. This motion was seconded by Dr. Crowell and Dr. Anderson. Dr. Laughinghouse moved that nominations be closed and the Secretary be directed to cast the unanimous vote of the Board for Dr. Way. This motion was carried, and the Secretary cast the unanimous vote of the Board for Dr. Way for President.

Dr. Rankin then stated briefly a proposition originating with the Tenth District Medical Society, the object of which was to establish in Asheville a branch State laboratory. Dr. Rankin stated that this suggestion was first made by Dr. F. L. Siler, of Franklin, as president of the Tenth District Medical Society, in his presidential address to that society in the fall of 1921. The matter had been kept alive in the society, and was again urged for action by the present president, Dr. Guy E. Dixon, of Hendersonville. Dr. Rankin then presented a letter, addressed to Doctors Siler and Dixon and Dr. Eugene Glenn, of Asheville, requesting them to serve as a committee to represent the Tenth District Society in submitting the proposition for a laboratory to the Board. The letter is as follows:

...
"DEAR SIRS:—As the Secretary of the State Board of Health, I am writing to suggest that you three gentlemen constitute a committee to present to the State Board of Health, at its meeting in Asheville next week, a proposition for the establishment of a branch district laboratory in Asheville. I respectfully request that Dr. Siler act as chairman of the committee and that he indicate to me as soon as convenient, after arriving in Asheville at the meeting of the State Society, when it will be convenient for the committee to appear before the Board, so that I may arrange a meeting.

"The Board will be particularly interested in having the committee define as accurately as possible the scope of activities that they would be pleased to have assumed at once, and to indicate other activities to be undertaken in the future in the order of their importance. The committee will understand, of course, that it will be necessary for the Board to know just what should be undertaken. Of course, we can rule out, to begin with, clinical laboratory work, such as blood counting, urinary analysis, stomach analysis, etc., as this sort of work has never been undertaken, so far as I know, by governmental agencies, but has been left in private hands, and doubtless will remain there. It approaches too closely to being considered as diagnostic methods. Then, there is other work, such as water analysis, the production of vaccines, and examination of material where the time element is not so important as t.b.'s and Wassermanns, that can be more economically done, and in all probability just as effectively done, in central laboratories than elsewhere. However, I can assure you that the Board of Health will be pleased to have you present the ideas in as definite form as possible.

With highest personal regards, I am

Very sincerely yours,

W. S. RANKIN, Secretary,
State Board of Health."

Dr. Rankin then stated that he had had a conference with Dr. Siler during the morning, to determine in so far as it was possible, what should be the scope of activities undertaken by a district laboratory, in the event that the Board saw fit to establish one. In the above-mentioned conference Dr. Siler and the secretary considered the scope of laboratory work under three headings—diagnostic, embracing sputa examinations, examinations of throat-swabs for diphtheria, rabies examinations. Wassermann tests, Widal tests, examinations for malaria, examinations for pus for gonococci; furnishing biological products, including typhoid vaccine, diphtheria antitoxin, toxin-antitoxin, Schick, Pasteur treatments, pertussis vaccine and smallpox vaccine, water analysis. Dr. Rankin then stated that it was evident that some of the above activities could best remain, for economic reasons and for greater accuracy in work, centralized, whereas it was possible for some of the work of the laboratory, especially the storage and distribution of biological products, to be handled in a district laboratory. Dr. F. L. Siler and Dr. Eugene Glenn were present to represent the Tenth District Society, and Dr. Siler presented his statement in writing, which is as follows:

"In behalf of the physicians of the Tenth District Medical Society and the people of western North Carolina, we have come to ask your honorable body to devise means by which the medical profession, and through them the public, might have a ready means of securing biological products and a ready means of getting the opinion of an expert on pathological specimens."
"In bringing this matter before the State Board of Health, we feel that such a laboratory would not only be a blessing to humanity, but would be a stimulus to those of us who live in the small towns to get better acquainted with modern laboratory assistance in our practice. Laboratory helps in diagnosis must be used to be appreciated, and we have felt for some time that if we had a well-equipped laboratory in the western part of the State, where specimens for examination could reach their destination in from two to eight hours instead of twenty to thirty, where phone messages could give us a report at any hour, and where laboratory products could be had with equal dispatch, it would not only be a great incentive for better work on the part of the profession, but a God-send to the public.

"The present method of sending our work to Raleigh is not only discouraging to the physicians, on account of the time involved, but the blood specimens, after being on a hot train so long, are often hemolysed by the time they reach their destination; and to ask the patient to let the vein be punctured the second and third times is both unpleasant and unassuring to the patient.

"When we remember that a large percentage of our physicians in the small towns began their work, before laboratory methods were very much in vogue, and that we seldom see the practical workings of the more modern methods, we can hardly realize how much more efficient our work could be made by the help the physicians receive who live where such methods are close at hand.

"The fact that the time-consuming element makes it impractical to send our work to Raleigh, in some cases, has a tendency to make us neglectful in others where time is not so important. Such work, if it does not beget carelessness, will lead us to rely more and more on the pathognomonic signs and symptoms of the old writers and keep us from realizing that we are in a new age in medicine.

"The cry is being heard all over the land for more physicians in the rural communities and small towns, and we often hear of a bonus being offered in order to get medical services near at hand. This unpleasant situation cannot be entirely due to the fact that the compensation is small, nor on account of the physical hardships that befall the country doctor; but, taught that the laboratory is often as essential as the physical examination, and often no conclusions can be reached nor rational treatment started until our ideas are confirmed or disproven, he feels that to start work, with such assistance hundreds of miles away, would be to cripple his usefulness and cripple his equipment that had been purchased with money and time and toil, and that he can ill afford to make the sacrifice, and the ambitious young members of the profession naturally seek the places offering greater opportunities.

"The people in most of the rural communities know so little of the necessity of the newer methods that, if asked to patronize a commercial laboratory, except in extreme cases, they would feel that the expense would be more than the good to be realized, and would rather let the old and less expensive methods suffice.

"We all realize that preventive medicine is reaching out more and more each year, and combating the ravages of diseases heretofore looked on as necessary evils, and that the knowledge gained by the profession and unselfishly given out for the public good has been instrumental in lengthening the span of life, yet we still find 50 per cent of sickness is from preventable causes, and that two-fifths of all deaths could be postponed. Each year the State Board of Health is marshalling its forces to try and make it more difficult for the unseen foes of health and efficiency to find lodgment in the human host; and while we have made splendid headway against typhoid, tuberculosis, smallpox, and diphtheria, yet we find that syphilis, the third great plague, whose causative factor so long defied detection, has made inroads on the health and efficiency of our people never dreamed of a decade ago. When we remember that it is a disease transmitted by contact and by heredity, that its victims are among the rich and the poor, among the pure and the dissipated, and in this great land of ours we are confronted by the alarming information that 6 per cent of our people are infected, and while it may only kill its thousands, it cripples and maims its multiplied tens of thousands. And until we supply more accessible laboratories for the use of the profession, and educate the public to
guard the altar of matrimony by a Wassermann of the blood, this loathsome malady will remain a blot of shame on our civilization.

"The great French philosopher, Descartes, said three centuries ago that if ever the human race is raised to its highest possible level, intellectually, morally, and physically, the science of medicine will perform that service. Dr. Work, in his presidential address at the American Medical Association two years ago, said that the colleges have learned to look longingly to the great foundations organized for higher medical education and for research in establishing scientific facts heretofore elusive or, at most, conjectural. No one should criticize such appropriation and expenditure in itself; but having in mind the medical discoveries and inventions of the last century, made by physicians in villages, working alone, we may well wonder whether the ends in view would not be better served by the application of the great incomes from these endowments to the encouragement of physicians in little villages working from below upward for the relief of what is known, rather than in search for what may not exist. They may aid the physician tremendously in caring for the sick by conserving his time, supplying laboratories and aids not otherwise available.

"We realize that every corporate body whose duty is to serve the public meets demands that are beyond the reach of available funds, but we know equally well that it is the purpose of your body to do the greatest good for the greatest number of people. We all realize that conservation of the health and life of humanity is the aim of modern medicine; but before we can accomplish our aim, we must have the cooperation and support of the public, and that before we can get that support we must have the public educated in underlying principles of preventive medicine. When we can assure the public that there is a plentiful supply of biological products near at hand for any emergency, that in a short time we can have any desired quantity of fresh vaccines and antitoxins, and teach them that any doubt about an epidemic of sore throat can be settled in a short time, that it is convenient and practical to make any tests that we are neglecting at present—when we can reassure the distracted parents when a rabid dog has left its mark on the children, and tell them that it is hours instead of days to secure the Pasteur treatment, we feel sure that it will prove one of our greatest educators in helping the people, the Board of Health and the profession to profit by a closer association of ideals and a more workable mixture of ideas. It will help the laity to appreciate the difference between twentieth-century medicine and a correspondence course with Lydia Pinkham, to draw the line between care and carelessness, between the wise and the wiseacre.

"It helps the discerning mind to better understand how disease and dissolution are, from physical causes, in contradistinction to the teaching of that mysterious cult that would have us believe that a dislocated joint is psychological, but a loose connecting-rod is garagical. It educates the public that it is possible to demonstrate the beginning of malignancy instead of waiting for a diagnosis till we face the terminal results of neglected pathology.

"In the name of our sturdy Anglo-Saxon people, in the name of a part of the State that has ever felt the tinge of isolation, except when called to follow the flag, in the name of a splendid body of professional men, who are as ready to give the ounce of prevention as the pound of cure, and who stand today like the man that Paul saw in his vision, saying, 'Come over into Macedonia and help us,' we beg, as far as is within your power, that you give us these methods commensurate to our needs.

"(Signed) F. L. Siler.
E. B. Glenn.
Guy E. Dixon."

Dr. Glenn endorsed the statement of Dr. Siler, and pointed out the favorable location of Asheville, with reference to railroads, for the establishment of a district laboratory. Dr. Shore then discussed the laboratory needs of the State, pointing out especially the value of local laboratories, which could do much work that it is not possible for a central, distant laboratory to carry on.
as, for example, milk examinations, dark-field illumination, and clinical laboratory procedures. Dr. Shore also called attention to the practice of the New York State Board of Health of licensing local laboratory men as being able to do laboratory work of an approved character. Dr. Laughinghouse spoke appreciatively, and moved that the committee representing the Tenth District Society be thanked for bringing the matter to the attention of the State Board of Health. This motion was seconded, put, and carried. Dr. Laughinghouse moved that a committee, consisting of Doctors Rankin and Shore, be appointed and instructed to submit to the executive committee of the State Board of Health a detailed plan for beginning the development of a district laboratory in Asheville. This motion was seconded by Dr. Crowell, put, and unanimously carried.

April 18, 1923.

Members present, Doctors Way, Laughinghouse, Anderson, Thompson, Tucker, and Crowell.

President Way announced the resignation of Dr. F. R. Harris as a member of the Board of Health, and called attention to the legal provision for the election of a successor to Dr. Harris for his unexpired term. Dr. Laughinghouse nominated Dr. D. A. Stanton, of High Point. Dr. Stanton's nomination was seconded by Doctors Anderson and Thompson. Dr. Laughinghouse moved that nominations be closed and the Secretary be instructed to cast the unanimous vote of the Board for Dr. Stanton. This motion was carried, and the Secretary cast the vote of the Board and declared Dr. Stanton elected as a member of the State Board of Health.

The President then called the attention of the Board to the fact that it would be necessary to elect an executive committee. The present executive committee, consisting of Doctors Way, Laughinghouse, and Lewis, was renominated and unanimously elected.

Motion to adjourn was made and carried.

(Signed) W. S. Rankin, Secretary.

MEETING OF THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH

On the call of the President, the Executive Committee met in Raleigh, May 16, 1923, with Doctors R. H. Lewis, Charles O'H. Laughinghouse, and J. Howell Way present. The Secretary of the Board was noted absent, attending by special invitation the annual meeting of the National Conference for Social Work in Washington, D. C., where he was scheduled to deliver the address on "Health," Thursday, May 17th. In his absence, Dr. Way acted as secretary.

The special object of the meeting was stated by President Way to be the consideration of the relation of the State Board of Health to the investigation now in progress by the legislative committee of the State Sanatorium for Tuberculosis, and the proper attitude of the Board to the problems presented, and especially the best means of promoting the best interests of the Sanatorium in its larger relations to the public-health problems of the State.

It was deemed advisable that the Secretary, Dr. Rankin, should present a detailed report to the investigating committee, showing the progress of the institution prior to its reorganization by the Board of Health and since that
time, and that such report, after being presented by the secretary, should be given out to the press of the State, with the signed endorsement of the executive committee, as representing the official attitude of the Board of Health. It was also deemed advisable that the members of the executive committee should attend the hearings before the committee and, if desired, testify in the case.

J. Howell Way, Acting Secretary.

MEETING OF THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH

Raleigh, August 10, 1923.

The members of the committee who were present were Dr. J. Howell Way, President of the State Board of Health; Dr. R. H. Lewis, and Dr. Charles O'H. Laughinghouse. Dr. K. P. B. Bonner, Director of the Bureau of Maternity and Infancy, and Dr. W. S. Rankin, Secretary of the Board, were present.

The work of the Bureau of Maternity and Infancy was thoroughly discussed, and the question of placing the educational work of that bureau on a local, or county, basis was considered. The Secretary stated that during the fall he intended to place this work in three or four counties on a county basis, and to compare the results of the educational or correspondence work in those counties with the work in other counties where the State system of correspondence is in operation. After much discussion, the executive committee moved that the future policy as affecting the educational work of the bureau be referred to the secretary and the director of the Bureau of Maternity and Infancy.

The executive committee then considered at length the existing relations between the public-health interests of the State and those of the medical profession, and the possibilities for more closely uniting these interests to the mutual advantage of the profession and the public. The question of handling this subject with local professions, the practice that has been followed, or taking it up with some representative State group of the profession, was seriously considered, and the conclusion finally reached that the present rate of development of the allied interests of medicine and the public was satisfactory, and that the existing policy, without alteration, should be adhered to. The existing policy is, that all matters of county health work should be taken up by representatives of the Board of Health with the county medical society, or, where there is no county medical society, with the physicians of the county, and, wherever and whenever possible, their understanding and approval of projects secured before laying the projects before the county authorities. The reason for this policy on the part of the Board is, that while there are a few fields in preventive medicine, very restricted in their scope, where the public might proceed without the understanding and cooperation of the profession, the vast majority of public-health opportunities are absolutely dependent for their larger and more permanent realization upon the interest and active cooperation of the rank and file of the medical profession; and, therefore, it is better to maintain close and friendly relations with the profession upon the general principles of necessary and cordial cooperation than to proceed in, relatively speaking, a few circumscribed public-health problems in disregard of the profession's understanding and support. It is further understood as a part of the existing policy of the
Board of Health that health officials are to restrict their activities to essential service—that is, public services that cannot under ordinary conditions be supplied by the profession, individually or collectively, and, in addition, to utilize their talents and training in bringing about more effective organized relations between the profession on the one hand and the public on the other for dealing with matters of large mutual interest. As a further part of the policy of this Board it is understood that all medical services of a public character should be performed by members of the medical profession and not by unnecessary public-health personnel, the profession being paid reasonable fees for the items of service rendered instead of such service being paid for in salaries to unnecessary public-health personnel.

The next matter that was brought before the committee for its action was a request by the Committee on Municipal Health Department Practice of the American Public Health Association for a year's leave of absence for the Secretary of the Board, so that he might become field director for the aforesaid 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 may be needed in assisting municipal health departments in improving their organization and provisions for work. The Secretary stated that he would only consider the offer of the Committee on Municipal Health Department Practice on the basis of a year's leave of absence, and that under present conditions and possibilities of health work in North Carolina he did not care to sever his connection permanently with his present field of service. After considerable discussion, the executive committee passed the following resolution:

"Whereas it has come to the knowledge of the Executive Committee of the State Board of Health that by permitting a leave of absence to Dr. W. S. Rankin he may become field director for the Committee on Municipal Health Department Practice of the American Public Health Association; and

"Whereas this can give to the State an opportunity for broadening and standardizing health work in municipalities throughout the United States; and

"Whereas public health and preventive medicine is undergoing rapid strides in the evolution toward perfection; and

"Whereas the State will be gaining first-hand information and intimate knowledge of this work; therefore be it

"Resolved, That Dr. Rankin be given a leave of absence for a year, just as soon as arrangements can be made to carry on the health work of the State in a manner satisfactory to the Board of Health."

(Signed) W. S. RANKIN, Secretary.

MEETING OF THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH

RALEIGH, October 1, 1923.

All members of the Executive Committee were present. The minutes of the last meeting, held on August 10th, were read and approved. It was moved and carried that a copy of the minutes of the meeting of August 10th be mailed at the earliest date to the Executive Committee and to all members of the State Board of Health.
It was also moved and carried that the Secretary request the Surgeon-General of the United States Public Health Service to supply this Board with fifteen copies of the Report of the Committee on Municipal Health Department Practice of the American Public Health Association, and that each member of the Board be then supplied with a copy of the said report.

At this point the Assistant Attorney-General, Mr. Frank Nash, at the request of the Executive Committee, appeared for a conference with the committee with respect to their right to permit or direct the secretary to accept work as field director of the Committee on Municipal Health Department Practice, the character of which has been briefly set forth in the minutes of the meeting of August 10th.

Following the conference with the Attorney-General, it was moved and carried that the former resolution adopted by the committee, with respect to giving Dr. Rankin a year’s leave of absence for work with the Committee on Municipal Health Department Practice, be rescinded. The following resolution was then introduced and adopted:

"Whereas it appears that opportunity has come to the Secretary of the State Board of Health to do certain very important and progressive work under the auspices of the American Public Health Association; and

"Whereas, in the opinion of the Executive Committee of the State Board of Health, this experience would add materially to the efficiency and usefulness of the secretary in the further prosecution of health work in North Carolina; therefore be it

"Resolved, That the secretary be directed to avail himself of the opportunity offered him by the Committee on Municipal Health Department Practice to become acquainted intimately and broadly with health administration in the cities of the United States; and

"Resolved further, That the secretary, in assuming work with the aforesaid committee, continue to exercise general supervision and executive control over the work of the State Board of Health."

(Signed) W. S. Rankin, Secretary.

MEETING OF THE EXECUTIVE COMMITTEE OF THE STATE BOARD OF HEALTH

Raleigh, December 29, 1923.

All the members of the Executive Committee were present, and the President of the Board, Dr. Way, called the committee to order at 10 a.m.

The minutes of the last meeting of the Executive Committee, held on October 1st, were read and approved.

The Secretary then made a brief statement to the Executive Committee with reference to the condition of the budget. He pointed out that apparently there was in prospect a surplus of between $6,000.00 and $8,000.00 in the executive fund, and unless additional counties were added or special work in the counties begun at an early date, a surplus of something like $26,000.00 in the budget for county health work. The Secretary further stated that the appropriation for county health work was requested of the budget commission as a conditional appropriation, and it was understood by that body that the funds for supplementing county health work would be expended, provided suitable personnel for developing counties and a sufficient number of requests from counties for whole-time departments were received.
The Secretary then pointed out certain administrative changes which he has recently effected, and asked the approval of the Executive Committee on these changes.

The Secretary stated that he had requested Mr. Miller, Director of the Bureau of Engineering and Inspection, who has so successfully developed two important city problems, to wit, regulation of public water supplies and proper disposal of sewage and excreta, to extend his bureau to include the work of milk regulation. The Secretary had authorized Mr. Miller to employ an experienced officer in milk control, and had given him assurance of an addition of $8,000.00 to his annual budget for such purpose. The cities of the State have long been in need of advisory assistance from the Board of Health with reference to developing and regulating their milk supplies. The unused surplus in the budget of the Executive Department will enable this work to be undertaken as soon as the Bureau of Engineering and Inspection can find a properly qualified officer.

The Secretary then pointed out that he had divided the State into two districts, consolidating the five districts previously arranged for five supervising district directors, and had placed a deputy State health officer, with an assistant deputy State health officer—that is, four supervisors—in charge of the two districts. Dr. E. F. Long will be responsible for the Western District, and Dr. H. A. Taylor will be responsible for the Eastern District. Dr. Long will be in charge of fifty-three counties, fifteen of which are full-time counties, and Dr. Taylor will be in charge of forty-seven counties, thirteen of which are full-time counties. Dr. Taylor will have four additional counties beginning full-time work January 1, 1924.

The Secretary then asked Dr. Cooper, the Assistant Secretary, to present the requests of certain employees of the Board for increases in salaries. Dr. Cooper first called attention to a request of Miss Lucy Hulin, who has charge of the mailing-room, to the effect that her salary be increased from $110.00 per month to $125.00. The committee asked the Assistant Secretary what information he had with respect to similar work performed in other departments of the State Government, more especially the Department of Public Instruction and the Department of Agriculture. Dr. Cooper stated that he was not familiar with the work of other departments. The Executive Committee then directed that he secure such information from other departments of the State Government, make a record of the facts, and if in his judgment Miss Hulin is receiving less than is paid for similar work elsewhere, he be authorized to grant her the increase in salary, as requested.

Dr. Cooper then presented a petition from the school nurses for an increase in salary, described the work performed by these nurses, and recommended that their salary be increased from $125.00 per month to $150.00 per month. The Executive Committee acted upon this recommendation and authorized the Assistant Secretary to notify the nurses of their action.

Dr. Cooper next presented a request from Dr. J. C. Johnson, Field Supervisor of Dentists, for an increase in salary. After full discussion of the work of the Field Supervisor, the Executive Committee declined to take action.

Dr. Cooper then brought up the request of Mrs. Oriana B. James, Chief Clerk, for an increase in salary. Dr. Rankin presented to the Board a letter from Mrs. James, written at his request, giving a statement of salaries paid chief clerks and stenographers in other divisions of the State Government.
and also another letter from Mrs. James, written at his request, giving a detailed statement of the work under her supervision. The Executive Committee referred the matter with power to act to Dr. Cooper, authorizing him to ascertain the character and amount of work done in other divisions of the State Government for the same salary as the increase asked for, and directed that he request the Auditor to examine our accounting system and to give him an official statement as to the amount of time required to handle the finances of the Board, the quality of service required—in short, an opinion as to what it should cost to take care of the financial transactions and records of the office. The Committee authorized Dr. Cooper, after such information was in hand, to grant the increase if, in his judgment, the amount and character of the work justified it.

The next matter brought to the attention of the Board was a request from Dr. C. L. Outland, formerly health officer of Carteret County, for the payment of $143.00, salary and expenses incurred in remaining in Carteret County following the abolition of the whole-time county health department by the board of county commissioners in the spring of 1923. The Secretary pointed out that Dr. Outland realized he had no financial claim against the Board, but felt that inasmuch as he spent ten days following his resignation as county health officer in assisting Dr. K. E. Miller, Director of the Bureau of County Health Work, in an attempt to secure reconsideration by the board of county commissioners, he should be reimbursed, certainly, for his expenses, if not also for his time at the rate of his then salary. The Executive Committee ordered that Dr. Outland submit a statement of actual expenses incurred during the time referred to and authorized the payment of such expenses, but did not authorize any payment for time.

The Secretary then brought to the attention of the Executive Committee the service which had been rendered by Dr. D. A. Dees, of Pamlico County, in holding local tonsil and adenoid clinics in the past year, in which clinics he had operated on about two hundred and seventy children. Ordinarily, the Board in the tonsil and adenoid clinics held under its direct supervision pays the operator an average of $4.00 per child operated upon. The Board had no contract with Dr. Dees for the work which he performed and Dr. Dees makes no claim, in fact has never mentioned the matter. Under a resolution passed by the State Medical Society and in line with the policies of the Board, only those who give their entire time to eye, ear, nose and throat work, that is, specialists, are approved as operators qualified to hold clinics for which the Board is responsible. In the case of Dr. Dees the Board fully appreciates the high quality of the service which he has rendered, his work comparing very favorably with that of other operators, and have felt under obligations to Dr. Dees for the public service which he has rendered. The Executive Committee, as an indication of its appreciation for this exceptional service, directed the Secretary to offer Dr. Dees a check for $300.00, not as payment for his services, but as an honorarium, and as evidence of the obligation that the Committee feels to him for his splendid and unselfish service in the tonsil and adenoid clinics held in his county during the past year.

Mr. H. E. Miller, Director of the Bureau of Engineering and Inspection, then stated to the Board the requirements of a law regulating the manufacture and sale of mattresses which was passed by the General Assembly of
1923. The law, among other things, requires that the State Board of Health adopt regulations with reference to the disinfection of mattresses. Mr. Miller presented, and the Board in formal resolution adopted, the attached regulations.

The Secretary then presented a request from Dr. J. S. Mitchener, formerly employed by the Board as Director of Bureau of Medical Inspection of Schools, that he be allowed a salary for one month following his resignation last June. The Secretary recommended that the request be not allowed, and the Board took no action.

Motion to adjourn was made and carried.

(Signed) W. S. Rankin, Secretary.

REGULATIONS PERTAINING TO THE DISINFECTION OF MATTRESSES IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA BEDDING LAW

December 29, 1923.

Sterilization and disinfection of mattresses and mattress materials as required by act of the General Assembly of 1923 shall be in accordance with one of the following methods:

First Method

Loose materials or made-up mattresses shall be subjected to treatment by steam under a pressure of fifteen pounds maintained for thirty minutes or a pressure of twenty pounds maintained for twenty minutes.

A gauge for registering steam pressure visible from the outside of the room shall be provided where steam under pressure is used.

Second Method

Mattress materials are to be treated with formaldehyde and sulphur concurrently in a moist atmosphere for a period of at least ten hours. Formaldehyde gas shall be generated from the use of one pint of formaldehyde solution (37%) to each 1,000 cubic feet of air space or through the use of any of the high-class commercial fumigators which generate an equivalent quantity of gas. Sulphur shall be from the burning of three pounds of flowers of sulphur for each 1,000 cubic feet of air space. The moist atmosphere shall be produced by thorough sprinkling of the floor of the room just prior to undertaking disinfection.

The room shall be provided with a separate air inlet and also an exhaust ventilator leading to the open air. Both inlet and exhaust connections shall be equipped with tight dampers or closure gates which can be operated from the outside of the room.

Character of Disinfection Rooms

Rooms for disinfection of mattresses and mattress materials shall be made gas and steam tight. When using formaldehyde and sulphur the cracks of the door opening shall be sealed with gummed paper.
The capacity of the room shall be sufficient for disinfection of at least two full sized mattresses at one operation. Mattresses under disinfection shall be stood on end and with a space of not less than six inches between or shall be suspended in the air by means of suitable hangers.

Shelving for loose mattress materials shall be of lattice or other open construction. Solid shelves of a type to prevent passage of gas through the materials on the shelves will not be permitted.

These regulations shall be in force and effect from and after January 1, 1924.

MINUTES ANNUAL MEETING OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., APRIL 14, 1924.

President J. Howell Way presided, and all members of the Board were present except Dr. Thompson.

The Secretary stated that the first order of business which he wished to submit to the Board for its consideration and action was a plan in process of development for the more adequate sanitary control of public milk supplies in North Carolina. The Secretary stated that during the last week of December, 1923, on finding that the Board had sufficient funds with which to begin milk control work, he instructed the Bureau of Engineering and Inspection to take the initial steps in such work, on a budget not to exceed four thousand dollars annually. The Secretary stated that he had placed this work under the Bureau of Engineering and Inspection for two reasons: (1) The Bureau of Engineering and Inspection, dealing with the water and sewerage problems of the towns and cities of the State, and being that bureau or division of the Board most concerned with municipal health work, seemed the logical allocation for milk control measures; and (2) for the reason that the Bureau of Engineering and Inspection has given good evidence of its efficiency as an administrative division of the Board of Health. The Secretary then stated that after a conference with Mr. Miller, chief of the Bureau of Engineering and Inspection, and after several conferences with Mr. Malcolm Lewis, he had recommended Mr. Lewis to Mr. Miller as a suitable man for assignment to milk control work, and that Mr. Miller, after satisfying himself as to the qualifications of Mr. Lewis, had employed him for the new work, his official service beginning February 9, 1924.

Mr. Lewis’ qualifications are as follows: He is a graduate of the Massachusetts Institute of Technology. He was then for eight or ten months assistant health officer of Montclair, N. J. He was then for a period of about twelve months health officer of West Orange, N. J. He was then in the army for a period of twelve or fifteen months. He was then employed by the Nestles Food Company, to inspect and supervise their milk stations, and served in this capacity for about three years, and for the last two years has been health officer of Hackensack, N. J.

The Secretary then asked Mr. Miller to make a complete statement to the Board (1) as to what he and Mr. Lewis had done since beginning the study of milk control measures. Mr. Miller submitted to the Board, and discussed in minute detail, a blue print showing the various activities of both himself and Mr. Lewis since beginning work. This blue print is a matter of
record in the files of the Bureau of Engineering and Inspection. Mr. Miller then stated further his future plans for the development of milk control measures.

Mr. Lewis was then asked to make a statement of his studies of milk control conditions in the State. He commented with particularity upon the milk control measures in various cities of North Carolina which he had visited and studied, and brought out as the most important fact ascertained in his studies the variations in milk control and the lack of uniformity through the absence of standards, under present conditions.

Mr. Miller then stated that the points of all milk control in North Carolina would be two—(1) A clean milk as shown by bacteriological standards and proper supervision over dairies; and (2) as rapidly as possible as complete pasteurization of public milk supplies as can be brought about. Mr. Miller indicated that the laboratory examination of milk supplies, he thought, could be effected through the arrangement of contracts with some existing city laboratories, and through the extension of laboratory work by the supervisors of laboratories which, at present and in the future, are doing or may undertake the laboratory examination of water, Mr. Miller then asked Mr. Leslie C. Frank, an engineer of the U. S. Public Health Service, and a man of extensive and successful experience in the control of public milk supplies, to discuss the ideas as above set forth by the Secretary, Mr. Miller, and Mr. Lewis, and to comment upon the possibility of successful milk control work in North Carolina along the lines already indicated in the discussion.

Mr. Frank spoke most encouragingly of the outlook and the general plan as stated. He called attention to the importance of influencing towns and cities to adopt uniform standards for regulating their milk supplies, and stressed the importance of adequate control over dairies under laws which make grading the essential principle rather than under laws of a less elastic and more compulsory character.

The Board of Health was much encouraged as to the outlook by the remarks of Mr. Frank, and directed the Secretary to express their thanks to the U. S. Public Health Service for the loan of Mr. Frank for a few days, for conferring with the executive staff in regard to milk control measures.

A motion to adjourn was then made and carried.

MINUTES ANNUAL MEETING OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., April 15, 1924.

The members of the Board who were present were: President Way, presiding, and Doctors Thompson, Tucker, Anderson, and Mr. Stove.

The first matter which the Secretary brought up was the question of requiring the Bureau of Engineering and Inspection to keep records of the inspection, date of inspections, and findings of each privy inspected under the State-wide privy act, and to furnish copies of such records, when requested to do so, to county health officers and those counties in which the inspections had been carried out. After very full discussion of this matter by Mr. Miller, director of the Bureau of Engineering and Inspection; Drs. Taylor and Long, deputy State health officers; and Dr. Cooper, the following resolutions was adopted:
Resolved, that the Bureau of Engineering and Inspection shall incorporate as soon as practical a system of recording the inspection of each privy coming under its system of control, and of furnishing a copy of such record to each county health officer when requested to do so.

The next matter considered was special regulations of conditions about tourist camps, after which discussion of this question the Board of Health adopted the following regulations:

**Regulations Governing the Conduct of Camps on Watersheds of Streams From Which Public Water Supplies Are Derived**

**Case I—Unfiltered Surface Water Supplies.**

**Regulation 1. No Camping or Trespass Allowed:**

No construction camp, labor camp, resort camp, tourist camp, picnic grounds, or other temporary living quarters shall be established, constructed or maintained by any person, organization, private or municipal corporation on the drainage area of any stream from which water is taken to be used unfiltered as a public supply. No person shall traverse any portion of such a watershed in going to and from a camp, or to trespass upon such drainage area in any way or for any purpose whatsoever.

**Case II—Filtered Surface Water Supplies**

**Regulation 1. Notice of Establishment of Camps on Watersheds:**

It shall be the duty of any person, organization, private or municipal corporation who shall establish, construct or maintain any camp or temporary living quarters, to be occupied by five or more persons for a period of three or more days, on the watershed of any stream from which water is taken to be used after filtration as a public supply to notify forthwith the mayor of the municipality served by the said public water supply system. This notice shall be in writing and shall set forth the exact location of such camp or temporary living quarters, the approximate number of occupants and the purpose for which such camp is to be used.

**Regulation 2. Refuse Disposal:**

Suitable galvanized garbage cans with covers shall be provided and conspicuously located at convenient points for the reception of garbage and refuse. Each and every camp or picnic site shall be within a distance of 200 feet from such a depository. The contents of these cans shall be removed daily and buried or completely burned. The cans shall not be allowed to become foul smelling, unsightly or breeding places for flies. All tents, buildings, and grounds shall at all times be kept clean and free from accumulation of refuse.

**Regulation 3. Sewage Disposal:**

Water-flush toilets shall be provided wherever a sewerage system is available or where conditions are such that a sewage disposal plant can be operated and water under pressure is available for the operation of flush toilets. Privies may be used where water under pressure is not available. All privies, sewerage or sewage disposal devices must be built and maintained
in accordance with the Rules and Regulations of the North Carolina State Board of Health. Separate toilets shall be provided men and women, sufficient in number to accommodate the maximum capacity of the camp on the basis of one toilet to each 50 persons.

The location of all toilets shall be plainly indicated by suitable signs, and each toilet shall bear a sign in large letters indicating whether it is for the use of men or women. No sleeping quarters within the camp shall be at a distance greater than 400 feet from both a men's and a women's toilet. No person shall commit a nuisance by urinating or defecating in any place other than the toilets provided.

Regulation 4. Posting of Camp:

Every such camp shall be conspicuously posted with durable signs at least 8x11 inches in size and printed in large bold type the following:

**WARNING**

This camp is on the watershed of a stream serving as a public water supply.

Grounds and buildings must be kept clean and sanitary.

All refuse and garbage must be deposited in fly tight receptacles and buried daily.

Toilets must be used for disposal of excreta. Keep them clean and fly tight.

Violation of these rules will subject offenders to prosecution under Section 7117, North Carolina Consolidated Statutes.

Regulation 5. Responsibility:

The management of every such camp or picnic ground shall be responsible for maintaining in good repair all sanitary appliances on said ground and shall promptly bring such action as is necessary to prosecute or eject from the premises any person who wilfully or maliciously damages such appliances or who in any way fails to comply with these regulations.

Each and every owner and lessee of any camp site or picnic ground shall be held responsible for full and literal compliance with these regulations.

Hospital Inspection

The next matter brought to the attention of the Board was a law adopted by the last General Assembly requiring the State Board of Health to inspect hospitals. The Secretary stated that he was not enforcing this law; that he was not prepared to enforce it without unnecessary expense to the State; and that the law was in conflict in the practice heretofore followed in the State, of leaving to another State agency the supervision of medical practice. The Secretary informed the Board that he was not enforcing the law and would not enforce the law at this time unless directed by the Governor or Attorney-General to do so. Further reason is that its enforcement would call for an expenditure of funds far in excess of any advantage to the State that might be derived from the enforcement of the act.
Doctor Cooper, Assistant Secretary, then asked the Board to approve the purchase of the Nelson Loose-Leaf System of Medicine. On motion this approval of the Board was granted.

The Assistant Secretary then called attention to the fact that the State Department of Education had not as yet made payment of $50,000 for the medical inspection of schools, for the years 1922 and 1923. An understanding between the State Superintendent of Public Instruction and the State Health Officer had been reached under which this grant was to be made. Both the Secretary and the Assistant Secretary felt that this matter could be adjusted without any action on the part of the Board.

The Board then passed the following resolution:

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.

The Board then adopted the following resolution:

Resolved, that, on and after May 1, 1924, no member of the executive staff of the Board shall make an official visit out of the State, to be paid for out of the funds of the Board, unless a request to make such visit has been first submitted to and approved by either the acting chief executive officer of the staff or the President of the State Board of Health; and

Resolved, further, that no payment shall be made for such visit until the staff officer who has made the visit shall have submitted a report of the visit covering first dates, expenses, purposes, results.

MINUTES ANNUAL MEETING OF THE NORTH CAROLINA STATE BOARD OF HEALTH

RALEIGH, N. C., APRIL 16, 1924.

The members of the Board who were present were President Way, presiding, and Doctors Lewis, Crowell, Tucker, and Mr. Stowe.

The Secretary stated that the first order of business which he wished the Board to consider was a matter of an existing policy which, when extended, called for the transformation of certain existing State machinery and resources into county machinery and resources. The Secretary called attention of the Board to the fact that after a number of years the executive staff have consistently followed the principles of diminishing State personnel and use funds available for stimulating and paying county employees, either part time or whole time, to do work which formerly had been in all probability very properly incorporated and carried on by full time personnel employed by the State Board of Health. The secretary then called attention of the Board to the fact that if this policy were extended, as in his opinion it should be, each would result in the conversion of full time personnel and funds now used in the Bureaus of Medical Inspection of Schools and Maternity and Infancy into county personnel and resources.

The Secretary further stated that in case the above change was considered advisable by the Board and was brought about, such a re-arrangement of
work would be in harmony with plans now under consideration for an alternation of contracts of the Board with counties, by which the Board would agree to partially finance public health work by units and without regard to further county, full time or part time, personnel, but on condition that the county provide part of the cost for the unit of work adopted; and further, that in carrying on such unit of work certain reasonable standards as approved by the Board should be made. If the work of the Bureaus of School Inspection and Maternity and Infancy is arranged with counties, by units of work restricted to these particular fields of public health, then the State machinery employees in the bureaus can be easily converted into full time or part time county personnel.

The Secretary then called attention to the work of the Bureau of Maternity and Infancy since the incorporation of the new plan of work, October 1, 1923, which had as its ultimate objective a measure of efficiency the development of clinics in the counties where pregnant women and infants could be taken for medical examination and advice. The idea of development into county clinics was the employment of full time men with special experience in maternity and infancy work, who would go to a county and, after obtaining the approval of the medical profession of the county, employ a full time county nurse, partially on county funds and partially on State funds, for visiting expectant mothers and the mothers of infants, and for the purpose of bringing such mothers and infants as need medical advice into county clinics. The county clinic was to be organized by the full time officer of the county, but turned over as soon as practicable to medical officers selected by the county medical society and trained by the visiting officers of the State Board of Health; and the nurse, too, would be trained in her work by the full time officer of the State Board of Health. Dr. Rankin and Dr. Bonner assumed that the visiting officer of the Board would use about three months in a county, in organizing a clinic and in securing and training a nurse for her duties. Three men had been employed by the Bureau of Maternity and Infancy for these duties, Dr. Carl C. Hugger, Dr. E. D. Andrews, and Dr. W. G. Byrd. During the initial stages of this work, namely, since October, the disadvantages of weather condition in rural sections had played a part, and one of the field officers, Dr. Andrews, had had a severe attack of pneumonia and was incapacitated five or six weeks. Notwithstanding these disadvantages of the work as planned, both Doctors Rankin and Bonner felt that so far the work had not yet received sufficient trial.

If the general policy of converting State official machinery and resources into county personnel and funds is carried out, then the present plan of work as carried on by the Bureau of Maternity and Infancy would be gradually transferred to a county basis, and the field officers, Doctors Hugger, Andrews, and Byrd, would pass under the direction of the deputy State health officers in charge of the work for groups of counties.

The idea was further expressed that wherever it is possible practicing pediatricians be employed on a part time basis of developing and supervising the maternity and infancy clinics in counties near the location of their practice. It being further understood that just as far as such work could be turned over to local physicians trained in clinic work by the visiting pediatrician, that such transfers should be made.
As a result of this discussion of the general policy of the Board and the future of the Bureaus of Medical Inspection of Schools and Maternity and Infancy in relation to general policy, the following resolutions was introduced and adopted:

Resolved, that it is the sense of the North Carolina State Board of Health that all such official machinery and resources, more especially that existing within the Bureaus of Medical Inspection of Schools and Maternity and Infancy, be converted into county machinery and resources, full time or part time, and with the transformation of such stated resources the personnel and fund by necessity be brought about gradually not later than January 1, 1925.

The following resolutions was introduced and adopted:

Whereas, the Secretary of the North Carolina State Board of Health has been directed by the Board to undertake certain services of a national character, under the direction of the Committee on Municipal Health Department Practice of the American Public Health Association, and that his services in the aforementioned duly began November 1, 1923, and expires November 1, 1924; and

Whereas, during this service in the national field he is to receive no remuneration as Secretary of the North Carolina State Board of Health, and

Whereas, the Assistant Secretary, Dr. George M. Cooper, has assumed the duties of the Secretary with other larger burdens of responsibility; Therefore be it

Resolved, that for the period of time the Secretary receives no remuneration from the North Carolina State Board of Health that the difference of one thousand dollars between the salary of the Assistant Secretary and that of the Secretary shall be paid to the acting Assistant Secretary.

The following resolution, after discussion, was carried:

Resolved, that the salary of Dr. J. C. Johnson, field supervisor of dentists, shall be increased from $3,000 a year to $3,600 a year, and this increase shall be effective from and after April 1, 1924.

The President of the Board then called attention of the Board to a recent outbreak of smallpox in one of the State institutions and referred to a similar outbreak of smallpox in another State institution two or three years ago. The President urged the Board to take cognizance of these unnecessary epidemics of smallpox in institutions receiving State funds. After considerable discussion the Board of Health adopted the following resolution:

Whereas, there has been a recent outbreak in one of the State institutions, and

Whereas, this is but a repetition of a similar occurrence in another such institution several years since, and

Whereas, smallpox is an entirely unnecessary disease and one most easily and assuredly preventable of all diseases, and

Whereas, its occurrence in State institutions results in serious interference of the efficiency of the institution, unnecessary expenditure of State funds, and seriously reflects upon the intelligence of the State government as well as that of the institution concerned; now, therefore, be it

Resolved, that it is the sense of the North Carolina State Board of Health that the management of the State institution should at once see to it that all
the other employees and inmates are successfully vaccinated against smallpox, and that the employees and personnel and the admission of inmates in the future should be conditioned always upon evidences of a successful vaccination against this preventable disease; and be it further

Resolved, that while the State Board of Health will content itself at this time with simply calling attention of the superintendent of this institution to its position in that matter, that in the event that there is a repetition of neglect to vaccinate employees and inmates in the institution with the occurrence of smallpox in a State institution the Board of Health will then plead this resolution as an ex honoration of any responsibility which it may have in an outbreak of smallpox and direct public attention to the unnecessary, inexcusable omission of the management of the State institution to vaccinate its institutional population; and

Resolved, further, that the Secretary of the State Board of Health be directed to send a copy of this resolution to the chief executive officers of all State, charitable, and penal institutions.

(Signed) W. S. Rankin, Secretary.

MINUTES MEETING OF EXECUTIVE COMMITTEE OF
STATE BOARD OF HEALTH

RALEIGH, N. C., JUNE 24, 1924.

All members of the Executive Committee were present. Dr. Way presiding.

The Secretary, on being asked about what matters he wished to present to the Committee for its consideration, stated that he had listed five items: to wit, (1) A request from Dr. J. S. Mitchener that a salary of one month be granted him following his resignation on June, 1923; (2) the matter of re-employing Florence Williams, now holding a position with the West Virginia State Board of Health, for public health work among the negroes; (3) the question of policy with reference to county tonsil and adenoid clinics; (4) a matter of health legislation in which the North Carolina Pharmaceutical Association are interested; and (5) the arrangement of the work of the Secretary for the year following the termination of his leave of absence for service with the Committee on Municipal Health Department Practice.

The request of Dr. Mitchener was considered, and the Executive Committee declined to allow payment of salary for time following the acceptance of Dr. Mitchener's resignation.

Doctor Rankin reported that Florence Williams, formerly employed by Dr. McBrayer as field agent among the colored people, and who is now employed by the West Virginia State Board of Health, had expressed to him the desire to return to North Carolina for resumption of her former activities, preferably under the State Board of Health. Dr. Rankin stated that he had learned from Dr. Henshaw, secretary of the State Board of Health of West Virginia, that Florence Williams' services were highly satisfactory and that that board desired to retain her. He further stated that there was a feeling on the part of some influential men and women in the State that Florence Williams be re-employed and used in health work among the negroes of this State if it is possible to find a suitable opportunity for real service for her.

Dr. Rankin stated that he thought this feeling on the part of certain prominent individuals was based, not only upon health consideration, but upon the
matter of race relationship. It was moved and carried that the Executive Office take up with the State Sanatorium, and also with the State Tuberculosis Association, the possibility of resumption of services of Florence Williams with them and if neither of the agencies mentioned could use her, that the Board keep her in mind for work among the negroes of this State as soon as a suitable opportunity for such work developed.

The question of policy with reference to payment for operations by local surgeons and specialists for tonsil and adenoid operations came up, on the request of certain citizens of Carteret County, that the Board of Health reimburse, if possible, Dr. Royall of that county for operations on school children who were in need of such operations. The Executive Committee moved that the matter be left by the Executive Staff to the Carteret County Medical Society, with the request that the society approve or disapprove the practice of local surgeons or specialists operating on public school children for remuneration by the State, and if the local medical profession approves such a course the Executive Staff be authorized to adjust the matter of payment with Dr. Royall on a basis of fairness and with consideration of the Carteret County case as precedent for future action.

In regard to the matter in which the Pharmaceutical Association expressed its interest, the Executive Committee moved that Mr. Bowman be notified that the Board of Health would hold a meeting in October, for the consideration of its legislative program, and would notify him of the time and place of such meeting and would be pleased to have him present any matters in which the Pharmaceutical Association might be interested jointly with the Board of Health.

The Secretary then related to the Executive Committee the development of his work with the Committee on Municipal Health Department Practice and stated that the committee, on being informed that he was under promise to return to North Carolina and resume his official duties at the end of his year's leave of absence, November 1, had requested him to ask the Board to permit him to retain general direction over the work of the committee on a part-time basis. The Committee on Municipal Health Department Practice felt that Dr. Rankin could, with suitable assistance, continue to direct the work of the committee, being away from his Raleigh office not over three months during the year. Dr. Rankin stated that it was his feeling, and also that of his committee, that it would be to the advantage of the State Board of Health that the arrangements suggested be allowed, the advantages being: (1) that such connection with the national agencies and with the national field health work would identify our State health work with the health work of the country generally in a way helpful to the general reputation of the Department of the State and further developments; and (2) that with broader field of observation and experience, much information of a helpful character to the development of our own work in North Carolina would be gained. The Committee moved that if it was agreeable to the Committee on Municipal Health Department Practice for the Secretary to retain general direction over their work, with the understanding that he need not be absent from the Raleigh office more than three full months during the year on their special service, that such an arrangement be approved.

(Signed) W. S. RANKIN, Secretary.