

SEVENTY-FIRST ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1948



MacCrellish & Quibley Co
Printers
Trenton, New Jersey

1949

Table of Contents.

SEVENTY-FIRST ANNUAL REPORT OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY, 1948

	PAGE
Report of the Director and Acting Commissioner of Health	7
Report of the Commissioner of Health	13
Report of Chief of Division of Personnel, Administration, Records and Accounts	15
Report of Chief of Bureau of Bacteriology	27
Report of Chief of Bureau of Chemistry	41
Report of Chief of Bureau of Engineering and Sanitation	45
Report of Chief of Bureau of Food and Drugs	63
Report of Chief of Division of Health Education	77
Report of Chief of Bureau of Local Health Services	81
Report of Bureau of Preventable Diseases	103
Report of Chief of Division of Adult and Industrial Health	107
Report of Chief of Division of Cancer Control	113
Report of Chief of Division of Dental Health	119
Report of Chief of Division of Maternal and Child Health	131
Report of Consultant to Negro Health Program	137
Report of Veterinarian-in-Charge of Rabies Control Unit	141
Report of Chief of Division of Tuberculosis Control	149
Report of Chief of Bureau of Venereal Disease Control	155
Report of Chief of Bureau of Vital Statistics	169

DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY
PUBLIC HEALTH COUNCIL

WHEELER McMILLEN, *Chairman*.....Hopewell
MARCUS W. NEWCOMB, M. D., *Vice-Chairman*.....Browns Mills
MRS. FLORENCE M. FARR, *Secretary*.....Brookside
WALTER G. ALEXANDER, M. D.....Orange
HARVEY N. DAVIS.....Hoboken
FREDERICK P. LEE, M. D.....Paterson
HARRY N. LENDALL, C. E.....New Brunswick

J. LYNN MAHAFFEY, M. D., *Director and Acting Commissioner of Health*
July 1, 1947—May 31, 1948

DANIEL BERGSMA, M. D., M. P. H., *Commissioner of Health*
June 1, 1948—

STATE OF NEW JERSEY.

DEPARTMENT OF HEALTH,

TRENTON, N. J., July 1, 1948.

To His Excellency Governor Alfred E. Driscoll:

To the Senate and General Assembly of the State of New Jersey:

To the Public Health Council:

GENTLEMEN—I have the honor of submitting herewith the Annual Report
of the Department of Health for the fiscal year ending June 30, 1948.

Respectfully submitted,

DANIEL BERGSMA, M. D., M. P. H.,
Commissioner of Health.

Report of the Director and Acting Commissioner of Health

July 1, 1947—May 31, 1948

By J. LYNN MAHAFFEY, M. D.

Chapter 177 of the Laws of 1947 became effective on July 1, 1947. The appointment of the Public Health Council by Governor Alfred E. Driscoll marked the first step under this reorganization law which was passed after two years of legislative study and consideration. The Director of Health was named to continue as Director of Health and to serve as Acting Commissioner of Health for a transition period during the reorganization. At the same time, plans were going forward within the State Government for the reorganization of the entire governmental structure under the new Constitution.

The work of the Department continued during this transition period and the highlights of the work accomplished are summarized in this report.

COMMUNICABLE DISEASE RECORDS

There was a slight reduction in the total of reported cases of communicable diseases in the calendar year of 1947; the diseases of childhood accounted for 85% of the 78,639 total reported. Measles was considerably lower than the high incidence of 1946 and diphtheria cases showed a drop as well. There were 296 cases of poliomyelitis reported—a slight increase over the 257 reported in 1946. The number of recorded deaths was, however, ten as compared with 24 in the preceding year. While new low annual case and death records were established in tuberculosis, still 3,161 new cases were recorded and 1,651 people died from tuberculosis in 1947.

Whooping cough claimed the lives of 24 persons—all children below ten years of age—and 19 of these were infants less than one year old. There was a marked reduction in the number of reported cases of malaria and there was one fatal case of rabies in a human.

Biologicals were distributed during the year through the distributing stations of the Department and were used widely by physicians and local health departments. Reports received showed that during the fiscal year ending June 30, 1948, at least 32,129 children were immunized with diphtheria toxoid

distributed free by the Department, and 35,416 received either diphtheria toxoid-whooping cough vaccine combined or whooping cough vaccine alone. Reports also show that at least 36,507 persons were vaccinated against smallpox with materials supplied by the Department. Immune serum globulin as the preventive of measles was distributed and rabies vaccine (human) was provided for complete treatment of 14 doses to 485 persons. Distribution of blood plasma furnished by the American Red Cross furnished from the excess above the needs of the armed forces was continued by the Department. During the year, 12,936 individual packages of plasma were distributed chiefly to hospitals.

There was a decline in the incidence of rabies as compared with the preceding year, but the occurrence of outbreaks among animals and the one human death served to stimulate interest in the problem. There was a growing awareness of the importance of rabies control on the part of the public, health and municipal officials and veterinarians. An Institute on Rabies was conducted by the Department in Trenton which was attended by local health and municipal officials, veterinarians and others concerned with rabies control. It becomes increasingly clear that the challenge of rabies can be met only by a complete dog control program, including vaccination of dogs.

TUBERCULOSIS AND VENEREAL DISEASE CONTROL

Free mass chest X-ray services were provided by the Division of Tuberculosis Control and 162,082 persons in industries, communities, and institutions were X-rayed. Of these, 3,838 showed abnormalities which were referred for follow-up. The chest X-ray survey work is now providing the maximum service with present equipment and personnel. During the year the procedure for follow-up of cases was increased in effectiveness and a referral system was organized on a priority basis so that X-rays showing the most significant findings would be followed up first. There was an increase of community surveys, as well as inclusion of state institutions and colleges in the surveys. The Department has worked with other agencies in the State in fostering X-ray of all admissions to general hospitals.

Penicillin continues to hold the stage in the field of venereal disease control. The history of venereal disease control during the last year has been the history of the development and extended use of penicillin in the treatment of syphilis and gonorrhoea. The Department, through the Division of Venereal Disease Control, has continued to offer free hospitalization to patients with syphilis, and a program for the ambulatory treatment of syphilis with penicillin was instituted from the office of private physicians and from clinics. Special clinics were maintained for the examination of agricultural migrant workers and special surveys were conducted in certain communities.

The Department suffered severe loss in the resignation of Dr. Roscoe P. Kandle as Director of the Bureau of Preventable Diseases when he joined the staff of the American Public Health Association. Evaluation studies of the programs of the units attached to the Bureau of Preventable Diseases were made during the year. A whooping cough control program for New Jersey was developed and a number of professional and popular publications in this field were released by the Bureau of Preventable Diseases.

A series of qualifications for admission to license examinations for health officers and inspectors of various types was adopted by the Public Health Council in accordance with the provisions of Chapter 177, Public Laws of 1947, and regular examinations were held under these regulations during the year.

ADULT AND INDUSTRIAL HEALTH SERVICES

Two general types of services of the Adult and Industrial Health Division were continued: (1) in-plant environmental engineering, and (2) medical and nursing assistance and consultation on plant health problems. The number of industrial services during the fiscal year was nearly double that of the preceding year. The majority of these plants employed fewer than 500 workers, many of them fewer than 100, indicating the greater need of the smaller plants for assistance in their industrial health programs. A spot survey of plants previously visited showed that recommendations of the Department resulting from surveys were being put into effect.

The Industrial Sight Conservation Program, the only one of its type in the nation, was continued and two community-wide industrial surveys were completed.

Organization of the Division of Cancer Control was continued during the past year, which was the second year since this Division was established. The Division has organized a joint pathological program with the New Jersey Society of Clinical Pathologists. This program includes a tumor slide registry, a consulting board of tissue pathologists, a tumor tissue laboratory, cancer reference laboratory, and pathological seminars.

An Advisory Nursing Committee on Cancer has been formally established by the State Nurses Association, State League of Nursing Education, and the State Organization for Public Health Nursing. The New Jersey Dental Society approved a joint program for the provision of fellowships in tumor pathology for New Jersey dentists, and the cancer fellowship at the James S. Green Memorial Tumor Clinic in Elizabeth was continued. Plans have been made for provision of cancer scholarships for nurses.

DENTAL HEALTH PROGRAM

It was with regret that we announced the resignation of Dr. J. M. Wisan as Chief of the Division of Dental Health to become the Director of the Division of Health Education of the American Dental Association. In his years with the Department, Dr. Wisan has established the outstanding dental health program which we now have. He was succeeded by Dr. Earl G. Ludlam, who had previously been employed as a supervisor in the Division of Dental Health.

New mobile clinics were put into operation in Atlantic, Cape May, Gloucester and Warren counties, and despite a 31% reduction in the amount of funds available, the services provided during the year were increased. During the coming year it is expected that a complete and thorough prophylaxis and a series of four topical applications of 2% sodium fluoride solution will be given to each child presented for treatment. A study has been started to determine the effects of the addition of one part per million sodium fluoride to the drinking water of the town of Morristown, in co-operation with the city and the Tri-County Dental Society. This will be the eighth such study of the effects of fluoride in a public water supply in the United States and it is expected to result in basic information in regard to the addition of sodium fluoride to drinking water supplies.

The Division of Maternal and Child Health completed its thirtieth year in 1947, with continued low maternal and infant death rates. Investigations of all maternal deaths were made by field physicians, including discussions with the attending physician, study of the records, completion of a detailed report and presentation of many of the cases before the county medical society for general discussion.

The Emergency Maternity and Infant Care Program was closed on July 1, 1947. During its effective period, from April, 1943, to June, 1947, 30,597 maternity and 2,996 infant cases were authorized for care.

The work of the Negro Health Program was continued as previously established, with a nursing service in special areas, health education activities, tuberculosis case-finding and special immunization programs.

HEALTH EDUCATION

Health education services, through the Division of Health Education, were expanded during the year, following the plan established when the Division was created in 1945. A three-phase program of health information services, health education material services and community health organization services has been developed. The first two phases, which are now well established, will provide the services and materials which will be needed in the development of the community health organization services.

With the year 1948, New Jersey completed the first 100 years of continuous central registration of birth, marriage and death records. There are now more than 12,000,000 vital records on file in the Bureau of Vital Statistics, with an addition of 220,000 during 1947. Three laws for the improvement of registration procedures were passed by the last Legislature.

The laboratories of the Department continue to render increasing services to the physicians, local health departments, other governmental agencies and the people of New Jersey despite the mounting difficulty which the handicap of inadequate laboratory quarters has brought upon such work. During the past year, the Bureau of Bacteriology developed a new procedure of tuberculosis culture, conducted basic research on serology problems and performed a greatly increased number of Rh factor determinations.

The Bureau of Chemistry assayed samples of factory-prepared mixtures for preparation of pie crusts, cakes, muffins and biscuits in the home. The work of checking mayonnaise, salad dressings and vegetable oils for fraudulent substitutions was continued, thus providing a protection to the housewives of New Jersey.

ENVIRONMENTAL SANITATION PROGRAM

With the continued rise in the cost of foods, there has been a continued increase in attempts to produce, distribute and sell adulterated or misbranded foods. In a number of cases milk was found which had been adulterated by the addition of water, and some butter samples showed excessive quantities of moisture. A high percentage of samples of hamburger and sausage showed that they contained excessive amounts of fat. The Department, through the agents of the Bureau of Food and Drugs, has worked to bring these under control.

During the year, legislation was passed repealing the prohibition of the sale of colored oleomargarine, and amidon was defined as a narcotic drug.

As a result of a conference between the governors of New York, Connecticut and New Jersey, a conference of milk control officials of Vermont, Connecticut, New York, New Jersey and Pennsylvania was held for the purpose of establishing an interstate commission for the reciprocal acceptance of approvals of dairy farms and milk plants. While the organization of this commission will necessarily take some time, the Department has continued to request information regarding sanitary conditions relating to milk and cream supplies from the U. S. Public Health Service.

Rising costs of materials and shortage of manpower have seriously impeded the construction of much-needed sewage and industrial wastes treatment plants in New Jersey. During the year the Department approved plans for 102 projects with an estimated cost of over \$14,000,000. However, only 66 projects for which permits were issued were started and these were pri-

marily sewer extensions or additions to existing installations, and the total cost was less than \$4,000,000. The construction of 36 new projects for which permits were issued was not started because bids submitted were greatly in excess of the original estimates. Of 59 water projects for which permits were issued, however, 56 were started involving the expenditure of one and a half million dollars.

There has been an increase since the end of the war in the sales of household garbage grinders for the disposal of household garbage through the domestic plumbing system to public sewage disposal systems. The Department has emphasized during the year that this method of disposal of garbage will place an additional pollution load on our streams and will increase the present problem of overloading our already inadequate sewage treatment plants.

Sanitary surveys of the New Jersey coastal recreation areas were conducted by the Bureau of Engineering and Sanitation and reports were made of the bacteriological content of bathing waters in these areas.

HEALTH NEEDS

The need of the Department for adequate quarters increases with each year. Space is now occupied on three floors and the basement of the State House and rented space is used in seven separate buildings scattered throughout the business section of Trenton. Repeated studies have indicated an urgent need for more space in a single building for efficient and proper offices for the State Department of Health. While no immediate relief appears possible, this housing need of one of the principal departments of the State Government must be met and faced during the next few years.

New Jersey's primary health problem, that of larger local health units, particularly for rural areas, remains unmet in much of our State. It is to this problem that we must devote the utmost in our time and energy and money if the health of the people of New Jersey is to be further improved.

* * * * *

IN MEMORIAM

J. LYNN MAHAFFEY, M. D.

April 13, 1879—November 1, 1948

Member, State Board of Health, 1925-1931

Director, 1931-1947

Director and Acting Commissioner of Health, 1947-1948

Report of the Commissioner of Health

June 1, 1948—June 30, 1948

By DANIEL BERGSMAS, M. D., M. P. H.

His Excellency Governor Alfred E. Driscoll nominated Daniel Bergsma, A. B., M. D., M. P. H., F. A. P. H. A., as the first State Commissioner of Health on May 12, 1948. This nomination was confirmed by the Senate on May 14, 1948. Dr. Bergsma was sworn into office on June 1, 1948.

A review of Department of Health budgets of recent years revealed a rapidly rising percentage of total available funds being spent for salaries. This process was reaching the point where program activity would soon be curtailed because of lack of funds to purchase equipment and supplies to keep all personnel fully occupied. Accordingly, a policy was established to permit each position that became vacant for whatever reason to remain vacant unless such action would hinder the reorganization of the Department.

A review of the personnel showed both strengths and weaknesses. Unfortunately, a significant proportion of employees were not assigned to the duties for which they were best fitted, or their qualifications did not meet modern standards for public health personnel as set up after long study by the American Public Health Association and as accepted by public health experts generally. The need to obtain the services of several unusually well-qualified persons, using funds released from certain position vacancies mentioned above, as part of the reorganization process, was evident.

A review of the organization plan of the Department revealed nine rather autonomous units of very unequal size and responsibility and with overlapping programs. Accordingly, a reorganization plan was prepared which divided all public health activity at the state level into six units, arranged primarily on a functional basis. This plan calls for a teamlike integration and co-ordination of program planning and activity. The plan was unanimously approved by the Public Health Council in accordance with law at its regular meeting in June, 1948.

DEPARTMENT OF HEALTH

LOCAL HEALTH SERVICES

Local health services for citizens can best be provided by a competent local health department staff. Very few exist in New Jersey. Most municipalities in this State have far too few citizens to permit of such a local health department staff on an individual municipal basis. With permissive legislation they could have all the benefits of a good, effective health department staff by collective action on a multi-municipal health department basis. This has been found necessary and effective in highway construction and in welfare. Consolidation of rural school districts to eliminate one-room schoolhouses was also desirable and effective. Disease germs do not regard man-made laws or municipal boundaries. Urban folk eat, swim and camp in rural areas and rural folk visit theatres and shopping centers in the nearest cities. Thus communicable diseases can and do spread from urban to rural folk and vice versa. Only well-planned and executed public health and medical services can reduce illness and death to a minimum. Every Jerseyman should have such protection, which can be provided only by co-operative action of a good local health department and the allied medical professions. The State Department of Health will strive to help create such effective local health departments and will serve such local departments with special laboratory, statistical and evaluation services and also render consultative aid in special program activities, such as communicable diseases, nutrition, and maternal, child and adult health.

Report of the Division of Personnel, Administration Records and Accounts

July 1, 1947—June 30, 1948

By C. M. CALLAHAN, *Chief*

In accordance with the provisions of P. L. 1947, c. 177, a Public Health Council was appointed by the Governor and confirmed by the Senate, June 30, 1947. The Public Health Council is composed of the following members:

<i>Name</i>	<i>Address</i>	<i>Expiration of Term</i>
Harvey N. Davis	Hoboken	June 30, 1948
Wheeler McMillen	Hopewell	June 30, 1949
Frederick P. Lee, M. D.	Paterson	June 30, 1950
Walter G. Alexander, M. D. ..	Orange	June 30, 1951
Marcus W. Newcomb, M. D. ...	Browns Mills	June 30, 1952
Florence M. Farr (Mrs.)	Brookside	June 30, 1953
Harry N. Lendall	New Brunswick	June 30, 1954

At a meeting of the Public Health Council held on July 8, 1947, it was agreed that the Council would meet on the second Monday of each month. At a meeting held on August 11, 1947, Mr. Wheeler McMillen was elected Chairman; Dr. Marcus W. Newcomb was elected Vice-Chairman; and Mrs. Florence M. Farr was elected Secretary.

At a meeting held on November 19, 1947, the Chairman appointed a Legislative Committee of the Council as follows: Dr. Newcomb, Chairman; Dr. Lee, Mrs. Farr.

On May 12, 1948, Governor Driscoll appointed Daniel Bergsma, M. D., M. P. H., as State Commissioner of Health. This appointment was confirmed by the Senate on May 14, 1948. Dr. Bergsma took the oath of office on June 1, 1948, and his appointment took effect as of that date. Dr. Bergsma succeeded J. Lynn Mahaffey, M. D., who had been continued in office as Director and Acting Commissioner of Health, under the provisions of Chapter 177, Public Laws 1947, reorganizing the State Department of Health effective July 1, 1947.

EXAMINATION FOR LICENSING OF HEALTH OFFICERS AND INSPECTORS

The Public Health Council at its meeting of August 11, 1947, adopted a series of qualifications for health officers and inspectors of various types, in accordance with provisions of Chapter 177, Public Laws 1947.

Examinations were held on the last Friday of October, January and April.

Patrick J. Monaghan, Newark; Armour C. Wood, D. V. M., Trenton; Leonid S. Snegireff, M. D., Trenton; Dennis J. Sullivan, Jersey City; Harold A. Murray, M. D., Newark; Ralph P. Shaw, Civil Service Commission, and John E. Bacon of the State Department of Health were appointed as members of the Board of Examiners of Health Officers and Inspectors for the year beginning March 1, 1948. The Board organized by the election of Leonid S. Snegireff, M. D., as Chairman, and John E. Bacon as Secretary.

During the year there were filed with the Department 145 applications for examination as health officer or as inspector of the various classes.

Licenses were issued to those receiving a general average of 70% or more, as follows: health officer, 21; sanitary inspector, first class, 28; sanitary inspector, second class, 15; sanitary inspector, third class, none; plumbing inspector, first grade, 27; plumbing inspector, second grade, 13; veterinary meat inspector, 3; milk inspector, 3; food and drug inspector, 1; lay meat inspector, none.

LEGISLATION

The following legislation of interest to health officials was enacted by the 1948 Legislature:

S-22, C. 444 (Armstrong). Makes Department of Health a "principal department" in executive branch of State Government. Includes Perth Amboy Port health officer and his deputy, Board of Barber Examiners, Board of Beauty Culture Control, Crippled Children Commission. Sets up a Bureau of Examination, Licensing and Registration within the department.

S-40, C. 334 (Hannold). Grants judges of County Courts under new State Constitution power to solemnize marriages.

S-118, C. 383 (Herbert). Provides that boards of freeholders instead of Supreme Court justices name county mosquito extermination commissions. (See S-396, C. 387, P. L. 1948.)

S-137, C. 53 (Bodine). Requires school buses to have proper mechanical equipment and signs warning other drivers of rules for approaching such buses while receiving, or discharging, children.

S-143, C. 148 (Littell). Amends well drillers' license act to exclude cored holes three inches or less in diameter drilled for exploration or investigation.

S-206, C. 285 (Lewis). Increases fees chargeable by municipal registrars of vital statistics for birth and death certificates and for marriage licenses.

S-249, C. 125 (Redding). Adds amidone to list of drugs regulated under Narcotics Act and other substances neither physically nor chemically distinguishable from narcotics listed in act.

S-262, C. 126 (Redding). Provides photo-recording of municipal vital statistics and interchange of such statistics between municipalities where necessary.

S-263, C. 205 (Redding). Governs terms of local registrars of vital statistics; permits deputies to fill vacancies upon death of registrar.

S-264, C. 127 (Redding). Provides penalties for solemnization of marriages by persons not authorized to do so.

S-355, C. 453 (Van Alstyne). To establish in the Department of Health facilities for medical treatment of alcoholics and prevention of alcoholism; abolishes a similar commission created under Chapter 94, P. L. 1945.

S-389, C. 348 (Herbert). Permits two or more municipalities to operate garbage disposal systems; permits creation of incinerator authorities for such purpose.

S-394, C. 350 (Van Alstyne). Designates optometry as profession and regulates practice of same.

SJR-5, C. JR. 2 (Lewis). Requests Governor to proclaim April as "Cancer Control Month."

SJR-11, C. JR. 13 (Bodine, Hess, Hand). Creates permanent Joint Memorial Blue Star Drive Commission of eight members to plan landscaping and arboreal ornamentation of Blue Star Drive in honor of World War II veterans.

A-13, C. 281 (McCay). Amends act governing referenda in second-class cities authorizing creation of municipal boards of public works and municipal water boards.

A-14, C. 24 (McCay). Specifies referenda at general elections for cities to adopt chapter 161, laws of 1916, authorizing issue of bonds, purchase of land and opening roads across non-navigable streams.

A-15, C. 187 (McCay). Specifies referenda at general elections in second-class cities to create boards of public works and water boards.

A-16, C. 25 (McCay). Specifies members of district sewerage boards be chosen at general elections.

A-60, C. 322 (McCay). Substitutes Superior Court for Chancery Court as court to order expunging of record of marriages from State Bureau of Vital Statistics after such marriages have been declared null.

A-66, C. 388 (McCay). Permit civil actions to determine mental incompetency without a jury unless jury trial is demanded by alleged incompetent or person in his behalf.

A-101, C. 42 (Curtis). Permits Common Pleas Courts to authorize county tuberculosis sanatoria superintendents to parole or discharge patients.

A-105, C. 34 (Salsburg). Defines and regulates practice of dentistry.

A-137, C. 53 (Russell). Permits all municipalities not having municipal hospitals to determine amounts of appropriations needed to be made for private charitable hospitals, both for treatment of indigent patients and for general support of private hospitals.

- A-219, C. 50 (Litvany). Permits registered assistant pharmacists, on payment of \$25 for each examination, to be tested in practical pharmacy and laboratory work for registered pharmacist certificates; limits candidates to three examinations, to be taken within two years of passage of present bill.
- A-223, C. 135 (Greenbaum). Adjudges common drug addicts as disorderly persons.
- A-257, C. 222 (Mackey). Increases from \$200,000 to \$300,000, appropriation boards of freeholders may make annually to private charitable hospitals.
- A-265, C. 36 (Greenbaum). Repeals section 24:13-4, Revised Statutes, containing restrictions against sale of yellow-colored oleomargarine.
- A-271, C. 276 (Miller). Permits local boards of health to enact ordinances establishing plumbing codes without including text of codes, if copies of codes are otherwise available.
- A-272, C. 275 (Miller). Governs advertising by local boards of health in enacting ordinances establishing plumbing codes.
- A-273, C. 105 (Mechorter). Regulates drug stores; governs issuance of temporary permits.
- A-297, C. 224 (Shershin). Permits pensioning of directors of public health laboratories in second-class cities, having 25,000 tests per year, where such directors have served as such and as assistants for aggregate of 25 years and are age 65.
- A-329, C. 136 (Field). Permits sanitary sewer district authorities in first and second-class counties to issue bonds up to 10 per cent of assessed value of real property in municipalities having contracts with such authorities.
- A-387, C. 191 (Thomas). Permits boards of education to establish special classes in institutions for instruction of eight or more physically handicapped persons.
- A-492, C. 306 (Reiffin). Increases mileage rate for State employees using own autos for official business from 5 cents to 7 cents per mile.
- A-499, C. 232 (Kates). Permits sale of municipal utilities to another municipality without necessity of referendum.
- A-531, C. 458 (Dixon). Transfers functions of Director of Agriculture Experiment Station with reference to butter fat testing to Secretary of Agriculture.
- A-553, C. 397 (Kates). Permits municipalities to sell or lease utilities to other municipalities or sanitary sewer authorities or other public bodies, without the necessity for referendum.
- AJR-2, C. JR. 3 (Russell). Creates commission of five, including representation from Institutions and Agencies Department, Economics Development Department, League of Municipalities, hospitals and Legislature, to survey voluntary hospitals to determine steps to relieve overcrowding and afford more revenue.

The following bills were introduced in the 1948 Legislature, but did not become laws:

- S-21 (Armstrong). Creates agency within state departments, of commissioners appointed by President, Civil Service Commission—excepting certain specified departments—to conduct hearings and make procedure conform to uniform standards of administration; Secretary of State to compile administrative code, publish rules and decisions of commissioners weekly in New Jersey Register; decisions reviewable by Superior Court, Appellate Division.
- S-120 (Herbert). Provides that rate paid by State for indigents in county tuberculosis institutions be one-half per capita maintenance cost.
- S-128 (Farley). Places under Civil Service all personnel of municipal health departments.
- S-148 (Lewis). Permits creation of county health districts, and creation of county health departments in other than first and second-class counties.
- S-215 (Barton). Permits riparian owners, claiming infringement of rights because of potable water diversion by public agencies, to procure injunction only to protect preferential and paramount right and to prevent diverter from asserting adverse use which might grow into prescriptive right.
- S-219 (Barton). Requires health department permits to establish commercial or mass bathing on watersheds above intake point of public potable water supply.
- S-220 (Barton). Permits municipalities or other public agencies maintaining water sheds and systems to establish police to protect such facilities.
- S-237 (Lewis). Requires dogs to be licensed beginning March 1 instead of January 1 of each year.
- S-246 (Young). Permits local boards of health to pass ordinances requiring store owners agreeing to supply heat, to supply such heat at 68 degrees Fahrenheit between 6 A. M. and 10 P. M. from October 1 to May 1.
- S-151 (Young). Provides that municipal clerks forward to State Health Department monthly data on dog licenses issued.
- S-254 (Barton). Places in classified Civil Service borough engineers acting also as water and sewage supervisors. (Vetoed.)
- S-268 (Wene). Permits Agriculture Department to revise specifications for egg standards.
- S-307 (Farley). Requires certain hotels, rooming houses and motor courts having 25 or more rooms for guests to be provided with approved fire extinguishers of specified capacities for each 5,000 feet of floor area; provides for inspection and license of such premises; establishes position of State Fire Marshal in State Health Department to carry out provisions of act in certain municipalities; excepts buildings within purview of Tenement House Act.
- S-313 (Herbert). Permits two or more municipalities to operate garbage disposal systems; permits creation of incinerator authorities for such purpose. (Vetoed.)
- A-162 (Salsburg). Regulates issue of burial permits in towns and townships.
- A-164 (Dixon). Defines "professional engineer," "practice of engineering," in act regulating and licensing engineers.

DEPARTMENT OF HEALTH

A-194 (Vogel). Creates cash sickness benefit fund for employees; utilizes one per cent employees' unemployment compensation tax for such fund.

A-200 (Herrmann). Creates cash sickness benefit fund for employees, utilizing one per cent employees' unemployment compensation tax for such fund.

A-203 (Musto). Forbids physicians or nurses to disclose, to public officers or courts, confidential information received from patients in connection with treatment for disease.

A-253 (Zangara). Permits local boards of health to pass ordinances protecting water supplies, regulating cutting and sale of ice and in other respects.

A-255 (Zangara). Creates Board of Examiners in Medical Technology.

A-292 (Shershin). Creates Recreation Commission and recreation bureau in State Department of Health; appropriates \$25,000.

A-308 (Bator). Requires sale of meat, meat products and poultry by weight.

A-317 (Bator). Requires sale of ice cream and other frozen products by weight.

A-359 (Dilger). Directs State Department of Health to establish health clinics for public to obtain at reasonable cost physical examinations, including cancer X-ray, cardiographic, laboratory and other tests. Appropriates \$100,000.

A-369 (Shershin). Repeals section 3, Chapter 240, Laws of 1947, relating to municipalities vacating cemetery lands.

A-372 (Shershin). Provides for Cancer Centre under Department of Institutions and Agencies; creates full-time director on salary fixed by department board of control. Appropriates \$250,000.

A-415 (Dixon). Provides new certificate of license, placing all engineering licenses heretofore issued in classification of "professional engineer."

A-447 (Dilger). Permits State Health Department to buy for free distribution, serum albumin, streptomycin, penicillin and other biologicals. (Vetoed.)

A-458 (McCay). Permits quarantining by local health authorities of persons with tuberculosis of the lungs in communicable form.

A-463 (Salsburg). Amends 1947 well drillers' act, reducing experience before license from 10 to 5 years prior to July 1, 1948; journeymen well drillers from 5 to 3 years.

A-567 (Dixon). Places control of milk and cream, registration of dealers, processing, handling and sale of products under Secretary of Agriculture.

A-569 (Russell). Repeals the Milk Control Act; abolishes the Milk Control Board.

DIV. OF PERSONNEL, ADM., RECORDS AND ACCOUNTS 21

APPROPRIATIONS

During the fiscal year ending June 30, 1948, there was appropriated through state and federal sources to the New Jersey State Health Department the sum of \$1,499,724.23.

The State Legislature appropriated \$739,486.03, and the following sums were received from the Federal Government:

Social Security Act, Title V (U. S. Children's Bureau)	\$107,416.20
Emergency Maternity and Infant Care Program (U. S. Children's Bureau)	46,783.00
General Health Funds (U. S. P. H. S.)	202,202.00
Venereal Disease Control Act (U. S. P. H. S.)	141,375.00
Rapid Treatment Facilities (U. S. P. H. S.)	34,240.00
Tuberculosis Control (U. S. P. H. S.)	129,888.00
Adult and Industrial Health (U. S. P. H. S.)	30,032.00
Cancer Control (U. S. P. H. S.)	68,302.00
Total federal funds	\$760,238.20

In addition to the foregoing appropriations, \$49,414 was received from dog registration fees, \$45,027.29 of which was used for rabies control. In accordance with the provisions of Chapter 151, P. L. 1941, the sum of \$26,127.26 was transferred to the General Fund of the State from the revenue received from this source.

STATEMENT OF REVENUE OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY
FOR THE YEAR ENDING JUNE 30, 1948

Source	Amount
Analyses of water samples	\$1,778.00
Audiometer rental	100.00
Laboratory receipts	9.10
Licenses—cold storage	890.00
“ goat milk	183.31
“ ice cream	6,870.00
“ milk plant	15,375.00
“ narcotics	565.00
“ sewage and water plant operators	3,971.00
Penalties—violations of food and drug laws	2,494.25
“ Dog Control Act	3,116.00
“ vital statistics	50.00
Searches of vital statistics	22,750.41
Miscellaneous (engineering and sanitation copies for certification)	1,204.94
Smallpox vaccine (P. L. 1947, c. 88)	174.80
Total revenue transmitted to the State Treasury	\$59,531.81

DEPARTMENT OF HEALTH

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1948

STATE FUNDS—CENTRAL ADMINISTRATION BUREAUS

	Personal Admin. Health's and Accounts	Bacteri- ology	Chemistry	Dental Health	Engineering and Sanitation	Food and Drugs	Fiscal Health	Negro Health	Vital Statistics	Totals
Salaries	\$89,230.95	\$10,102.08	\$27,180.00	\$03,400.97	\$52,997.35	\$61,109.07	\$43,968.59	\$11,840.00	\$55,984.46	\$422,905.47
War adjustment	330.86						55.92		106.00	20,221.01
Laboratory supplies	17,653.26		2,460.04			737.61				155,361
Antitoxins and sera							185.86			15,137.10
Diphtheria toxin and measles vaccine							15,137.10			3,072.90
Whooping cough immunization							242.85			3,428.86
Zyphoid vaccine							38.41			1,747.76
Voluntary vaccination supplies							300.70			188.20
Engineering, recreational and library supplies							668.46			188.20
Dental health educational material										707.32
Printing's supplies										146.16
Traveling expenses										2,893.30
Binding volumes of birth, marriage and death certificates										1,883.22
General of fabrication machines										745.00
Freight, express and cartage										1,251.50
Subscriptions										1,043.00
Maintenance of dental trailer										1,517.15
Miscellaneous expenses										1,128.04
Maintenance of boats and plants										332.87
Repairs and maintenance:										415.72
Automotive equipment										745.00
Office furniture, equipment and machines										476.12
Replacement of motor vehicles										490.62
Postage										5,107.48
Telephone and telegraph										2,000.00
Dental health equipment										400.00
Bleeding of sheep										1,200.00
Totals	\$84,800.00	\$07,117.37	\$80,079.13	\$07,992.87	\$89,250.70	\$109,447.62	\$08,885.17	\$14,477.62	\$60,289.22	\$529,172.50

DIV. OF PERSONNEL, ADM., RECORDS AND ACCOUNTS 23

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1948

STATE FUNDS

APPROPRIATIONS FOR SPECIFIC PURPOSES

	Veneral Disease Control	Maternal and Child Health	Industrial Health	Totals
Salaries	\$23,326.53	\$87,781.21	\$28,511.39	\$139,619.13
War adjustment	36.00	79.92		115.92
Laboratory supplies, drugs and biologicals and equipment	4,982.15	639.24	2,562.63	8,184.02
Stationery and office supplies	858.20	1,157.60	282.77	2,298.57
Printing	450.67	388.74	1,222.20	2,061.61
Travel	825.84	12,889.85	3,913.54	17,629.23
Advertising			262.32	262.32
Subscriptions	85.50	12.50	91.00	189.00
Telephone and telegraph			1,395.00	1,395.00
Miscellaneous expenses		71.17	60.63	131.80
Current Repairs:				
Office furniture, equipment and machines and scientific equipment	164.39	129.58		293.97
Health educational materials			1,057.09	1,057.09
Rent			25.00	25.00
Freight and cartage	4.20	12.52		16.72
Office equipment			614.39	614.39
Totals	\$30,733.48	\$103,162.33	\$39,997.96	\$173,893.77

TOTAL EXPENDITURES FROM STATE FUNDS

Central administration bureaus	\$529,172.39
Appropriations for specific purposes	173,893.77
Total	\$703,066.16

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING JUNE 30, 1948

STATE FUNDS

RABIES CONTROL FUNDS

Salaries	\$30,018.86
Anti-rabies serum and vaccine	5,735.64
Stationery and office supplies	642.49
Motor vehicle transportation supplies	1,049.62
Printing	198.57
Travel	4,861.47
Insurance	10.00
Postage	500.00
Office rent	915.00
Garage rent	282.00
Replacement of office equipment	116.50
Telephone and telegraph	300.00
Miscellaneous expenses	189.81
Subscriptions	21.85
Current repairs	185.48
Total expenditures—rabies control	\$45,027.29

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH
OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING
JUNE 30, 1948

FEDERAL FUNDS

<i>Project General Health</i>	<i>Salaries</i>	<i>Travel</i>	<i>Materials, Supplies and Services</i>	<i>Total Expendi- tures</i>
Bureau of Administration	\$14,559.58	\$635.62	\$11,606.34	\$26,801.54
Bureau of Bacteriology	32,229.52	.....	6,422.53	38,652.05
Bureau of Chemistry	14,400.00	.....	311.31	14,711.31
Division of Dental Health	17,904.00	993.81	499.54	19,397.35
Bureau of Engineering and Sanitation	18,330.49	688.53	1,712.00	20,731.02
Bureau of Food and Drugs	19,175.00	5,104.67	13,110.10	37,389.77
Bureau of Local Health Administration Atlantic, Cape May State Health District	9,170.70	921.21	2,840.83	12,932.74
Bergen, Passaic State Health District	9,809.90	579.98	1,132.50	11,522.38
Burlington State Health District	3,760.00	384.55	180.85	4,325.40
Cumberland, Gloucester, Salem Health District	8,520.00	1,848.31	596.80	10,965.11
Mercer County Health District	6,964.00	845.52	1,066.97	8,876.49
Monmouth, Ocean and part of Middle- sex State Health District .....	.....	13.60	.....	13.60
Somerset, Hunterdon, Middlesex, Camp Kilmer State Health District	3,469.30	383.53	143.05	3,995.88
Sussex, Warren, Morris State Health District	3,640.00	567.60	604.27	4,811.87
Camden County State Health District	4,080.00	656.62	1,031.97	5,768.59
Bureau of Vital Statistics	3,720.00	264.40	473.53	4,457.93
Bureau of Preventable Diseases	10,680.97	.....	1,821.49	12,502.46
Division of Health Education	18,115.82	966.65	1,538.80	20,621.27
In-service field orientation .....	.....	.....	2,553.92	2,553.92
Training of personnel .....	.....	.....	1,660.00	1,660.00
Encumbrance budget for prior years ..	.....	.....	595.00	595.00
.....	.....	.....	28,360.75	28,360.75
Total expenditures—general health funds	\$198,529.28	\$14,854.60	\$78,262.55	\$291,646.43
<i>Adult and Industrial Health</i>				
Division of Adult and Industrial Health	\$19,540.49	\$1,762.45	\$4,128.93	\$25,431.87
Division of Dental Health	2,250.00	.....	.....	2,250.00
Division of Health Education .....	.....	.....	120.95	120.95
Total expenditures—adult and industrial health	\$21,790.49	\$1,762.45	\$4,249.88	\$27,802.82
<i>Cancer Control</i>				
Bureau of Administration	\$2,520.00	.....	.....	\$2,520.00
Division of Cancer	24,822.61	\$1,953.21	\$13,848.12	40,623.94
Division of Health Education	4,862.00	.....	3,038.62	7,900.62
Bureau of Preventable Diseases	1,280.00	.....	.....	1,280.00
Statistical Research .....	.....	.....	427.03	427.03
Bureau of Vital Statistics	1,105.81	.....	532.00	1,637.81
Total expenditures—cancer control	\$34,590.42	\$1,953.21	\$17,845.77	\$54,389.40

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH
OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING
JUNE 30, 1948

FEDERAL FUNDS—Continued

<i>Project</i>	<i>Salaries</i>	<i>Travel</i>	<i>Materials, Supplies and Services</i>	<i>Total Expendi- tures</i>
<i>Veneral Disease Control Act</i>				
Bureau of Bacteriology	\$3,762.47	\$57.24	\$8,517.00	\$12,336.71
Division of Health Education	1,186.66	.....	1,850.93	3,037.59
Division of Veneral Disease Control ..	73,439.50	5,995.63	40,212.27	119,647.40
Training of personnel .....	.....	.....	835.00	835.00
Encumbrances for prior years .....	.....	.....	995.49	995.49
Total expenditures—Veneral Disease Control Act	\$78,388.63	\$6,052.87	\$52,410.69	\$136,852.19
Total expenditures—rapid treatment facilities .....	.....	.....	\$40,565.08	\$40,565.08
<i>Title V, Social Security Act</i>				
Total expenditures—maternal and child health	\$100,761.03	\$10,574.56	\$17,912.75	\$129,248.34
Emergency maternity and infant care ..	.....	.....	\$126,091.94	\$126,091.94
Total expenditures—emergency maternity and infant care ..	.....	.....	\$126,091.94	\$126,091.94
<i>Tuberculosis Control</i>				
Bureau of Bacteriology	\$6,270.00	.....	.....	\$6,270.00
Division of Tuberculosis Control	55,303.08	\$9,151.32	\$32,967.87	97,422.27
Division of Health Education	15,240.00	1,472.61	3,176.08	19,888.69
Encumbrances for prior years .....	.....	.....	2,587.94	2,587.94
Total expenditures—tuber- culosis control	\$76,813.08	\$10,623.93	\$38,731.89	\$126,168.90
Total federal funds expended.	\$510,872.93	\$45,821.62	\$376,070.55	\$932,765.10

DEPARTMENT OF HEALTH

STATEMENT OF EXPENDITURES OF THE DEPARTMENT OF HEALTH
OF THE STATE OF NEW JERSEY FOR THE YEAR ENDING
JUNE 30, 1948

COMBINED EXPENDITURES—STATE AND FEDERAL FUNDS

Salaries (and War Adjustment)—

State		\$573,151.00
Federal: General health	\$198,529.28	
Veneral Disease Control Act	78,388.63	
Title V - maternal and child health	100,761.03	
Tuberculosis control	76,813.08	
Adult and industrial health	21,790.49	
Cancer control	34,590.42	
	<u>510,872.93</u>	
<i>Other Expenses—</i>		\$1,084,023.93

State	\$129,915.16	
Federal: General health	\$93,117.15	
Veneral Disease Control Act	58,463.56	
Rapid treatment facilities	40,565.08	
Title V - maternal and child health	28,487.31	
Emergency maternity and infant care	126,091.94	
Tuberculosis control	49,355.82	
Adult and industrial health	6,012.33	
Cancer control	19,798.98	
	<u>421,892.17</u>	
		\$551,807.33
Total expended—state and federal funds		\$1,635,831.26
Expended for rabies control from dog registration fees		\$45,027.29

Report of the Bureau of Bacteriology

July 1, 1947—June 30, 1948

By JOHN H. SPOONER, JR., Chief

The Bureau of Bacteriology at the end of the fiscal year 1948 has a forward outlook. The reason for this optimistic viewpoint is the planned program of reorganization of the State Health Department under its newly appointed State Commissioner of Health, Daniel Bergsma, M. D., M. P. H. That such a hopeful outlook may be justified is plainly shown by Dr. Bergsma's recommendation that a Bureau of Laboratories be formed as one of the six bureaus of the State Department of Health. This demonstrates that the Commissioner recognizes the important place of the laboratory in the field of modern public health.

Outstanding in the work of the Bureau during the fiscal year was the establishment of a new procedure of tuberculosis culture, basic research on serology problems and an increase in Rh factor determination requests. This work is described in more detail in the following paragraphs.

The work of the Bureau of Bacteriology may be summarized in a general way by the description of the following examinations made: performs diagnostic tests for syphilis; examines smears for gonorrhoea; cultures and identifies pathogenic bacteria, performs agglutination and culture tests for the enteric diseases; makes smears, cultures, concentration method and animal inoculations for tuberculosis; examines stools for intestinal parasites, ova and cysts; makes animal brain and mice inoculations for rabies; examines blood smears for malarial and other tropical diseases; conducts investigations of food products suspected of food poisoning; makes virulence tests; prepares antigens, vaccines and media and inspects laboratories desiring approval to perform premarital and prenatal blood tests.

A total of 341,790 serological, bacteriological and parasitological specimens were examined during the fiscal year.

TABLE I

NUMBER OF SPECIMENS EXAMINED DURING YEAR ENDING JUNE 30, 1948	
Diphtheria	5,688
Tuberculosis	12,978
Blood agglutinations	6,578
Enteric diseases (feces and urine)	10,964
Gonorrhœa	8,911
Syphilis	282,748
Rh factors	7,743
Blood types	1,357
Miscellaneous specimens	4,823
Total	341,790

"Diphtheria" refers to the number of throat cultures examined for *Corynebacterium diphtheriae* during the fiscal year.

"Tuberculosis" refers to the number of smear specimens examined for *Mycobacterium tuberculosis* during the fiscal year.

"Blood agglutinations" refers to the number of blood specimens examined for such diseases as typhoid fever, paratyphoid fever, undulant fever, Rocky Mountain spotted fever and tularemia. See also Table VIII.

"Enteric pathogens" refers to the examination of feces and urine specimens for the presence of *Eberthella typhosa*, *Salmonella* and *Shigella* organisms.

"Blood types" refers to the typing of blood specimens. It is a new activity undertaken at the request of physicians interested also in the Rh factor determination.

"Miscellaneous" refers to a number of examinations less in number than those listed in Table I. These examinations are itemized in Table X.

Table I shows a slight decrease in the volume of work performed in the last fiscal year as compared with the figures for the year ending June 30, 1947. A part of this decrease may be accounted for by the fact that oftentimes we were unable to supply all the mailing containers that were requested by physicians and various health organizations using our services throughout the State. This slight decrease in volume of work in the serology division was utilized by Mr. C. H. Bunting, Senior Serologist, and Mrs. Eleanor Thomas, Assistant Serologist, in performing a number of trial projects on serology problems. This work consisted of a study of standardization of various antigens for the Wassermann test; comparison of quantitative results on the Kolmer, Mazzini and V. D. R. L. tests; comparative tests on the different hydrogen ion con-

centration of physiological salt solutions and a study of complement titrations in the Kolmer test; a standing and shaking comparative test for sensitivity and size of antigen particles in the Kahn test. A comparison between the V. D. R. L. antigen and Mazzini antigen was also made on a large volume of routine specimens. These tests were performed at the request of the Venereal Disease Research Laboratory and the results reported to them.

Under the direct supervision of Mr. J. N. Welsh, Senior Bacteriologist, the Bureau instituted a new procedure in tuberculosis culture during the year. This was made possible by a transfer of funds to the Bureau of Bacteriology from the Division of Tuberculosis Control. We were unable to start our culture work at the beginning of the fiscal year because of our inability to secure necessary glassware at that time. Results of the cultures so far made are shown in Table VII.

Bacteriology also prepared a number of sera for precipitation tests to determine the type of meat being offered for sale to the public. This work was done at the request of the Bureau of Food and Drugs.

Requests for Rh factor determination greatly increased. The number of Rh factor determinations performed for the year ending June 30, 1947, was 2,120; this year the total was 7,743—positive, 6,634; negative, 1,109. The total number of specimens examined in 1948 was 341,790; in 1947, 360,105; and in 1946, 321,610.

TABLE II

SPECIMENS OF BLOOD AND SPINAL FLUID EXAMINED FOR SYPHILIS DURING YEAR ENDING JUNE 30, 1948, BY MONTHS

Month	Positive	Doubtful	Negative	Unsatisfactory	Total
July	1,650	750	20,471	637	23,508
August	1,751	795	19,818	567	22,931
September	1,841	845	23,896	774	27,356
October	1,742	887	24,195	813	27,637
November	1,236	559	18,710	502	21,007
December	1,296	566	16,947	590	19,399
January	1,477	482	18,581	1,034	21,574
February	1,311	606	16,564	1,003	19,484
March	1,351	724	21,751	608	24,434
April	1,631	581	20,991	439	23,642
May	1,529	636	21,239	427	23,829
June	1,668	547	25,105	627	27,947
	18,481	7,978	248,268	8,021	282,748

This table shows 6.5 per cent positive, 2.8 per cent doubtful, 2.8 per cent unsatisfactory and 87.8 per cent negative. The Mazzini flocculation test is used as a screen test on all specimens. Specimens showing a reaction of positive or doubtful or unsatisfactory are further tested by the Kolmer complement fixation test and the Kahn precipitation test. Where there is insufficient serum for these tests a V. D. R. L. slide test may be used as a check on the original results. The V. D. R. L. test refers to the cardiolipin-lecithin antigen as developed for use at the Venereal Disease Research Laboratory at Staten Island. It is a flocculation test similar to the Mazzini. When the Bureau started using this test slips containing information about the test were mimeographed and returned with the report to the physician. The results of all tests are then reported to the physician with an interpretation as to positive, doubtful or negative based upon the results of the tests above. Positive and doubtful tests are also reported in degrees of positiveness. The interpretation of "positive" is in no way to be construed as a diagnosis of syphilis in the absence of clinical symptoms of the disease. The Kolmer, Kahn or Mazzini quantitative test will be performed on specimens if the physician so requests, and the inactive undiluted serum gives a 3+ or more result in its respective test.

Table III shows the number of additional tests made on specimens of blood and spinal fluid as well as those for applicants for marriage, required by the New Jersey premarital law, and on expectant mothers, required by the prenatal law. This table shows that whereas the number of serology specimens was 282,748, the actual number of tests performed in serology more nearly approximated 330,000.

TABLE III

Premarital specimens	52,297
Positive premarital specimens	886
Prenatal specimens	41,046
Positive prenatal specimens	541
Spinal fluid specimens	2,056
Mazzini tests	271,835
Quantitative Mazzini tests	247
Kahn tests	18,935
Quantitative Kahn tests	261
V. D. R. L. slide tests	2,090
Kolmer tests	29,530
Quantitative Kolmer tests	3,299

The Kolmer quantitative test is made on all spinal fluids, 2,056 for the year. The Bureau now supplies a special container for submitting spinal fluid specimens by mail. The tubes are prepared with a 1:10,000 solution of

"Merthiolate" to act as a preservative. These containers may be obtained in any quantity upon request.

There were 4,136 less premarital examinations and 7,279 less prenatal examinations this year. 1.69 per cent of the premarital specimens were found positive; 1.3 per cent of the prenatals gave positive reactions. This percentage very clearly approximates the figures of last year. Premarital certificates were also issued to service men who had their blood tests performed in Army, Navy and other service laboratories. Certificate forms are also furnished to private and local health laboratories throughout the State which have been approved by the State Department of Health to make such tests. These are recognized for marriage only within the State.

The New Jersey Department of Health recognizes, and will accept for marriage licenses, blood tests performed in all State Department of Health laboratories, all service laboratories throughout the United States and the city laboratories of New York, Philadelphia and Baltimore. All State laboratories and the above city laboratories have been furnished with our premarital certificate forms or may obtain them upon request.

EVALUATION STUDY

In 1948, the Bureau of Bacteriology again participated in the evaluation study conducted by the United States Public Health Service for state department of health laboratories. The control on the evaluation was performed by the author of the various standard tests.

Results are considered satisfactory by the United States Public Health Service rating when the specificity tests are 99 per cent and the sensitivity tests within 10 per cent of the author's standard.

Following are the results obtained in the Bureau of Bacteriology on 236 sera tested in the syphilitic group and 134 in the non-syphilitic group:

	<i>Sensitivity</i>	<i>Specificity</i>
Mazzini (flocculation)		
Author control	75.0	99.3
Bureau of Bacteriology	71.3	99.3
Kolmer (complement fixation)		
Author control	74.4	100.0
Bureau of Bacteriology	63.2*	98.9
Kahn (precipitation)		
Author control	66.2	100.0
Bureau of Bacteriology	67.2	99.7

* The author used the new, more sensitive Kolmer antigen.

There were 8,911 smear examinations made during the year. 12 per cent were reported as containing typical intracellular Gram negative diplococci.

TABLE IV

SPECIMENS EXAMINED FOR NEISSERIA GONORRHOEA (PUS SMEARS) DURING YEAR
ENDING JUNE 30, 1948, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	126	722	14	872
August	115	652	16	783
September	130	814	25	969
October	88	737	19	844
November	54	571	19	644
December	57	527	6	590
January	88	481	11	580
February	72	626	12	710
March	76	685	21	782
April	83	575	9	667
May	76	626	19	721
June	92	636	21	749
	1,057	7,652	202	8,911

There was a slight decrease in the number of throat culture specimens for *C. diphtheriae*; last year the number was 5,812, this year, 5,688. Table V shows 6.2 per cent were reported as containing organisms resembling *C. diphtheriae*. Animal inoculations and bio-chemical culture reactions were performed upon these specimens before they were reported positive. There were 67 animal inoculation virulence tests performed.

TABLE V

SPECIMENS EXAMINED FOR CORYNEBACTERIUM DIPHTHERIAE DURING YEAR
ENDING JUNE 30, 1948, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	3	323	22	348
August	..	245	15	260
September	4	288	14	306
October	3	313	25	341
November	13	357	16	386
December	72	636	40	748
January	93	552	38	683
February	128	557	31	716
March	21	377	26	424
April	5	391	35	431
May	1	450	44	495
June	10	516	24	550
	353	5,005	330	5,688

Specimens for examination for *M. tuberculosis* increased this year. There were 1,569 more examinations, last year's figure being 11,909, as compared with 12,976 for this year. 9.6 per cent were reported as positive. Requests for this type of examination have steadily increased over the years. Culture work is also being done as mentioned above, on specimens requesting animal inoculation. At the present time routine culture work on all specimens received cannot be attempted.

TABLE VI

SPECIMENS EXAMINED FOR MYCOBACTERIUM TUBERCULOSIS DURING YEAR
ENDING JUNE 30, 1948, BY MONTHS

Month	Positive	Negative	Unsatisfactory	Total
July	100	1,224	20	1,344
August	108	819	10	937
September	80	906	7	993
October	140	1,152	24	1,316
November	89	872	11	972
December	103	856	17	976
January	88	803	10	901
February	89	834	17	940
March	120	1,109	24	1,253
April	127	1,012	17	1,156
May	61	895	16	972
June	140	1,054	24	1,218
	1,245	11,536	197	12,978

Results of animal inoculations and cultures for *M. tuberculosis* are shown in Table VII.

TABLE VII

GUINEA PIG INOCULATIONS FOR *M. TUBERCULOSIS*

Material	Positive	Negative	Unsatisfactory
Gastric contents	8	150	30
Sputa	8	73	7
Urine	10	86	16
Pleural fluid	7	47	5
Spinal fluid	..	12	..
Paracentesis fluid	..	1	..
Abdominal fluid	..	4	..
Ear swab	2	..	..
Pus	2	4	..
Gland	2	1	..
Swab from wound	..	1	1
Tonsil	..	1	..
Miscellaneous fluid	13	80	14
Total—585.	52	460	73

The following table shows the results of culture inoculations for *M. tuberculosis* as performed from the time this work was started in April up to June 30, 1948:

Material	Petragani's		Lowenstein's	
	Positive	Negative	Positive	Negative
Sputa	1	14	1	14
Pleural fluid .....	..	3	1	2
Urine .....	..	6	..	6
Chest fluid .....	..	1	..	1
Gastric contents	1	1	..	2
	<u>2</u>	<u>25</u>	<u>2</u>	<u>25</u>

Blood agglutination tests are performed for typhoid O and H antigens, paratyphoid A and B, undulant fever, tularemia and the Weil-Felix reaction for typhus and Rocky Mountain spotted fever. The laboratory prepared its own antigens for these tests and used both OX19 and OX2 for the Weil-Felix reaction. We also have an OXK antigen which can be utilized to check for Tsutsugamushi fever on request.

Requests for blood agglutination decreased slightly as compared with those performed last year. Reactions are shown in Table VIII.

TABLE VIII

BLOOD AGGLUTINATION TESTS DURING YEAR ENDING JUNE 30, 1948

	Positive	Negative	Unsatisfactory	Total
Typhoid fever	65	2,134	84	2,283
Paratyphoid fever	23	1,282	19	1,324
Undulant fever	73	2,619	50	2,742
Rocky Mountain spotted and typhus fevers	7	150	11	168
Tularemia	2	59	..	61
	<u>170</u>	<u>6,244</u>	<u>164</u>	<u>6,578</u>

There was a slight decrease in the number of cultural examinations (feces and urine) for enteric pathogens made this year. This work includes the more complete identification of the *Salmonellas* into their respective groups. Results of specimens are reported to the physician and culture of the *Salmonella* organism sent to the *Salmonella* Typing Center at the University of Kentucky. The cultures so identified are as follows:

<i>S. typhimurium</i>	3
<i>S. derby</i>	3
<i>S. montevideo</i>	2
<i>S. oregon</i>	1
<i>S. mississippi</i>	1
<i>S. typhimurium</i> variation copenhagen	1

TABLE IX

FECES AND URINE SPECIMENS EXAMINED FOR ENTERIC PATHOGENS DURING YEAR ENDING JUNE 30, 1948

	Positive	Negative	Unsatisfactory	Total
<i>Eberthella typhosa</i>	18	3,455	117	3,590
<i>Salmonellas</i>	34	3,439	117	3,590
<i>Shigellas</i> .....	..	3,473	117	3,590
No examination .....	..	....	194	194
	<u>52</u>	<u>10,367</u>	<u>545</u>	<u>10,964</u>

The following Table is a list of specimens classified as "Miscellaneous."

TABLE X

MISCELLANEOUS SPECIMENS EXAMINED DURING YEAR ENDING JUNE 30, 1948

	Positive	Negative	Unsatisfactory
Rabies	62	294	10
Anthrax	1	..	..
Bacterial infection (blood, body fluids, pus, etc.)	335	39	9
Globulin	1	53	1
Gonococcus infection (eye smears)	2	46	7
Hemolytic streptococci	248	467	..
Infectious mononucleosis	53	232	3
Malaria	10	110	1
<i>N. meningitidis</i> .....	..	15	..
Occult blood	1	4	..
Ophthalmia neonatorum	6	2	..
Ova and parasites	26	676	3
<i>H. pertussis</i>	1	21	3
Pneumonia	1	5	..
<i>Treponema pallida</i>	1	2	3
Trichinosis .....	..	3	..
<i>M. tuberculosis</i> (blood, body fluids, urine, pus, etc.)	84	878	12
Vincent's angina	65	595	10
Special examination of eating utensils	57	226	..
Other unusual examinations	78	60	1
	<u>1,032</u>	<u>3,728</u>	<u>62</u>
Total "Miscellaneous"	4,823		

TABLE XI

RABIES SPECIMENS (SPECIES OF ANIMALS) EXAMINED DURING YEAR ENDING JUNE 30, 1948

Dogs	Positive, 62; negative, 231; unsatisfactory, 8.
Cats	Negative, 45; unsatisfactory, 2.
Squirrels	Negative, 7.
Chipmunks	Negative, 1.
Mice	Negative, 1.
Cows	Negative, 3.
Hamsters	Negative, 1.
Rats	Negative, 1.
Horses	Negative, 2.
Lambs	Negative, 1.
Rabbits	Negative, 1.

YEARLY TOTALS OF ANIMALS EXAMINED FOR RABIES FROM 1940 TO 1948, INCLUSIVE

	1940	1941	1942	1943	1944	1945	1946	1947	1948
Positive	116	76	45	8	8	12	60	114	62
Negative	140	144	129	103	90	104	94	237	294
Unsatisfactory	15	7	17	15	7	18	8	28	10
Total	271	227	191	126	105	134	162	379	366

MUNICIPALITIES, ARRANGED BY COUNTIES, FROM WHICH RABID ANIMALS WERE RECEIVED DURING YEAR ENDING JUNE 30, 1948

Essex County—Bloomfield, 1.
Hunterdon County—Califon, 1; Lebanon, 1.
Mercer County—Hopewell, 4; Princeton, 10; Trenton, 1.
Middlesex County—Dunellen, 1; Metuchen, 1; New Brunswick, 6; New Market, 1; South Plainfield, 1.
Morris County—Morristown, 1.
Passaic County—Paterson, 1.
Somerset County—Belle Mead, 1; Middlebush, 2; North Plainfield, 1; Somerville, 8; South Bound Brook, 1.
Union County—Fanwood, 1; Linden, 1; Mountainside, 2; Plainfield, 2; Rahway, 1; Westfield, 7.
Warren County—Belvidere, 2; Hackettstown, 1; Warren Glen, 1; Washington, 1.

When no evidence of rabies is found in the nerve cells of the brain on microscopic examination, and the animal has bitten a person or persons, Swiss mice are inoculated intradurally and kept under observation for three to four

weeks. The following table shows the source of material inoculated into Swiss mice:

TABLE XII

MICE INOCULATIONS FOR RABIES

Material	Positive	Negative	Unsatisfactory
Dog brain	1	165	2
Cat brain	33	..
Horse brain	1	..
Cow brain	1	..
Lamb brain	1	..
Squirrel brain	4	..
Rat brain	1	..
Mouse brain	1	..
Hamster brain	1	..
	1	208	2

TABLE XIII

MAILING CASES FOR THE COLLECTION AND TRANSMISSION OF SPECIMENS SUPPLIED TO PHYSICIANS AND LOCAL HEALTH DEPARTMENTS THROUGHOUT THE STATE DURING YEAR ENDING JUNE 30, 1948

Diphtheria (regular mailing cases)	5,435
Extra swabs	800
	6,235
Tuberculosis mailing cases	16,235
Typhoid fever mailing cases	1,411
Malaria mailing cases	87
Gonorrhoea mailing cases	9,996
Feces and urine mailing cases	5,595
Syphilis mailing cases	294,221
Treponema pallida mailing cases	17
Ophthalmia neonatorum mailing cases	17
Total	333,904

The Bureau of Bacteriology supplies media to other Bureaus in the state service, and local and private laboratories throughout the State. The Bureau prepared and supplied 1,896,600 cc. of various kinds of media during the fiscal year.

The Bureau of Bacteriology was forced to change the type of needle supplied to physicians for taking serology specimens during the year. This was due to the increased cost of the Petroff type of needle as formerly supplied. We returned to the old type of Wassermann needle. Some physicians had difficulty in using this type of needle. For this reason, instructions were

issued and were printed in the *Public Health News* and the *New Jersey Medical Society Journal*. Following are the instructions:

- A. Hold the tube or vial between the last fingers and the palm of the hand; grasp the needle at the hub between the thumb and the first finger, so that the hub rests on the lips of the tube. Have a tourniquet applied to patient's upper arm to engorge the veins. If the skin is held down firmly with the left hand it is easier to enter the vein.
- B. Some physicians prefer to hold the needle with a hemostat, pressing the tube against the handles, with the hub of the needle at the lip of the tube. The rigidity gained by this method makes it easier to enter the vein.
- C. Others prefer to hold only the needle in the right hand. It is held at the hub between the forefinger and the thumb. A piece of absorbent cotton is placed at the end of the needle opposite the point and as soon as blood appears on the cotton, the tube or vial is quickly substituted and the specimen collected.

Because of the large number of hemolyzed specimens being received at the laboratory during the winter, the following instructions were printed and appeared in the *Public Health News* and the *New Jersey Medical Society Journal*:

1. The specimen after being taken should not be exposed to freezing temperature or to extremely warm temperature for any length of time.
2. If a syringe is used, be sure the needle and syringe are perfectly dry.
3. Do not fill the tube so full that the insertion of the cork causes pressure.
4. Do not expel the blood through the needle. Disconnect the needle and allow the blood to flow gently from the syringe. forcible expulsion ruptures the blood cells.
5. Collect blood before breakfast, preferably, or before meals. Do not take specimen during digestive period.
6. Allow the specimen to clot in a cool place and keep in the refrigerator until mailing time.
7. Mail specimens so that they will reach the laboratory in the shortest possible time. Avoid mailing on Friday, Saturday or Sunday, or before a holiday.
8. Be sure that the tube is securely stoppered, that the absorbent material has been replaced around the tube and that the mailing container cap is screwed on securely.

In conclusion, I would like to point out that besides the needed expansion in health services in the fields of serology, virology and general bacteriology, there is a need for improvement in the fundamental requirements of the laboratories on the fourth floor of the State House. Their efficiency could be greatly increased by providing a number of the following much-needed improvements:

(1) Adequate gas pressure. (Gas pressure is low. Autoclaves used in sterilizing media and infectious material are brought to proper pressure and temperature with great difficulty and often after a long heating period.)

(2) Adequate water pressure. (Water pressure is often reduced to a mere trickle and many times fails altogether. This has resulted in the burning out of at least one valuable piece of laboratory apparatus.)

(3) An electrical voltage of 120 and 220. (Voltage on the fourth floor falls below 120 and 220 and has made it necessary for some of our electrical machinery to be re-wound to take care of the low voltage.)

(4) A daily supply of 2,000 gallons of 160° F. water. (At the present time the low pressure of gas is further reduced by heating all of our water on the fourth floor. The efficiency could be greatly increased by a centrally located water-heating plant.)

(5) A pressure steam line piped to the fourth floor to our autoclaves used for sterilizing, instead of the present method of making steam by gas heaters. (Such a steam line at present would greatly increase the efficiency of the autoclaves in quickly reaching the proper temperature and pressure.)

Even the remedies of these basic needs are, of course, only temporary palliatives. The need is for modern new quarters, thoughtfully planned to take care adequately of the future growth of the laboratories as reflected by the many requests for services throughout the State.

Report of Bureau of Chemistry

July 1, 1947—June 30, 1948

By JOHN E. BACON, *Chief*

The Bureau of Chemistry makes chemical, bacteriological, microscopical and toxicological examinations of samples of foods, drugs, water, sewage and trade wastes collected by the Department's representatives in the enforcement of the public health laws of New Jersey. The facilities of the laboratory are also extended to local boards of health, the State Department of Education, the Division of Purchase and Property, the State Police, the Fish and Game Commission, the Milk Control Board, state institutions and the State Tax Department. Analyses are also made of various samples of foods and supplies purchased under specifications for institutional use; rural school waters submitted by local boards of education; drinking water, lake and stream water submitted by camps maintained by benevolent associations, and other miscellaneous samples.

Assistance is given to local boards of health and water works laboratories desiring to install chemical control or supplement existing laboratory facilities. Instructions in chemical procedures are given the personnel of such laboratories when requested.

During the past year the drive against unscrupulous manufacturers of mayonnaise, salad dressing and vegetable oils was continued. All brands sold in New Jersey have been resurveyed and 129 samples examined. None was found to contain mineral oil. This substitute for olive, cottonseed and other edible oils has no food value, absorbs Vitamin A from the intestines and interferes with natural elimination.

Of the 3,600 milk samples examined, 3.1 per cent were found to be below standard, and most of these were below the amount of butter fat declared on the cap, even though above the legal standard of 3 per cent. Some samples were skimmed and contained added water.

There is an increasing tendency on the part of the housewife to use factory-prepared mixtures for piecrusts, cakes, muffins and biscuits. Generally these turn out satisfactory products when used in the home according to directions, and the time saved in preparing the end products indicates they are here to

stay, provided they are manufactured under proper sanitary conditions. Most brands of these ready-mixes sold in New Jersey have been collected and examined during the past year. Twenty-one per cent of those assayed have shown the presence of filth and/or insect infestation. Most of these cereal products are manufactured by concerns out of the State, over which the New Jersey State Department of Health has no jurisdiction, and corrective measures at places of manufacture must be instituted either by the responsible state health officials or by the Federal Food and Drug Administration.

In last year's annual report, mention was made that only in a small area having a 15-mile radius around the town of Glassboro in South Jersey do the public water supplies of New Jersey contain sufficient fluorine to be beneficial in inhibiting dental caries. These supplies are all deep artesian wells, contain fluorine not exceeding two parts per million and represent less than 4 per cent of the 270 public water supplies.

The following tabulation of the monthly fluorine content of these "high fluorine waters" of New Jersey over a four-month period shows appreciable variation in the samples collected at different times, being much lower in the early spring than in the late fall.

FLUORINE CONTENT OF SAMPLES COLLECTED
(PARTS PER MILLION)

Towns	FLUORINE CONTENT OF SAMPLES COLLECTED (PARTS PER MILLION)				% Variation bet. Max. & Min. F. Content
	Nov. '47	Jan. '48	Feb. '48	March '48	
Clarksboro	1.10	0.90	0.80	0.80	27%
Glassboro	1.32	1.30	...	0.50	62%
Mantua	1.10	0.80	0.80	0.70	36%
Mullica Hill	1.10	1.10	1.00	0.85	23%
Pitman (N. J. Conference Camp Meeting)	1.20	1.20	0.90	0.90	25%
Pitman (Water Dept.)	0.95	1.40	1.40	0.75	46%
Wenonah	0.95	0.90	0.90	0.45	53%
Woodbury	1.40	0.22	0.90	0.45	84%
Woodstown	2.00	1.50	1.80	0.75	63%

There were 15,270 samples of food, drugs, water, sewage and miscellaneous preparations examined during the past year. The following tabulations show in detail the number and nature of such analyses.

TABLE I
SAMPLES ANALYZED IN WATER AND SEWAGE LABORATORY—JULY 1, 1947, TO JUNE 30, 1948

Months	Public Water Supplies	Pay Samples	Miscellaneous Samples	Camp Samples	State and County Institution Samples	Dairy Samples	Bottled Water Samples	School Supplies	Bathing Waters and Swimming Pools	Stream Samples	Sewage Samples	Trade Waste	Surf Samples	Sand Samples	Experimental Samples	Total
July	698	33	156	98	35	3	22	19	11	20	1	3	1	1	13	1,110
August	485	45	84	26	11	4	15	3	8	80	5	3	1	1	11	781
September	465	16	87	2	14	12	9	116	8	149	60	26	3	3	12	976
October	406	14	105	2	15	..	..	57	1	99	58	22	..	..	12	793
November	295	45	74	..	25	3	..	66	..	1	57	14	..	..	6	587
December	367	20	64	..	13	..	5	57	..	2	3	9	..	..	8	548
1948	276	11	58	..	16	8	..	40	..	1	43	5	..	..	95	553
January	289	15	57	..	11	5	..	68	..	2	1	1	..	..	33	483
February	476	54	68	1	13	3	10	68	..	4	2	4	..	..	5	700
March	508	16	83	3	17	3	..	27	..	17	16	2	..	..	7	711
April	388	15	100	2	7	5	..	42	..	22	47	..	..	..	18	725
May	344	14	101	35	12	2	22	34	12	64	34	59	140	..	31	904
June	4,997	298	1,037	169	189	50	83	631	85	461	327	145	140	8	251	8,871
Totals	4,997	298	1,037	169	189	50	83	631	85	461	327	145	140	8	251	8,871

DEPARTMENT OF HEALTH

TABLE II

NUMBER AND CHARACTER OF SAMPLES EXAMINED IN FOOD AND DRUG LABORATORY—
JULY 1, 1947, TO JUNE 30, 1948

<i>Foods</i>	<i>Above Standard</i>	<i>Below Standard</i>	<i>Total</i>
Milk—chemical	3,490	113	3,603
Milk—bacteriological	30	..	30
Milk—phosphatase	498	73	571
Goat's milk—chemical	6	1	7
Goat's milk—phosphatase	1	..	1
Chocolate milk—chemical	107	4	111
Chocolate milk—phosphatase	9	..	9
Chocolate drinks	2	..	2
Buttermilk	1	..	1
Cream—sweet	97	1	98
Cream—sour	34	..	34
Ice cream	266	4	270
Sherberts	..	4	4
Butter	126	17	143
Carbonated beverages	369	21	390
Fruit syrups and fruit drinks	5	6	11
Tomato products	136	35	171
Cranberry sauce	4	2	6
Soy sauce	76	..	76
Ground beef	196	19	215
Vegetable and salad oils	12	..	12
Salad dressing and mayonnaise	43	..	43
Olive oil	74	2	76
Fruit cakes	6	4	10
Canned blueberries	7	..	7
Cracker meal	5	2	7
Bread	4	1	5
Flour	..	6	6
Piecrust mix	32	1	33
Cake mix	23	2	25
Muffin and biscuit mix	29	17	46
Miscellaneous cereal mixes	13	6	19
Miscellaneous food samples	25	11	36
Total food samples	5,726	352	6,078
<i>Drugs</i>			
Alkali solution	9	..	9
Extract of witch hazel	29	6	35
Marihuana leaves	1	..	1
Sulfathiazole tablets	6	..	6
Tincture of iodine	32	11	43
Epsom salts	3	..	3
Total drug samples	80	17	97
Urinalyses	47	..	47
Blood counts	125	..	125
Blood smears	44	..	44
Miscellaneous and experimental	8	..	8
Total	6,030	369	6,399

Report of the Bureau of Engineering and Sanitation

July 1, 1947—June 30, 1948

By H. P. CROFT, C. E., Chief

The inflated costs of materials and manpower are factors seriously impeding the construction of much-needed sewage and industrial waste treatment works throughout the State. Reference is made to the following table wherein it will be noted that the Department acted upon plans and specifications providing for the estimated expenditure of \$14,296,577.88 necessary to complete 102 projects. However, only \$3,831,496.98 was expended on actual construction—primarily sewer extensions and/or alterations and additions to existing installations—covering 66 projects for which permits issued. The construction of 36 projects—new sewer systems and appurtenant treatment works—for which permits issued and providing for the estimated expenditure of \$10,465,080.90 were not started during the year due to the fact that bids submitted were greatly in excess of engineers' estimates.

The costs of construction of water supply and treatment facilities do not reflect the same conditions as apply to sewage treatment. During the year, permits issued upon 59 water projects requiring an estimated expenditure of \$1,968,027.10, of which \$1,582,271.10 was either earmarked or actually expended for the completion of 56 installations (new supply sources or improvements to existing supplies). Only three projects were not started during the year. Two of the projects not started provided for complete replacement of existing treatment facilities at an estimated cost of \$378,256.

DEPARTMENT OF HEALTH

NUMBER OF WATER AND SEWERAGE PROJECTS EXAMINED AND APPROVED FROM
JULY 1, 1947 TO JUNE 30, 1948

Type of Projects	No. of Projects	No. of Plans	Engineers' Estimates of Costs
<i>Water:</i>			
Alterations, improvements and additions to waterworks	54	146	\$1,305,937.50
New systems and supplies	5	28	662,089.60
Total	59	174	\$1,968,027.10
<i>Sewage:</i>			
Sewer extensions	43	79	\$469,957.40
Alterations and additions to sewerage systems, sewage and/or industrial waste treatment plants	42	436	7,461,435.84
New sewage and/or industrial waste treatment plants, systems and appurtenances..	17	432	6,365,184.64
Total	102	947	\$14,296,577.88
Totals	161	1,121	\$16,264,604.98
Total of engineers' estimates of costs for the fiscal year ending June 30, 1937			\$6,357,788.33
Total of engineers' estimates of costs for the fiscal year ending June 30, 1947			\$10,230,671.32

MAN-HOURS IN FIELD ON: SEWAGE, INDUSTRIAL WASTES,
STREAM POLLUTION

As hereinafter referred to, the Department's activities in stream pollution control are governed by certain laws, rules and regulations and policies lodging enforcement responsibility in the State Department of Health. There follows a summary of the man-hours spent by Bureau representatives in these enforcement activities:

BUREAU OF ENGINEERING AND SANITATION

MAN-HOURS IN FIELD ON SEWAGE, INDUSTRIAL WASTES AND STREAM POLLUTION

Drainage Basin	Sewage and Industrial Waste Treatment Plants	Stream Surveys	Investigation of Complaints	Special: Factory Sites: (a) State Agencies; (b) Bathing Waters (c)	Conferences: Interstate Sanitation Comm.; Federal and State Agencies; Incidents and Other Issues	Total Hours All Bins
Delaware River	574	286	47	31 (b)	59	997
Raritan River	459	529	..	5 (a)	30	1,063
Passaic River	148	22	94	40 (b)	..	286
Hackensack River	93	34	31	..	22	183
Atlantic Coastal Plain	281	7	38	25 (a)	..	553
Other rivers	31	29	..	213 (c)	14	121
Special works	26	10	..	11 (a)	32	121
				18 (b)	939	975
Total hours	1,612	917	210	343	1,096	4,178
Total hours potable waters	721	533	185	130	829	2,398

MAN-HOURS IN FIELD ON WATER SUPPLY SOURCES AND TREATMENT

<i>Public Water Supplies</i>		
Inspections, including water treatment plants		1,254
Inspections on potable watersheds		2,398
Investigations of complaints		1,399
Conferences		241
<i>Cross-connections</i>		
Inspections of installations		53
Conferences		27
<i>Certification of Interstate Carriers</i>		
Inspections		189
Conferences .....		..
<i>Rural School Supplies</i>		
Inspections		92
Conferences .....		..
Total hours		5,653

SUMMARY OF MAN-HOURS

(1) In field on sewage, industrial wastes, stream pollution (less potable watersheds)	1,781
(2) In field on water supplies and supply sources (including potable watersheds)	6,653
(3) Man-hours required in office on plans, reports, conferences, etc.	13,028
Total man-hours	21,462
(4) Total man-hours overtime, field and office	3,688
Total man-hours expended	25,150

NOTICES AND OTHER LEGAL ACTIONS

Incident to the routine activities of the Bureau is the preparation of various legal documents, including resolutions, notices and orders necessary in the enforcement of certain public health statutes. There follows a summary of such documents prepared in the Bureau during the year, with appropriate references to the statutes involved:

Notices issued:

R. S. 58:10 et seq.	2
R. S. 58:10 et seq. and c. 192, P. L. 1945	1
R. S. 58:11 et seq.	3
R. S. 58:11 et seq., P. L. 1942, c. 308, and Title 26 of the Revised Statutes....	1
R. S. 58:12 et seq.	6
R. S. 58:12 et seq. and Title 26 of Revised Statutes	1
Orders of Necessity issued (R. S. 40:1-16, g)	9

Cases referred to Department of Law for violation of:

R. S. 58:12 et seq.	2
R. S. 58:11-14 et seq.	2
Chancery Court decrees	2

Cases withdrawn from Department of Law for violation of:

R. S. 58:10 et seq.	1
P. L. 1918, c. 23, and P. L. 1946, c. 295	1

Notices rescinded:

R. S. 58:11 et seq.	4
R. S. 58:11 et seq., P. L. 1942, c. 308, and Title 26 of the Revised Statutes ...	1

Permits rescinded and revoked:

Establishment of factories on potable watersheds	6
Public water supplies	5
Public sewerage works	6

Records of Department transferred and/or changed:

Public sewerage works	1
Public water supplies	5
Application for approval of public water supply denied	1
Licenses of sewage treatment plant operators revoked	2

ORDERS OF NECESSITY

Orders of Necessity, so-called, were issued pursuant to R. S. 40:1-16, subdivision "g," and R. S. 58:12, in order that certain municipalities might exceed their statutory limitations of debt in order to construct sewerage facilities necessary to prevent or suppress present menaces to the public health. A summary of the orders issued follows:

August 15, 1947—City of Camden. The order requires the construction of sewerage works comprising intercepting sewers, pumping stations and sewage treatment plants.

August 15, 1947—Borough of Manville. The order requires the construction of sanitary sewer extensions.

December 5, 1947—Borough of Seaside Park. The order requires the construction of a new sewage treatment plant.

December 15, 1947—Borough of Bergenfield. The order requires the construction of additions and alterations to the sewage treatment plant operated jointly by the Boroughs of Bergenfield and Dumont.

December 15, 1947—Borough of Dumont—The order requires the construction of additions and alterations to the sewage treatment plant operated jointly by the Boroughs of Bergenfield and Dumont.

December 16, 1947—Borough of Fairlawn. The order requires the construction of sanitary sewer extensions as approved by the Passaic Valley Sewerage Commission.

December 22, 1947—Borough of West Cape May. The order requires the construction of sanitary sewers and a sewage ejector station to provide for the discharge of sewage from the Borough of West Cape May to the sewerage system of the City of Cape May, pursuant to agreement dated September 22, 1947, between those two municipalities.

March 1, 1948—Borough of Magnolia. The order requires that the borough construct a comprehensive sewer system and pumping station in accordance with plans approved by the Department on November 14, 1947.

May 6, 1948—Township of Haddon. The order requires that the township complete the construction of the new Westmont sewage treatment plant; and, the construction of a pumping station and force main designed to discharge sewage collected in the Bluebird section of the township to the proposed new Westmont sewage treatment plant thus effecting the abandonment of the Bluebird sewage treatment plant.

LICENSING ACT

R. S. 58:11-14 et seq. provides for the examination and licensing, under the direction of the State Department of Health, of superintendents or operators of public water treatment plants, public sewerage treatment plants and public water supply systems.

In accordance with the provisions of the legislation referred to, a Board of Examiners is appointed annually to supervise the examining of applicants for licenses.

There follow data upon licensing during the fiscal year ending June 30, 1948:

<i>Applicants</i>	<i>Public Water Treatment Plants</i>	<i>Public Water Supply Systems</i>	<i>Public Sewage Treatment Plants</i>
Examined	38	35	39
Licensed	20	18	24

CROSS-CONNECTIONS

Original cross-connection permits were issued pursuant to P. L. 1942, c. 308, to the following companies:

<i>Municipality</i>	<i>Permit Holder</i>	<i>Permit No.</i>
Hanover Township	Rowe Manufacturing Company (Whippany Section)	202
Harrison	Nopco Chemical Company	203
Harrison	Nopco Chemical Company	203-A
Keyport	Architectural Tiling Company, Inc.	201
New Brunswick	Cream-O-Land Dairy	204
Paterson	Elvan Properties	86
Perth Amboy	Lehigh Valley Railroad Company	206
Trenton	Fisher Body-Ternstedt Division (General Motors Corporation)	205

ESTABLISHMENT OF FACTORIES WITHIN POTABLE WATERSHEDS

Industrial development within the State of New Jersey, especially in the metropolitan area north of Trenton, has expanded at a rapid rate during the year. The Department, in accordance with the provisions of R. S. 58:10-17 et seq., which provides that "No factory, workshop or place for the manufacture of materials or goods shall be located or established on any watershed in this state above the point at which any public supply of potable water is taken, unless the person responsible for the operation of such factory, workshop or place shall have obtained from the department a written permit to so locate or establish the same," issued 25 permits to applicants requesting permission to establish in conformity with the aforesaid statute.

There follows a list of permits issued during the year, with the names and locations of the manufacturing concerns involved. It will be noted that the majority of the permits were for the establishment of factories on potable watersheds in the northern section of New Jersey.

<i>Location</i>	<i>Name of Concern</i>
Delaware, Township of	George Unfried (slaughterhouse)
Emerson, Borough of	Emerson Cleaners
Emerson, Borough of	Emerson General Manufacturing
Franklin, Township of	Emerswick Paint Company
Hamilton, Township of	Canada Dry Bottling Company of Trenton, Inc.
Hanover, Township of	Maltbie Chemical Company
Hanover, Township of	The Flintkote Company
Hillsborough, Township of (Belle Mead section)	Anthony De Filippis
Hillsborough, Township of	Florenz Packing Company
Hillsdale, Borough of	Mercury Conveyor, Inc.
Hopewell, Township of	Anthony Stellitano (slaughterhouse)
Kenilworth, Borough of	Reduction and Refining Company
Landis, Township of	Kimble Glass Division of Owens-Illinois Glass Co.
New Providence, Borough of	Air Reduction Sales Company
Northvale, Borough of	Bergen Casket Co., Inc.
Park Ridge, Borough of	A & J Ruspini Covered Wire Company
Park Ridge, Borough of	General Distributing Company
Park Ridge, Borough of	Williams Brothers Weaving Co.
Summit, City of	Celanese Corp. of America
Summit, City of	Public Service Electric and Gas Co.
Tenafly, Borough of	The Penetone Corporation
Union, Township of	Carpenter Steel Company
Washington, Borough of	Northern Dyeing Corporation
Wayne, Township of	Rare Earths, Inc.
Westwood, Borough of	Wright Metalcoaters

SANITARY SURVEY OF SEWAGE TREATMENT FACILITIES AND SURF-BATHING WATERS ADJACENT TO MUNICIPALITIES IN RARITAN AND SANDY HOOK BAYS AND OCEAN WATERS ALONG THE NORTH JERSEY ATLANTIC COAST

During June 1948 a comprehensive sanitary survey was made at municipalities within the North Jersey coast recreational area, in order to establish and report upon the bacteriological quality of bathing waters adjacent to this area. Representatives of this Department investigated the operation of the sewage treatment plants and sewer outfalls provided by these municipalities and collected samples of bathing waters adjacent to established beaches within the area in order to determine the bacteriological quality of the waters of Raritan and Sandy Hook Bays and the North Jersey Atlantic Coast used for recreational purposes. There follows a tabulation containing the bacteriological results derived from the examination of the samples. It will be noted that with certain minor exceptions the area in Raritan Bay extending from Lawrence Harbor to Keansburg is classified as unsatisfactory, based upon the bacteriological standards accepted by this Department for comparative purposes in measuring the bacteriological quality of surf-bathing waters.

The State of New Jersey relies upon the recommendations of the Joint Committee on Bathing Places of the Conference of State Sanitary Engineers in classifying bathing waters. These provide, in part, as follows:

"Waters showing a concentration of most probable numbers of coliform organisms" (organisms tested for and used as an index of pollution) "of less than 1000 per 100 ml. are considered in most such areas" (densely populated) "to be fairly acceptable for bathing unless the sanitary survey discloses immediate dangers from human sewage pollution; however, it must be admitted that bathing beaches where the content of coliform organisms runs as high as . . . 2400 per 100 ml. on the basis of most probable numbers, or sometimes even higher, have been used without reported evidence of illness, and this limit . . . is still employed as the criterion of acceptability in some states. The trend is, of course, to reduce bacteria counts where possible by sewage treatment if human sewage is a threat, and the attainment of reasonable progress in this direction is to be hoped for. Allowances must in all cases be made and distinction drawn as to pollution introduced by large bathing loads at outdoor bathing places and pollution derived from sewer discharges or other sources."

In accounting for the pollution evidenced in the Raritan Bay waters it must be noted that there is considerable discharge of polluting material within the metropolitan New York and New Jersey areas. In addition to the discharge of raw sewage by New York City, it is concluded that a major portion of the pollution contributed to the Raritan Bay waters is from the waters of the Arthur Kill, Hudson River and the Narrows. The minor sources of pollution may be from the Raritan River and isolated sources in that area extending from Laurence Harbor to Keansburg and adjacent municipalities.

The State Department of Health adopted a resolution on January 15, 1929, requiring that certain North Jersey seashore municipalities discharging, for good and valid reasons, their domestic sewage into the waters of the Atlantic Ocean, must and shall provide the minimum degree of sewage treatment comprising the methods of sedimentation and chlorination, the settled and disinfected effluent to be discharged into the waters of the Atlantic Ocean through outfall pipes 1,000 feet or more in length. All municipalities along the North Jersey Atlantic Coast having sewer systems have complied with these requirements. With the inception of this provision in 1929 the bacteriological quality of the surf bathing waters along the Atlantic Coast has with a few exceptions steadily improved. The same cannot be said for sewage treatment plants serving municipalities within the Raritan Bay and Sandy Hook Bay areas. The Borough of Keansburg does not provide for satisfactory treatment of its sewage, in accordance with the departmental requirements. It is believed that when it does comply, that a definite improvement will be noted within the Raritan Bay area.

SURF SAMPLES—LAURENCE HARBOR TO BEACH HAVEN BACTERIOLOGICAL DATA FROM SAMPLES COLLECTED ON JUNE 21 AND 22, 1948

Municipality	Location	Tide	Organisms of the Coliform Group	Organisms of the Coliform Group Most Probable Number (M.P.N.) per 100 ml.
Laurence Harbor	Opposite restaurant	Flooding	Pres. 100 in 1 c.c.	16,000+
Laurence Harbor	Opposite restaurant	Ebbing	Pres. 20 in 1 c.c.	3,500
Madison Twp.	Seidler's Beach	Flooding	Pres. 60 in 1 c.c.	9,200
Madison Twp.	Seidler's Beach	Ebbing	Pres. 20 in 1 c.c.	3,500
Keypoint	Main beach at dock	Flooding	Pres. 20 in 1 c.c.	3,500
Keypoint	Main beach at dock	Ebbing	Pres. 100 in 1 c.c.	16,000+
Union Beach	Pine St.	Flooding	Pres. 80 in 1 c.c.	16,000+
Keansburg	Pine St.	Ebbing	Pres. 20 in 1 c.c.	3,500
Keansburg	Laurel Ave.	Flooding	Pres. 40 in 1 c.c.	5,400
Keansburg	Laurel Ave.	Ebbing	Pres. 40 in 1 c.c.	5,400
Keansburg	Carr Ave.	Flooding	Pres. 20 in 1 c.c.	3,500
Keansburg	Carr Ave.	Ebbing	Pres. 20 in 1 c.c.	3,500
Keansburg	Bayview Ave.	Flooding	Pres. 80 in 1 c.c.	16,000
Keansburg	Bayview Ave.	Ebbing	Pres. 20 in 1 c.c.	3,500
Keansburg	Lawrence Ave.	Flooding	Pres. 10 in 1 c.c.	2,400
Keansburg	Lawrence Ave.	Ebbing	Pres. 5 in 50 c.c.	240
Ideal Beach	Brant Ave.	Flooding	Pres. 5 in 5 c.c.	1,100
Ideal Beach	Brant Ave.	Ebbing	Pres. 5 in 50 c.c.	540
Leonardo	Concord Ave.	Flooding	Pres. 4 in 1 c.c.	920
Leonardo	Concord Ave.	Ebbing	Pres. 5 in 50 c.c.	240
Atlantic Highlands	Free Beach	Flooding	Pres. 6 in 1 c.c.	2,400
Atlantic Highlands	Free Beach	Ebbing	Pres. 5 in 50 c.c.	240
Atlantic Highlands	Free Beach	Flooding	Pres. 5 in 50 c.c.	540
Atlantic Highlands	Free Beach	Ebbing	Pres. 4 in 1 c.c.	1,600
Atlantic Highlands	Richards Beach	Flooding	Pres. 8 in 1 c.c.	640
Atlantic Highlands	Richards Beach	Ebbing	Pres. 5 in 50 c.c.	640
Atlantic Highlands	Richards Beach	Flooding	Pres. 6 in 1 c.c.	640

SURF SAMPLES—LAURENCE HARBOR TO BEACH HAVEN BACTERIOLOGICAL DATA FROM SAMPLES COLLECTED ON
JUNE 21 AND 22, 1948—(Continued)

Municipality	Location	Tide	Organisms of the Coliform Group	Organisms of the Coliform Group Most Probable Number (M.P.N.) per 100 ml.
Atlantic Highlands	Richards Beach	Ebbing	Pres. 6 in 1 c.c.	920
Highlands	Atlantic Ave.	Flooding	Pres. 5 in 50 c.c.	1,700
Highlands	Atlantic Ave.	Ebbing	Pres. 10 in 1 c.c.	240
Highlands	Miller St.	Flooding	Pres. 5 in 5 c.c.	1,100
Sea Bright	Miller St.	Ebbing	Pres. 8 in 1 c.c.	170
Sea Bright	Sandless Beach	Flooding	Pres. 5 in 5 c.c.	23
Sea Bright	Sandless Beach	Ebbing	Absent in 5 c.c.	33
Sea Bright	Beach Club	Flooding	Pres. 1 in 5 c.c.	170
Sea Bright	Beach Club	Ebbing	Pres. 5 in 5 c.c.	2
Sea Bright	Peninsula House	Flooding	Pres. 1 in 50 c.c.	49
Sea Bright	Peninsula House	Ebbing	Absent in 5 c.c.	2
North Long Branch	Shipkins Beach	Flooding	Pres. 2 in 5 c.c.	130
North Long Branch	Shipkins Beach	Ebbing	Absent in 5 c.c.	33
Long Branch	Madison Ave.	Flooding	Pres. 4 in 5 c.c.	540
Long Branch	Madison Ave.	Ebbing	Pres. 5 in 50 c.c.	33
Long Branch	Chelsea Baths	Flooding	Pres. 1 in 5 c.c.	9,200
Long Branch	Chelsea Baths	Ebbing	Pres. 3 in 50 c.c.	7.8
			Absent in 5 c.c.	

Long Branch	Atlantic Baths opposite New Atlantic Hotel	Flooding	Pres. 5 in 50 c.c.	130
			Pres. 4 in 5 c.c.	
			Pres. 5 in 50 c.c.	79
			Pres. 3 in 50 c.c.	
			Pres. 3 in 50 c.c.	11
			Pres. 1 in 5 c.c.	
			Pres. 5 in 50 c.c.	49
			Pres. 2 in 5 c.c.	
Elberon	Garfield Terrace	Flooding	Pres. 5 in 50 c.c.	170
Elberon	Garfield Terrace	Ebbing	Pres. 5 in 5 c.c.	13
			Absent in 5 c.c.	
Deal	Phillips Ave.	Flooding	Pres. 5 in 50 c.c.	1,700
Deal	Phillips Ave.	Ebbing	Pres. 10 in 1 c.c.	79
Deal	Marine Place	Flooding	Pres. 5 in 5 c.c.	23
Deal	Marine Place	Ebbing	Absent in 5 c.c.	23
Allenhurst	Corlies Ave.	Flooding	Pres. 5 in 50 c.c.	79
Allenhurst	Corlies Ave.	Ebbing	Pres. 5 in 50 c.c.	33
Asbury Park	8th Ave.	Flooding	Pres. 1 in 5 c.c.	3,500
Asbury Park	8th Ave.	Ebbing	Pres. 20 in 1 c.c.	1,700
Asbury Park	3rd Ave.	Flooding	Pres. 10 in 1 c.c.	2,400
Asbury Park	3rd Ave.	Ebbing	Pres. 5 in 50 c.c.	49
Asbury Park	3rd Ave.	Flooding	Pres. 10 in 1 c.c.	
Asbury Park	3rd Ave.	Ebbing	Pres. 5 in 50 c.c.	
Asbury Park	Wesley Lake Bathing Club	Flooding	Pres. 20 in 1 c.c.	2,200
Asbury Park	Wesley Lake Bathing Club	Ebbing	Pres. 5 in 50 c.c.	240
Ocean Grove	North Pavilion	Flooding	Pres. 5 in 5 c.c.	2,400
Ocean Grove	North Pavilion	Ebbing	Pres. 5 in 50 c.c.	23
Ocean Grove	South Pavilion	Flooding	Pres. 10 in 1 c.c.	3,500
Ocean Grove	South Pavilion	Ebbing	Absent in 5 c.c.	49
			Pres. 20 in 1 c.c.	
			Pres. 5 in 50 c.c.	
			Pres. 2 in 5 c.c.	

SOUP SAMPLES—LAURENCE HARBOR TO BEACH HAVEN BACTERIOLOGICAL DATA FROM SAMPLES COLLECTED ON
JUNE 21 AND 22, 1948—(Continued)

Municipality	Location	Tide	Organisms of the Coliform Group	Organisms of the Coliform Group Most Probable Number (M.P.N.) per 100 ml.
Avon	Norwood Ave.	Flooding	Pres. 5 in 50 c.c.	79
Avon	Norwood Ave.	Ebbing	Pres. 3 in 5 c.c.	
Avon	Opposite outfall	Flooding	Pres. 5 in 50 c.c.	33
Avon	Opposite outfall	Ebbing	Pres. 1 in 5 c.c.	
Belmar	Second Ave.	Flooding	Pres. 2 in 1 c.c.	350
Belmar	Second Ave.	Ebbing	Pres. 3 in 50 c.c.	11
Belmar	Second Ave.	Flooding	Pres. 1 in 5 c.c.	49
Belmar	Second Ave.	Ebbing	Pres. 2 in 50 c.c.	
Belmar	Fifth Ave.	Flooding	Pres. 5 in 50 c.c.	23
Belmar	Fifth Ave.	Ebbing	Absent in 5 c.c.	79
Belmar	South of outfall	Flooding	Pres. 3 in 5 c.c.	
Belmar	South of outfall	Ebbing	Pres. 5 in 50 c.c.	33
Belmar	Sixteenth Ave.	Flooding	Pres. 1 in 5 c.c.	350
Belmar	Sixteenth Ave.	Ebbing	Pres. 2 in 1 c.c.	2
Belmar	Sixteenth Ave.	Flooding	Pres. 1 in 50 c.c.	79
Belmar	Sixteenth Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Ludlow Ave.	Flooding	Pres. 3 in 5 c.c.	13
Spring Lake	Ludlow Ave.	Ebbing	Pres. 4 in 50 c.c.	
Spring Lake	Morris Ave.	Flooding	Absent in 5 c.c.	240
Spring Lake	Morris Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Morris Ave.	Flooding	Pres. 5 in 5 c.c.	17
Spring Lake	Morris Ave.	Ebbing	Pres. 1 in 5 c.c.	
Spring Lake	Morris Ave.	Flooding	Pres. 5 in 50 c.c.	23
Spring Lake	Morris Ave.	Ebbing	Absent in 5 c.c.	4
Spring Lake	Morris Ave.	Flooding	Pres. 1 in 50 c.c.	
Spring Lake	Morris Ave.	Ebbing	Pres. 1 in 5 c.c.	

Spring Lake	South of pavilion	Flooding	Pres. 5 in 50 c.c.	23
Spring Lake	South of pavilion	Ebbing	Absent in 5 c.c.	13
Spring Lake	Pa. Ave.	Flooding	Pres. 4 in 50 c.c.	
Spring Lake	Pa. Ave.	Ebbing	Absent in 5 c.c.	23
Spring Lake	Pa. Ave.	Flooding	Pres. 5 in 50 c.c.	49
Spring Lake	Pa. Ave.	Ebbing	Absent in 5 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 5 in 50 c.c.	33
Spring Lake	Pa. Ave.	Ebbing	Pres. 2 in 5 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 5 in 50 c.c.	13
Spring Lake	Pa. Ave.	Ebbing	Pres. 4 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Absent in 5 c.c.	130
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 4 in 5 c.c.	13
Spring Lake	Pa. Ave.	Ebbing	Pres. 4 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Absent in 5 c.c.	33
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	4,5
Spring Lake	Pa. Ave.	Flooding	Pres. 2 in 50 c.c.	79
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 3 in 5 c.c.	13
Spring Lake	Pa. Ave.	Ebbing	Pres. 4 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Absent in 5 c.c.	33
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 2 in 50 c.c.	4,5
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	79
Spring Lake	Pa. Ave.	Flooding	Pres. 3 in 5 c.c.	130
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 4 in 5 c.c.	49
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 2 in 5 c.c.	2
Spring Lake	Pa. Ave.	Ebbing	Pres. 1 in 50 c.c.	33
Spring Lake	Pa. Ave.	Flooding	Absent in 5 c.c.	
Spring Lake	Pa. Ave.	Ebbing	Pres. 5 in 50 c.c.	0
Spring Lake	Pa. Ave.	Flooding	Pres. 1 in 5 c.c.	17
Spring Lake	Pa. Ave.	Ebbing	Pres. 4 in 50 c.c.	
Spring Lake	Pa. Ave.	Flooding	Pres. 1 in 5 c.c.	0
Spring Lake	Pa. Ave.	Ebbing	Absent in 50 c.c.	

DEPARTMENT OF HEALTH

Organisms of the Coliform Group Most Probable Number (M.P.N.) per 100 ml.

Organisms of the Coliform Group

Municipality	Location	Tide	Organisms of the Coliform Group	Organisms of the Coliform Group Most Probable Number (M.P.N.) per 100 ml.
Bay Head	.....200 feet south of Bridge Ave.	.....Flooding	Pres. 2 in 50 c.c.	6.8
Bay Head	.....200 feet south of Bridge Ave.	.....Ebbing	Pres. 1 in 5 c.c.	
Mantoloking	.....Williams Place	.....Flooding	Pres. 2 in 50 c.c.	6.8
Mantoloking	.....Williams Place	.....Ebbing	Pres. 1 in 5 c.c.	
Mantoloking	.....Lyman Place	.....Flooding	Pres. 4 in 50 c.c.	17
Mantoloking	.....Lyman Place	.....Ebbing	Pres. 1 in 5 c.c.	2
Mantoloking	.....Lyman Place	.....Flooding	Absent in 5 c.c.	
Mantoloking	.....Lyman Place	.....Ebbing	Pres. 4 in 50 c.c.	13
Lavallette	.....President Ave.	.....Flooding	Absent in 5 c.c.	2
Lavallette	.....President Ave.	.....Ebbing	Pres. 1 in 50 c.c.	
Lavallette	.....President Ave.	.....Flooding	Pres. 3 in 50 c.c.	7.8
Lavallette	.....President Ave.	.....Ebbing	Absent in 5 c.c.	0
Seaside Heights	.....Kearney Ave.	.....Flooding	Absent in 50 c.c.	0
Seaside Heights	.....Kearney Ave.	.....Ebbing	Absent in 5 c.c.	
Seaside Heights	.....Old Casino, Sherman Ave.	.....Flooding	Absent in 50 c.c.	0
Seaside Heights	.....Old Casino, Sherman Ave.	.....Ebbing	Pres. 1 in 5 c.c.	1.8
Seaside Park	.....Decatur Ave.	.....Flooding	Pres. 4 in 50 c.c.	13
Seaside Park	.....Decatur Ave.	.....Ebbing	Absent in 5 c.c.	
Seaside Park	.....Decatur Ave.	.....Flooding	Pres. 3 in 50 c.c.	7.8
Seaside Park	.....Decatur Ave.	.....Ebbing	Absent in 5 c.c.	
Seaside Park	.....Below Cottage Group	.....Flooding	Pres. 3 in 50 c.c.	7.8
Seaside Park	.....Below Cottage Group	.....Ebbing	Absent in 5 c.c.	
Seaside Park	.....Below Cottage Group	.....Flooding	Pres. 1 in 50 c.c.	2
Seaside Park	.....Below Cottage Group	.....Ebbing	Absent in 5 c.c.	
Barnegat City	.....8th St.	.....Flooding	Pres. 3 in 50 c.c.	14
Barnegat City	.....8th St.	.....Ebbing	Pres. 2 in 5 c.c.	
Barnegat City	.....8th St.	.....Flooding	Absent in 50 c.c.	0
Barnegat City	.....8th St.	.....Ebbing	Absent in 5 c.c.	

BUREAU OF ENGINEERING AND SANITATION

Barnegat City	.....8th St.	.....Ebbing	Pres. 1 in 50 c.c.	2
Barnegat City	.....8th St.	.....Flooding	Absent in 5 c.c.	
Harvey Cedars	.....78th St.	.....Flooding	Absent in 50 c.c.	0
Harvey Cedars	.....78th St.	.....Ebbing	Absent in 5 c.c.	
Harvey Cedars	.....78th St.	.....Flooding	Absent in 50 c.c.	0
Harvey Cedars	.....78th St.	.....Ebbing	Absent in 5 c.c.	
Surf City	.....14th St.	.....Flooding	Absent in 50 c.c.	0
Surf City	.....14th St.	.....Ebbing	Absent in 5 c.c.	
Surf City	.....14th St.	.....Flooding	Absent in 50 c.c.	0
Surf City	.....14th St.	.....Ebbing	Absent in 5 c.c.	
Ship Bottom-Beach Arlington	.....20th St.	.....Flooding	Absent in 50 c.c.	0
Ship Bottom-Beach Arlington	.....20th St.	.....Ebbing	Absent in 5 c.c.	
Ship Bottom-Beach Arlington	.....20th St.	.....Flooding	Pres. 1 in 50 c.c.	4
Ship Bottom-Beach Arlington	.....20th St.	.....Ebbing	Pres. 1 in 5 c.c.	
Brant Beach	.....38th St.	.....Flooding	Pres. 1 in 50 c.c.	2
Brant Beach	.....38th St.	.....Ebbing	Absent in 5 c.c.	
Brant Beach	.....38th St.	.....Flooding	Pres. 3 in 50 c.c.	7.8
Brant Beach	.....38th St.	.....Ebbing	Absent in 5 c.c.	
Beach Haven Crest	.....Hobart Ave.	.....Flooding	Pres. 3 in 50 c.c.	7.8
Beach Haven Crest	.....Hobart Ave.	.....Ebbing	Absent in 5 c.c.	
Beach Haven Crest	.....Hobart Ave.	.....Flooding	Pres. 1 in 50 c.c.	4
Beach Haven Crest	.....Hobart Ave.	.....Ebbing	Pres. 1 in 5 c.c.	
Beach Haven Park	.....Kansas Ave.	.....Flooding	Pres. 2 in 50 c.c.	6.8
Beach Haven Park	.....Kansas Ave.	.....Ebbing	Pres. 1 in 5 c.c.	
Beach Haven Park	.....Kansas Ave.	.....Flooding	Pres. 2 in 30 c.c.	4.5
Beach Haven Park	.....Kansas Ave.	.....Ebbing	Absent in 5 c.c.	
Beach Haven Terrace	.....Maryland Ave.	.....Flooding	Pres. 1 in 50 c.c.	2
Beach Haven Terrace	.....Maryland Ave.	.....Ebbing	Absent in 5 c.c.	
Beach Haven Terrace	.....Maryland Ave.	.....Flooding	Pres. 1 in 50 c.c.	2
Beach Haven Terrace	.....Maryland Ave.	.....Ebbing	Pres. 1 in 50 c.c.	
Spray Beach	.....23rd St.	.....Flooding	Pres. 2 in 50 c.c.	4.5
Spray Beach	.....23rd St.	.....Ebbing	Absent in 5 c.c.	
Spray Beach	.....23rd St.	.....Flooding	Absent in 50 c.c.	0
Spray Beach	.....23rd St.	.....Ebbing	Absent in 5 c.c.	
North Beach Haven	.....11th St.	.....Flooding	Pres. 1 in 50 c.c.	2
North Beach Haven	.....11th St.	.....Ebbing	Absent in 5 c.c.	
North Beach Haven	.....11th St.	.....Flooding	Pres. 2 in 50 c.c.	4.5
North Beach Haven	.....11th St.	.....Ebbing	Absent in 5 c.c.	
Beach Haven	.....Center St.	.....Flooding	Absent in 50 c.c.	0
Beach Haven	.....Center St.	.....Ebbing	Absent in 5 c.c.	
Beach Haven	.....Center St.	.....Flooding	Pres. 1 in 50 c.c.	4
Beach Haven	.....Center St.	.....Ebbing	Pres. 1 in 5 c.c.	

THE DISPOSAL OF GROUND GARBAGE IN SEWERAGE SYSTEMS

About 15 years ago some sanitary engineering and public health authorities became actively interested in the practicability of disposing household garbage through domestic plumbing systems, thence into public sanitary sewer systems. After considerable research work had been done, some manufacturers proceeded to promote the household garbage grinder. By 1941, when the United States entered World War II, the household garbage grinder was being widely advertised as a desirable and practical household appliance. The restrictions upon the domestic economy produced by the war required the suspension of the manufacturing of this equipment.

During the past two years the promoters of the household garbage grinders have become active again. Interest has grown to such an extent that at the present time there are eight or ten manufacturers of household garbage grinders. Active competition has entered the field and vigorous sales promotion campaigns are being made. It became apparent to this Bureau that some information should be released by it on the subject of the disposal of ground garbage in sewerage systems. An article was prepared by members of the staff which will appear in the July, 1948, issue of *Public Health News*. The article was read at a meeting of the South Jersey Sewage Operators' Association and generated a general widespread interest in the subject throughout the State. Summarized, the article states:

The Bureau is of the opinion that the streams of this State should not be burdened at this time with an additional pollution load produced by the disposal of ground garbage in sewer lines. The present problem of generally overloaded and inadequate sewage treatment plants in this State would be intensified greatly by the addition of ground garbage to the sewers. It is well established that ground garbage can be treated with domestic sewage in some of the standard types of sewage treatment plants. Sanitary engineering has the "know-how" to do the job. The public should be told that it is going to cost a lot of money to build, maintain, and operate treatment plants for the disposal of ground garbage.

The purpose here is not to oppose or promote the use of garbage grinders, but to bring to light the fact that a real problem is involved. Municipalities owning sewage treatment plants now overloaded and approaching their capacities must anticipate an additional investment in plant expansion if garbage grinders are to be permitted. Provision likewise must be made in new plants if ground garbage is to be treated with sewage.

Any municipality in New Jersey desiring to prohibit household garbage grinders may do so under R. S. 40:63-7 which provides that the governing body of a municipality may, by ordinance, fix and prescribe such conditions and restrictions as to connection with and use of sewers and drains in the municipality, as it may deem proper and necessary.

The following letter was addressed on June 24, 1948, to the Department of Public Works of Greenwich, Connecticut, by the Interstate Sanitation Commission:

"Referring to your inquiry of May 3, regarding the effect of garbage grinders on sewage treatment plants, the subject was discussed by the members of the Interstate Sanitation Commission at their last meeting.

"The Interstate Sanitation Commission will look with disfavor on any increase of the pollution load on the waters of the Interstate Sanitation District.

"The Commission urges that no steps be permitted that may ultimately result in a deterioration of the sewage treatment plant effluent, unless accompanied by both engineering and financial provisions to adapt the treatment to the increased load and thereby avoid any increase of the pollution load on the waters of the Interstate Sanitation Districts."

Report of Bureau of Food and Drugs

July 1, 1947—June 30, 1948

By WALTER W. SCOFIELD, *Chief*

The Bureau of Food and Drugs continued the enforcement of existing laws governing the handling, preparation, storage, distribution and transportation of foods and drugs under sanitary conditions and of laws and regulations designed to prevent the adulteration and misbranding of foods, drugs, devices and cosmetics. In addition, enforcement of a regulation prohibiting the re-use of textile bags as flour containers was delegated to the Bureau.

An act of the Legislature of 1948 defined the drug "amidone" as a narcotic drug and regulated the handling and distribution of the product in the same manner as other narcotic drugs. During the same period, legislation was passed repealing the prohibition on the sale of colored oleomargarine in the State of New Jersey.

Throughout this period, the Bureau of Food and Drugs was confronted with difficult problems in connection with attempts to produce, distribute and sell adulterated or misbranded foods caused by high prices of certain foods and/or shortage of certain foods. During the annual milk shortage in New Jersey in the late summer and early fall, a large number of milk samples were collected and it was found that, in a number of cases, milk had been adulterated by the addition of water. Representative samples of butter were also collected and, in several instances, the butter was found to contain an excessive quantity of moisture with consequent deficiency of butterfat. No cases of substitution of colored oleomargarine for butter were uncovered during this period. The price of meats climbed to a new high and, as a result, there has been a continued demand on the part of consumers for those meat products which are generally sold at lower prices. Large numbers of hamburger steak and sausage samples were collected by agents of this Bureau and reports from our laboratory prove that a high percentage of the samples collected were adulterated by the addition of excessive amounts of fat.

During the routine inspection of all types of food establishments, representatives of the Bureau made careful investigations regarding methods of

storage of raw ingredients used in the manufacturing processes and also investigated the storage of finished products on the premises. In several instances large lots of foods found contaminated by insects or rodents were embargoed and were destroyed or converted into animal feed under the supervision of agents of this Bureau. A special effort was made to improve storage conditions of cereal and grain products, especially in bakeries and similar food establishments.

As in the preceding year the Bureau received a number of requests from drug and cosmetic manufacturers in New Jersey for certificates of approval covering the labeling and manufacturing conditions of products designed for export to certain South and Central American countries. Careful investigations were made in all cases where requests were received and where conditions were found satisfactory, certificates of approval have been issued. A number of certificates were refused where conditions were found unsatisfactory.

The application of one food manufacturer desiring to export foods to a South American country was denied after an inspection of the plant was made.

NEW LEGISLATION AND REGULATIONS

Regulation Governing the Use of Textile Bags as Containers for Flour

Acting under authority contained in section 24:2-1 of the Revised Statutes of New Jersey, the following regulation requiring the use of new textile bags as containers for flour was issued effective January 1, 1948:

"No person, firm, or corporation shall sell, offer or expose for sale, distribute or have in possession with intent to sell or to distribute or to manufacture into food for human consumption in this State, any flour in textile bags that have been used previously."

A survey was made of bakeries and other establishments in which flour was stored in New Jersey and it was found there was general compliance with the above regulation.

An Act to amend the Uniform Narcotic Drug Law and amending section 24:18-2 of the Revised Statutes.

The "new drug," "amidone," identified chemically as 4, 4-Diphenyl-6-Dimethylamino-Heptanone-3, or any salt or form thereof by whatever trade name identified, was found to have narcotic properties and was classified as a narcotic drug by the Bureau of Internal Revenue of the United States Treasury Department. Acting upon the request of the Federal Bureau of Internal Revenue, the Department requested the Legislature to amend the State Uniform Narcotic Law to include in the definitions of this law the indicated

chemical identification for "amidone." As a result of this request, the Legislature passed Senate Bill 249 and the Governor approved this amendment which went into effect immediately.

REPEAL OF COLORED OLEOMARGARINE BAN

For a great many years the citizens of New Jersey were unjustly deprived of the right to purchase oleomargarine which had been artificially colored, even though the sale of butter containing artificial color was permitted by law. There seemed to be no justification for this type of discrimination against a wholesome food product. Consumer groups, housewives and women's organizations exerted great pressure upon the Governor and legislators to repeal the above legislation because a great many people desired to use yellow oleomargarine in place of butter. One of the arguments presented was that uncolored oleomargarine did not appear as palatable as yellow margarine and housewives found it difficult to color the product manually. The extremely high price of butter also accounted for the agitation for repeal of the prohibition on the sale of colored oleomargarine. As a result, legislation was introduced and approved removing the prohibition against the sale of colored oleomargarine.

DAIRY FARM AND MILK PLANT INSPECTION

Title 24, Chapter 10, Revised Statutes of New Jersey, provides for a licensing system, governs the production, handling and distribution of milk, cream and milk products in this State and places upon the State Department of Health the responsibility of assuring the fitness of these articles of food.

P. L. 1938, c. 195, regulates the production, collection, storage, transportation and sale of goats' milk in New Jersey.

Chapter XI of the Sanitary Code, enacted by the State Department of Health on November 10, 1920, and amended on February 3, 1931, outlines the regulations governing the production, distribution and sale of certified milk in New Jersey.

The problem of securing safe milk and milk products for the inhabitants of this State is one which involves the health, happiness and well-being, not only of millions of consumers, but of the operators of milk plants and dairies. The statutes provide for a permit system to control dealers in these articles of food and set up minimum standards covering production and distribution.

Records on file indicate that approximately 97 per cent of the milk and cream offered for sale in New Jersey is pasteurized. Our agents are constantly checking the pasteurization efficiency of the plants to make certain that the milk is properly pasteurized.

During the annual milk shortage in New Jersey in the late summer and early fall, a large number of milk samples were collected and it was found that, in a number of cases, milk had been adulterated by the addition of water. Wherever adulterated samples of milk were collected, hearings were held and, in some instances, proceedings were instituted for the collection of penalties.

Due to insufficient appropriations for travel expenses during this year, inspections of dairy farms and milk plants located outside of New Jersey supplying milk or cream to New Jersey were discontinued during the first half of the year. During the second half of the year it was possible to cause inspections to be made of milk supplies located in the States of New York, Pennsylvania, Delaware and Maryland by agents of this Department. However, lack of funds made it impossible to cause inspections of milk plants and dairy farms supplying cream for manufacture into ice cream located in the States of Wisconsin, Michigan and Indiana during the fiscal year 1947-1948.

During the year, applications were received for permits in states other than New Jersey covering new supplies of milk and cream. The United States Public Health Service offered to certify to inspections of supplies made by officials of the states in which the supplies were located. Requests were made for certifications covering the new applications and in several cases permits were issued or denied based upon these reports.

During this period, Governor Alfred E. Driscoll of New Jersey, Governor Thomas E. Dewey of New York and the late Governor McConaughy of Connecticut, conferred with the object of finding some practical way of exchanging information between the official milk control agencies of the States of Vermont, Connecticut, New York, New Jersey and Pennsylvania covering the sanitary conditions of dairy farms and milk plants. As a result of the conference between the governors, the milk control officials of these states were requested to meet in the offices of the State Department of Health of New York in New York City for the purpose of establishing an interstate commission for reciprocal acceptance of approvals of dairy farms and milk plants. It was agreed that each state should provide at least one experienced milk sanitarian to spend full time, if necessary, in making joint surveys of interstate sources of milk supplies. Under this agreement, the states and cities in this area could and should discontinue routine inspections outside their borders even though they reserve the right to make check inspections of milk sources in other states. The states and cities could then accept with confidence the certification of the state in which the milk supplies are located.

This committee also recommended that each state study its own problem and take such steps by legislation, if necessary, to substitute uniform regulations affecting the inspection of dairy farms and milk plants. This committee also considered at length the specific requirements governing the production of milk on dairy farms and the handling of milk in milk plants, and agreed

upon basic requirements similar to those contained in a code known as the "Northeastern States Regulations," agreed upon in conferences held in 1944. There seems to be no obstacle in the way of the State Department of Health of New Jersey participating in this interstate milk commission excepting that minor changes should be made in the laws of New Jersey authorizing this State to participate in the work of such a commission.

Until the definite organization of the proposed interstate milk commission, comprising the States of Vermont, Connecticut, New York, New Jersey and Pennsylvania, is completed and is operating, this Department has advised the United States Public Health Service that it desires to receive information regarding milk supplies located in the above-mentioned states. This Bureau will continue to request information from the United States Public Health Service regarding sanitary conditions of milk and cream supplies not covered by the proposed interstate milk commission.

The following table shows the number of inspections of milk plants and dairy farms made by representatives of this Department during the year:

<i>State</i>	<i>Number of Inspections of Milk Plants</i>	<i>Number of Inspections of Dairies</i>
Delaware	6	98
Maryland	19	235
New Jersey	1,818	4,524
New York	52	953
Pennsylvania	78	1,574
	1,973	7,384

In examining the farmers' milk as delivered to milk plants, 5,852 sediment tests and 10,041 Breed smears were taken.

The following table shows the number of reports of inspections of milk plants received from local boards of health of this State:

<i>State</i>	<i>Number of Inspections of Milk Plants</i>
Delaware	1
New York	3
Pennsylvania	3
	7

SANITATION OF BAKERIES AND PUBLIC EATING PLACES

Agents of the Bureau of Food and Drugs continued with routine sanitary inspections of all bakeries in the State and public eating establishments located in cities, towns and boroughs. Besides investigating sanitary conditions within these food establishments, considerable attention was paid to the methods of storage of raw ingredients used in the manufacture of foods and to the storage of finished products.

During the year, 2,095 inspections have been made of bakeries and 2,310 inspections have been made of public eating establishments. Letters of advice and/or warnings in those cases in which violations of the laws were reported were forwarded to the operators by the Bureau. Reinspections have been made where warning letters have been sent. In those cases in which little or no improvement was found upon reinspection, the proprietors have been given opportunities to appear to show cause why legal action should not be taken against them for violations of the State laws. In certain cases, prosecutions were ordered after repeated warnings had been given.

Agents of the Bureau continued to educate operators of food establishments in an effort to reduce insect and rodent infestation within their plants. In several instances large lots of food were found to be grossly contaminated by insects, rodents or foreign material. They were embargoed and either destroyed or converted into animal feed under the supervision of agents of this Bureau. Quantities of foods which had deteriorated and spoiled were also seized and destroyed by agents of the Bureau.

Enforcement of the Flour and Bread Enrichment Act, enacted into law on July 1, 1946, was also continued. This act prescribes minimum standards of vitamin and mineral content for white flour, white bread and rolls, and provides for the enrichment thereof by the addition of certain vitamins and other ingredients, in addition to exempting certain flour to be resold or used in products other than white bread or rolls. Regulations adopted under powers granted by the act were also enforced by agents of the Bureau. Compliance with the law and regulations governing the enrichment of white flour and white bread and rolls was excellent throughout the State.

SUMMARY OF ARTICLES OF FOODS CONDEMNED AND DESTROYED, WHICH WERE FOUND TO BE ADULTERATED

<i>Article</i>	<i>Amount</i>
Baking ingredients	603 pounds
Bologna casings	2,391 pounds
Bread crumbs	785 pounds
Candy	2,860 pounds
Canned goods	448 cans
Cereal products	1,416 pounds
Dried fruits and vegetables	992 pounds
Eggs (frozen)	30 pounds
Fat	35 pounds
Flavors	10 pounds
Flour	80,639 pounds
Fresh fruits	44 pounds
Grain	75 pounds
Ice cream	38 quarts
Meats	64 pounds
Milk	80 quarts
Milk (powdered)	1,325 pounds
Miscellaneous	167 pounds
Miscellaneous	21 jars
Salt	15 pounds
Spices	900 pounds
Sugar	20 pounds

SLAUGHTERHOUSE AND MEAT INSPECTION

During the year, 635 inspections of 166 slaughterhouses were made by the veterinarian assigned to this work, and the animals and dressed meats found there at the time examined.

In several instances unsatisfactory practices were observed in the handling and storage of meats and meat products. Emphasis has also been placed upon the proper disposal of solid and liquid wastes resulting from the slaughtering operations. In several instances operators were given orders to cease operations and abate nuisances caused by improper disposal of the wastes before resuming operations.

Sausages, bolognas, frankfurters, etc., are prepared in establishments not licensed by the State Department of Health. However, these plants are inspected periodically by the veterinarian of the Department for sanitation of the establishments and for the methods used in the preparation of the meat products. The meat may be subjected to a curing process with brine prior to grinding. In the inspection of these establishments, the salt used in making the brine was examined to determine whether or not it was filthy and recommendations were made to store the salt in such a manner that it would not

be contaminated with filth. Operators were also instructed to prepare and hold the brine so that it would not be contaminated with filth. In the case of several types of sausages and frankfurters, intestines of animals are used as containers for ground meat. During the past year, agents of this Bureau have inspected the manner in which these casings were being cleaned prior to use as containers for ground meat. In certain instances, it was found that casings were not being cleaned properly and that filthy casings were being used as containers for these food products.

Operators of these ground meat preparing establishments have been instructed: (1) that the rooms and all equipment and utensils used in the handling of meat are to be kept in a clean condition and are to be thoroughly cleaned at the end of the operation of each day; (2) all ingredients used in the food products are to be stored in such a manner that they are not contaminated with dirt or filth; (3) meat which is to be ground is to be trimmed in a manner that will remove contamination before it is ground; (4) the meat is to be handled in such a manner as to eliminate as much handling with human hands as is possible; (5) the meat is to be thoroughly chilled prior to grinding; (6) cooked ground meat products which are to be consumed as sold, should be heated in the meat processing plant to temperatures sufficiently high to destroy micro-organisms and to allow an ample margin of safety above the theoretical temperatures required for this destruction; and (7) only clean ice, frozen from potable water, is to be added in the process of grinding and the quantity of ice added is to be limited to the minimum necessary to facilitate grinding.

Thirty-five inspections of these plants were made during the year.

	MEAT INSPECTIONS		Condemned	
	<i>Passed for Food</i> Carcasses	Pounds	Carcasses	Pounds
Beef	326	4,300	2	..
Calves	36	..	..	..
Lamb .....	..	..	..	55
Pork	257	8,050	..	45
Sheep	8	..	..	..

DRUGS

Many large firms manufacturing drugs and/or cosmetics have located in New Jersey during recent years. Many of these firms hope to export an appreciable amount of their products to Central and South American countries. Due to frauds and deceptive practices of a few unscrupulous manufacturers in past years who exported drugs and/or cosmetics which were grossly adulterated and/or misbranded, several of the countries have recently adopted

stringent regulations governing the importation of these products into the countries. They are demanding certificates of approval from national, state or local health authorities indicating: (a) that the products intended for export comply with federal, state or local laws; (b) that these same products are freely sold in the country of origin; (c) that they do not differ in strength or purity from the products as sold in the country of origin; (d) that they are not adulterated or misbranded; and (e) that they are manufactured under sanitary conditions.

Manufacturers engaged in the exportation of these products applied to federal agencies for assistance in securing the necessary certificates of approval. However, federal agencies were unable to comply with these requests due to the lack of specific federal laws authorizing such action. A number of manufacturers located in New Jersey then applied to the Department of Health for such certificates. This Bureau made most careful investigations in all cases and where conditions were found satisfactory, certificates were issued.

It is our opinion that existing federal laws should be amended to authorize some federal agency to issue certificates of approval for the exportation of drugs to foreign countries requiring such certificates as such matters pertain to the business between the United States Government and foreign countries.

DAINGEROUS DRUGS

A number of drugs have been classified as "dangerous drugs" by the Federal Food and Drug Administration and the New Jersey State Department of Health, due to their toxic or habit forming qualities. These preparations should not be sold except on the prescriptions of physicians and should not be used except under their supervision. Agents of this Bureau have been instructed to visit drug stores and request certain of these "dangerous drugs" without presenting prescriptions. In several cases, they were sold to the agents. In general, containers were not marked with adequate directions for use and/or with adequate warnings necessary for the protection of users, as required by laws of this State. Prosecutions have been instituted in a number of instances.

SHELLFISH CONTROL

During this period, the Shellfish Division carried out the usual investigations of all the waters used in connection with the production of shellfish. Sanitary inspections were made of establishments in which shellfish are handled. A large number of samples of water and shellfish were examined.

The Bureau received requests to make surveys of the waters of Sandy Hook Bay to ascertain whether or not it was possible to open certain areas which had been condemned because of pollution. It was represented that

steps had been taken to prevent the contamination of these waters. After thorough examination, the results proved that it was not possible for the Department to open any of the condemned areas.

The attention of the Bureau was directed to additional pollution of certain waters in Atlantic County. Request was made that investigations be made of the areas in which certain portions had been condemned for use in the production and storage of shellfish. A thorough study was made of the sources of pollution and a large number of samples of water collected and examined for the purpose of determining whether or not changes should be made in the areas from which it was legal to take shellfish. The conclusion was drawn that no changes should be made in the open or condemned areas.

Agents of the Bureau have continued to investigate the marking of containers of shellfish offered for sale in this State, for the purpose of ascertaining whether or not such shellfish have been shipped from sources approved by the United States Public Health Service.

During the fiscal year 956 water samples were examined in the laboratory of the boat "Inspector." The boat traveled 765 miles through the various waters of the State. In addition, there were examined in the three field laboratories 196 samples of shell oysters, 345 samples of shucked oysters, 4 samples of frozen oysters and clams, 292 samples of hard clams, 150 samples of soft clams, 26 samples of mussels and 504 samples of water.

The total number of samples subjected to bacteriological analyses were 1,460 water samples and 1,013 shellfish samples, making a grand total of 2,473 samples analyzed.

Inspections were completed as follows: shellfish shipping establishments 1,977; shellfish shucking establishments 140; miscellaneous 5. The grand total of inspections was 2,122.

The Department granted shipping certificates to 480 establishments.

SANITARY INSPECTIONS MADE OF ESTABLISHMENTS WHERE FOODS AND DRUGS ARE PRODUCED, PREPARED, PACKED, STORED OR OTHERWISE HANDLED

	<i>Inspections</i>
Bakeries	2,095
Candy factories	73
Canning factories	158
Cold storage warehouses	432
Dairies	7,384
Dehydration plants	1
Drug manufacturing establishments	36
Drug stores	20
Egg-breaking establishments	31
Flavoring extract plants	2
Flour mills	4
Food markets	596
Food and meat markets	230
Food packing plants	26
Food warehouses	4
Ice cream manufacturing plants	538
Meat markets	53
Meat processing plants	35
Milk plants	1,973
Miscellaneous food plants	5
Non-alcoholic beverage establishments	294
Pickling plants	34
Poultry slaughterhouses	1
Restaurants and hotel kitchens	2,310
Shellfish shipping establishments	1,977
Shellfish shucking establishments	140
Shellfish inspections (miscellaneous)	5
Shrimp cocktail plants	5
Slaughterhouses	635
Soy sauce examinations	72
	19,169

PENALTIES

During the year, \$2,529.25 was collected in penalties and costs for violations of the food and drug laws.

FEES

The following fees were collected during the year for licenses and permits:

615 Milk permits	@ \$25.00	\$15,375.00
17 Goat milk permits	@ 10.00	170.00
1 Goat milk permit	@ 7.50	7.50
1 Goat milk permit	@ 5.81	5.81
27 Ice cream plant licenses	@ 100.00	2,700.00
10 Ice cream plant licenses	@ 50.00	500.00
14 Ice cream plant licenses	@ 25.00	350.00
44 Ice cream plant licenses	@ 10.00	440.00
576 Ice cream plant licenses	@ 5.00	2,880.00
89 Cold storage licenses	@ 10.00	890.00
7 Narcotic drug licenses	@ 50.00	350.00
43 Narcotic drug licenses	@ 5.00	215.00
1,444		\$23,883.31

SAMPLES OF MILK, CREAM, FOODS, DRUGS COLLECTED FOR ANALYSES

	<i>Above Standard</i>	<i>Below Standard</i>	<i>Misbranded</i>	<i>Total</i>
Milk and cream	4,492	194	17	4,703
Foods	1,670	208	48	1,926
Drugs	115	17	54	186
	6,277	419	119	6,815

COLD STORAGE OF FOODS

The Bureau of Food and Drugs enforces the law, rules and regulations governing cold storage and refrigerating warehouses. This statute requires all places artificially cooled to or below 45° F. and in which certain articles of food are placed and held for 30 days or more, to be licensed by the State Department of Health. This law limits the storage period to 12 months excepting in those cases in which permission is granted by the State Department of Health after the articles have been examined and found suitable for additional storage. Agents of the Department make routine inspections of these warehouses to determine sanitary conditions and to determine compliance with the marking requirements of the law.

During the year, unusually large quantities of poultry and fresh meats were held in the cold storage warehouses. A sizable proportion of these foods had been in storage several months at the beginning of this year. An unusual number of requests for permission to store these foods beyond the legal limit of 12 months were received. Each lot of food for which an extension of storage time was requested, was inspected by an agent of the Bureau to determine its suitability for additional storage.

During the year, extensions of time were granted for the storage of articles of food in cold storage, as follows:

<i>Quantity</i>	<i>Article</i>	<i>Extension Granted</i>
58 cartons	Chili Con Carne	3 months
1,195 boxes	Cheese	3 months
14,307 cans	Eggs—frozen whole	3 months
262 boxes	Fish—fresh	3 months
299 cartons	Lard	3 months
1,317 boxes	Poultry	3 months
22 barrels	Poultry	3 months
65 boxes	Cheese	2 months
7 barrels	Fat—beef	2 months
939 boxes	Fish—fresh	2 months
420 boxes	Meats—fresh	2 months
1,126 boxes	Poultry	2 months
60 barrels	Poultry	2 months
100 cartons	Fish	1 month
89 boxes	Poultry	1 month
12 barrels	Poultry	1 month

ANNUAL COLD STORAGE REPORT
1947—1948

Article	July 1947	August 1947	September 1947	October 1947	November 1947	December 1947	January 1948	February 1948	March 1948	April 1948	May 1948	June 1948
Eggs, cases, lbs.	377,235	509,446	270,033	180,079	78,423	10,719	28,009	50,970	130,045	343,391	437,682	437,476
Eggs, broken, lbs.	3,801,213	4,698,729	3,801,213	3,893,098	3,887,169	3,243,202	2,819,896	3,180,047	3,284,225	4,063,807	4,071,682	4,583,983
Cheese, lbs.	4,300,674	4,688,729	4,688,729	3,116,258	5,270,807	5,393,700	4,126,050	3,549,427	2,033,522	3,642,006	2,431,221	2,431,083
Butter, lbs.	3,877,172	4,648,851	3,800,207	3,116,258	5,270,807	5,393,700	4,126,050	3,549,427	2,033,522	3,642,006	2,431,221	2,431,083
Fresh fish, lbs.	9,144,139	8,701,117	7,318,791	10,902,273	11,241,272	11,876,537	13,000,000	9,571,496	7,228,352	188,081	542,667	6,050,231
Fresh fish, cases	21,336,621	20,109,408	16,305,614	13,439,712	17,657,072	25,635,077	27,035,107	20,100,100	17,834,408	6,700,210	6,115,562	1,550,622
Milk and milk products, lbs.	6,371,560	4,727,259	4,211,430	5,116,825	5,536,082	4,035,003	4,032,482	3,393,459	2,360,304	2,838,729	3,522,642	3,362,554
Milk and milk products, cases	5,810,507	5,980,084	4,320,807	6,538,136	2,691,149	1,898,076	1,883,270	870,156	618,326	1,281,019	4,699,387	3,647,013
Meats, lbs.	1,571,830	1,373,254	2,183,039	1,462,202	1,270,523	1,134,004	1,847,807	923,541	836,350	448,984	1,594,434	1,707,058
Meats, cases	1,125	2,406	1,418	1,880	7,096	19,490	6,901	3,382	1,484	2,530	5,241	1,669
Miscellaneous, articles, packages	803,523	1,035,523	906,472	1,307,013	1,398,000	1,693,920	1,170,892	808,480	921,208	801,618	728,133	714,828

Report of the Division of Health Education

July 1, 1947—June 30, 1948

By RALPH T. FISHER, M. P. H., Chief

Created on July 1, 1945, the Division of Health Education has completed the third year of its activities, providing ever-increasing services to the Department and to health agencies in New Jersey. This three-year period has been marked by the development of a three-phase program: health information services, health education materials services and community health organization.

HEALTH INFORMATION SERVICES

Health information services of the Division included regular news releases, radio programs, publication of *Public Health News* and issuance of a house organ and regular specialized news letters. The news release service to the newspapers of New Jersey and adjoining metropolitan areas was widely used and provided a ready means of reaching the public with health information and news of Department activities. Weekly radio programs were conducted using the facilities of radio stations in various parts of the State.

Public Health News has been issued monthly since the July 1947 issue. A change of format in 1947 from single to double columns made possible a 40 per cent increase in the amount of copy per issue. Continuance of this format on a monthly basis provided a 280 per cent increase in amount of copy. The mailing list of 6,000 persons has been revised and provides a directed circulation to health and civic leaders and groups throughout the State, making *Public Health News* an effective medium for health promotion in New Jersey. *Office, Field and Lab*, a monthly house organ, served as a means of disseminating health information to Department employees.

HEALTH EDUCATION MATERIAL SERVICES

A large portion of the time and effort of the Health Education Division was used in providing specific health education material and related services to the Department and to health agencies. The Health Education Workshop,

equipped for production of silk screen posters, charts, illustrations, exhibits and other graphic materials, was staffed by a commercial artist and a technical assistant. Complete photographic and dark room equipment is available, but the staff does not include a photographer.

Four new display units were built in the Health Education Workshop and a large cancer exhibit featuring a transparent mirror was built commercially. Eighteen major exhibits and a number of smaller ones were held throughout the State and a week-long nutrition exhibit was shown at the State Fair.

The print shop, equipped with three multilith presses, power folder and power cutter and staffed by two operators, more than doubled its output over the previous year. Two Vari-typer machines and an Electro-matic writing machine were used in production of printed materials. In many cases art work was combined with Vari-typer composition in production of materials which were printed in the shop. Four new three-color posters were produced and ten new health education pamphlets. The largest job done was a 20-page plastic bound booklet in five colors with cover, "X-ray, the Picture of Health," produced for the Division of Tuberculosis Control. The monthly *Industrial Health Bulletin* was produced for the Division of Adult and Industrial Health. Departmental forms are being printed in increasing numbers, in addition to the health education materials. The print shop passed the three-million mark in the number of printed materials turned out before the close of the fiscal year.

Warehousing and shipping facilities for printed materials was provided for the Department and drugs were stored and distributed for the Division of Venereal Disease Control. In addition to this, some office supplies were also stored at the warehouse, as well as equipment for the Tuberculosis Control Division. This departmental use of personnel and facilities made operating economies possible.

With these resources, the Health Education Division provided a complete service in the production of visual aids to the Department. For example, pamphlets written by the editorial staff were composed on the Vari-typer, illustrated with art work, printed, stored and shipped—all these activities being performed by the Health Education Division.

The film library of the Department was augmented by the purchase of several new films. A catalog was issued, although the library is deficient in a number of fields and sufficient prints of most films are not available to meet requests. A small group of 12 professional films for staff use was also purchased. All film purchases are made by the departmental unit concerned in the specific field. A credit trailer was produced for addition to all Department films.

COMMUNITY HEALTH ORGANIZATION SERVICES

During the three organizational years, the bulk of the work of the Health Education Division was concerned with development of two phases of the three-phase program—health information services and health education material services. These services were organized and developed to provide support and services for the third phase of the program—community health organization—which is the heart of the health education program planned for the State Department of Health when the Division of Health Education was established in 1945. At the end of the three-year period, the first two phases are well-established and developed to the point where they can support a state-wide community health organization work program.

This third phase has been developed on the state level by working with state health, welfare and civic groups. A number of community endeavors were fostered, although it was impossible to meet more than a few of the community needs without a field staff. Consultation services were provided, however, for a number of local groups.

Two examples of this service may be cited as typical:

Working with the New Jersey Health Officers' Association, the Bureau of Food and Drugs, the Bureau of Local Health Services and local health departments, the organization of food handler training courses was stimulated and several were held throughout the State.

Working with a county Tuberculosis League, a seven-week training course for community leaders in that county was planned and organized. The course was selected by the National Publicity Council as an outstanding example of community health organization techniques and an article about it was published in *Channels*, national publication of the Council.

Close working relationships with a large number of state-wide health, welfare and civic organizations was continued.

The Basic Public Health Course was conducted jointly with Rutgers University, and 33 students completed both terms. The course has been included in the eligibility requirements of the Board of Examiners for certain licenses. Eight short-term courses were offered in the fall and spring sessions, and 126 students completed courses.

The 37th Annual Conference of State and Local Health Officials of New Jersey was held in the War Memorial Building on March 12, 1948. The program of the conference, which was organized by the Health Education Division, follows:

MORNING SESSION

Presiding: William H. MacDonald, Chief, Bureau of Local Health Services

10:30 A. M. *100 Years of Vital Statistics in New Jersey and Their Value to Health Departments*

Walter R. Scott, Chief, Bureau of Vital Statistics

11:30 A. M. *Looking Forward in Local Health Administration*

William H. MacDonald, Chief, Bureau of Local Health Services

Participants—The New Licensing Law—John Bacon, Chief, Bureau of Chemistry; Public Health Courses—R. T. Fisher, Chief, Division of Health Education; New Annual Report Forms—W. T. Eakins, Asst. Chief, Bureau of Local Health Services

AFTERNOON SESSION

Presiding: J. Lynn Mahaffey, M.D., State Director and Acting Commissioner of Health

2:00 P. M. *Greetings from the Public Health Council*

Dr. Walter G. Alexander

2:15 P. M. *Federal Funds for Health Centers*

Mr. Edward A. Mooney, Director, Hospital Survey and Construction Division, State Department of Institutions and Agencies

3:00 P. M. *The Role of the Community Health Council*

S. S. Lifson, Assistant Director, Community Organization, National Health Council

3:45 P. M. *Certification of Child Care Centers*

Mrs. Monema Kenyon, Asst. Early Childhood Education, State Department of Education

4:15 P. M. Pending Health Legislation

Dr. Marcus W. Newcomb, Chairman, Legislative Committee, New Jersey Public Health Council

The full development of the third and basic function of the Health Education Division—that of community health organization—awaits the development of the plan for the appointment of community health educators or health extension workers in the state district health offices. With such a field staff, the Department could provide a basic service in community health education, and to this end renewed requests for the needed funds have been made for the ensuing fiscal year.

Report of the Bureau of Local Health Services

July 1, 1947—June 30, 1948

By WILLIAM H. MACDONALD, Chief

During the fiscal year ending June 30, 1948, there were some changes in the personnel of the Bureau. Two Sanitarians resigned to accept municipal positions at higher salaries. Another Sanitarian was granted a temporary leave of absence to carry on post-graduate work at the University of Michigan. The position of Supervisor of District Health Officers left vacant by the retirement of Mr. C. K. Blanchard was not filled. Mr. John Zemlansky, District Health Officer, was transferred from the Camden County district to a new district to include Mercer County and part of Middlesex County, with headquarters at Trenton. Later in the year the plan designating Camden County as a state health district was abandoned, the office at Collingswood closed, and the county added to the territory to be covered from the district health office at Mount Holly, Burlington County.

The personnel of the Bureau at the end of the year included the Chief and Assistant Chief, eight District Health Officers, eight Sanitarians and twenty-three other employees.

There was continued the plan started in the previous year whereby nurses employed by the Board of Freeholders of Atlantic County and assigned communicable disease activities, worked from the district health office at Mays Landing under the direction of the District Health Officer and the Assistant Supervisor of Public Health Nurses assigned to that office. As of June 30, 1948, two county nurses were so engaged; two vacancies existed because of temporary leaves of absence. From this district health office there was supplied personnel, except the diagnostician, to operate the chest clinics at Mays Landing and Hammonton, at each of which an X-ray unit has been installed. At the latter clinic quarters, a cancer diagnostic clinic was also held periodically under the auspices of the county medical society and at which public health nursing aid was supplied from the district health office.

REPORTABLE DISEASES FOR 1947

Thirty-nine diseases are declared reportable by Regulation 1, Chapter VI of the State Sanitary Code. During the calendar year 1947, local boards of health reported to the State Health Department 78,639 cases of these 39 diseases. This is somewhat lower than the total reported cases in 1946. The so-called children's diseases—chickenpox, measles, German measles, mumps and whooping cough—accounted for 67,173 or 85 per cent of the cases of all diseases reported in 1947. Diphtheria case reports numbered 208 as compared with 249 for 1946. Measles reports dropped from over 56,000 in 1946 to 12,209 with a reduction in the number of deaths from 27 to 4. Granting the prevalence of measles fluctuates widely from year to year, the figures for 1947 show a definite drop from the preceding year in the number of cases and also a drop both in the total number of deaths from this cause and in the proportion of deaths to cases. Immune serum globulin supplied through the State Health Department was increasingly used during 1947 by physicians on children exposed to measles. It is probable the use of this material had a definite effect in reducing the number of deaths from this cause.

Meningitis, epidemic cerebro-spinal, which increased in prevalence in New Jersey as elsewhere during the war period and immediately following, showed a reduction to 101 cases from the 184 reported in the preceding year.

Deaths from pneumonia during 1947 were slightly higher than in 1946.

The number of cases of poliomyelitis (296) was slightly over the 1946 total (257). The number of recorded deaths, however, was 10 compared to 24 in 1946.

Scarlet fever case reports (3,474) were below the preceding year. Only two deaths from this cause were recorded in 1947.

In tuberculosis, new low annual case and death records were established. This is gratifying; however, it must be kept in mind that in spite of these low records, 3,161 new cases of tuberculosis were recorded in 1947 and 1,651 deaths.

Another new low annual case record was established in 1947 in typhoid fever. The total reported cases for the year was 45. Four deaths were recorded.

Whooping cough still exacted its toll in New Jersey in 1947 when 8,231 cases were reported and 24 deaths recorded. Of these 24 deaths, all occurred in children below ten years of age, and 19, or about 92 per cent, occurred in children less than one year old.

ANTHRAX

Nine cases of anthrax were reported in 1947. It is the practice of the Bureau of Local Health Services to advise both the Division of Adult and Industrial Health and the State Department of Labor of such cases when reported so that special investigation may be made of cases among workers at industrial plants. Of the nine cases recorded, eight were among workers at four different industrial plants handling wool, hides, or similar raw materials.

MALARIA

During 1947 there was a very marked reduction in the number of reported cases of this disease. The total cases recorded in 1947 was 99 as compared with 931 in 1946. Of the 99 reported cases, 49 were reported directly from military posts in military personnel infected elsewhere. Study of histories of the remaining 50 cases revealed that 47 of these were in persons who had been members of the armed forces and who received initial infection abroad. Of the remaining three cases, the history in one instance clearly indicated initial infection in Europe. No history of probable infection outside of New Jersey was established in two instances, although one of these patients gave a history of previous attacks suggestive of malaria.

RABIES IN HUMANS

One fatal case of rabies in a human was recorded during the calendar year of 1947. This person, an adult male, was bitten on the ear and finger by a rabid dog on September 14. In spite of anti-rabic treatment, he was taken ill with rabies on September 30 and died two days later.

ROCKY MOUNTAIN SPOTTED FEVER

Twenty-six cases of this disease were reported in 1947 and five deaths recorded. The cases were distributed by counties as follows: Monmouth, six; Cumberland, five; Camden, four; Gloucester, three; Atlantic, Cape May, Hunterdon, two each; Burlington and Ocean, one each.

As has been the practice for several years, the Department upon request furnished physicians with vaccine for preventive inoculations. The U. S. Public Health Service prepared and provided the vaccine.

TRICHINOSIS

Twenty-nine cases with one death were reported in 1947. Case histories indicated that 20 of the patients ate pork or pork products shortly before onset of illness. Another patient ate ground meat which may have contained pork. For the remaining eight cases, satisfactory case histories were not secured.

TULAREMIA

Three cases of tularemia were reported. Two patients shortly before onset cleaned wild rabbits said to have been shot in Atlantic County. The third case gave a history of cleaning a wild rabbit shot in an adjoining state.

UNDULANT FEVER

In 1947 there was a further drop from previous years in the number of reported cases of this disease. The 45 cases recorded in 1947 were widely scattered and no single common source of infection for any marked number of cases was discovered.

Investigations of these cases were made by State District Health Officers or by local health officials. By this means it was learned that three of the reported cases had received infection outside of New Jersey and one patient, a laboratory worker exposed to cultures of the causative agent of the disease, had presumably become accidentally infected in handling these cultures. Regarding the other 41 cases, investigation showed that 23 were regular users of raw milk prior to illness; 10 gave a history of using both pasteurized and raw milk while two used pasteurized milk regularly but had obtained other milk which may have been unpasteurized.

A complete history of one case was not obtained. In the remaining five cases, no history of the use of raw milk shortly before onset was obtained; however, two of these patients were butchers and, therefore, handled raw meat, while a third was a foreman in a dairy.

INVESTIGATION OF COMMUNICABLE DISEASES

During the fiscal year ending June 30, 1948, employees assigned the Bureau investigated 310 cases of communicable diseases, exclusive of tuberculosis and venereal diseases. These cases were distributed by disease as follows: Anthrax 6, Chickenpox 52, Diphtheria 36, Dysentery, amoebic 6, Dysentery, bacillary 1, German measles 2, Influenza 2, Malaria 5, Measles 3, Meningitis, epidemic 6, Mumps 7, Paratyphoid fever 7, Poliomyelitis 79, Psittacosis 1, Rocky Mountain spotted fever 12, Scarlet fever 5, Streptococcal sore throat 20, Trichinosis 3, Typhoid fever 33, and Undulant fever 24.

In addition to the cases listed above, investigations were made by the Bureau of the following outbreaks of gastro-enteritis:

<i>Municipality</i>	<i>No. of Cases</i>	<i>Vector or Suspected Vector of Infection</i>
Raritan Town and Bridgewater Township	4	Custard-filled doughnuts
Randolph Township and nearby places	99 plus	Shrimp cocktails suspected
Upper Penns Neck Township	126 plus	Not definitely determined

The following additional outbreaks of gastro-enteritis were reported by local health officials:

<i>Municipality</i>	<i>No. of Cases</i>	<i>Vector or Suspected Vector of Infection</i>
Long Branch City	11	Ground meat sandwiches
Newark City and North Arlington Borough	20	Custard-filled cake
Ocean Township (Monmouth)	97 plus	Roast turkey

DAIRY PREMISES

Cases of certain communicable diseases transmittable through milk are required by existing regulations to be reported by physicians directly to the State Department of Health when occurring on dairy premises. During the fiscal year 11 cases of these diseases were reported on or in connection with 11 dairy premises. The cases included nine of scarlet fever and two of tuberculosis. The daily milk production at these 11 dairies was about 7,810 quarts. Through the efforts of the State District Health Officers, with the assistance of local health officials, precautionary measures designed to prevent the spread of infection through milk were established at each of 10 of these dairies and the sale of milk allowed to continue. At one dairy the operator voluntarily discontinued the sale of milk during the continuance of the case rather than follow precautionary measures considered necessary to protect the product.

TYPHOID CARRIERS

At the close of the fiscal year, 88 persons were recorded in the files of the Department as carriers of typhoid bacilli; four were withdrawn from the list during the year, three by death and one by removal from the State. Six persons were added to the list of carriers; three were known carriers who moved into New Jersey from another state, three were discovered as a result of investigation of cases of typhoid fever.

TOXOID AND VACCINE

Diphtheria toxoid (alum precipitated), diphtheria toxoid (Ramon), small-pox vaccine, typhoid and paratyphoid vaccine combined, whooping cough vaccine, and diphtheria toxoid-whooping cough vaccine combined, were made available to physicians, and also to local boards of health for clinic purposes, at 63 distributing stations located at strategic points about the State. Antirabies vaccine (human) was also made available at key distributing stations.

Reports received from physicians and local health departments during the fiscal year ending June 30, 1948, show that at least 32,129 children received diphtheria toxoid distributed by the State Health Department and 35,416 received either diphtheria toxoid-whooping cough vaccine combined or received whooping cough vaccine alone. The latter group numbered 5,646. Reports received also show that at least 36,507 persons were vaccinated against smallpox with the material supplied by the State.

OTHER BIOLOGICALS

Immune serum globulin as a preventive of measles in children exposed to infection was also made available at the established distributing stations. All of this material distributed was supplied to this Department by the American Red Cross without charge. During the year a total of 23,500 packages of 2 c.c. each and 1,500 packages each containing 5 c.c. was received for distribution from the American Red Cross.

Sufficient rabies vaccine (human) was released for a complete treatment of 14 doses to 485 persons.

In view of a requirement of statutes, a small amount of anti-pneumococcic sera for typing of pneumococci was furnished during the year to five approved laboratories. No request for serum for the treatment of a case of pneumonia was received.

BLOOD PLASMA

Requests from hospitals and other distributing stations for blood plasma were met throughout the year. The material furnished was supplied this Department by the American Red Cross from the excess above the needs of the armed forces. Allotments of plasma received from the American Red Cross were stored in a local warehouse in Trenton from which shipments were made by express, collect, in conformity with requests received from hospitals and other established distributing stations about the State. For proper labeling, in accord with the wishes of the Red Cross, cases were opened at the warehouse and each package labeled and repacked prior to shipment. Packages furnished contained 250 c.c. or 500 c.c. of dried plasma with necessary equipment for adding liquid in the required amount and for adminis-

tering the material. During the year there were received from the Red Cross 12,936 individual packages of the plasma. This was distributed chiefly to hospitals.

In Essex County, by arrangement made during the year, the Essex County Blood Bank acted as a local distributing center for the plasma supplied hospitals and stations in that county. Plasma was furnished from the state supply in cases to the Essex County Blood Bank who redistributed it in small quantities upon request to hospitals in the county, collecting and forwarding to the office of the State Health Department reports of physicians on the use of the material.

TUBERCULOSIS AND MASS CHEST X-RAY SURVEYS

During the year there was followed the general practice adopted several years ago whereby the Division of Tuberculosis Control referred to the Bureau of Local Health Services the names and addresses of persons whose X-ray taken in mass screening examinations of industrial and community groups indicated possible pulmonary tuberculosis. Any person so reported and who gave the name of his physician at the time of the survey was urged by letter to consult the physician promptly for more complete examination. At the same time, the physician was notified of the X-ray findings and requested to advise this office as a matter of record of a final determination as to the absence or presence of tuberculosis either in an active or arrested stage. Names of persons who did not give the name of a family physician at the time of the survey and also the names of persons whose family physician did not file a report form within a reasonable time were referred for visitation and follow-up either directly or through State District Health Officers to such agencies as local health departments, county tuberculosis associations and tuberculosis hospitals.

For the year ending June 30, 1948, a total of 3,838 persons were referred to the Bureau of Local Health Services by the Tuberculosis Control Division, and the follow-up procedure started. Since considerable time is required both for the desired examination and in many instances in persuading the suspect to seek such examination, records for the entire number referred could not be completed during the same 12-month period. In the instances in which the special examination was completed during the year, both of those referred and of some others previously referred, there were recorded on the basis of re-examination 172 cases of active pulmonary tuberculosis and 1,668 of arrested tuberculosis. Five hundred forty-nine were recorded as having some chest pathology other than tuberculosis.

TUBERCULOSIS AND THE VETERANS' ADMINISTRATION

As in previous years, notification of cases of tuberculosis was received from hospitals located in nearby states and operated by the Veterans' Administration for tuberculous veterans. These notifications included the names of patients from New Jersey admitted to such hospitals, as well as the names of patients leaving such institutions either with or against medical advice.

Veterans reported as leaving these hospitals were referred to local agencies for follow-up. Reports returned to this office, after follow-up, show that of the number referred out during the year and of the number previously referred but not reported upon, 23 were attending a chest clinic in New Jersey; 11 were admitted to a hospital in this State; one was re-admitted to a veterans' hospital, 25 were under the professional care of their personal physicians; one was recorded as deceased; ten were not located in New Jersey and 23 were still under investigation at the end of the year.

With notices of tuberculous veterans admitted to or leaving the veterans' hospitals, there are also furnished names of members of the immediate family of each such veteran. These names are also referred to local agencies with the request that the persons named be urged to have a chest examination. Three hundred forty persons were so referred during the year. Reports of visits to these and to a similar group under investigation at the end of the previous year show that at least 224 had a chest examination. Seven were found to have active tuberculosis, 33 arrested, and nine had lung pathology other than tuberculosis.

CAMP INSPECTIONS

Recreational summer camps are situated chiefly in rural areas of the State in which local board of health activities are quite limited. For this reason the parents of the campers look to the State Department of Health for assurance that basic sanitary facilities at such camps are reasonably safe. During the year ending June 30, 1948, representatives of the Bureau inspected 159 such camps and where indicated made suggestions for improvement of sanitary conditions and operation.

INSPECTIONS OF FOOD-VENDING PLACES

During the year inspection work in food-vending places along highways in rural areas and in the vicinity of Fort Dix and Camp Kilmer was continued to the extent time and limited personnel made it possible. A total of 5,719 inspections were made at 1,310 such establishments. On alternate weeks a limited number of swabs was collected from eating and drinking utensils in public places in the Fort Dix and Camp Kilmer areas, and delivered to the state laboratory for bacteriological counts as a check of cleansing methods.

PRIVATE WATER SUPPLIES

The results of all laboratory tests on samples from private and semi-private water supplies, except pay samples, are referred to this Bureau for interpretation and reporting to the proper official. Many of these samples are collected by employees in the Bureau but others come from local health officials or some other agency. In most cases, the report is made to the local board of health having jurisdiction, with copies to other officials concerned in the matter.

In the fiscal year ending June 30, 1948, 1,224 such reports were sent, each containing the results of the tests, an interpretation of their public health significance and, if the result of examination showed the water to be unsafe, a request for a report on action taken by the local board. Seven hundred seventy-five of the 1,224 supplies were shown to be safe, 104 were of doubtful quality and 345, or 28 per cent, were reported unsafe for drinking and household use. Reports of examination of 85 samples of water from ponds and other bathing places were also forwarded to local officials submitting such samples.

LOCAL BOARDS OF HEALTH

Each local board of health is expected under the provisions of section 26:3-35 of the Revised Statutes to submit an annual report to the State Department of Health. It has been the practice for the State Department of Health to prepare and to furnish to each local board a printed form for the use of such boards in submitting this report. The form prepared for the purpose for the calendar year 1947 was more extensive in scope and more detailed in several respects than had been used for several years. This fact probably accounted for delay greater than usual on the part of some boards in filing the 1947 report.

Up to the date of preparation of this summary, such reports had been received from 560 of the 569 local health boards in the State. Certain data contained in the reports received reveal that at the close of 1947, 80 local boards of health were employing 50 licensed health officers engaged on a full-time basis, and 81 local boards were employing 64 licensed health officers serving in the public health field on a part-time basis.

Local boards of health also reported employing either on a full- or part-time basis 283 licensed sanitary, food and drug, or special food inspectors, and 143 licensed plumbing inspectors.

The total amount of funds available to the local boards of health in 1947 for all purposes was reported as \$4,318,097.20. This is an increase of over \$600,000 above the total sum available for the use of the local health boards in 1946. In a few municipalities appropriations for the use of local health

boards included a special allotment for the maintenance of a contagious disease hospital, and also in a few municipalities part of the funds appropriated for the local health boards was intended to be used for garbage collection and disposal.

Excluding the sum reported as utilized for these special purposes, there remained for the use of the local boards the total of \$4,018,093.92. Based upon an estimated total population of the State as of July 1, 1947, of 4,435,000, the per capita amount so available was \$.91. The total amount reported as expended by local boards of health in 1947, less any amount for hospitals and for garbage disposal, is \$3,816,702.65, or \$.86 per capita. This is about eight cents per capita higher than the amount reported expended in 1946. The total amount reported expended, less any amount for hospitals and garbage disposal, by all boards of health in each of the respective counties, shows a per capita amount of \$.15 or less in the counties of Gloucester, Hunterdon and Warren. On the other hand, the highest per capita sum, \$1.81, was shown in Essex County. The per capita expenditure in 1946 reported by all the boards of health in 13 municipalities each having a total population of 50,000 or more was \$1.24. During 1947 the same municipalities reported the per capita expenditure by the boards of health as \$1.37. For all boards of health in other municipalities of the State the reported per capita expenditure for 1947 was about \$.50. These sums are exclusive of expenditures for hospitals and for garbage removal.

SUMMARY OF OTHER WORK OF THE BUREAU

Certain activities of employees assigned the Bureau and not otherwise listed above include the following:

1. No. of conferences with local health officials on questions pertaining to public health	5,740
2. No. of conferences with persons other than local health officials	9,376
3. No. of meetings of local boards of health attended	66
4. No. of other meetings attended	348
5. No. of lectures given in courses for health officials	38
6. No. of other talks or lectures given or papers read	63
7. No. of specimens collected from humans either by employees of the Bureau or with their aid to be examined for pathogenic bacteria	135
8. No. of water samples collected for laboratory examination	847
9. No. of other specimens and samples collected for laboratory examination ..	538
10. No. of instances in which aid was given in diagnosis of suspected cases of communicable diseases	6
11. No. of special investigations, including alleged nuisances, insanitary conditions, etc.	1,548

REPORTED CASES AND DEATHS, CASE AND DEATH RATES FOR CERTAIN REPORTABLE DISEASES FOR 1947

DISEASE	Cases	*Cases per 100,000 Pop.	Deaths	*Deaths per 100,000 Pop.	Per Cent Fatality
Chickenpox	30,620	690.41	2	0.04	0.005
Diphtheria	208	4.69	14	0.31	6.73
Influenza	257	5.79	75	1.69	29.18
Pneumonia	3,397	76.59	1,483	33.44	43.55
Meningitis, epidemic cerebrospinal ...	101	2.27	33	0.74	32.67
Measles	12,209	275.28	4	0.09	0.03
German measles	1,354	30.08	0	...	...
Polio-myelitis, acute anterior	236	5.37	19	0.42	3.58
Scarlet fever	3,474	78.33	2	0.04	0.05
Rocky Mountain spotted fever	26	0.58	5	0.11	19.23
Tuberculosis	3,161	71.27	1,561	35.19	49.38
Typhoid fever	45	1.01	4	0.09	8.89
Whooping cough	8,821	197.62	24	0.54	0.29

* Rates figured on an estimated population of 4,435,000.

CASES AND DEATHS FROM OTHER REPORTABLE DISEASES FOR 1947

DISEASE	Cases	Deaths	DISEASE	Cases	Deaths
Anthrax	9	0	Rabies	1	1
Dysentery, amoebic	66	2	Smallpox	1	1
Bacillary	3	0	Tetanus	5	6
Unspecified	5	1	Trachoma	0	2
Encephalitis, lethargic	5	16	Trichinosis	29	1
Malaria	90	1	Tularemia	3	0
Mumps	14,689	1	Typhus fever	0	0
Ophthalmia neonatorum	7	0	Undulant fever	45	1
Paratyphoid fever	18	2			

DEPARTMENT OF HEALTH

RECORDED DEATHS FROM COMMUNICABLE DISEASES BY COUNTIES FOR 1947

COUNTIES	Anthrax	Chickpox	Diphtheria	Dysentery	Encephalitis, Eutharctic	Influenza	Malaria	Measles	German Measles	Epidemic Cerebrospinal	Mumps	Ophthalmia Neonatorum	Paratyphoid Fever	Pneumonia	Acute Arteritis Polymyositis
Atlantic	0	0	0	0	2	2	0	0	0	8	0	0	0	127	0
Bergen	0	0	0	0	0	2	0	0	0	0	0	0	0	120	0
Burlington	0	0	0	0	0	0	0	0	0	0	0	0	0	116	0
Camden	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
Cape May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumberland	0	0	1	0	0	3	0	0	0	0	0	0	0	50	0
Essex	0	0	0	0	0	1	0	0	0	0	0	0	0	24	0
Hancock	0	0	0	0	0	1	0	0	0	0	0	0	0	22	0
Hudson	0	1	3	1	0	0	1	0	0	0	0	0	0	223	0
Hunterdon	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
Mercer	0	0	3	0	1	2	0	0	0	0	0	0	0	0	0
Middlesex	0	0	2	0	0	2	0	0	0	0	0	0	0	74	0
Monmouth	0	0	1	0	0	0	0	0	0	0	0	0	0	81	0
Morris	0	1	0	0	0	0	0	0	0	0	0	0	0	69	0
Green	0	0	0	0	0	0	0	0	0	0	0	0	0	49	0
Passaic	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Somerset	0	0	0	1	2	7	0	0	0	4	0	0	1	117	0
Sussex	0	0	0	0	0	1	0	0	0	1	0	0	0	10	0
Trenton	0	0	0	0	0	1	0	0	0	0	0	0	0	27	0
Union	0	0	1	0	0	1	0	0	0	1	0	0	0	11	0
Warren	0	0	0	0	0	1	0	0	0	3	0	0	0	118	1
State total	0	2	14	3	18	75	1	4	0	33	1	0	2	1,481	20

BUREAU OF LOCAL HEALTH SERVICES

RECORDED DEATHS FROM COMMUNICABLE DISEASES BY COUNTIES FOR 1947—(Continued)

COUNTIES	Rabies	Rocky Mountain Spotted Fever	Scarlet Fever	Smallpox	Streptococcal Sore Throat	Tetanus	Trichinosis	Tuberculosis	Typhoid Fever	Typhus Fever	Whooping Cough
Atlantic	0	1	0	0	1	0	0	60	0	0	1
Bergen	0	0	0	0	0	0	1	87	0	0	0
Burlington	0	1	0	0	0	0	0	115	0	0	0
Camden	0	0	2	0	0	0	0	6	0	0	0
Cape May	0	0	0	0	0	0	0	0	0	0	0
Cumberland	0	1	0	0	1	0	0	24	0	0	0
Essex	1	0	0	0	0	0	0	43	0	0	0
Gloucester	1	1	0	0	0	0	0	20	1	0	0
Hudson	0	0	0	0	1	0	0	284	0	0	0
Hunterdon	0	0	0	0	0	0	0	8	0	0	0
Mercer	0	0	0	1	0	0	0	35	1	0	0
Middlesex	0	0	0	0	1	0	0	60	0	0	0
Monmouth	0	0	0	0	0	2	0	50	0	0	0
Morris	0	0	0	0	0	0	0	37	0	0	0
North Hampden	0	0	0	0	0	0	0	17	0	0	0
Passaic	0	0	0	0	1	0	0	95	0	0	0
Salem	0	0	0	0	0	0	0	15	0	0	0
Somerset	0	1	0	0	0	1	0	27	0	0	0
Sussex	0	0	0	0	0	0	0	29	0	0	0
Trenton	0	0	0	0	1	1	0	90	0	0	0
Union	0	0	0	0	0	0	0	8	0	0	0
Warren	0	0	0	0	0	0	0	0	0	0	0
State total	1	5	2	1	8	6	1	1,561	4	0	24

Deaths occurring in state institutions are charged to the place of residence of the decedent.
Deaths occurring at military posts are charged to the county in which the post is located.

REPORTED CASES OF ACUTE ANTERIOR POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.

REPORTED CASES AND DEATHS FROM ACUTE ANTERIOR POLIOMYELITIS IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths).

REPORTED CASES OF SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.

REPORTED CASES AND DEATHS FROM SCARLET FEVER IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths).

REPORTED CASES OF TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Months

Table with columns: AGE GROUPS, Total, Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec.

REPORTED CASES AND DEATHS FROM TUBERCULOSIS IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Sex

Table with columns: AGE GROUPS, Male (Cases, Deaths), Female (Cases, Deaths), Total (Cases, Deaths).

REPORTED CASES OF TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	0	0	0	0	0	0	0	0	0	0	0	0	0
1 year	1	0	0	0	0	1	0	0	0	0	0	0	0
2 years	2	0	0	0	0	0	0	0	0	0	0	0	0
3 years	1	0	0	0	0	0	0	0	0	1	0	0	0
4 years	1	0	0	0	0	0	0	0	0	0	1	0	0
Under 5 years	5	2	0	0	0	1	0	0	0	1	1	0	0
5 to 9 years	5	1	0	0	0	1	0	0	1	1	0	0	0
10 to 14 years	4	0	1	0	0	0	0	0	1	0	1	0	1
15 to 19 years	1	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24 years	6	0	0	0	0	0	0	0	1	1	3	0	1
25 to 34 years	5	0	1	0	0	1	0	1	1	1	0	1	0
35 to 44 years	8	0	0	2	0	1	0	1	0	1	2	1	0
45 to 54 years	6	0	0	0	0	0	2	0	0	1	2	1	0
55 to 64 years	5	0	0	1	0	0	0	2	0	1	0	1	0
65 years and over	0	0	0	0	0	0	0	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	45	3	2	3	0	5	0	5	7	3	12	2	3

REPORTED CASES AND DEATHS FROM TYPHOID FEVER IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	0	0	0	0	0	0
1 year	1	0	0	0	1	0
2 years	0	0	0	0	0	0
3 years	1	0	0	0	1	0
4 years	0	0	1	0	1	0
Under 5 years	2	0	3	0	5	0
5 to 9 years	2	0	3	0	5	0
10 to 14 years	3	1	1	0	4	1
15 to 19 years	0	0	1	1	1	1
20 to 24 years	0	0	6	0	6	0
25 to 34 years	3	0	2	1	5	1
35 to 44 years	4	0	4	0	8	0
45 to 54 years	2	0	4	0	6	0
55 to 64 years	3	0	2	1	5	1
65 years and over	0	0	0	0	0	0
Age not stated	0	0	0	0	0	0
Total	19	1	26	3	45	4

REPORTED CASES OF WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Months

AGE GROUPS	NUMBER OF CASES												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Under 1 year	718	51	28	35	55	71	73	89	88	63	74	45	46
1 year	595	35	25	22	28	38	60	59	68	50	48	39	42
2 years	737	55	42	46	50	77	66	89	91	82	58	47	43
3 years	917	80	52	53	67	89	83	116	99	100	73	60	45
4 years	872	67	59	47	62	99	127	116	115	103	71	58	49
Under 5 years	3849	288	206	203	262	374	499	451	461	396	324	249	224
5 to 9 years	3754	356	259	271	299	440	494	382	276	330	258	260	224
10 to 14 years	328	42	38	42	38	65	44	30	54	37	37	37	36
15 to 19 years	64	8	6	4	5	10	7	3	4	7	3	4	5
20 to 24 years	13	2	0	0	1	1	2	2	2	0	1	0	1
25 to 34 years	43	0	1	3	3	3	6	6	5	4	2	4	4
35 to 44 years	31	2	2	0	3	3	5	5	3	5	1	0	2
45 to 54 years	16	2	0	0	0	0	2	3	3	1	2	2	1
55 to 64 years	5	1	0	0	1	0	0	0	0	1	0	0	1
65 years and over	2	0	0	0	0	0	0	0	1	0	0	0	1
Age not stated	6	0	0	2	0	1	2	0	0	0	0	0	1
Total	8321	699	522	506	611	897	901	899	786	801	625	575	499

REPORTED CASES AND DEATHS FROM WHOOPING COUGH IN NEW JERSEY

For the Calendar Year 1947, by Age Groups and Sex

AGE GROUPS	Male		Female		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	331	4	387	15	718	19
1 year	232	1	253	2	595	3
2 years	344	0	393	1	737	1
3 years	420	0	488	0	917	0
4 years	450	0	492	0	972	0
Under 5 years	1836	5	2013	18	3849	23
5 to 9 years	1811	0	1943	1	3754	1
10 to 14 years	240	0	298	0	538	0
15 to 19 years	31	0	33	0	64	0
20 to 24 years	3	0	10	0	13	0
25 to 34 years	12	0	31	0	43	0
35 to 44 years	12	0	19	0	31	0
45 to 54 years	5	0	11	0	16	0
55 to 64 years	0	0	5	0	5	0
65 years and over	0	0	2	0	2	0
Age not stated	3	0	3	0	6	0
Total	3953	5	4368	19	8321	24

Report of the Bureau of Preventable Diseases

July 1, 1947—June 30, 1948

ROSCOE P. KANDLE, M. D., served as Director of the Bureau until February 1, 1948

A. JOSEPH HUGHES, M. D., served as Acting Director from February 1 to June 1, 1948

The Bureau of Preventable Diseases consists of the Divisions of Adult and Industrial Health, Cancer Control, Dental Health, Maternal and Child Health, Tuberculosis Control and Venereal Disease Control; the Negro Health Program and Rabies Control Program; the Advisory Public Health Nurse; and the Nutritionist. It is housed at 19 West State Street, Trenton, where there is also the laboratory for the Division of Adult and Industrial Health and a testing laboratory for the mobile X-ray equipment of the Division of Tuberculosis Control.

Regular staff discussion group meetings of the Division Chiefs and Program Heads of the Bureau were held; other bureau chiefs and guests were frequently invited. By this method, plans were developed for such projects as a Division of Public Health Nursing, expanded statistical service for the Department, inter-divisional and inter-bureau policies, etc. Some progress toward departmental staff meetings was made.

Informal evaluation studies regarding the programs of the units of the Bureau were made. Continuous studies, research and planning were conducted regarding the relationships and effectiveness of the programs of the Bureau, as related to local health services. These resulted in the increasing conviction that a grant-in-aid program to local units organized on a county basis must be obtained to achieve the objectives which each Division or program separately and collectively recognizes as essential for the *people* of New Jersey. Some further progress was made in the co-ordination of the work of the Divisions and programs of the Bureau, within the Bureau, with other Bureaus and with other departments and local municipalities.

The studies in whooping cough began to bear fruit with the publication of a manual "The Control of Whooping Cough in New Jersey." A paper based

on the studies appeared in the September 1947 issue of the *Journal of the Medical Society of New Jersey*. Pamphlets and posters on this subject were developed in co-operation with the Division of Health Education. The State Department of Education joined the Department of Health in making this pattern of the control of whooping cough a part of its official program. The increasing interest of local school, health and nursing groups in whooping cough control was gratifying.

A course in the epidemiology of tuberculosis was conducted in Newark and Hackensack, as a part of the fall courses of the Department and Rutgers University.

The Bureau assisted the Bureau of Local Health Services in conducting an intensive and extensive survey of public health services in Bloomfield.

The Director of the Bureau served as chairman of the Board of Examiners of Health Officers and Inspectors, and the office of the Bureau continued the studies of the examining procedure and the development of examination material. The examining process was interrupted in July by the fact that the Attorney-General's Office advised that no examinations could be held until a Commissioner was appointed. The designation of the Director of Health as Acting Commissioner permitted the examinations to be held in October. New examining materials were utilized which had been constructed with the consultation of the Merit System Unit of the American Public Health Association.

The personnel assigned to the Migrant Labor Program was housed with the Bureau. Policies for the program were developed by means of a committee and co-ordination within the Bureaus was promoted.

The increasing use of the conference room for Bureau meetings and by other bureaus and agencies was an obviously useful, integrating force within the Department. The conference room was developed with the aid and advice of the experts of the Division of Adult and Industrial Health and is a laboratory and demonstration of sound practice in eye conservation.

The attempt to develop competent statistical and research services for the Department continued and made significant progress. The service was housed in the Bureau offices and received guidance from the Bureau, although structurally the service is a part of the Bureau of Personnel, Administration Records and Accounts. The staff of two which had functioned since January 1, 1947, was reduced to one, the Statistician, on July 1. Requests for his services increased steadily, both in number and in the potential effectiveness of the service. Substantial contributions were made to the Migrant Program, the Rabies Program, the Divisions of Maternal and Child Health, Venereal Disease Control and Dental Health, to the Director of the Bureau of Preventable Diseases and the Nutritionist. Some additional co-ordination of the

total statistical functions of the Department was achieved. Plans were developed in close co-operation with the Bureau of Vital Statistics to secure mechanical tabulating and sorting equipment and to standardize procedures in this field.

NUTRITION

Most encouraging progress was made in the Nutrition Program. It increasingly became actually a departmental program and co-ordinated closely and effectively with the total state program. In-service training was given for the 300 field public health nurses under the supervision of the Division of Maternal and Child Health. Plans were laid for the 1947-48 fall, winter, and spring, and regular monthly meetings held on this basis for small groups throughout the State. A formal course was given at the Paterson State Teachers College.

Plans were drawn for a co-operative project with the New Jersey Experiment Station under the Flanagan-Hope Act. Survey of industrial workers and their families will get under way in the fall of 1948.

Accredited field training was provided a post-graduate student of Simmons College in Boston.

Research and field work was done in co-operation with the American Red Cross on an evaluation of the nutrition services of New Jersey municipalities.

Consultation was provided a rheumatic fever clinic and special forms and procedures were developed.

Material which achieved national comment was prepared in conjunction with the Governor's Food Conservation Program.

Radio programs on nutrition have been prepared in co-operation with the Division of Health Education. Material on the harmful use of mineral oil as a food was prepared and distributed. The Nutritionist prepared a nutrition exhibit for the nutrition booth of the New Jersey Medical Society at its annual convention in Atlantic City in April.

Several thousand pamphlets on foods and nutrition have been distributed by this Department throughout the State.

The Nutritionist took an active part in the State Nutrition Council and worked with them to secure the passing of the bill to allow the use of colored margarine in the State.

ADVISORY PUBLIC HEALTH NURSE

The Advisory Public Health Nurse continued to work under the Director of the Bureau of Preventable Diseases during the past year.

Consultant services were rendered in the field of public health nursing, both to official and non-official agencies in the State. These services included

recruitment and placement of nurses and advice in planning changes in program.

Active participation on a state level in committee work was continued, and regional and national conferences were attended.

A current file of all public health nurses operating in the State was maintained.

Articles on public health nursing were prepared and published in health journals and magazines.

Hospital schools of nurses were given assistance with student education through preparation of material and provision of personnel.

Assistance was also given with the public health nursing portions of community surveys.

Report of the Division of Adult and Industrial Health

July 1, 1947—June 30, 1948

By E. L. SCHALL, *Industrial Hygiene Engineer*

A great advance in industrial health activities was completed by the Division of Adult and Industrial Health during the fiscal year ending June 30, 1948. The number of industrial plants serviced was nearly doubled over the number serviced the preceding year. Initial plant visits were made following requests received from management, labor union, employees, communities and occupational disease reports.

COVERAGE OF INDUSTRY OF STATE

Plant Activities

Number of different plants serviced	691
Total number of workers in plants serviced	627,145
Total number of plant visits made	794

Source of Service

Self-initiated and follow-up visits	132
Request from management, labor, etc.	618
Official reports of occupational diseases	44
Total	794

During the twelve-month period, 691 different plants were serviced as compared with 353 the previous year. As in other years, most of these plants employed less than 500 workers while others employed less than 100 workers, again emphasizing the fact that smaller plants require more assistance from outside agencies in providing adequate industrial health programs. The total number of plant visits made was 794 as compared to 464 the previous year and 325 in the 1945-1946 fiscal year.

Self-initiated visits represented 19 per cent of all plant visits and were conducted as a guide to the Division to learn what per cent of the recommendations to industry were being made effective. Of these plants visited, it was learned that \$470,760 had been spent by these industries at the recommendation of this Division to promote better health among the workers. Industry

first requested these surveys and willingly applied the recommendations to improve conditions, knowing such recommendations are the result of scientific medical-engineering studies—not inspections. The self-initiated follow-up visits completed only partially covered the plants to which recommendations had been offered. This phase of the Division's activities should be expanded, but the requests for other services placed a definite limit on the time allotted for this work.

Of the 691 different plants visited, 169 or 25 per cent had never been visited by the Division before. The remaining 522 or 75 per cent had received Division services during previous years and apparently satisfied, desired assistance with additional problems this fiscal year.

Services offered by the Division were of two general types: (1) in-plant environmental engineering (assistance with plant lighting, ventilation, control of noise, dust, fumes, gases, and the like), and (2) medical and nursing assistance and consultation on plant health problems and activities. Of the 691 plants serviced, 478 were in-plant environmental engineering services (69 per cent of the total services) and 213 were medical-nursing services (31 per cent of the total services).

The basis for a majority of the recommendations made during the year are the results of the analysis of atmospheric samples, raw materials handled, and urine and blood samples collected by the personnel of this Division at work locations or from individuals working at operations where health hazards exist. The following table indicates the number of analyses made, both in the laboratory and in the field according to the suspected toxic material:

LABORATORY ANALYSES AND FIELD DETERMINATIONS

Acetone	24	Manganese	11
Ammonia	22	Noise determinations	31
Amyl acetate	32	Oxides of nitrogen	3
Asbestos dust	1	Phenol	2
Ash	20	Radioactive rays	16
Atmospheric temperatures	31	Relative humidity	42
Benzol	1	Solids	41
Carbon monoxide	13	Solvents	102
Chlorides	20	Sulfur dioxide	22
Chlorinated hydrocarbons	51	Sulphates	20
Chromic acid	18	Sulphuric acid	18
Dust counts	40	Tar	18
Formaldehyde	3	Toluol	6
Free silica	8	Urine albumen	110
Hydrogen cyanide	7	Urine sugar	110
Hydrogen sulphide	28	Ventilation readings	207
Iron oxide	7	Volatile sulphur	20
Lacquer	7	Xylol	40
Lead	157		
		Total	1,309

The above total of 1,309 is an increase of 26 per cent over the laboratory analyses and field determinations reported for last year which was 1,039.

During the year, the Division has been called on frequently by industrial physicians and company representatives for information regarding the toxicity of certain substances and for other inquiries regarding industrial hygiene activities. Requests for this type of information numbered 406 during the past year. This indicates the realization of industry that when information is needed on this subject the Division can be helpful.

SPECIAL PROJECTS

Each year in addition to plant surveys, consultations and recommendations mentioned above, there are special projects of a nonroutine nature handled. A few of these are described in the following:

Industrial Sight Conservation Program

Pursuing the development of the adult health program of this Division, the Industrial Sight Conservation Program was continued. The policies originally adopted have been followed and successful studies completed in several industrial plants. The knowledge of the engineering phase of this program was sought and utilized in redecorating certain offices in the State House and in the development of an experimental schoolroom project in West Trenton, New Jersey. The schoolroom of functional design embodies such new features as painted walls of proper light reflectance, one solid wall of light bending blocks, abundant fluorescent lighting fixtures of special design, dark green writing boards instead of the conventional blackboard, seats arranged fan-shaped from a focal point off center at the front of the room, desks finished in a light wood color rather than dark, and the teacher's desk located at the rear of the room.

The schoolroom project is interesting in its development and the only one we know of its type in the nation.

Community-Wide Industrial Surveys

Two of these surveys were completed this year as compared to four last year. Again, increased requests for assistance limited the activities of this project. Five communities are still to be contacted who have requested such surveys. When conducting these surveys, representatives of this Division, in co-operation with the local health officer, survey all industries in the specific community for the purpose of detecting and correcting existing health hazards and developing techniques for the introduction of industrial health services to the small factories.

Radiation Survey

Additional installations of a static eliminator, employing the ionized rays produced by radium as their principal of operation, were made in factories of this State during this year. All of these installations have been declared with this Division by the manufacturer. For the first eight months, stray radiation surveys were conducted on all new installations but due to the failure of the Geiger-Muller Counter such surveys were necessarily discontinued pending the repair of the instrument now at the manufacturer.

Nuisance Complaints

During the past year, 60 nuisance complaints were investigated which necessitated extending this service 126 times. This type of request work was so heavy that it became necessary in many cases to explain that the only recourse to solution would be through the Courts of Chancery of the State. In most cases, however, tests were conducted to determine the complaint a nuisance and not a health hazard. When a health hazard was encountered as the result of one of these studies, recommendations to alleviate the hazard were forwarded the offending plant and follow-up visits made to ascertain the compliance with these recommendations. Additional personnel is needed by this Division to better study such aerial nuisances reported.

Industrial Health Bulletin

Volume 2 of the Industrial Health Bulletin was prepared during this year. This promotional activity of a concise technical bulletin comprised ten issues whose titles were: Anthrax, Vision, Phosphorus, Nuisance Dust, Magnesium, Cadmium, Carbon-tetrachloride, Medical Record System, Mercury, and Chrome. Three thousand (3,000) issues of each bulletin were printed and distributed. Requests for this bulletin have been received from points all over the world and hundreds of complimentary letters regarding it are in the files of this office. These bulletins are prepared by the personnel of this Division explaining in simple language the medical-engineering industrial health facts for the substance mentioned in the title.

Mailing List Revision

A notice was sent to each person appearing on the mailing list of this Division asking if the name, address and title were correct and if the person wished to continue to receive mailings. Those not answering were sent a final notice. Approximately 2,800 names appeared on the original list and indications are that approximately the same number will appear on the revised list. A space headed "Comments" was also provided and the return notices revealed many congratulatory remarks regarding the mailings of this Division.

Chamber of Commerce Survey Requests

One community located in South Jersey has been endeavoring to increase the number of industries locating within its boundaries and an investigation of each new industry is conducted by the community Chamber of Commerce. At the request of this Chamber of Commerce, representatives of this Division visited industrial plants, located in nearby states but intending to locate in this community, to learn and make known to the local Chamber of Commerce what controls would be necessary for good industrial hygiene practices both within and without the proposed new industrial plants.

Visitors

Many distinguished persons visited this Division this year. Several of these were referred to us by Harvard University, Columbia University and the U. S. Public Health Service. Three nurses obtaining degrees from Columbia completed a field training course with the personnel of this Division. B. N. Lingaraju, M. B., B. S., D. P. H., from India, spent one week and Pablo P. Recarte, M. D., M. P. H., from Uruguay, spent three weeks observing the work of this Division.

GENERAL

Preliminary arrangements were made at several plants for mass chest X-ray surveys to be completed by the Division of Tuberculosis Control of this Department.

Preliminary plans and an industrial outline was prepared for a joint industrial Cancer Survey to be conducted by this Division and the Division of Cancer Control of this Department.

Programs of other Divisions, as Dental Health and Venereal Disease Control were promoted at every opportunity.

Forty-six talks were delivered during the year and thirty articles were published. One class in industrial hygiene was taught at Rutgers University in co-operation with a course in Public Health. Literature distributed to industry comprised 36,695 individual pieces during this fiscal year.

Report of the Division of Cancer Control

July 1, 1947—June 30, 1948

By RAYMOND V. BROKAW, M. D., *Chief*

This fiscal period marks practically the second year of activity of this Division. The efforts of the Division have therefore of necessity been largely devoted to continued organization in line with adopted policies and program.

BASIC PRINCIPLES

In reviewing the imminent needs of a state-wide attack upon the cancer problem the Department has fully appreciated the desirability of avoiding duplication of effective measures already in operation under the auspices of existing non-official agencies. Conversely, the Department appreciates the significance of cancer control as a public health problem and is aware of its particular responsibilities in that direction.

In the development of the present program of the Division of Cancer Control the Department has accordingly recognized the fundamental importance of the medical, the dental, and the nursing professions in the approach to this problem. The responsibilities and prerogatives of the respective professions and of the Department have been duly regarded. Policies have been adopted by prior agreement with the profession concerned. Present emphasis is placed upon the promotion of mutual interests under joint auspices in the medical, the dental and the nursing fields of cancer control.

JOINT PATHOLOGICAL PROGRAM

In the medical field, activity of the Division has been largely limited to a joint program with the New Jersey Society of Clinical Pathologists. In setting up this project the following recommendations were made by the Society and adopted by the New Jersey State Department of Health on January 14, 1947:

- (1) That the Society establish a Tumor Registry in co-operation with the Division of Cancer Control of the New Jersey State Department of Health, to be financed by the Division.
- (2) That such a Tumor Registry shall include the physical facilities for the collection and filing of cancer case histories, tissue slides, gross pathological specimens,

photographs of pathological material, outlines of proposed treatment, a plan of follow-up of treatment, library facilities, and other pertinent data related to tumors.

- (3) That the cancer histories, tissue slides, and other data necessary for the maintenance of the Tumor Registry shall be furnished by the members of the Society of Clinical Pathologists and other physicians for permanent filing and follow-up.
- (4) That the Society shall select a Consulting Board of Tissue Pathologists who shall direct the professional activities of the Tumor Registry in co-operation with the Division of Cancer Control.
- (5) That the Division of Cancer Control shall provide laboratory facilities for the preparation of gross pathological specimens and microscopic sections for the Tumor Registry.
- (6) That the Division of Cancer Control employ a competent pathologist who shall be approved by the Consulting Board of the Tumor Registry; and whose activities shall be controlled by the Consulting Board in so far as the work of the Tumor Registry is concerned.
- (7) That the Division of Cancer Control promote and support pathological seminars for the members of the Society in co-operation with the Society.
- (8) That the Division of Cancer Control promote and support clinico-pathological conferences for the medical profession of the State in co-operation with the Society.

At the end of the fiscal period (June 1948) these recommendations have been largely fulfilled:

The Tumor Slide Registry is being maintained, the Consulting Board of Tissue Pathologists is functioning, a tumor tissue laboratory is in operation, a cancer reference library is available, and pathological seminars have been held.

In the pathological seminars the cytologic diagnosis of cancer has been emphasized. In one of the sessions, Dr. George N. Papanicolaou presented an extended discussion of his experience in this important field.

Motion picture films on cancer cytology which are the property of the Division and are available for presentation to professional audiences include the following:

- Cinematograph of Living Cells—by Warren H. Lewis, M. D.
- Various Aspects of Cells in Living Tissues—by Robert Chambers, M. D.
- Precancer Diagnosis of the Cervix by Cytology—by J. E. Ayre, M. D.

Complete details of the operation of the various features of this program have been set forth in the report of this Division for the previous fiscal year.

CONSULTING BOARD OF PATHOLOGISTS

The Consulting Board of Tissue Pathologists appointed by the New Jersey Society of Clinical Pathologists has included the following members during this fiscal period: Nicholas M. Alter, M. D., Jersey City; Arthur R. Casilli, M. D., Elizabeth; Samuel A. Goldberg, M. D., Newark; Frank W. Konzelmann, M. D., Atlantic City; Carlos A. Pons, M. D., Asbury Park; John L. Work, M. D., Montclair; Asher Yaguda, M. D., Newark.

DENTAL PROGRAM

The New Jersey State Dental Society has formally approved a joint program with this Division which provides for fellowships in tumor pathology for qualified young New Jersey dentists and for the preparation and distribution by this Division of a booklet on cancer for dentists.

Arrangements have been made with the Army Institute of Pathology at Washington for the training of the recipients of these fellowships. Tentative copy for the cancer booklet has been approved by the Board of Trustees of the Dental Society.

ADVISORY NURSING COMMITTEE ON CANCER

An Advisory Nursing Committee on Cancer has been formally established by the State Nurses' Association, the State League of Nursing Education, and the State Organization for Public Health Nursing, for the development of a joint educational program with this Division in the field of cancer nursing care. Plans include provision of cancer scholarships for nurses by the Division and a state-wide program of cancer education among the members of the nursing profession.

The following statement of qualifications and conditions pertaining to these scholarships was formulated and adopted by the Nursing Committee at a recent meeting:

I. Cancer Consultant Nurse in Public Health:

Applicant—

- (a) must be a registered professional nurse engaged in the field of public health nursing in New Jersey.
- (b) must hold a degree in Public Health Nursing from a college or university offering an approved course in public health nursing.
- (c) must have had one year's experience in public health nursing following her degree, under qualified supervision with either an official or a non-official agency.

Beneficiary of this scholarship shall serve at least two years in the field of her specialty in the State of New Jersey.

II. Cancer Consultant Nurse in Nursing Education:

Applicant—

- (a) must be a registered professional nurse engaged in the field of nursing education in New Jersey.
- (b) must hold a degree in nursing education and/or nursing administration from a college or university approved for nursing education.
- (c) must have had at least three years' experience in teaching or supervision in an approved school of nursing.

Beneficiary of this scholarship shall serve at least two years in the field of her specialty in the State of New Jersey.

Committee members representing the New Jersey State Nurses' Association include Edna M. Antrobus, R. N., Secretary-Treasurer, N. J. State Board of Nursing, Newark; and Olive N. Northwood, R. N., Director, School of Nursing, Mountainside Hospital, Montclair.

The N. J. State League of Nursing Education is represented by Martha S. Trainor, R. N., Director of Nursing, Division of Hospitals, State Department of Institutions and Agencies, Trenton; and Eleanor C. Tilton, R. N., Director, School of Nursing, McKinley Hospital, Trenton.

The N. J. State Organization for Public Health Nursing is represented by Grace Anderson, R. N., President, S. O. P. H. N., Camden; Anna J. Haines, R. N., Director, Visiting Nurse Association, Trenton; and Alice G. Howard, R. N., Director, Visiting Nurse Association, Moorestown.

The State Department of Health is represented by Gertrude L. McLaughlin, R. N., Advisory Public Health Nurse, Bureau of Preventable Diseases of the Department.

Miss Haines serves as chairman of the committee and Mrs. Norwood is the secretary.

PROFESSIONAL TRAINING

A cancer Fellowship providing a full year's residency for qualified young New Jersey physicians is maintained at the James S. Green Memorial Tumor Clinic in Elizabeth. The present incumbent completes his residency at the end of this fiscal year as the second beneficiary of this provision.

In June, 1948, a staff nurse of the Division received a degree in public health nursing education from the University of Pennsylvania as a beneficiary of the in-service training program of the Department.

LAY EDUCATION

Lay education in cancer has been conducted during this period in continued co-operation with the Division of Health Education.

A booklet for the general reader entitled "About Cancer" has been made available during this period for distribution without charge in cancer educational programs.

A new "talking mirror" cancer exhibit has been constructed and is scheduled for its first showing at the New Jersey State Fair in September 1948. This striking mechanism provides vocal answers to selected questions on cancer designated by the interested visitor.

Several sound films on cancer suitable for presentation to lay audiences are available on a free loan basis except for transportation charges.

PUBLIC HEALTH CANCER COUNCIL

The Public Health Cancer Council consists of representatives of New Jersey professional and civic agencies whose state-wide formal interests include the problems of cancer control.

Members serving during this period are as follows:

Mrs. Claire Ader, State Chairman of Health—New Jersey State Federation of Colored Women's Clubs, Inc.

Dr. Emil Frankel, Director, Division of Research and Statistics—New Jersey State Department of Institutions and Agencies.

Miss Anna J. Haines, R. N., Director of Trenton V. N. A.—New Jersey State Organization for Public Health Nursing.

Mr. John Hall, Executive Secretary—New Jersey Health and Sanitary Association.

Mr. Charles C. Hansbury, Manager—American Cancer Society, New Jersey Division, Inc.

Mr. Seward H. Jacobi, Assistant Research Director—New Jersey State Chamber of Commerce.

Mr. J. Harold Johnston, Executive Secretary—State Hospital Association.

Alfred Nelson, D. D. S.—The New Jersey State Dental Society.

J. Lynn Mahaffey, M. D., Director and Acting Commissioner of Health—New Jersey State Department of Health.

Mr. Carl T. Pomeroy, President—New Jersey Health Officers' Association.

Carlos A. Pons, M. D., President—New Jersey Society of Clinical Pathologists.

L. S. Snegireff, M. D., Medical Director—American Cancer Society, New Jersey Division, Inc.

J. Earle Stuart, M. D., Chief, Division of Negro Health, New Jersey State Department of Health—New Jersey State Medical Association.

Mrs. W. Andrew Wesley—American Association of University Women (New Jersey State Division).

William O. Wuester, M. D., Chairman, Advisory Committee on Cancer Control—The Medical Society of New Jersey.

PROFESSIONAL RELATIONS

The Director of the Department of Health has continued to serve during this period as a member of the Executive Committee and of the Board of Trustees of the New Jersey Division of the American Cancer Society.

The Chief of the Division of Cancer Control has served as a consultant on the Advisory Cancer Committee of the Medical Society of New Jersey, and as a member of the Consulting Board of Tissue Pathologists of the New Jersey Society of Clinical Pathologists.

Report of the Division of Dental Health

July 1, 1947—June 30, 1948

By EARL G. LUDLAM, D. D. S., *Chief*

During the past year covered in this report, the dental health program in the State of New Jersey has prospered and shown considerable progress, although the obstacles to be overcome were many. Many changes in personnel occurred during this one-year period. Dr. Daniel Bergsma, M. D., M. P. H., was appointed Commissioner of Health, a new Health Council was appointed, and Dr. Earl G. Ludlam, D. D. S., on February 15, 1948, became the new Chief of the Dental Division to succeed Dr. J. M. Wisan, who accepted the call to become the Director of Division of Health Education to the American Dental Association in Chicago, Illinois. Dr. Ludlam of Camden, New Jersey, Supervisor in South Jersey, was appointed Assistant Chief on July 1, 1947, and upon Dr. Wisan's resignation was selected and approved by the Commissioner of the Department of Health, as well as the New Jersey Dental Society, as the new Chief of the Dental Division.

Another vast hindrance was the one of finances. Without going into detail at this time, it is only necessary to say that our federal and state allocations were reduced by \$38,795, or 31 per cent. This item is discussed in the report on pages 125 and 126.

These are but two of the many hardships that had to be handled, and the surmounting of these obstacles has been far from an easy task. The following pages show the various problems that have arisen and the successful manner in which they have been cared for.

The Division of Dental Health feels the task has been performed in a very satisfactory manner and with very pleasing results.

The following headings give in detail the activities of the Division for the fiscal year July 1, 1947, to June 30, 1948:

I. *Personnel*: As stated, Dr. Earl G. Ludlam became the Chief of the Dental Division on February 15, 1948. Dr. Neal W. Chilton remains as part-time Assistant Chief, concentrating his efforts on research, statistics and lecturing. The other part of the Assistant Chief position formerly held by

Dr. Earl G. Ludlam has been temporarily discontinued. The position of Supervisor in Southern New Jersey, formerly occupied by Dr. Ludlam, still remains vacant. Knowing the valuable work accomplished by our other three Supervisors, namely, Dr. Frederick Lauer, Dr. Edward de Monseigle, and Dr. Armand Rose, I am very desirous of having a Supervisor appointed in the near future for the southern counties of the State. *Direct supervision* of our program activities is an absolute necessity. At present Mrs. Olive D. Stone, Dental Aide in Camden and Gloucester Counties, and Mrs. L. E. Bedwell, R. N., Field Representative in Sussex, Warren, and Morris Counties, are performing their duties in an excellent manner in their respective communities. Since January there have been several changes in the Central Office personnel. The position of senior clerk has been vacant since February 15, 1948. The position of clerk-typist has been vacant and then filled by a new employee. During the past year there have been many requests from dentists throughout the State for positions as operating dentists in the Dental Health Program, but due to limitations of budget, only 11 new operators were added to the present list and 19 voluntarily resigned, bringing the total number of operating dentists for the year to 100. The total listing of all personnel for the dental program will be found on page 124.

II. *Finances*: Finances have been quite a problem. In the year 1946-47 the federal and state budgets combined amounted to \$124,250, and local contributions increased this figure by approximately \$30,000. For the fiscal year 1947-48 the federal and state budget was greatly reduced and the combined amount allocated was \$85,454, or a reduction of \$38,795 (local contributions were approximately \$34,150).

Because of these financial limitations it has not been possible to expand the existing programs, or initiate new ones, with but very few exceptions. A request for an appropriation for a mobile clinic for Burlington County was denied in the 1948-49 budget.

I am pleased to report that with these limitations in funds, our reports show an increase in work accomplished and a balanced budget on June 30, 1948. A detailed breakdown of these figures appears on pages 125 and 126.

III. *Treatment Programs*: The new mobile clinic purchased for Atlantic and Cape May counties was put in operation this past year and Dr. Edgar Gattegno was appointed dental operator for this unit. The working schedule, the salary of assistant, and supplies for this clinic are shared equally between these two counties. The salary of dentist (hourly basis) is paid by Division of Dental Health.

The new mobile clinic purchased for Gloucester County was also put in operation in January of the past year and Dr. Edward Pointer was appointed dental operator.

The Warren County mobile clinic, operated by Dr. Blumenfeld, began operation during this past year also. The complete listing of all mobile clinics will be found on page 123.

I am pleased to report that all mobile clinics will be in operation during the coming summer. A summer schedule has been designed for each, and all schedules have been approved by Dr. Bergsma, the Dental Health Committee and Dr. Ludlam.

The private office and clinic program reports show considerable progress during the past year.

The station wagon in Sussex County operated by Mrs. Johnson, R. N., performed an almost impossible task, covering her territory during the bad weather encountered this past winter.

For the coming year, a complete and thorough prophylaxis, and a series of four topical applications of two per cent sodium fluoride solution, will be given to each child presenting himself or herself for treatment.

For a detailed report as to treatment programs, see pages 127, 128 and 129.

IV. *Educational Activities*: In addition to a continuation of the educational activities of the Division, as listed in the annual report of 1946-47, the Division of Dental Health has participated in the following educational activities during 1947-48:

Course in Dental Health Education at Glassboro Teachers College.

Course in Dental Health Education at Seton Hall.

Course in Dental Health Education at Paterson Teachers College.

Symposium on Dentistry for children at the Greater Philadelphia Dental Meeting arranged through the New Jersey Society of Dentistry for Children.

Lecture in the postgraduate course in Pedodontics at the Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania.

Lectures in the post-graduate course in Pedodontics at the College of Dentistry, New York University.

Lecture on the "Topical Application of Sodium Fluoride" at the meeting of the New Jersey Health and Sanitary Association.

Co-operation with the Division of Health Education of the American Dental Association on the evaluation of dental health education materials.

Participation in the second Conference on Dental Health, sponsored by the New Jersey State Dental Society, April 20, Atlantic City.

Co-operation with the Division of Cancer Control of the New Jersey State Department of Health in a projected program of professional education for the detection and control of malignancies in the oral cavity. The program is outlined as follows:

1. A paper on the diagnosis of oral malignancies, by Dr. Brokaw, Chief of the Division of Cancer Control, was published in the July issue of the *Journal of the New Jersey State Dental Society*.

2. A pamphlet containing illustrations of typical malignant oral lesions, prepared by the Division of Cancer Control in co-operation with the Division of Dental Health, to be distributed to all dentists in this State.

3. Scheduling of authoritative speakers on the subject of oral malignancies before the component dental societies of New Jersey.

4. Short intensive courses on the recognition, treatment and pathology of oral cancer, to be given at leading cancer institutions in New York and Philadelphia, for interested New Jersey dentists.

Conference on dental health education methods for parents, teachers, nurses, and school administrators in Camden.

Children's Dentistry issue of the *Journal of the New Jersey State Dental Society*, by the staff of the College of Dentistry, New York University (January 1948).

A paper on the public health aspects of periodontology to be presented before the Section on Periodontology of the American Dental Association in Chicago, September 1948.

Pamphlets entitled "Dental Plan for Low Income" have been revised and reprinted and are now available for distribution.

Poster, "Donald Duck," being revised and will soon be available.

Purchase of 2,000 Pinocchio Certificates for distribution to children after completion of dental treatments.

"Dental Health Education for Children-Primary Grades" and "Dental Health Education for Children-Intermediate Grades," are now being printed and will soon be available.

V. *Investigatory*: The third paper in the series, "Studies in Dental Public Health Administration: III. Administrative Factors in a Dental Program as Measured by Lost Time Analysis," was published in the *Journal of the American Dental Association* in January 1948.

A survey was performed, in co-operation with the Board of Health, Health and Welfare Council and Board of Education of New Brunswick, of the dental conditions of the children in the New Brunswick elementary public and parochial schools.

The report of the survey of the dental facilities of Passaic County, made in 1947 at the request of the Medical and Dental Societies of the County of Passaic, was presented to the requesting organizations.

A study is being undertaken to determine the effects of the addition of one part per million of sodium fluoride to the drinking water of the City of

Morristown. This study is under the direct supervision of the Division of Dental Health, in co-operation with the City of Morristown and the Tri-County Dental Society. The teeth of 1,300 children in this city have been examined prior to the addition of the fluorine to the public water supply. These children will then be examined periodically over the next decade to determine the effects of this chemical on the teeth. This will make the eighth such study on fluorination of public water supplies instituted throughout the county. The examinations and processing of the data will be conducted slightly differently, however, to obtain information which will be more readily applicable to the State of New Jersey.

Preliminary plans are being prepared for a study of the public health aspects of periodontal disease in this State. The first step has been the sending of a circular letter to the various dental colleges in this country for data on the distribution of periodontal diseases of various types in different parts of the country. It is hoped that co-operation and participation of the necessary organizations will be obtained in order to complete such a study, which will be the first of its kind in this country.

A study of the statistical aspects of dental and public health research, to be conducted under the auspices of the Division of Dental Health, Columbia University and the Navy Dental Research Program, is being contemplated.

In conclusion, the changes in personnel, limitations in financial appropriations, etc., will in no way deter the Division from continuing the excellent work it has performed in the past. We shall continue forward, initiating new phases of public dental health as the occasion arises.

The following is a complete listing of the mobile units within the State of New Jersey during the past year.

County	Name of Operator	Type
Camden	Dr. William Laub	Self-propelled
Atlantic and Cape May	Dr. Edgar Gattegno	Self-propelled
Gloucester	Dr. Edward Pointer	Self-propelled
Warren	Dr. William Blumenfeld	Self-propelled
Ocean	Dr. Maney Horn	Trailer
Somerset	Dr. Saul Gale	Trailer
Sussex	Mrs. E. Johnson, R. N.	Station wagon for transportation of children

All mobile units will be in operation during the months of July and August, as well as during the months of the school year.

The Somerset unit was repaired this June at a cost of \$500. Each unit will in turn be overhauled and repaired as the need presents itself in the future.

DEPARTMENT OF HEALTH

All units are performing an excellent task and showing a very high percentage of completed cases—a goal we are constantly striving to obtain.

PERSONNEL

- 1—Chief, Division of Dental Health
- 1—Assistant Chief (part-time basis)
- 3—Dental Supervisors
- 1—Dental Aide
- 2—Field Representatives
- 1—Senior clerk-stenographer—resigned 2/14/48 and unable to secure replacement—position vacant
- 2—Clerk-typists
- 100—Operating dentists
- 9—Full-time dentists
- 91—Part-time dentists

DIVISION OF DENTAL HEALTH

Items	BUDGET—1947-1948	State	Federal
Salaries:			
Chief, Dr. J. M. Wisan (7½ months at \$6,750.00 per year)		\$4,218.75	
Chief, Dr. E. G. Ludlam (4½ months at \$6,000.00 per year)		2,250.00	
Total salaries		\$6,468.75	\$1,440.00
Field Representative, Mrs. L. E. Bedwell		2,400.00	600.00
Dental Aide, Mrs. J. Hutchinson		2,040.00	525.00
Clerk-typist, Mrs. O. D. Stone		1,800.00	
Clerk-typist, Mrs. M. McCoy			
Senior clerk-stenographer, Mrs. M. Neumann			
Senior clerk-stenographer, Miss P. Kerfall (4 months)			
Senior clerk-stenographer, Mrs. G. Gering (3½ months)			
Position of senior clerk-stenographer vacant for 4½ months			
Operating dentists		49,672.22	
Dental Aide (amount transferred to operating dentist for purpose of conducting Morris County fluorine survey)			500.00
Paterson, dentist salaries			6,200.00
North Arlington, dentist salary			3,400.00
Supervisors			3,944.40
Others:			
Laboratory supplies			450.00
Travel			870.00
Maintenance of trailers		650.00	
Dental health educational material		1,000.00	
Stationery and office supplies		1,000.00	
Printing			200.00
In-service field orientation		375.00	400.00
			200.00
Total		\$65,405.97	\$20,049.00
State funds		\$65,405.97	
Federal funds			20,049.00
Local contributions (approximately)			34,150.00
Total			\$119,604.97

INCREASE OF ACTIVITIES
Dental Treatment Program of the New Jersey State Department of Health—1939-1948

	1939	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48
Number of children treated	0	833	2,088	2,846	3,613	5,401	5,782	7,713	8,730
Number of communities included	0	25	50	109	160	171	171	188	181
Number of children included	0	2	8	10	16	17	17	17	18
Number of mobile units	0	0	1	1	2	2	3	3	6

During 1948, 93.4 per cent of the children included in the program were given all necessary fillings and extractions.

Report of the Division of Maternal and Child Health

For the Calendar Year 1947

By JULIUS LEVY, M. D., *Chief*

MATERNAL MORTALITY

The maternal mortality rate in New Jersey consistently continues to decrease. In 1947 there were 105 maternal deaths which makes a rate of less than one per 1,000 live births.

If the 1937 rate of 3.2 had prevailed, there would have been 234 more maternal deaths in 1947, or a total of 339 instead of 105.

If the 1927 rate of 6.1 had prevailed, there would have been 542 more maternal deaths in 1947.

One of the major factors in reducing the maternal mortality has been the educational program directed to mothers, stressing the importance of proper nutrition, hygiene and early medical care during pregnancy.

Another factor of importance has been the investigation of each maternal death by our field physicians. These investigations have included a discussion with the attending physician, a study of the record of the case, the completion of a detailed report and, in many instances, the presentation of the case before county medical societies for general discussion.

The statistical study showed that the maternal deaths during 1947 were attributable to the following causes:

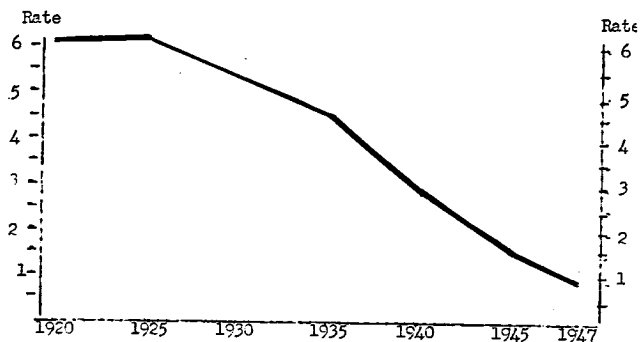
	<i>Per Cent</i>
Hemorrhage, trauma, shock	40
Infection	29
Toxemias	22
Other causes	9

INFANT MORTALITY

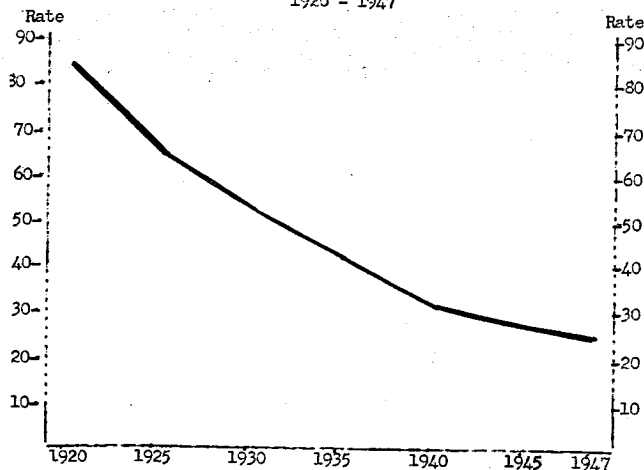
The infant mortality rate for 1947, although the same as the 1946 rate in round numbers (28), is fractionally slightly less. This reduction in the infant mortality rate is remarkable in view of the fact that there were over 11,000 more births in 1947 than in 1946.

If the 1937 rate of 39 had prevailed, there would have been 1,178 more infant deaths in 1947.

MATERNAL MORTALITY CHART
Rates Per 1,000 Live Births
1920 - 1947



INFANT MORTALITY CHART
Rates Per 1,000 Live Births
1920 - 1947



If the 1927 rate of 61 had prevailed, there would have been 3,512 more infant deaths in 1947, or a total of 6,471 deaths instead of 2,959.

The lowest infant mortality rate for 1947 among the counties of the State was the rate of 21 recorded in Bergen County. The highest rate, 37 deaths per 1,000 live births, was observed in rural Salem County.

Of the cities with more than 1,000 births per year, Irvington had the lowest rate of 20. Passaic City with a rate of 37 was high.

Prematurity among the prenatal and natal causes of death took most of the infant lives.

HOME DELIVERY NURSING SERVICE

The use of the home delivery nursing service has decreased. There were only 137 home deliveries where 14 registered nurses assisted the physician. One nurse from the Visiting Nurse Association assisted at one delivery. Obstetrical consultants who are available for home deliveries were called in three cases.

BABY KEEP-WELL STATIONS

There were 179 Baby Keep-well Stations conducted under the supervision of the Division of Maternal and Child Health. Physicians served in 123 of these stations. Doctors in 104 of the stations were paid from Social Security funds. In 19 of the stations, doctors in attendance were paid locally or served without compensation.

The doctors in the stations made 12,368 examinations of infants and 5,567 of pre-school children.

EDUCATIONAL ACTIVITIES

Nurses under the supervision of the Division met regularly in conferences with their district supervisors to discuss the various aspects and problems of the maternal and child health work. Guest speakers also presented such topics as Care of the Premature Baby, the Rh Factor, Nutrition, and Prenatal Care. The staff of the Division also met regularly for conferences to discuss the many aspects of maternal and child health work.

Courses in the Understanding, Care and Guidance of Children were given to an enrollment of 90 nurses under the auspices of Seton Hall College. Dr. Levy and Dr. Esty were the chief lecturers.

AUDIOMETER

The audiometer for testing the hearing of school children was under repair frequently during the year. It has outworn its usefulness and will not be used during the coming year. No plans have been made to replace it, because many

of the cities and counties have purchased audiometers and may be able to cover their needs. A total of 11,369 children were given their initial test. There were 1,827 re-tests made and the 1,786 children found to have hearing defects were referred to their family physicians for care.

MATERNITY HOMES

Licenses for the 14 maternity homes were renewed by the State Department of Health. In accordance with the Hospital Licensing Act, maternity homes with more than one bed will now be licensed by the Department of Institutions and Agencies, those with only one bed will continue to be licensed by the State Department of Health. However, the Division of Maternal and Child Health will continue the inspections and general direction of the homes.

EXTENSION OF ACTIVITIES

Of the 257 field nurses under the supervision of the Division of Maternal and Child Health, 176 were paid entirely by the communities in which they work, 12 were paid entirely by the State, and 69 were paid partly by the State and partly by the communities in which they work.

The 257 public health nurses had under their supervision 14,703 expectant mothers, 22,850 post-partums, 46,624 infants, 53,009 children between one and six, and 141,987 school children.

During the year, five nurses were placed for the demonstration period in the following communities:

South Bound Brook
Bound Brook
Bridgeton

Hawthorne
Dumont

The following communities assumed a portion or the balance of the nurses' salaries:

Atlantic County—Absecon, Linwood.
Bergen County—Park Ridge, Washington Township.
Burlington County—Burlington.
Camden County—Bellmawr, Gloucester.
Cumberland County—Commercial Township.
Gloucester County—East Greenwich Township, Logan Township, Swedesboro, Franklin Township, National Park, Harrison Township, South Harrison Township.
Morris County—Mine Hill.
Mercer County—Ewing Township.
Salem County—Elmer.
Somerset County—Bridgewater Township.
Sussex County—Sussex, Green Township, Newton.
Warren County—Belvidere, Hackettstown, Oxford.

STATISTICAL SUMMARY OF THE 257 NURSES' WORK

Home visits by the nurses	510,404
To expectant mothers	43,521
To post-partums	53,896
To infants	199,870
To children 1 to 6	156,536
To school children	56,581
Visits to Baby Keep-well Stations	51,063
By babies	31,834
By children 1 to 6	19,229
Child Hygiene Leagues (classes conducted)	239
Dental sessions, nurse assisting	605
Classes for mothers conducted by nurses	24
Children under one year of age immunized	11,117
Children one to five years of age immunized	6,931
Children vaccinated	62,532
School children supervised	141,987
(Inspections—annual, assisting doctor or general)	763,229

ILLEGITIMATE BIRTHS

There were 2,476 births out-of-wedlock among New Jersey residents. This represented 2.3 per cent of the total births for the State, the same as in 1946. Of the mothers, 4 per cent were under 15 years of age; 35 per cent were between 15 and 20; 35 per cent were between 20 and 25; 15 per cent were between 25 and 30; 10 per cent were over 30.

MIDWIFERY

There were 161 licensed, registered midwives in New Jersey in 1947, or 16 less than there were in 1946. Of these, 146 were supervised by the State Department of Health and 15 by a local department.

Of the 161 midwives, 82 delivered no cases during the year, 66 delivered less than 12 cases, and 13 delivered more than 12 cases.

Although the total births in the State increased, the total delivered by midwives decreased. The midwives delivered only .4 per cent of the total births.

EMERGENCY MATERNITY AND INFANT CARE PROGRAM

Acceptance of new cases for maternity care under this program ceased after July 1, 1947. The only cases authorized after that date were for pregnancies that occurred previous to July 1. Infant care will be available for those born by April 1948 until they reach the age of one year. From the time the program for the benefit of servicemen's wives and infants became effective in April 1943 until the end of June 1947 there were 30,597 maternity cases and 2,996 infant cases authorized for care.

Report of the Negro Health Program

July 1, 1947—June 30, 1948

By J. EARLE STUART, M. D., M. S. P. H., *Consultant*

Community organization for better health remains the motivating concept for planning and executing the various programs that co-ordinate the services of the Bureaus and Divisions of the Department of Health. This program recognizes the need to interpret available health services and to develop individual health consciousness and community interest.

NURSING SERVICE

Our generalized nursing program has played an important part in the development of various programs for better health for individuals and the community. Our nurses serve as instructors, educators and counsellors. This is particularly true in the rural South Jersey area where there is a paucity of the accepted services usually found in urban cities. The nurses help individuals through home visits to understand and share responsibility in solving personal, family and occupational health problems. Their functions in this state-wide program in accordance with the administrative policies of our health department are:

1. Interpretation of local available facilities and current community services; for example, community X-ray surveys, pre-school clinics and health educational meetings.
2. Learning of family health status and health problems so as to offer assistance.
3. Directions to seek private physician, clinic or hospital care.
4. Referral to proper agencies, such as Commission for Blind, Commission for Crippled Children, Tuberculosis Leagues, etc.
5. Organization and promotion of health educational meetings with local organized groups and agencies, official and unofficial.

During the past year our three nurses made a total of 979 home visits in widely scattered areas throughout the State, particularly in the South Jersey area, helping families and individuals previously unreached.

They also arranged interviews with school officials, Y. M. and Y. W. C. A. directors, health officials, ministers and private physicians for the promotion of various community health programs. A total of 143 such conferences was held.

HEALTH EDUCATION

Health education an important service of this modern public health program was promoted through the media of health meetings, newspaper articles, radio broadcasts and the distribution of health pamphlets. A total of 49 health meetings was held during the year, reaching approximately 5,183 teen-agers and adults. These meetings were held in churches, Y. M. and Y. W. C. A.'s, and community centers and schools. Physicians of our Speakers' Bureau gave the lectures, which were sometimes supplemented with health films. Important facts about community sanitation, diseases such as tuberculosis and venereal diseases, cancer and discussions on sex relations and petting were presented. We co-operated with Mrs. Margaret Zealand, Nutritionist, in the promotion of education and the distribution of literature relating to proper nutrition.

Articles on various diseases appeared currently in the monthly newspaper, *The Trenton Bulletin*, which is disseminated throughout the State.

Radio broadcasts were held periodically as part of publicity for community chest X-ray surveys and national celebrations such as National Public Health Nursing Week and National Negro Health Week.

CASE-FINDING

A total health program to be successful requires more than health education; it requires also the satisfactory development of demonstrative procedures, such as community chest X-ray surveys, where the general public participates. Our program enjoyed close working relations with the Bureau of Tuberculosis Control in correlating community surveys with industrial chest X-ray surveys, so that not only the plant worker but his family also could receive a chest X-ray examination. This was true in Atlantic City, Pleasantville, Camden, Berlin, Vineland, Bivalve, Port Norris, Princeton, Trenton, Morristown, Bridgeton, Paulsboro, Woodbury, Pennsville, Pennsgrove and Salem. Such a community project requires a satisfactory educational campaign, teaching the value of a periodic examination of the chest when apparently well. This must be done through both group and individual approach. Conferences were held by the writer with health officers, local and district, health league secretaries, Visiting Nurse Association executives and prominent laymen for the promotion of publicity and to discuss details for adequate follow-up of cases needing further study. A total of 16 surveys was held this year and 17,329 persons were X-rayed. The films were read

by Dr. Pugh of the Bureau of Tuberculosis, and follow-up procedures were handled by that Bureau and the local county tuberculosis and health leagues.

As part of our case-finding program, 148 children of the Lawnside Public School were patch tested. Those with positive reactions (approximately 45) were X-rayed during the community survey in Camden. As a rule, children under 16 years of age are not included in the community X-ray surveys.

IMMUNIZATION PROGRAM

The annual immunization clinics were held in Port Norris and Haleyville under the leadership of Mrs. Clara Cossaboon and Mrs. Mae Hires of the Bureau of Maternal and Child Health. The writer administered combined diphtheria and whooping cough toxoid to 57 pre-school children and vaccinated 90 pre-school and school children. The parents of these children are in the low-wage-earning group and this preventive measure would not be enjoyed by them if not offered by the State.

SUMMARY

A statistical record is included with this report. There are no startling accomplishments, but it is to be remembered that the results of any health program cannot always be measured adequately statistically.

It should also be pointed out that the services of this program are offered to all groups, but our efforts are concentrated in certain sections of the communities where the need is greatest and which statistics prove have been neglected previously.

Towns or Cities	Number Health Meetings	Approx. Att'n	Total X-rayed	Immunization Tox.	Vac.	Home Visits	Lit. Dist.
<i>Atlantic County</i>							
Atlantic City	4	1,220	3,352	...	...	65	...
Pleasantville	1	40	825	...	...	20	...
<i>Camden County</i>							
Camden	4	495	3,102	...	...	180	...
Berlin .....	...	...	452	...	...	40	...
Lawnside	1	35	...	6	6	135	...
Jericho .....	...	...	...	...	...	40	...
<i>Cumberland County</i>							
Bridgeton	1	80	1,609	...	...	10	...
Bivalve .....	...	...	137	...	...	...	...
Haleyville .....	...	...	...	16	46	...	...
Port Norris .....	...	...	321	35	38	48	...
Vineland .....	...	...	2,947	...	...	31	...
<i>Essex County</i>							
East Orange	1	40	...	...	...	...	...
Bloomfield	1	46	...	...	...	14	...
Montclair	1	45	...	...	...	...	...
Orange	1	55	...	...	...	...	...
Newark	4	1,165	...	...	...	8	...
<i>Gloucester County</i>							
Glassboro	3	194	...	...	...	76	...
Paulsboro .....	...	...	232	...	...	8	...
Woodbury .....	...	...	194	...	...	44	...
<i>Hudson County</i>							
Jersey City	2	120	...	...	...	...	...
<i>Mercer County</i>							
Princeton .....	...	...	1,686	...	...	38	...
Trenton	5	295	...	...	...	3	...
<i>Middlesex County</i>							
Perth Amboy	1	25	...	...	...	...	...
Carteret	1	25	...	...	...	8	...
<i>Morris County</i>							
Morristown .....	...	...	1,237	...	...	...	...
<i>Passaic County</i>							
Passaic	1	40	...	...	...	8	...
Paterson	1	40	...	...	...	10	...
<i>Salem County</i>							
Pennsgrove	2	50	188	...	...	5	...
Pennsville .....	...	...	331	...	...	...	...
Salem	2	65	716	...	...	8	...
<i>Union County</i>							
Elizabeth	5	800	...	...	...	175	...
Roselle	3	168	...	...	...	...	...
Rahway	1	50	...	...	...	...	...
Linden	1	50	...	...	...	5	...
Plainfield	1	25	...	...	...	...	...
<i>Warren County</i>							
Washington	1	45	...	...	...	...	...
Totals	49	5,183	17,329	57	90	979	18,830

Report of the Rabies Control Unit

FOR THE CALENDAR YEAR 1947

By J. S. McDANIEL, D. V. S., *Veterinarian-in-Charge*

At the close of the calendar year December 31, 1947, the personnel of the Rabies Control Unit comprised: Veterinarian-in-Charge; one Veterinary Inspector; two Rabies Control Wardens; four Investigators; two Inspectors (emergency); one principal clerk; one senior clerk-stenographer and one clerk-stenographer.

The year 1947 indicated a growing awareness of the importance of the rabies problem on the part of the public, health and municipal officials, and veterinarians. Although there has been a decline in the incidence of rabies this year over 1946, the recurrence of outbreaks among animals during the current year and one human death serves as a warning that rabies in the State of New Jersey is still rampant. Some areas in New Jersey harbor reservoirs of rabies infection and presumably new strains of virus are introduced by dogs in the incubation stage of rabies brought into the State. It is from these sources that explosive outbreaks arise. Throughout the years, as cases of rabies developed, attempts have been made by the State Department of Health to suppress the disease by ordering restrictions on dogs pursuant to R. S. 26:4-84 (Quarantine Act), and by assisting local officials in patrolling infected territories. Since the number of susceptibles remains constant, the application of these methods alone cannot be expected to yield satisfactory results. This annual recurrence of the disease in significant numbers, despite quarantine and patrolling, has given rise to the view that the surest and safest approach to the eventual eradication of rabies from the canine population of this State is to balance the control program by the administration of specific rabies treatment to dogs kept within the rabies-infected area.

REVENUE

The State Department of Health, during the calendar year 1947, collected a total of \$81,034.05 in dog registration tag fees, as required by R. S. 4:19-15.2. Expenditures covering this period were \$46,494.74.

FIELD ACTIVITIES

In March of 1947, two Rabies Control mobile units were activated and an additional mobile unit added in December 1947. Field personnel covered a total of 103,433 miles in assisting municipalities not equipped to handle the problems of rabies and dog control. Obviously, the Rabies Control Unit cannot be expected to undertake all of the work which is the responsibility of the local municipal authorities; however, every reasonable effort has been made to co-operate in the development of efficient local control facilities. Inadequate facilities for dog control at state and local levels are recognized and an attempt has been made to improve both agencies. In response to a municipal questionnaire designed to assemble data pertinent to rabies control, facts were revealed indicating laxness on the part of many municipalities in carrying out the provisions of the Rabies Control Act. Many of the smaller municipalities had absolutely no facilities whatever for dog control, being unable to employ a warden, or to furnish pounds or other essential equipment. The following figures, taken from a survey of 117 municipalities within three average counties, are regarded as representative of the general situation throughout the State:

Municipalities employing full- or part-time wardens	53 or 45 per cent
Pounds municipally or privately owned	59 or 50 per cent
Unofficial service	28 or 24 per cent
No service provided	36 or 31 per cent

Granting that the overall picture appears uncomplimentary, the low efficiency average does not reflect unfavorably on the more populated areas when adequate funds are made available for such work. Smaller villages, hamlets and townships often find their situation hopelessly encumbered in attempting to adhere to principles of home rule on the one hand and co-operation with their neighbors on the other. Attempts of the Rabies Control Unit to organize community groups into a working unit large enough for control purposes have resulted in disappointment. Cognizance is taken of the benefits that may be enjoyed if legislation is passed establishing larger and more efficient local health units into which such programs as rabies control could be integrated. A great many municipalities, striving to carry out the provisions of the Rabies Control Act but being unable to formulate a control unit of sufficient size to be effective, are now utilizing the services of the Rabies Control mobile units.

It would seem pertinent that all dog license fees collected by municipalities under the Rabies Control Act, especially in metropolitan areas where sufficient moneys are collected to do so, be expended for the purposes stated in the Rabies Control Act, to wit: for collecting, keeping and disposing of dogs

liable to seizure under this act or under local dog control ordinances; for local prevention and control of rabies; for providing anti-rabic treatment under the direction of the local board of health for any person known or suspected to have been exposed to rabies; for payment of damage to or losses of poultry and domestic animals, except dogs and cats, caused by a dog or dogs; and for administering the provisions of this act.

INCIDENCE OF RABIES

According to reports received, there were 94 reported cases of rabies in the State of New Jersey during the year 1947; 92 canine, 1 feline and 1 human. (See Table No. 1.)

QUARANTINE

Restrictions on dogs established in 1945 and 1946, pursuant to R. S. 26:4-84 (Quarantine Act), are still operative in Bergen, Essex and Union Counties, in the Town of Kearny in Hudson County and in Franklin Township in Warren County.

Due to outbreaks of rabies in Mercer, Middlesex and Somerset Counties during 1947, quarantine restrictions were established in the following municipalities:

Mercer County—Boroughs of Hopewell, Pennington, and Princeton; Townships of Hopewell, Lawrence, Princeton and West Windsor.

Middlesex County—Boroughs of Carteret, Dunellen, Highland Park, Metuchen, Middlesex, South Plainfield; City of Perth Amboy; and Townships of Piscataway and Raritan.

Somerset County—Townships of Franklin and Montgomery; and Rocky Hill Borough.

LEGAL ACTION

Legal actions brought by and in the name of the State Department of Health at the request of local authorities resulted in the collection of \$3,166 in fines for violations of R. S. 4:19-15.2 (Licensing) and R. S. 26:4-84 (Quarantine). A review of the attached tabulation (Table No. 2) will show that \$3,152 of the amount collected was for violations of the Quarantine Act, indicating lack of concerted action on the part of some municipal officials in enforcing the provisions of that law.

DOG BITES

According to a tabulation received from the Bureau of Local Health Services, 13,620 dog bites were reported to local boards of health under the provisions of Title 26, Chapter 4, Article 7. As a courtesy to the State Depart-

ment of Health, some municipalities forward dog bite reports to this office; of 4,959 bites reported, 4,878 were inflicted by dogs, 54 by cats, 7 rats, 4 rabbits, 1 ewe, 4 squirrels, 1 opossum, 4 monkeys, 1 pony, 1 fawn, 1 weasel, 1 raccoon, and 1 parrot.

INSTITUTE ON RABIES

On March 10, 1947, an Institute on Rabies, sponsored by the New Jersey State Department of Health, was held in the War Memorial Building, Trenton, New Jersey. This institute was attended by local health and municipal officials, veterinarians, representatives of dog owners' associations, members of the S. P. C. A., bacteriologists and interested citizenry.

Participating in the Institute were:

- Dr. James H. Steele, Director, Veterinary Public Health, States Relations Division, United States Public Health Service, Washington, D. C.;
- Dr. John Wright, National Institute of Health, Washington, D. C.;
- Dr. Alexander Zeissig, Veterinary Consultant, Division of Communicable Diseases, New York State Department of Health, Albany, New York;

and the following members of the New Jersey State Department of Health:

- Dr. J. Lynn Mahaffey, Director of Health;
- Dr. Frederick P. Lee, President, Board of Health;
- Dr. Roscoe P. Kandle, Director, Bureau of Preventable Diseases;
- Mr. John H. Spooner, Chief, Bureau of Bacteriology;
- Dr. J. S. McDaniel, Veterinarian-in-Charge, Rabies Control Unit.

Dr. Daniel Bergsma, Deputy Director of the New Jersey State Department of Health, acted as moderator.

GENERAL

Feeling that education of the public is a dominant factor in advancing any public health program, representatives of the State Department of Health accepted invitations to speak before the New Jersey Health Officers' Association, Parent-Teacher Associations, Grange meetings, the New Jersey Veterinary Medical Society and other citizen groups.

In view of recommendations of eminent authorities in the field of rabies control, the State Department of Health is convinced that the challenge imposed by rabies can be met only by the proper administration of vaccines of demonstrated potency, in conjunction with other control measures. Therefore, it is deemed imperative that, in those areas in which rabies infection is known to be enzootic, the following policy be established:

- (1) Encourage and participate in an educational campaign designed to strengthen community interest in a rabies eradication program.
- (2) Supply vaccine of known value to local health and/or municipal officials to be used in immunizing dogs, said vaccine to be administered by regularly licensed veterinarians of the State of New Jersey under sponsorship of local governments.
- (3) Recommend that 30 days after 85 to 90 per cent of the dogs in a municipality have been vaccinated, the Director and Acting Commissioner of Health abolish existing restrictions on vaccinated dogs imposed pursuant to R. S. 26:4-84.
- (4) Adjust the budget for the year 1948 to compensate for the purchase and storage of vaccine in existing chemo-biologic depots maintained by the New Jersey State Department of Health. Based on the registered dog population of Bergen, Essex, Union and Middlesex, Mercer and Somerset counties—known to contain foci of rabies infection—a minimum of 135,000 doses of vaccine should be provided. The estimated cost of this amount of vaccine is \$40,500.

The protective value of modern anti-rabic vaccine is no longer in doubt. All such vaccines are tested by the Habel mouse test in the National Institute of Health and are required to meet a minimum standard before being released. In view of the confidence engendered by positive results in actual field test, immunization of dogs and cats against rabies has received the endorsement of the following official organizations:

- a. National Research Council on Animal Health.
- b. U. S. Department of Agriculture, Bureau of Animal Industry.
- c. U. S. Public Health Service.
- d. New York Academy of Science.
- e. New Jersey Bureau of Animal Industry.
- f. New Jersey State Veterinary Medical Society.
- g. The American Veterinary Medical Association.

Obviously vaccination, though imperative, is not the solution to all dog problems. Each municipality should adopt an ordinance dealing with local requirements, such as any part, or all, of the provisions of P. L. 1941, c. 151, the Rabies Control Act; leash and enclosure clauses; physical facilities and competent personnel for dog control; and setting up machinery to facilitate vaccination of dogs.

The object of the New Jersey State Department of Health is eradication of the disease from the State. To accomplish this requires:

1. Licensing all dogs within the State.
2. Apprehension and disposal of all stray dogs.
3. Quarantine of dogs in infected areas until the outbreak has subsided.
4. Frequent patrol of infected areas in support of the quarantine.
5. Immunization of all dogs kept within rabies danger zones.
6. Pursue with vigor an educational program designed to establish the hazards of rabies to the general public.

TABLE No. 1
THE NUMBER OF CASES OF RABIES REPORTED TO THE RABIES CONTROL UNIT OF THE NEW JERSEY STATE DEPARTMENT OF HEALTH
FROM JANUARY 1, 1947 TO DECEMBER 31, 1947

COUNTY	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for County
Atlantic													3
Bergen				1			1						1
Burlington													1
Camden													1
Cape May													1
Cumberland													1
Essex	1	40		1	1	1	1	2		1			48
Gloucester													1
Hudson			1										1
Monmouth	2		3			1	3						9
Middlesex	1	4	1	2	2	3	3	2	1				22
Morris													1
Passaic													1
Salem													1
Somerset		6	3			2				1	2		16
Sussex	1	1	8	3	1	4							25
Warren													1
Warren													1
Totals	6	23	16	9	4	10	4	5	5	2	2	8	94

* 1 cat.
** 1 human.

TABLE No. 2—TABULATION OF REVENUE RECEIVED 1947

LEGAL ACTIONS				Fine	Month of Violation
Municipality	County	Statutes			
Saddle River Twp.	Bergen	R. S. 26:4-84		\$28.00	September
Hasbrouck Heights	Bergen	R. S. 26:4-84		5.00	June
East Paterson	Bergen	R. S. 26:4-84		75.00	June
Wallington	Bergen	R. S. 26:4-84		15.00	May
Wallington	Bergen	R. S. 26:4-84		125.00	April
Lodi	Bergen	R. S. 26:4-84		220.00	April
Fair Lawn	Bergen	R. S. 26:4-84		85.00	January
Englewood	Bergen	R. S. 26:4-84		199.00	September
Belleville	Essex	R. S. 26:4-84		25.00	November
Belleville	Essex	R. S. 26:4-84		140.00	October
Nutley	Essex	R. S. 26:4-84		165.00	October
Nutley	Essex	R. S. 26:4-84		10.00	February
Nutley	Essex	R. S. 26:4-84		90.00	January
West Orange	Essex	R. S. 26:4-84		10.00	September
West Orange	Essex	R. S. 26:4-84		100.00	August
Kearny	Hudson	R. S. 26:4-84		75.00	October
Kearny	Hudson	R. S. 26:4-84		145.00	April
Kearny	Hudson	R. S. 26:4-84		10.00	February
Kearny	Hudson	R. S. 26:4-84		25.00	January
Dunellen	Hudson	R. S. 26:4-84		190.00	December 1946
Roselle	Middlesex	R. S. 26:4-84		30.00	November
Roselle	Union	R. S. 26:4-84		70.00	October
Roselle	Union	R. S. 26:4-84		45.00	September
Roselle	Union	R. S. 26:4-84		5.00	July
Roselle	Union	R. S. 26:4-84		15.00	June
Roselle	Union	R. S. 26:4-84		245.00	April
Linden	Union	R. S. 26:4-84		80.00	September
Linden	Union	R. S. 26:4-84		5.00	July
Linden	Union	R. S. 26:4-84		80.00	June
Linden	Union	R. S. 26:4-84		260.00	May
Summit	Union	R. S. 26:4-84		115.00	August
Summit	Union	R. S. 26:4-84		155.00	March
Summit	Union	R. S. 26:4-84		30.00	December 1946
Cranford Twp.	Union	R. S. 26:4-84		15.00	May
Cranford Twp.	Union	R. S. 26:4-84		15.00	April
Scotch Plains Twp.	Union	R. S. 26:4-84		55.00	April
Union Twp.	Union	R. S. 26:4-84		35.00	April
Union Twp.	Union	R. S. 26:4-84		30.00	December 1946
Fanwood	Union	R. S. 26:4-84		35.00	April
New Providence Boro.	Union	R. S. 26:4-84		10.00	February
Garwood	Union	R. S. 26:4-84		80.00	December 1946
Garwood	Union	R. S. 26:4-84		5.00	December 1946
New Hanover Twp.	Burlington	R. S. 4:19-15.2		4.00	July
Pemberton Twp.	Burlington	R. S. 4:19-15.2		2.00	July
Freehold Twp.	Monmouth	R. S. 4:19-15.2		7.00	June
Freehold Twp.	Monmouth	R. S. 4:19-15.2		1.00	May

1 Remittance received January 1, 1947.
2 Remittance received January 2, 1947.
3 Remittance received January 3, 1947.
4 Remittance received January 3, 1947.
5 Remittance received January 3, 1947.

Report of the Division of Tuberculosis Control

July 1, 1947—June 30, 1948

By A. JOSEPH HUGHES, M. D., *Chief*

From July 1, 1947 through June 30, 1948 the Division of Tuberculosis Control has X-rayed 162,082 persons in industries, communities and institutions in New Jersey. A total of 3,838 persons whose films showed abnormalities of possible significance were referred to the Bureau of Local Health Services for follow-up. Better integration of the activities of this Division, the Bureau of Local Health Services, official agencies, and tuberculosis leagues resulted in more rapid and effective follow-up of the screened suspects. Assistance was given to certain general hospitals in securing routine chest X-rays for their in- and out-patients. X-ray equipment belonging to the Division was in use in eight clinics throughout the State, and 7,525 persons received chest X-rays in these clinics. Modern case registry equipment was loaned by the Division to three agencies, with the approval of the Bureau of Local Health Services.

Again this year the Division of Tuberculosis Control made the mass X-ray survey its main effort. The discovery of each unsuspected case of tuberculosis directly benefited the individual concerned, his family and the community in which he lives. In addition, a chain of events was initiated which developed a much-needed co-ordination among the many persons and agencies involved in tuberculosis control. The public received continuous health education, and the private physician was stimulated to a greater awareness of the frequency of chest problems in his patients. The Division's mass X-ray survey work reached a probable maximum with the present allocation of funds. Industries, communities and institution populations were surveyed.

Large and small industries comprised the bulk of this aspect of the Division's work. For example, a survey of the 30,000 employees of the Public Service Electric and Gas Company throughout the State, begun in November 1947, is now about 70 per cent complete. Some industries were done a second and third time since 1942. The field director's activities resulted in requests on hand to survey over 50,000 persons employed in various industries, and additional requests are received daily. To continue industry's interest in the

Division's X-ray service, the Division of Health Education prepared an excellent new descriptive brochure. Each month the Division mailed out over 500 copies of its publication "The TB Controller" to inform interested persons of survey activities.

The number of persons X-rayed in community surveys increased appreciably. The success of the community surveys depended on the assistance of local health departments, tuberculosis leagues, the Negro Health Program, civic groups and county medical societies. In community work, many persons were reached who would not otherwise have been X-rayed. Occasionally a community program and local industrial surveys were held simultaneously, a noteworthy example being the Vineland survey of October 1947, in which about 80 per cent of the adult population of that area was X-rayed. Interested local physicians contributed much to the success of this survey.

In conjunction with the State Department of Institutions and Agencies, this Division provided much-needed screening of the populations of crowded mental institutions, as well as those of almshouses and prisons. In co-operation with the State Department of Education, this Department conducted chest X-ray surveys at some of the training and normal schools and the New Jersey State College for Women. Exceptionally large numbers of active cases of tuberculosis were found in the insane asylums; segregation of the actively tuberculous and the routine X-raying of all admissions were recommended.

A condensed statistical summary of the X-ray survey work of the Division is given below. A more detailed analysis is available on request. The diagnoses refer to the impression of the Division physicians in reading the films, and do not refer to the clinical appraisal reported back to the Bureau of Local Health Services by private physicians and clinics, or to the appraisal of institution physicians.

SUMMARY OF MASS CHEST X-RAY SURVEYS

I. Number of persons X-rayed 162,082
 II. Surveys by counties:

<i>County</i>	<i>No. Surveys</i>	<i>No. Persons X-rayed</i>
Atlantic	25	10,265
Bergen	2	1,857
Burlington	4	4,706
Camden	21	7,299
Cape May	1	700
Cumberland	10	9,619
Essex	39	15,634
Gloucester	9	4,191
Hudson	42	19,042
Hunterdon	5	1,791
Mercer	19	14,089
Middlesex	22	9,361
Monmouth	5	1,568
Morris	25	17,158
Passaic	49	25,471
Salem	5	2,329
Somerset	28	7,232
Union	24	7,923
Warren	2	1,847
	337	162,082

III. Survey X-ray abnormalities:

A. Pulmonary		4,377
1. Probably tuberculous	2,052	
a. Minimal	1,408	
(1) Probably active	183	
(2) Activity doubtful	848	
(3) Probably inactive	377	
b. Moderately advanced	586	
(1) Probably active	319	
(2) Activity doubtful	229	
(3) Probably inactive	38	
c. Far advanced, active	58	
2. Possibly tuberculous	1,750	
a. Tuberculosis suspect (subminimal)	1,311	
b. Gross lesions not typically tuberculous	409	
c. Disseminated multiple intrapulmonic calcific deposits	30	
3. Probably non-tuberculous	575	
a. Suspected pneumoconiosis	158	
b. Suspected neoplastic masses	92	
c. Suspected bronchiectasis	80	
d. Suspected lung cysts	9	
e. Suspected emphysema	19	
f. Miscellaneous	217	
B. Pleural	140	
C. Diaphragmatic	223	
D. Skeletal	1,541	
E. Operative	26	
F. Cardio-vascular	3,013	
IV. Number of persons referred for follow-up		4,282
A. Through Bureau of Local Health Services	3,838	
B. Directly to institution physicians	444	

A tremendous burden was put on the Bureau of Local Health Services this year. Of the 4,282 persons whose X-rays showed abnormalities of possible importance, 3,838 were referred to the Bureau of Local Health Services for follow-up. The remaining 444 were referred directly to institution physicians. The Bureau of Local Health Services and the Division of Tuberculosis Control evolved and put into operation a priority system for referrals from mass X-ray surveys so that the greatest emphasis will be placed on those cases whose survey films show the greatest public health urgency. Thus, the persons whose survey X-ray shows a probably active, cavitary tuberculosis, will receive continuous attention, while relatively little attention will be given the person with an obviously calcific lesion.

Before this priority system was put into use, a special study was made of the Newark community survey which involved over 9,000 Newark residents, and from which there were 123 significant referrals. The study was made six months after the survey, and the material was gathered by the Division's Nurse Consultant. With the co-operation of the Bureau of Local Health Services and the Newark Health Department, it was found that 12 persons (0.13 per cent) proved to have active pulmonary tuberculosis, even without ideal bacteriologic and serial X-ray follow-up. Such a percentage figure for activity is comparable to the percentage given by other workers for metropolitan areas of various states, although 0.3 per cent has been reported under ideal follow-up conditions. On analysis it was found that the majority of finally proven active cases fell into the group in which the Division's physicians had initially read the survey film as "probably active." A check on the final results in other surveys lead to the same conclusion. Consequently, all persons whose survey X-rays were read as "probably active" have been placed in the top priority for follow-up.

Funds were insufficient to give general hospitals much more than an impetus to X-ray the chests of all their in- and out-patients. However, film for this purpose was given to the Hackensack General Hospital through the instigation of the Bergen County Tuberculosis League, and a similar program was begun at the Paterson General Hospital in co-operation with the Passaic County Tuberculosis League. Recently the Division has loaned a 4 x 5 X-ray machine to the St. Francis Hospital in Trenton to make routine chest X-rays of all in- and out-patients. The Mercer County Tuberculosis League has promised assistance in the follow-up work. At present, few of New Jersey's 42 general hospitals approved for internship, X-ray the chests of all ward admissions.

This year, the Division loaned X-ray machines to clinics in Burlington, Cliffside Park and Newton, in addition to those already in operation in Ham-monton, Lakewood, Mays Landing, Paterson and Trenton. Free follow-up and routine clinic X-rays were made available to persons unable to pay for

such service. A statistical summary of the X-ray work done by the clinics using the Division's X-ray equipment during the fiscal year is given below.

WORK OF CLINICS USING X-RAY MACHINES OWNED BY THE
DIVISION OF TUBERCULOSIS CONTROL

Number of X-rays taken	*7,525
Number of persons X-rayed for first time	6,087
Number of persons re-X-rayed	1,438
Number of persons admitted to sanatoria	168

Modern case registry equipment was provided to Mr. Goemann for Cliffside Park, Mr. Newell for Bergen County, and the Monmouth County Organization for Social Service. The Bureau of Local Health Services and this Division will be guided by the use made of these registries in considering their installation elsewhere.

The Division is justly proud of its achievements during this fiscal year, and realizes that such accomplishments have depended on the industry of the field director, X-ray supervisors and technicians, the principal clerk and her able staff and on the co-operation of all with whom it has had dealings. Only through the continuous and integrated efforts of all concerned will tuberculosis cease to be a serious public health problem in New Jersey.

* Includes—2,037 fluoroscopies done in the Paterson Clinic in lieu of X-rays.

Report of the Division of Venereal Disease Control

July 1, 1947—June 30, 1948

By A. J. CASSELMAN, M. D., Dr. P. H., *Chief*

Annual reports of the past three years have started with penicillin, and this one also will record first the developments of the past year in the penicillin treatment program as this is the focal point around which the whole program functions. Those who have been in venereal disease work for many years are still awed by the effectiveness and non-toxicity of penicillin as a therapeutic agent against both gonorrhoea and syphilis. The significant development of the past year is the appearance on the market of different preparations of penicillin which make cure possible in a shorter time and with greater ease than before. Scientists predict that the cure of syphilis by a single injection of penicillin may be an accomplishment of the coming year.

PENICILLIN IN THE TREATMENT OF SYPHILIS

The Division has continued to offer free hospitalization to patients with syphilis. Forty-two general hospitals have accepted patients under this plan during the past year. Some hospitals have objected to our rate of payment in view of increasing costs of operating hospitals. The rate of payment to some hospitals has been increased to the maximum therefore, but no change has been made in the maximum allowance of \$7.50 per day. In addition to the general hospitals, some of the counties (notably Essex County) and cities have provided hospital beds for residents within the jurisdiction. Penicillin for these patients has been supplied by the Division. A recapitulation of numbers of patients hospitalized for penicillin treatment with state aid during the four years of the program is given in Table 1.

On April 1, 1948, the hospital program, which had been limited to cases of less than one year's duration, was extended to all classifications of syphilis. This extension was made because reports of research workers indicated that penicillin is remarkably effective in the treatment of late as well as early syphilis. A shift from hospital to ambulatory treatment, which will be discussed later, made our appropriation adequate to offer hospitalization for late cases. A treatment schedule, requiring eight days hospitalization and a total dosage of 4.8 million units (50,000 units every two hours), was adopted at the same time for all cases except neurosyphilis and early congenital syphilis

(less than four years), in which cases further extension of treatment was authorized. This schedule of treatment follows recommendations of the Syphilis Study Section, National Institute of Health, as released under date of December 1, 1947. It increases the treatment time and dosage which had been used previously in this State for primary, secondary, and latent syphilis of less than one year.

In spite of the introductory statement in this report about the trend to further simplification of treatment for syphilis, it seemed best to adopt a uniform schedule of treatment for early and late syphilis, longer than previously used for early cases, because of the difficulty of securing accurate classification of many cases. The aqueous preparation of penicillin is still being used in the hospital program.

Physicians have welcomed the extension of the hospital program to include old syphilis and have taken the opportunity to refer patients who are still serologically positive after years of treatment with arsenicals and bismuth, and patients who are partially disabled, physically or mentally, as a result of inadequately treated syphilis. There has not been time to evaluate the permanent effects of penicillin treatment for late syphilis. That many such persons are improved, at least temporarily, there is no doubt. Even temporary and partial recovery for these patients (which has been observed in our limited experience in New Jersey) is of inestimable value to them and their families. There is no doubt that institutional care will be avoided for some of them, with a resultant saving to the taxpayer. By treating all classifications of syphilis, it is reasonable to assume that many of the crippling manifestations of syphilis of the central nervous system will be prevented.

TABLE NO. 1
CASES TREATED WITH PENICILLIN UNDER THE STATE PLAN

Six-Month Periods	Gonorrhoea		Syphilis		
	Hospitalized	Out-Patient	Civilians Hospitalized	Separates Hospitalized*	Ambulatory Treatment
July-December, 1944	357	...	95	...	...
January-June, 1945	446	...	168	...	...
July-December, 1945	...	1,023	408	256	...
January-June, 1946	...	2,323	691	433	...
July-December, 1946	...	2,183	1,028	103	...
January-June, 1947	...	2,732	1,149	...	...
July-December, 1947	...	3,293	839	...	5
January-June, 1948	...	2,266	949†	...	561
Total	803	13,820	5,327	792	566

* During rapid discharge of men from military service at close of World War II.

† On April 1, 1948, hospitalization was offered for all classifications of syphilis—previously it had been restricted to cases of less than one year.

AMBULATORY TREATMENT OF SYPHILIS

Enough POB (penicillin in oil and beeswax) had been accumulated by November 1947 to experiment in supplying physicians with this medication for ambulatory treatment of patients in their offices. A single daily injection of 600,000 units for ten days, of a slowly absorbed preparation of penicillin was recommended. A group of Newark physicians who had reported five or more cases of syphilis in 1947 (only 29 could meet this requirement) were offered replacement of POB (two 10 cc. vials, containing 3 million units each) for cases of syphilis of less than one year. The reason for choosing Newark for this experiment was because a public health nurse of our staff was available to interview patients for contact information.

Contrary to expectations, few requests for POB were received. A meeting of these physicians was then called to discuss the plan. The concensus of opinion seemed to be that they were seeing cases of early syphilis infrequently in private practice. Reluctance to have private patients interviewed by a public health nurse was also mentioned as a deterring factor in applying for free penicillin. Public funds expended for the treatment of syphilis do not accomplish maximum results unless contacts of the patient are traced promptly. This requirement that the patient be interviewed by a public health nurse will be continued and efforts made to reassure physicians that such an interview will not interfere with the patient-physician relationship.

The offer was extended in December 1947 to 156 other physicians throughout the State (all who could meet the requirement of having reported five cases in 1947). In February 1948, all physicians who had reported one or more cases in 1947 were notified of the availability of POB for early cases of syphilis. As this fiscal year closes, requests from physicians who have reported cases are being filled regardless of the classification of the disease, as a means of getting prompt treatment to the patient and encouraging better reporting of cases. One hundred fifty-six physicians have received penicillin for ambulatory treatment of 293 private patients.

In March, efforts were started to arrange for ambulatory treatment of syphilis in as many of the clinics as possible. As most of the clinics were in session only once or twice a week, this involved arrangements for personnel to give daily injections. Most of the larger clinics (30) have worked out a plan to do this and are treating all of their patients in groups of a size which can be handled by available personnel. To the end of June, 273 clinic patients have been treated on an ambulatory basis with penicillin supplied by the State, in addition to the 293 private patients, or a total of 561 patients (see Table 1). Cases previously treated with arsenicals and bismuth, in addition to new cases, are being put through this course of penicillin treatment. Following this, the previously treated cases will be recalled for tests at periodic

intervals but will receive no further treatment unless relapse occurs. This method will reduce clinic loads and the cost of operating clinics.

IS THE PREVALENCE OF SYPHILIS DECLINING?

Fewer cases of syphilis were reported this year than last year; many clinics reported decreased enrollments. The assumption that the drop in clinic attendance could be accounted for probably by a shift to private physician care was not confirmed by private physicians with whom the staff is in contact. The demand for POB for use in private practice had been smaller than expected. Accordingly, a questionnaire was sent to all physicians, asking for an opinion as to the trend in prevalence of early syphilis as observed in private practice. Of 670 replies, 455 physicians indicated that they are seeing less early syphilis in practice than heretofore. These are straws in the wind which point to success in the control of syphilis.

GONOCOCCUS CULTURE SERVICE DISCONTINUED

Reluctantly the decision was reached to discontinue the gonococcus culture laboratory as of December 31, 1947. We realized that many physicians would feel that the Department was depriving them of a laboratory aid to the scientific practice of medicine after having urged this procedure upon them. As anticipated, some protests have been received from physicians. Objections have also come from some persons who interviewed patients for contact information and who claim that patients talk more freely when confronted with the laboratory evidence of their infection. As most of the contact reports now being received from military sources are for gonorrhoea, some military authorities are objecting to the fact that they do not receive definite information about the results of contact investigation of civilians, since doctors, although they may treat for gonorrhoea, hesitate to make a definite diagnosis without laboratory evidence. One good result is that culture reports will no longer influence the sentencing of girls picked up on vagrancy, prostitution, and other similar charges, as happened sometimes in the past; the sentence should be based on the crime and not on the presence or absence of disease.

The culture service, which was undertaken to assist physicians at a time when both diagnosis and therapy were very unsatisfactory, is no longer practical as a public health procedure. Penicillin now provides a cheap, efficient, innocuous cure for gonorrhoea. Instead of delaying treatment until an exact culture diagnosis can be made, physicians are being urged to treat with penicillin immediately on the basis of clinical or epidemiologic findings. A laboratory culture for gonorrhoea is now more difficult and costly than a cure, and to delay starting treatment until the receipt of a culture report makes possible the spread of disease.

The discontinuance of the culture service is in accordance with recommendations of the U. S. Public Health Service.

TABLE 2—NUMBER OF SPECIMENS RECEIVED DURING THE OPERATION OF THE GONOCOCCUS CULTURE PROGRAM

	<i>Mailed Specimens</i>	<i>Delivered Specimens</i>	<i>Total</i>
January-June, 1943	1,463	2,108	3,571
July-December, 1943	2,694	2,449	5,143
January-June, 1944	4,196	3,003	7,199
July-December, 1944	6,585	3,068	9,653
January-June, 1945	7,435	3,929	11,364
July-December, 1945	9,182	4,006	13,188
January-June, 1946	10,474	4,574	15,048
July-December, 1946	12,342	4,725	17,067
January-June, 1947	11,134	4,211	15,345
July-December, 1947	8,358	2,884	11,242
Total	73,863	34,957	108,820

EXAMINATION OF AGRICULTURAL MIGRANT WORKERS

For several years the Division has operated special clinics for the examination of migrant agricultural workers. Last summer these clinics were expanded, under the direction of a committee of the State Departments of Labor and Health, to provide a more comprehensive health examination. Nine clinics were operated, as follows: Cranbury, Imlaystown, Freehold, Glassboro, Gelston Village and Orchard Center near Bridgeton, Mount Holly, Hammonton and Swedesboro, but the Hammonton and Swedesboro clinics were small and were discontinued after one month.

When cases of venereal disease were found the procedure was to hospitalize immediately for penicillin treatment cases of syphilis of less than one year's duration. Patients with syphilis of more than one year's duration were advised to report to the nearest V. D. clinic or to a private physician for treatment. When gonorrhoea was diagnosed clinically, an injection of POB was given immediately and a confirmatory culture was done.

Only about 12 per cent of those examined were found to have syphilis, in contrast to about 30 per cent in previous years. Many persons stated that they had received treatment in rapid treatment centers in the south before coming to New Jersey.

From these nine summer clinics, 90 migrant workers were hospitalized for early syphilis and 215 cases of gonorrhoea were treated. The number of blood tests done in each clinic is given in Table 3.

OTHER MIGRANT GROUPS

In addition to the special clinics, examinations of many migrant workers were made at industrial plants, race tracks, hotels, etc. It is difficult to secure complete figures as employee tests are not always marked so that migrants and residents can be distinguished. The partial list below gives some idea of the extent of the problem:

TABLE 3—MIGRANT WORKERS EXAMINED FOR SYPHILIS, JULY 1, 1947-JUNE 30, 1948

	<i>Positive</i>	<i>Doubtful</i>	<i>Negative</i>
<i>Agricultural migrants (special clinics)</i>			
Cranbury	227	123	895
Freehold	215	96	431
Imlaystown	94	31	499
Glassboro (farm labor camp) Porta Ricans } Swedesboro (farm labor camp) Porta Ricans }	21	33	414
Gelston Village, Bridgeton	5	13	447
Orchard Center, Bridgeton	40	28	1,134
Mt. Holly	24	10	161
Hammonton .....	...	...	7
	626	334	
<i>Race tracks</i>			
Atlantic City	22	14	71
Monmouth Park	16	12	203
Garden State (Camden)	79	52	744
	117	78	
<i>Other groups</i>			
Armour Fertilizer, Carteret	16	14	...
Howard Smith Fertilizer, Port Monmouth ...	11	5	...
Hurff Camp, Swedesboro	33	31	...
Lakewood (hotel employees)	32	28	428
Seabrook Farms, Bridgeton	23	24	...
Ritters Canning Co., Bridgeton	16	18	...
Oyster shuckers, Port Norris	207	93	432
Miscellaneous	18	20	...
	356	233	
Total	1,099	645	5,866

EMPLOYMENT TESTS

Many industries are doing pre-employment tests routinely. These are not always marked so that they can be identified as pre-employment tests. However, 1,206 positive and 2,164 doubtful specimens submitted to the State Laboratory could be checked as from 134 different large industries. Follow-up of the persons who had positive tests was carried out in the same routine as for previous years by a letter to the individual, his physician and to the local health officer or public health nurse if it appeared that needed medical care was not being received. In addition, 183 positive or doubtful test reports from persons living in other states were referred to the State Department of Health having jurisdiction.

SPECIAL SURVEYS

Community blood test surveys were attempted in Passaic and Manville. In Passaic a local committee was organized and considerable publicity work done, including an excellent series of announcements by the local newspaper. The results in number of persons examined were disappointing, as shown in Table 4.

In Manville an effective publicity campaign was carried on with the assistance of local agencies, but the blood testing was called off at the last minute because of objections from officials of the county tuberculosis league to a blood-testing program in connection with a chest X-ray program. In other places also the hope of doing blood tests in connection with community chest X-ray surveys was not realized for two reasons; first, because the state trailer was used for the chest X-rays and there is not sufficient space to do blood tests and, second, the county tuberculosis associations, in line with the New Jersey Tuberculosis League, are concentrating their efforts at this time on tuberculosis. This is a change in policy of the state society under the direction of the new executive, as the society for several years past has carried on a social hygiene educational program.

Blood tests were offered on a voluntary basis to postal employees of Camden and to the Amalgamated Garment Workers of America at Vineland, with results as indicated in Table 4.

TABLE 4—SPECIAL SURVEYS, JULY 1, 1947-JUNE 30, 1948

	<i>Positive</i>	<i>Doubtful</i>	<i>Negative</i>
Passaic	2	4	79
Postal employees, Camden	1	3	166
Amalgamated Garment Workers of America, Vineland	12	18	1,097
	15	25	1,342

PREMARITAL AND PRENATAL SEROLOGIC TESTS FOR SYPHILIS

The laws requiring premarital and prenatal serologic tests for syphilis continue to be an excellent case-finding measure, reaching a large group of young adults.

TABLE 5—PREMARITAL BLOOD TESTS REPORTED BY APPROVED LABORATORIES IN NEW JERSEY

	Total Tests	Positives	Per Cent Positive	No. of Persons Married
1939	68,021	928	1.36	63,790
1940	87,622	1,120	1.28	82,118
1941	100,947	1,384	1.37	93,076
1942	100,391	1,510	1.50	100,906
1943	77,172	1,313	1.7	82,090*
1944	66,435	1,205	1.81	72,168*
1945	78,876	1,272	1.61	79,200*
1946	120,728	1,688	1.39	122,040
1947	113,707	1,705	1.49	106,260

As most positive tests would be repeated for confirmation, whereas a negative report would be accepted in most cases, the percentage of positive tests probably is higher than the actual percentage of persons infected with syphilis. This is true also in Table 6 which follows:

TABLE 6—PRENATAL BLOOD TESTS REPORTED BY APPROVED LABORATORIES IN NEW JERSEY

	Total Tests	Positives	Per Cent Positive
1939	42,863	640	1.49
1940	52,940	735	1.39
1941	62,852	874	1.39
1942	78,774	1,263	1.60
1943	58,376	794	1.36
1944	66,804	886	1.33
1945	66,537	992	1.49
1946	100,139	1,443	1.44
1947	96,059	1,433	1.49

* Many of these persons had blood tests in military laboratories of this or other states.

TABLE 7—TOTAL NUMBER OF BLOOD TESTS FOR SYPHILIS OF ALL LABORATORIES

	Total	Positive Results	Per Cent Positive
1939	507,801	47,081	9.28
1940	534,729	40,730	7.62
*1941	729,888	47,082	6.45
*1942	1,012,982	57,189	5.65
*1943	930,830	45,532	4.89
1944	563,530	38,740	6.87
1945	546,185	34,126	6.25
1946	703,040	36,383	5.17
1947	702,110	39,756	5.66

STANDARDIZATION OF SEROLOGIC TESTS

Ten years ago standardization of tests for syphilis was being done with lyophile standardized syphilitic serum. The supplying of dried standard syphilitic serum was discontinued during World War II as an economy measure. In the meantime, lyophile apparatus was simplified and made more efficient through necessity in the preparation of penicillin during the recent war. This simplified apparatus has been ordered so that the standard syphilitic serum again will be available in New Jersey. As a cheap method of increasing uniformity in sensitivity, Mazzini antigen of a constant sensitivity has been regularly supplied upon request to any New Jersey laboratory. Eighty-seven different laboratories have received 7,770 c.c. of standardized Mazzini antigen with a total of 65 liters of necessary buffered saline.

Quantitative Mazzini tests for syphilis are done upon request at the State Laboratory. Quantitative tests will be done routinely to supply this more informative report if sufficient funds become available for the purpose.

EPIDEMIOLOGY

Twenty years ago, New Jersey pioneered in applying the "from whom and to whom" method of finding cases of syphilis and has considered this phase of the program as indispensable ever since. Additional personnel were employed for this work in 1936 when federal funds first became available, and the staff gradually increased to 20 public health nurses assigned to various parts of the State. During the war years this expanded staff was invaluable in investigating contacts of infected military personnel. In 1945, the peak year, more than 2,500 such contacts were reported from military sources. With the demobilization of military personnel, by 1947 the number of military V. D. contacts reported had dropped to 590. This present fiscal year

* Includes tests for Selective Service.

the number was further reduced to 401. With the first peacetime conscription authorized by Congress to begin in August, every effort will be made to continue the close working relationship between military and civilian V. D. officials to prevent spread of disease to the young men required to undergo military training.

A representative of the Division assisted police officials (chiefly in Trenton) by interviewing 47 contacts suspected of being prostitutes. In 29 of these cases this assistance was requested directly by the police officials; the other cases were investigated because of information on contact reports from military establishments. Jail sentences were given to 26 of these persons and several were committed to state institutions. This assistance in interviewing prostitutes and conferences with police officials as to the disposition of other cases involving neglect of children, juvenile delinquency, sex offenses, etc., gave opportunity for the development of a close working relationship with police officials and for interpretation of the venereal disease laws.

CIVILIAN CONTACTS

The investigation of contacts named by civilians also has continued to be a major part of the V. D. program in New Jersey, although there was a decrease in the total number of such reports received from 2,700 last year to 2,002 this year. A few states have discontinued contact tracing in cases of gonorrhea on the assumption that the effectiveness of penicillin is so well known that infected persons will seek treatment. Although our staff has been instructed to give preference to early cases of syphilis, there still seems value in interviewing gonorrhea patients for contact information and in following up such information.

TABLE 8—CIVILIAN CONTACTS BY COUNTY AND LARGE CITY, JULY 1, 1947-JUNE 30, 1948

(NOTE: These figures should not be taken as an indication of the relative prevalence of venereal disease in these localities. The number of contacts reported depends, in part, upon the case-finding activity in that locality.)

Atlantic County	241	
(Atlantic City—206)		
Bergen County	96	
Burlington County	76	
Camden County	112	
(Camden—91)		
Cape May County	11	
Cumberland County	127	
Essex County	315	
(Newark—266)		
Gloucester County	41	
Hudson County	177	
(Jersey City—96)		
Hunterdon County	6	
Mercer County	143	
(Trenton—122)		
Middlesex County	64	
(New Brunswick—21)		
Monmouth County	134	
(Asbury Park and Neptune—39)		
Morris County	50	
Ocean County	12	
Passaic County	161	
(Paterson—122)		
Salem County	65	
Somerset County	27	
Sussex County	9	
Union County	115	
Warren County	20	
Out-of-state		2,002
		699
Total		2,701

To measure completely the results of contact-tracing is impossible, but an effort has been made in Table 9 to evaluate the program. As a result of being interviewed by a public health nurse, the alleged contact may place himself under medical care in another city, such as New York or Philadelphia, where he is not known, and it is sometimes difficult to complete his record. He may influence a group of his friends to have medical examinations, or may persuade to seek medical care a person or persons known by him to be infected. This assumption of responsibility by the individual for his own medical needs and

for educating others is a highly desirable result which does not lend itself to statistical measurement.

TABLE 9—RESULTS OF INVESTIGATION OF CIVILIAN CONTACT INFORMATION

(See Table 8)

Brought or returned to treatment	481
Previously untreated	351
Previously treated	130
Under treatment at time of investigation	100
Located—uncooperative (not examined)	22
Not infected	556
Not located	663
Not known at address	278
Fictitious address	116
Old address—suspect left	38
Moved out of jurisdiction	43
Insufficient information to begin investigation	188
Other disposition	150
Satisfactory	112
Unsatisfactory	38
Disposition unknown	26
Disposition pending	4
	2,002

PUBLIC HEALTH NURSES IN CASE-FINDING PROGRAM

Public health nurses of this Division have given full-time assistance to local health departments this year in the venereal disease case-finding program in the following areas: the northern part of Hudson County and Hoboken, the eastern part of Bergen County, the western part of Bergen County, Gloucester County, Cumberland County, Salem County, Camden and vicinity, Morris County, Plainfield and vicinity, Newark (private physician program), Monmouth County, Paterson and vicinity, Passaic and vicinity, Trenton and Mercer County, Atlantic City, and Somerset County.

STANDARD DRUGS

During the past years research workers have expressed increasing confidence in penicillin alone in the treatment of all classifications of syphilis. In neurosyphilis, results for penicillin alone have been reported by some psychiatrists as favorable as results with any other type of treatment or combinations of treatment.

A 38 per cent decrease has occurred this year in the amount of arsenicals and bismuth requested by practicing physicians, which suggests that this most conservative group is placing more reliance on penicillin as the decrease in

reported cases is not great enough to account for a decrease in requests for drugs. Not all have taken up the "new"; of 605 physicians who answered a recent questionnaire, 76 (12 per cent) stated that they use arsenicals and bismuth only in the treatment of early syphilis. Seventy-two per cent (436) stated that they use a combination of penicillin and the older drugs in early syphilis. In view of the preference of many physicians for a combination treatment, even in early syphilis, distribution of the arsenical and bismuth is being continued.

The four-page Syphilis History-Physical-Treatment record was revised and printed as a single sheet 5" x 10", and offered to all the clinics.

EDUCATIONAL PROGRAM

Through the department page in the *Journal of the State Medical Society* and by direct circularization of physicians and hospitals, the medical profession has been informed of advances in diagnosis and treatment. Three issues of *Vee Dee News Letter* were prepared and sent to health officers, clinics, and a mailing list of other interested persons.

A 15-minute radio broadcast was prepared for Social Hygiene Day and used by several local stations; letters were sent to all local health officers; and the Division cooperated again with the New Jersey Pharmaceutical Association and the New Jersey Tuberculosis League in sending a letter to all pharmacists in the State, resulting in requests from them for 21,000 pamphlets for distribution in drug stores.

In addition to the Social Hygiene Day broadcast, two other 15-minute radio scripts were prepared and used on radio stations. There were 139 showings of V. D. films to 15,000 people, and 20,000 pamphlets, in addition to those distributed through drug stores, were sent to individuals and organizations upon request.

The Division has continued its interest in sex education through membership on the advisory committee on social hygiene education to the State Department of Education, which committee has recently released a pamphlet to assist elementary school teachers and administrators. Although no active publicity has been done in recent years many requests for sex educational pamphlets are received from schools, P. T. A.'s and other groups. These requests have been filled. Staff members promote courses in sex education for communities under the sponsorship of Rutgers University.

TRAINING OF PERSONNEL

Several staff members have been assigned to universities for academic work during the past year, leaving the Division understaffed. It is anticipated that this academic training will prove very useful in advancing the program in the coming year when the reorganization of the entire Department will be undertaken by the new State Commissioner of Health.

TABLE 10—CASES OF VENEREAL DISEASE REPORTED IN NEW JERSEY,
JANUARY 1—DECEMBER 31, 1947 (CIVILIAN CASES ONLY*)

County	Syphilis		Gonorrhea		Chancroid		Total	1940 Population Thous.	Rate Per Thous.
	M.	F.	M.	F.	M.	F.			
Atlantic	379	353	290	152	2	...	1,176	124,066	9.5
Bergen	143	174	149	41	2	1	510	409,646	1.2
Burlington	105	105	98	39	1	..	348	97,013	3.6
Camden	225	215	209	99	2	..	750	255,727	2.9
Cape May	40	40	31	3	1	..	115	28,919	4.0
Cumberland	215	218	116	53	10	..	612	73,184	8.4
Essex	1,193	1,056	2,005	570	15	6	4,845	837,340	5.8
Gloucester	76	94	77	20	1	..	268	72,219	3.7
Hudson	309	297	391	191	9	1	1,198	652,040	1.8
Hunterdon	35	12	12	5	1	..	65	36,766	1.8
Mercer	450	334	296	133	2	..	1,215	197,318	6.2
Middlesex	265	221	137	97	3	1	724	217,077	3.3
Monmouth	380	410	194	103	4	4	1,095	161,238	6.8
Morris	55	45	88	44	..	..	232	125,732	1.8
Ocean	64	48	27	13	1	..	153	37,706	4.1
Passaic	176	167	228	65	1	..	637	309,353	2.1
Salem	69	65	80	19	2	..	235	42,274	5.6
Somerset	51	27	24	7	3	..	112	74,390	1.5
Sussex	8	12	9	2	..	..	31	29,632	1.0
Union	264	218	171	77	..	..	730	328,344	2.2
Warren	17	12	8	3	..	..	40	50,181	8
Total	4,519	4,123	4,640	1,736	60	13	15,091	4,160,165	3.6

Granuloma inguinale—7.

Lymphogranuloma venereum—13.

* Does not include military cases; includes migrant workers.

Report of the Bureau of Vital Statistics

Statistics for the Calendar Year 1947

By WALTER R. SCOTT, *State Registrar and Chief*

A Bureau of Vital Statistics has existed in New Jersey since 1879 and a statistical report has been published each year. The statistics compiled by the Bureau during this long period have been partly responsible for activities which caused a decline in the general death rate from 18.4 per 1,000 population in 1879 to 10.9 in 1946, and in the rate from tuberculosis of the respiratory system from 251.0 to 33.0 per 100,000 population.

The Bureau has the custody of more than twelve million records of births, marriages, and deaths which date back to 1848. The records for the period 1848 to 1887 were collected by the Secretary of State and turned over to the Bureau when the health laws were revised by the Legislature during the session of 1887. The new law provided for a State Board of Health and Bureau of Vital Statistics. Prior to that year the annual report was prepared from records not in the custody of the Bureau.

The Bureau supervised the issuance of marriage licenses and the registration of births, marriages and deaths throughout the State and supplied to local registrars and others the forms necessary to obtain registration.

Three bills for the improvement of registration procedures were written by the Bureau, and after departmental approval were introduced in the Legislature. All of the bills were passed by both the Assembly and Senate, and two received executive approval. The third bill had not been delivered to Governor Driscoll at the time of writing this report.

Monthly and annual statistical tables were compiled and published and in addition a large amount of special statistical data was compiled for the use of public and private institutions and agencies interested in disease and accident prevention. Electrical tabulation machinery, installed in 1915, was used in the preparation of the data. The statistical work done by the Bureau has been invaluable to other bureaus of the Department, particularly to the Division of Maternal and Child Health in the reduction of infant and maternal mortality.

The Bureau supplied photostatic service to other bureaus and divisions of the Department and allowed the Division of Venereal Disease Control the use of the electrical tabulating equipment for the preparation of statistical studies and reports.

Photostatic copies of certificates of deaths due to reportable diseases were prepared and forwarded to the Bureau of Local Health Services, and copies of certificates of deaths due to cancer and other malignant tumors were prepared for the Division of Cancer Control.

Certified copies of birth, marriage and death records were issued individuals and interested organizations and agencies. During the fiscal year 1947-48, 37,614 searches of the records were made and copies of certificates found issued, for which \$23,075.15 was received in fees. A total of 14,539 of the searches and certified copies were for purposes exempt from charge by law. The revenue of the Bureau decreased approximately \$650 from the amount collected during the preceding year. There was also a slight decrease in the number of certificates issued without charge, which records were requested mainly for obtaining dependency allotments and for claims against the Government due to service with the armed forces.

During the year the Bureau received, examined, classified, tabulated, indexed and permanently filed approximately 220,000 birth, stillbirth, marriage and death certificates, a small part of which records were for unreported births that occurred during previous years. The annual growth of the records requires approximately 200 cubic feet of storage space.

More than 111,000 premarital certificate forms were received and examined, a duty placed upon the Bureau at the adoption of the law requiring an examination for syphilis prior to the issuance of a marriage license.

A total of 1,578 original birth records were sealed and new certificates containing the names obtained by adoption made, as prescribed by section 26:8-40.1 of the Revised Statutes.

The Bureau field representative made 51 calls on local registrars and six calls on district health officers, county clerks, hospital authorities, judges and clergymen.

The additional clerical assistance requested to comply with P. L. 1945, c. 202, which requires a monthly report of the names of deceased veterans with the dates and places of burial, cremation or removal of such deceased veterans, and the wars in which they served, to the county supervisors of veterans' interment, still has not been provided. The work made mandatory by law has been done at the expense of a delay in the preparation of cross-indexes vital to the searching process. A total of 2,014 veterans were reported as buried in New Jersey cemeteries during the fiscal year.

The Bureau has been greatly handicapped by a lack of trained personnel and adequate working quarters. The electrical tabulating machinery is operated in a small room which also houses the voluminous files of the Bureau of Engineering and two file clerks. Exactng statistical work cannot be done efficiently where other persons are present, and personnel other than machine operators should not be subjected to the noise of the electrically operated equipment. Space, equipment and personnel should be provided in order that birth and marriage data could be punched on cards, which after use for statistical purposes, could be used for the preparation of indexes. New Jersey, one of the earliest registration states, is far behind some states in the preparation and dissemination of statistical data.

GENERAL SUMMARY

	1920	Calendar Years		
		1930	1940	1947
Births registered, tabulated and indexed	76,431	68,282	59,328	106,086
Stillbirths registered, tabulated and indexed	3,221	2,647	1,543	2,265
Marriages registered, tabulated and indexed	31,327	28,499	41,059	55,802
Deaths registered, tabulated and indexed	40,820	43,190	45,206	48,276
Total records registered, tabulated and permanently filed	151,799	142,618	147,136	212,429
Searches made and/or certified copies issued for which fees were received	4,664	10,523	38,431	23,075
Certified copies issued and searches made in pension and other cases for which no fees were received	4,232	6,938	11,300	14,539
Fees received for searches and certified copies	\$4,051	\$9,601	\$31,614	\$23,075.15

CHARTS AND TABLES—1947

- Table 1. Births, marriages, deaths and rates, 1879-1947.
 Table 1a. Births, marriages and deaths by months.
 Table 1b. Births, marriages, deaths and deaths under one year of age by counties, cities, boroughs and townships.
 Table 2. Deaths by age groups, with the percentage of each group of total deaths: 1947.
 Chart 1. Births and deaths per 1,000 population, 1880-1944.
 Table 3. Deaths of infants under five years of age and percentage of total deaths, 1904-1947.
 Table 4. Number of births, stillbirths, deaths under one month, deaths under one year and maternal deaths with rates per 1,000 live births, 1906-1947.
 Table 5. Deaths under one month, stillbirths and maternal deaths per 1,000 live births, by counties and certain cities.
 Table 7. Births, deaths under one year and infant mortality rates, by counties and cities.

- Chart 2. Deaths from typhoid fever per 100,000 population, 1880-1944.
 Table 8. Comparison between typhoid fever death rates in New Jersey and the United States Registration Area, 1937-1947.
 Table 10. Typhoid fever rates by counties, 1937-1947.
 Chart 3. Deaths from measles per 100,000 population, 1880-1944.
 Chart 4. Deaths from scarlet fever per 100,000 population, 1880-1944.
 Chart 5. Deaths from whooping cough per 100,000 population, 1880-1944.
 Chart 6. Deaths from diphtheria per 100,000 population, 1880-1944.
 Chart 7. Deaths from respiratory tuberculosis per 100,000 population, 1880-1944.
 Table 12. Cancer and other malignant tumors by sex, age period and organs affected.
 Table 12a. Cancer and other malignant tumors by part of body affected and color of decedent.
 Chart 8. Deaths from cancer and other malignant tumors per 100,000 population, 1880-1944.
 Table 13a. Violent or accidental deaths.
 Table 13b. Motor vehicle fatalities.
 Table 13c. Accidental deaths by type of injury.
 Table 13d. Accidental deaths by counties.
 Table 13e. Accidental deaths by months.
 Table 13f. Accidental deaths by ages.
 Table 14. Percentage of the various causes of total deaths and of each sex of total.
 Table 15. Death rates, total, white and colored, from important causes, per 100,000 total, white and colored population.
 Table 16. Deaths (exclusive of stillbirths) by causes and months of death.
 Table 17. Deaths (exclusive of stillbirths) from each cause of the Abridged International List, by age, sex, and color.
 Table 18. Deaths (exclusive of stillbirths) by causes, by days, weeks and months of the first year of life.
 Table 19. Deaths (exclusive of stillbirths) under one year of age, by causes and months of death.
 Table 20. Deaths (adjusted for residence) from each cause, Detailed International List, in the counties of New Jersey and selected municipalities and townships.
 Table 22. Deaths by causes, sex, color and age periods in the counties and cities having 50,000 or more inhabitants in 1940. (County figures include cities which follow):

Atlantic County
 Atlantic City
 Bergen County
 Burlington County
 Camden County
 Camden City
 Cape May County
 Cumberland County
 Essex County
 East Orange
 Irvington
 Newark

Gloucester County
 Hudson County
 Bayonne
 Hoboken
 Jersey City
 Union City
 Hunterdon County
 Mercer County
 Trenton
 Middlesex County
 Monmouth County

Morris County
 Ocean County
 Passaic County
 Passaic City
 Paterson
 Salem County
 Somerset County
 Sussex County
 Union County
 Elizabeth
 Warren County

Population.—In computing rates for the State, the U. S. Census Bureau estimate of 4,435,000 as of July 1, 1947 was used. Armed forces stationed in the State were included; residents of the State serving with the armed forces overseas were excluded. Information concerning the computing method may be obtained by referring to Current Population Reports, Series P-25, No. 4, issued by the Bureau of the Census on October 12, 1947.

Since county population estimates for 1947 were not available from the U. S. Census Bureau, the death rates by counties were based upon estimates of county populations for 1947 released by the State Department of Economic Development. These estimates were developed from a survey of the largest municipalities of each county.

Estimates of the 1947 population of municipalities were secured in the same manner as the county estimates.

Births.—During 1947, 106,086 live births were reported, with a resultant rate of 23.9 per 1,000 population. This was a numerical increase of 11,042 over the preceding year. The 1946 total of 95,044 was 18,049 more than occurred in 1945. Birth rates, which decreased from 25.1 in 1917 to 13.2 in 1936, have shown a rising trend since the latter year.

The number of illegitimate births reported for 1947 was 2,436 of which 1,157 were babies born to colored mothers. Expressed as percentages of the total births by color for white and non-white, the figures were 1.3 and 14.4 respectively. Similar percentages for 1946 were 1.4 and 14.9.

Marriages.—The number of marriages reported for 1947 was 55,802, a decrease of 5,218, or 8.6 per cent, from the number for the previous year. The marriage rate per 1,000 population was 12.6 compared with 14.2 for 1946 and 9.5 for 1945.

Deaths.—The number of deaths of residents of the State for 1947 was 48,276, equivalent to a rate of 10.9 per 1,000 population. In 1946 the rate was 10.7. For the past decade the rate ranged from 10.6 in 1938 and 1939 to 11.8 in 1943.

Stillbirths.—There were 2,265 stillbirths reported during 1947. The number for the previous year was 2,127. The 1947 rate was 21 per 1,000 live births. The rate for the colored population was 37.

BERGEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allendale Borough	70	14	37	4
Alpine Borough	11	5	4	0
Bergenfield Borough	262	128	114	9
Bogota Borough	175	78	96	3
Carlstadt Borough	134	44	61	3
Cliffside Park Borough	378	139	160	18
Closter Borough	77	30	42	1
Cresskill Borough	66	13	24	2
Demarest Borough	31	12	5	0
Dumont Borough	260	92	62	2
East Paterson Borough	289	60	61	8
East Rutherford Borough	177	110	74	2
Edgewater Borough	48	26	46	0
Emerson Borough	41	5	15	1
Englewood City	463	322	212	10
Englewood Cliffs Borough	15	3	5	0
Fair Lawn Borough	427	92	89	6
Fairview Borough	197	197	79	8
Fort Lee Borough	207	213	115	7
Franklin Lakes Borough	27	7	14	0
Garfield Borough	650	342	211	7
Glen Rock Borough	111	50	49	0
Hackensack City	586	582	286	20
Harrington Park Borough	22	11	14	1
Hasbrouck Heights Borough	169	101	65	3
Haworth Borough	24	9	13	0
Hilldale Borough	83	33	36	1
Hobokus Borough	23	25	27	0
Leonia Borough	133	59	50	1
Little Ferry Borough	103	64	59	5
Lodi Borough	376	122	104	8
Lodi Park Borough	416	203	180	11
Lynchburg Township	103	38	42	2
Mahwah Township	182	40	57	3
Midland Park Borough	120	43	28	1
Montvale Borough	39	7	17	3
Moonachie Borough	42	16	14	1
New Milford Borough	198	30	36	2
North Arlington Borough	366	99	85	7
Northvale Borough	43	15	10	0
Norwood Borough	39	32	20	1
Oakland Borough	38	13	14	1
Old Tappan Borough	16	2	7	1
Oradell Borough	52	22	42	2
Palisades Interstate Park	...	...	2	...
Palisades Park Borough	230	84	75	4
Paramus Borough	74	31	45	4
Park Ridge Borough	61	36	35	1
Ramsey Borough	109	54	37	3
Ridgefield Borough	129	67	58	3
Ridgefield Park Village	270	106	126	6
Ridgewood Village	275	178	168	7
River Edge Borough	169	32	47	4
Riverdale Township	30	3	16	1
Rochelle Park Township	129	45	31	1
Rockleigh Borough	2	1	1	0
Rutherford Borough	321	154	176	7
Saddle River Borough	13	10	8	0
Saddle River Township	37	18	18	1
South Hackensack Township	26	12	1	0
Teaneck Township	548	198	234	4
Tenafly Borough	141	68	82	1
Teterboro Borough	2	1	1	0
Upper Saddle River Borough	16	8	1	0
Waldwick Borough	73	11	32	0
Washington Borough	235	55	64	5
Washington Township	7	2	4	0
Westwood Borough	138	92	69	0
Woodcliff Lake Borough	31	5	7	1
Wood Ridge Borough	142	70	54	1
Wyckoff Township	101	36	39	4
Total	10479	5061	4217	225

BURLINGTON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bass River Township	17	7	12	1
Beverly City	95	31	37	3
Bordentown City	115	118	85	6
Bordertown Township	39	3	13	4
Burlington City	319	183	129	12
Burlington Township	38	10	19	0
Chesterfield Township	29	9	16	1
Cinnaminson Township	42	22	17	0
Delanco Township	58	17	31	9
Delran Township	43	9	2	1
Eastampton Township	13	2	6	1
Edgewater Park Township	24	15	8	0
Fresham Township	43	9	23	2
Fieldsboro Borough	19	5	4	0
Florence Township	151	68	67	7
Fort Dix	27	132	3	2
Hainesport Township	34	23	11	0
Lumberton Township	26	2	11	1
Mansfield Township	49	10	23	7
Maple Shade Township	150	88	57	7
Medford Township	77	22	37	2
Medford Lakes Borough	4	11	0	0
Moorestown Township	214	82	85	6
Mount Holly Township	228	94	94	1
Mount Laurel Township	14	20	2	2
New Hanover Township	11	6	6	2
North Hanover Township	8	5	8	1
Palmyra Borough	159	48	59	1
Pemberton Borough	47	11	18	1
Pemberton Township	98	68	2	2
Riverside Township	184	103	62	9
Riverton Borough	70	45	28	0
Shamong Township	16	1	1	0
Southampton Township	52	17	29	1
Springfield Township	8	3	3	0
Tabernacle Township	27	15	9	0
Washington Township	8	0	6	0
Westampton Township	18	6	9	0
Willingboro Township	8	0	5	0
Woodland Township	11	0	4	2
Wrightstown Borough	44	4	10	3
Total	2681	1284	1114	82

CAMDEN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Audubon Borough	270	71	107	14
Barrington Borough	57	12	24	0
Bellmawr Borough	168	11	16	3
Berlin Borough	71	53	36	5
Berlin Township	48	11	12	0
Brooklawn Borough	48	5	5	0
Camden City	3211	1753	1433	109
Chesthurst Borough	3	9	6	0
Clementon Borough	80	28	37	0
Collingswood Borough	391	148	179	4
Delaware Township	73	22	22	0
Gibbsboro Borough	12	4	11	1
Gloucester City	390	148	168	12
Gloucester Township	136	37	69	9
Haddonfield Borough	284	101	139	4
Haddon Heights Borough	137	106	71	4
Haddon Township	137	59	93	4
HINella Borough	7	0	2	0
Laurel Springs Borough	63	18	20	2
Lawnside Borough	35	9	29	2
Lindenwold Borough	56	45	32	2
Magnolia Borough	42	14	23	0
Merchantville Borough	301	95	72	6
Mount Ephraim Borough	102	50	23	0
Oaklyn Borough	139	44	82	2
Pennsauken Township	304	138	170	13

CAMDEN COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Pine Hill Borough	41	14	22	2
Pine Valley Borough	1	1	1	1
Runnemede Borough	109	46	27	3
Somerdale Borough	36	18	18	2
Stratford Borough	21	19	6	1
Taristock Borough	1	1	1	1
Voorhees Township	19	16	8	1
Waterford Township	64	23	23	2
Winslow Township	99	64	54	1
Woodlyne Borough	48	6	30	2
Total	6978	3209	3988	214

CAPE MAY COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Avalon Borough	10	6	10	1
Cape May City	79	43	43	3
Cape May Point Borough	2	1	2	1
Dennis Township	41	18	30	2
Lower Township	45	10	32	2
Middle Township	100	42	58	3
North Wildwood City	37	21	39	1
Ocean City	112	75	97	4
Sea Isle City	19	7	12	1
Stone Harbor Borough	11	10	6	1
Upper Township	36	16	23	1
West Cape May Borough	13	5	9	1
West Wildwood Borough	2	1	1	1
Wildwood City	131	118	97	8
Wildwood Crest Borough	18	4	18	1
Woodbine Borough	40	9	22	3
Total	716	385	498	27

CUMBERLAND COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bridgeton City	532	242	242	15
Commercial Township	46	37	48	2
Deerfield Township	69	9	15	2
Downe Township	51	11	18	1
Fairfield Township	57	26	40	3
Greenwich Township	37	5	14	2
Hopewell Township	25	5	28	2
Lands Township	377	141	196	12
Lawrence Township	58	7	21	1
Maurice River Township	49	18	33	1
Milville City	332	193	215	6
Skiloh Borough	17	5	10	1
Stow Creek Township	26	3	19	1
Upper Deerfield Township	129	40	83	3
Vineland Borough	189	117	92	5
Total	2022	839	1008	53

ESSEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Belleville Town	724	358	276	15
Bloomfield Town	1036	426	450	25
Caldwell Borough	169	85	71	3
Caldwell Township	27	18	40	1
Cedar Grove Township	81	4	41	3
East Orange City	1710	746	881	41
Essex Falls Borough	22	15	12	1
Glen Ridge Borough	164	67	83	1
Irvington Town	1255	617	590	25
Livingston Township	190	55	52	4
Maplewood Township	378	175	237	7
Millburn Township	195	133	114	5
Montclair Town	929	500	527	28
Newark City	1,829	7211	5156	350
North Caldwell Borough	28	2	13	2
Nutley Town	598	285	283	19
Orange City	968	576	433	26
Roseland Borough	49	10	17	3
South Orange Village	252	172	183	5
Verona Borough	174	77	85	5
West Caldwell Borough	94	5	27	3
West Orange Town	627	198	252	15
Total	20111	11703	9715	586

GLOUCESTER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clayton Borough	57	27	44	4
Deptford Township	106	68	62	3
East Greenwich Township	36	21	26	1
Elk Township	27	7	12	1
Franklin Township	81	35	58	2
Glassboro Borough	143	83	75	8
Greenwich Township	66	20	17	1
Harrison Township	59	8	53	3
Logan Township	42	8	14	1
Mantua Township	109	39	39	2
Monroe Township	117	51	55	5
National Park Borough	68	22	25	3
Newfield Borough	44	17	14	1
Paulsboro Borough	228	88	70	9
Pitman Borough	156	67	84	2
South Harrison Township	11	3	7	1
Swedesboro Borough	57	48	41	9
Washington Township	37	20	23	1
Wenonah Borough	41	16	25	2
West Deptford Township	73	43	34	5
Westville Borough	137	73	51	6
Woodbury City	271	121	135	9
Woodbury Heights Borough	36	7	7	1
Woodwich Township	29	2	11	1
Total	2061	894	856	76

HUDSON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bayonne City	1859	902	722	42
East Newark Borough	87	17	16	1
Guttenberg Town	95	55	68	2
Harrison Town	340	253	160	11
Hoboken City	1180	1247	833	83
Jersey City	7261	4666	3515	205
Keany Town	968	408	366	17
North Bergen Township	861	259	392	15
Secaucus Borough	160	70	67	3
Union City	1187	920	639	27
Weehawken Township	272	215	169	10
West New York	825	920	357	16
Total	15055	9982	7134	381

HUNTERDON COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alexandria Township	25	4	15	...
Bethlehem Township	12	1	1	3
Bloomsbury Borough	16	5	14	...
Callon Borough	11	15	14	...
Clinton Town	33	15	18	...
Clinton Township	41	13	20	2
Delaware Township	38	15	18	...
East Amwell Township	26	6	16	2
Fleming Borough	51	56	42	1
Franklin Township	36	8	9	...
Frenchtown Borough	39	8	18	1
Glen Gardner Borough	26	12	13	1
Hampton Borough	28	18	16	2
High Bridge Borough	35	36	27	3
Holland Township	17	6	6	1
Kingwood Township	122	4	12	1
Lambertville City	16	4	53	4
Lebanon Borough	17	10	11	1
Lebanon Township	37	2	16	...
Milford Borough	42	21	8	...
Milford Township	58	7	29	2
Readington Township	79	41	48	1
Stockton Borough	12	8	10	...
Tewksbury Township	23	4	14	...
Union Township	19	2	10	1
West Amwell Township	13	...	10	...
Total	903	397	478	26

MERCER COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
East Windsor Township	16	...	13	1
Ewing Township	338	68	124	8
Hamilton Township	946	334	872	32
Highstown Borough	104	58	55	4
Hopewell Borough	49	30	28	1
Hopewell Township	76	8	49	4
Lawrence Township	192	50	72	7
Pennington Borough	25	29	19	4
Princeton Borough	241	173	114	...
Princeton Township	109	6	28	1
Trenton City	2885	1843	1439	101
Washington Township	30	19	17	3
West Windsor Township	60	12	18	1
Total	5081	2628	2345	167

MIDDLESEX COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Camp Hillmer	22	88	2	...
Carteret Borough	307	183	102	10
Cranbury Township	52	12	32	2
Dunellen Borough	235	122	65	3
East Brunswick Township	106	32	31	5
Helmetta Borough	14	12	10	1
Highland Park Borough	92	36	36	3
Jamesburg Borough	69	41	21	1
Madison Township	184	31	58	7
Metuchen Borough	220	112	87	9
Middlesex Borough	55	50	39	1
Milbourn Borough	37	42	38	2
Monroe Township	58	7	14	2
New Brunswick City	962	706	394	28
North Brunswick Township	153	21	46	6
Perth Amboy City	963	683	405	30

MIDDLESEX COUNTY—Continued

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Piscataway Township	190	32	77	5
Plainboro Township	24	4	6	...
Raritan Township	256	85	99	8
Sayreville Borough	184	78	70	3
South Amboy City	228	122	109	5
South Brunswick Township	86	13	37	4
South Plainfield Borough	151	17	56	8
South River Borough	230	159	84	2
Spotswood Borough	51	14	17	1
Woodbridge Township	790	257	289	18
Total	5981	3062	2255	170

MONMOUTH COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allenhurst Borough	18	1	9	...
Allentown Borough	30	29	16	...
Asbury Park City	372	408	260	15
Atlantic Township	19	13	7	...
Atlantic Highlands Borough	94	37	35	2
Avon Borough	34	24	17	...
Belmar Borough	108	102	64	...
Bradley Beach Borough	80	44	50	1
Brielle Borough	27	3	7	...
Deal Borough	21	2	1	1
Eatontown Borough	110	27	19	1
Englishtown Borough	36	15	18	1
Fair Haven Borough	65	13	40	3
Farmingdale Borough	24	16	20	2
Fort Hancock	12	...	2	1
Fort Monmouth	35	72	4	...
Freehold Borough	157	102	101	3
Freehold Township	84	5	26	...
Highlands Borough	72	22	32	4
Holmdel Township	17	8	21	1
Howell Township	109	29	50	1
Interlaken Borough	17	...	10	3
Keansburg Borough	164	76	54	5
Kearport Borough	13	43	6	...
Little Silver Borough	153	110	65	4
Long Branch City	43	16	27	1
Manalapan Township	658	249	233	10
Manasquan Borough	51	15	19	2
Marlboro Township	69	52	58	2
Matawan Borough	42	19	37	1
Matawan Township	114	38	44	5
Middletown Township	39	13	37	2
Middleton Township	311	85	148	8
Millstone Township	27	2	21	2
Monmouth Beach Borough	15	4	14	1
Monmouth Township	302	78	208	8
Neptune City Borough	68	17	39	3
Ocean Township	130	22	54	5
Oceanport Borough	63	13	15	...
Red Bank Borough	39	...	18	...
Red Bank Township	341	206	171	5
Roosevelt Borough	13	2	1	...
Rumson Borough	92	48	40	3
Sea Bright Borough	29	6	12	...
Sea Girt Borough	24	12	21	2
Shrewsbury Borough	29	17	11	...
Shrewsbury Township	64	24	20	3
South Belmar Borough	26	8	11	...
Spring Lake Borough	43	38	33	1
Spring Lake Heights Borough	30	17	15	...
Union Beach Borough	71	24	22	4
Upper Freehold Township	44	5	22	1
Wall Township	145	24	53	4
West Long Branch Borough	46	11	25	2
Total	4827	2233	2399	122

MORRIS COUNTY - 1947

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bonton Town	186	95	78	4
Bonton Township	22	1	7	1
Butler Borough	103	66	36	1
Chatham Borough	134	34	54	1
Chatham Township	31	9	10	1
Chester Borough	19	12	20	1
Chester Township	24	7	9	2
Deaville Township	136	81	54	2
Dover Town	318	169	159	21
East Hanover Township	22	17	16	1
Florham Park Borough	42	8	33	2
Hanover Township	113	45	28	1
Harding Township	25	7	9	1
Jefferson Township	55	20	15	1
Kinnelon Borough	30	2	4	1
Lincoln Park Borough	73	28	27	3
Lodi-on Borough	234	125	82	8
Meadham Borough	37	29	20	2
Meadham Township	24	2	7	1
Mine Hill Township	58	20	23	1
Montville Township	77	34	32	2
Morris Plains Borough	54	45	34	4
Morrisstown Town	409	221	213	9
Morris Township	125	28	61	4
Mountain Lakes Borough	45	13	23	1
Mount Arlington Borough	20	9	6	1
Mount Olive Township	63	9	28	1
Netcong Borough	74	59	33	5
Parsippany-Troy Hills Township	171	33	56	3
Parsippany Township	74	19	28	1
Petunneck Township	92	22	26	1
Randolph Township	80	17	43	5
Riverdale Borough	24	4	18	1
Rockaway Borough	108	76	39	3
Rockaway Township	15	15	28	4
Roxbury Township	127	31	57	8
Washington Township	48	12	38	1
Wharton Borough	88	55	50	6
Total	3465	1429	1502	97

OCEAN COUNTY - 1947

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Barnegat City Borough	1	1	3	1
Bay Head Borough	25	6	9	1
Beach Haven Borough	27	18	9	1
Beachwood Borough	42	5	15	3
Berkeley Township	22	17	12	1
Brick Township	77	8	38	6
Dover Township	185	100	84	5
Egleswood Township	8	5	9	1
Horver Cedars Borough	1	1	1	1
Island Beach Borough	1	1	1	1
Island Heights Borough	16	6	9	3
Jackson Township	49	14	29	7
Lacey Township	24	4	18	1
Lakehurst Borough	108	15	17	7
Lakewood Township	223	170	131	5
Lavallette Borough	11	3	6	1
Little Egg Harbor Township	13	2	7	1
Long Beach Township	12	2	5	1
Manchester Township	3	19	6	1
Mantoloking Borough	1	1	1	1
Ocean Township	6	5	3	1
Ocean Gate Borough	6	2	3	1
Pine Beach Borough	12	4	2	1
Plumsted Township	18	22	12	1
Point Pleasant Borough	122	32	46	2
Point Pleasant Beach Borough	15	56	34	1

OCEAN COUNTY—Continued—1947

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Seaside Heights Borough	13	9	10	1
Seaside Park Borough	21	8	5	1
Ship Bottom-Beach Arlington Borough	4	3	6	1
South Toms River Borough	5	11	4	1
Stafford Township	26	6	21	1
Surf City Borough	4	1	2	1
Tuckerton Borough	38	20	23	3
Union Township	30	14	18	2
Total	1224	569	613	43

PASSAIC COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bloomington Borough	72	17	23	4
Clifton City	1370	403	445	32
Haledon Borough	110	65	39	2
Hawthorne Borough	279	149	127	8
Little Falls Township	153	59	49	3
North Haledon Borough	80	10	27	1
Passaic City	1292	123	629	70
Paterson City	3095	2085	1688	47
Pompton Lakes Borough	87	104	24	2
Prospect Park Borough	129	61	39	2
Ringwood Borough	43	4	15	3
Totowa Borough	97	59	35	1
Wanaque Borough	123	76	45	3
Wayne Township	235	76	83	2
West Milford Township	67	29	37	1
West Paterson Borough	65	21	29	4
Total	7342	4301	3355	185

SALEM COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Alloway Township	32	12	16	2
Elmer Borough	57	17	20	2
Elisabethtown Township	18	2	9	1
Lower Alloways Creek Township	32	5	13	1
Lower Penns Neck Township	145	26	53	3
Mannington Township	40	5	23	1
Oldmans Township	51	21	15	1
Penns Grove Borough	248	99	103	11
Pittsgrove Township	30	2	8	1
Pittsgrove Township	47	14	31	2
Quinton Township	59	14	23	5
Salem City	265	107	118	11
Upper Penns Neck Township	116	35	49	3
Upper Pittsgrove Township	43	10	18	1
Woodstown Borough	52	30	33	2
Total	1215	399	525	52

SOMERSET COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Bedminster Township	20	22	10	1
Bernards Township	83	33	38	5
Bernardsville Borough	79	53	41	1
Bound Brook Borough	284	151	85	11
Branchburg Township	49	21	21	3
Bridgewater Township	161	68	66	4
East Millstone Town	6	...	5	...
Far Hills Borough	22	9	5	...
Franklin Township	200	41	64	6
Green Brook Township	11	8	4	...
Hillsborough Township	92	17	36	3
Manville Borough	252	110	61	9
Millstone Borough	5	2	5	...
Montgomery Township	42	9	23	...
North Plainfield Borough	292	153	136	7
Peapack-Gladstone Borough	34	19	22	...
Raritan Town	120	59	45	...
Rocky Hill Borough	16	5	10	1
Somerville Borough	263	156	121	7
South Bound Brook Borough	73	25	25	1
Warren Township	74	13	20	1
Watchung Borough	27	24	10	...
Total	2207	957	851	63

SUSSEX COUNTY 1947

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Andover Borough	14	7	8	1
Andover Township	38	...	11	1
Branchville Borough	20	15	7	...
Byram Township	10	2	7	...
Frankford Township	33	2	15	1
Franklin Borough	96	34	42	2
Fredon Township	12	6	4	...
Green Township	11	4	...	...
Hamburg Borough	41	34	17	1
Hampton Township	8	1	8	...
Hardyston Township	32	6	15	2
Hopatcong Borough	18	7	6	...
Lafayette Township	28	8	10	1
Montague Township	12	2	4	...
Newton Town	160	88	66	3
Ogdensburg Borough	29	5	12	...
Sandyton Township	16	9	5	...
Sparta Township	70	33	31	...
Stanhope Borough	33	14	...	...
Stillwater Township	16	3	...	...
Sussex Borough	39	40	23	...
Vernon Township	28	8	21	4
Walpack Township	5	1	5	...
Wantage Township	71	9	26	2
Total	861	346	362	20

UNION COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Clark Township	101	21	28	3
Cranford Township	441	155	157	9
Elizabeth City	2740	1549	1210	73
Fanwood Borough	82	10	32	1
Garwood Borough	141	44	27	1
Hillside Township	483	139	154	9
Kenilworth Borough	87	17	19	1
Linden City	736	259	177	18
Mountainside Borough	49	10	10	1
New Providence Borough	56	26	27	3
New Providence Township	...	11	22	...
Plainfield City	1050	554	432	24
Rahway City	526	241	194	21
Roselle Borough	437	160	138	14
Roselle Park Borough	226	51	67	2
Scotch Plains Township	176	50	53	3
Springfield Township	131	62	52	4
Summit City	393	177	172	9
Union Township	631	216	240	13
Westfield Town	413	216	200	9
Winfield Township	60	4	5	2
Total	9003	3972	3416	225

WARREN COUNTY

NAME OF PLACE	Births	Marriages	Deaths	Deaths under one year
Allamuchy Township	17	...	9	...
Alpha Borough	38	...	41	...
Belvidere Town	57	32	40	1
Blairstown Township	28	18	17	2
Franklin Township	26	10	16	...
Frelinghuysen Township	12	2	5	...
Greenwich Township	39	24	17	...
Hackettstown Town	93	39	65	4
Hardwick Township	10	...	3	...
Harmony Township	36	16	12	...
Hope Township	10	4	10	1
Independence Township	21	13	8	...
Knowlton Township	18	8	12	...
Liberty Township	4	...	5	...
Lopatcong Township	12	2	12	...
Mansfield Township	23	6	19	...
Oxford Township	54	19	31	3
Papaquarry Township	...	...	...	...
Phillipsburg Town	462	197	217	18
Pohatcong Township	39	10	23	1
Washington Borough	104	75	69	1
Washington Township	30	5	15	2
White Township	30	2	12	...
Total	1198	525	637	34
State Total	106086	53802	48276	2869

TABLE 2—DEATHS BY AGE PERIODS AND PERCENTAGES OF EACH OF TOTAL DEATHS, 1947

	AGE PERIODS											90 and over	Unknown				
	Total	Under 1 year	1 year	2 years	3 years	1 years	Under 5 years	5 to 9	10 to 19	20 to 29	30 to 39			40 to 49	50 to 59	60 to 69	70 to 79	80 to 89
Deaths	48,270	2,959	169	108	81	70	3,987	101	860	1,052	1,775	3,687	8,142	10,086	11,490	6,152	882
Percentage of total ..	100.0	6.1	0.4	0.2	0.2	0.1	7.0	0.4	0.8	2.2	3.7	8.1	16.9	22.8	28.7	12.7	1.8

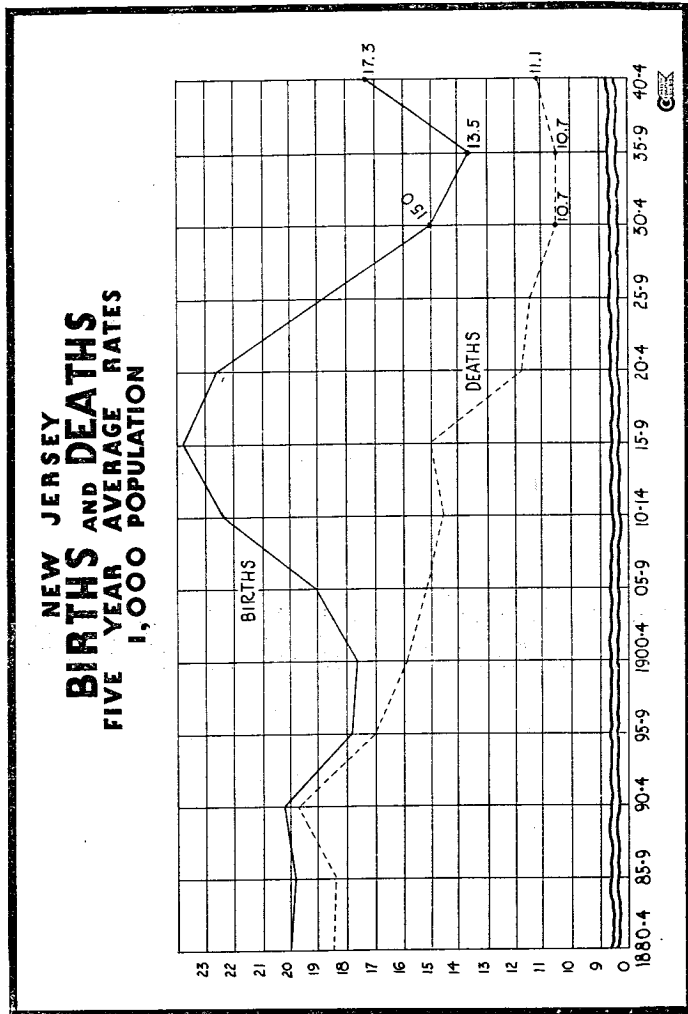


CHART 1

Infant Mortality.—The infant mortality rate for 1947 was 27.9 per 1,000 babies born alive. The rate for 1946 was 28.5 and the average annual rate for the five-year period 1942-1946 was 31.8. Reference to Table 4 will show the great decrease in the infant death rate in New Jersey since baby welfare work was extensively undertaken in New Jersey.

Colored Races.—The infant mortality rate for the colored races was 47.2. The colored races have shown high mortality rates ever since vital records were first collected and analyzed.

Maternal Mortality.—The rate of 1.0 for 1947 was 23.1 per cent lower than the rate for 1946 and was the lowest since such rates were first computed in 1906. The average annual rate for the five-year period 1942-1946 was 1.6 per 1,000 live births. The colored maternal mortality rate for 1947 was 1.6.

TABLE 3—NUMBER OF DEATHS AT ALL AGES, UNDER ONE YEAR OF AGE AND UNDER FIVE YEARS OF AGE, AND THEIR PERCENTAGES OF TOTAL DEATHS

CALENDAR YEAR	DEATHS IN NEW JERSEY				
	All Ages	Under one year		Under five years	
		Number	Percentage of Total	Number	Percentage of Total
1904	35,298	7,472	21.2	10,927	31.0
1905	33,864	6,951	20.5	9,864	29.1
1906	35,670	7,773	21.8	11,246	31.5
1907	37,408	7,732	20.7	10,867	29.0
1908	35,597	7,823	22.0	10,869	30.5
1909	36,359	7,658	21.1	11,137	30.6
1910	39,494	8,352	21.1	11,648	29.5
1911	38,612	7,642	19.8	10,740	27.8
1912	37,772	7,457	19.7	10,309	27.3
1913	39,425	7,542	19.1	10,686	27.1
1914	39,967	7,431	18.6	10,278	25.7
1915	39,435	7,077	17.9	9,828	24.9
1916	43,376	7,348	16.9	11,188	25.8
1917	43,532	7,582	17.4	10,267	23.6
1918	60,852	8,372	13.8	13,709	22.5
1919	39,979	6,111	15.3	8,661	21.7
1920	40,820	6,672	16.3	9,569	23.4
1921	37,362	5,773	15.4	8,047	21.5
1922	40,086	5,864	14.6	8,371	20.9
1923	41,294	5,368	13.0	7,727	18.7
1924	40,531	5,359	15.5	7,344	21.3
1925	41,749	5,109	12.3	6,997	16.8
1926	44,396	5,090	11.5	7,442	16.8
1927	41,562	4,464	10.7	6,045	14.5
1928	44,555	4,600	10.3	6,438	14.4
1929	45,746	4,116	9.0	5,795	12.6
1930	43,190	3,870	9.0	5,205	12.1
1931	44,135	3,649	8.3	4,916	11.1
1932	42,826	3,089	7.2	4,049	9.4
1933	43,380	2,608	6.0	3,512	8.1
1934	43,547	2,686	6.2	3,518	8.1
1935	43,267	2,539	5.9	3,291	7.6
1936	44,659	2,383	5.3	3,039	6.8
1937	45,312	2,170	4.8	2,870	6.3
1938	44,045	2,228	5.1	2,810	6.4
1939	43,837	2,180	5.0	2,677	6.1
1940	45,206	2,094	4.6	2,506	5.6
1941	45,971	2,392	5.2	2,809	6.1
1942	46,270	2,535	5.5	2,958	6.4
1943	49,781	2,782	5.6	3,258	6.5
1944	47,340	2,567	5.4	3,060	6.5
1945	47,633	2,470	5.2	2,943	6.2
1946	46,261	2,705	5.8	3,141	6.8
1947	48,276	2,959	6.1	3,387	7.0

TABLE 4.—NUMBER OF BIRTHS, STILLBIRTHS, DEATHS UNDER ONE MONTH, DEATHS UNDER ONE YEAR AND MATERNAL DEATHS IN NEW JERSEY, WITH RATES PER 1,000 LIVE BIRTHS

Year	Births Reported	Deaths Under 1 Year of Age	Rates per 1,000 Births	Deaths Under 1 Month of Age	Rates per 1,000 Births	Stillbirths	Rates per 1,000 Births	Maternal Deaths	Rates per 1,000 Births
1906	42,677	7,743	182.1	2,545	59	2,399	56	322	7.5
1907	44,651	7,743	174.5	2,602	58	2,530	56	280	6.5
1908	47,608	7,825	165.2	2,601	55	2,617	55	339	6.9
1909	53,952	7,658	161.2	2,601	50	2,737	50	311	6.5
1910	58,952	8,362	154.8	2,801	49	2,754	47	377	6.9
1911	60,073	7,972	151.4	2,887	49	2,863	47	415	6.9
1912	61,482	7,545	122.7	2,886	47	2,896	49	410	7.4
1913	65,403	7,431	113.6	2,995	47	2,896	49	410	6.3
1914	70,319	7,977	104.4	2,802	43	3,075	47	383	6.3
1915	75,309	7,583	101.7	3,076	43	3,183	45	383	6.4
1916	74,649	8,372	112.3	3,170	43	3,221	42	417	6.1
1917	70,935	6,111	87.3	2,690	37	3,033	42	390	6.5
1918	70,935	6,972	98.3	2,861	38	3,252	42	404	6.1
1919	78,470	6,972	88.6	2,861	36	3,251	41	404	6.1
1920	74,611	7,877	105.6	2,861	38	3,251	41	404	6.1
1921	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1922	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1923	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1924	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1925	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1926	74,611	8,368	112.3	2,861	38	3,251	41	404	6.1
1927	72,709	4,464	61.3	2,697	35	3,018	40	394	6.4
1928	70,076	4,600	65.0	2,482	33	3,074	42	450	6.7
1929	68,527	4,118	59.9	2,482	33	2,907	40	400	6.1
1930	68,527	3,649	53.1	2,407	30	2,647	38	378	5.7
1931	64,678	3,649	50.4	1,694	32	2,647	38	378	5.7
1932	61,215	2,608	40.9	1,635	27	2,647	38	351	5.1
1933	56,072	2,228	38.8	1,635	27	2,647	38	351	5.1
1934	54,651	2,668	48.9	1,635	27	2,647	38	351	5.1
1935	54,651	2,668	48.9	1,635	27	2,647	38	351	5.1
1936	54,145	2,333	40.9	1,635	27	2,647	38	351	5.1
1937	55,197	2,170	39.3	1,529	28	1,848	34	202	4.5
1938	56,092	2,228	38.8	1,365	24	1,761	28	182	3.2
1939	59,828	2,189	35.9	1,412	25	1,600	26	171	3.3
1940	67,104	2,835	39.1	1,422	25	1,543	26	172	2.9
1941	80,812	2,835	33.8	1,821	25	1,732	26	166	2.0
1942	82,363	2,782	33.9	1,862	23	1,676	25	162	1.8
1943	76,992	2,567	33.4	1,862	23	1,676	25	151	1.8
1944	76,992	2,567	33.4	1,862	23	1,676	25	151	1.8
1945	68,044	2,705	32.5	1,827	22	1,427	24	118	1.5
1946	100,986	2,940	27.9	2,317	21	1,237	22	119	1.3
1947	100,986	2,940	27.9	2,317	21	1,237	22	105	1.0

TABLE 5.—DEATHS UNDER ONE MONTH, STILLBIRTHS AND MATERNAL MORTALITY PER THOUSAND LIVE BIRTHS—1947

	Deaths Under One Month	Rate Per 1,000 Live Births Stillbirths	Maternal Deaths
New Jersey	21	21	1.0
Atlantic County	27	20	0.7
Atlantic City	23	22	0.8
Bergen County	16	20	1.0
Burlington County	23	23	0.4
Camden County	22	22	1.9
Camden City	25	23	1.6
Cape May County	22	14	1.4
Cumberland County	18	18	1.5
Essex County	23	23	0.7
East Orange	17	18	..
Irvington	17	18	0.8
Newark	26	26	0.7
Gloucester County	27	17	2.4
Hudson County	19	22	0.5
Bayonne	16	20	..
Hoboken	19	25	0.9
Jersey City	21	22	0.6
Union City	18	25	0.8
Hunterdon County	20	21	1.1
Mercer County	23	25	1.0
Trenton	25	23	1.4
Middlesex County	23	22	1.2
Monmouth County	20	25	1.2
Morris County	21	16	0.6
Ocean County	28	24	1.6
Passaic County	20	19	0.8
Passaic City	26	20	1.6
Paterson	18	22	1.0
Salem County	30	20	1.6
Somerset County	24	21	0.5
Sussex County	16	17	1.2
Union County	19	21	1.1
Elizabeth	20	25	2.2
Warren County	17	9	3.3

TABLE 7—BIRTHS, DEATHS UNDER ONE DAY, ONE WEEK, ONE MONTH AND ONE YEAR AND INFANT MORTALITY RATES (EXCLUSIVE OF STILLBIRTHS)—1947

	<i>Births (Exclusive of Stillbirths)</i>	<i>One Day</i>	<i>Deaths Under One Week</i>	<i>One Month</i>	<i>One Year</i>	<i>Infant Mortality Rates</i>
New Jersey	106,086	1,075	1,925	2,217	2,959	28
Atlantic County	2,776	38	63	75	111	40
Atlantic City	1,333	15	26	30	48	36
Hammonton	175	7	8	8	11	63
Pleasantville	303	4	6	6	12	40
Bergen County	10,479	84	144	168	225	21
Bergenfield	262	3	5	8	9	34
Cliffside Park	378	6	14	14	18	48
Englewood	465	3	5	7	10	22
Fairview	197	4	5	6	8	41
Fort Lee	207	..	3	4	7	34
Garfield	650	2	3	5	7	11
Hackensack	586	9	13	15	20	34
Lodi	376	..	3	4	8	21
Lyndhurst Township	416	5	6	8	11	26
North Arlington	366	3	5	5	7	19
Ridgefield Park	270	1	3	3	6	22
Ridgewood	275	3	4	5	7	25
Rutherford	321	4	6	6	7	22
Teaneck Township	548	2	3	3	4	7
Wallington	235	2	2	2	5	21
Burlington County	2,681	31	55	61	82	31
Burlington City	319	3	8	9	12	38
Camden County	6,978	73	126	155	214	31
Audubon	270	3	5	9	14	52
Camden	3,211	42	70	80	109	34
Collingswood	391	1	1	1	4	10
Gloucester	390	4	6	10	12	31
Haddonfield	264	1	3	3	4	15
Pennsauken Township	304	2	7	8	13	43
Cape May County	716	9	15	16	27	38
Cumberland County	2,022	27	34	36	53	26
Bridgeton	532	8	10	11	15	28
Millville	332	1	2	2	6	18
Vineland	189	3	4	4	5	26
Essex County	20,111	203	404	453	586	29
Belleville	724	6	10	10	15	21
Bloomfield	1,036	8	20	22	25	24

	<i>Births (Exclusive of Stillbirths)</i>	<i>One Day</i>	<i>Deaths Under One Week</i>	<i>One Month</i>	<i>One Year</i>	<i>Infant Mortality Rates</i>
East Orange	1,710	14	28	29	41	24
Irvington	1,255	10	19	21	25	20
Maplewood Township	378	3	6	6	7	19
Millburn Township	195	4	4	4	5	26
Montclair	929	9	23	24	28	30
Newark	10,529	115	232	271	350	33
Nutley	593	5	11	12	19	32
Orange	968	11	18	18	26	27
South Orange	252	1	4	4	5	20
West Orange	627	5	12	12	15	24
Gloucester County	2,061	28	44	56	76	37
Woodbury	271	4	6	7	9	33
Hudson County	15,055	159	265	282	381	25
Bayonne	1,859	13	29	30	42	23
Guttenberg	95	1	2	2	2	21
Harrison	340	4	8	8	11	32
Hoboken	1,130	9	18	21	33	29
Jersey City	7,261	96	146	153	205	28
Kearny	998	7	13	14	17	17
North Bergen Township	861	3	9	10	15	17
Secaucus	160	1	1	2	3	19
Union City	1,187	11	19	21	27	23
Weehawken Township	272	5	8	9	10	37
West New York	825	9	12	12	16	19
Hunterdon County	903	9	15	18	26	29
Mercer County	5,081	44	86	115	167	33
Princeton	241	3	4	4	4	17
Trenton	2,885	32	60	73	101	35
Middlesex County	5,981	48	119	138	170	28
Carteret	307	5	9	10	10	33
Highland Park	242	4	5	8	8	33
New Brunswick	962	9	21	24	28	29
Perth Amboy	963	7	23	28	30	31
Sayreville	184	..	2	2	3	16
South Amboy	228	1	3	3	5	22
South River	280	1	2	2	2	7
Woodbridge Township	790	4	11	13	18	23
Monmouth County	4,827	44	84	96	122	25
Asbury Park	372	7	10	10	15	40
Long Branch	658	3	6	6	10	15
Neptune Township	302	2	6	6	8	26
Red Bank	341	3	4	5	5	15

	Births (Exclusive of Stillbirths)	One Day	Deaths Under		One Year	Infant Mortality Rates
			One Week	One Month		
Morris County	3,465	37	58	72	97	28
Dover	318	6	14	17	21	66
Madison	234	..	1	3	3	13
Morristown	409	5	7	8	9	22
Ocean County	1,224	19	28	34	43	35
Passaic County	7,242	76	129	147	185	26
Clifton	1,370	11	24	28	32	23
Hawthorne	279	3	5	5	8	29
Passaic	1,262	14	29	33	47	37
Paterson	3,098	35	50	57	70	23
Salem County	1,215	23	33	37	52	43
Salem City	265	5	7	8	11	42
Somerset County	2,207	19	40	53	63	29
Bound Brook	284	2	5	9	11	39
North Plainfield	292	2	4	6	7	24
Somerville	263	2	6	6	7	27
Sussex County	861	4	12	14	20	23
Union County	9,003	92	156	171	225	25
Cranford Township	441	1	4	7	9	20
Elizabeth	2,740	27	51	56	73	27
Hillside Township	465	3	7	8	9	19
Linden	736	10	14	14	18	24
Plainfield	1,050	11	13	14	24	23
Rahway	526	13	18	20	21	40
Roselle	437	4	9	10	14	32
Roselle Park	226	..	1	1	2	9
Summit	393	3	6	7	9	23
Union Township	631	8	14	15	18	29
Westfield	413	3	8	8	9	22
Warren County	1,198	8	15	20	34	28
Phillipsburg	462	5	7	8	18	39

Typhoid Fever.—Four deaths were reported for the year. This was a rate of 0.1 per 100,000 population. In 1946 the rate of 0.1 represented three deaths. The 1947 rate was low in comparison with the United States rate of 0.2. Table 17 shows the distribution of typhoid fever deaths by age, sex and color. The number of deaths from typhoid fever by counties and cities may be obtained by referring to Table 20.

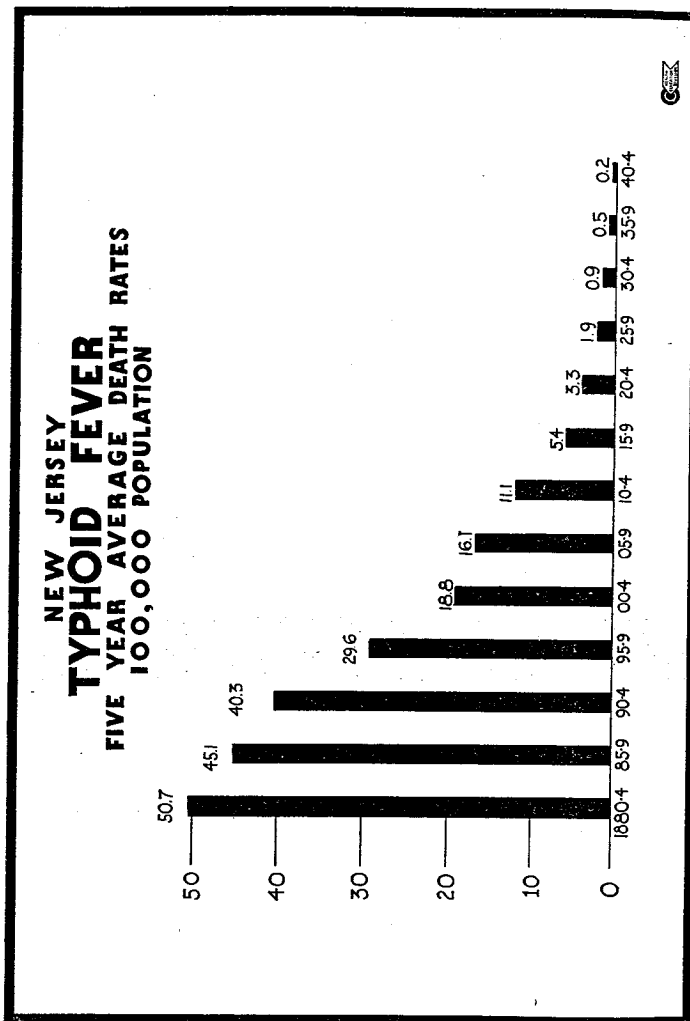


CHART 2

TABLE 8—COMPARATIVE DEATH RATES FROM TYPHOID FEVER PER 100,000 POPULATION, IN THE REGISTRATION AREA OF U. S. AND IN N. J. FOR 10 YEARS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Registration area of the United States	1.8	1.5	1.0	0.8	0.5	0.5	0.4	0.4	0.2	0.2
New Jersey	0.4	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1

TABLE 10—DEATHS FROM TYPHOID FEVER, PER 100,000 POPULATION, BY COUNTIES, FOR 10 YEARS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Atlantic	1.4	2.4	8.8	...	1.6	...	...	0.9	...	...
Bergen	0.4	...	0.2	0.5	...	...	...	...	0.4	...
Burlington	1.0	1.0	...	...	...	...	...	...	...	1.1
Camden .....	...	1.2	...	0.4	...	0.4	...	0.8	...	...
Cape May .....	...	1.4	...	...	...	1.4	1.4	...	...	...
Cumberland .....	...	...	...	...	...	...	...	...	...	...
Essex	0.5	0.6	0.1	0.1	...	...	...	0.4	...	0.1
Gloucester .....	...	1.4	...	...	...	...	1.3	...	...	1.3
Hudson	0.6	...	0.3	...	0.2	...	0.5	...	...	...
Hunterdon .....	...	...	2.7	...	...	...	...	...	...	...
Mercer	0.5	...	1.0	...	...	...	...	...	...	0.5
Middlesex	0.4	...	0.9	0.5	...	0.4	...	...	...	...
Monmouth .....	...	0.6	0.6	0.6	0.6	...	...	...	...	...
Morris .....	...	...	...	...	...	...	0.8	...	...	...
Ocean .....	...	...	...	...	...	...	...	...	...	...
Passaic	0.3	0.3	...	0.3	0.3	...	0.3	...	...	...
Salem .....	...	2.4	...	...	...	...	...	...	2.2	...
Somerset .....	...	...	...	...	...	1.5	...	...	...	...
Sussex .....	...	...	...	...	...	...	...	...	...	...
Union .....	...	...	0.3	0.3	...	...	0.3	...	...	...
Warren .....	...	...	...	...	...	...	...	2.1	...	...
New Jersey	0.4	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1

Smallpox.—One death occurred during 1947. This was the first reported death in New Jersey since 1925, when as in 1924, the disease was prevalent in epidemic form in certain sections of the State.

Measles.—Four deaths occurred from this disease, equivalent to a rate of 0.1 per 100,000 population. Of these, one death was in the group under one year of age and two were in the group under five years of age. In 1946, twenty-seven deaths were reported, equivalent to a rate of 0.6.

Scarlet Fever.—The number of deaths from scarlet fever was two, equivalent to a rate of less than 0.1 per 100,000 population. The number for the previous year was five and the rate was 0.1.

Malaria.—As the following figures show, deaths during recent years from this disease were practically negligible in the State:

1879.....	268	1896.....	119	1913.....	11	1930.....	5
1880.....	293	1897.....	132	1914.....	10	1931.....	0
1881.....	431	1898.....	82	1915.....	17	1932.....	3
1882.....	379	1899.....	96	1916.....	10	1933.....	1
1883.....	290	1900.....	84	1917.....	5	1934.....	0
1884.....	230	1901.....	50	1918.....	13	1935.....	6
1885.....	209	1902.....	36	1919.....	2	1936.....	3
1886.....	243	1903.....	40	1920.....	5	1937.....	0
1887.....	217	1904.....	47	1921.....	10	1938.....	1
1888.....	264	1905.....	21	1922.....	3	1939.....	1
1889.....	203	1906.....	33	1923.....	2	1940.....	0
1890.....	195	1907.....	29	1924.....	6	1941.....	0
1891.....	180	1908.....	30	1925.....	3	1942.....	3
1892.....	198	1909.....	25	1926.....	2	1943.....	2
1893.....	148	1910.....	25	1927.....	2	1944.....	0
1894.....	162	1911.....	25	1928.....	3	1945.....	3
1895.....	144	1912.....	29	1929.....	5	1946.....	2
						1947.....	1

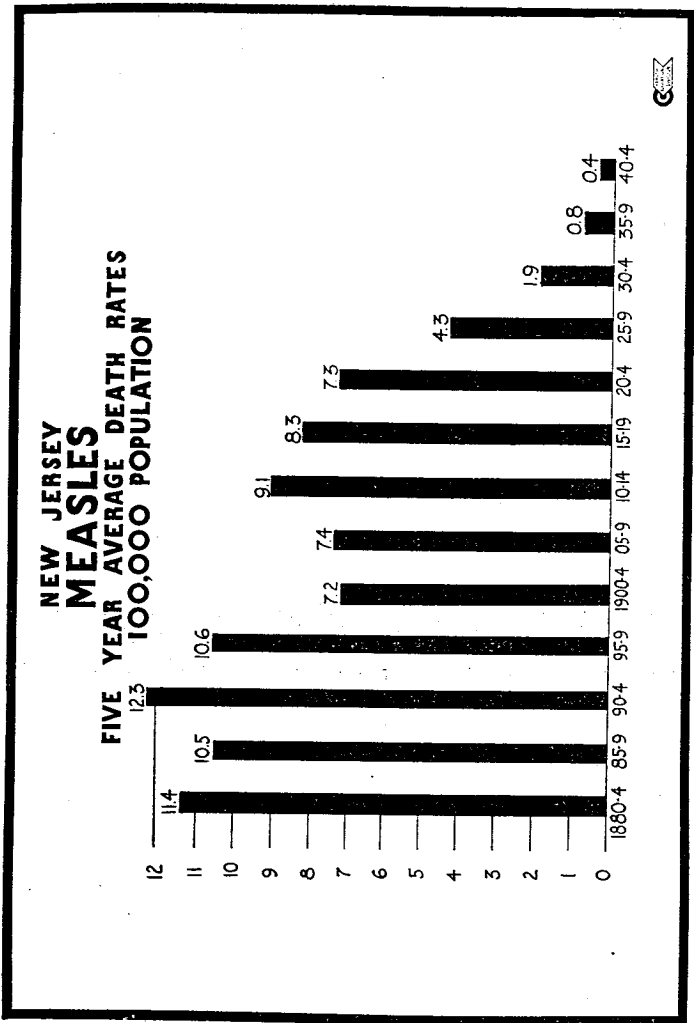


CHART 3

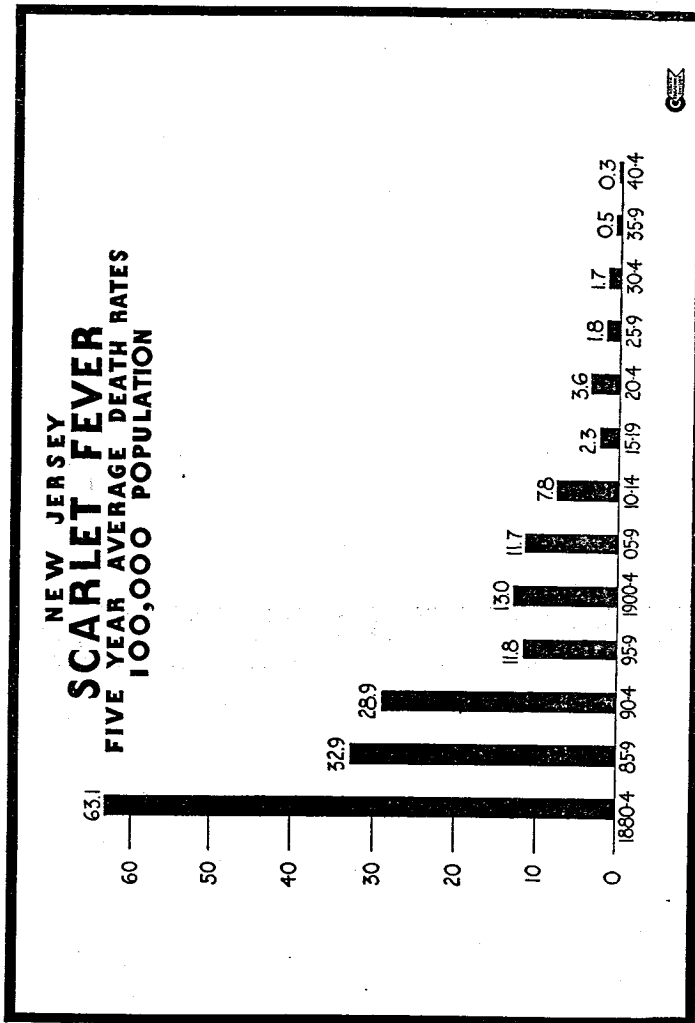


CHART 4

Whooping Cough.—This disease caused twenty-four deaths during 1947; for 1946 the number was twenty-seven and for 1945, twenty-four. The 1947 death rate was 0.5 per 100,000 population. Nineteen of the deaths occurred during the first year of life.

Diphtheria.—During 1947 fourteen persons died from diphtheria and laryngeal croup, equivalent to a rate of 0.3 per 100,000 population. One death was of a child under one year of age. The death rate from diphtheria for 1888 was 148 per 100,000 population. During the decade beginning with 1900, the rate declined from forty-eight to twenty-five. The following ten-year period showed a decline to eighteen. The rate for 1947 was decidedly favorable when compared with the 1947 rate for the United States, which was 0.6.

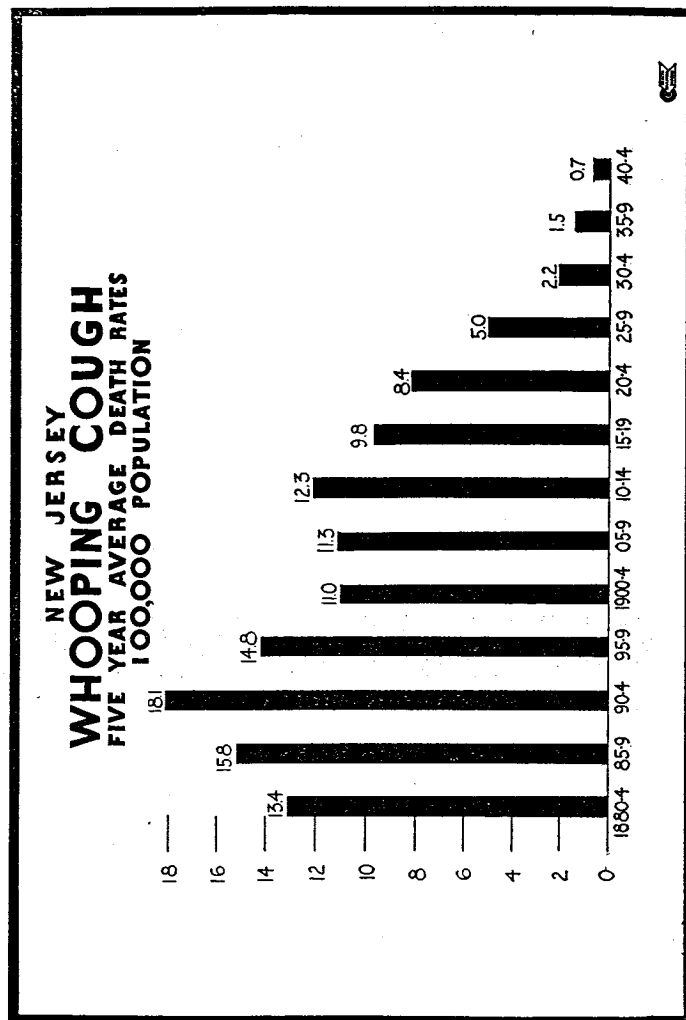


CHART 5

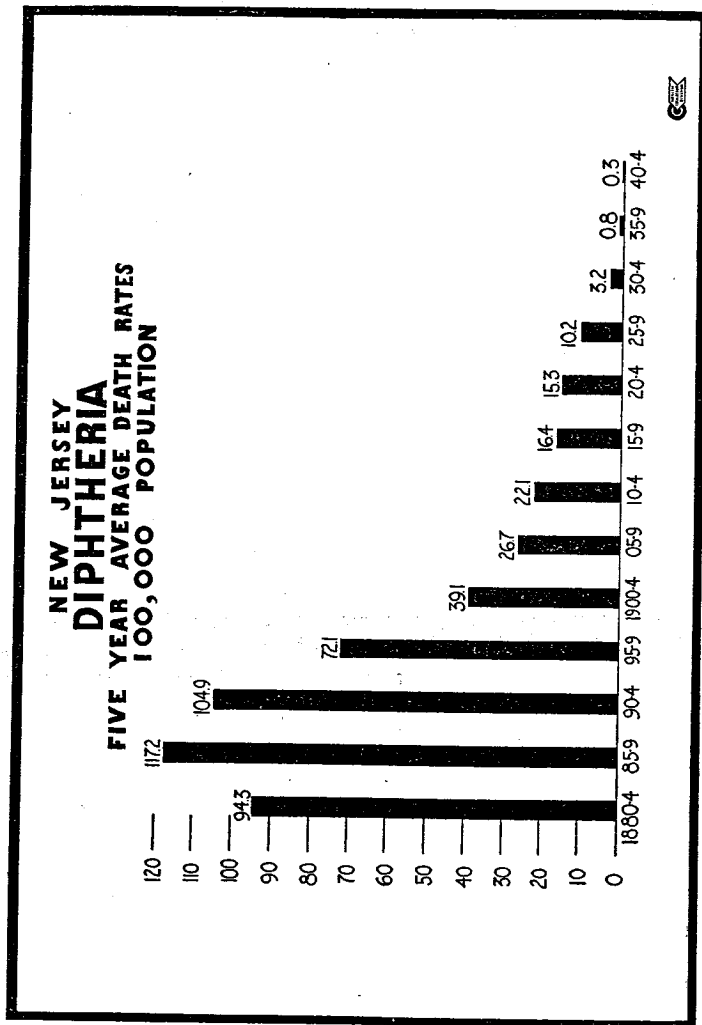


CHART 6

Tuberculosis.—The number of deaths from all forms of tuberculosis during 1947 was 1,561 of which 1,464 were deaths from tuberculosis of the respiratory system. The death rates per 100,000 population were 35.2 and 33.0 respectively. The rates for 1946 were 38.2 and 35.7.

White.—The number of deaths of white persons from all forms of tuberculosis was 1,174. This was equivalent to a rate of 28.0 per 100,000 white population. Similar figures for 1946 were 1,258 and 30.9.

Colored.—The number of deaths from all forms of tuberculosis was 387 and the rate was 158.7 per 100,000 colored population. Similar figures for 1946 were 385 and 162.6.

Rates for tuberculosis of the respiratory system and other forms of tuberculosis, by color, may be obtained by reference to Table 15.

Cancer.—The number of deaths from cancer and other malignant growths for 1947 was 7,742 and the death rate was 174.6 per 100,000 population compared with 170.2 for the previous year. The mortality from the disease, with few exceptions, has steadily increased since the time records were first kept in New Jersey. This may be due, in some measure, to the increasing age of the population and also to more accurate diagnosis of the disease by physicians.

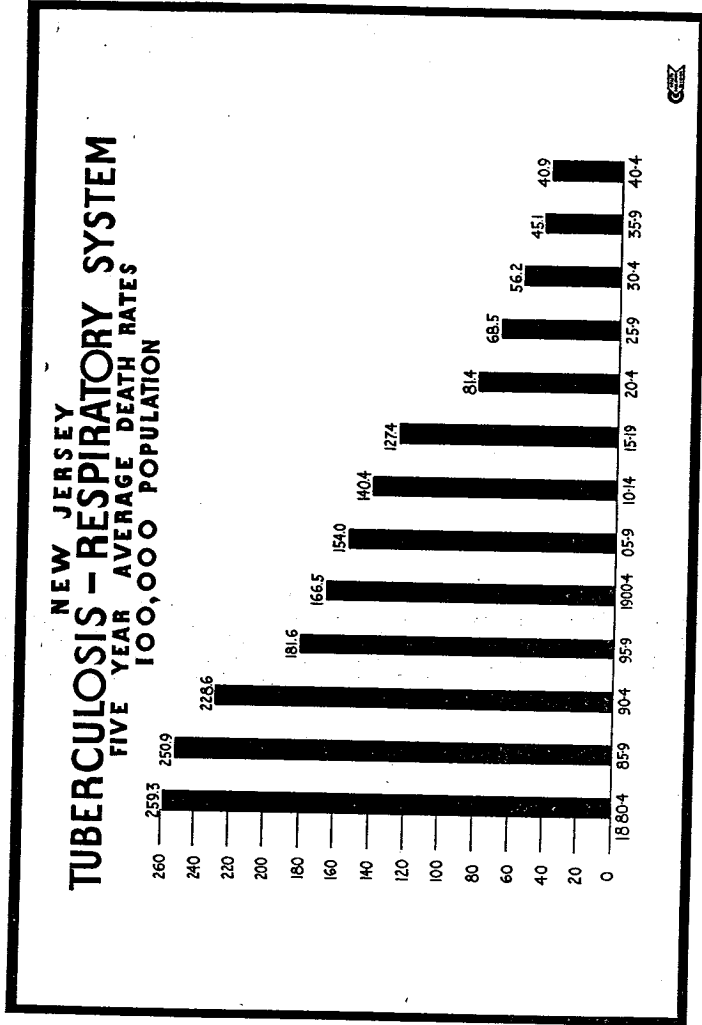


CHART 7

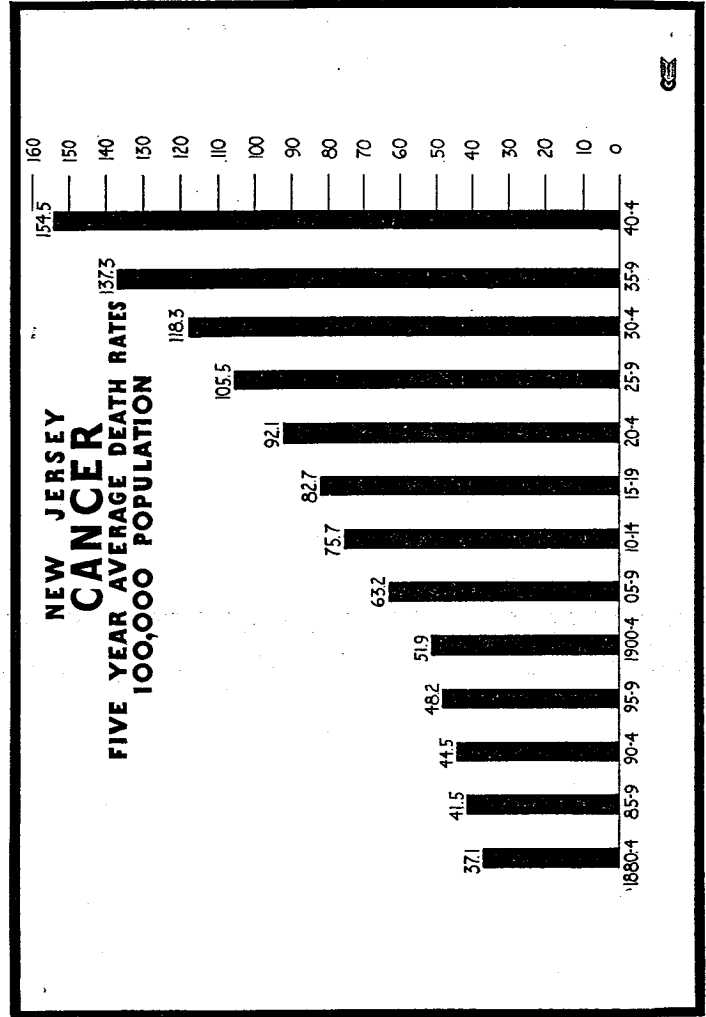


CHART 8

TABLE 1A.—DEATHS FROM CANCER AND OTHER MALIGNANT TUMORS BY PART OF BODY AFFECTED AND COLOR OF DECEDENT—NEW JERSEY—1947

	Total			White			Colored		
	M	F	Total	M	F	Total	M	F	Total
Cancer of the buccal cavity and pharynx	183	37	220	177	34	211	6	3	9
Lip	15	2	17	15	2	17			
Tongue	58	7	65	56	6	62	3	1	4
Mouth	30	7	37	29	7	36			
Jaw bone	20	0	20	20	0	20			
Unspecified parts of the buccal cavity	3	12	15	3	11	14		1	1
Pharynx	62	12	74	60	11	71	3	1	4
Cancer of the digestive organs and peritoneum	2639	1047	3686	1565	89	1654	89	82	171
Esophagus	152	35	187	142	30	172	10	5	15
Stomach	644	418	1062	599	36	635	28	28	56
Small intestine	330	217	547	322	4	326	8	13	21
Rectum and anus	504	557	1061	488	370	858	16	17	33
Intestines (except duodenum and rectum)	150	201	351	140	192	332	7	9	16
Liver and biliary passages	20	24	44	17	9	26	7	7	14
Pancreas	20	23	43	17	9	26	7	7	14
Mesentery and peritoneum	26	33	59	21	1	22	1	2	3
Other and unspecified sites	687	118	805	609	113	722	27	5	32
Cancer of the respiratory system	87	0	87	81	4	85	1	2	3
Trachea	2	1	3	2	1	3			
Bronchus	210	27	237	208	26	234	8	1	9
Lung	367	81	448	351	79	430	16	2	18
Pleura	4	0	4	4	0	4			
Mediastinum and unspecified sites	10	3	13	15	3	18	1	1	2
Cancer of the uterus	535	228	763	482	53	535	53	27	80
Cervix	228	201	429	201	27	228	27	26	53
Other and unspecified sites	307	281	588	281	26	307	26	26	52
Cancer of other female genital organs	235	206	441	222	13	235	13	13	26
Ovary	1	1	2	1	1	2			2
Fallopian tube and parametrium	13	11	24	11	1	12	2	2	4
Vagina	14	14	28	14	14	28			2
Other and unspecified sites	1	1	2	1	1	2			2
Cancer of the breast	7	752	759	7	710	717			42
Cancer of the male genital organs	370	382	752	362	18	380	18	18	36
Scrotum	347	381	728	347	18	365	18	18	36
Prostate	17	17	34	17	4	21			2
Penis	6	4	10	6	4	10			2
Other and unspecified sites	204	146	350	202	145	347	12	1	13
Cancer of the urinary organs	279	46	325	274	46	320	5	5	10
Bladder	214	100	314	209	96	305	7	1	8
Other and unspecified sites	1	1	2	1	1	2			1
Cancer of the skin (except vulva and scrotum)	54	32	86	54	31	85			1
Cancer of the brain and other parts of the central nervous system	82	51	133	82	51	133			1
Including glioma, except when coded as benign	46	22	68	46	22	68			1
Glioma	37	20	57	37	20	57			1
Other and unspecified cancers of the brain and central nervous system	254	219	473	254	203	457	19	16	35
Cancer of other and unspecified organs	6	6	12	6	6	12			1
Adrenal gland	42	36	78	38	35	73	4	1	5
Bone (except jaw bone and accessory sinuses)	12	23	35	11	23	34	1	1	2
Thyroid gland	8	5	13	8	5	13			1
Anal cavity and accessory sinuses	186	133	319	174	136	310	12	15	27
Other and unspecified organs	3970	3772	7742	3799	3556	7355	171	215	156
Grand Totals	3970	3772	7742	3799	3556	7355	171	215	156

Encephalitis Lethargica or Sleeping Sickness.—Eighteen deaths were assigned to this classification for the year 1947. In 1922, which was the year that such deaths were first separately classified, there were forty-five deaths. Twenty-four deaths were recorded in 1946.

Nephritis.—Deaths due to acute and chronic nephritis totaled 2,629, compared with 2,639 for the previous year.

Suicide.—While deaths by this means increased considerably during the period 1926 to 1932, a reversal of trend started in 1933 and continued through 1936. Deaths for 1947 showed a decrease of forty from the number for 1946. Of the various means employed, hanging or strangulation held first place with poisonous gases and firearms in second and third places respectively. The number of deaths by suicide for ten years follows:

1938	682	1943	492
1939	563	1944	483
1940	664	1945	519
1941	598	1946	566
1942	537	1947	526

TABLE 13A—VIOLENT OR ACCIDENTAL DEATHS IN NEW JERSEY—1947
(International Classification Numbers 163-195)

SUICIDE BY SOLID OR LIQUID POISONS	35
Arsenic and compounds	1
Barbituric acid and derivatives	2
Cresol compounds	1
Mercury and compounds	1
Other carbon monoxide gas	1
Other poisonous gases	1
Other solid or liquid poisons	26
SUICIDE BY POISONOUS GASES	115
Motor vehicle exhaust gas	1
Other carbon monoxide gas	1
Other poisonous gases	113
SUICIDE BY OTHER MEANS	185
Hanging or strangulation	24
Firearms and explosives	93
Cutting or piercing instruments	23
Drowning from high places	9
Crushing	6
Other or unspecified means	6
Infanticide (homicide of infants under 1 year of age)	7
Homicide by firearms	62
Homicide by other means	59
Homicide by other means (piercing instruments)	63
Railway accidents (except collisions with motor vehicles)	50
MOTOR VEHICLE ACCIDENTS	13
Collisions between automobiles and trains	1
Collisions between automobile and street cars	1
Automobile accidents (except collisions with trains or street cars)	638
Motorcycle accidents (except collisions with automobiles)	15
STREET CAR AND OTHER ROAD-TRANSPORT ACCIDENTS	5
Street car accidents (except collisions with trains or motor vehicles)	4
Other and unspecified road-transport accidents	1
Water-transport accidents	32
Maritime accidents	14
Accidents in mines and quarries	1
AGRICULTURAL AND FORESTRY ACCIDENTS	9
Accidents involving agricultural machinery and vehicles	9
Accidents involving forestry machinery and vehicles	6
Other agricultural accidents	4
Accidents involving forestry machinery and vehicles	6
Other forestry accidents	15
Other accidents involving machinery	15
Food poisoning	4
ACCUENTUAL ABSORPTION OF POISONOUS GAS	87
Motor vehicle exhaust gas	12
Other carbon monoxide gas	6
Other poisonous gases	8
ACUTE ACCIDENTAL POISONING BY SOLIDS AND LIQUIDS	1
Arsenic and compounds	17
Barbituric acid and derivatives	1
Cresol compounds	1
Mercury and compounds	1
X-ray emanations	1
Carbolic acid and phenol	1
Lye and potash	2
Tobacco and derivatives	1
Narcotics and other habit-forming substances	8
Other and unspecified substances	8
Conflagration	6
Accidental burns (except due to conflagration)	66
Accidental mechanical suffocation	77
Accidental injury by firearms	169
Accidental injury by cutting or piercing instruments	21
Accidents due to electric currents (except lightning)	6
Accidents by venomous animals (not specified as occurring in the course of agricultural and forestry operations)	6
ACCIDENTAL INJURY BY FALL OR CRUSHING	829
Crushing	10
Cataclysm (all deaths attributed to a cataclysm regardless of their nature)	10
Injury (not including falls) occurring or occurring in the course of agricultural and forestry operations	1
Hunger or thirst	11
Excessive cold	11
Excessive heat	1
Accidents due to electric currents (except lightning)	8
Accidents by venomous animals (not specified as occurring in the course of agricultural and forestry operations)	23
Fall	1
OTHER ACCIDENTS	4
Somehow of preventive immunization, inoculation or vaccination	4
Other accidents due to medical or surgical intervention	1
Lack of care of the newborn	1
Obstruction, suffocation or puncture by ingested objects	88
Other and unspecified accidents	88

TABLE 13B—MOTOR VEHICLE FATALITIES IN NEW JERSEY
BY TYPE OF ACCIDENT—1947

Total	667
Collision with	
Railroad train	11
Street car	2
Horse-drawn vehicle	..
Motorcycle	12
Pedestrian	342
Bicycle	12
Other motor vehicle	145
Fixed object	93
Non-collision	47
Type not stated	3

TABLE 13C—ACCIDENTAL DEATHS IN NEW JERSEY BY IMMEDIATE CAUSE OF
DEATH AND PLACE OF OCCURRENCE—1947

(International Classification Numbers 169-195)

	Total	Home	Farm	Accidents in		Other	Not Stated
				Industrial Place	Public Place		
Total	2,412	996	23	144	1,215	..	34
Poisonous gas	145	115	..	10	20	..	..
Burns	161	122	..	14	25	..	..
Mechanical suffocation	50	46	..	1	3	..	..
Drowning	200	8	1	9	180	..	2
Cutting or piercing	4	1	..	1	2	..	..
Fall	849	587	3	38	211	..	10
Crushing, landslide	781	4	9	39	721	..	8
Electric currents	24	4	3	11	6	..	..
Other and unspecified injuries	198	109	7	21	47	..	14

These totals vary, in some instances, from figures in the other tabulations of accidental deaths. The deaths are classified by the immediate causes irrespective of the nature of the accidents.

TABLE 13D—DEATHS IN NEW JERSEY FROM CERTAIN TYPES OF ACCIDENTS
BY PLACE OF ACCIDENT—1947

(International Classification Numbers 169-195)

	Total Accidental Deaths	Motor Vehicle	Falls	Burns	Drowning
Total	2,412	667	829	172	168
Atlantic County	93	33	36	8	2
Bergen County	180	45	59	10	11
Burlington County	73	31	16	6	6
Camden County	136	32	49	18	9
Cape May County	35	7	3	2	12
Cumberland County	60	24	12	5	5
Essex County	393	76	177	36	12
Gloucester County	63	35	9	4	5
Hudson County	288	50	138	17	28
Hunterdon County	31	10	7	4	1
Mercer County	143	49	46	11	4
Middlesex County	148	53	38	11	7
Monmouth County	121	33	33	3	8
Morris County	79	24	22	4	9
Ocean County	63	20	14	3	7
Passaic County	169	50	69	7	14
Salem County	43	15	11	4	5
Somerset County	67	20	20	7	5
Sussex County	31	8	4	4	7
Union County	132	32	51	4	7
Warren County	28	11	9	2	2
Other States	22	8	4	2	2
Not stated	14	1	2	..	..

TABLE 13E—ACCIDENTAL DEATHS IN NEW JERSEY BY MONTH OF DEATH—1947

(International Classification Numbers 169-195)

	Total Accidental Deaths	Motor Vehicle	Falls	Burns	Drowning
Total	2,412	667	829	172	168
January	208	61	70	16	3
February	180	30	68	12	12
March	197	58	48	31	8
April	190	52	68	18	14
May	186	50	54	9	11
June	179	47	63	3	19
July	211	53	64	9	47
August	213	60	83	9	23
September	192	63	74	8	13
October	188	49	80	13	10
November	201	66	74	12	3
December	267	78	83	32	5

TABLE 13F—ACCIDENTAL DEATHS IN NEW JERSEY BY AGE OF DECEASED—1947

(International Classification Numbers 169-195)

	Total Accidental Deaths	Motor Vehicle	Falls	Burns	Drowning
All ages	2,412	667	829	172	168
Under 1 year	95	2	4	7	1
1 to 4	102	31	8	29	18
5 to 9	65	24	1	7	22
10 to 14	58	17	7	3	18
15 to 19	88	44	3	4	15
20 to 24	108	63	7	..	12
25 to 64	986	353	218	69	69
65 and over	910	133	581	53	13

TABLE 14—PERCENTAGE OF THE VARIOUS CAUSES OF TOTAL DEATHS AND EACH SEX OF TOTAL, IN NEW JERSEY—1947

Abridged International List Number	CAUSE OF DEATH	Percentage of Total	Males—Percentage of Total	Females—Percentage of Total
	ALL CAUSES	100.0	55	45
1	Typhoid and paratyphoid fevers	0.0	33	67
2	Plague	0.0	..	..
3	Scarlet fever	0.0	..	100
4	Whooping cough	0.0	21	79
5	Diphtheria	0.0	64	36
6	Tuberculosis of the respiratory system	3.0	66	34
7	All other forms of tuberculosis	0.2	53	47
8	Malaria	0.0	100	..
9	Syphilis	0.6	75	25
10	Influenza	0.2	56	44
11	Smallpox	0.0	100	..
12	Measles	0.0	25	75
13	Typhus fever	0.0	40	60
14	Other infectious or parasitic diseases	0.4	56	44
15	Cancer and other malignant tumors	15.0	51	49
16	Nonmalignant tumors or tumors of unspecified nature	0.4	37	63
17	Chronic rheumatism and gout	0.1	21	79
18	Diabetes mellitus	3.2	33	67
19	Chronic or acute alcoholism	0.1	80	20
20	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	1.1	52	48
21	Meningitis (nonmeningococcal) and diseases of the spinal cord	0.3	56	44
22	Intracranial lesions of vascular origin	8.5	44	56
23	Other diseases of the nervous system and sense organs	0.7	51	49
24	Diseases of the heart	35.8	58	42
25	Other diseases of the circulatory system	2.7	47	53
26	Bronchitis	0.2	64	36
27	Pneumonia and bronchopneumonia	3.1	58	42
28	Other diseases of the respiratory system	0.6	61	39
29	Diarrhea and enteritis	0.3	47	53
30	Appendicitis	0.4	60	40
31	Diseases of the liver and biliary passages	1.8	57	43
32	Other diseases of the digestive system	1.8	65	35
33	Nephritis	5.4	49	51
34	Other diseases of the urinary and genital systems	0.9	76	24
35	Puerperal infection	0.1	..	100
36	Other diseases of pregnancy, childbirth, and the puerperium	0.2	..	100
37	Diseases of the skin, cellular tissue, bones, and organs of movement	0.1	48	52
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	4.9	58	42
39	Senility, old age	0.3	31	69
40	Suicide	1.1	72	28
41	Homicide	0.3	71	29
42	Automobile accidents (all motor-driven road vehicles)	1.4	78	22
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	3.6	60	40
44	Causes of death ill-defined, unknown, or unspecified	0.1	69	31

TABLE 15—DEATH RATES, TOTAL WHITE AND COLORED, FROM IMPORTANT CAUSES, PER 100,000 TOTAL, WHITE AND COLORED POPULATION IN NEW JERSEY—1947

Abridged International List Number	CAUSE OF DEATH	Total Deaths per 100,000 Estimated Population	White Deaths per 100,000 Estimated White Population	Colored Deaths per 100,000 Estimated Colored Population
	ALL CAUSES	1088.5	1067.4	1432.1
1	Typhoid and paratyphoid fevers	0.1	0.1	0.8
2	Plague	0.0	0.0	0.4
3	Scarlet fever	0.0	0.0	..
4	Whooping cough	0.5	0.5	1.6
5	Diphtheria	0.3	0.3	..
6	Tuberculosis of the respiratory system	33.0	26.6	143.1
7	All other forms of tuberculosis	2.2	1.4	15.6
8	Malaria	0.0	0.0	..
9	Syphilis	4.4	4.3	41.8
10	Influenza	1.7	1.6	3.3
11	Smallpox	0.0	..	0.4
12	Measles	0.1	0.1	..
13	Typhus fever	0.1	0.1	..
14	Other infectious or parasitic diseases	4.6	4.4	8.6
15	Cancer and other malignant tumors	174.6	175.3	158.7
16	Nonmalignant tumors or tumors of unspecified nature	4.6	4.2	11.9
17	Chronic rheumatism and gout	0.9	1.0	..
18	Diabetes mellitus	35.2	35.4	32.8
19	Chronic or acute alcoholism	1.6	1.5	3.3
20	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	11.8	11.7	13.9
21	Meningitis (nonmeningococcal) and diseases of the spinal cord	3.1	3.0	4.1
22	Intracranial lesions of vascular origin	92.6	92.1	101.3
23	Other diseases of the nervous system and sense organs	7.2	7.1	9.0
24	Diseases of the heart	589.6	391.5	356.3
25	Other diseases of the circulatory system	29.8	29.9	27.1
26	Bronchitis	2.3	2.3	2.5
27	Pneumonia and bronchopneumonia	33.4	30.3	79.1
28	Other diseases of the respiratory system	6.3	6.2	8.2
29	Diarrhea and enteritis	3.4	3.2	6.1
30	Appendicitis	4.1	4.0	6.6
31	Diseases of the liver and biliary passages	19.9	20.2	14.3
32	Other diseases of the digestive system	19.9	19.3	27.1
33	Nephritis	59.3	55.8	119.7
34	Other diseases of the urinary and genital systems	9.3	8.9	15.2
35	Puerperal infection	0.7	0.5	2.5
36	Other diseases of pregnancy, childbirth, and the puerperium	1.7	1.6	2.9
37	Diseases of the skin, cellular tissue, bones, and organs of movement	1.6	1.6	1.6
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	53.4	50.0	112.3
39	Senility, old age	3.3	3.2	4.5
40	Suicide	11.9	12.2	5.7
41	Homicide	3.2	3.0	23.0
42	Automobile accidents (all motor-driven road vehicles)	14.7	14.6	16.8
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	38.6	37.0	66.4
44	Causes of death ill-defined, unknown, or unspecified	1.5	1.3	3.7

TABLE 16—DEATHS (EXCLUSIVE OF STILLBIRTHS) BY CAUSES AND MONTHS OF DEATHS, IN NEW JERSEY—1947

Abridged Internat l List Number	CAUSE OF DEATH	MONTH OF DEATH												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
1	ALL CAUSES	48276	4017	4490	4111	3945	3725	3905	3552	3930	3904	3998	4041	
2	Diphtheria and paratyphoid fevers	6	2	2	1	1	1	1	1	1	1	1	1	
3	Scarlet fever	2	2	2	1	1	1	1	1	1	1	1	1	
4	Whooping cough	24	1	2	3	3	1	6	2	1	2	2	1	
5	Diphtheria	14	128	142	161	132	120	120	117	90	135	92	104	
6	Tuberculosis of the respiratory system	1464	97	9	8	7	13	6	7	8	14	8	6	
7	Other forms of tuberculosis	97	0	0	0	0	0	0	0	0	0	0	0	
8	Malaria	288	33	24	23	16	20	23	20	15	24	32	1	
9	Syphilis	75	14	3	16	9	1	4	1	3	4	4	10	
10	Influenza	1	1	1	1	1	1	1	1	1	1	1	1	
11	Smallpox	1	1	1	1	1	1	1	1	1	1	1	1	
12	Typhus fever	1	1	1	1	1	1	1	1	1	1	1	1	
13	Other infectious or parasitic diseases	246	16	22	22	17	10	11	27	6	10	13	16	
14	Cancer and other malignant tumors	7742	598	641	618	699	660	653	627	666	648	611	694	
15	Nonmalignant tumors or tumors of unspecified nature	205	21	14	23	10	17	13	23	22	13	9	23	
16	Chorea, choreism and goit	42	6	4	3	2	4	4	2	2	4	5	6	
17	Diabetes mellitus	152	18	17	13	14	13	11	12	10	11	10	11	
18	Chronic or acute alcoholism	89	5	1	6	7	0	4	1	0	1	6	10	
19	Other diseases, other general diseases, diseases of the blood, and chronic poisonings	523	43	45	36	39	42	38	45	43	60	33	37	
20	Measles (nonmeningococcal) and diseases of the skin	137	13	9	11	8	14	14	10	13	14	9	9	
21	Other diseases of the nervous system and sense organs	4105	363	369	341	314	324	313	270	270	359	360	418	
22	Intracranial lesions of vascular origin	320	30	36	31	18	27	28	14	32	24	19	23	
23	Other diseases of the nervous system and sense organs	17279	1642	1480	1006	1444	1624	1211	1180	1243	1425	1500	1756	
24	Diseases of the heart	1529	122	130	147	89	90	92	90	99	103	103	111	
25	Other diseases of the circulatory system	107	14	9	8	5	6	3	6	6	8	10	19	
26	Bronchitis	1483	204	146	130	102	71	81	77	83	124	107	108	
27	Pneumonia and bronchopneumonia	286	22	10	27	17	1	26	37	23	16	27	20	
28	Other diseases of the respiratory system	130	10	16	20	8	6	13	7	9	13	6	13	
29	Amoebic dysentery	883	80	64	82	88	77	62	58	70	71	111	133	
30	Diseases of the liver and biliary passages	884	76	74	72	70	70	71	64	63	75	68	68	
31	Other diseases of the digestive system	2629	298	272	230	210	212	177	137	170	210	262	277	
32	Nephritis	411	28	25	59	41	30	32	38	33	30	28	34	
33	Other diseases of the urinary and genital systems	23	4	4	2	2	4	4	2	2	2	2	2	
34	Urinary infection	76	8	3	2	0	0	0	0	0	0	0	0	
35	Other diseases of pregnancy, childbirth, and the puerperium	60	0	0	0	0	0	0	0	0	0	0	0	
36	Diseases of the skin, cellular tissue, bones, and joints	2088	220	202	193	232	106	181	176	208	188	163	200	
37	Congenital malformations and debility, respiratory, birth, and diseases peculiar to the first year of life	528	14	42	42	59	46	58	49	43	33	42	41	
38	Senility, old age	1400	8	8	9	9	8	10	16	17	9	12	14	
39	Home accidents (all motor-driven cars and other vehicles)	602	66	27	51	53	50	48	48	67	67	68	77	
40	Other violent or accidental deaths (suicide, homicide, and other accidents excepted)	1714	148	147	140	133	140	125	114	128	138	135	101	
41	Causes of death ill-defined, unknown, or unspecified	65	2	6	2	11	3	5	7	5	9	4	2	

TABLE 10—DEATHS (exclusive of stillbirths) UNDER ONE YEAR OF AGE, BY CAUSES AND MONTHS OF DEATH IN NEW JERSEY—1947

CAUSE OF DEATH	MONTH OF DEATH												
	Total	January	February	March	April	May	June	July	August	September	October	November	December
ALL CAUSES	2030	203	264	317	251	270	237	210	107	244	224	212	220
1 Typhoid and paratyphoid fevers	2	1	1	1	1	1	1	1	1	1	1	1	1
2 Plague	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Whooping cough	10	1	1	1	1	1	1	1	1	1	1	1	1
5 Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Infections of the respiratory system	1	1	1	1	1	1	1	1	1	1	1	1	1
7 All other forms of tuberculosis	5	1	1	1	1	1	1	1	1	1	1	1	1
8 Malaria	1	1	1	1	1	1	1	1	1	1	1	1	1
9 Syphilis	17	3	2	3	4	2	2	2	1	1	1	1	1
10 Influenza	13	3	2	3	4	2	2	2	1	1	1	1	1
11 Measles	1	1	1	1	1	1	1	1	1	1	1	1	1
12 Mumps	1	1	1	1	1	1	1	1	1	1	1	1	1
13 Typhus fever	1	1	1	1	1	1	1	1	1	1	1	1	1
14 Other infectious or parasitic diseases	13	3	2	3	4	2	2	2	1	1	1	1	1
15 Cancer and other malignant tumors	4	1	1	1	1	1	1	1	1	1	1	1	1
16 Nonmalignant tumors or tumors of unspecified character	2	1	1	1	1	1	1	1	1	1	1	1	1
17 Chronic rheumatism and gout	2	1	1	1	1	1	1	1	1	1	1	1	1
18 Diabetes mellitus	1	1	1	1	1	1	1	1	1	1	1	1	1
19 Chronic or acute alcoholism	2	1	1	1	1	1	1	1	1	1	1	1	1
20 Ataxoidoses, other general diseases, diseases of the nervous system, and diseases of the spinal cord	42	5	5	5	1	1	6	2	2	5	3	5	2
21 Meningitis (meningococcus, meningococcus, meningitis)	10	1	2	2	2	3	1	1	1	1	1	1	1
22 Intracranial lesions of vascular origin	8	1	1	1	1	1	1	1	1	1	1	1	1
23 Other diseases of the nervous system and sense organs	13	2	2	1	1	1	1	1	1	1	1	1	1
24 Diseases of the heart	2	1	1	1	1	1	1	1	1	1	1	1	1
25 Other diseases of the circulatory system	2	1	1	1	1	1	1	1	1	1	1	1	1

26 Hemorrhitis	17	3	1	22	25	21	11	13	3	2	1	1	2
27 Pneumonia and bronchopneumonia	206	47	20	22	25	21	11	13	3	15	17	17	22
28 Other diseases of the respiratory system	88	6	12	20	13	6	5	7	1	0	2	2	6
29 Diarrhea and enteritis	1	1	1	1	1	1	1	1	1	1	1	1	1
30 Diseases of the liver and biliary passages	3	1	1	1	1	1	1	1	1	1	1	1	1
31 Other diseases of the digestive system	11	1	1	1	1	1	1	1	1	1	1	1	1
32 Nephritis	3	1	1	1	1	1	1	1	1	1	1	1	1
33 Other diseases of the urinary and genital systems	3	1	1	1	1	1	1	1	1	1	1	1	1
34 Other diseases of pregnancy, childbirth, and the puerperium	1	1	1	1	1	1	1	1	1	1	1	1	1
35 Diseases of the skin, cellular tissue, bones, and organs of movement	1	1	1	1	1	1	1	1	1	1	1	1	1
36 Congenital malformations	1	1	1	1	1	1	1	1	1	1	1	1	1
37 Diseases and diseases peculiar to the first year of life	2201	214	192	272	186	228	190	173	109	100	159	158	178
Congenital malformations (stillbirths not included)	201	45	44	63	38	44	35	32	42	38	46	32	40
Premature birth (no other cause stated)	1176	104	89	116	6	3	3	3	1	1	3	2	4
Other diseases peculiar to the first year of life	208	31	29	47	25	125	107	92	85	116	94	76	82
Senility, old age	339	32	20	25	30	34	21	14	20	20	20	18	13
Suicide	41	1	2	1	1	1	2	2	1	1	1	1	2
Automobile accidents (all motor-driven road vehicles)	2	1	1	1	1	1	1	1	1	1	1	1	1
Other violent or accidental deaths (suicide, homicide, and automobile accidents excluded)	62	10	11	12	6	9	8	4	1	7	4	5	15
Causes of death ill-defined, unknown, or unspecified	14	1	1	1	2	1	1	2	1	2	1	1	1

TABLE 20—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE (COUNTY FIGURES INCLUDE)

Table with columns for Essex County, Belleville, Bloomfield, East Orange, Irvington, Maplewood Twp., Millburn Twp., Montclair, Newark, Nutley, Orange, South Orange, West Orange, Gloucester County. Rows list 104 causes of death such as Cancer of the brain, Diabetes mellitus, etc.

COUNTIES OF NEW JERSEY AND SELECTED MUNICIPALITIES AND TOWNSHIPS PLACES WHICH FOLLOW: 1947—Continued

Table with columns for Woodbury, Hudson County, Bayonne, Guttenberg, Harrison, Hoboken, Jersey City, Kearny, North Bergen Twp., Secaucus, Union City, Weehawken Twp., West New York, Hunterdon County, Mercer County, Hamilton Twp., Princeton, Trenton, Middlesex County, Carteret, Highland Park, New Brunswick, Perth Amboy, Sagreville, South Amboy, South River, Woodbridge Twp. Rows continue from the previous table with causes 54 through 104.

TABLE 20—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE
(COUNTY FIGURES INCLUDE

	Monmouth County	Asbury Park	Long Branch	Neptune Twp.	Red Bank	Morris County	Dover	Madison	Morristown	Ocean County	Passaic County	Clifton
54. Cancer of the brain and other parts of the central nervous system	4					2				1	14	1
55. Cancer of other and unspecified organs	30					16				12	37	4
56. Nonmalignant tumors (including dermoid cysts)	5	1				3		1		2	7	1
57. Tumors of unspecified nature	2					1		2		1	4	1
58. Acute rheumatic fever						1		1			2	1
59. Chronic rheumatism and other rheumatic diseases	1					1		1			2	1
60. Gout										1	4	1
61. Diabetes mellitus	7	8	13	4	6	35	2	2	5	11	130	16
62. Diseases of the pituitary gland												
63. Diseases of the thyroid and parathyroid glands	2					4				1	6	1
64. Diseases of the thymus gland	4					4				2	4	1
65. Diseases of the adrenal glands (not specified as tuberculous)												
66. Other general diseases												
67. Scurvy												
68. Beriberi												
69. Pellagra												
70. Rickets												
71. Avitaminoses	1											
72. Hemorrhagic conditions												
73. Anemias (except splenic anemia)												
74. Leukemias and aleukemias	15	4				2				6	2	1
75. Diseases of the spleen	1					6				12	1	1
76. Other diseases of the blood and blood-forming organs						2		1		1		
77. Alcoholism	2											
78. Lead poisoning	1	1										
79. Chronic poisoning by other mineral or organic substances	1											
80. Encephalitis (nonepidemic)	1					1						
81. Meningitis (not due to meningococcus)	2					1						
82. Diseases of the spinal cord (except locomotor ataxia, disseminated sclerosis)	1											
83. Intracranial lesions of vascular origin	4					1						
84. Mental diseases and deficiency (except general paralysis of the insane)	199	26	22	22	16	112	7	1	18	54	303	36
85. Epilepsy	2											
86. Convulsions (under 5 years of age)	2					3		1			4	1
87. Other diseases of the nervous system	1					1					3	1
88. Diseases of the organs of vision	7	1	2	2		3						
89. Diseases of the ear and mastoid process	1									2	13	2
90. Pericarditis (except acute rheumatic)												
91. Acute endocarditis (except rheumatic)												
92. Chronic affections of the valves and endocardium												
93. Diseases of the myocardium	50	8	2	10		3	3	3	3	7	55	7
94. Diseases of the coronary arteries and angina pectoris	470	48	56	46	38	342	39	14	53	101	611	71
95. Other diseases of the heart	292	28	19	24	13	173	12	17	34	105	439	69
96. Aneurysm (except of heart and aorta)	111	7	12	6	8	28	1		3	5	69	7
97. Arteriosclerosis (except coronary or renal sclerosis)	3					1			2	1	7	
98. Gangrene	47	5	5	1	3	60	5	5	10	21	102	17
99. Other diseases of the arteries	1											
100. Diseases of the veins	4											
101. Diseases of the lymphatic system	4	1										
102. High blood pressure (idiopathic)												
103. Other diseases of the circulatory system	3											
104. Diseases of the nasal fossae and accessory sinuses												

COUNTIES OF NEW JERSEY AND SELECTED MUNICIPALITIES AND TOWNSHIPS
PLACES WHICH FOLLOW: 1947—Continued

	Lanarthorne	Puassic	Fateron	Salem County	Salem City	Somerset County	Round Brook	North Plainfield	Somerville	Sussex County	Union County	Cranford Twp.	Elizabeth	Hillside Twp.	Linden	Plainfield	Rahway	Roselle	Roselle Park	Summit	Union Twp.	Westfield	Warren County	Phillipsburg
1	4	5	1			3			1	10	1		4	1	1	1				1	1		3	1
2	9	20	5	1	11				2	1	45		22	6	1	6					1	1	3	1
3	1	2	1	1	2				2	1	6		1	1	1	1					1	1	4	1
4	1	2	1	1	2				2	1	3		1	1	1	1			1		1	1	3	1
5	18	70	18	5	33	5	6	6	12	114	2	45	2	10	16	5	9	3	1	9	3	20	11	
6	1	3	1		1				1															
7	3	1	1																					
8	1	1	1		1				1															
9	1	1	1		1																			
10	1	1	1		1																			
11	5	4	1		4				1				1	1	1	2					1	1	3	1
12	1	1	1		2								8	1	1	1						3	1	1
13	1	1	1		4				1	2	14													
14	1	3	3		3	1			1	3			2											
15	1	1	1																					
16	1	1	1		1																			
17	67	145	50	8	96	5	16	13	36	316	18	117	12	19	43	15	10	5	12	12	24	75	24	
18	1	1	1							2														
19	1	1	1		2					2														
20	67	145	50	8	96	5	16	13	36	316	18	117	12	19	43	15	10	5	12	12	24	75	24	
21	1	1	1							2														
22	1	1	1		2					2														
23	1	1	1		2					2														
24	1	1	1		2					2														
25	1	1	1		2					2														
26	1	1	1		2					2														
27	1	1	1		2					2														
28	1	1	1		2					2														
29	1	1	1		2					2														
30	1	1	1		2					2														
31	1	1	1		2					2														
32	1	1	1		2					2														
33	1	1	1		2					2														
34	1	1	1		2					2														
35	1	1	1		2					2														
36	1	1	1		2					2														
37	1	1	1		2					2														
38	1	1	1		2					2														
39	1	1	1		2					2														
40	1	1	1		2					2														
41	1	1	1		2					2														
42	1	1	1		2					2														
43	1	1	1		2					2														
44	1	1	1		2					2														
45	1	1	1		2					2														
46	1	1	1		2					2														
47	1	1	1		2					2														
48	1	1	1		2					2														
49	1	1	1		2					2														
50	1	1	1		2					2														
51	1	1	1		2					2														
52	1	1	1		2					2														
53	1	1	1		2					2														
54	1	1	1		2					2														
55	1	1	1		2					2														
56	1	1	1		2					2														
57	1	1	1		2					2														
58	1	1	1		2					2														
59	1	1	1		2					2														
60	1	1	1		2					2														
61	1	1	1		2					2														
62	1	1	1		2					2														
63	1	1	1		2					2														
64	1	1	1		2					2														

DEPARTMENT OF HEALTH

TABLE 20—DEATHS FROM EACH CAUSE, DETAILED INTERNATIONAL LIST, IN THE
(COUNTY FIGURES INCLUDE)

	Monmouth County	Asbury Park	Long Branch	Neptune Twp.	Red Bank	Morris County	Dover	Madison	Morristown	Ocean County	Passaic County	Clifton
150. Other and unspecified conditions of child birth and the puerperium												
151. Carbuncle and furuncle												
152. Phlegmon and acute abscess												
153. Other diseases of the skin and cellular tissue												
154. Osteomyelitis and perlostitis												
155. Other diseases of the bones (except tuberculosis)												
156. Diseases of the joints and other organs of movement												
157. Congenital malformations (stillbirths not included)												
158. Congenital debility (cause not stated)												
159. Premature birth (cause not stated)												
160. Injury at birth												
161. Other diseases peculiar to the first year of life												
162. Senility												
163. Suicide by poisoning												
164. Suicide by other means												
165. Infanticide (homicide of infants under 1 year of age)												
166. Homicide by cutting or piercing instruments												
167. Homicide by other means												
168. Railway accidents (except collisions with motor vehicles)												
169. Motor vehicle accidents (except collisions with street car and other road transport accidents)												
170. Street car and other road transport accidents												
171. Water transport accidents												
172. Air transport accidents												
173. Accidents in mines and quarries												
174. Agricultural and forestry accidents												
175. Other accidents involving machinery												
176. Food poisoning												
177. Accidental absorption of poisonous gas												
178. Acute accidental poisoning by solids or liquids												
179. Confagration												
180. Accidental burns (except confagration)												
181. Accidental mechanical suffocation												
182. Accidental drowning												
183. Accidental injury by firearms												
184. Accidental injury by cutting or piercing instruments												
185-1. Accidental injury by fall												
185-2. Accidental injury by crushing												
187. Cataclysm												
188. Injury by animals												
189. Hunger or thirst												
190. Excessive cold												
191. Excessive heat												
192. Lightning												
193. Accidents due to electric currents (except lightning)												
194. Poisoning by venomous animals												
195. Other accidents												
196. Deaths of military personnel during operations of war												
197. Deaths of civilians due to operations of war												
198. Legal executions												
199. Sudden death												
200. Ill-defined and unknown causes												
Totals	2399	260	233	208	171	1502	139	82	213	613	3353	445

COUNTIES OF NEW JERSEY AND SELECTED MUNICIPALITIES AND TOWNSHIPS
PLACES WHICH FOLLOW: 1947—Continued

	Hawthorne	Passaic	Paterson	Salem County	Salem City	Somerset County	Bound Brook	North Plainfield	Somerville	Sussex County	Union County	Canford Twp.	Elizabeth	Hillside Twp.	Linden	Plainfield	Rahway	Roselle	Roselle Park	Summit	Union Twp.	Westfield	Warren County	Phillipsburg
150. Other and unspecified conditions of child birth and the puerperium																								
151. Carbuncle and furuncle																								
152. Phlegmon and acute abscess																								
153. Other diseases of the skin and cellular tissue																								
154. Osteomyelitis and perlostitis																								
155. Other diseases of the bones (except tuberculosis)																								
156. Diseases of the joints and other organs of movement																								
157. Congenital malformations (stillbirths not included)																								
158. Congenital debility (cause not stated)																								
159. Premature birth (cause not stated)																								
160. Injury at birth																								
161. Other diseases peculiar to the first year of life																								
162. Senility																								
163. Suicide by poisoning																								
164. Suicide by other means																								
165. Infanticide (homicide of infants under 1 year of age)																								
166. Homicide by cutting or piercing instruments																								
167. Homicide by other means																								
168. Railway accidents (except collisions with motor vehicles)																								
169. Motor vehicle accidents (except collisions with street car and other road transport accidents)																								
170. Street car and other road transport accidents																								
171. Water transport accidents																								
172. Air transport accidents																								
173. Accidents in mines and quarries																								
174. Agricultural and forestry accidents																								
175. Other accidents involving machinery																								
176. Food poisoning																								
177. Accidental absorption of poisonous gas																								
178. Acute accidental poisoning by solids or liquids																								
179. Confagration																								
180. Accidental burns (except confagration)																								
181. Accidental mechanical suffocation																								
182. Accidental drowning																								
183. Accidental injury by firearms																								
184. Accidental injury by cutting or piercing instruments																								
185-1. Accidental injury by fall																								
185-2. Accidental injury by crushing																								
187. Cataclysm																								
188. Injury by animals																								
189. Hunger or thirst																								
190. Excessive cold																								
191. Excessive heat																								
192. Lightning																								
193. Accidents due to electric currents (except lightning)																								
194. Poisoning by venomous animals																								
195. Other accidents																								
196. Deaths of military personnel during operations of war																								
197. Deaths of civilians due to operations of war																								
198. Legal executions																								
199. Sudden death																								
200. Ill-defined and unknown causes																								
Totals	127	629	1638	325	118	851	85	136	121	362	3416	157	1210	154	177	432	194	138	67	172	240	200	637	217

TABLE 22.—TABULATION OF DEATHS IN ATLANTIC COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods															
				Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
		1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947
1	ALL CAUSES	1808	801	630	292	145	111	128	4	7	8	28	40	61	102	206	415	431	213	70	Unknown		
2	Typhoid and paratyphoid fevers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Dysentery	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Influenza, or of the respiratory system	54	22	6	12	11	2	3	1	1	1	5	10	6	10	10	7	1	1	1	1	1	1
8	Malaria	6	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Syphilis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	Smallpox	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	Erythra fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	Cyprus fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Gangrenous or parasitic diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Cancer, in situ or malignant tumors	222	99	98	16	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Nonmalignant tumors or tumors of unspecified nature	9	2	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	Chronic rheumatism and gout	52	26	5	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	Chronic meningitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	Chronic mellitus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	Avian influenza, other influenza, diseases of the blood, and chronic poison diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Measles (meningoencephalitis) and diseases of the nervous system	18	7	7	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	Intracranial lesions of vascular origin	156	58	72	14	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

23	Other diseases of the nervous system and sense organs of the brain	18	12	6	15	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	Diseases of the heart	60	29	13	5	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	30	15	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Bronchitis and bronchopneumonia	75	22	18	24	11	24	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Pneumonia and bronchopneumonia	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Other diseases of the respiratory system	41	20	15	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	Appendicitis, enteritis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	Diseases of the liver and biliary passages	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Other diseases of the digestive system	38	20	10	7	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the urinary and genital systems	253	87	80	23	22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	Other diseases of the urinary and genital systems	15	9	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	Other diseases of pregnancy, childbirth, and the puerperal infection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	Other diseases of pregnancy, childbirth, and the puerperal infection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Diseases of the skin, cellular tissue, bones, and cartilages	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin, cellular tissue, bones, and cartilages	89	39	20	8	4	77	79	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	6	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	Senility, old age	15	10	5	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Suicide	7	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Automobile accidents (all motor-driven road vehicles)	22	15	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	52	20	23	6	3	1	0	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	Causes of death ill-defined, unknown, or unspecified	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated Population, 130,716.

Total Resident Deaths, 1,808.

Rate per 1,000 Population, 13.8.

TABULATION OF DEATHS IN ATLANTIC CITY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods													
		1000	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	1000	467	324	139	114	48	54	3	3	8	14	37	39	68	205	234	228	61	22	
2	Typhoid and paratyphoid fevers																				
3	Plague fever																				
4	Whooping cough																				
5	Diphtheria																				
6	Tuberculosis of the respiratory system																				
7	All other forms of tuberculosis																				
8	Scarlet fever	30	13	24	12	9	2	3													
9	Syphilis																				
10	Influenza																				
11	Smallpox																				
12	Measles																				
13	Polio																				
14	Dysentery																				
15	Cholera																				
16	Nonmalignant tumors of unspecified nature	132	48	85	15	17	1	1													
17	Chronic meningitis and goit	5	1	3																	
18	Diabetes or non-diabetic diabetes	1																			
19	Chronic or acute nephritis	22	12	14	1	6															
20	Arteriosclerosis, other general diseases of the blood, and chronic poison diseases	10	3	4	1	2															
21	Malnutrition (kwashiorkor) and diseases of the alimentary tract	8	2	1	1	2															
22	Intracranial lesions of vascular origin	87	36	35	42	10	1	1													

23	Other diseases of the nervous system and sense organs	5	2																		
24	Diseases of the heart	327	136	191	48	23															
25	Other diseases of the circulatory system	16	8	6	1	1															
26	Stroke	10	4	6																	
27	Pneumonia and bronchopneumonia	46	11	7	20	8	10	10	1												
28	Other diseases of the respiratory system	8	3	5																	
29	Diarrhea and enteritis	1																			
30	Appendicitis, the liver, and biliary passages	25	6	19	3	3															
31	Other diseases of the digestive system	19	8	4	6	1															
32	Other diseases of the urinary system	120	42	44	18	22															
33	Nephritis	7	3	2	2	1															
34	Other diseases of the urinary and genital systems	1																			
35	Systemic infection																				
36	Other diseases of pregnancy, childbirth, and the puerperium	2	1	1																	
37	Diseases of the skin, cellular tissue, bones, and joints																				
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	33	15	12	4	2	32	33													
39	Accidents, old age	40	16	24																	
40	Stomach, old age	8	4	3																	
41	Stomach, old age	3	1	2																	
42	Homicide	5	3	2																	
43	Automobile accidents (all motor-driven road vehicles) and other accidents, deaths (suicide)	29	14	11	4	2															
44	Causes of death ill-defined, unknown, or unspecified																				

Estimated Population, 67,148.

Total Resident Deaths, 1,000.

Rate per 1,000 Population, 14.9.

TABULATION OF DEATHS IN BERGEN COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods													
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over
		4217	2139	1944	56	358	225	256	25	8	16	86	136	188	201	718	953	1014	603	74	Unknown
1	Typhoid and paratyphoid fevers	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Plague	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Croup and whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Tuberculosis of the respiratory system	82	51	19	3	6	1	1	2	15	18	5	1	1	1	9	20	15	1	3	1
7	All other forms of tuberculosis	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Malaria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Septicemia	21	11	5	2	1	1	1	2	1	1	1	2	3	5	9	3	1	1	1	1
10	Smallpox	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	Typhus fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	Other infectious or parasitic diseases	14	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Chronic infectious diseases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Cancer of malignant tumors	735	352	370	8	2	3	1	3	1	1	2	1	2	1	1	2	2	2	2	2
16	Nonmalignant tumors of unspecified nature	23	9	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	Chronic rheumatism and gout	136	49	86	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	Chronic arthritis	9	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	Chronic osteomyelitis	58	30	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	Avitaminoses, other general diseases of the blood, and chronic poisonings	19	4	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Menigitis (meningococcal) and diseases of the meningitis cord	307	143	215	5	4	2	3	1	1	2	1	2	1	7	13	47	87	150	79	8
22	Intracranial lesions of vascular origin	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Abridged International List Number

23	Other diseases of the nervous system and sense organs of the heart	32	14	18	10	11	2	1	2	1	2	3	5	2	1	1	2	2	4	8	21
24	Other diseases of the heart	1520	832	688	12	7	5	1	8	1	6	6	22	21	34	64	282	287	544	433	102
25	Other diseases of the circulatory system	134	64	69	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Bronchitis	12	8	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Pneumonia and bronchopneumonia	137	69	68	5	2	20	3	6	3	2	3	2	5	9	15	20	28	16	3	1
28	Other diseases of the respiratory system	11	19	6	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	Influenza and its complications	17	9	8	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	Appendicitis	23	13	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	22	17	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the digestive system	82	57	30	1	1	1	1	1	1	1	3	4	4	7	9	35	41	56	24	5
33	Diphtheria	184	79	94	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	Other diseases of the urinary and genital systems	46	30	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	Puerperal infection	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth, and the puerperium	8	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of cellulular tissue, bones, and organs of movement	5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	187	100	74	4	0	170	182	2	2	1	1	1	1	1	1	1	1	1	1	1
39	Senility, old age	12	4	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Suicide	55	38	17	1	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	10	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Automobile accidents (all motor-driven road vehicles)	54	41	13	1	1	7	1	3	0	6	1	4	6	9	11	1	1	1	1	1
43	Other deaths of accidental death (aircraft, homicide, and automobile accidents excepted)	184	97	92	2	3	5	9	4	3	2	5	5	6	4	18	18	20	33	7	1
44	Causes of death ill-defined, unknown, or unspecified	8	7	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1

Estimated Population, 447,925.

Total Resident Deaths, 4,217.

Rate per 1,000 Population, 9.4.

TABULATION OF DEATHS IN BURLINGTON COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods																			
		1114	302	462	51	30	82	96	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown					
																							Male	Female	Male	Female	
1	Typhoid and paratyphoid fevers	1																									
2	Scarlet fever																										
3	Whooping cough																										
4	Diphtheria																										
5	Whooping cough																										
6	Diphtheria																										
7	Whooping cough																										
8	Diphtheria																										
9	Whooping cough																										
10	Diphtheria																										
11	Whooping cough																										
12	Diphtheria																										
13	Whooping cough																										
14	Diphtheria																										
15	Whooping cough																										
16	Diphtheria																										
17	Whooping cough																										
18	Diphtheria																										
19	Whooping cough																										
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29	Whooping cough																										
30	Diphtheria																										
31	Whooping cough																										
32	Diphtheria																										
33	Whooping cough																										
34	Diphtheria																										
35	Whooping cough																										
36	Diphtheria																										
37	Whooping cough																										
38	Diphtheria																										
39	Whooping cough																										
40	Diphtheria																										
41	Whooping cough																										
42	Diphtheria																										
43	Whooping cough																										
44	Diphtheria																										

Estimated Population, 102,047. Total Resident Deaths, 1,114. Rate per 1,000 Population, 10.9.

TABULATION OF DEATHS IN CAMDEN COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods													
		Male	Female	Male	Female	Male	Female	Under 1 year	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
ALL CAUSES																					
1	Typhoid and paratyphoid fevers	2088	1200	172	141	214	243	18	16	20	82	103	80	140	667	677	736	411	46		
2	Chague fever																				
4	Whooping cough																				
5	Diphtheria																				
6	Pulerculosis of the respiratory system	110	61	28	13	13	13	1	1	1	20	9	8	7	27	10	14	4			
7	All other forms of tuberculosis																				
8	Syphilis																				
10	Indienna	25	0	2	1	1	1	1													
11	Smallpox	8	0	1	1	1	1														
12	Measles																				
13	Scarlet fever																				
14	Other febrile or parasitic diseases																				
15	Cancer and other neoplasms	424	197	201	10	16	3	5	1	3	4	15	15	26	97	120	103	33			
16	Nonmalignant tumors or tumors of unspecified nature																				
17	Cortic rheumatism and gout	11	1	7	1	2															
18	Chronic or acute alcoholism	86	29	54	2	1															
19	Diphtheria, other general infectious diseases of the blood, and chronic poisoning																				
20	Avitaminosis, other general infectious diseases of the blood, and chronic poisoning	40	17	21	1	1	2	5	1	3	4	5	6	7	4	3					
21	Measles (nonmeningococcal) and diseases of the skin (nonmeningococcal)	10	3	5	2	1															
22	Intracranial lesions of vascular origin	272	109	144	9	10															

23	Other diseases of the nervous system and sense organs	21	11	0																	
24	Diseases of the heart	1054	258	386	24																
25	Other diseases of the circulatory system	66	23	3	4																
26	Bronchitis and pneumonitis	6	4																		
27	Other diseases of the respiratory system	120	58	15	17	24	1	2	1	1	2	3	2	7	15	20	23	8			
28	Other diseases of the alimentary system	116	7	8	1	6	10														
29	Diarrhea and enteritis																				
30	Appendicitis	7	3	2																	
31	Diseases of the liver and biliary passages	20	28	2	9																
32	Diseases of the digestive system	231	184	107	23	2															
33	Nephritis																				
34	Other diseases of the urinary and genital systems	28	15	5	7																
35	Uterine infection																				
36	Other diseases of pregnancy, childbirth, and the puerperium																				
37	Diseases of the skin, cellular tissue, bones, and joints	9																			
38	Organs of movement and disability (accidents, birth, and diseases peculiar to the first year of life)	4	1	3																	
39	Senility, old age	167	82	63	13	9	165	106													
40	Suicide	30	29	9																	
41	Accidents (all motor-driven road vehicles)	12	3	1	0	2															
42	Automobile accidents (all motor-driven road vehicles)	38	27	8	2	1															
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	118	68	35	9	6	10	11	5	4	4	6	8	3	7	8	19	20	26	3	
44	Unspecified	5	3	2																	

Estimated Population, 266,632. Total Resident Deaths, 3,088. Rate per 1,000 Population, 11.6.

TABULATION OF DEATHS IN CAMDEN CITY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods															
		Male	Female	Male	Female	Male	Female	Under 1 Year	Under 5 Years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown	
																							1433
1	ALL CAUSES	1433	478	524	130	101	100	110	11	7	9	42	57	51	75	200	310	315	163	12			
2	Typhoid and paratyphoid fevers																						
3	Plague																						
4	Scarlet fever																						
5	Diphtheria																						
6	Whooping cough																						
7	Influenza and other forms of the respiratory system																						
8	All other forms of the respiratory system	66	26	10	11	40	1	1	1	1	13	15	7	4	17	8	0	2					
9	Measles																						
10	Scarlet fever																						
11	Diphtheria																						
12	Whooping cough																						
13	Smallpox	4	2	1	6	2	1	1															
14	Measles																						
15	Typhus fever																						
16	Other infectious or parasitic diseases	8	7	4	8	11	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1		
17	Nonmalignant tumors or tumors of unspecified nature	188	78	71	8	11	1	1	1	1	1	2	6	8	12	49	50	33	4	1			
18	Chronic rheumatism and gout	4	1	2	1																		
19	Gonorrhea																						
20	Chronic meningitis	40	14	34	1																		
21	Acute meningitis																						
22	Other acute infectious diseases, diseases of the blood, and diseases of the spinal cord	15	7	7	1	1	2	1	1	1	3	1	2	3	1	2	3	1	1	1	1		
23	Intra-cranial lesions of vascular origin	4	2	1	1																		
		110	47	54	5	6	1	1	1	1	1	1	1	1	9	21	31	28	18	1			
23	Other diseases of the nervous system and sense organs of the heart	10	4	5	17	1																	
24	Diseases of the heart	483	261	178	27	4																	
25	Other diseases of the circulatory system	26	6	14	2	4																	
26	Bronchitis	11	36	12	1	5	11	14															
27	Pneumonia and bronchopneumonia	8	3	4	1	2	6	0															
28	Diarrhea and enteritis	5	2	1	2	4																	
29	Appendicitis	28	13	11	3	4																	
30	Diseases of the liver and biliary passages	3	1	1	1	1																	
31	Other diseases of the digestive system	112	42	37	17	16																	
32	Other diseases of the urinary and genital systems	14	9	1	4	2																	
33	Puerperal infection	2																					
34	Other diseases of pregnancy, childbirth, and puerperium	3																					
35	Diseases of the skin, cellular tissue, bones, and organs of movement	3																					
36	Congenital malformations and disability, prematurity, and diseases peculiar to the first year of life	83	37	27	11	8	83	83															
37	Senility, old age	14	10	4	1	5																	
38	Homicide	16	4	1	5																		
39	Other violent or accidental deaths (all motor-driven road vehicles)	10	12	2	2																		
40	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	56	31	12	7	6	3	3	3	3	4	3	2	3	6	10	9	7					
41	Causes of death ill-defined, unknown, or unspecified	1		1																			

Estimated Population, 120,500.

Total Resident Deaths, 1,433.

Rate per 1,000 Population, 11.9.

TABULATION OF DEATHS IN CAPE MAY COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	408	387	249	206	26	17	27	20	2	1	10	8	14	17	73	124	134	134	67	10	
2	Typhoid and paratyphoid fevers	1	1	1	1																	
3	Plague																					
4	Dysentery																					
5	Whooping cough																					
6	Diphtheria	2	1		1		1	2	2													
7	Tuberculosis of the respiratory system	6	4	4	2																	
8	All other forms of tuberculosis	6	4	4	2																	
9	Syphilis																					
10	Influenza	5	1	1	1			1	1													
11	Smallpox																					
12	Measles																					
13	Scarlet fever																					
14	Other fevers of parasitic diseases	2	2																			
15	Other parasitic diseases	2	2																			
16	Cancer and other malignant neoplasms	17	36	31	5	4		1	1	1	1	2	2	2	2	2	2	2	2	1	1	
17	Nonmalignant tumors or tumor nodules	3	1	1	1																	
18	Chronic rheumatism and gout																					
19	Diabetic or acute alcoholism	15	7	8																		
20	Chronic or acute alcoholism	15	7	8																		
21	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	6	3	3																		
22	Malnutrition (nonhemorrhagic) and diseases of the spinal cord	42	1	17	10	4	2															
23	Intracranial lesions of vascular origin	1	1	1																		

23	Other diseases of the nervous system and sense organs of the head	1	1	1																		
24	Diseases of the heart	106	90	84	8	5																
25	Other diseases of the circulatory system	13	7	6																		
26	Bronchitis	15	5	6	4	4																
27	Pneumonia and bronchopneumonia	2	2																			
28	Other diseases of the respiratory system	8	6	2																		
29	Other diseases of the digestive system	32	16	12	3	1																
30	Appendicitis	1	1																			
31	Diseases of the liver and biliary passages	1	1																			
32	Other diseases of the digestive system	3	2	1																		
33	Diseases of the urinary and genital systems	3	2	1																		
34	Puerperal infection	1	1																			
35	Other diseases of pregnancy, childbirth, and the puerperium	1	1																			
36	Diseases of the skin, cellular tissue, bones, and organs of movement	1	1																			
37	Diseases of the eye	1	1																			
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	10	7	6	3	10																
39	Senility or old age	3	1	2																		
40	Suicide	3	1	1																		
41	Homicide	4	4																			
42	Automobile accidents (all motor-driven road vehicles)	19	12	7																		
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	1	1																			
44	Causes of death ill-defined, unknown, or unspecified	1	1	1	1	1																

Estimated Population, 32,041.

Total Resident Deaths, 498.

Rate per 1,000 Population, 15.5.

DEPARTMENT OF HEALTH

TABULATION OF DEATHS IN CUMBERLAND COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths	White		Colored		Age Periods																	
			Male	Female	Male	Female	Under 1 year	Under 5 years																
									5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown			
	ALL CAUSES	1008	518	396	56	38	53	68	5	4	8	29	30	25	44	163	200	204	148	22				
1	Typhoid and paratyphoid fevers																							
2	Dysentery																							
3	Scarlet fever																							
4	Epidemic typhus																							
5	Diphtheria																							
6	Whooping cough																							
7	Tuberculosis of the respiratory system	24	10	10	1	2	1																	
8	All other forms of tuberculosis																							
9	Scarlet fever																							
10	Infantile diarrhea	6	3	3																				
11	Smallpox	3	1	2																				
12	Mumps																							
13	Typhus fever																							
14	Other infections or parasitic diseases	12	5	7																				
15	Cancer in situ of benign type	14	61	67	7	8																		
16	Nonmalignant tumors or tumors of unspecified nature																							
17	Chronic rheumatism and gout	1	2	2																				
18	Chronic or infectious diseases	36	8	24	2	2																		
19	Avascular diseases	1	1	1																				
20	Avitaminosis, other general diseases, diseases of the blood, and chronic diseases	8	2	6																				
21	Malnutrition (nonmeningococcal) and diseases of the nutrient elements	5	2	3																				
22	Intra-cranial lesions of vascular origin	101	51	45	4	4																		

23	Other diseases of the nervous system and sense organs	8	3	5	1	1																			
24	Diseases of the heart	259	200	131	11	7																			
25	Diseases of the circulatory system	22	17	11	1	2																			
26	Hydrops	24	3	7																					
27	Pneumonia and bronchopneumonia	21	9	3	4	1	0	2																	
28	Other diseases of the respiratory system	22	1	3	1	1	1	1																	
29	Diarrhea and enteritis	6	3	3																					
30	Dysentery	17	9	8	2	1	1	1	1	1															
31	Diseases of the liver and biliary passages	28	3	25																					
32	Other diseases of the digestive system	66	33	24	3	2																			
33	Nephritis																								
34	Other diseases of the urinary and genital systems	9	8	1																					
35	Puerperal infection																								
36	Other diseases of pregnancy, childbirth, and the puerperium	3		2																					
37	Diseases of the skeletal system, cartilage, bones, and joints	1		1																					
38	Congenital malformations and disability, premature birth, and diseases peculiar to the first year of life	42	22	10	6	4	40	41																	
39	Senility, old age	6	2	4	1	1																			
40	Senility, old age	9	8	4	1	1																			
41	Homicide	5	1	1	1	1																			
42	Automobile accidents (all motor-driven road vehicles)	26	16	7	2	1	2	4	5	1	1	2	3	2	2	2	3	4	2	3	8	5	1		
43	Other motor-vehicle accidents (excluding automobiles and automobile accidents excepted)																								
44	Causes of death ill-defined, unknown, or unspecified	32	14	12	4	2	4																		

Estimated Population, 80,443.

Total Resident Deaths, 1,008.

Rate per 1,000 Population, 12.5.

TABULATION OF DEATHS IN EAST ORANGE CITY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	881	400	398	45	22	45	41	46	1	1	1	10	20	35	38	124	202	236	141	21	
2	Typhoid and paratyphoid fevers																					
3	Scarlet fever																					
4	Whooping cough																					
5	Diphtheria																					
6	Epidemic typhus																					
7	Acute infectious of the respiratory system	18	9	2	4	3	1	1	1	1	1	5	3	1	1	7	1					
8	Atypical forms of tuberculosis																					
9	Malaria																					
10	Syphilis																					
11	Influenza	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
12	Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
13	Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
14	Other infectious or parasitic diseases	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
15	Cancer and other malignant tumors	107	62	81	3	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
16	Nonmalignant tumors or tumors of unspecified character	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
17	Chronic rheumatism and gout																					
18	Diabetes mellitus and gout																					
19	Chronic or acute alcoholism	25	12	11	2																	
20	Alcoholism, other general diseases, diseases of the circulatory system	4	3	1																		
21	Meningitis (meningococcal) and diseases of the spinal cord	9	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
22	Intracranial lesions of vascular origin	72	25	41	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

23	Other diseases of the nervous system and sense organs	6	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	Diseases of the heart	358	176	130	9	14	1	1	1	1	1	2	7	7	16	38	93	125	63	1	1
25	Other diseases of the circulatory system	20	7	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Pneumonia and bronchopneumonia	20	7	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Other diseases of the respiratory system	4	3	1																	
28	Diarrhea and enteritis	4	3	1																	
29	Appendicitis	19	8	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	Diseases of the liver and biliary passages	11	6	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Other diseases of the digestive system	50	25	25	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Nephritis	6	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	Other diseases of the urinary and genital systems																				
34	Other diseases of the urinary and genital systems																				
35	Infection																				
36	Other diseases of pregnancy, childbirth, and the puerperium																				
37	Diseases of the skin, cellular tissue, bones, and joints																				
38	Organic malformations and debility, prematurity birth, and diseases peculiar to the first year of life	30	13	16	4	3	20	30													
39	Senility, old age	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Senility, old age	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Senility, old age	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Automobile accidents (all motor-driven road vehicles)	10	5	3	2																
43	Other violent or accidental deaths (suicide, homicide, and undetermined causes)	38	19	16	3	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
44	Causes of death ill-defined, unknown, or unspecified	1	1	1																	

Estimated Population, 75,007.

Total Resident Deaths, 881.

Rate per 1,000 Population, 12.0.

TABULATION OF DEATHS IN IRVINGTON FOR 1947, ACCORDING TO THE ABBRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods													
		Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown	
																					268
1	ALL CAUSES	569	321	268	1	20	28	2	2	2	2	5	21	23	19	110	101	139	68	10	
2	Typhoid and paratyphoid fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Scarlet fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Diphtheria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Whooping cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Tuberculosis of the respiratory system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	All other forms of tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	Syphilis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9	Infantia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	Infantia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Other infectious or parasitic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	Other infectious or parasitic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	Cancer and other malignant tumors	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Nonmalignant tumors of unspecified nature	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	Diabetes mellitus and goit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	Chronic or acute alcoholism	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19	Chronic or acute alcoholism	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	Avitaminosis, other general diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	Meningitis, blood, and chronic poisonings, diseases of the spinal cord (meningococcal) and diseases of the intracranial lesions of vascular origin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	Intracranial lesions of vascular origin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

23	Other diseases of the nervous system and sense	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	Diseases of the heart	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Other diseases of the circulatory system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Bronchitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	Pneumonia and bronchopneumonia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	Other diseases of the respiratory system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	Diarrhea and enteritis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	Appendicitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Diseases of the liver and biliary passages	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Diseases of the digestive system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Nephritis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Other diseases of the urinary and genital systems	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	Puerperal infection	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other infections of pregnancy, childbirth, and the puerperium	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Diseases of the skin, cuticular tissue, bones, and organs of movement	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Congenital malformations and debility, prematurity, and diseases peculiar to the first year of life	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	Senility, old age	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Suicide	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Homicide	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Accidents (all motor-driven road vehicles)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Causes of death ill-defined, unknown, or unspecified	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Estimated Population, 59,405.

Total Resident Deaths, 590.

Rate per 1,000 Population, 9.3.

TABULATION OF DEATHS IN NEWARK FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods											90 and Over																			
		Male		Female		Male		Female		Under 1 Year		Under 5 Years		5 to 9		10 to 14		15 to 19		20 to 29		30 to 39		40 to 44		45 to 49		50 to 59		60 to 69		70 to 79		80 to 89				
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male		Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female				
1	ALL CAUSES	5160	2400	1888	429	387	350	309	20	14	24	101	273	216	304	972	1196	1080	401	54	Unknown																	
1	Typhoid and paratyphoid fevers	1	1	1	1																																	
2	Dysentery																																					
3	Scarlet fever																																					
4	Diphtheria																																					
5	Whooping cough																																					
6	Tuberculosis of the respiratory system	283	116	47	62	58	1	1	1	2	11	59	51	30	28	44	10	16	9																			
7	All other forms of tuberculosis	281	4	1	4	12	1	3	1	1	1	7	4	2	2	4	1	1	1																			
8	Malaria																																					
9	Septicemia	62	22	6	17	8	5	5	5																													
10	Septicemia (meningococcal)	3	1	2																																		
11	Smallpox																																					
12	Measles																																					
13	Typhus fever																																					
14	Other infectious or parasitic diseases	16	9	5	2	1	2	1	2																													
15	Other malignant tumors	702	388	321	57	46	1	2	3																													
16	Nonmalignant tumors or tumors of unspecified nature	31	8	11	4	8	1	3	1																													
17	Chronic rheumatism and gout	6	1	1																																		
18	Diabetes mellitus	183	49	118	6	10	1	1																														
19	Chorea	13	5	3	4	1																																
20	Arteriosclerosis, other thrombotic diseases of the blood, and chronic poisonings	49	23	18	4	4	5	12	1	1	1	4	3	3	1	7	10	6																				
21	Meningitis (meningococcal) and diseases of the spinal cord	17	7	9	1	1	1	1																														
22	Intracranial lesions of vascular origin	379	144	103	17	23	1	3	1																													
23	Other diseases of the nervous system and sense organs of the head	16	9	6	3	3	4	2	1	2	4	2	1	4	2	2	2	1	1																			
24	Diseases of the eye	1735	923	648	10	11	1	1	1	1	4	4	13	53	66	80	33	48	45	9																		
25	Other diseases of the circulatory system	132	53	58	10	11	2	4	1	2	2	4	1	1	1	1	1	2	1																			
26	Bronchitis and bronchopneumonia	129	68	35	18	8	22	29	1	1	1	4	1	6	13	21	19	17	16	2																		
27	Other diseases of the respiratory system	15	11	6	1	2	10	10	1	1	1	2	2	4	3	1	1	1	1																			
28	Diphtheria	29	12	5	3																																	
29	Appendicitis	105	59	40	1	5	1	1	1	1	1	2	2	2	8	9	12	36	18	16																		
30	Diseases of the liver and biliary passages	108	65	72	13	21	2	2	1	1	1	5	19	13	11	22	18	25	17	4																		
31	Other diseases of the digestive system	28	12	11	2	2	2	1	1	1	1	2	2	2	1	1	1	1	1	1																		
32	Other diseases of the urinary and genital systems	36	36	5	4	5	3	1	1	1	1	3	2	1	3	11	12	11	3																			
33	Overperal infection	3	3																																			
34	Other diseases of pregnancy, childbirth, and the puerperium	4																																				
35	Diseases of the skin, cellular tissue, bones, and organs of movement	14	9																																			
36	Concussion and contusions and disability from year of life	287	122	85	44	36	270	284																														
37	Senility, old age	11	4	8	1	1																																
38	Suicide	64	37	22	3	2																																
39	Automobile accidents (all motor-vehicles road vehicles)	21	4	2	10	3																																
40	Automobile accidents (all motor-vehicles road vehicles)	40	29	8	7	2																																
41	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	189	94	54	25	16	13	28	2	5	1	7	12	8	14	27	20	44	25	1																		
42	Causes of death ill-defined, unknown, or unspecified	4	1	2	1																																	

Total Resident Deaths, 5,156.

Rate per 1,000 Population, 11.6.

Estimated Population, 443,000.

TABULATION OF DEATHS IN GLOUCESTER COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		Colored		Age Periods														
		White		Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
		Male	Female																	
1	ALL CAUSES	856	401	60	43	76	87	5	17	41	25	44	124	205	239	145	27			
2	Typhoid and paratyphoid fevers	1	1																	
3	Dysentery																			
4	Scarlet fever																			
5	Whooping cough																			
6	Diphtheria																			
7	Tuberculosis of the respiratory system	15	8	5	1															
8	All other forms of tuberculosis	1	1																	
9	Syphilis	1	1																	
10	Influenza	4	3	3	1	1	1													
11	Smallpox	1	1	1																
12	Measles																			
13	Scarlet fever																			
14	Other infectious or parasitic diseases	1	1																	
15	Cancer and other malignant tumors	141	65	6	4	1	1													
16	Nonmalignant tumors or tumors of unspecified nature	5	1	4																
17	Chorea, choreiform and gout	30	13	17																
18	Diabetes mellitus and gout																			
19	Chronic or acute alcoholism	7	2	3	1	3	4	1												
20	Atrial fibrillation, other general diseases, diseases of the heart	3	1	2																
21	Menstritis (uterus, oviducts) and diseases of the uterine and fallopian tubes	80	25	45	7	1	2													
22	Intra-cranial lesions of vascular origin																			
23	Other diseases of the nervous system and sense organs	4	1																	
24	Diseases of the heart	336	174	136	15	12	1	1												
25	Other diseases of the circulatory system	25	11	9	2															
26	Pneumonia and bronchopneumonia	22	12	8	2	7	6	1												
27	Other diseases of the respiratory system	15	3	1	1	2	2													
28	Diarrhea and enteritis	5	4																	
29	Appendicitis	5	4																	
30	Other diseases of the liver and biliary passages	15	7	1	1	1	1													
31	Other diseases of the digestive system	15	7	1	1	1	1													
32	Nephritis	81	38	32	7	4														
33	Other diseases of the urinary and genital systems	10	6	4																
34	Other diseases of the urinary and genital systems	2	1																	
35	Other diseases of pregnancy, childbirth, and the puerperium	3																		
36	Diseases of the skin, cellular tissue, bones, and organs of movement																			
37	Disorders of movement and ability to use birth and diseases peculiar to the first year of life	55	27	17	8	3	55	55												
38	Scalds, old age	2	2																	
39	Suicide	11	7	3	2			2												
40	Automobile accidents (all motor-driven road vehicles)	6	2	2																
41	Automobile accidents (all motor-driven road vehicles)	27	21	4	2															
42	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	26	10	12	4	1	5	1	1	2	1	1	1	1	1	1	1	1	1	
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	2	1	1																
44	Unspecified																			

Estimated Population, 79,737.

Total Resident Deaths, 966.

Rate per 1,000 Population, 12.5.

TABULATION OF DEATHS IN HUDSON COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths				White		Colored		Age Periods																												
		Male		Female		Male		Female		Under 1 Year		Under 5 Years		5 to 9		10 to 14		15 to 19		20 to 29		30 to 39		40 to 44		45 to 49		50 to 59		60 to 69		70 to 79		80 to 89		90 and Over		
		Male	Female	Male	Female	Male	Female	Male	Female																													
	ALL CAUSES	7134	3802	3297	110	881	435	17	21	34	142	300	208	3000	1350	1093	1038	1038	700	700	90	90	Unknown															
1	Typhoid and paratyphoid fevers	1	1	1																																		
2	Scarlet fever																																					
3	Diphtheria																																					
4	Whooping cough																																					
5	Diphtheria																																					
6	Influenza	205	182	57	12	14	1	2	1	3	24	37	26	27	61	10	22	4	1	1	1																	
7	Other forms of tuberculosis	19	6	10	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
8	Malaria	1	1	1																																		
9	Syphilis	1	1	1																																		
10	Influenza	18	10	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
11	Scarlet fever	1	1	1																																		
12	Scarlet fever	1	1	1																																		
13	Other infectious or parasitic diseases	31	15	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
14	Cancer and other malignant tumors	1217	636	532	13	16	12	3	3	1	2	5	5	2	3	2	6	6	6	6	6																	
15	Nonmalignant tumors or tumors of unspecified	34	13	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
16	Chronic rheumatism and gout	23	1	3																																		
17	Diabetes mellitus	23	1	3																																		
18	Chronic or acute alcoholism	29	16	4																																		
19	Arteriosclerosis, other general diseases, diseases of arteries, other general diseases	70	36	37	2	1	2	7	1	1	0	11	3	7	16	10	11	1	1	1	1																	
20	Meningitis (nonmeningococcal) and diseases of the spinal cord	22	14	7	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
21	Meningitis (nonmeningococcal) and diseases of the spinal cord	574	275	305	6	8	1	1	1	1	2	14	13	39	112	155	108	1	1	1	1																	
22	Intracranial lesions of vascular origin																																					
23	Other diseases of the nervous system and sense organs of the head	49	17	36	2	1	2	1	2	3	8	4	5	3	1	6	6	6	6	6	6																	
24	Diseases of the heart	258	151	75	10	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
25	Other diseases of the circulatory system	130	75	71	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
26	Bronchitis	10	7	3																																		
27	Pneumonia and bronchopneumonia	223	113	91	12	7	38	46	1	5	9	8	9	11	41	37	26	21	21	21	21																	
28	Other diseases of the respiratory system	14	25	17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																	
29	Chronic or acute enteritis	30	16	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
30	Appendicitis	26	16	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
31	Diseases of the liver and biliary passages	152	83	59	1	1	1	1	1	1	2	13	11	15	45	38	22	4	4	4	4																	
32	Other diseases of the digestive system	128	89	47	1	1	1	1	1	1	1	2	1	2	10	6	10	10	10	10	10																	
33	Other diseases of the urinary and genital systems	282	145	124	5	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																	
34	Other diseases of the urinary and genital systems	45	31	12	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																	
35	Puerperal infection	4	3	1																																		
36	Other diseases of pregnancy, childbirth, and puerperium	3	2	1																																		
37	Diseases of the skin, cellular tissue, bones, and nails	5	4	5																																		
38	Diseases of movement organs of movement	309	168	124	12	5	300	300	2	2	2	2	2	2	2	2	2	2	2	2	2																	
39	Sanitary, old age	5	1	4																																		
40	Accidents (all motor-driven road vehicles)	61	44	16	1	1	1	1	1	1	2	7	9	8	13	14	8	2	2	2	2																	
41	Accidents (all motor-driven road vehicles)	66	48	11	1	1	1	1	1	1	4	2	10	5	8	12	5	10	1	1	1																	
42	Accidents (all motor-driven road vehicles)	277	108	81	5	3	8	18	4	3	13	18	16	15	42	38	60	36	3	3																		
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	4	1	3																																		
44	Causes of death ill-defined, unknown, or unspecified																																					

Estimated Population, 704,340.

Total Resident Deaths, 7,134.

Rate per 1,000 Population, 10.1.

TABULATION OF DEATHS IN BAYONNE FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
		Male	Female	Male	Female	Male	Female	Under 1 Year	Under 5 Years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	722	400	202	11	13	42	45	2	3	5	17	30	27	43	144	107	130	58	3		
1	Typhoid and paratyphoid fevers																					
2	Dysentery																					
3	Scarlet fever																					
4	Whooping cough																					
5	Diphtheria																					
6	Influenza and other diseases of the respiratory system	27	20	4	1	2																
7	All other forms of tuberculosis	1	1																			
8	Malaria																					
9	Syphilis																					
10	Influenza																					
11	Measles																					
12	Scarlet fever																					
13	Typhus fever																					
14	Other infectious or parasitic diseases																					
15	Cancer and other malignant tumors	237	80	64	2	1																
16	Malignant tumors of unspecified nature	5	2	3																		
17	Chronic rheumatism and gout																					
18	Diabetes mellitus	26	8	17																		
19	Chronic or acute alcoholism																					
20	Other general diseases, diseases of the blood, other diseases of the circulatory system	6	1	5																		
21	Meningitis (communicable) meningitis of the spinal cord	3	0	1																		
22	Intracranial lesions of vascular origin	75	20	44	1	1																

23	Other diseases of the nervous system and sense organs of the heart	1	0	0																	
24	Other diseases of the circulatory system	238	146	88	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Ischemic heart disease	13	8	5																	
26	Arteriosclerosis	16	4	5	1	1	0														
27	Arteriovenous aneurysm	3	1	2																	
28	Other diseases of the circulatory system	1	1	1																	
29	Diarrhea and enteritis	3	2	1	1	1															
30	Appendicitis	1	1	1																	
31	Diseases of the liver and biliary passages	12	5	7																	
32	Other diseases of the digestive system	1	1	1																	
33	Nephritis (communicable) diseases of the urinary and genital systems	48	25	20	1	2															
34	Other diseases of the urinary and genital systems	1	1	1																	
35	Everepid infection																				
36	Other diseases of pregnancy, childbirth, and puerperium																				
37	Diseases of the skin, cellular tissue, bones, and joints																				
38	Other diseases of the skin, cellular tissue, bones, and joints																				
39	Congenital malformations and debility, prematurity, low birth weight, and diseases peculiar to the first year of life	30	14	14	1	1	30	30													
40	Senility, old age	2	1	1																	
41	Sticide	1	1	1																	
42	Automobile accidents (all motor-driven road vehicles)	14	11	3																	
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	20	24	5																	
44	Causes of death ill-defined, unknown, or unspecified	2	1	1																	

Estimated Population, 90,000. Total Resident Deaths, 722. Rate per 1,000 Population, 8.0.

TABULATION OF DEATHS IN HOHEN FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
	List Number	Abridged International	Male		Female		Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
			Male	Female	Male	Female															
ALL CAUSES			679	376	248	4	2	23	20	15	2	9	20	10	25	114	100	147	60	6	
1 Typhoid and paratyphoid fevers			1	1																	
2 Plague																					
3 Scarlet fever			4	4																	
4 Diphtheria			1	1																	
5 Whooping cough			2	2																	
6 Tuberculosis of the respiratory system			24	6																	
7 All other forms of tuberculosis			22	1																	
8 Syphilis			1	1																	
9 Spinaemia			2	1																	
10 Influenza			1	1																	
11 Staphylococci			1	1																	
12 Measles			3	3																	
13 Mumps			1	1																	
14 Other viral fevers			3	3																	
15 Other parasitic diseases			3	3																	
16 Cancer and other neoplasms			38	30																	
17 Nonmalignant tumors or tumors of unspecified nature			1	1																	
18 Chronic rheumatism and gout			1	1																	
19 Chronic or acute alcoholism			10	5																	
20 Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings, diseases of the blood, and chronic poisonings, diseases of the brain			2	1																	
21 Meningitis (meningococcal) and diseases of the brain			3	1																	
22 Intracranial lesions of vascular origin			43	25																	
23 Other diseases of the nervous system and sense organs of the brain			2	1																	
24 Other diseases of the heart			277	165																	
25 Other diseases of the circulatory system			9	6																	
26 Bronchitis			1	1																	
27 Pneumonia and bronchopneumonia			20	11																	
28 Tuberculosis of the respiratory system			2	2																	
29 Diphtheria and enteritis			1	1																	
30 Appendicitis			6	4																	
31 Diseases of the liver and biliary passages			15	8																	
32 Other diseases of the digestive system			11	11																	
33 Other diseases of the urinary and genital systems			1	1																	
34 Puerperal infection			1	1																	
35 Other diseases of pregnancy, childbirth, and the puerperium			1	1																	
36 Diseases of the skin, cellular tissue, bones, and cartilages			1	1																	
37 Diseases of movement			1	1																	
38 Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life			24	17																	
39 Senility, old age			7	5																	
40 Suicide			1	2																	
41 Homicide			1	1																	
42 Automobile accidents (all motor-driven road vehicles)			1	1																	
43 Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)			26	17																	
44 Causes of death ill-defined, unknown, or unspecified			1	1																	

Estimated Population, 51,005.

Total Resident Deaths, 638.

Rate per 1,000 Population, 12.3.

TABULATION OF DEATHS IN HUNTERDON COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	Typhoid and paratyphoid fevers	478	251	225	1	1	20	33	3	1	3	4	14	9	12	57	110	132	86	14		
2	Scarlet fever																					
3	Whooping cough																					
4	Diphtheria																					
5	Tuberculosis of the respiratory system	8	4																			
6	Other forms of tuberculosis																					
7	Malaria																					
8	Syphilis																					
9	Indiana																					
10	Smallpox																					
11	Scarlet fever																					
12	Other infectious or parasitic diseases																					
13	Cancer and other malignant tumors																					
14	Nonmalignant tumors or tumors of unspecified character																					
15	Chronic rheumatism and gout																					
16	Diabetes mellitus and gout																					
17	Chronic or acute alcoholism																					
18	Arteriosclerosis, other general diseases, diseases of the circulatory system																					
19	Arteriosclerosis, other general diseases, diseases of the circulatory system																					
20	Arteriosclerosis, other general diseases, diseases of the circulatory system																					
21	Menigitis (meningococcal) and diseases of the spinal cord																					
22	Intracranial lesions of vascular origin																					

23 Other diseases of the nervous system and sense organs

24	Diseases of the heart	170	100	76																		
25	Other diseases of the circulatory system	22	8	14																		
26	Pneumonia and bronchopneumonia	14	6	8																		
27	Other diseases of the respiratory system	10	4	6																		
28	Diarrhea and enteritis	10	2	8																		
29	Appendicitis	2	1	1																		
30	Diseases of the liver and biliary passages	9	7	2																		
31	Diseases of the digestive system	10	7	3																		
32	Other diseases of the digestive system	20	11	9																		
33	Neuritis (meningeal) and diseases of the nervous system																					
34	Other diseases of the urinary and genital systems	5	4	1																		
35	Pericardial infection																					
36	Diseases of the pericardium, pleura, and lungs	1		1																		
37	Diseases of the skin, cellular tissue, bones, and organs of movement																					
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	21	12	9			20	20														
39	Senility, old age	5	2	3																		
40	Suicide	7	7	0																		
41	Homicide	1	1	0																		
42	Accidents (all motor-driven road vehicles)	6	6	0																		
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)																					
44	Causes of death ill-defined, unknown, or unspecified	21	11	10																		
		1	1	0																		

Estimated Population, 38,940.

Total Resident Deaths, 478.

Rate per 1,000 Population, 12.6.

TABULATION OF DEATHS IN MERCER COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	White		Colored		Age Periods											90 and Over	Unknown				
		All Deaths		Male	Female	Male	Female	Under 1 Year	Under 5 Years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49			50 to 59	60 to 69	70 to 79	80 to 89
		Male	Female																			
1	ALL CAUSES	2345	1101	948	111	55	107	108	8	3	17	61	64	82	112	381	530	513	298	367		
2	Typhoid and paratyphoid fevers	1																				
3	Plague																					
4	Bacterial fever																					
5	Whooping cough	2																				
6	Diphtheria	1																				
7	Tuberculosis of the respiratory system	90	37	10	16	7	2	2	1	1	11	15	7	9	17	21	8	1				
8	All other forms of tuberculosis	5	1	1	5	1	1	1														
9	Scarlet fever	1																				
10	Styphilia	1																				
11	Infuenza	1	1	1	1	2	2	2														
12	Smallpox	1																				
13	Meningitis	1																				
14	Other meningitis or meningoencephalitis	4																				
15	Other infectious or parasitic diseases	371	182	167	11	11	2	1			1	2	1	1	1	81	169	98	33	1		
16	Cancer and other malignant tumors	13	1	10		2	2	2			8	2	4	5	1	1	1	2	3			
17	Benign neoplasms and gouts	7																				
18	Chronic rheumatism and gout	13	1	10		2	2	2			8	2	4	5	1	1	1	2	3			
19	Chronic or acute alcoholism	7																				
20	Arteriosclerosis, other general diseases, diseases of the blood, and chronic poisonings	79	25	51	1	1	1	1			15	15	1	1	1	1	31	18	8	1		
21	Septic (bacteriemic, meningococcal) and diseases of the central nervous system	27	12	14		1	2	3			1	2	1	2	4	0	0	0	3			
22	Intracranial lesions of vascular origin	102	8	4	1	4	1	1	1			1	5	1	1	1	48	70	22	3		
23	Other diseases of the nervous system and sense organs of the head	6	5	3	2	1	1	1														
24	Diseases of the heart	806	426	379	21	27	1	1			1	1	6	1	1	1	200	215	135	23		
25	Other diseases of the circulatory system	73	37	32	1	3	3	3			1	1	1	1	1	2	8	20	30	7		
26	Bronchitis	5	3	2		2	2	2			2	2	1	0	0	0	10	13	8			
27	Pneumonia and bronchopneumonia	74	41	24	3	6	17	25	1	2	2	2	1	0	1	2	4	2	1			
28	Other diseases of the respiratory system	18	8	4	5	1	10	17														
29	Other diseases of the digestive system	15	4	9	2	2	2	2			1	2	1	1	1	2	3	1	1			
30	Appendicitis	45	22	12	1	1	1	1			1	1	1	1	1	1	1	1	1			
31	Diseases of the liver and biliary passages	40	24	10	1	0	3	0			1	1	1	1	1	1	1	1	1			
32	Other diseases of the digestive system	100	46	44	5	0	3	0			1	1	1	1	1	1	4	10	24	21		
33	Other diseases of the urinary and genital systems	19	12	6	1	1	2	1			2	1	1	1	1	1	4	6	3	2		
34	Other diseases of pregnancy, childbirth, and puerperal infection	2																				
35	Diseases of the skin, cellular tissue, bones, and cartilages	3																				
36	Diseases of the skin, cellular tissue, bones, and cartilages	3																				
37	Diseases of the skin, cellular tissue, bones, and cartilages	3																				
38	Congenital malformations and debility, prematurity, and diseases peculiar to the first year of life	123	57	48	14	4	10	120			1	1	1	1	1	1	1	1	1	1		
39	Senility, old age	19	16	3																		
40	Suicide	12	1	8		3	4	4			2	1	2	2	4	3	1	1	2	1		
41	Homicide	1																				
42	Accidents (all motor-driven road vehicles)	45	31	8	3	3	1	4	1	4	10	6	0	0	0	5	7	1	1			
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	80	48	29	8	4	3	5	4	1	2	5	12	2	5	14	13	11	16	1		
44	Causes of death ill-defined, unknown, or unspecified	2																				

Estimated Population, 216,264.

Total Resident Deaths, 2,345.

Rate per 1,000 Population, 10.8.

TABULATION OF DEATHS IN TRENTON FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths	White		Colored		Age Periods														
			Male		Female		Male		Female		Male		Female		Male		Female				
			Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	1430	731	570	78	60	101	120	3	3	7	36	52	45	65	253	353	310	170	22	.....
2	Typhoid and paratyphoid fevers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Plague .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Scarlet fever .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Whooping cough .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Diphtheria .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	Tuberculosis of the respiratory system .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	All other forms of tuberculosis	05	38	6	15	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9	Malaria	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	Syphilis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Influenza	6	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	Smallpox .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Measles .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	Typhus fever .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	Other infectious or parasitic diseases .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Cancer and other malignant tumors	232	119	102	6	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	Nonmalignant tumors or tumors of unspecified nature	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	Chronic rheumatism and gout .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19	Diabetes mellitus	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	Chronic or acute alcoholism	40	16	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	Atrial fibrillation, other general diseases, diseases of the blood, and chronic poisonings	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	Meningitis (nonmeningococcal) and diseases of the spinal cord	14	7	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	Intracranial lesions of vascular origin	4	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	.....	127	64	54	5	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

23	Other diseases of the nervous system and sense organs	8	6	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	Diseases of the heart	402	235	204	18	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Other diseases of the circulatory system	48	23	22	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Bronchitis	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	Pneumonia and bronchopneumonia	46	22	17	2	5	9	13	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	Other diseases of the respiratory system	10	5	3	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	Diarrhea and enteritis	10	3	5	1	1	1	8	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	Dysentery	50	2	7	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Diseases of the liver and biliary passages	23	18	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Other diseases of the digestive system	27	14	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Nephritis	60	26	30	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Other diseases of the urinary and genital systems	12	8	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	Puerperal infection	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth, and the puerperium	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Diseases of the skin, cellular tissue, bones, and organs of movement	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	Senility, old age	77	34	31	8	4	74	76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Suicide	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Homicide	9	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Automobile accidents (all motor-driven road vehicles)	18	13	2	1	2	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	55	31	18	4	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Causes of death ill-defined, unknown, or unspecified .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Estimated Population, 128,750.

Total Resident Deaths, 1,439.

Rate per 1,000 Population, 11.2.

TABULATION OF DEATHS IN MORRIS COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	White		Colored		Age Periods																
		All Deaths		Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
		15023	802	636	29	15	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106
1	Typhoid and paratyphoid fevers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Typhoid fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	All other forms of the respiratory system	30	20	13	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Malaria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Syphilis	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10	Scarlet fever	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
11	Scarlet fever	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
12	Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	Typhus fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Other infectious or parasitic diseases	9	8	5	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Other infectious or parasitic diseases	225	98	123	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Other infectious or parasitic diseases	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
17	Chronic rheumatism and gout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	Chronic rheumatism and gout	35	15	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	Chronic rheumatism and gout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	17	10	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Meningitis (nonmeningococcal) and diseases of the spinal cord	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
22	Intra-cranial lesions of vascular origin	112	50	59	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2

23	Other diseases of the nervous system and sense organs of the heart	9	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	Other diseases of the nervous system and sense organs of the heart	532	312	288	7	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	89	33	33	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	Other diseases of the circulatory system	49	24	23	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Pneumonia and bronchopneumonia	84	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	Other diseases of the respiratory system	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
29	Other diseases of the respiratory system	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
30	Appendicitis	27	16	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	32	23	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Other diseases of the digestive system	71	26	42	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	Other diseases of the digestive system	12	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	Other diseases of the urinary and genital systems	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
35	Puerperal infection	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth, and the puerperium	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
37	Diseases of the skin, cellular tissue, bones, and organs of movement	82	48	28	4	2	78	81	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	16	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	Scalds, old age	20	16	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Stroke	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
41	Homicide	20	16	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Automobile accidents (all motor-driven road vehicles)	48	23	25	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	Causes of death ill-defined, unknown, or unspecified	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Total Resident Deaths, 1,502.

Estimated Population, 135,904.

Rate per 1,000 Population, 11.0.

TABULATION OF DEATHS IN OCEAN COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods													
		Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown	
																					Male	Female
1	ALL CAUSES	613	332	254	12	15	43	47	1	3	1	15	17	15	25	88	121	103	100	8	
2	Typhoid and paratyphoid fevers																				
3	Hague																				
4	Scarlet fever																				
5	Whooping cough																				
6	Diphtheria																				
7	Tuberculosis of the respiratory system	17	9	6	1	1	1	1													
8	All other forms of tuberculosis																				
9	Malaria																				
10	Syphilis																				
11	Smallpox																				
12	Measles																				
13	Typhus fever																				
14	Other infectious or parasitic diseases																				
15	All forms of malignant tumors	102	45	55	2	2	1	1													
16	Non-melanotic tumors of unspecified nature																				
17	Chronic rheumatism and gout																				
18	Chorea																				
19	Chorea minor																				
20	Avitaminoses, other general diseases of the blood, and chronic poisonings																				
21	Menigitis (nonmeningococcal) and disease of the spinal cord	7	7			2	2														
22	Intra-cranial lesions of vascular origin	54	25	29	1	2															
23	Other diseases of the nervous system and sense	9	131	131																	
24	Diseases of the heart	219	14	11	2	1															
25	Other diseases of the circulatory system	20	1	1																	
26	Bronchitis	2	1	1																	
27	Pneumonia and bronchopneumonia	20	14	5	1	1	4	5													
28	Influenza	4	3	1																	
29	Diarrhea and enteritis	4	3	1																	
30	Appendicitis	2	2																		
31	Diseases of the liver and biliary passages	5	1	4																	
32	Diseases of the digestive system	5	1	4																	
33	Scrub typhus	39	10	29	2	1															
34	Other diseases of the urinary and genital systems	1	1																		
35	Septic infection	1	1																		
36	Other septic processes: cellulitis, and the puerperium	1	1																		
37	Diseases of the skin, cellular tissue, bones, and organs of movement	1	1																		
38	Causes of death due to injury from falls, burns, scalds, and diseases peculiar to the first year of life	35	22	9	2	23	35														
39	Senility, old age	4	4																		
40	Suicide	2	1	1																	
41	Automobile accidents	16	12	3	1																
42	Automobile accidents (all motor-driven road vehicles)	27	16	9	1	1	1	1													
43	Other violent or accidental deaths (suicide, other homicide, and automobile accidents excepted)																				
44	Causes of death undetermined, unknown, or unspecified																				

Estimated Population, 46,760.

Total Resident Deaths, 613.

Rate per 1,000 Population, 15.0.

TABULATION OF DEATHS IN PASSAIC COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
		Male	Female	Male	Female	Male	Female	Under 1 Year	Under 5 Years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	3,335	1,455	67	56	185	212	13	11	10	60	120	95	143	670	789	859	413	151			
2	Typhoid and paratyphoid fevers	1	1																			
3	Scarlet fever																					
4	Whooping cough																					
5	Diphtheria																					
6	Tuberculosis of the respiratory system	59	23	5	6																	
7	All other forms of tuberculosis	6	1	1	1																	
8	Syphilis																					
9	Infuenza	17	8	4	3																	
10	Scarlet fever																					
11	Diphtheria																					
12	Tuberculosis of the respiratory system																					
13	All other forms of tuberculosis																					
14	Other infectious or parasitic diseases	17	3	2	1																	
15	Cancer and other malignant tumors	582	264	270	2																	
16	Nonmalignant tumors or tumors of unspecified nature	11	5	6																		
17	Chorea																					
18	Diabetes mellitus	130	40	81	2																	
19	Chronic or acute alcoholism	4	3	1																		
20	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	33	19	14																		
21	Meningitis (meningococcal) and diseases of the spinal cord	5	3	3																		
22	Intracranial lesions of vascular origin	303	133	156																		

23	Other diseases of the nervous system and sense organs of the head	28	15	13																		
24	Other diseases of the circulatory system	1175	681	472	17																	
25	Bronchitis	133	38	65	1																	
26	Pneumonia and bronchopneumonia	117	52	57	4																	
27	Other diseases of the respiratory system	29	10	9	1																	
28	Other diseases of the digestive system	4	2	1																		
29	Appendicitis	50	27	24																		
30	Diseases of the liver and biliary passages	59	40	19																		
31	Other diseases of the digestive system	136	69	56	2																	
32	Diarrhea	29	16	3																		
33	Other diseases of the urinary and genital systems	3																				
34	Other diseases of pregnancy, childbirth, and the puerperium	3																				
35	Other diseases of pregnancy, childbirth, and the puerperium	5	2	3																		
36	Congenital malformations and debility, premature birth, and diseases peculiar to the first year of life	152	88	57	1																	
37	Accidents (all motor-driven road vehicles, but excluding deaths from homicide and automobile accidents)	10	28	11																		
38	Automobile accidents (all motor-driven road vehicles, but excluding deaths from homicide and automobile accidents)	40	3	2																		
39	Other accidents (all motor-driven road vehicles, but excluding deaths from homicide and automobile accidents)	44	29	14																		
40	Causes of death ill-defined, unknown or unspecified	121	62	59	7																	
41	Causes of death ill-defined, unknown or unspecified	6	5	1																		

Estimated Population, 384,308. Total Resident Deaths, 3,335. Rate per 1,000 Population, 10.0.

TABULATION OF DEATHS IN PATRSON FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		Cohort		Age Periods												90 and Over	90 and Over			
		White		Colored		Age Periods																
		Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79			80 to 89		
1	ALL CAUSES	1088	802	745	42	39	70	83	6	4	7	24	52	47	70	200	383	483	227	30	Unknown	
1	Typhoid and paratyphoid fevers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Diphtheria	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	Whooping cough	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	Other diseases of the nervous system and sense	12	7	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	Diseases of the heart	624	343	266	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	70	34	35	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
26	Ironobilia	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	Other diseases of the circulatory system	61	32	25	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
28	Other diseases of the circulatory system	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	Diarrhea and enteritis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	Appendicitis	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	Diseases of the liver and biliary passages	27	14	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	Diseases of the digestive system	28	18	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	Nephritis (nomenagococci) and diseases of the urinary and genital systems	14	30	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	Other diseases of the urinary and genital systems	10	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	Tubercular infection	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	Other diseases of pregnancy, childbirth, and the puerperium	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	Diseases of the skin, cellular tissue, bones, and organs of movement	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	Congenital malformations and debility, prematurity, and diseases peculiar to the first year of life	60	34	21	5	58	59	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	Senility, old age	7	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	Suicide	15	9	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	Homicide	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	Accidents (all motor-driven road vehicles)	19	14	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)	88	53	28	5	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	Causes of death ill-defined, unknown, or unspecified	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Estimated Population, 150,000.

Total Resident Deaths, 1,088.

Rate per 1,000 Population, 11.3.

TABULATION OF DEATHS IN SALEM COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods										90 and Over				
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59		60 to 69	70 to 79	80 to 89	90 and Over
1	ALL CAUSES	527	254	180	60	41	52	02	3	1	4	21	13	14	20	78	102	114	78	9		
2	Typhoid and paratyphoid fevers																					
3	Typhoid fever																					
4	Scarlet fever																					
5	Whooping cough																					
6	Diphtheria																					
7	Infections of the respiratory system																					
8	All other forms of tuberculosis																					
9	Malaria																					
10	Syphilis																					
11	Infuenza																					
12	Measles																					
13	Typhus fever																					
14	Other infections or parasitic diseases																					
15	Cancer and other malignant tumors																					
16	All benign tumors or tumors of unspecified nature																					
17	Chronic rheumatism and gout																					
18	Diabetes mellitus																					
19	Other diseases of the circulatory system																					
20	Arteriosclerosis, atherosclerosis, diseases of the blood, and chronic poisonings																					
21	Alzheimer's, other senile, diseases, diseases of the brain, and chronic degenerative diseases of the nervous system																					
22	Meningitis (nonmeningococcal) and diseases of the spinal cord																					
23	Intracranial lesions of vascular origin																					
23	Other diseases of the nervous system and sense organs																					
24	Diseases of the heart																					
25	Other diseases of the circulatory system																					
26	Ischemic and thrombotic diseases																					
27	Phlebotomy and embolism																					
28	Other diseases of the circulatory system																					
29	Diarrhea and enteritis																					
30	Appendicitis																					
31	Diseases of the liver and biliary passages																					
32	Other diseases of the digestive system																					
33	Nephritis																					
34	Other diseases of the urinary and genital systems																					
35	Infectious mononucleosis																					
36	Other diseases of pregnancy, childbirth, and the puerperium																					
37	Diseases of the skin, cellular tissue, bones, and cartilages																					
38	Organs of movement																					
39	Senility, old age																					
40	Stroke																					
41	Paralysis																					
42	Automobile accidents (all motor-vehicle road vehicles)																					
43	Other violent or accidental deaths (suicide, homicide, and automobile accidents excepted)																					
44	Causes of death ill-defined, unknown, or unspecified																					

Estimated Population, 45,406.

Total Resident Deaths, 525.

Rate per 1,000 Population, 11.6.

TABULATION OF DEATHS IN SUSSEX COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods																
		Male	Female	Male	Female	Male	Female	Under 1 year	Under 5 years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown		
										362	157	1	1	1	1	20	22	2	2	3	3		1	17	8	12	48	87	100	48	8
1	ALL CAUSES	362	157	1	1	1	1	20	22	2	2	3	3	1	17	8	12	48	87	100	48	8	2	
2	Typhoid and paratyphoid fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Flu	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Scarlet fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Diphtheria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	Tuberculosis of the respiratory system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	All other forms of tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9	Meningitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	Stroke	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	Meningitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Other infectious or toxic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	Other infectious or toxic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	Causes and other malignant tumors	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Nonmalignant tumors or tumors of unspecified nature	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	Gout	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	Diabetes mellitus and goit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19	Chronic or acute alcoholism	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	Avitaminoses, other general diseases, diseases of the blood, and chronic poisonings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	Meningitis (meningococcal) and diseases of the spinal cord (meningococcal) and diseases of the spinal cord (meningococcal) and diseases of the spinal cord (meningococcal)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	Intracranial lesions of vascular origin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

23	Other diseases of the nervous system and sense organs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	Diseases of the heart	124	71	51	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	Other diseases of the circulatory system	10	10	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Infectious mononucleosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	Pneumonia and bronchopneumonia	11	6	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	Other diseases of the respiratory system	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	Diarrhea and enteritis	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	Diseases of the liver and biliary passages	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Other diseases of the digestive system	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Nephritis	21	13	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Other diseases of the urinary and genital systems	6	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	Puerperal infection	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Other diseases of pregnancy, childbirth, and the puerperium	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Diseases of the skin, cellular tissue, bones, and joints	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Congenital malformations and debility (pre-natal, post-natal, and diseases peculiar to the first year of life)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	Senility, old age	15	10	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Accidents (all motor-driven road vehicles)	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	Homicide	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	Automobile accidents (all motor-driven road vehicles)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	Other violent or accidental deaths (suicide, homicide, and motor accidents excepted)	4	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Causes of death ill-defined, unknown, or unspecified	18	13	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Estimated Population, 20,005.

Total Resident Deaths, 362.

Rate per 1,000 Population, 12.1.

TABULATION OF DEATHS IN UNION COUNTY FOR 1947, ACCORDING TO THE ABRIDGED INTERNATIONAL LIST OF CAUSES OF DEATH

Abridged International List Number	CAUSE OF DEATH	All Deaths		White		Colored		Age Periods														
				Male		Female		Male		Female												
		Male	Female	Male	Female	Male	Female	Under 1 Year	Under 5 Years	5 to 9	10 to 14	15 to 19	20 to 29	30 to 39	40 to 44	45 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over	Unknown
1	ALL CAUSES	3410	1738	1434	116	128	223	260	13	10	17	70	105	113	170	016	709	775	424	54		
2	Typhoid and paratyphoid fevers																					
3	Scarlet fever																					
4	Diphtheria																					
5	Whooping cough																					
6	Tuberculosis of the respiratory system																					
7	All other forms of tuberculosis																					
8	Malaria																					
9	Infantile																					
10	Infantile																					
11	Smallpox																					
12	Measles																					
13	Typhus fever																					
14	Other infectious or parasitic diseases																					
15	Other malignant tumors																					
16	Nonmalignant tumors or tumors of unspecified nature																					
17	Chronic rheumatism and gout																					
18	Diabetes mellitus																					
19	Alcoholism																					
20	Arteriosclerosis and diseases, diseases of the blood, and chronic diseases																					
21	Meningitis (nonmeningococcal) and diseases of the spinal cord																					
22	Intracranial lesions of vascular origin																					
		316	1288	171	6	8	1	1	1	1	1	8	7	13	53	87	30	44	8			
23	Other diseases of the nervous system and sense organs	92	13																			
24	Diseases of the heart	1143	631	445	32	35																
25	Other diseases of the circulatory system	104	41	54	4	2																
26	Bronchitis and bronchopneumonia	118	6	2																		
27	Pneumonia	309	13	0																		
28	Other diseases of the respiratory system	13	7	0																		
29	Diarrhea and enteritis	13	7	0																		
30	Appendicitis	10	8	2																		
31	Diseases of the liver and biliary passages	70	37	32																		
32	Diseases of the digestive system	101	11	1																		
33	Nephritis	101	68	75	7	11																
34	Other diseases of the urinary and genital systems	27	20	5	1	1																
35	Systemic infectious diseases	8																				
36	Other infectious diseases, childhood and the puerperium	8																				
37	Diseases of the skin, cellular tissue, bones, and organs of movement	5	1	3																		
38	Causes of movement and disability, congenital and diseases peculiar to the first year of life	102	95	81	6	10	181	180	1													
39	Senility, old age	42	29	13																		
40	Stroke	8	1	2	5																	
41	Other diseases of the circulatory system	56	39	10	1																	
42	Automobile accidents (all motor-driven road vehicles)	104	51	47	6	0	0	1	4	3	0	0	1	0	12	11	21	24				
43	Other violent or accidental deaths (suicide, fire, and automobile accidents excepted)	10	9	5	2	2	4	6														
44	Causes of death, unspecified																					

Estimated Population, 371,583.

Total Resident Deaths, 3,416.

Rate per 1,000 Population, 9.2.

INDEX.

	PAGE
Accidental deaths	210-213
Acting Commissioner of Health, Report of	7
Activities :	
Departmental	7
Activities of Bureaus, Divisions and Programs :	
Adult and Industrial Health	9, 107
Bacteriology	27
Cancer Control	113
Chemistry	41
Dental Health	119
Engineering and Sanitation	45
Food and Drugs	63
Health Education	77
Local Health Services	14, 81
Maternal and Child Health	131
Negro Health	137
Personnel, Administration, Records and Accounts	15
Preventable Diseases	103
Rabies Control	141
Tuberculosis Control	149
Venereal Disease Control	155
Vital Statistics	169
Acute Anterior Poliomyelitis :	
Reported cases by age groups and months	98
Reported cases and deaths by age groups and sex	98
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Adult and Industrial Health :	
Activities	107, 111
Bulletin	110
Laboratory analyses	108
Nuisance complaints	110
Plants visited	108
Sight Conservation Program	109
Special Projects	109
State's industry, coverage of	107
Surveys	109, 111

Advisory Public Health Nurse	105
Analyses of water samples, Statement of Revenue	21
Annual Conference of State and Local Health Officials	79
Anthrax	83
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94
Appropriations	21
Audiometer	133
Revenue from rental of	21
Automobile fatalities	211

B

Baby Keep-Well Stations	133
Bacteriology, activities of Bureau of	27
Bakeries	68
Basic Public Health Course	79
Bergsma, Daniel, M.D. appointed State Commissioner of Health	13, 15
Bills introduced in Legislature	16
Biologicals	86
Births	169-185, 190, 192-194
By counties and municipalities	175-185
By months	175
Illegitimate	135
Number and rates	174
Infants	192-194
Blood plasma	86
Blood tests	29
Pre-Natal	162
Pre-Marital	162
Syphilis	163
Board of Examiners of Health Officers and Inspectors	16

C

Camp Inspections	88
Cancer:	
Death rate	203
Death rates—five-year average	205
Deaths by color	208
Deaths by organ affected, age groups and sex	206, 208
Cancer Control, Division of	
Advisory Nursing Committee	115
Basic Principles	113
Consulting Board of Pathologists	115
Dental Program	115
Joint Pathological Program	113
Lay Education	117
Professional Training and Relations	116, 118
Public Health Council	117

Case-finding	138, 166
Charts and Tables, vital statistics, list of	171
Chemistry, Bureau activities	41
Chest X-ray Surveys	87, 151
Chickenpox:	
Reported cases and deaths, case and death rates	91
Reported cases and deaths by counties	92, 94
Cold Storage	75, 76

Colored Races:

Deaths	254, 320
Infant and Maternal Mortality	188
Nursing Services	137
Tuberculosis	203
Commissioner of Health, Appointed	13
Communicable diseases	7
Investigation of	84
On dairies	85
Reportable	82
Reported cases and deaths	91, 101
Communities paying portion of nurses' salaries	134
Community Health Organization	79
Conference of State and Local Health Officials	79
Commissioner of Health, Report of	13

Council, Public Health:

Appointment of	13
Members	15
Cream, milk products, samples of	74
Cross-connections	50

D

Dairy premises, communicable diseases on	85
Dairy farm and milk plant inspection	65
Table	67
Deaths	169-321
Accidental	210-213
Age period	186
Age, sex and color	218-225
By counties and municipalities	175-185
By counties, white and colored	254-320
Cause and sex	214
Cause by counties, cities and municipalities	230-253
Infants	175-185, 188-194, 226-229
Months	216
Number and rates	174, 187, 189-191
Rates, white and colored	215

Dental Health:	
Activities	PAGE 10, 119-130
Budget	125, 126
Educational	121
Finances	120
Investigatory	122
Personnel	119
Treatment programs	120, 127-129
Diphtheria:	
Death rate	200
Death rates—five-year average	202
Reported cases by age groups and months	96
Reported cases and deaths by age groups and sex	96
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Specimens examined for	32
Director of Health, Report of	7
District Health Officers	81
Dogs:	
Bites	143
Registration fees	21
Drugs:	
Amidone, new drug	64
Samples examined	74
Dangerous	71
Exportation of	70
Dysentery:	
Reported cases and deaths by counties	92, 94
Reported cases and deaths	91
E	
Eating establishments	68
Education:	
Activities	77, 133
Negro Health	138
Public Health Courses	79
Eggs in storage	76
Emergency Maternity and Infant Care Program	135
Encephalitis Lethargic:	
Deaths	209
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94

Engineering and Sanitation, Bureau of:	PAGE
Activities	45
Cross-connections	50
Factories within Potable Watershed	50
Ground Garbage	60
Licensing Act	49
Man-hours	46, 48
Notices and Legal Actions	48
Pollution of Raritan Bay Waters	52
Surf bathing waters	51
Surf samples	53, 59
Water and Sewerage Projects	45, 46
Environmental Sanitation Program	11
Epidemic Cerebro-Spinal Meningitis:	
Reported cases by age groups and months	96
Reported cases and deaths by age groups and sex	97
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Evaluation study	31
Examinations for Health Officers and Inspectors	16
Expenditures, statement of	22-26
F	
Factories within Potable Watershed	50
Farr, Florence M., Elected Secretary, Public Health Council	15
Feces and urine specimens checked	35
Fees:	
Analyses of water samples	21
Audiometer	21
Dog Registration	21
Laboratory Receipts	21
Licenses	21
Penalties:	
Dog Control Act	21
Violations of Food and Drugs Laws	21
Statement of	21
Vital statistics certificates	21
Federal funds	21, 24, 25
Flour and bread enrichment act	68
Fluorine tests	42
Food:	
Adulteration	63
Cold storage	74-76
Table	75
Condemned	69
Eggs in storage	76
Flour, containers for	64
Oleomargarine	65

Food:—(Continued)

Inspections:	PAGE
Bakeries	64, 68
Dairies	65-67
Establishments where foodstuffs are produced	73
Meat	69, 70
Milk Plants	65-67
Public eating places	68
Shellfish establishments	71
Slaughterhouses	69
Samples examined	42, 44, 72, 74
Vending establishments	88
Food and Drugs:	
Fees—licenses and permits	21, 74
Inspections of establishments	73
New Legislation and Regulations	64
Penalties for violations of law	73
Samples examined	42, 44, 74
Table, character of samples examined	44
Funds:	
Appropriated to the Department	21
Statement of Expenditures	22-25
G	
Gastro-Enteritis	85
Garbage, disposal of in sewerage systems	60
German Measles:	
Reported cases and deaths, with rates	91
Reported cases and deaths by counties	92, 94
Gonococcus culture service discontinued	158
Gonorrhoea:	
Cases treated	156
Reported cases	168
Specimens examined	32, 159
Guinea pig inoculations	33
H	
Health courses at Rutgers	79
Health needs	12
Health Education:	
Activities	10, 77
Community Health Organization	79
Division of	77-80
Film Library	78
Information and Material Services	77
Negro Health	138
Printshop	78
Warehouse, Workshop	78

Health Officers:	PAGE
Licenses issued	16
Members of Board of Examiners of	16
I	
Industries, coverage of	107
Industrial wastes	46
Infant Mortality	188-194, 131, 132
Influenza:	
Reported cases and deaths, with rates	91
Reported cases and deaths, by counties	92, 94
K	
Kahn tests	31
Kolmer tests	30, 31
L	
Laboratories:	
Blood tests made in	29
F. & D. samples examined in	44
Specimens examined in	32-37
Sewage and water samples analyzed in	43
Legislation	16-20
Legislative Committee	15
Lethargic Encephalitis:	
Deaths	209
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94
Licenses and permits:	
Food and Drugs	74
Health Officers and Inspectors	16
Maternity homes	134
Revenue from	21
Licensing Act—Operators of water and sewage plants	49
Local Boards of Health	89
Local Health Services:	
Bureau of	81
Services rendered	90

M

	PAGE
Mahaffey, J. Lynn, M.D., deceased	12
McMillen, Wheeler:	
Elected Chairman, Public Health Council	15
Man-hours:	
Sewage, industrial wastes, stream pollution	46-48
Mailing cases	37
Malaria	83
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94
Deaths	197
Marriages	169-173
By counties and municipalities	175-185
By months	175
Number and rates	174
Maternal and Child Health Activities	131
Maternal Mortality	131, 132
Maternity homes	134
Mazzini tests	30, 31
Measles:	
Death rate	197, 198
Death rates—five-year average	198
Reported cases and deaths by counties	92, 94
Reported cases and deaths, with rates	91
Measles, German:	
Reported cases and deaths by counties	92, 94
Reported cases and deaths, with rates	91
Meat inspections	69
Media supplies	37
Meningitis Epidemic Cerebro-Spinal:	
Reported cases by age groups and months	96
Reported cases and deaths by age groups and sex	97
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Midwifery	135
Migrant workers	159, 160
Mice inoculations	37
Milk:	
Samples collected for analyses	44, 74
Dairy farms and plant inspections	65
Tables:	
Fees for licenses and permits	74
Plant inspection	67
Morbidity tables	91-101

	PAGE
Mortality:	
Infant	188-194
Maternal	188, 190
Tables	174-319
Motor Vehicle Fatalities	211
Mumps:	
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94
N	
Negro Health Program:	
Activities	137-140
Case-finding, tuberculosis	138
Chest X-ray surveys	138
Health Education	138
Immunization Program	139
Nursing Service	137
Summary	139, 140
Negroes, death rates of	203, 215
Nephritis	209
Newcomb, Dr. Marcus W.:	
Elected Vice-Chairman, Public Health Council	15
North Jersey coast recreational area, sanitary survey	51
Notices, engineering	48
Nurses:	
Public Health	81
Salary assumed by communities	134
Statistical summary of work	135
Nursing services	133
Nutrition	105
O	
Oleomargarine	65
Ophthalmia Neonatorium:	
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94
Orders of Necessity	49
P	
Paratyphoid Fever:	
Reported cases and deaths	91
Reported cases and deaths by counties	92, 94

Penalties:

	PAGE
Dog Control Act	21
Food and drug laws	21
Vital Statistics	21
Penicillin	155
Photostatic Services	170

Pneumonia:

Reported cases by age groups and months	97
Reported cases and deaths by age groups and sex	97
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Poliomyelitis, Acute Anterior	92
Reported cases by age groups and months	98
Reported cases and deaths by age groups and sex	98
Reported cases and deaths by counties	92, 94
Reported cases and deaths with rates	91
Population	173, 174
Pre-Marital Blood Tests	30, 162
Pre-Natal Blood Tests	162
Preventable Diseases, Bureau of	103
Public eating establishments	68
Public Health Council	7
Public Health Courses at Rutgers	79
Public Health News	77
Public Health Nurses	81

R

Rabies:

Animals examined	36
Anti-rabic vaccine	145
Cases	143, 146
Dog bites	143
Field activities	142
In humans	83
Institute on	144
Legal action	143, 147
Mice inoculations for	37
Revenue	141, 147
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95
Specimens	36
Quarantine	143
Rabies Control Unit:	
Activities	141-147
Funds	23
Raritan and Sandy Hook Bays, sanitary survey	51
Report of the Commissioner	13

	PAGE
Report of Director and Acting Commissioner of Health	7
Reportable diseases	87
Revenue, statement of	21
Rocky Mountain Spotted Fever	83
Reported cases and deaths by counties	93, 95
Reported cases and deaths with rates	91
Rutgers University training courses	79

S

Samples examined:

Milk, Cream, Food and Drugs	44, 74
Shellfish establishments	72
Water and Sewage	46, 72
Sanitary Inspectors licenses issued	16
Sanitary Shellfish Control	71
Scarlet Fever:	
Death rate	197
Death rates—five-year average	199
Reported cases by age groups and months	98
Reported cases and deaths by age groups and sex	99
Reported cases and deaths by counties	93, 95
Reported cases and deaths with rates	91
Sewage, industrial wastes, stream pollution, man hours on	47
Sewage and water samples analyzed	43
Sewerage and water projects examined and approved	46
Shellfish control	71
Slaughterhouses	69
Smallpox	197
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95

Specimens examined:

Blood agglutinations	28, 34
Diphtheria	28
Feces and urine	34, 35
Gonorrhea	28
Hemolyzed	38
Mailing cases for collection of	37
Miscellaneous	28, 35
Rabies	36
Serology	37
Syphilis	28
Tuberculosis	28, 33, 34
Typhoid Fever	34
Spinal fluid	29, 30
State and Local Health Officials, Annual Conference	79

Statement of Expenditures:	
Federal funds	PAGE
State funds	21
State and Federal funds	21, 23
Statement of Revenue	21, 26
Statistical Tables	21
Statistical research	169
Stillbirths	104
Stream pollution	173, 190, 191
Streptococic sore throat, reported cases and deaths by counties	47
Suicide	93, 95
Surf Samples examined, Lawrence Harbor to Beach Haven	209
Syphilis:	53, 59
Blood tests	162, 163
Case-finding	166
Decline in	158
Employment tests	161
Migrant workers	159, 160
Military contacts	163
Penicillin treatment	155, 163
Reported cases	168
Specimens examined	29
Serologic tests	162, 163
Standard drugs in treatment of	166
Treatment	155-157

Tables:	T
Communicable diseases	91-101
Rabies	146
Venereal diseases	156, 159-163, 165, 166
Vital statistics	171, 174-320

Tetanus:	
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95
Toxoid	86
Trachoma, reported cases and deaths	91
Training courses	79
Trichinosis	84
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95

Tuberculosis:	PAGE
Activities of Division	7, 149-154
Case finding	149
Deaths	203
Death rates—five-year average	204
Follow-up examinations	87
Guinea pig inoculations for	33
Reported cases by age groups and months	99
Reported cases and deaths by age groups and sex	99
Reported cases and deaths by counties	93, 95
Reported cases and deaths with rates	91
Reports from Veterans' Administration	88
Specimens examined	33, 34
X-ray surveys	87, 149-152
Tularemia	84
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95
Typhoid carriers	85
Typhoid fever:	
Reported cases by age groups and months	100
Reported cases by age groups and sex	100
Reported cases and deaths by counties	93, 95
Reported cases and deaths with rates	91
Death rates	195, 196
Death rates—five-year average	195

Typhus fever:	
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95

	U
Undulant fever	84
Reported cases and deaths	91
Reported cases and deaths by counties	93, 95

	V
Vaccine	86
Venereal Disease Control	8
Blood test program	162, 163
Case-finding	166
Cases reported	168
Civilian contacts	164, 166
Clinics	160
Contact tracing	164, 165
Educational program	167
Migrant workers	159, 160
Military contacts	163
Penicillin treatment	155
Special surveys	161
Specimens	29, 32
Treatment	155, 157

	PAGE
Vital Certificates—Statement of Revenue	21
Vital Statistics, Bureau activities	169
Vital Statistics—Charts and Tables	171, 172

W

Water and sewerage projects	45, 46
Water and sewage samples analyzed	43
Water samples, Revenue from	21
Water supplies:	
Licensing Act	49
Private	89
Projects examined	46
Surf samples	53, 59
Whooping Cough	82
Reported cases by age groups and months	100
Reported cases and deaths by age groups and sex	101
Reported cases and deaths by counties	93, 95
Reported cases and deaths, with rates	91
Death rate	200
Death rates—five-year average	201

X

X-ray surveys	87, 152
Chest examinations and surveys	151, 154