EIGHTY-NINTH ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1966

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DEPARTMENT OF HEALTH

TRENTON, NEW JERSEY

To His Excellency, Governor Richard J. Hughes:

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

This is the Annual Report of the Department of Health for the calendar year 1966.

Respectfully submitted,

ROSCOE P. KANDLE, M.D.,
State Commissioner of Health.

Department of Health of the State of New Jersey
Public Health Council

FISCAL YEAR 1966-1967

MRS. J. DUNCAN PITNEY, *Chairman* ..... Mendham

HENRY L. DREZNER, M.D., *Vice-Chairman* ..... Trenton

NELSON S. BUTERA, *Secretary* ..... Morristown

JOHN J. CANE, D.D.S. ..... Phillipsburg

MICHAEL S. KACHORSKY ..... Manville

WILLIAM S. LITTLE ..... Ridgewood

MRS. SAMUEL F. RISKIN ..... Passaic

HARRY J. ROBINSON, M.D. ..... Short Hills

ROSCOE P. KANDLE, M.D., *State Commissioner of Health*

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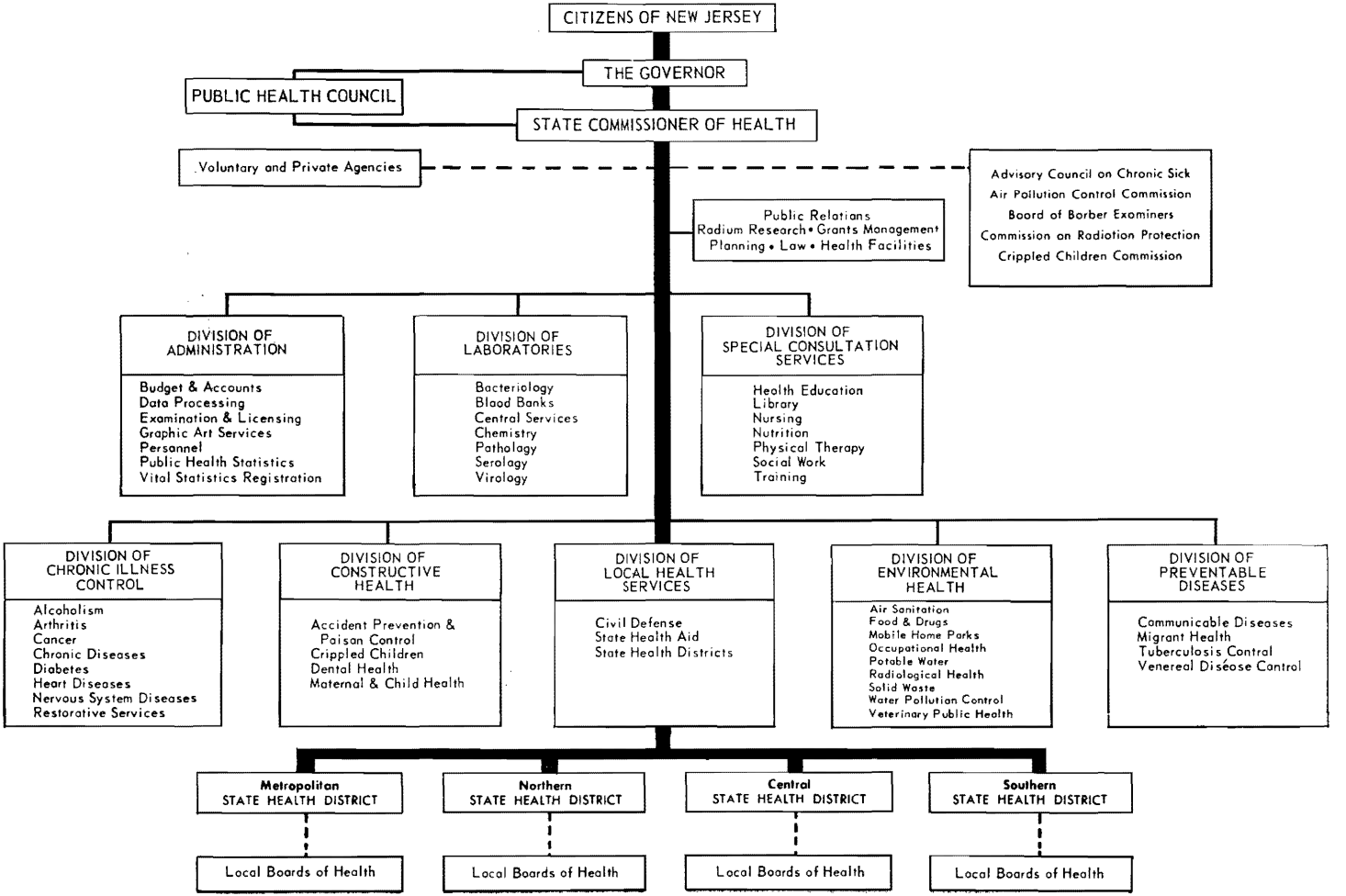
NEW JERSEY STATE DEPARTMENT OF HEALTH



Annual Meeting
Public Health Council

The annual meeting of the Public Health Council was held on July 11, 1966. The following officers were elected for the fiscal year beginning July 1, 1966 and ending June 30, 1967: Mrs. J. Duncan Pitney, chairman; Dr. Henry L. Drezner, vice-chairman; and Nelson S. Butera, secretary.

The membership of the Council was as follows:

	Address	*Term of Office Expiration Date*
Mrs. Samuel F. Riskin	Passaic	June 30, 1967
John J. Cane, D.D.S.	Phillipsburg	June 30, 1968
Michael S. Kachorsky	Manville	June 30, 1968
Harry J. Robinson, M.D.	Short Hills	June 30, 1969
Nelson S. Butera	Morristown	June 30, 1970
Henry L. Drezner, M.D.	Trenton	June 30, 1971
Mrs. J. Duncan Pitney	Mendham	June 30, 1972
William S. Little	Ridgewood	June 30, 1973

Office of the Commissioner

State Commissioner of Health ..... Roscoe P. Kandle, M.D.

Executive Assistant ..... William R. Peebles

Assistant for Legal Affairs ..... Edward P. Mincher

Program Plans and Grants ..... Jule Erdie

Public Relations Director ..... Donald S. Benson

Director of Office of Health Facilities Certification ..... Curtis F. Culp, M.D.

Project Director, Radium Research Project ..... Samuel Ingraham, II, M.D.

Secretary ..... Miss Angela Piontek

Office of the Commissioner

The Commissioner provides leadership, overall direction and oversight to Departmental programs and activities. He reports monthly and at other times as necessary to the Public Health Council and to the Governor on significant activities of the Department. The Commissioner also sat as a member of the Air Pollution Control Commission and of the Radiation Protection Commission and of the Hospital Licensing Board. The present Commissioner has also doubled for some time as Acting Director of the Division of Chronic Illness Control.

Elements of the Commissioner's office are concerned with providing legal advice; with providing information to the public (Public Relations Section); and with the management and coordination of health facilities and agencies seeking to become eligible to render service under the Medicare Act. A Radium Research Project which has been operating for several years with federal grants was also located organizationally in the Commissioner's Office.

The Assistant to the Commissioner for Legal Affairs provides legal advice to Program personnel in the Department and to local boards of health. He is considerably involved in the preparation of Departmental regulations and revisions of them. He conducts public hearings. He maintains liaison with the Office of the Attorney General and with the Deputy Attorneys General assigned to the Department. He provides information to the Counsel and the Governor. He analyzes proposed legislation that has significance for health and provides a periodic summary to Departmental personnel of legislation that has been introduced that has significance for health. He processes accident reports of persons in the Department who have had accidents.

The Program Plans Unit is responsible for coordinating the printing and collating of the 50 Departmental Program plans prepared each two years by Program Coordinators and revised annually. This office is also responsible for the review of each plan to determine the most effective presentation of the plan and for comparison of the previous year's plan with that being developed. Consultations with Program Coordinators are provided. The format of the plans is established by this office. Annual evaluations are received, reviewed, and processed as are other forms as required by the U. S. Public Health Service and the Children's Bureau. Coordination and liaison between these agencies and the Department are maintained through this office as they relate to Program plans.

The Grants Management Unit is responsible for the administration, coordination, and control of the Department's grant-in-aid system for state and federal grants and contracts. It assists Program Coordinators in the develop-

ment of project grant requests and contract negotiations with the federal government. It receives, processes, and controls all grants made by the State Department of Health to local health agencies, hospitals, voluntary agencies, and individuals.

The Grants Management Unit processed approximately 425 grants in 1966.

The Program plan manual format was significantly changed in that the short-term objectives were incorporated into the plan itself. Heretofore, they were separate documents.

The Department's contract forms were revised to include the provision of the Governor's Executive Order 21 and the federal regulations relating to Title VI of the Civil Rights Act of 1964.

The Office of Health Facilities Certification was established on March 10 and placed in the Commissioner's Office. The Director took office on June 20. The function of this office is to inspect hospitals, Home Health Agencies, Extended Care Facilities, and laboratories and to recommend those that meet federal standards for certification by the Social Security Administration so that they may receive payment for services provided to persons covered under the Health Insurance for the Aged Program (Medicare). Through December 31, the unit had recommended for certification 118 hospitals, 55 Home Health Agencies, and 42 Extended Care Facilities. The Department of Health used an inspection team representing many disciplines and its objective was to provide constructive consultation so that as many agencies as possible would be eligible to provide services for Medicare patients.

The Public Relations unit issued 143 press releases throughout the year in behalf of Departmental activities and Programs. The editing of Public Health News (12 issues per year) is done in this unit. From reports submitted by the Divisions, the Public Relations section prepares for the approval of the Commissioner a monthly summary of significant activities in the Department which is sent to the Governor. The Public Relations unit also prepares a summary year end report of the Department and edits the narrative printed annual report of the Department. The unit also provides consultation to Departmental personnel in public relations and assists in preparation of speech material. A good deal of time is spent in answering the questions of newspaper reporters. The unit has also assisted local health officers in preparing materials on public health subjects for use in their newspapers.

The Public Relations section also prepares advertisements for newspapers with respect to public hearings and advises Program personnel on the timing of such hearings.

Division of Administration

JOHN B. VAN ELLIS, *Director*

Programs:

Budget and Accounts ..... GEORGE E. FORMAN
Program Coordinator

Data Processing ..... ROBERT T. KING, B.S.
Program Coordinator

Examination and Licensing ..... KENNETH J. CARHART
Program Coordinator

Graphic Art Services ..... DONALD J. WERDEN
Program Coordinator

Personnel ..... WILLIAM R. MONYER
Program Coordinator

Public Health Statistics ..... ANNA P. HALKOVICH, B.A., M.B.A.
Program Coordinator

Vital Statistics Registration ..... F. MERTON SAYBOLT, B.S., M.S.P.H.
State Registrar and
Program Coordinator

Division of Administration

This Division provides administrative services to all operating units of the Department through the following program activities: Budget and Accounts, Data Processing, Examination and Licensing, Graphic Art Services, Personnel, Public Health Statistics, and Vital Statistics Registration. The Board of Barber Examiners is administered through the Bureau of Examination and Licensing.

Particulars regarding the various services rendered by the Division are presented in the following reports of Program Coordinators.

Budget and Accounts Program

The Budget and Accounts Program is responsible for the receipt and disbursement of appropriations, allotments and allocations received by the Department. The Program prepares fiscal reports, budgets, letters of credit and requests for funds for state and federal agencies as required. It coordinates and directs all fiscal transactions involving the State Department of Treasury and the Federal Department of Health, Education, and Welfare.

The Program also is responsible for the warehouse functions of receiving and distributing educational materials, office supplies, drugs, and biologics.

Eleven federal project and research grants were renewed and nine new federal grants were activated in addition to the continuing formula grants of water pollution, tuberculosis, heart disease, cancer, general health, radiological health, chronically ill, maternal and child health, and crippled children.

Two hundred ten specialized federal fiscal reports were prepared; 13,354 vouchers were passed for payment and 1,395 applications were processed and forwarded to the Division of Purchase and Property.

Following is a consolidated financial statement as of June 30, 1966.

STATE DEPARTMENT OF HEALTH
FINANCIAL STATEMENT
July 1, 1965 — June 30, 1966
Receipts

Received for Transfer to State Treasury:	
Licenses and Permit Fees	$332,450.25
Penalties	13,530.00
Certified Certificates	96,948.78
Examination Fees	13,110.50
Miscellaneous	8,208.72
Net Total	$464,248.25

Received for Disbursements:	
State Appropriation and Transfer	$6,090,768.32
United States Department of Health, Education and Welfare—Public Health Service	3,057,196.62
Children's Bureau	2,165,261.26
Other Federal Funds	1,095,709.00
Private Grants	9,148.00
Crippled Children Donations (Private)	12.51
Net Total	$12,418,095.71

DEPARTMENTAL ALLOCATIONS

July 1, 1965-June 30, 1966

DIVISION	Salaries State	Salaries Federal	Salaries Private	Other Allocations State	Other Allocations Federal	Other Allocations Private	Total State	Total Federal	Total Private	Total All Funds
Office of the Commissioner	$113,594.00	$132,311.00	.....	$53,478.36	$180,022.00	$2,145.00	$167,072.36	$312,333.00	$2,145.00	$481,550.36
Administration	544,807.00	109,882.38	.....	111,549.69	68,849.74	.....	656,356.69	178,732.12	.....	835,088.81
Environmental Health ...	977,337.00	406,036.00	.....	1,394,295.81	304,949.00	.....	2,371,632.81	710,985.00	.....	3,082,617.81
Preventable Disease	258,066.00	477,878.00	.....	238,553.93	413,711.00	.....	496,619.93	891,589.00	.....	1,388,208.93
Chronic Illness	101,421.00	154,991.00	.....	352,289.37	821,040.00	.....	453,710.37	976,031.00	.....	1,429,741.37
Laboratories	482,822.00	120,383.00	$5,662.00	111,644.39	99,123.50	1,341.00	594,466.39	219,506.50	7,003.00	820,975.89
Constructive Health	87,492.00	278,682.00	.....	352,987.99	1,816,560.26	12.51	440,479.99	2,095,242.26	12.51	2,535,734.76
Special Consultation Services	151,498.00	66,004.00	.....	20,097.05	15,428.00	.....	171,595.05	81,432.00	.....	253,027.05
Local Health Services ...	558,824.00	268,434.00	.....	180,010.73	583,882.00	.....	738,834.73	852,316.00	.....	1,591,150.73
Total Allocations..	$3,275,861.00	$2,014,601.38	$5,662.00	$2,814,907.32	$4,303,565.50	$3,498.51	$6,090,768.32	$6,318,166.88	$9,160.51	$12,418,095.71

DEPARTMENTAL EXPENDITURES

July 1, 1965-June 30, 1966

Office of the Commissioner	$113,711.58	$83,116.56	.....	$49,724.68	$131,134.35	$1,000.00	$163,436.26	$214,250.91	$1,000.00	$378,687.17
Administration	544,740.45	75,974.28	.....	106,159.63	58,014.73	.....	650,900.08	133,989.01	.....	784,889.09
Environmental Health ...	968,034.69	359,596.25	.....	1,302,768.28	245,405.36	.....	2,270,802.97	605,001.61	.....	2,875,804.58
Preventable Disease	257,589.35	361,097.72	.....	236,455.58	275,388.73	.....	494,044.93	636,486.45	.....	1,130,531.38
Chronic Illness	97,146.41	126,180.04	.....	347,641.78	662,706.98	.....	444,788.19	788,887.02	.....	1,233,675.21
Laboratories	483,073.77	116,252.01	$4,984.42	112,084.31	80,389.25	1,256.41	595,158.08	196,641.26	6,240.83	798,040.17
Constructive Health	86,480.71	213,843.66	.....	299,057.91	1,394,242.73	.....	385,538.62	1,608,086.39	.....	1,993,625.01
Special Consultation Services	151,468.96	65,586.69	.....	19,634.33	12,535.51	.....	171,103.29	78,122.20	.....	249,225.49
Local Health Services ...	562,155.87	214,304.39	.....	156,875.48	294,581.54	.....	719,031.35	508,885.93	.....	1,227,917.28
Total Expenditures.	$3,264,401.79	$1,615,951.60	$4,984.42	$2,630,401.98	$3,154,399.18	$2,256.41	$5,894,803.77	$4,770,350.78	$7,240.83	$10,672,395.38
Balances, June 30, 1966..	$11,459.21	$398,649.78	$677.58	$184,505.34	$1,149,166.32	$1,242.10	$195,964.55	$1,547,816.10	$1,919.68	$1,745,700.33

Data Processing Program

The Data Processing Program was established as a separate program on July 1, 1966 in order to provide needed data to all Programs within the Department of Health.

During January of 1966, an IBM 1440 computer system was installed to replace several pieces of tabulating equipment. The 1440 is a general purpose digital computer system consisting of two magnetic tape units and two random access disk drives in addition to the standard components of a 240 line-a-minute printer and a card reader punch.

During the first six months of 1966, the Data Processing Program was involved in the hiring and training of programmers as well as converting all operations from tabulating equipment to the computer system.

During the last six months of 1966, the Data Processing Program became involved in improving and supplementing the current reports as well as converting new systems to the computer.

In the short span of one year, the Data Processing Program prepared 246 computer programs for routine jobs in addition to 50 one-time programs for special research projects.

Work time allotted to Programs by the Dating Processing Program is indicated below:

Air Pollution Control	12.81%	Radiological Health	2.99%
Budget and Accounts	4.03%	Tuberculosis Control	.64%
Crippled Children	3.27%	Venereal Disease	3.84%
Examination and Licensing	1.85%	Vital Statistics	55.43%
Maternal and Child Health	3.32%	Other Programs	7.60%
Personnel	1.56%	Department of Agriculture	2.66%

In addition to providing routine services for the above Programs, the Data Processing Program provided special services to the Division of Laboratories, the Dental Health Program, and the Division of Chronic Illness Control.

Examination and Licensing Program

Services rendered by this Program enable the Department to certify to local authorities and agencies Health Officers, Milk Inspectors, Meat Inspectors, Sanitary Inspectors, Plumbing Inspectors, Food and Drug Inspectors, Veterinary Meat Inspectors, and Public Health Laboratory Technicians and also Public Water Supply System Operators, Public Water Treatment Plant Operators, and Public Sewage Treatment Plant Operators qualified to perform essential public health services. The Bureau maintains

a close working relationship with the Department of Civil Service as well as with local authorities to determine their needs, and with universities, colleges and schools offering courses preparing applicants for our licensing examinations to be sure course contents encompass license responsibilities and that questions asked are valid and reliable.

During the period covered by this report, 968 applications were processed for examinations. Seven days were spent in examining 700 persons of whom 371 received licenses during the year 1966.

There were 1,740 licenses renewed covering water supply systems, water treatment plants, and sewage treatment plants.

The amount of $20,007.00 was deposited to the credit of the General Treasury; of this amount $2,800.00 represented penalties collected for licensing violations. The revenue deposited in this period is twice the amount reported for the fiscal year 1951-52.

There were 320 licensed operators of water or sewage facilities who were issued authorization to operate more than one water or sewage facility.

There were 93 persons who failed examinations and who requested and were granted reviews of their examination papers.

Records were established for 70 new water or sewage facilities and their management notified of the law requiring their operation by licensed operators.

On the approval of the Division of Laboratories, the Program issued three initial Blood Bank licenses, and renewed 125 Blood Bank licenses.

During this period, 17 informal hearings were held on alleged violations and/or infractions of rules relating to sewage and water licenses. Numerous conferences were also held with the Deputy Attorneys General in reference to licensing cases referred for necessary action.

During this period, the first revocation of a license was ordered after a hearing before the Public Health Council.

Initial steps were taken to place current records on Data Processing.

The Program and Department received immeasurable assistance and guidance from the licensing boards whose members serve without remuneration.

The Board of Barber Examiners is administered by this Program. The Board in July suspended for two weeks the license to practice of a New Jersey barber who had practiced in an unprofessional manner.

Workload by the Board of Barber Examiners included the following:

January 1, 1966 - December 31, 1966

Shops Inspected	14,213
Special Investigations	1,009
Shops Found with Sanitary Violations	399
Reinspections	399
Hearings Held	145
Persons Assessed Penalties by Board	89
Persons Found Working without a Certificate	22
Unlicensed Apprentices	4
Shops Found Operating without a License	13
Shops Reported Out of Business	172
Complaints Received from Public and Investigated	77
Barbers Reported Deceased	80
Applicants Scheduled for Examination	483
Applicants Failed to Appear	37
Applicants Examined	446
Applicants Passed Examination	352
Applicants Failed to Pass Examination	94
Examination Days	26
Examination Fees Forfeited	2

Graphic Art Services Program

This Program provides for the design and production of exhibits, audio-visual services, printing, and addressographing as required by the Department.

In collaboration with the Health Education Program, seven new exhibits were designed and constructed. These exhibits became part of the Department's loan service which made 17 bookings throughout the state as requested by the Programs involved.

Professional films belonging to various Programs are stored, repaired, scheduled, and shipped throughout the state by the central film library maintained by this Program; 600 bookings were made. As part of the Program's audio-visual function, 120 audio-visual equipment loans were processed. Audio-visual equipment assigned to the training and conference rooms on the main floor of the building is maintained by the Program's film technician.

Approximately 128 of the Department's non-professional films, covering a wide variety of public health activities, and intended for viewing by lay groups, are housed in the New Jersey State Museum Film Library. These films are offered free of charge to appropriate audiences and were viewed by over 365,000 New Jerseyans during 1966. This required approximately 7,500 individual bookings by the State Museum Film Library. This Program expedited the ordering of new prints and replacement footage as required.

All of the Department's printing needs are handled by this Program. The Graphic Art Section designed and produced printing mechanicals as required and filled requests for charts, transparencies, slide mechanicals, and signs.

Outside printing jobs required 124 detailed applications with follow-up to delivery during 1966.

The Department's in-plant print shop, a combined activity with the Department of Agriculture, produced 5,900 short-run jobs amounting to approximately 7,250,000 impressions. The workload ratio was 70 percent Health and 30 percent Agriculture. This activity includes plate making, press work, and bindery as required.

The addressograph section processed over 300,000 pieces. There were 246 mailing jobs in handling the Department's bulk mailing requirements from 70 special lists maintained by this Program.

Personnel Program

The Personnel Program is responsible for recruiting and screening applicants; maintaining an adequate classification of positions; processing regular and supplemental payrolls for all Programs and projects; maintaining central personnel records of all Departmental employees; providing orientation and other in-service training courses for new employees; and coordinating and supplying data for salary accounting and assisting in preparing salary data for departmental budgets.

Personnel maintains a constant and effective working relationship among all Departmental Programs and other state and federal agencies. During the year, consultation services to Departmental supervisors and employees were provided concerning matters on personnel and payroll, salary problems, and fringe benefits.

Job specifications were reviewed, desk audits were performed to evaluate proper classifications, and needed changes were made. Exit interviews were conducted to determine true reasons for separations and evaluations of supervisors.

Members of this office served on various committees including the State Personnel Council, Public Personnel Association, Service Awards Program, Department Safety Committee, miscellaneous fund raising committees, and the Savings Bond Drive. This office also handled other projects such as employee relations and recreation programs.

The Personnel Program provided services to more than 970 Departmental employees requiring the processing of approximately 50,000 records during the year. A number of job specifications were reviewed and 50 were revised. One hundred eight employee service awards were issued.

There were 218 classifications in the Department. Of the 775 employees on the payroll at the end of this period, 146 were at the minimum of their salary range, 517 at intervening steps, and 112 at their maximum or in no range positions. These positions were filled by 585 employees with permanent civil service status, 139 employees with temporary status, and 51 with unclassified status. There were 427 female employees.

As of the end of this period, 474 employees were paid from state funds and 301 were paid from federal or project funds.

During this reporting period, 195 employees were separated for various reasons and 251 employees were appointed.

At the end of this period, there were 47 vacant positions which this Program was attempting to fill. Most of these positions require persons with specialized professional background for which the recruiting is extremely difficult due to low state salaries and shortages which exist in these fields throughout the country.

Public Health Statistics Program

The Public Health Statistics Program prepares the data which are presented in "New Jersey Health Statistics," published annually. The work of the Public Health Statistics Program is reflected in that document.

Vital Statistics Registration Program

Historical Background

The State Registrar has custody of about 13,000,000 records of births, marriages, deaths, and fetal deaths dating back to the year 1848. The records for the period 1848 to 1887 were collected originally by the Secretary of State and were turned over to the Bureau of Vital Statistics when it was created by legislation in 1887. All records of births from 1848 through 1903, marriages from 1848 through 1929, inclusive, and all death certificates from 1848 through 1957, have been microfilmed. The original records are stored several miles from the State House.

By law, the State Registrar has supervisory power over the 567 local registrars and must furnish the forms required for registering vital events.

Some forms are used exclusively by the local registrar and others are distributed by him to physicians, clergymen, funeral directors or hospital administrators.

The Program is also responsible for searching and issuing transcripts of entries in the 1905 and 1915 State Census records which are on microfilm.

Workload and Accomplishments

In calendar year 1966, the Program received, processed and filed 232,804 original reports of vital events, about 1,500 delayed reports of births, and approximately 10,000 corrections to current and old records. New birth records were prepared for 3,272 persons who were adopted in 1966 or prior years. There were 2,269 office visits and 20,565 telephone calls by persons needing help in various registration matters.

More than 1,000 persons applied for copies of entries in the State Census records of 1905 and/or 1915. Such copies are usually acceptable in lieu of birth certificates as proof of age for benefits under Social Security and Medicare. Including the census requests, the Program processed 80,710 applications for searches of the vital records of one or more years under one or more names. This is an increase of 6,534 (nine percent) over 1965, and 1965's number of applications was 18 percent greater than 1964.

A large amount of free work is done in furnishing verifications or certified copies of records for the administrative use of welfare boards of the counties and certain municipalities. By law, the Program must furnish to County Supervisors of Veterans' Interments a photocopy of the death record of every veteran both dying and being buried in New Jersey. To assist the Cancer Program, approximately 500 man-hours were spent searching for death records of cancer patients who might possibly have died in New Jersey. Copies of records found are sent for the clearance of cancer registers of hospitals and other agencies in and outside of New Jersey.

A summary of the volume of the major activities of the Program follows:

Table 1. ORIGINAL CERTIFICATES RECEIVED, PROCESSED, AND PERMANENTLY FILED

	Calendar Year		
Certificate Type	*1966**	*1965*	*1964*
Birth	117,253	121,482	128,420
Fetal Death	1,710	1,850	2,003
Marriage	46,966	46,364	45,705
Remarriage	2,172	1,489	1,484
Death	64,703	63,398	62,666
Total	232,804	234,583	240,278

* Provisional.

Table 2. SEARCHES REQUESTED AND FEES RECEIVED

Item	*Fiscal Year* 1966	1965	1964
Searches made and/or copies issued for which fees were received	40,739	35,352	36,142
Searches made and/or copies issued for which no fees were received	42,595*	31,977	26,168
Total searches	83,334*	67,329	62,310
Fees received for searches and certified copies	$92,003.53	$48,689.33	$44,773.05

* Includes 1,017 searches (averaging one-half hour per search), on behalf of the Cancer Control Program, for records of possible deaths of persons on cancer registers but not heard from for many years.

Division of Chronic Illness Control

ROSCOE P. KANDLE, M.D., *Acting Director*

Programs:

Alcoholism Control ..... WILLIAM J. HARRIS, M.P.H.
Program Coordinator

Arthritis and Allied Disorders ..... LEON A. FRASER, M.D.
Program Coordinator

Cancer Control ..... WILLIAM J. HARRIS, M.P.H.
Acting Program Coordinator

Chronic Disease Control ..... ROSCOE P. KANDLE, M.D.
Acting Program Coordinator

Diabetes, Endocrine and Metabolic Disorders ..... ARTHUR KROSNICK, M.D.
Program Coordinator

Diseases of Nervous System and Special Senses ..... LEON A. FRASER, M.D.
Program Coordinator

Heart and Circulatory Diseases ..... ALVIN A. FLORIN, M.D.
Program Coordinator

Restorative Services ..... ROSCOE P. KANDLE, M.D.
Acting Program Coordinator

Division of Chronic Illness Control

Introductory Statement

Dedicated to the philosophy that appropriate, accessible, comprehensive, high quality health services should be available to all people of New Jersey, the Division of Chronic Illness Control has traditionally directed its efforts at the development, expansion, and coordination of community health services. Since 70 percent of the chronically ill are not in institutions, the Division has stimulated and assisted in the establishment and strengthening of health services available to the chronic sick in their homes to enable them to live and function at the highest level possible within the unavoidable limits of their particular problems. During the past year, these efforts were accelerated further with the appropriation of special federal funds to assist new or existing public or private agencies to develop, improve, and expand their capacity to provide home health services and to prepare to administer a Home Health Agency under Medicare.

Utilizing these supplemental Home Health Services funds as well as normal appropriations, the Division this year made available more than three-quarters of a million dollars through grants-in-aid to 106 local health and welfare agencies in the state. These demonstration grants made possible community services such as diet counseling, physical therapy, homemaker-home health aide, public health nursing, social work, comprehensive home care, and friendly visitor; screening programs for the early detection of cancer, diabetes, and pulmonary disease; rehabilitation services for the alcoholic and the cardiovascular accident patient; application of specialized techniques in connection with the diagnosis and treatment of arthritis, cancer, cardiovascular diseases, chronic renal disease and pulmonary disease; and professional education and training programs for specialized personnel. In many instances, modest, short-term subsidies made possible the upgrading of agencies to meet the requirements for certification as a Home Health Agency under Medicare. By December 31, 55 nursing agencies were so certified.

Chronic Disease Control Program

Friendly Visitor

Two hundred eighty-six individuals, ranging in age from 16 to 79 years, were trained as Volunteer Friendly Visitors in eight courses during the year as follows:

County	*Agency*	*Number trained*
Middlesex	Roosevelt Hospital	35
Bergen	Bergen Pines County Hospital (day)	61
Bergen	Bergen Pines County Hospital (eve.)	24
Union	SAGE	26
Essex	Presbyterian Hospital	47
Middlesex	Perth Amboy General Hospital	33
Morris	Merry Heart Nursing Home	20
Essex	Newark Senior Citizens Council	40

The course sponsored by the Newark Senior Citizens Council was the first financed by Office of Economic Opportunity funds. Most of the trainees were over 65 years of age and visit in public housing projects on a daily basis under the supervision of the Office of Tenant Relations in Newark.

A demonstration training project for teen-agers was conducted at the Perth Amboy General Hospital. It was found that with modification of the course content, training of candy stripers implements the basic orientation provided by the hospital and also introduces the concept of adult volunteering. On the basis of the success and demand for training teen-agers, the State Committee agreed to offer the course to people under 21 years of age thus lowering the minimum age to 16 years. The teen-agers must be serving in a hospital setting where they will receive adequate supervision.

Seventy trained Volunteer Friendly Visitors attended a Reunion Workshop held in June in Newark. The purpose of the Workshop was to relate the current information regarding health insurance for the aged and to give the volunteers an opportunity to exchange ideas and experiences. The program included discussions on Medicare followed by a panel discussion by representatives of three agencies using friendly visitors.

Using the New Jersey program and materials as a guide, the Woman's Auxiliary to the American Medical Association launched a national Volunteer Friendly Visitor Project at its Regional Conference held in Chicago in the fall. A letter of credit to New Jersey and a history of this state's program will be part of the kit of materials to be distributed nationwide.

Homemaker-Home Health Aide

Three new homemaker-home health aide agencies, in Gloucester, Ocean, and Warren Counties, were organized and began to provide service during the year. Service is now available to 98 percent of the state's population with 23 agencies operating in 20 counties. During 1966, these agencies provided 881,187 hours of service to 6,405 patients, a 21 percent increase of hours over the previous year. Eighteen percent, or 162,449, of the total hours of service were provided to Medicare patients who number 1,170 or 18 percent of the

total patients. A diagnostic breakdown by hours of service and number of patients follows (See Table 1).

During the past year, the availability of homemaker-home health aide service made possible earlier hospital discharges for 1,148 persons and made institutionalization unnecessary for another 1,482 individuals. These services also prevented employment or school absenteeism in 2,489 instances.

Homemaker-home health aide services have been one of the most popular community health services requested under the Medicare Program. This increased demand for services has intensified the recruitment and training of homemaker-home health aides. There were 29 training courses held this year compared with 15 in 1965. Five-hundred and six individuals were trained, reflecting a 91 percent increase over the previous year.

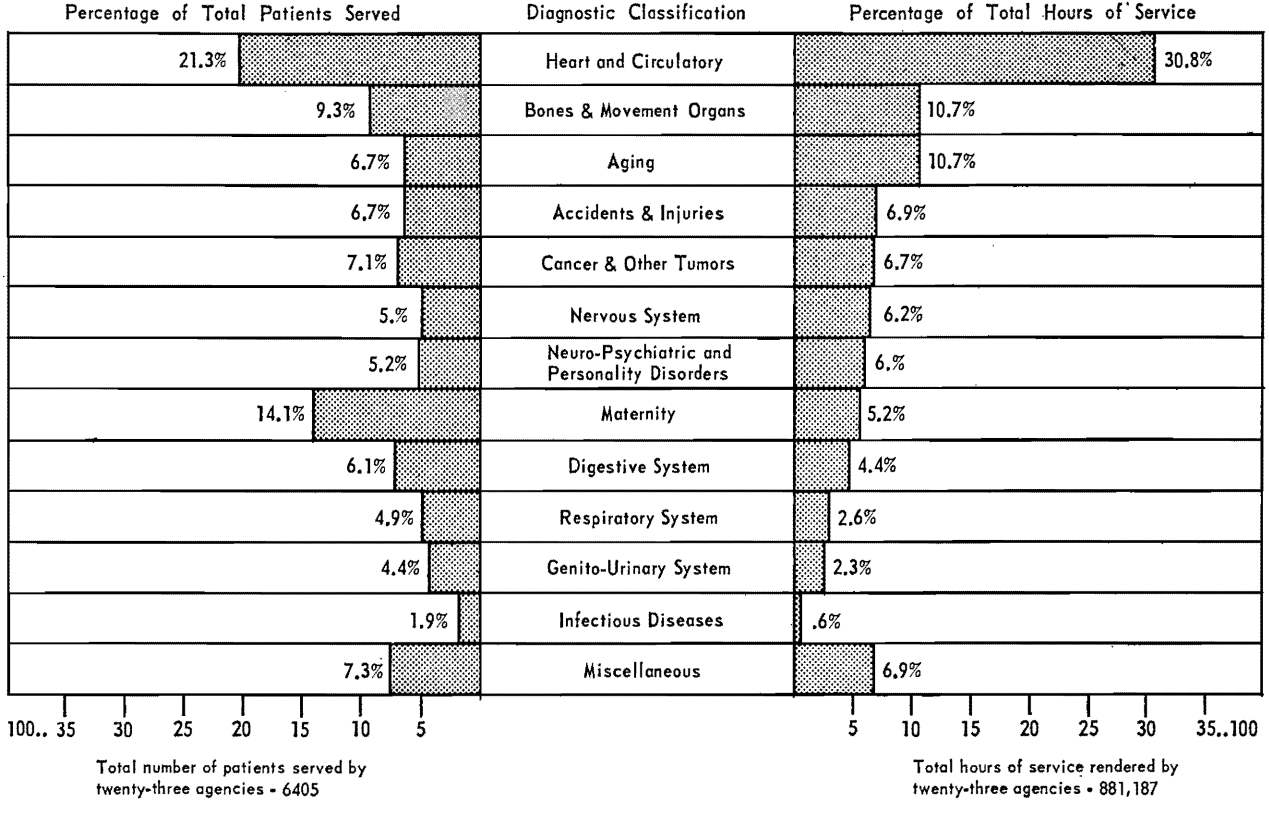
A three-day Executive Training Seminar for directors of homemaker-home health aide services, sponsored by this Department in cooperation with the Visiting Homemaker Association of New Jersey, was held in Princeton. The program included a review of administrative procedures relevant to the operation of a homemaker-home health aide agency as well as responsibilities and contractural relationships pertinent to the agencies' participation in Medicare.

The demonstration project using carefully selected and specially trained homemakers to work with multiproblem families living in a "disadvantaged area" has now completed its second year. This project is being carried out by the Visiting Homemaker Service of Greater Trenton with assistance from this Division. During the past year, 6,663 hours of service were provided to 122 families in 2,595 visits made by the extension project homemakers who serve as communicators, interpreters, teachers, and friends to the clients and to the community.

The expansion of the project in April, 1966 to include the provision of services to 70 Spanish-speaking families has indicated even more acutely the extent and depth of their problems. In addition to the language barrier, this group faces the challenges of living in an unfamiliar urban environment and cooperating effectively with the school system, employers, and the business community in general. Three Spanish-speaking women were recruited and trained as extension homemakers to serve this segment of the population. These women demonstrate, by precept, housekeeping skills including house cleaning, laundry, garbage disposal, general hygiene, along with counseling in budgeting, shopping economically and preparing nutritional meals. Literature on budgeting, nutrition, legal services, etc., printed in Spanish with meaningful illustrations has been distributed and interpreted by the homemakers. Participation in group activities has been made available under the aegis of

the Mercer Street Friends Center where instruction in conversational English, sewing, crocheting, etc are provided.

NEW JERSEY HOMEMAKER
HOME HEALTH-AIDE SERVICE
January -- December 1966



Nursing

The development of new and the strengthening of existing public health nursing services were major activities of the Chronic Disease Program in 1966. Nine agencies were provided grants for the employment of licensed practical nurses to increase the availability of nursing services at a minimum increase in costs.

In order to develop an effective method of providing uninterrupted nursing care to patients from hospital to home, 10 home health agencies were provided short-term subsidies for the employment of a public health nurse coordinator on a part-time basis. Agreements have been solidified with 28 hospitals. With the referral of 600 patients, it seems evident that the coordination program has become an accepted part of each hospital routine. One agency has used the services of the coordinator to broaden its program further with the establishment of a Mental Health After Care Program in cooperation with a state hospital. A public health nurse with mental health experience was placed in the hospital to assist in the development of criteria for the selection of patients to be referred to the nursing agency. In this way, additional support will be provided to the patient in his transition from the institution to his home and the community by providing a therapeutic relationship and helping the patient to utilize community resources for his maximum rehabilitation.

A new voluntary nursing agency, the Home Health Services of Passaic, Inc., was begun with financial assistance from this Program. This agency operates two offices, one in mid-county and one in the Passaic-Clifton area, and provides service to a major portion of Passaic County. A qualified director was recruited and employed the beginning of May and nursing service to the public was instituted July 1. During the first six months of operation, this agency provided 4,828 nursing visits, 76 percent of which were to the chronically ill.

Twelve other public health nursing agencies assisted during the year reported a total of 39,484 nursing visits with the following diagnostic breakdown: Arthritis—1,193; Cancer—2,028; Diabetes—968; Heart and Circulatory Disease—6,596; Mental Retardation—110; Neurological—148; Other Chronic—4,106; Other—24,335.

Fifty-five directors of visiting nurse agencies participated in a two-day workshop sponsored by this Department in cooperation with the New Jersey League for Nursing. The program dealt with the responsibilities of the community nursing agency as a home health agency in the Medicare program.

four percent—diseases of the digestive system; four percent—respiratory diseases. Diseases of the genito-urinary system; allergic, metabolic and endocrine disorders; diseases of the nervous system; infectious diseases; congenital defects; and senility were the diagnoses in the remaining 34 percent of the patients.

The Summer Experience in Social Work project was provided modest subsidy again this year. This program aids in the recruitment of personnel by making it possible for undergraduate students interested in social work to spend the summer months working in social agencies. Applications were received from 262 students representative of 123 colleges. Summer placements were secured in 19 public and 11 voluntary agencies for 95 of the students.

Special Projects

Upon recommendation of the Governor's Task Force on Nursing, a nurse educator was employed under a short-term contract to develop a Master Plan for Nursing Education in New Jersey. A survey was conducted to obtain data regarding issues such as: (1) number of persons who will be applying for admission to both graduate and undergraduate schools of nursing; (2) number of eligible applicants and the percentage who could not be admitted because of inadequate facilities; (3) service needs in relation to the number of nursing education programs; (4) number of schools of nursing of all levels, student capacity, and geographic distribution; (5) need for additional schools of nursing at all levels.

A Hospital-Nursing Home Relationship Project aimed at improving the continuity and quality of health services for the long term patient was undertaken by the Hospital Research and Educational Trust of New Jersey with modest, short-term assistance from this Program. During the year, field work was begun in four demonstration areas of the state, namely, the Montclair area; Ocean County; Camden; and the Newton (Sussex County) area. Further work on this project is now being carried out under a federal grant.

Twenty-five medical educational programs were presented during the year by the Pennsylvania Hospital with subsidy from this Program. Topics included "Treatment of Lymphomas," "Complications of Myocardial Infarction," "Gout and Gouty Arthritis," and "Evaluation of the Patient with Renal Disease."

Alcoholism Control Program

Two new Services begun during this year are proving to be additional, effective ways of providing services for the alcoholic in areas away from popu-

lation centers of the state. The out-patient alcoholism program developed in conjunction with the Salem County Guidance Center in January is providing part-time alcoholism services by the center staff which include psychiatry, psychology, and social work. There was a one-third increase in services to alcoholics and their families during the second half of the year. The Center employs a non-professional counselor who is responsible for coordinating the alcoholism activities of the agency. This individual also develops working relationships with other health and welfare agencies in the county. Community education activities are also being undertaken in a limited way in the county.

The second out-patient Service which began in March at the Monmouth Medical Center functions one evening a week. Services rendered increased almost 50 percent during the last three months of the year. The Center is staffed by a part-time psychiatrist, general practitioner, social worker, and a full-time secretary. In recent months, the program has grown so that the social worker equally divides his time between the alcoholism services and the home care program at the hospital.

During this year, the Drug Addiction Program of the Department of Institutions and Agencies has been promoting and developing aftercare clinics for addicts discharged from the in-patient unit at the New Jersey Neuro-Psychiatric Institute. The law which established the State Drug Addiction Program requires that these programs be developed in the county board of freeholders with grant assistance for specified services or activities from the state. As a demonstration, the Board of Freeholders in Middlesex County has developed an evening aftercare center for addicts utilizing the staff of the existing alcoholic treatment center. The Board of Freeholders in Bergen County has developed a similar but less integrated program. These programs are being observed in an effort to determine how effective the treatment of addicts and alcoholics can be accomplished in a single service. At this point, there is a question on both sides as to the feasibility of this practice.

Services

Two thousand nine hundred thirty-seven individual patients were reached during the year in services co-sponsored by this Department.

One thousand four hundred forty patients made a total of 11,238 visits to the 10 out-patient treatment centers located in community hospitals.

Four hundred seventeen alcoholics, families of alcoholics, clergymen, employers, etc., contacted the two Information and Referral Centers for help in dealing with problems related to alcohol. These contacts were made by actual visits to the center (293) or telephone calls (1,042).

One thousand eighty individuals attended weekly group sessions conducted in four tuberculosis hospitals, a county jail, and a county workhouse by the field representative from this Program. The purpose of these sessions is to create an awareness of the effect alcohol is having on the individual and to stimulate him to seek help for his problem when released or discharged from the institution. These individuals make up a hard core of the alcoholic problem known as the chronic drunkenness offender. It is this group that contributes heavily to the recalcitrant tuberculosis population.

A subjective evaluation of the treatment success of individuals attending out-patient treatment centers has been made. Factors included in this evaluation are drinking habits, employment record, adjustment in the family and community, and physical health. These criteria are given a number rating at the beginning of treatment and at the end of a 12 months period. The results for this year are as follows:

24.2 percent showed marked improvement
29.7 percent showed reasonable improvement
19.6 percent showed no change
3.5 percent showed deterioration
26.8 percent were unable to be evaluated or were lost to follow-up

A major need for the chronic drunkenness offender alcoholic is for facilities which provide food and shelter. Traditionally, these services have been provided by church groups, who operate mission type programs, such as the Mount Carmel Guild, Salvation Army, and Good Will. Although these facilities fulfill a real need for many individuals in this population, there are large numbers who cannot, for one reason or another, accept this type of "program." The Flynn Houses in New Jersey as well as other states have as their only requirement that the individual stay sober and, when able, pay a maximum of $20 a week for room and board. In addition, Flynn Houses provide assistance with employment and referral services which might be rendered by other community agencies. With the encouragement and moral support of the Alcoholism Program, a third Flynn House was opened in New Brunswick in July. This facility can accommodate up to 15 men, who are referred from the alcoholism clinics, jails, and workhouses and other community agencies. Although no financial assistance was provided from this Program, the board of directors was assured that every effort would be made to assure the successful continuation of this new project. Additional houses will be opened in other areas of the state when feasible.

Educational Activities

Ninety-three persons received training in alcoholism and alcohol education at workshops, institutes, and summer schools sponsored by this Department.

Thirteen individuals were awarded scholarships to attend the Rutgers Summer School of Alcohol Studies and Northeast Institute of Alcohol Studies. The recipients were social workers, parole and probation officers, nurses, clergymen, state police, and a lay counselor.

Eighty teachers and school nurse teachers were in attendance at the four two-week workshops held at Montclair, Trenton, Jersey City, and Glassboro State Colleges. The workshops on alcohol education are designed to provide an opportunity for the classroom teacher to acquire information on the use and abuse of alcohol, and to develop curriculum for presentation in the classroom. The course includes such topics as physiology of alcohol, alcohol and social responsibility, the problem of alcoholism, alcohol and traffic safety, and the moral and religious aspects of alcohol.

During the year, the six films on alcohol and alcoholism continued to be used extensively by schools and other interested groups. There were 609 film showings with more than 33,679 persons in attendance during this period.

Ninety-seven lectures were given by members of the speakers bureau to various professional and civic groups on the subject of alcohol and alcoholism.

"Alcoholism—A Treatment Digest for Physicians" is now in its *fifteenth* year of publication. This is a quarterly publication mailed to all practicing physicians in New Jersey, as well as other interested individuals. It has been well received and appreciated.

Program Emphasis

Recruitment of trained personnel in the community alcoholism treatment program continues to be a major problem. During the next year, as funds permit, a major emphasis will be placed upon the development of treatment programs in conjunction with existing community agencies, such as community mental health clinics, and, if appropriate, aftercare drug addiction clinics.

Major emphasis will also be placed on encouraging existing community helping agencies to provide appropriate services to the alcoholic. Many of these services can be provided much more effectively by these agencies than by special facilities limited exclusively to the alcoholic patient and his family.

Arthritis and Allied Disorders Program

In cooperation with the New Jersey Rheumatism Association and the New Jersey Arthritis Foundation, this Program sponsored a mid-winter clinical training session on "Crystal Induced Synovitis" which was well attended. Speakers were Dr. John Abruzzo of the New Jersey College of Medicine, Dr. Daniel McCarty of Hahnemann Medical College, and Dr. Leif Sorensen of the University of Chicago.

The Program Coordinator attended the Arthritis and Diabetes Conference held in New Orleans sponsored by the U. S. Public Health Service.

In cooperation with the Diabetes Program, a session in Arthritis and Diabetes supported by the Public Health Service was conducted in April, 1966 for the continuing education of physicians.

Thirty-six selected nurses and physical therapists were provided special training at a workshop which explored the practical and didactic aspects of handling the patient with arthritis. Faculty included two physicians, a nurse and a physical therapist, all of whom were well-qualified in dealing with the subject.

The New Jersey College of Medicine and Dentistry has moved its Rheumatology Unit to the Veterans Hospital in East Orange. This unit now operates three clinics, including the Jersey City Medical Center Clinic. The Rheumatology Unit continues to receive assistance from the Arthritis Program through its support of a clinical nurse. A report of the number of patients tested according to clinical categories during the year is as follows:

Rheumatoid Arthritis	1,001
Degenerative Arthritis	238
Rheumatic Fever	91
Gout	175
Other	852
TOTAL	2,357

Support for the services of a clinical nurse and physical therapist are being provided to the Arthritis Unit of the Hospital Center at Orange. The New Jersey Arthritis Foundation also shares with the support of this program. This assistance involves a broader community coverage and service to the arthritics in that area. A report of clinical activities for 1966 is as follows:

Patients Served	513
Patient Visits	4,494
Communities Served	23

This Program and the New Jersey Rheumatism Association sponsored a symposium on the "Diagnosis and Management of Arthritis." The specific subject matter concentrated on gouty arthritis, rheumatoid arthritis, juvenile arthritis, and osteoarthritis, since these conditions account for more than 80 percent of those afflicted with arthritis. The program was geared for the General Practitioner and was well attended.

Cancer Control Program

It might be said that 1966 was the year when a major push was made to develop greater use of cytology as a means of early cancer detection. The availability of project grants from the Public Health Service to develop hospital-based cervical cytology programs and a decision by the American Cancer Society, New Jersey Division, to promote the cytology screening, as well as the efforts of this Department to develop new programs, are factors which contributed to wider use of this proven method of cancer detection.

The Cancer Program in cooperation with Region II staff of the U. S. Public Health Service continued to provide consultation to community hospital-based cytology screening programs. Two federal grants were awarded to New Jersey hospitals namely, Newark City Hospital and St. Michael's Hospital in Newark. Several other grant applications were pending at the end of the year.

The American Cancer Society, New Jersey Division, has expanded its program of providing slide kits to private physicians for screening of patients in their offices, as well as increasing its educational efforts in this area.

Screening projects which have been promoted and supported by the Cancer Program reached 10,501 persons during this year. Of the 10,501 persons screened, there were 33 cases reported positive and 97 as suspicious. The positive cases have been referred for appropriate treatment and suspicious cases continue to be under surveillance. Three of the 13 programs supported by the Department are in local health departments. Although this has not been a major source of promoting cytology during the past years, it is anticipated that with the new state health aid funds to local communities, more and more local health departments will be developing cytology screening programs as a part of their chronic illness programming. To date, negotiations are underway with one additional health department; namely, Bayonne City Health Department, for the development of a program.

Oral Cytology

The oral cytology program initiated three years ago in conjunction with the Dental Health Program continues. Four one-day courses in oral cytology held in East Orange, Morristown, Cherry Hill, and Princeton were attended by 200 New Jersey dentists. To date a total of 725 dentists have attended these courses.

In an effort to promote the use of oral cytology, the Department has made laboratory services for the cytological examination of slides available to dentists who attend the course. To date, 1,510 cases have been screened, yielding 10 positive cases confirmed by biopsy and referred for appropriate treatment.

Cytotechnician Training

The program to train cytotechnician screeners continues in cooperation with Presbyterian Hospital of the United Hospitals of Newark. This program provides training in cytotechnology for qualified technicians who have been recommended by a practicing pathologist in the state. Seven students were accepted and completed the course which is held one day each week for a nine month period. This schedule permits the students to continue on their regular jobs while receiving training. To date, 47 students have completed the course.

Recruitment of qualified students to attend the accredited schools of cytotechnology continues to bear little fruit. This year, no technicians from New Jersey made use of the stipends available through this Department and the American Cancer Society. The major problem appears to be a general shortage of technicians, and for this reason, a reluctance on the part of the laboratory directors to release their staff for a minimum of six months for this training.

Cancer Registries

The *county* registry demonstration at Bergen Pines County Hospital has completed its fifth year of operation. Eight community hospitals in the county are participating in the registry. The report of four years of study indicates that 1,862 cases were added to the registry during the year. The total cases now listed with the registry are 7,238, with follow-up ranging from 75 percent-92 percent among the participating hospitals.

Death Certificates

The Cancer Program in cooperation with the Public Health Statistics Program continues to provide death certificates to hospital registries in New

Jersey, as well as other states. During the past year, there were 1,017 requests for copies of death certificates. Of this number, 753 were found and furnished to the registries.

Smoking and Health

During the first half of this year, anti-smoking activities were at their peak. Employment of a coordinator for the New Jersey Interagency Council on Smoking and Health enabled the Program to activate local interagency councils on smoking and health. Fourteen counties have either organized or are in the process of organizing their councils. Two counties, Mercer and Camden, have begun activities in conjunction with the schools in their area.

A newsletter was developed by the State Interagency Council and distributed to interested official and voluntary agencies throughout New Jersey, as well as other states. The information contained in the newsletter is geared to interested local health and welfare agencies concerned with the problem of smoking and health.

The third revision of the Teacher's Reference Guide on Smoking and Health was completed and distributed to all public and private elementary and secondary schools throughout the state. The new revision contains material that will be helpful to the elementary teacher in developing curriculum. Approximately 10,000 have been distributed to date. In addition, single copies have been made available to out-of-state secondary schools, colleges, and voluntary health agencies on request.

The untimely death of the coordinator of the New Jersey Interagency Council in June considerably curtailed the activities of the Council. Every effort is being made to fill this position so that this most important health activity will be continued.

Nursing Activities

The Black-Stevenson Clinical Observation Program provides continuing education in cancer treatment and management for nurses at the Presbyterian Hospital, United Hospitals of Newark. This year, 87 nurses representing 23 public health agencies and 13 hospitals participated. Small groups from hospitals and public health nursing agencies attend the Head and Neck Clinic every other Wednesday, September through May. For example, an opportunity is often provided for the nurses to observe the actual fitting and care of oral prothesis by a dentist trained in this field. The patient's cosmetic appearance after surgery and his increased comfortable life span are emphasized. The afternoon session consists of observation in the cobalt therapy unit and the

isotope department where nursing implications are emphasized. Throughout the day, attention is placed on prevention, newer methods of diagnosis and treatment available for an optimistic attitude toward cancer.

Approximately 85 nurses attended a one-day Radiological Nursing Institute sponsored by the Cancer Control Program in conjunction with the American Cancer Society, New Jersey Division, at the Presbyterian Hospital in Newark. Speakers included a radiotherapist, a nurse-coordinator from a radiotherapy department, and a representative of the Radiological Health Program from this Department. This meeting evolved from a survey of schools of nursing and hospitals conducted by the Cancer Program Nurse Consultant which revealed a need for information on the subject.

Inservice education on cancer and related disorders was given to 75 nurses at the Morristown Memorial Hospital, the Visiting Nurse Association of Camden, and the Merchantville-Pennsauken Visiting Nurse Association. In addition, Public Health Nurse Coordinator spoke at a program for instructors of nurse refresher courses held at the New Jersey Hospital Association, Princeton. A three-dimensional plastic model was used to demonstrate the anatomical changes due to surgical procedures such as colostomy, ileostomy, and ileal bladder. The post-operative nursing care and rehabilitation of these patients were emphasized. These included care of appliances used by these patients and the physiological, social, and vocational adjustment required. Community agencies available for assistance to these patients was included in the discussion.

Educational Activities

A grant from the Cancer Program enabled the Academy of Medicine of New Jersey to conduct six seminars on cancer for practicing physicians. The six programs were held at the following hospitals: Hackensack, St. Elizabeth, Englewood, Warren, and St. Peters. The subjects covered included "Leukemia" and "Therapy of Lymphomas: Chemotherapy vs Radiation." The programs were attended by more than 375 physicians.

The annual seminar for pathologists which is sponsored by the New Jersey Society of Pathologists and this Department this year was devoted to the topic of cytopathology. A record attendance of 225 pathologists participated in this full-day seminar. A collection of slides representing problem cases was mailed to each pathologist and a diagnosis determined prior to the seminar. The findings as reported by the participants were discused by the moderator, Doctor Leopold Koss.

Films on cancer which have been placed in the film library of the museum continue to receive wide use from a variety of health and welfare groups, as well as schools. During the year there were more than thirty film showings with an approximate attendance of 1,400.

Diabetes, Endocrine, and Metabolic Disease Program

In 1966, the Diabetes Control Program coordinated blood testing activities which involved almost 49,000 individuals. These tests were performed in conjunction with Diabetes Detection Week as well as short- and long-term detection programs throughout the state. Yields of newly discovered diabetics were extremely impressive. Very high levels, ranging from 15 to more than 35 newly discovered diabetics per 1,000 screened, were reported in studies among New Jersey State Highway Department employees, Garden State Parkway employees, and studies done at the Newcomb Hospital, Somerset County Tuberculosis and Health Association, East Orange Health Department, Edison Health Department, Verona Health Department, and Long Branch Public Health Nursing Association. These represent yields two times to almost five times the national average yield as reported by the U.S. Public Health Service. Our yields, in some instances, will be even higher when complete follow-up reports are available.

The following tables of results are organized by 1) Diabetes Detection Week, 2) year-round diabetes screening programs, and 3) short-term diabetes screening projects.

Table 1. Diabetes Detection Week

Total Screened	*Dextrostix Positive at 130 value block on initial screening*	*Retest on AutoAnalyzer(R) Venous Samples Negative (Less than 130 mg%)*	*Positive (130 mg% or higher)*
34,731	3,152	2,034	1,118

A total of 105 detection centers were established during Diabetes Detection Week 1966.

Hospitals	34
Health Departments	35
Community Sites	26
Other Areas	10
	105

Thirty-five health departments, 15 medical societies and seven osteopathic societies were directly involved.

Table 2. SHORT-TERM SCREENING PROJECTS

Site	Number Tested	Positive	New	Potential	Known	Not* Diabetic	Follow-up Incomplete	Per 1,000 ** Yield
Health-Agriculture Employees	144	9	1	2	...	4	2	6.9
Highway Department Employees (1st)	227	9	4	1	1	3	..	17.6
Marlboro Township Board of Health	41	3	...	...	...	...	3	...
Sisters of Poor, Newark	190	10	4	1	1	4	...	21.1
Highway Department Employees (2nd)	163	7	5	..	...	2	..	30.7
Bergen County Health Fair	375	18	3	3	...	9	3	8.
Motor Vehicle Employees	386	6	2	1	...	3	...	5.2
Somerset County Health Fair	625	8	4	...	4	...	...	6.4
Migrant Program Project	197	5	1	...	4	...	...	5.1
Newcomb Hospital	325	18	5	2	...	10	1	15.1
Totals	2,673	93	29	10	10	35	9	10.8

* Screened positive but later diagnosed negative by physician.
** Number of new diabetics per 1,000 persons tested.

Table 3. YEAR-ROUND DETECTION CENTERS

Site	Number Tested	Positive	New	Potential	Known	Not* Diabetic	Follow-up Incomplete	Yield per 1,000 screened**
Somerset County and Health Association	197	28	7	1	7	13	...	35.5
Cranford Health Department	275	20	1	3	.	14	2	3.6
East Orange Health Department	1,270	90	21	5	42	15	7	16.5
Edison Health Department	165	14	2	1	4	5	2	12.1
Morristown Memorial Hospital	5,267	334	52	..	52	149	81	10.
Verona Health Department	451	12	5	1	1	1	4	11.1
Long Branch Public Health Nursing	211	22	5	2	5	10	..	23.2
Woodbridge Health Department	868	57	11	1	5	38	2	12.1
Camden Visiting Nurse Association	1,845	84	12	6	12	18	36	6.5
Hoboken Health Department	400	10	2	1	5	2	...	5.
Garden State Employees	369	17	10	1	4	1	1	27.2
Totals	11,318	688	128	22	137	266	135	11.3

Listed below are the results of questionnaires sent to the 70 participating groups. (Forty-three of the questionnaires were returned.)

Personnel used during Diabetes Detection Week	948
Physicians	129
Public Health Nurses	122
Private Nurses	144
Technicians	86
Volunteers (Clerical)	310
Others	157

Professional Education

The following films on Diabetes were requested for showing during the year:

"Diabetes and Its Long Range Control"	17
"Diabetes and You Too"	8
"Diabetes: What You Don't Know Can Hurt You!"	34
"Chiropody Clinic in Hospital Routine"	2
"Diabetes in Youth"	4
"Diabetic Unknown"	32

The Utilization and Distribution Section of the National Medical Audio-Visual Facility made 181 loans of "Diabetes and Its Long Range Control" during the same period. They state, however, that this is not indicative of the total demand for this particular film as they received 110 additional requests which they could not fill because of the limited number of copies of the film.

Medical Film Guild, Ltd., producers of the film "Diabetes and its Long Range Control," reported 39 showings of the film in 1966.

"Retinal and Renal Expression of Diabetic Microangiopathy"—Diabetes Workshop, May 1966, Health and Agriculture Building, Trenton. Fifty physicians attended.

"Recent Advances in Diabetes," November, 1966. The Academy of Medicine of New Jersey in conjunction with the New Jersey State Department of Health, held at Englewood Hospital, Englewood, N. J., with 60 in attendance.

Patient and Non-Professional Education

More than 3,500 requests for "Diabetes and the School Child" were filled.

More than 4,700 requests for various non-professional literature for diabetic patients, their families, and other interested persons were filled.

During Diabetes Detection Week, the following pamphlets were distributed:

"Diabetes Runs in Families"	24,447
"Overweight?—Check for Diabetes"	16,260
"A Quiz Game"	10,000
"Foot Care for People with Diabetes"	15,000

Activities of Program Staff

Members of the staff of the Diabetes Control Program gave lectures, presented formal papers, and participated in conferences and seminars to professional audiences in New Jersey and in six other states. The staff organized special training courses for public health personnel from 13 states, as well as a special Public Health Fellowship for the American Podiatry Association.

Published Papers

"Counseling and Managing Your Diabetic Patient," October, 1966 issue of CONSULTANT.

"Diabetes Detection Week 1965"—PUBLIC HEALTH NEWS, September, 1966 issue.

"Diabetes Case-Finding in Clinical Practice," June, 1966 issue of the JOURNAL of the New Jersey Association of Osteopathic Physicians and Surgeons.

"Patient Education with AutoTutor Teaching Machine and Tutor Film Taking Care of Diabetes"; DIABETES OUTLOOK, November, 1966 issue.

Research and Special Projects

The Mercer County Component Medical Society's Prenatal Diabetes Detection and Education Project completed an evaluation on 1,500 individuals. This concluded the clinical phase. The remainder of the time was spent in analyzing hospital records of each individual pregnancy and abstracting the data for transmittal to punched cards. A code was prepared and the data turned over to the Data Processing Unit for analysis. This information will be available soon.

A contract was entered into with U. S. Public Health Service, Diabetes and Arthritis Program, for a total diabetes control program in a community. Salem, New Jersey was selected for the first study of this kind in the United States. The project staff includes a local physician as director, a public health advisor assigned from U. S. Public Health Service, a laboratory technician,

public health nurse, secretary and a part-time nutritionist. In addition, a second physician has been active in patient education. The time was spent in community organization for case-finding professional and patient education, completion of an audit of a five-year experience with diabetic patients admitted to Salem County Memorial Hospital, completion of a structured interview with each of the practicing physicians in the community, audit of office records of diabetic patients of selected physicians in the community, development of a diabetic patient register, etc. A manual of procedures has been prepared with all of the details of the project.

In connection with the Salem project, a grant was provided Salem County Memorial Hospital to secure hospital records of diabetic patients over a five-year period; a contract entered into with the City of Salem to develop a total diabetes program; a contract provided Dr. Isadore Lipkin for professional services relating to patient education; and a grant provided Dr. William Sprout for his role as Project Director of the project.

A comparison study was undertaken on 377 state employees in the Health and Agriculture Building and the Highway Department on three different methods of diabetes screening. Two of the methods involved the securing of a small amount of blood from the fingertip, one utilizing a reagent strip (Dextrostix^{R}) and a color chart and the other utilizing an especially made pipette (Unopette^{R}). The third method, the control method, was the taking of a sample of blood from the arm. All specimens were analyzed in the laboratory of this Department.

Grants-in-Aid

A grant was again provided the New Jersey Diabetes Association for the services of a physician and nurse at Camp Nejeda, the summer camp for diabetic children at Stillwater, New Jersey.

A grant was provided Perth Amboy General Hospital for teaching diabetic patients self-care and better knowledge of this chronic disease.

A grant was provided Morristown Memorial Hospital for screening high risk individuals, including pregnant women in the clinic.

A grant was provided to the Visiting Nurse Association of Camden for a diabetes screening project and making a comparison study by use of Dextrostix and Unopette methods of securing blood specimens.

Heart and Circulatory Disease Program

Heart disease and stroke are the nation's leading health problems and continue to rank first and third in causes of death, accounting for 56.2 percent of all resident deaths in New Jersey in 1965 as compared to 50.1 percent of all deaths in the United States. Arteriosclerotic heart disease including coronary heart disease accounted for 22,786 of the 30,878 heart disease deaths. Deaths from stroke (vascular lesions affecting the central nervous system) rose from 5,597 deaths in 1964 to 5,678 deaths in 1965. While prevention and cure are the ultimate goals still to be realized, the prevention of untimely death and disability continues to be the immediate goal of the program.

Atherosclerosis Research Project—(Anti-Coronary Club)

The Anti-Coronary Club at Montclair continues the study of 200 young males between the ages of 20 and 50. A group of 100 men referred by their family physicians is the study group; a group of 100 men referred by plant physicians is the control group. An additional 100 men have been admitted to the Project as a reserve for additional studies that may be planned and they have been treated identically to the study group. The prerequisite for entry into the project study group is one or more documented myocardial infarctions. The patients are classified into four groups on the basis of their electrocardiograms: (1) those with a normal electrocardiogram at the time of admission but with previous evidence of infarction on the electrocardiogram obtained at the time of the initial insult; (2) those with an abnormal electrocardiogram showing damage but no specific area of infarction. These will also require corroboration by previous electrocardiograms taken at the time of initial insult; (3) those with one infarction as shown by abnormal Q waves at the time of admission; and (4) those with more than one infarction.

Continued evaluation of the first five years of experience of the project, in addition to showing a 160 percent higher infarction rate and a 233 percent higher mortality rate for the control group as opposed to the study group, has shown the following lipid changes. The blood cholestrol is lowered 10 percent by the 30 percent fat dietary pattern and remains so throughout the period of adherence. The triglycerides, total fats, phospholipids and neutral fats, however, do not appear to be altered by the dietary pattern and do not differ from the levels in the control group. Objective monitoring of dietary adherence by fatty acid analysis of the serum triglycerides and free fatty acids and the depot fat of the subject has continued, and holds promise for wider application of epidemiological work.

Studies evaluating the effects of supplemental oral calcium upon serum lipids in both animals and man have continued. It appears that the calcium ion works best when it remains in the gut, and that in this form, it is a potent agent for reducing both cholestrol and triglyceride level of serum and tissues. Mechanism studies suggest that there is an initial effect on increasing excretion of the cholestrol group and free fatty acids. Much more work in this vein, however, is still needed.

Studies attempting to evaluate the effects of quantified stressful stimuli on blood lipids in man have been completed and the results are now in press. Aside from significant changes in the free fatty acid levels following certain of the carefully measured stimuli, no reproducible or predictible changes in any other lipid parameter were noted. These findings raise certain questions as to the significance of low-level, day-to-day stresses on blood lipid levels and the pathogenesis of atherosclerotic heart disease, but more data are still needed.

Statistical participation has been obtained from Rutgers—the State University, Applied Statistics Center. All data have been placed on magnetic tape for computer analysis. The medical director of the Project addressed the Seventh International Congress of Nutrition in Hamburg, Germany. The title of his monograph was "Possible Similarities of Lipid Effects of Supplemental Dietary Calcium and Polyunsaturated Fats in Humans."

The medical director also spent several days in England with Doctor Ben Nordin, Professor of Epidemiology at the University of Leeds School of Medicine, Leeds, England at his Metabolic Unit in Leeds. Tentative plans were laid for a survey of randomized men from two similar groups in London and in Leeds to see if, in fact, living in a hard water area (London) produces lower lipid levels than living in a soft water area (Leeds). The Montclair group will be doing all of the lipid analyses. The randomization techniques will be done by the London group and the sampling will be done in both London and Leeds. Doctor Nordin is one of the world's experts in this field, and he has been helpful to our group in determining the disassociation constants of several of the fatty acid calcium complexes and of the bile acid calcium complexes.

Numerous requests were received during this past year from medical, public health, and lay groups for speakers from the Anti-Coronary Club to discuss the studies and arteriosclerosis in general. Fifty-six requests were honored and were considered most useful in disseminating accumulated knowledge in arteriosclerosis epidemiology and management.

Coronary Care

The intensive Coronary Care Unit concept has shown that when acute myocardial infarction patients are cared for in these units, the mortality can be reduced from 10 to 30 percent. The basic premise in these units is the continuous assessment of patients through a unique combination of direct observation and cardiac monitoring. The nurse renders invaluable assistance to the patient and physician as she provides intensive nursing care and identifies patient problems as soon as they are evident. This system implies more than having a nurse call a physician when a problem arises. She must be able to evaluate each problem and proceed with therapy. It follows that every hospital providing intensive coronary care to its myocardial infarction patients must have a highly trained staff of competent nurses to provide this specialized care and treatment.

Through a crash program of education, an objective of the Program to assist nurses in obtaining preparation has been realized during the past year. Seven one-week courses attended by 209 nurses from 51 hospitals were held at Overlook Hospital, Summit. Two two-week courses held at Hackensack Hospital were attended by 37 nurses from 20 hospitals. Hospitals sending nurses to the course have monitoring equipment and are in various stages of operating Intensive Coronary Care Units.

Congestive Heart Failure

The Special Heart Project, a multi-disciplinary approach toward the treatment of congestive heart failure, continued at the St. Peter's Hospital in New Brunswick. Of the Project's original 50 patients, 41 were still participating as of January 1, 1966; nine had expired during the previous 15 months, or since the project began. In the subsequent year, 11 patients expired from their basic cardiac disease in at least five instances, two were discharged from the project and one moved. Forty-nine patients were hospitalized for 53 admissions and 717 days. Of these totals, only 25 percent of the admissions and 15 percent of the days were for congestive heart failure; the rest were for unrelated conditions. The team conferences continued with participation by physicians, clinic nurses, visiting nurse, social workers, nutritionists, and a secretary; there were 40 such conferences.

Two highlights of the year were the re-institution of group interaction sessions at St. Peter's Hospital where project patients meet and relax with table games and group discussions under the supervision of the project social worker and volunteer students from Rutgers—the State University; and the presentation of results of the project, one of six such presentations, at the National Congestive Heart Failure Seminar in California.

External Cardiopulmonary Resuscitation (ECPR)

A state-wide conference was held to discuss teaching methods and the dissemination of knowledge in techniques of external cardiopulmonary resuscitation. Representation was strong and varied including physicians, nurses, pertinent hospital administrative personnel, and rescue and fire squad members.

The full-day training course on external cardiopulmonary resuscitation co-sponsored by this Department and the New Jersey College of Medicine and Dentistry was continued and remained in great demand. Seven sessions were held and attended by 78 physicians, 98 nurses, 26 medical students, and two other para-medical people. Individuals trained at this course assisted with 56 training sessions in their respective hospitals for physicians and selected nurses.

Stroke Projects

Six hundred thirty cerebrovascular accident patients were referred by family physicians to the Stroke Rehabilitation Projects at Cooper Hospital, Camden; the East Orange General Hospital, East Orange; the Presbyterian Hospital, Newark; Bayonne Hospital, Bayonne; Cape May County Health Department, Cape May; Overlook Hospital, Summit; the Rehabilitation Department Stroke Unit, St. Michael's Hospital, Newark; and Visiting Nurse Association of Atlantic City. Sixty percent of these patients have been discharged from the general hospital to their homes. Approximately 73 percent of those discharged attain either total or partial independence in daily living activities. Considering the age and sex grouping (55 percent women), it is not unexpected that only 7 to 11 percent return to a job outside the home. However, imposed deformities and disabilities have been prevented and many months of independent living at home with their families have been gained by a large percentage of these patients who formerly would have been institutionalized at the taxpayers' expense. The Medicare Program has not met as much of the financial burden as had been expected. This has been of particular significance for out-patient services of physical, occupational, speech therapy, and social work as well as payment for physiatrist services.

Lack of trained personnel to provide rehabilitation services for stroke patients continues to be a problem. A pilot program for training practical nurses underwritten by this Program was instituted at the Hospital Center at Orange where 30 licensed practical nurses attended a two-week training program. Plans include participation with the State Department of Education, Division of Vocational Educational, in a pilot training program for rehabilitation aides.

Nutrition Services

It is generally recognized that nutrition plays an important role in the prevention and control of heart disease. Much evidence implicates diet as one of the key etiological factors in coronary atherosclerosis and the resultant heart disease including properly instituted diet therapy using diets planned to reduce the intake of saturated fats and to reduce or maintain body weight.

The New Jersey Diet Manual Committee has completed revision of the "Diet Manual" which will be printed next year. Several dietary treatments including fat-controlled diets, those for inborn errors of metabolism, and the kidney dialysis diet will be included in this revised edition. The use of the manual by Extended Care Facilities has stimulated its use. More than 122 copies were distributed in 1966.

The "Diet Pads" (Bland, Low Calorie, Fat Restricted—1800 and 2600) developed by this Program continue to be popular with physicians, hospitals, and dietitians. In 1966, a total of 473 Diet Pads were distributed upon request.

The nutritionist in the Heart Program assisted with the planning and made presentations at several educational and in-service training programs for diet counselors, dietitians, and nutritionists to prepare them for participation in Health Insurance for the Aged Program (Medicare). "Community and Technical Resources in Diet Therapy" was the title of a refresher institute. The nutritionist assisted the Office of Health Facilities Certification (Medicare) in the evaluation of dietary services in institutions and with the establishment of criteria for Extended Care Facilities. "Community Programs and the Nutrition Consultant" was the title of a presentation by the nutritionist at an institute on "Atherosclerosis Diet and Community Consultation" sponsored by the U. S. Public Health Service at the Training Center for Comprehensive Care, Framingham, Massachusetts. In addition, presentations were made at various symposia on diet in chronic illnesses including heart and circulatory diseases in cooperation with the East Orange Veterans Administration Hospital, New Jersey Dietetic Association, and a training course in diabetes and arthritis and dietary services in care at home for long-term patients.

New Jersey has been given the responsibility of chairing a "Committee to Develop Guidelines for the Establishment of Community Diet Counseling Services" by the Executive Board of the American Dietetic Association. The Committee functions as part of the activities of the Community Nutrition and Diet Therapy National Sections and its "Guidelines" will be distributed nationally.

Diet Counseling

Diet counselors in two areas continue to function actively as part of medical teams—the Stroke Project at Cooper Hospital, Camden, and the Special Heart Project at St. Peter's Hospital, New Brunswick. The year has been one of transition for the 11 diet counseling services. With the decreases in grant-in-aid funds, it has been necessary for the Services to concentrate their efforts on other sources of support such as patient fees, approved weight control classes, teaching, welfare, community funds, and Health Insurance for the Aged.

Diet counselors are now active as nutritionists in Home Health Agencies and as dietary consultants for Extended Care Facilities although Medicare does not now pay for these services. The previous focus of the diet counselor was in the field of therapeutic dietetics and patient education which is compatible with her role in the Home Health Agency. Since not all of the diet counselors' recent experiences had been in administrative dietetics, all attended an institute on the "Role of Nutritionists and Dietitians in Medicare" presented by Columbia University, Public Health Service and this Department. The purpose of the institute was to provide orientation and up-dating for persons participating in Health Insurance for the Aged.

Education

This Program continued to assist the Academy of Medicine of New Jersey in the program of continuing physician education. Four roving symposia on "Management of Ischemic Heart Disease" were held in four selected areas of the state. Full-day symposia were held at the Academy of Medicine with state-wide physician participation. Two hundred forty physicians attended these courses.

Post-graduate courses on "Recent Advances in Clinical Medicine" were presented with the cooperation of St. Michael's Hospital, Newark. These courses were designed to acquaint the practicing physician with the most recent developments in the field of cardiology and other areas of medicine, and are open to physicians, residents, and interns of the state.

Activities of the New Jersey Heart Program with emphasis on the Congestive Heart Failure Project were presented at the annual meeting of the State and Territorial Chronic Disease Program Directors.

The following papers written by Program personnel were published: "A Training Programme for External Cardiopulmonary Resuscitation—Its Health Education Implication"—*International Journal of Health Education*, Vol. IX 1966, October-December, 1966; "Effects of Dietary Calcium Upon Lipid

Metabolism in Mature Male Rats Fed Beef Tallow," *Journal of Nutrition*, March, 1966; "Relationships of Serum Lipids to Certain Dietary Factors in the Young Male with Coronary Heart Disease," *Journal of the American Dietetic Association*, 50:112; "Modified Fat Dietary Management of the Young Coronary Male—A Five-Year Study," *Circulation* 32:11–3.

Special Projects

The Department has a contract with Cooper Hospital in Camden to develop and administer a stroke prevention program based on the early and comprehensive complete diagnostic work-up, treatment, and follow-up of 40 cerebrovascular disease patients presenting transient cerebral ischemia without infarction. Services include the team approach consisting of neurosurgeon, neurologist, internist, vascular surgeon, radiologist, ophthalmologist, plus diagnostic procedures and complete laboratory studies.

To expand and strengthen community health facilities to provide appropriate care to heart patients the services of a cardiac consultant continue at the Bridgeton Hospital in Bridgeton on a part-time basis. During the year, 203 patients were seen in the cardiac clinic at Bridgeton Hospital by a visiting cardiac specialist.

Assistance was provided to the Newcomb Hospital, Vineland, for the services of a nurse and clerk for the cardiac clinic to assist with the clinical evaluation of suspected and known cardiac patients. Teaching and consultative services were offered to patients also.

Programs offering technical help in physiological studies in conjunction with open-heart surgery and rehabilitation of the cardiac patient were established at two hospitals in the metropolitan area. Two hundred fifty-seven selected patients received this service at the Hospital Center at Orange; 2,158 patients received specified services at St. Michael's Hospital, Newark.

Diseases of the Nervous System and Special Senses Program

Electroencephalography Symposium

Approximately 60 electroencephalograph technicians were provided with an intensive day's training, at the "Eighth Symposium on Electroencephalography" in Trenton. Featured speakers were: Dr. Eli Goldensohn, Professor of Neurology, Hospital of the University of Pennsylvania; Molly Cox, Instructor in Neurology, Albert Einstein College of Medicine; Betty Jo Hurley, Chief EEG Technician, Hospital of the University of Pennsylvania; and Theda Sannit, Chief EEG Technician, Graduate Hospital, University of Pennsylvania.

Electroencephalography Course

An intensive, three-day intensive revolving electroencephalography course designed to bring the electroencephalograph technicians completely up-to-date with new teachings and improve their practice was sponsored by this Program. Participating hospitals were the Graduate Hospital, Philadelphia; the Hospital of the University of Pennsylvania, Philadelphia; and the Albert Einstein Medical College, Bronx, New York. This course provided the opportunity for small groups of technicians to experience first-hand training at the three hospitals' electroencephalograph laboratories on three successive days. This unique course was limited to 15 persons and proved to be of superior value for the technicians.

Expansion of Consultation Service

The U. S. Public Health Service grant providing for expansion of the New Jersey Consultation Service for Neurological Diseases is now in its fifth year. This expanded service has made possible the clinical evaluation of a broad range of neurologic disorders. Prior to expansion, only convulsive disorders were accepted for evaluation. This project now operates six clinics located in strategic areas of the state thereby providing accessibility to the patients. The case load has shown a gradual increase since the beginning of the expansion. Table 1 shows the activities for the year 1966.

Table 1. New Jersey Consultation Service for Neurological Diseases Clinical Activities

Patients Awaiting Evaluation Listed by Areas as of December 31, 1966

Central Area	40
Northern Area	24
Southern Area	22
Metropolitan Area	34

Community Clinics—January 1, 1966 - December 31, 1966

	Patients Seen	
	New	*Old (Re-Visit)*
Southern (Total Seen—71)	50	21
Northern (Total Seen—82)	60	22
Metropolitan (Total Seen—149)	139	10
Central (Total Seen—141)	108	33
Totals (Grand Total Number Seen—443)	357 New	86 (Re-Visit) Old

GRAND TOTAL OF IN-PATIENT ADMISSIONS
JANUARY 1, 1966 - DECEMBER 31, 1966
49 In-Patients Admitted to New Jersey Neuro-Psychiatric Institute
(New Jersey Consultation Service for Neurological Diseases, 1966)

Electroencephalograph Machines

Twenty-two electroencephalograph machines have been placed in community hospitals during the past 12 years. These instruments are invaluable for making "brain wave tracings" to aid in the neurologic work-up. The electroencephalograph machine has now become a necessary part of each hospital's Neurologic Unit. It has its greatest application in convulsive disorders and brain tumors. Table 2 shows these activities for 1966. The training sessions outlined above assure the best use of these valuable instruments.

Table 2. REPORT OF ELECTROENCEPHALOGRAPH SERVICES IN 21 HOSPITALS
January 1, 1966 - December 31, 1966

	Number of Patients Examined	*Number of EEG Examinations*		
		Total	*Normal*	*Abnormal*
All Souls Hospital (Morristown)	60	64	51	13
Atlantic City Hospital	183	183	123	60
Burlington County Memorial Hospital (Mount Holly)	87	87	55	32
Clara Maass Memorial Hospital (Belleville)	142	142	93	49
East Orange General Hospital	86	86	41	45
Elizabeth General Hospital	182	186	110	76
Englewood Hospital	120	120	72	48
Fitkin Memorial Hospital (Neptune)	770	770	545	225
Hunterdon Medical Center (Flemington)	24	24	15	9
Jersey Shore Medical Center	239	239	171	68
Mercer Hospital (Trenton)	154	154	117	37
Monmouth Medical Center (Long Branch)	348	348	220	128
Morristown Memorial Hospital	371	371	256	115
Mountainside Hospital (Montclair)	188	188	122	66
Paterson General Hospital	233	237	132	105
Perth Amboy General Hospital	223	223	200	23
Presbyterian Unit Hospital (Newark)	135	135	102	33
Princeton Hospital	98	98	65	33
St. Elizabeth Hospital (Elizabeth)	116	113	49	64
St. Francis Hospital (Trenton)	145	149	89	60
St. Mary's Hospital (Hoboken)	71	71	55	16
Total	4,075	3,988	2,683	1,305

Division of Constructive Health

WATSON E. NIEMAN, M.D., *Director*

Crippled Children's Program	WATSON E. NEIMAN, M.D. *Program Coordinator*
Dental Health Program	DAVID R. WALLACE, D.D.S., M.P.H. *Program Coordinator*
Maternal and Child Health Program	ANTHONY J. ZANGARA, M.D. *Program Coordinator*

Division of Constructive Health

Introductory Statement

The Programs of the Division of Constructive Health in their objectives share the basic concepts of: prevention of early diseases where possible; early diagnosis where prevention is not possible; and provision of restorative services when needed.

In addition, to fulfill the mission of the Division it has been demonstrated that the activities of the Programs must be closely coordinated within the Division. There also must be a combined effort on the part of all governmental, private, philanthropic, and professional groups throughout the state if these objectives are to be met.

Crippled Children's Program

General Statement

The objective of the Crippled Children's Program is to provide recommended medical rehabilitation services to the physically handicapped whose disabilities may be corrected or alleviated. Maximum accomplishment of this objective is attained through cooperation with state, county, and municipal representatives of hospitals, rehabilitation facilities, private, philanthropic, and professional groups.

Community Services and Program Activities

In accordance with the definition of a crippled child and within the diagnostic categories as accepted and approved by the Program, there were 27,183 children registered with the program at the end of 1966 as compared with 25,880 children registered in 1965. There were 3,281 children added to the Program in 1966 compared with 3,845 in 1965. Of the total number of children registered with the Program, 9,807 received services in 1966 as compared with 11,282 in 1965. Much of this decrease was due to elimination of the Rural Youth Corps Program.

Hospitalization and Convalescent Care

The Program assisted in underwriting 23,467 hospital bed days and 29,946 convalescent bed days for 886 children in 1966 as compared with 21,488

hospital bed days and 30,308 convalescent bed days for 698 children in 1965. In 1966, the total expenditure for these services amounted to $543,606.09.

During 1966, we agreed to participate with 64 New Jersey hospitals, nine New York hospitals, and four Philadelphia hospitals. We cooperated with six convalescent centers in New Jersey and one in the State of New York.

Prosthetic Devices, Bracing and Appliances

In 1966, the Program assisted in providing 2,252 braces and artificial limbs for 1,011 children compared with 2,827 appliances to 990 children in 1965. The total cost of these devices was $125,032.47. We agreed to participate with 82 vendors in New Jersey and with 14 out-of-state vendors.

Nursing Services

The Program helped pay for 9,071 nursing visits to 6,180 children in 1966. This is a slight drop from the 9,962 nursing visits provided to 7,686 children in 1965. Nursing agencies were paid $44,463.61 for their services. In addition, nursing consultation services were provided to all nursing agencies working with the Program.

The following table shows the number of evaluations completed in 1966 and children served, compared to similar categories in 1965.

Table 1. Evaluations and Children Served

	1966 Evaluations	*Children Served*	*1965 Evaluations*	*Children Served*
Asthma	8	8	18	18
Amputee	12	11	22	22
Cardiac	41	20	36	36
Cleft Palate	28	25	51	51
Cystic Fibrosis	21	8	21	21
Hearing and Speech Evaluations	274	213	250	250
Hearing and Speech Therapy	5,649	203	4,282	240
Orthodontia	323	125	32	32
Physical Therapy	1,179	52	1,620	100

Table 2. Case Numbers and Payment of Hospital, Convalescent Home and Appliance Services

Hospital, Convalescent Care—Total Number of Children	886
Total Bed Days	53,413
Hospital	
Number of children receiving hospital services	673
Number of bed days	23,467

Convalescent Care

Number of children receiving convalescent services	213
Number of bed days	29,946
Payment of Bed Days (Hospital and Convalescent Care) Total	$543,606.09
State and Federal Funds	$245,767.45
County Boards of Chosen Freeholders	282,166.52
Others	5,821.28
Parents	9,850.84

Appliances

Total Number of Children	1,011
Total Number Purchased	2,252
Total Payments	$125,032.47
State and Federal Funds	$42,236.89
County Boards of Chosen Freeholders	71,405.93
Others	4,212.09
Parents	7,177.56

Table 3. Clinic, Hospital, and Convalescent Services

Section I—Children who received Clinic, Hospital, and Convalescent Services, and the number of services:

Services	*Number Children*	*Number of Visits or days*
Clinic	10,550	20,290 Visits
Hospital	673	23,467 Days
Convalescent	213	29,946 Days
Total Count of Children and Services	11,436	73,703 Units

Section II—County Residence of Children Receiving Clinic, Hospital and Convalescent Services:

Total Number of Children 9,807

County	*Number of Children*	*County*	*Number of Children*
Atlantic	129	Monmouth	399
Bergen	686	Morris	534
Burlington	315	Ocean	135
Camden	517	Passaic	254
Cape May	64	Salem	42
Cumberland	150	Somerset	310
Essex	2,874	Sussex	178
Gloucester	236	Union	760
Hudson	804	Warren	88
Hunterdon	119	Military	15
Mercer	532	Institutions	23
Middlesex	643		

The Program provided neonatal surgical services in one center in New Jersey during 1966; the center providing this service had 421 bed days of care during this period at a total cost of $15,804.32. These bed days are included in the total above.

During 1965, the Crippled Children's Program offered to all counties an opportunity to reverse the Program–County participation ratio. In 1964, the county's share of the cost was 60 percent and the Program's share was 40 percent. At the end of 1965, there were 14 counties paying 40 percent of the share of the cost and seven counties still operating under the old ratio, wherein they paid 60 percent of the cost. At the end of 1966, there were 15 counties paying 40 percent of the share of the cost and six counties still paying 60 percent of the cost. As in the past, some counties have had difficulty in meeting their share and no county has been willing to add new diagnostic categories of crippled children because of the extra cost involved. At the end of the year, two counties had run out of money to pay their share of the cost. One county had appropriated the maximum amount permitted by law, therefore the Program picked up its share of the cost for the balance of the year. In the other county, inasmuch as the county did not appropriate the maximum amount permitted by law, the Program could not pick up its balances.

Dental Health Program

Introduction

The Dental Health Program has been involved with local health departments in developing dental programs since the State Health Aid Act has been put into effect. The impetus of federal legislation stressing comprehensive health services has increased the interest in dental health. Dental health education programs have stimulated an awareness of the need for dental services.

The local health departments in surveying the health needs of the people in their jurisdiction have become aware of the large volume of unmet dental needs. Programs of prevention, health education, and treatment are being planned with the local health departments being the focus of this development. In planning their programs, the local authorities have consulted with the State Dental Health Program so that programs can be developed which are tailored to meet the needs of the local jurisdiction.

In much of the recent federal health legislation, there has been a stress put on comprehensive health services. When comprehensive health services are stressed, dental health services are a necessity. Therefore, we are experiencing an inclusion of dental services as an integral part of all health programs.

Dental health education programs have been carried out as a part of all public health dental programs. With the astute society that has developed throughout the country, a concerted effort is being made to conquer the problems of dental disease which plague mankind. Increased efforts in prevention; increased efforts in dental health education; increased efforts in dental research and implementation of dental research; and provision of treatment services are the ways that the dental profession can work towards a solution of the dental problems of the people.

Preventive Programs and Dental Health Education

Promotion of fluoridation of public water supplies has been intensified during the year. The Dental Health Program and the Fluoridation Committee from the New Jersey State Dental Society have been engaged in carrying out educational programs for community agencies which in turn will promote fluoridation in their respective communities.

Again, the Dental Health Program has provided dental health educational services for the migrants and their children during their stay in New Jersey. This was accomplished by employing five dental students from New Jersey for a training program. Dental health education was provided at five school sites and several camps. The dental health education program for the adults was given in the evening at the camps. This program was very well received and appreciated by the migrant population.

The Dental Health Program cooperated with the dental schools and with the New Jersey State Dental Society in providing courses for the dental profession.

In cooperation with the New Jersey College of Medicine and Dentistry, the Dental Health Program carried on a course on Rehabilitation of Handicapped Children. This course was attended by 130 dentists who have a specific interest in providing care for children who have handicaps.

A course on Early Orthodontic Care for Children was provided by the faculty of the New Jersey College of Medicine and Dentistry, in which preventive orthodontic techniques were stressed to the 31 dentists in attendance.

The faculty from the College worked with the Dental Health Program in developing courses on medical emergencies in the dentist's office which were held at three different locations throughout the state. A total of 145 dentists attended these courses.

In cooperation with the New Jersey State Dental Society, a course was developed on cleft palate. This course demonstrated the techniques for provision of services for cleft palate patients and was attended by 125 dentists.

In cooperation with Fairleigh Dickinson University School of Dentistry, a course in the control of pain in dentistry for children was developed. This course was held in three separate sessions and 126 dentists participated.

All of the above courses were a cooperative effort with the New Jersey State Dental Society in that their offices provided publicity and helped in the planning of the courses.

The pre-school dental inspection program has been continued as in the past. This year, inspections were conducted in 58 school districts which were located in seven counties. As a result of the examinations, many children and their parents received dental health education, and as a consequence, the children were taken to a dentist to receive treatment before they started their career in school. (See Tables 3 and 4 for a five-year comparison.)

The dental health education program in Phillipsburg schools was so successful that two townships nearby requested that they be included in the dental health education project. This was done voluntarily by the two dentists who carry out the Phillipsburg program. Also, classes were held at two schools for the handicapped.

Dental treatment services for school children were extended to include 20 counties out of the 21 in New Jersey. These services were provided by 114 dentists (private offices—76, dental clinics—25, trailers—11, and two in an educational program in Phillipsburg). (See Tables 1 and 2 for a five-year comparison.)

Services for crippled children were provided in cooperation with the Crippled Children's Program in the following hospitals: All Souls Hospital, Bergen Pines Hospital, Camden County General Hospital, Cooper Hospital, Monmouth Medical Center, Morristown Memorial Hospital, and St. Barnabas Medical Center. This program provided restorative dental services for people with crippling handicaps, and in addition provides orthodontic services for those patients who have gross malocclusions.

Treatment services were provided for migrant children in Indian Mills in Burlington County, Cedarville and Rosenhayn in Cumberland County, Cranbury in Middlesex County, and Woodstown in Salem County. These services were provided by private dentists who took time out of their offices and came to the schools to provide dental treatment. (Table 5.)

Studies

The studies carried out by the three Dental Public Health Residents have provided useful information in the fields of continuing education, organization of a local dental program, and dental needs of a mentally retarded

population. This information has been useful in providing the basic information for the development of programs in these three areas.

The two new Dental Public Health Residents that started with the Dental Health Program in July are doing studies on hospital dental facilities; and the dental needs in a specific school population in two communities, one having a strong dental department and the other one having a dental program which is limited to treatment services only.

The Dental Public Health Residents have provided information on the needs of patients who are clients of the Office of Economic Opportunity.

Cooperation with Other Agencies

The Dental Health Program has continued its liaison with the Dental Director, Department of Institutions and Agencies, to coordinate efforts of the two departments.

The Dental Health Program has cooperated with the New Jersey College of Medicine and Dentistry, Fairleigh Dickinson University School of Dentistry, and Monmouth Medical Center in providing courses of interest to the dental profession.

The Dental Health Program continued to cooperate with the Crippled Children's Program in providing rehabilitation services for patients with cleft palates, and providing complete dental services for handicapped children.

The Dental Health Program cooperated with the Maternal and Child Health Program, the Division of Preventable Diseases, the Department of Education, and the Department of Labor and Industry in providing dental treatment and educational programs for the children of migrant workers and migrant laborers.

Statistical Data

See Tables 1, 2, 3, 4, and 5 attached.

Table 1. TREATMENT PROGRAM STATISTICAL DATA

January 1, 1966 to December 31, 1966

Program by Counties and Communities	Program Initiated	Present Type of Program*	Dentists	School Districts	Total Operating Hours	Examinations	Visits	Total Operations	Children Treated	Cases Completed	Percentage of Completed Cases
Atlantic	1947	Tr.	3	3	465	2,964	669	1,349	115	60	52
Bergen	1943	P. O.	4	4	340	800	637	1,845	188	148	79
North Arlington	1940	Cl.	1	1	525	1,496	1,687	1,468	156	145	93
Rutherford	1945	Cl.	1	1	145	2,212	155	418	50	38	76
Burlington	1943	P. O.	4	6	180	1,538	382	1,052	131	84	64
Burlington City	1943	Cl.	2	1	168	287	407	1,153	82	45	55
Camden	1943	Tr.	1	11	723	5,454	1,007	2,453	541	468	86
Lawnside	1944	P. O.	1	1	39	24	58	197	20	9	45
Cape May	1958	P. O.	7	11	369	278	640	1,954	248	74	30
Cumberland	1955	Tr.	1	12	792	1,063	1,326	1,436	790	239	30
Essex	1966	P. O.	3	1	142	166	365	343	260	27	10
Bloomfield-Montclair	1964	Cl.	2	2	735	726	1,482	6,489	555	255	46
Orange—Parochial	1944	Cl.	2	1	465	192	967	3,216	189	151	80
Orange—Public	1964	Cl.	2	1	395	81	850	1,690	250	75	30
Gloucester	1947	Tr.	2	11	554	10,705	700	1,173	366	176	48
Hudson	1966	P. O.	1	1	50	23	101	119	21	7	33
Hunterdon	1940	Cl.	1	25	339	598	779	595	453	182	40
Mercer	1966	P. O.	1	1	426	17,079	.....	.....	.....	.....	...
Middlesex	1942	P. O.	5	5	410	169	639	2,216	154	73	47
Edison Township	1963	Cl.	1	1	79	43	149	387	77	0	0
Kiddie Keep-Well Camp	1942	Cl.	1	1	198	305	473	640	262	62	24
Monmouth	1941	P. O.	10	10	550	2,960	1,094	2,849	371	224	60
Matawan	1945	Cl.	3	3	241	3,536	407	656	133	88	66
Union Beach	1946	Cl.	1	1	108	1,279	234	303	113	32	28
Collier Foundation	1945	Cl.	1	1	54	45	89	145	35	13	37
Morris	1943	P. O.	18	34	1,258	626	2,323	5,611	674	466	69
Dover	1964	Cl.	5	1	265	150	364	832	99	16	16
Ocean	1944	P. O.	6	4	181	87	301	942	109	41	38
Trailer	1946	Tr.	2	2	689	299	1,737	4,912	376	281	75
Passaic	1962	P. O.	4	4	490	1,736	791	1,839	179	113	63
Salem	1955	Cl.	2	12	96	153	153	449	132	0	0
Somerset	1942	Tr.	1	5	965	9,395	564	1,220	248	170	69
Sussex	1942	P. O.	12	16	989	461	1,633	4,204	457	304	66
Warren	1947	Tr.	1	11	911	305	1,385	3,470	327	215	66
Phillipsburg	1954	Ed.	2	1	476	.....	.....	.....	.....	.....	...
TOTALS (20 Counties)			114	206	14,812	67,235	24,548	57,625	8,161	4,281	52

* Code for Type of Program: P. O.—Private Office; Cl.—Clinic; Tr.—Non-motorized Mobile Clinic with Dental Equipment; Ed.—Educational Program.

Table 2. DENTAL TREATMENT PROGRAM

Year	Number of Dentists	School Districts	Number of Examinations	Number of Children Treated	Percentage of Completed Cases	Number Extractions of Permanent Teeth per 100 Children Treated	Number of Operations per 100 Children Treated
1961-62*	91	199	74,944	10,130	56	..	..
1963	92	185	42,537	7,070	57	17	680
1964	95	194	49,968	8,563	50	14	592
1965	104	200	52,044	8,288	52	21	735
1966	114	206	67,235	8,161	52	18	706

* July 1, 1961 to December 31, 1962 (18-month report)

Table 3. PRE-SCHOOL DENTAL INSPECTION PROGRAM

Counties	Number of School Districts	Number Examined	Number Requiring Treatment	Percent Requiring Treatment	Number of d e f Per Child	Number of Dentists
Bergen	3	587	240	41	2.6	3
Camden	4	612	245	40	2.5	1
Essex	3	1,364	618	45	2.5	6
Gloucester	14	1,080	420	39	1.9	12
Ocean	4	375	199	53	2.5	3
Passaic	10	3,175	1,248	39	2.5	17
Warren	20	1,068	541	51	3.2	10

Bergen, Camden, Ocean, Passaic and Warren Counties conducted the above inspections during the Spring and Fall of 1966.

Gloucester County conducted the above inspections during the Spring of 1966.

Table 4. PRE-SCHOOL DENTAL INSPECTION PROGRAM

Year	Number of Counties	Number of School Districts	Number of Examinations	Number Requiring Treatment	Percent Requiring Treatment	Number of d e f Per Child	Number of Dentists
1962	5	62	5,232	2,562	49	2.8	39
1963	5	56	4,944	2,386	48	2.7	34
1964	6	63	6,553	3,125	48	2.8	43
1965	7	70	10,198	4,587	45	2.7	55
1966	7	58	8,261	3,511	43	2.5	52

Table 5. MIGRANT DENTAL TREATMENT PROGRAM FOR CHILDREN OF MIGRANT WORKERS
July 1, 1966 to August 31, 1966

	Burlington County Indian Mills	*Cumberland County Cedarville*	*Cumberland County Rosenhayn*	*Middlesex County Cranbury*	*Salem County Woodstown*	*Totals*
Number of Dentists	1	1	(1)*	1	1	4
Number of Examinations	72	128	17	113	89	419
Number of Visits	175	203	85	231	192	886
Number of Extractions—Permanent	0	1	2	1	4	8
—Deciduous	9	5	7	17	18	56
Number of Fillings—Amalgam	9	11	25	124	40	209
—Others	0	1	4	22	7	34
Number of Temporary Fillings	5	1	1	12	14	33
Number of Linings	0	0	0	32	50	82
Number of Prophylaxis	70	72	60	110	79	391
Number of X-rays	76	0	0	0	84	160
Number of Fluoride Treatments	65	70	60	108	79	382
Number of Children Treated	72	128	17	113	86	416
Number of Cases Completed	0	3	15	87	6	111
Percentage of Completed Cases	0.0	2.3	88.2	76.9	6.9	26.6

* Same dentist worked in two counties or communities.

Maternal and Child Health Program

General Statement

In conformity with the assigned responsibilities of the Maternal and Child Health Program and the ascribed objectives, namely, prevention, early detection, diagnostic evaluation with planned programming and case registration, the following activities and services have been provided in 1966.

PKU Testing of Newborns

The Department has increased its PKU testing screening program from 42 hospitals in 1964 to 79 hospitals in 1966. These hospitals have 108,295 estimated births per year. It is estimated that during the year, 84,691 children were screened for PKU. There are two clinics in the state to which all cases and suspected cases of PKU are referred. One of the clinics is located at Babies' Hospital, Newark and the other at the Bancroft School, Haddonfield. At the end of the year, there were 26 children under treatment and six new cases of PKU had been discovered as a result of the screening program. During 1966, there were 241 serum blood specimens taken and analyzed. The Division of Laboratories of the Department performed all of the screening tests and the serum tests mentioned above.

Complete Diagnostic Evaluation

The Maternal and Child Health Program had five clinics in operation to evaluate children for mental retardation and similar defects in 1966, as compcompared to one clinic in 1964. A new clinic was started at Hunterdon Medical Center, Flemington, in November. The previous four clinics are located in Morristown Memorial Hospital, Morristown; Babies' Hospital, Newark; Hackensack Hospital, Hackensack; and Bancroft School in Haddonfield. There were 321 evaluations and follow-up services done in 1966 as compared to 46 in 1964.

Hospitalization of Premature and Infant Exchange Transfusions

Thirteen infants had treatment under this program for 1966 as compared to seven in 1965.

Child Health Conferences

There were 291 Child Health Conferences throughout the state in which 226,030 children were seen. The Program participated financially in 26 of

these conferences. Through the District Pediatric Consultants, cooperation and consultation services are provided to all Child Health Conferences. All Child Health Conferences were provided free vaccines through the State Biological Distribution Stations. Reports of activities were given the Program from 66 such stations. Following is a breakdown of children serviced in the Child Health Conferences (this also includes children treated in the Migrant Schools and Day Care Centers for migrant children. See also services under Migrant Health):

Service Category	*Infants Under 1 Yr.*	*Children 1 - 4 Yrs.*	*Children 5 Yrs. and Over*	*Total*
Smallpox Vaccine	36,244	78,388	25,848	140,480
Diphtheria Injection	38,325	33,694	7,825	79,844
Diphtheria Booster	....	....	....	22,327
Pertussis	38,269	31,904	7,452	77,625
Pertussis Booster	....	....	....	22,228
Tetanus	38,325	33,694	7,825	79,844
Tetanus Booster	....	....	....	22,327
Polio	45,225	51,937	20,611	117,773
Polio Booster	....	....	....	17,558
Measles	6,934	89,172	12,244	108,350
Tuberculin Tests	3,090	11,494	1,434	16,018
PKU Tests	16,005	544	21	16,570
Referrals for Medical or Dental Care	2,197	1,760	184	4,141
Other Services	18,353	33,758	14,619	66,730
Complete Examination by Physician	59,770	79,056	19,777	158,603

Unattended Births

There were 191 unattended births investigated.

Maternal Deaths

The Maternal and Child Health Program works cooperatively with the Special Committee on Maternal and Infant Welfare of the Medical Society of New Jersey in maternal deaths. Fifty-three such deaths were reported and 48 follow-up investigations were made of those reported.

Consultation Services

The Program has three nurse consultants and one physician consultant to provide consultation services as relates to the Maternal and Child Health Program. Our nurse consultant for pediatric services made 20 hospital consultation visits. Fifty-one hospitals received consultative services relating to

maternity and newborn care by our hospital nurse consultant, and our obstetrical nurse consultant made 52 hospitals consultation visits. The physician obstetrical consultant provided 13 hospitals with consultation visits.

Maternity Service Questionnaire

In cooperation with the Medical Society of New Jersey, the Maternity Service Record Book was revised and copies sent to each of the hospitals in the state which have a maternity service. It is felt that the new Record Book will facilitate the preparation of the Maternity Service Questionnaire which each of these hospitals will be asked to submit to the State Health Department early in 1968.

Midwives

There were 39 licensed midwives registered to practice in New Jersey; however, there were only three active midwives who delivered six newborns.

Migrant Health

The Maternal and Child Health Program had agreements with nine hospitals in New Jersey to provide prenatal and obstetrical services for migrant workers in 1966. There were 51 mothers registered with the Program and 37 deliveries with a total of 132 bed days of care and 120 prenatal visits made during the year.

The Program participated in five clinics conducted in conjunction with the schools for migrant children. There were a total of 30 clinic sessions with 599 children examined and a total of 480 re-visits.

Dental Care Program in conjunction with the Schools for Migrant Children: dental examinations were provided for 506 children; 489 children were treated; 221 fillings and 95 extractions were provided; and of the 506 children examined and treated, there were 163 completed cases. These services were provided in the communities of Cranbury, Freehold, Cedarville, Indian Mills, Rosenhayn, and Woodstown.

Educational Activities

1. Seminar on Phenylketonuria (PKU) was held in the southern part of the state. Physicians and nurses from this area of the state were invited to attend. Four papers were presented including one paper from Dr. Guthrie, the physician who developed the PKU testing program for screening newborns as now used in the state.
2. In cooperation with the Academy of Medicine of New Jersey a symposium on "Adolescence" was held.

3. Roving symposia consisting of four sessions were held throughout the state on "Neonatal Mortality" in cooperation with the Academy of Medicine of New Jersey.

4. In cooperation with the Department of Pediatrics at St. Francis Hospital, Trenton, four lectures were held pertaining to various child health subjects.

5. The following is a representative listing of other training or educational activities participated in or sponsored by the Maternal and Child Health Program during the period of this report:

   a. In-service Educational Programs in Maternal and Child Health were held at the Visiting Nurse Association of Eastern Union County, Atlantic City Visiting Nurse Association, Cranford Visiting Nurse Association, and the Burlington County Public Health Nursing Association (including city and county nurses). Seven sessions were held.

   b. Nursing in Maternal and Child Health (federal, state and local). Two sessions at Seton Hall College of Nursing (basic students-collegiate program).

   c. Play Activities for Hospitalized Children:

      1) Monmouth Medical Center Auxiliary—focus on setting up playroom and play program.

      2) St. Francis Hospital, Trenton—Two sessions for pediatric nursing staff and volunteers assigned to pediatrics.

   d. Graduate Nurse Refresher Programs—Involved in planning for two and presented Principles of Pediatric Nursing at Middlesex Hospital Refresher Program.

   e. Rheumatic Fever—panel member: "Convalescent Care of the Child with Rheumatic Fever." Sponsored by the Essex County Heart Association and presented for the school nurses of the Newark Board of Education.

   f. Planned for and accompanied Assistant Director and Supervisors from Monmouth County Organization for Social Service to Morristown Child Evaluation Center.

   g. Spoke to enrollees in Short-term Program at Teachers College on Public Health Nursing Consultation in Pediatrics.

   h. Assisted with planning for MCH Component of the Department Public Health Nurse Training Program.

i. Assisted with revision and preparation of new material for the Public Health Nursing Services Guide.

j. Rancocas Valley Hospital—Refresher courses for nurses.

k. Control of Public Health Nurses' Responsibility in Communicable Diseases.

l. Spoke to Administrators, Doctors, and Nurses in hospitals—Surveillance of Infections in Hospitals.

m. Planned for a referral form to be used by hospitals and Monmouth County Organization for Social Service.

n. In-service Educational Program at Passaic General Hospital and West Jersey Hospital.

Health Education Materials

The Maternal and Child Health Program has provided and purchased health education materials on various aspects of maternal and child care, nutrition, and sex education. In addition, a substantial number of film prints on various aspects of child growth and development has been made available through the State Museum to large audiences. Other educational materials are handled directly by the Program.

A series of eight leaflets on accident prevention was printed and distributed. A "Selected Bibliography for Hospitals, Supplement 2" was also prepared and published. A number of other publications have been revised and printed.

Publications distributed	273,750
Film prints made available through Museum	137
Number of film showings	3,639
Total film attendance	179,949

Accident Prevention and Poison Control

This activity is part of the Maternal and Child Health Program.

Poison Control

Of the 39 Poison Control Centers in New Jersey, 38 reported poisoning cases. There was a total of 3,655 cases, with 1,706 of these receiving follow-up visits by a local source. Consultation and routine visits were made in half of the existing centers.

The Program continued its support in acting as a distributor for information regarding the National Poison Prevention Week.

Lead Poisoning

There was a total of 1,628 suspected cases of lead poisoning of which blood lead analyses were done by arrangement with our Department's Division of Environmental Health. There was a total of 617 cases of lead poisoning or of abnormal lead absorption reported. The majority of these reports and cases were from two cities: Newark and Jersey City. The Health Departments of these cities did epidemiologic and environmental investigations on cases of lead poisoning or abnormal lead absorption.

Domestic Accident Prevention

Through cooperation by this Program, various organizations were given direct service, among them, the State Pesticide Association, nursing schools, local boards of health, District health offices, and numerous service organizations.

A District-wide conference was held to discuss the relationship of accident prevention and the home environment. Health officers, student nurses, public health nurses, and homemakers were in attendance. It is hoped that this is a trend, and that other conferences will be held in other parts of the state.

A supply of a *Guide for Teaching Poison Prevention in Kindergartens and Primary Grades* was given to the State Department of Education for its distribution to appropriate individuals.

Through cooperative efforts by this Program and the Pesticide Coordinator at Rutgers University, three publications regarding poisons and their uses were being developed during the year.

Exhibits, speakers and material regarding accident prevention were available from this Program to the state. Twenty-two films are made available through the State Museum on poisonings, accidents, and safety. The Program's Consultant participated in radio, newspaper and television announcements to apprise the public of the Program's role in controlling and reducing injuries and deaths from accidental causes.

Division of Environmental Health

ALFRED H. FLETCHER, M.S. in Engineering, *Director*
ROBERT S. SHAW, M.P.H., *Assistant Director*

Programs:

Air Sanitation ..... WILLIAM A. MUNROE
Program Coordinator

Food and Drugs ..... MILTON RUTH, *Chief*
FRANCIS A. TIMKO
Acting Supervising Sanitarian

Food ..... JOSEPH PRINCE
Program Coordinator

Drug, Device and Cosmetic ..... RICHARD J. RUSSO, M.S.P.H.
Program Coordinator

Meat Inspection ..... ROBERT JOHNSON
Program Coordinator

Milk ..... HOWARD ABBOTT, M.P.H.
Program Coordinator

Shellfish ..... RICHARD E. BELLIS
Program Coordinator

General Sanitation ..... ALFRED H. FLETCHER, M.S.
Acting Supervising Engineer

Camp and Bathing ..... ANTHONY T. LEAHEY
Program Coordinator

Potable Water ..... JOHN WILFORD
Program Coordinator

Solid Waste ..... JOHN ZEMLANSKY, M.S.
Program Coordinator

Mobile Home Parks ..... LLOYD HIGGS
Program Coordinator

Ragweed and Poison Ivy ..... JOHN ZEMLANSKY, M.S.
Program Coordinator

Housing ..... MARTIN CHOMSKY
Program Coordinator

Occupational Health ..... E. LYNN SCHALL, M.P.H.
Program Coordinator

Radiological Health ..... WILLIAM H. AAROE, M.P.H.
Program Coordinator

Stream Pollution ..... ERNEST R. SEGESSER
Supervising Public Health Engineer
Program Coordinator

Veterinary Public Health ..... OSCAR SUSSMAN, D.V.M., M.P.H.
Chief

Division of Environmental Health

The plans and work of the Division of Environmental Health are directed toward controlling conditions of the environment which may adversely affect health.

Today pollution of the natural resources of air, water, and soil is being recognized as demanding far greater efforts than have been made to date to control the sources of this pollution. These sources are on the increase and have been for two decades due to population increases and the expansion of industry and the new types of products its produces.

In the last 20 years, the extension of man's capabilities in the factory, on the land, in the air, and in outer space has surpassed the technological accomplishments of all prior history.

The Division's Programs deal with: the pollution of air, water and land, by liquid, gaseous, and solid wastes; swimming, bathing and camping health hazards; the health aspects of housing and mobile home parks; the safety and wholesomeness of milk, meat, poultry, shellfish, and other foods as they are grown, harvested, processed and distributed; and conditions in industry to which workers are exposed.

Programs are carried out to protect persons from unnecessary sources of radiation and against toxic gases, fumes and dust in industry. Epidemiologic study and field research are carried out to uncover and determine the reservoirs of infection and mode of transmission of animal diseases to humans and to develop practical methods of control. The Division fosters programs also to control insects, weeds, and animal pests to protect and promote health.

The Division is organized into seven major units or Programs as follows: Occupational Health, Air Sanitation, Radiological Health, Stream Pollution, General Sanitation, Food and Drugs, and Veterinary Public Health. The activities are grouped into the following Programs and activities:

Food and Drugs
- Milk and Milk Products
- Shellfish
- Meat and Poultry
- Food
- Drug Manufacturing and Wholesaling

Occupational Health

Air Sanitation

Radiological Health

Stream Pollution

General Sanitation
- Bathing-Camp
- Housing
- Potable Water
- Ragweed and Poison Ivy
- Solid Waste Disposal

Veterinary Public Health
- Rabies
- Other Animal Diseases
- Insect and Rodent Control

Codes are drafted and when approved by the Department are recommended for adoption by local boards of health by reference. The following is a list of recommended codes pertaining to environmental health in existence to date:

Boarding Home for Children Code (1956)
Coin-Operated Dry Cleaning Establishment Code (1962)
Food and Beverage Vending Machine Code (1961)
Housing Code (1962)
Individual Sewage Disposal Systems Code (1963)
Maintenance of Swine Code (1957)
Plumbing Code (1964)
Private Camp Grounds Code (1964)
Public Health Nuisance Code (1953)
Retail Food Establishment Code (1965)
Smoke Control Code (1953)
Solid Waste Code (1959)
Swimming Pool Code (1955)
Water Supply Code
Weed Control Code (1953)
Sewage Disposal Code
Sanitary Standards for Mobile Home Parks and the Disposal of Solid Wastes are included in the State Sanitary Code and are enforceable by local boards of health

An Advisory Committee to the Department was appointed to update the Swimming Pool Code of New Jersey (1955). Several meetings have been held. The report is expected in 1967.

An Advisory Committee was appointed to update Chapter 9 of the State Sanitary Code dealing with Mobile Home Parks Sanitation Requirements. The report from this Committee is expected in 1967.

An act to amend and supplement Chapter 199, P. L. 1954, dealing with the installation of public water supply and sewage facilities at new realty improvements was adopted. This amendment authorizes the State Department of Health to study the various geographical areas of the state to determine whether any such area should be restricted to the types of sewage facilities which may be thereafter constructed. If the State Health Department determines that the type of sewage facilities should be restricted, it may promulgate appropriate regulation designating the area as a critical area for sewage purposes.

The work of the Joint Drainage Committee continued through the year. A report with recommendations on a state drainage policy is expected in 1967.

Air Sanitation Program

The development of air pollution control in New Jersey in 1966 was marked by significant actions by the New Jersey State Legislature, by solidifying the organization and procedures of the Air Pollution Control staff of the Department, by the substantial extension of enforcement activity, and by the implementation of the continuous air monitoring program. In addition, important developments were made with respect to the carrying out of the New York-New Jersey Regional Air Pollution Warning System. Progress was also scored in handling air pollution cases through legal mechanisms, in increased attention to public information, interstate cooperation, and other areas detailed below.

The New Jersey Air Pollution Control Commission

The State Legislature in 1966 pased two companion laws which require the New Jersey Air Pollution Control Commission to set standards for emission of pollutants into the atmosphere from motor vehicles.

The Commission was made responsible for developing (1) standards for vehicles on the road; (2) standards for vehicles not required to have pollution control systems or devices, such as those now required of 1968 model cars; and (3) standards for vehicles manufactured with devices and systems in accordance with the Federal Clean Air Act.

New Jersey was the first state in the nation to enact such legislation augmenting the motor vehicle provisions of the Clean Air Act Amendments.

The New Jersey Air Pollution Control Code was strengthened and extended during the year. On March 1, 1966, Chapter V of the code, which controls emission of fly ash, was amended, placing more stringent limitations on emissions from new installations.

After thorough study, the New Jersey Air Pollution Control Commission brought to public hearing on May 2 proposed Chapter VIII of the code, controlling emission of sulfur compounds from industrial processes. Several special meetings were held on this code by the Commission, the further opinions of industry and civic groups solicited and received, and the Commission promulgated Chapter VIII at its November 21 meeting, to be effective March 1, 1967.

Work proceeded on the development of another chapter of the code controlling incinerators, and on a model incinerator code for adoption by municipalities by reference.

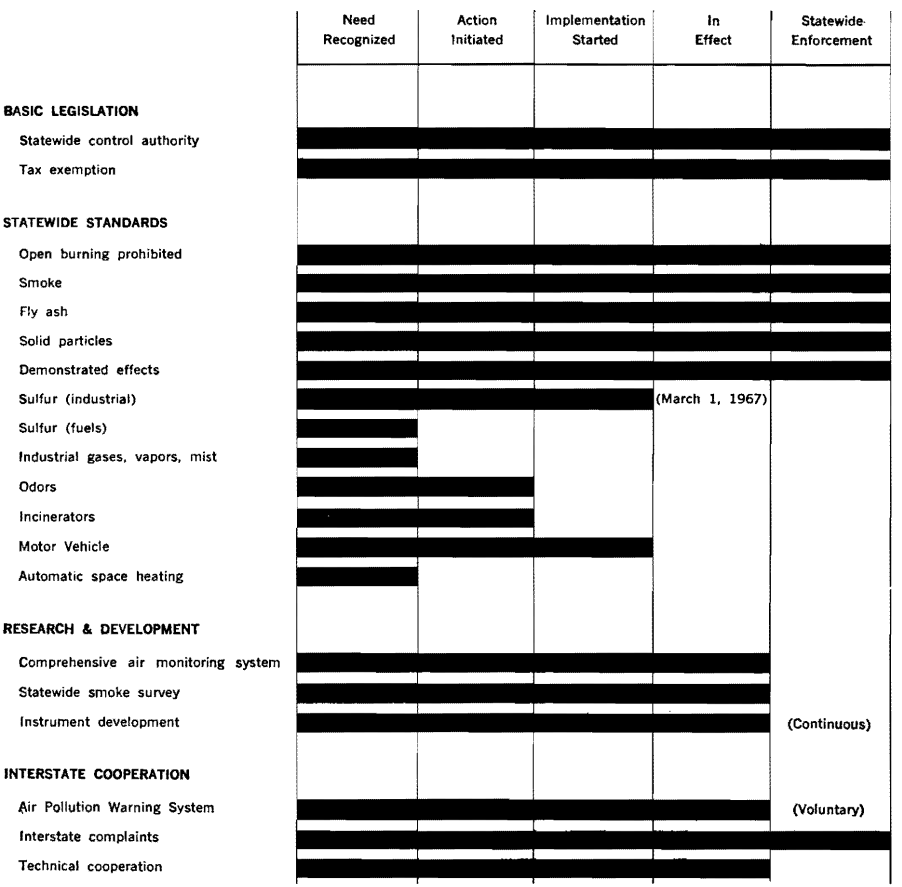
The Commission received a report of a planning committee which it had appointed, with Richard J. Sullivan as chairman. Mr. Sullivan made numerous

recommendations for advancing and enlarging the Commission's work; the Commission acted upon several of the recommendations.

The Commission's technical committee, at the December meeting, recommended that the Commission proceed with the writing of codes on sulfur in fuels, odors, and soluble fluorides.

During the year, a long-standing vacancy was filled by the appointment to the Commission of Irwin S. Zonis, representing the New Jersey Manufacturers Association. Late in the year, the Commission recommended that its membership be expanded by law to include two additional public members. On July 18, Louis A. Winkelman was re-elected Chairman of the Commission for his third term.

NEW JERSEY AIR POLLUTION CONTROL PROGRESS REPORT, 1966



Enforcement

Special intensive enforcement projects were undertaken during the year in the Doremus Avenue section of Newark, and in Carteret, Woodbridge, and a portion of Somerset County. Investigators were assigned to locate and identify air pollution sources on virtually a plant-to-plant basis and to take appropriate steps locally to abate pollution.

The acquisition of three radio patrol cars by the Metropolitan Field Office in Newark during the year materially aided in both speed and communication in enforcement work.

The Department moved forward in achieving enforcement of Chapter VII of the code, which prohibits emission of solid particles. Plant evaluations were made of nearly all bituminous concrete plants and ferrous foundries in the state. Action brought in the courts by the Attorney General's office to enforce this code resulted in a significant legal precedent in the pursuit of control measures (case of Shahmoon Industries, Inc.).

Enforcement actions taken in 1966 are indicated in the chart below:

CHAPTERS	*II*	*IV*	*V*	*VI*	*VII*
New Violations	349	172	na*	390	87
Repeat Violations	158	47	na*	na*	na*
Continuing Violations	na*	na*	2	230	58
Patrols & Surveillance of Violators	1,997	555	na*	na*	na*
Plant Evaluations	na*	5	45	986	139
Complaint Investigations	99	44	6	105	8
Conferences	33	49	9	105	49
Orders Issued	341	142	0	2	4
Departmental Hearings	1	4	0	1	1
Fines Collected	27	35	0	0	0
Stack Tests	na*	na*	1	4	4
Compliance Achieved	540	69	27	241	2
Effects Surveys	na*	na*	na*	830	na*

* not applicable

DEPUTY ATTORNEY GENERAL

The efforts of the Department to accomplish more stringent controls and more thorough enforcement of the laws and codes on air pollution in the state were reinforced during the year by the appointment of a Deputy Attorney General to spend full time on air pollution control work. The year 1966 saw an increase in the handling of court cases in this field and the development of what appeared to be increased awareness by the courts of the need for stronger laws and enforcement.

The following is a list of cases handled by the office of the Attorney General in 1966:

Department of Health v. Stabilized Pigments, Inc.—After being closed down and then allowed to reopen following compliance with Chapter VI, the defendant again began violating the same code; ultimate disposal: the plant's production cut 75 percent by the court until such time as there should be compliance with Chapter VI.

Shahmoon Industries, Inc. v. Department of Health—Amended order issued by the Commissioner, February 16, 1966, ordering the defendant to cease violation of Chapter VII (discharging solid particles into the outdoor atmosphere from its stacks) on or before January 1, 1967. Shahmoon appealed to the State Superior Court, Appellate Division, contesting the Commissioner's order, but the court unanimously affirmed the order on December 12, 1966. This was the first case brought to the Appellate Division regarding solid particle discharges from ferrous foundry operations, and its disposition established significant precedents in favor of the Air Pollution Control Program.

Department of Health v. Patrick Barone, Iron Bound Incinerator Co., et al.—On January 19, 1966, the office of the Attorney General obtained a temporary restraining order and order to show cause against the defendants for violating Chapter VIII of the State Sanitary Code (open burning of refuse). The court ordered closing of dumping area and extinguishing of all fires. Defendant did extinguish the fires but did not fully comply with Chapter VIII; at close of year, case was pending for trial in an effort to obtain a permanent injunction closing down the premises.

Department of Health v. Newark Steel Drum Co., Inc.—Civil action settled for $100; penalty, Chapter IV of code (smoke emission); Union County District Court.

Humble Oil & Refining Co. v. Department of Health—Administrative hearing; Department order directing company to cease violating Chapter IV of code upheld.

Department of Health v. Broad Street Building Agency, Inc.—Defendant voluntarily paid amount originally sought by the Department.

Department of Health v. Schiavone-Bonomo Corp.—Civil action settled prior to trial for $1,000; violation of Chapter II (open burning for salvage); Hudson County District Court.

State of New Jersey ex rel R. P. Kandle v. Aero-Flow Dynamics—Temporary restraining order issued in Superior Court of New Jersey, Chan-

cery Division, Union County; order vacated conditionally upon defendant's compliance with certain conditions.

Department of Health v. J. Orwin t/a Harrison Box & Lumber Co.—Civil action settled for $150 on each of three counts ($450 total); penalty, violation of Chapter II (open burning of refuse); Hudson County District Court.

Department of Health v. Al's Auto Body—Civil action involving penalty for violation of Chapter II (open burning for salvage); defendant paid the amount of penalty originally sought by the Department.

Department of Health v. Joseph L. Muscarelle—Civil action settled in advance of trial for $200, the amount originally sought by the Department; violation of Chapter II (open burning of refuse); Middlesex County District Court.

Department of Health v. Caruso Auto Parts—Civil action settled in advance of trial for $100, the amount originally sought by the Department; Atlantic County District Court.

Department of Health v. Owens-Corning Fiberglas—Administrative hearing brought pursuant to Chapter VI of code; case still pending at the end of 1966.

Department of Health v. Eric Schuster Corp.—Civil action brought for violation of Chapter IV (smoke emission); Passaic County District Court; judgement for the plaintiff.

Borough of Verona v. Shalit—Case initiated by Verona in Essex County Court re violation of local nuisance ordinance on smoke and odors. Court ruled nuisance portion of ordinance invalid and dismissed case. Verona appealed. Case placed before Superior Court, Appellate Division. Motion of Attorney General's office to appear as *amicus curiae* (friend of the court) was granted by Appellate Division. No determination of the action by end of 1966.

Department of Health v. Richlee Dyeing and Finishing Co.—Civil action brought for violation of Chapter IV (smoke emissions); Passaic County District Court; case pending at end of 1966.

Research and Development

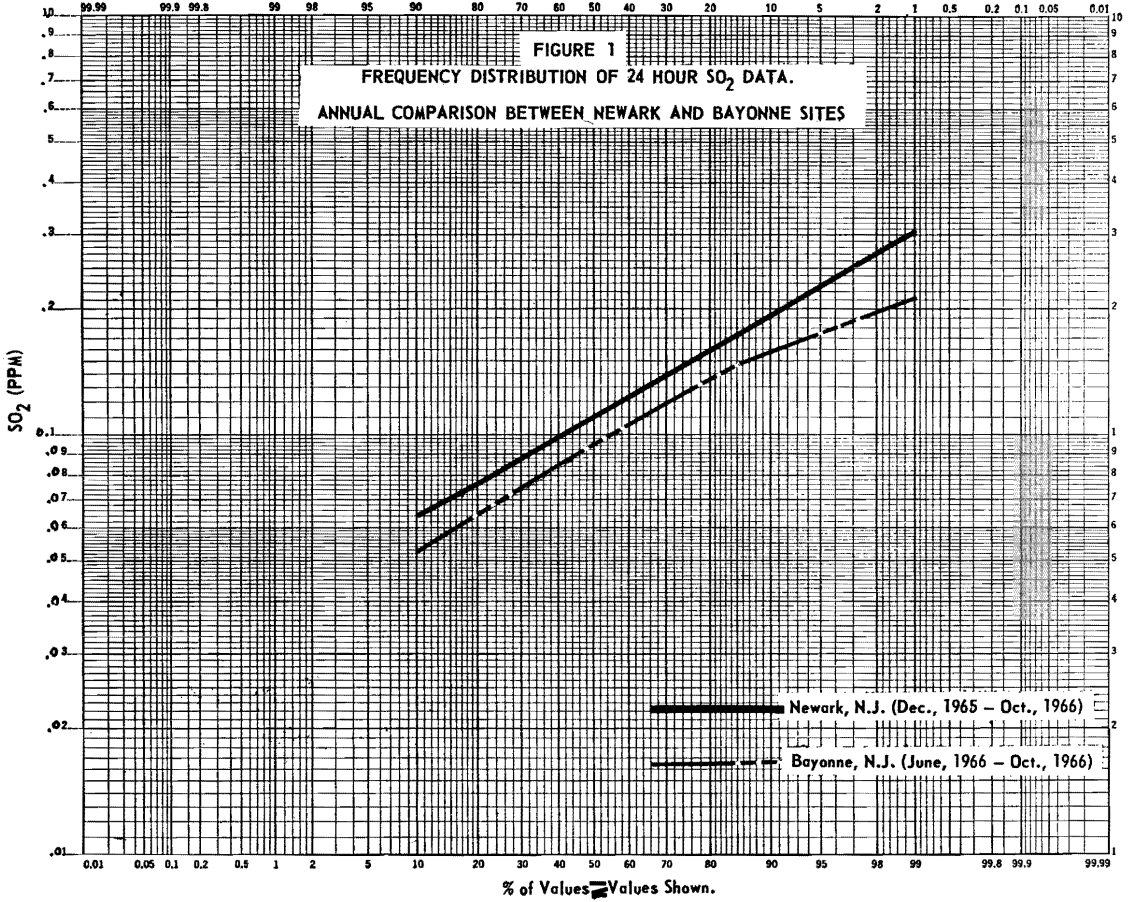
The purpose of the work done in Research and Development is to gather, analyze and project statistics on physical conditions, often involving human factors, so that rational plans for present and future action can be formulated and promulgated into laws and regulations.

The continuous air monitoring program was brought into being during 1966 by placing into operation three mobile air pollution laboratories to measure contaminants. On March 30, the first of these laboratories was put in operation in Newark; a second went into operation in mid-summer in Hudson County Park, Bayonne; and a third began operating in Ancora, lower Camden County, in the early fall. Each of the laboratories measures the following contaminants on a continuous basis 24 hours per day: sulfur dioxide, carbon monoxide, carbon dioxide (Bayonne only), smoke (soiling), nitrogen dioxide, nitric oxide, oxidants, aldehydes, hydrocarbons. Weather information is also recorded. These data are expected to be useful to public administrators, legislators, and decision makers in controlling several basic activities of society in New Jersey, including home heating, composition of fuels, transportation, motor vehicles, industrial processes, etc. The data are also useful in establishing air quality standards, in quantitating contaminant levels from various sources of pollution, and in establishing the amount of reduction necessary to meet standards.

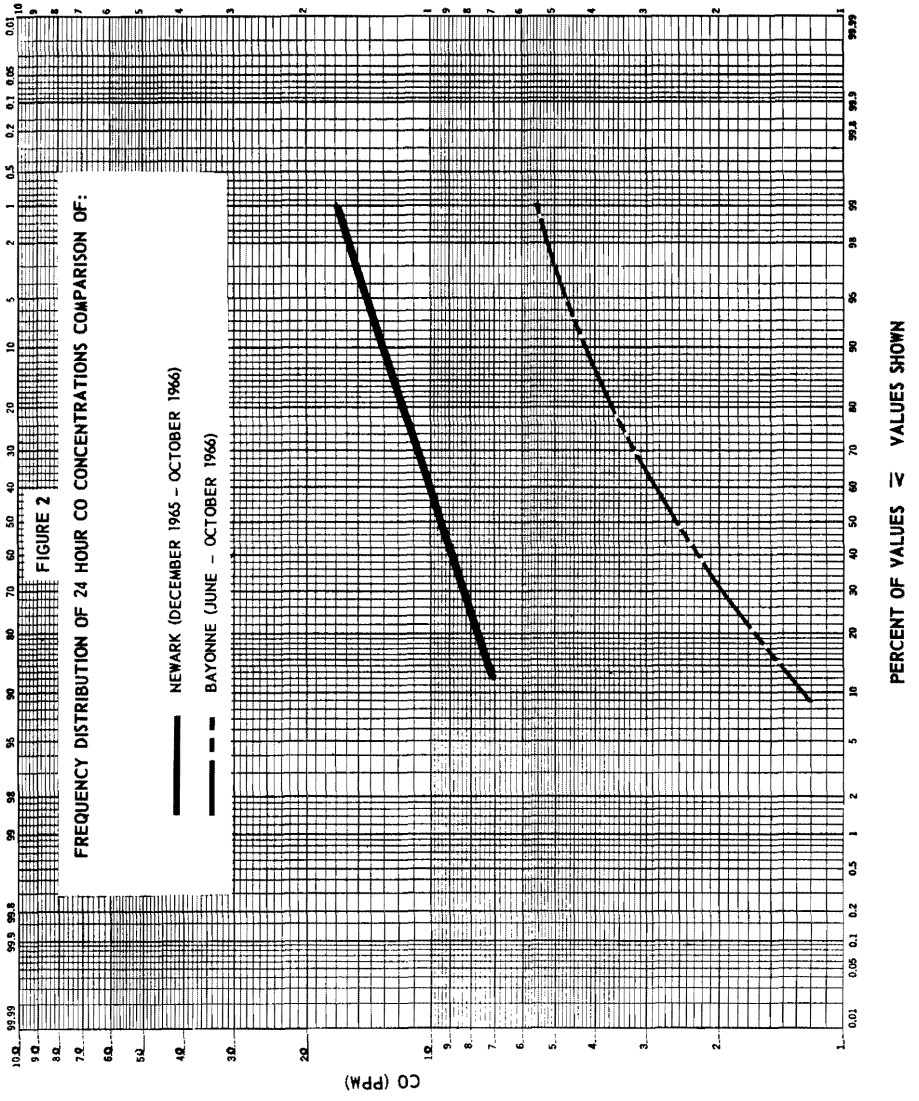
A considerable amount of early data was accumulated in the first months of operation to give the Department and the Commission a glimpse of the true character of air pollution in New Jersey. More data are required for a complete evaluation. Some important ramifications of these data are expected in the medical field.

Figures 1 and 2 show some of the typical information gathered by Research and Development reduced to chart form for meaningful interpretation. In Figure 1, 24-hour averages of sulfur dioxide concentrations in parts per million for Newark and Bayonne are plotted on the vertical logarithmic scale against the horizontal probability scale. These data are based on 28,000 half-hourly average readings. By plotting in this way, quantities of information can be presented in a manner which does not overwhelm the investigator with masses of seemingly meaningless numbers.

Information can be drawn from Figure 1, for example, by selecting the 70th percentile on the horizontal scale, and then moving vertically upward to where this percentile intersects the Newark curve. It is readily established, by referring to the vertical scale, that a sulfur dioxide concentration of 0.135 parts per million is indicated. This means that on 70 percent of the days during the 11 months of operation in Newark, daily concentrations of 0.135 parts per million of sulfur dioxide *or less* were observed and on 30 percent of the days, concentrations greater than 0.135 parts per million of sulfur dioxide were recorded. Other percentiles and concentrations can be interpreted similarly.



Concentrations of carbon monoxide are shown in Figure 2. Twenty-four-hour averaging times were used to obtain the frequency distribution curves.



In 1966, over 300,000 half-hourly averages were converted from ink lines on chart paper to numbers punched in tab cards. These data were on the levels of contaminants. The Program obtained 83 different monthly reports.

In addition, 132 charts on weather data were analyzed by personnel in Research and Development. These charts consist of 36 charts on wind direction and wind velocity, 48 on temperature and humidity, and 48 on barometric pressure. The wind direction and velocity charts give half-hourly readings which are recorded on a sheet coded in consonance with the information on contaminants.

Facilities in the laboratories were also used in part for the implementation of the Regional Air Pollution Warning System, particularly in reporting levels of carbon monoxide, sulfur dioxide, and smoke. Telemetering equipment in the Trenton office provided a means for the Trenton headquarters staff of the Air Sanitation Program to keep abreast of developments during air pollution watches and alerts called during 1966. The first *first alert* called under this system was announced November 25, 1966, and constituted a major emergency in the Middle Atlantic States over the Thanksgiving period. New Jersey implemented the alert, requesting the cooperation of industry and all municipalities and of the public in reducing emissions of pollutants into the atmosphere. The alert was called off at 9:15 a.m., Saturday, November 26. The laboratory equipment in Newark and Bayonne and the telemetering system between the Newark lab and Trenton were of invaluable assistance in conducting New Jersey's part of this system.

Interstate Cooperation

Developments in interstate air pollution control and cooperation included the formalizing of a staff agreement between the States of New Jersey, Pennsylvania, and Delaware. A proposal was advanced by Governor Richard J. Hughes for a four-state commission to study ways of controlling air pollution in metropolitan areas, the four states being New Jersey, Pennsylvania, New York, and Delaware.

During most of 1966, extensive preparation was undertaken for New Jersey's participation in the interstate air pollution abatement conference scheduled for January, 1967, to discuss the air pollution problems of New York and New Jersey. The conference was called by the Secretary of Health, Education, and Welfare on abatement of sulfur dioxide and carbon monoxide under the terms of the Federal Clean Air Act. Personnel and equipment were assigned by the Program to assist in the technical survey carried on by the federal government.

New Jersey in 1966 cooperated with and was active in the various functions of several interstate bodies such as the Metropolitan Regional Council, the Interstate Sanitation Commission, the New York-New Jersey Cooperative Committee on Interstate Air Pollution, and the Regional Council of Elected Officials.

The first *first alert* called under the Regional Air Pollution Warning System involving the New York-New Jersey metropolitan area was called on November 25, 1966. The warning system was adopted late in 1964 by the New York-New Jersey Cooperative Committee on Interstate Air Pollution. The Interstate Sanitation Commission is the coordinating body of the system, which also involves the Departments of Health of New York, New Jersey, and New York City. The states implement the system within their own jurisdictions. A bulletin on the system was published by the Air Sanitation Program in 1966 and several special mailings were made to mayors, boards of health, health officers, and others.

Motor Vehicle Air Pollution Control Project

In April, 1966, the Air Pollution Control Act (1954) was amended and Title 39 of the Revised Statutes concerning motor vehicles and traffic regulation was supplemented to provide for the development, adoption and enforcement of standards and requirements for the control of air contaminants from motor vehicles. (See Legislation.)

The Air Pollution Control Commission, in 1966, began taking steps to develop performance standards and testing procedures for enforcement in motor vehicle testing stations for the following vehicles:

(a) new motor vehicles (1968 models) manufactured in accordance with federal requirements;

(b) motor vehicles (pre-1968) manufactured prior to the adoption of federal requirements, and for diesel-powered vehicles.

(c) all classes of regulated motor vehicles for general on-the-road enforcement.

In 1965, the State Department of Health retained a consultant in motor vehicle exhausts to evaluate the possibilities of motor vehicle air pollution control in New Jersey. When the motor vehicle project was contemplated subsequent to the passage of legislation, the same consultant was retained by the Department to assist in developing a master plan for the motor vehicle air pollution control project.

It is the function of the motor vehicle air pollution control project to furnish the Commission technical data needed to set standards.

A detailed plan of procedure was developed in 1966, dividing the program into five phases. A specialist was assigned specific duties relative to working out rapid test procedures, developing exhaust and blowby emission standards, setting up procedures for establishing standards, and developing diesel smoke tests and standards. Phase I (development of test procedures for exhaust and crankcase emissions and development of a prototype quick test) got underway in 1966 with the awarding of $129,279 to Davidson Laboratory of Stevens Institute of Technology to evaluate diesel motor vehicle emissions, and $139,455 to Scott Research Laboratories, Inc., of San Bernardino, California, to develop a suitable test procedure for New Jersey's auto inspection lanes and to evaluate appropriate devices for use in such testing.

The total program announced in December, 1966, envisions five phases of activity: (1) test procedures for exhaust and crankcase emissions and development of a prototype quick test; (2) and (3) determination of baselines for exhaust and blowby emission standards for cars with and without exhaust controls; (4) development of baselines for diesel-powered vehicles; and (5) setting of standards for gasoline motor and diesel-powered vehicles.

Also, a laboratory to supplement and develop further techniques was established in Ewing Township. It is expected that the bulk of the project work will be conducted at this site.

In December, the U. S. Public Health Service granted the state $235,300 to carry forward the motor vehicle project. The state granted $78,434 to be used during the fiscal year July, 1966 through June, 1967, to implement the two studies described and to provide administrative expenses such as consulting fees, salaries, etc.

Personnel

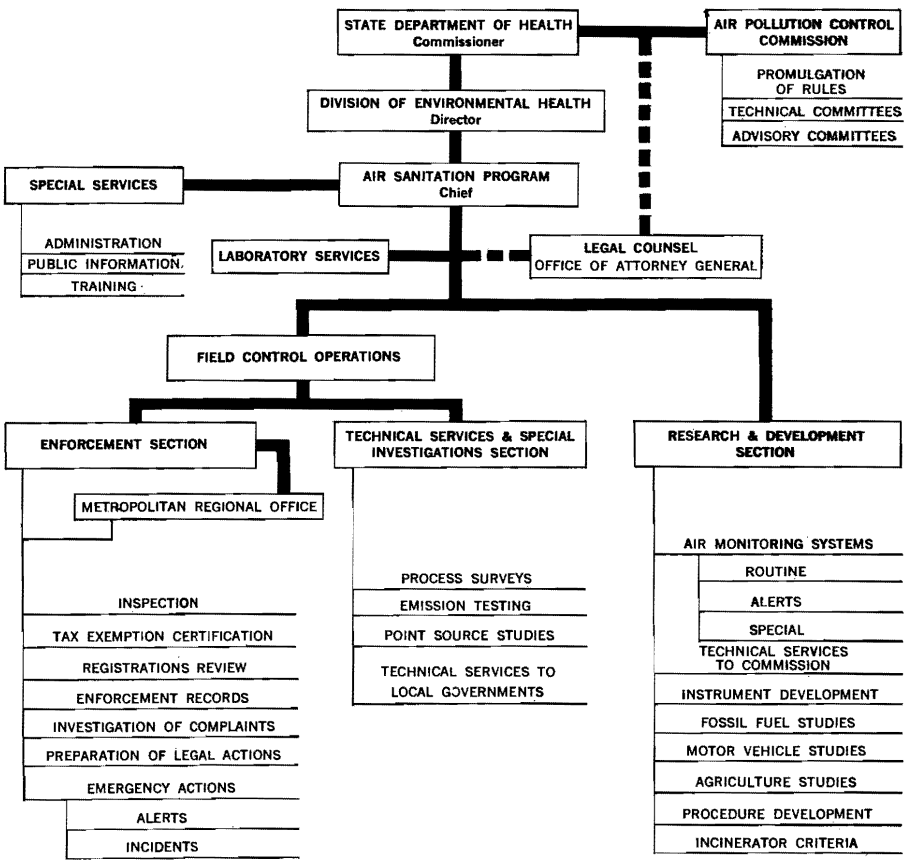
The Air Sanitation Program of the New Jersey State Department of Health grew slowly through its first decade from its start in 1954. At first its work was supported by modest budgets, but in the past two years, aided by greatly increased funds, the Program has been expanded to sizable proportions to meet the soaring and urgent needs of controlling air pollution. Its functions and scope of activity have similarly been increased and enlarged.

To carry out the work of the unit, additional personnel were added during the year, bringing the total authorized complement to 69 at the end of 1966. Included among those added to the staff of the Program and the state government's personnel in this field were a deputy attorney general, now assigned full time to air pollution control work; a specialist in motor vehicle air pollution control; several new members of the enforcement section; a reconstituted

staff of three specialists in stack testing; an assistant in procedures and systems analysis; and a specialist in administrative budgetary procedures.

The Function Chart below explains the organization of personnel and functions involved in the Air Sanitation Program, as it was at the end of 1966.

FUNCTION CHART OF THE AIR SANITATION PROGRAM, NEW JERSEY STATE DEPARTMENT OF HEALTH



The year 1966 saw the thorough training and molding of the staff of the Metropolitan Field Office in Newark into a strong enforcement activity for that area. Staff members were also added to the Central Office enforcement group, which was responsible for enforcement activities in the balance of the state. Plans and budget provisions were made for establishing an office in

southern New Jersey with functions in enforcement similar to those of the Newark and Central offices.

During 1966, 27 persons attended a five-day Smoke Observation Course conducted jointly with Rutgers University; five persons took a Rutgers course in Air Sampling and Analysis; one person completed the 10-session Civil Service course in Forms Design Control; one person took a four-day Solid Waste Management course offered at the Robert A. Taft Engineering Center of Cincinnati; and five persons completed a four-day Workshop in Air Pollution held at New York State University in Cortland, New York.

Financial Report

The air pollution control effort was supported during 1966 by increased federal and state funds. Federal funds available during 1966 amounted to $485,300 compared with $250,000 for 1965. State funds used by the Program increased from $278,000 in 1965 to $400,000 for the year 1966.

Major Equipment Obtained in 1966

Three mobile air monitoring laboratories, located in Newark, Bayonne, and Ancora, were placed in operation in 1966. (See Research and Development.)

Other major equipment and facilities acquired by the Air Pollution Control Program during 1966 include: meteorological station at the Metropolitan Field Office, Newark; radio communications system, Newark; complete set of stack sampling equipment, Trenton; X-ray Spectrometer and Diffraction Unit with accessory sample preparation facilities, Trenton laboratory; analytical balance, Trenton laboratory. One truck and four sedans were also acquired.

Various pieces of office furniture and equipment were procured.

Laboratory

The laboratory continued to assist the Program in analyzing stack samplings for particulate matter, in particle size evaluation, in identity of unknown materials, in microscopy, in analyzing sulfur dioxide gases, etc.

Legislation

In its spring session, the State Legislature passed a measure which provided tax benefits for installation of air pollution control devices and systems by industry. The State Department of Health, under this law, is the agency

for certifying such tax exemptions. The Department set up appropriate certification forms and procedures and organized the system for handling certification. About 80 industries requested the certification forms, and approximately 12 industries were under consideration for certification by the end of the year.

Public Information

Public information activity was increased in 1966 largely by the publication of a new newsletter, AirSan. A mailing list for the publication was developed including local boards of health, physicians, industrial and commercial groups, voluntary health organizations, citizens' groups, etc.

Nineteen press releases and 13 films were distributed throughout the year; radio and television interviews conducted and special mailings made to legislators, freeholders, and other interested persons. The public information office was in almost daily telephone or personal contact with news media to provide information on air pollution control and developments. A major exhibit was prepared for the National Conference on Air Pollution in Washington, D. C., and a Physicians' Conference on Air Pollution was held in February in cooperation with the Medical Society of New Jersey.

Three hundred and ninety-two individual letters—many of them answers to referral letters from Governor Hughes or Dr. Kandle involving complaints or requests for information—were sent out by the public information office. More than 400 requests for literature were handled.

In 1966, the personnel of the Air Sanitation Program participated in 86 speaking engagements, seminars, conferences, training sessions for municipal authorities and official group consultations. The arrangements for most of these events were handled by the public information office.

Formal papers were prepared by Air Sanitation staff members, and delivered at points as far distant as Paris and California.

Food and Drugs

Administration and enforcement of the statutes dealing with Food and Drugs have been delegated to the following Programs within the Bureau of Food and Drugs:

Drugs, Devices and Cosmetics
Food (other than meat, milk, and shellfish)
Meat
Milk and Frozen Desserts
Shellfish

The basic function of each Program is protection of public health. Program Coordinators are responsible for administration and enforcement of laws and regulations enacted to protect the consumer through preventing the distribution or sale of foods, drugs, cosmetics and devices that are adulterated, misbranded, or otherwise unfit for consumption or use. Establishments engaged in the manufacture, processing, storage, and distribution of these commodities are inspected.

Programs issue licenses, accept registrations, certify and list specific industries, collect samples to determine compliance with standards and review labels of products to determine that all required information is contained thereon and that this information is legible and true.

All Programs maintain constant liaison with federal agencies, other state departments, local boards of health, industry and industrial associations.

Table 1 shows the number of licenses, permits, certificates and registrations issued during the past calendar year and revenue derived therefrom:

Table 1. LICENSES, PERMITS, ETC. ISSUED IN 1966

Establishments		*Licenses*	*Permits*	*Cert.*	*Regs.*	*Revenue*
Drug Manufacturers and Wholesalers		....	...	...	653	$71,275.00
Egg Breaking Establishments		42	...	...	...	No fee
Frozen Desserts Plants		1,272	...	...	...	21,545.00
*Frozen Desserts Plants Inspection Fees		....	...	...	...	1,725.00
Milk Plants		....	406	...	...	16,900.00
Narcotic Manufacturers and Wholesalers		92	...	...	...	820.00
Non-Alcoholic Beverage and Water Bottling Plants		140	...	...	...	No fee
Refrigerated Warehouses and Locker Plants		147	...	...	...	6,350.00
Shellfish Establishments		....	...	172	...	No fee
Slaughterhouses:						
Red Meat	78	....	...	...	...	.....
Poultry	183	261	...	...	...	No fee
Totals		1,954	406	172	653	$118,615.00

* For the first time newly enacted frozen dessert legislation permits collection of fees covering costs of inspection of out-of-state plants.

Penalties amounting to $4,950 were collected through the efforts of the Department and the Attorney General's office for violation of various sections of the laws and regulations enforced by the programs.

Legislation

The Legislature passed new major labeling requirements for hazardous substances entitled New Jersey Hazardous Substances Labeling Act effective September 6, 1966.

The Legislature supplemented, and amended sections of the Uniform Narcotic Drug Law, Chapter 18 of Title 24, R.S., Chapter 105 of the laws of 1948 and supplemented Chapter 14 of Title 45 of R.S. effective December 29, 1966.

An act regulating and controlling the sale and distribution of depressant and stimulating drugs along with an appropriation of $50,000 to enforce was passed by the Legislature effective 180 days after approval on December 29, 1966.

The Legislature made minor changes in Chapter 12 of Title 24 affecting the special dietary uses section.

The Legislature made minor changes in Chapters 1 through 6 and 17 of Title 24 affecting definitions of "State Board" and "Local Board," increased the penalty for interference, clarified the association with federal agencies and empowered the local board of health to take penalty action in a municipal court.

The Legislature also changed Chapter 15 to include drug and cosmetic establishments under its sanitary provisions; repealed Chapter 13 governing the labeling of oleomargerine; repealed those portions of Chapter 6 dealing with vinegar; and repealed Chapter 7, sanitary requirements dealing with canned tomatoes.

Effective May, 1966, regulations requiring screening tests of abnormal milk were substituted for the previously required annual physical of milk producing animals.

Education and Training

Program personnel attended the following training courses and conferences during 1966:

Basic Sanitation Course—Rutgers University—
2 men—196 hours each

United States Public Health Service (PHS) sponsored training course on Liquid Egg Processing
6 men—2 days each

United States Public Health Service (PHS) sponsored training course on Concepts of Food Preservation, Protection, and Regulation

2 men—3 days each

United States Public Health Service (PHS) sponsored Course on Administrative Aspects of Food Protection

1 man—5 days

United States Food and Drug Administration sponsored course on Inspection Techniques for State and Local Food and Drug Officials

2 men—3 days each

New Jersey State Police sponsored course in Crime Detection Investigation

1 man—35 days

United States Department of Agriculture sponsored meeting of Federal-State Collaborators

1 man—2 days

Program personnel served on committees, acted as consultants and resource personnel to groups planning educational and training activities; namely, New Jersey Health Officers' Association, New York State Association of Milk and Food Sanitarians, Central Atlantic States Association of Food and Drug Officials, Northeast Sanitary Milk Standards Committee, Annual Conference of State Milk Sanitation Survey Officers, Governor's State Emergency Food Council, Advisory Committee on Hazardous Foods, State Health Resource Management Task Food Group, the East Orange Training Center, Economic Opportunities Act Training Program, New Jersey Bakery Code Committee, Regional Training Activities of Public Health Service, and the Extension Division Training Program at Rutgers.

Program personnel also participated as instructors in the Basic Sanitation Course co-sponsored by the Department and Rutgers; and the East Orange Field Training Center.

Personnel

New legislation in the Drug Program associated with hazardous substances labeling legislation created a Principal Sanitarian title and a Clerk Stenographer title. Both positions were filled.

A position of Sanitarian was filled in the Shellfish Program as were two Sanitarian titles in the Food Program.

All Bureau vacancies were filled at the close of the year.

Food Program

(Other than Meat, Milk, and Shellfish)

About the turn of the century, a great change took place in the nation's feeding habits. Foods previously prepared in the home started to be processed in commercial food processing establishments. As the industry expanded, problems associated with improper sanitation, adulteration, unwholesomeness, and dangerous additives, deception and fraud became increasingly apparent.

The above conditions resulted in the enactment of the Federal "Pure Food and Drug Law of 1906." This Act was enforced by the Bureau of Chemistry of the United States Department of Agriculture. The entire Act was modernized in 1938 and the enforcement of the Act was eventually transferred to the United States Food and Drug Administration, Department of Health, Education, and Welfare.

In 1938, the State Legislature enacted the New Jersey Food, Drug and Cosmetic Act of 1938 patterned after the new federal act. This enabled the state to protect health and promote honesty and fair dealing in the interest of the consumer.

During the past few years, the United States Food and Drug Administration has again moved decisively in updating its laws to better control an ever increasingly expanding industry. Consumer protection, "right-to-know" legislation became a major objective of President Johnson's "Great Society."

Unfortunately, our legal authority has not kept abreast of improvements in the federal act despite many years of effort to modernize existing statutes. The Legislature did make a few minor changes in our basic law during the past year but nothing in the way of a complete modernization.

One of the most challenging characteristics of the American industrial and economic system is constant change. In 1926, there were approximately 800 food commodities available to the consumer; today, there are in excess of 8,600 items a customer can purchase in the supermarket. The greatest change has come in the area of "convenience" foods. This was brought about by the nature of our present economy manifested by the working housewife.

Into this particular group of foods fall many of the so-called potentially hazardous foods which require additional supervision to provide adequate protection for the consumer.

During the year, two sanitarians were trained bringing the total number of experienced trained field personnel to six. The six men divide their time between the Meat Program and the Food Program.

New legislation and increased field inspections and laboratory services are needed to keep abreast of the expanding and ever-changing food industry and assure for the consumer a safe and wholesome food supply.

Despite limitations imposed by personnel shortages, etc. the following steps have been taken to revitalize and upgrade food establishment sanitation and food service practices.

Potentially Hazardous Food

Heavy emphasis was continued on the potentially hazardous foods group. This year the emphasis was switched from potato salad, macaroni salad and coleslaw to frozen foods including beef pies, clam cakes, and coconut custard pie. A total of 203 samples were collected and analyzed for total plate count and coliform determinations. Of this number 51 or 25.2 percent of the samples analyzed contained over 100,000 bacteria per gram and 43 or 21.1 percent indicated coliform counts in excess of 100 per gram. The figures of 100,000 bacteria per gram and 100 coli per gram were established as guides by the Commissioner's Advisory Committee on Potentially Hazardous Foods which was appointed when the program was initiated.

Prompt follow-up inspections and resampling in most instances resulted in improved products for the consuming public. Sixty manufacturers or wholesale distributors of potentially hazardous foods were inspected by Program personnel.

The Program continued its policy of informing interested surrounding states and municipalities of imported products that did not meet New Jersey's standards.

Meetings with the Commissioner's Advisory Committee on Potentially Hazardous Foods are planned to discuss progress of the program to date; to project the direction of the program for the coming year; and to develop greater interest on the part of local boards of health in the retail phase of the program.

Salmonella in Foods

Problems associated with Salmonella in food have become increasingly apparent. During the past year, many commercially prepared foods, never before implicated, were recalled under the United States Food and Drug Surveillance Program due to Salmonella contamination. This is in addition to the age-old problem of Salmonella outbreaks associated with retail food preparation and service.

Salmonella is directly associated with swine, dairy and beef cattle, dogs, cats, pet birds, pet turtles, rodents, poultry, red meats, powdered, frozen and shell eggs, soya milk, dried yeast, coconut, cereal powder, pork sausage, animal feeds, non-fat dry milk, candy and candy coatings. Each day's work seems to implicate a food not before suspect.

Bakery Code

The Bakery Code Advisory Committee established to develop a code which could be recommended to local boards of health for adoption by reference expects to complete its work soon.

One problem associated with finalizing the document is rewriting the section dealing with the treatment of hazardous food type products such as cream puffs, eclairs, custards and the so-called "summer filled" products in accord with up-to-date knowledge and laboratory findings.

The final draft will be reviewed by industry and the New Jersey Health Officers Association before being legally worded and recommended for adoption by the Commissioner.

Promulgation of the Uniform Code was requested by organized segments of the retail bakery industry.

It is anticipated that the Code will be in final form early in 1967.

Interstate Cooperation

Our reciprocity program with food control officials in Connecticut, Pennsylvania, and Rhode Island for inspection and/or licensing of nonalcoholic beverage plants and bakeries shipping into their respective jurisdictions continued this year. During the current year, 80 plant inspections and reinspections were conducted in their behalf by Program personnel. Many other specific requests were made by other states, other state departments, and local boards of health.

The office of Federal-State Relations, United States Food and Drug Administration, has greatly improved liaison with the states. Valuable information and materials are received daily. Telegrams concerning contamination of foods that result in recall by the manufacturer are forwarded to this office so that immediate action can be instituted by the state and local boards of health should the situation dictate such action.

Catering Program

The Program continued the Reciprocity Program with local health departments for the Supervision and Control of General Caterers. State personnel conducted 25 inspections of catering establishments. Fifty-eight inspections were conducted by the 22 local boards of health participating in the program. Eighty-nine establishments are now included in the General Registry of Caterers listed by participating boards of health. Reports covering individual caterers were forwarded to participating boards of health upon request and the entire list including all inspection information is forwarded two times a year.

Wholesale Food Plant Inspection Activities

With the addition of two trained sanitarians during the year and by utilizing meat inspection personnel part time, we were able to expand Program activities. One large segment of our Program is to locate, inspect and list all food establishments doing business in interstate commerce. During the year, 573 inspections were conducted at 367 food establishments doing business in interstate commerce. This represented an increase of 68 establishments that were located during the year. In addition, there were 369 inspections conducted at food establishments not engaged in interstate commerce. Representatives made 500 visits associated with locating unlisted and uninspected establishments, special surveys, special food sampling projects, and similar activities.

Our increased inspection activities resulted in locating and licensing 26 new refrigerated warehouses.

The following table lists the number and type of establishments inspected by Food Program personnel.

Table 1. Establishments Inspected, 1966

Bakeries	151
Restaurants	4
Confectionery Plants	59
Egg Breaking Establishments	47
Refrigerated Warehouses	97
Nonalcoholic Beverage Bottling Plants	51
Wholesale Food Distributors	132
Other Food Establishments	401
Total	942

In connection with the inspections, investigations and visits, the table below lists the types and quantities of food destroyed for non-compliance with our laws and regulations.

Table 2. Foods Destroyed Because of Non-Compliance, 1966

Cereal products	3,868 lbs.
Dried fruits and vegetables	1,444 lbs.
Eggs, frozen	1,700 lbs.
Flour	3,000 lbs.
Frozen dinners	36,557 lbs.
Canned goods	40,880 lbs.
Powdered milk	131,640 lbs.
Miscellaneous foods	4,500 lbs

In addition, 7,480 pounds of meat were destroyed or caused to be returned to the point of origin due to being adulterated, misbranded, or illegally shipped in interstate commerce without federal inspection.

Approximately 170,000 pounds of food were released from embargo after being cleared for removal for reconditioning, relabeling or found to be satisfactory by laboratory analysis.

One meat processing establishment was fined a first offense penalty of $50 for breaking a legal embargo.

Six hundred and one samples of food and 27 water samples of private water supply systems were collected during various food establishment inspections and special sampling surveys and investigations.

Egg Breaking

Regulations promulgated by the United States Department of Agriculture (USDA) required the pasteurization of all liquid eggs and liquid egg products in plants operating under USDA inspection after June 1, 1966. Also, the United States Food and Drug Administration adopted amendments to its standards for liquid eggs and egg products which required pasteurization of all such products shipped in interstate commerce after May 18, 1966. The actions were deemed necessary because of the relationship between Salmonella outbreaks and the consumption of unpasteurized eggs.

In addition, the United States Public Health Service is developing a Model State Food Processing Ordinance Related to Eggs and Egg Products to regulate egg breaking establishments and heat treatment of raw liquid eggs or egg products to insure freedom from Salmonella and other food borne disease organisms. Because of uncertainty regarding safe temperatures and

times necessary to produce a safe product, neither the United States Public Health Service nor the United States Food and Drug Administration has as yet recommended specific temperatures or times.

Because of the nationwide trend toward compulsory pasteurization of liquid and frozen broken eggs, Program personnel began studying the possible effects on the New Jersey broken egg industry. Most of the 42 licensed egg breaking establishments were not in a position to invest approximately $15,000 for pasteurization equipment, due to the small volume of eggs broken. According to comments received from industry representatives, compulsory pasteurization of all eggs broken in New Jersey would probably result in the closing of 75 percent of the licensed establishments. The Department has attempted through various channels to stimulate research to develop a small inexpensive pasteurizing unit to permit small independent operators to operate in conformity with acceptable practices.

At the end of the year, information was received that a compact batch-type egg pasteurizing unit had been developed and was being offered for sale. Since information is not currently available concerning its effectiveness, an evaluation of the unit is planned to determine if it can be utilized by small egg breaking plant operators to produce safe broken eggs at a reasonable cost.

If favorable information is received concerning such units, steps will be taken by the Department to require the pasteurization of eggs and egg products broken in commercial egg breaking establishments in the state.

Adulterated Meats

On behalf of consumer protection, the Department continued the surveillance of retail meat markets and other establishments distributing sausage, hamburger, and other combinations of fresh ground meat. Field screening tests were made by Program and District personnel to detect the presence of sodium sulphite used to conceal inferiority in such products and to detect excessive added fats. Five hundred and thirty-two Malachite Green tests of meats were made to detect sulphites with six suspicious samples collected for official laboratory confirmation. Two of the six suspicious samples (0.37%) were confirmed as positive by laboratory analysis. This year's total of 0.37 percent unsatisfactory samples represents an improvement over last year's total of 1.2 percent.

Two hundred and fifty-four Hobart field tests were conducted on ground meats to detect the presence of excessive fat. Thirty-three suspicious samples were collected and submitted to the laboratory for sample analysis. Twelve of the 33 samples were confirmed in the laboratory by chemical analysis. Eight

first offense penalties of $50, two $100 second offense penalties, and two $100 third offense penalties (Attorney General allowed $100 settlement of $200 fines) totaling $800 were collected during this year. Four and seven-tenths percent (4.7%) of the samples analyzed this year were unsatisfactory. This represents an improvement over last year's total of 8.25 percent.

In addition, laboratory analysis of one ground meat sample disclosed the presence of niacin resulting in a first offense penalty of $50. Niacin in ground meats has the same adulterating properties as sulphites.

General

Program representatives continued to cooperate with federal, state, and local agencies by making special joint investigations, collecting samples for special analyses and label review, placing embargoes on fire damaged merchandise or otherwise adulterated food, and coordinating special projects involving other agencies. Technical and consultative services were also provided for other agencies, industry, other interested groups and the consuming public.

The Program continued a limited sampling surveillance to detect the presence of pesticides in raw agriculture commodities; 130 samples were submitted to the laboratory for analysis.

In connection with our representation on the Governor's State Food Advisory Council, the Program compiled a listing of all major food establishments located in the state.

Questionnaires concerning volume and type of foods were circulated to all establishments listed and the information was forwarded to the Department of Defense, Division of Civil Defense, for tabulation.

The value of this enormous effort was demonstrated during the State-wide Civil Defense exercise "Operation Rebound," where a difficult and exacting civil defense problem in a state-wide exercise was handled expeditiously.

Drug, Device and Cosmetic Program

The Drug, Device and Cosmetic Program operated with five field inspectors during the first 10 months of the year and with one additional Principal Sanitarian during the last two months. On September 6, 1966, Governor Hughes signed Assembly Bill 758 which became Chapter 262, P. L. 1966. This new law is entitled "New Jersey Hazardous Substances Labeling Act" and is patterned after the "Federal Hazardous Substances Labeling Act" enacted in 1960. The federal government claims that since the enactment of its law, the incidence of violations has been reduced by approximately 40

percent. It is hoped that with educational promotion and gradual regulatory enforcement New Jersey may reduce its incidence of violations. The objective of the law is to prevent poisoning in the home, particularly of young children, by establishing adequate labeling for hazardous substances intended for household use. The law defines "hazardous substances" as: Any substance or mixture of substances which (I) is toxic, (II) is corrosive, (III) is an irritant, (IV) is a strong sensitizer, (V) is flammable, or (VI) generates pressure through decomposition, heat, or other means, etc. Examples of household products included under this definition are: rust and stain removers, antifreeze, paint thinners and removers, most bleaches, lighter fluids, lawn mower and motor boat fuels, strong ammonia, some toilet bowl cleaners, and certain photo chemicals. The ultimate goal of this new activity is to regulate, educate, and encourage voluntary compliance by involved industries and cooperate with enforcement agencies to bring about informative labeling of household aids and materials which have the capability of causing illness, injury, or death when they are misused. The Principal Sanitarian assigned to this activity visited federal authorities in Washington, and state hazardous substances people in Connecticut, Massachusetts, and Illinois in order to become familiar with similar activities conducted both at the federal and state levels.

The current field staff of the Drug Program includes four Registered Pharmacists, two Principal Sanitarians, both of whom have had many years experience in the area in which they are primarily responsible. In addition to the field personnel, the Program has three persons in the clerical staff, one Senior Clerk Stenographer, one Clerk Stenographer and one Clerk Typist, and a Program Coordinator.

At the end of the 12-month period covered by this report, there were 640 drug establishments registered with the Department under the Drug Registration Law, N. J. S. A. 24:6B. These 640 registrants had a total of 724 locations in the state, each of which should be inspected at least once a year. Three hundred and thirty of these locations were registered as drug manufacturers, and 394 were registered as drug wholesalers. Two hundred and fifty-three inspections were made of drug manufacturers, and 227 inspections were made of drug wholesalers. A total of 580 inspections of the two above categories were completed which represents a coverage of approximately 80 percent. In addition to the inspections of manufacturers and wholesalers, special investigations were conducted in 65 drug stores, and 140 SCUBA (Self-Contained Underwater Breathing Apparatus) shops.

The issuance of narcotic drug licenses by the Department increased over last year by 12. One hundred and ten licenses are now in effect and this represents approximately an 11 percent increase. During this year, a large percent

of all narcotic licensees were inspected prior to their renewal date. This is comparable with last year's activity and has remained relatively constant. One field representative has been assigned the exclusive task of handling all narcotic inspections.

Three pieces of drug legislation were enacted during this year. The Hazardous Substances Labeling Law, which has been described in detail above, and Assembly Bill 547, Chapter 313, P. L. 1966, and Assembly Bill 548, Chapter 314, P. L. 1966, were also signed into law. However, because Chapters 313 and 314 became law on December 29, 1966, no administrative action was undertaken during the period covered by this report. Both of the latter two bills mentioned substantially increase the responsibility of the Drug Program. Chapter 313 is a revision of the narcotic drug law which places this responsibility for the first time in the State Department of Health for the controlling of narcotic drugs in retail outlets. Chapter 314 also places substantial responsibility with the Drug Program for the control of central nervous system stimulants, depressants, and hallucinogens throughout the entire manufacturing and distribution system. The bill carried an appropriation of $50,000 for its implementation.

Two field representatives were assigned for a combined total of five months to work on the Medicare Certification of Pharmaceutical Services in Nursing Homes.

Major activities, accomplishments, and highlights of the Program are as follows:

1. Program personnel located and certified the growth of 6,896 plants of wild marihuana in a number of locations within our state for destruction. This resulted in destruction of enough marihuana to have produced six million marihuana cigarettes (commonly referred to as "sticks"). If converted into dollar sales, this would amount to approximately six million dollars.
2. Two New Jersey drug firms were fined for four major violations. Ethical Import Export Limited and City Wide Wholesale Drug Company, having interlocking directorates, and both located at 147 Main Street, Fort Lee, New Jersey, were fined a total of $3,950 in Bergen County District Court in Hackensack for violation of four specific sections of Title 24 of the New Jersey drug laws. The complaint was brought by New Jersey State Department of Health. Judge Martin Kole imposed the penalties on May 5, 1966, after a three day trial. Together, the above-mentioned drug firms were found guilty of failing to register their drug manufacturing and wholesale drug business

with the State Department of Health; of failure to keep records of receipt and shipment of drugs; of misbranding a prescription drug in that the label was false and misleading; and of violating an order of the State Commissioner of Health requesting shipping records of a quantity of misbranded drugs which had previously been found on the premises.

3. One hundred and forty inspections were made of the 70 known "shops" manufacturing or distributing SCUBA compressed air to insure that regulations governing the Standards of Compressed Air Used in SCUBA (Self-Contained Underwater Breathing Apparatus) were being complied with. Over 140 samples were collected and analyzed, resulting in one "shop" being ordered to stop selling contaminated air.
4. Program representatives supervised the destruction of the drug contents of 12 pharmacies because the drugs were found to be adulterated or misbranded as a result of fire, heat and/or water damage. Investigations of this nature are probably the single most time consuming item in which this Program routinely becomes involved. It is not uncommon to have one or two men spend nine or 10 full working days in handling this consumer protection activity.
5. Cooperating with the Division of Purchase and Property and through membership on its "Drug Standardization Committee," the Drug Program has upgraded the quality of drugs that have been purchased by the state for use in its institutions. This has been accomplished by recommending additional quality control requirements for insertion into the bidding documents, and by sampling drugs received at state institutions for analysis. Numerous drugs sampled and analyzed by this Department have been found to be substandard. This has resulted in the state purchasing drugs from alternate suppliers who produce an acceptable product.
6. During the period covered by this report, this Program cooperated with the Federal Food and Drug Administration in numerous joint inspections and investigations. Enforcement of drug laws without cooperation between complementary governmental agencies becomes an almost impossible task. We continually strive to improve our working relationship with all governmental agencies in an effort to improve our overall effectiveness.

Several additional statistical items of importance are as follows:

a. Through the issuance of drug registrations and narcotic licenses a total of approximately $72,095 was realized. This amount, pursuant

to fiscal policy, was placed in the General Treasury of the State of New Jersey.

b. Approximately 46 embargoes were issued for adulteration and/or misbranding of drugs, and final disposition of the drugs has been made in all but a few instances.

c. Approximately 143 samples of various drug products were collected and analyzed for compliance with our drug laws.

d. The Drug Program cooperated with federal authorities, either directly or indirectly, in the recall of several drug items from the market. The degree of activity by this Program varied with the particular item to be recalled and the potential hazard that existed.

e. This Program actively participated in 12 investigations involving the destruction of narcotic drugs. Some of the investigations were the result of fires, bankruptcy sales, change of ownership sales and similar proceedings.

In conclusion, with the passage of the three bills, Chapter 262, Chapter 313, and Chapter 314, the activity of the Drug, Device and Cosmetic Program will of necessity be stepped up substantially. In fact, it is anticipated that the field staff will double in size within the next calendar year.

Meat Program

Seventy-eight red meat and 183 poultry slaughterhouses were licensed this year, as provided for in Title 24, Chapter XVI, Revised Statutes of New Jersey and "Regulations Concerning Construction, Operation, Maintenance and Licensing of Slaughterhouses and Inspection and Labeling of Animals Slaughtered for Food." In addition, 236 meat processing establishments were controlled under "Regulations Concerning Construction, Operation and Maintenance of Meat Processing Establishments and Labeling of Meat Products Processed for Food," permitted by Title 24, Chapter II.

A system of rating slaughtering and processing plants makes it possible to compare the sanitation of the plants for a seven-year period. This comparison shows an upward trend in sanitation levels. Ninety is considered a good sanitation rating. Following is a seven-year comparison of sanitation ratings for poultry and red meat slaughterhouses:

Table 1. Licensed Poultry Slaughterhouses

Year	*Number of Establishments*	*Sanitation Rating*
1960-61	212	88.839
1961-62	236	91.199
1962-63	214	93.350
1963-64	198	92.671
1964-65	212	90.292
1965-66	193	95.822
1966-67 (Feb. 1)	183	95.717

Table 2. Licensed Red Meat Slaughterhouses

Year	*Number of Establishments*	*Sanitation Rating*
1960-61	70	86.358
1961-62	76	90.855
1962-63	79	89.845
1963-64	79	89.450
1964-65	81	92.444
1965-66	78	94.129
1966-67 (Feb. 1)	78	94.496

Industrial waste disposal continues to be a major problem for some large poultry slaughterhouses having their own disposal systems.

Thirty-nine investigations were conducted with United States Department of Agriculture representatives to control illegal meat handling and shipping practices. Penalties were assessed through court action against two operators. Better control is possible when there is cooperation between the federal and state departments. In addition, when local boards of health increase their inspections of retail meat markets and retail meat processors, a more complete surveillance of the meat industry in New Jersey is brought about.

In 1966, an educational need was fulfilled when a meat inspection course was given by the Department in cooperation with the Extension Division of Rutgers University in New Brunswick. Forty municipal and industrial personnel students took the course which prepares them for a "Meat Inspector" license examination.

Experience to date indicates that an institute for sanitarians should be held also to provide specialized training in sanitation and meat evaluation to permit Department and local inspectors to better fulfill their duties in providing a wholesome and sanitary meat and poultry supply.

Table 3. Program Activities for 1966

Red Meat	
Number of applications received	78
Number of licenses issued	78
Number of applications pending	0
Number of establishments going out of business	3
Poultry	
Number of applications received	183
Number of licenses issued	182
Number of applications pending	1
Number of establishments going out of business	10
Inspection Data	
Number of sanitary inspections	587
Number of visits and investigations	217
Number of water samples collected	80
Number of water supply samples unsatisfactory	5
Number of water supplies corrected	5
Number of meat inspection evaluations	29
Number of conferences with local boards of health	182
Wholesale Meat Processing Establishments	
Number under supervision	236
Number of sanitary inspections	318
Number of visits and investigations	237

The annual number of red meat slaughterhouse licenses issued remains about the same. However some of the smaller "select kill" type poultry plants discontinued business because of competition from larger plants.

There was a 20 percent increase in inspections of wholesale meat processing establishments this year over last year.

Based on the past two years' experience, it is anticipated that all of the federal and non-federal wholesale meat processing establishments located within New Jersey will have been located and inspected by next year.

Meat Inspection

There has been a uniform decline in the number of animals slaughtered from 1959 to 1965. This decline leveled off in 1965 and 1966. In 1966, 13,694,694 animals, including poultry, were slaughtered in New Jersey licensed establishments. There were 139,517 animal carcasses and 206,312 parts condemned as unfit for human consumption. These figures compare favorably with 1965. There was no significant difference in the condemnation rates.

As in previous years, condemnation rates for animals slaughtered in establishments employing New Jersey licensed meat inspectors were compared with plants under the direct supervision of meat inspectors employed by the federal government. This is the first year since the onset of the Meat Program in 1959 that federal condemnation rates were consistently higher for all classes of animals except poultry. The higher rates may not be of any significance as the percentage differences are actually very close. The economy in New Jersey may suggest the marketing of dairy type animals at a much earlier age; consequently fewer animals would be condemned. This procedure of marketing younger dairy type animals in order to increase efficient production was reported in California to offset the high cost of real estate taxes, utilities, feed and labor.

In poultry establishments, New Jersey condemnation rates were lower than federal rates. This has been the case in every year that comparisons have been made, since New Jersey supervised plants slaughter younger fowl consumed primarily in the fresh state. Younger fowl have a lower disease rate than the older laying hens. Older hens are slaughtered in plants under federal supervision.

Table 4. Ante and Postmortem Inspection Results

Kind of Animal—Numbers and Percentages

Kind of Animal	*Antemortem Inspection*				*Postmortem Inspection*			
	Passed	*Suspected*	*Condemned*	*Total*	*Passed*	*Condemned*	*Total*	*Pc*
Cattle	389,671	142	2,898	392,569	389,632	39	389,671	
Calves	388,585	90	281	388,866	388,451	134	388,585	
Swine	1,508,050	2,703	50	1,508,100	1,505,647	2,403	1,508,050	
Sheep	1,034,852	73	166	1,035,018	1,034,472	380	1,034,852	
Poultry	10,309,575	9,763	60,392	10,369,967	10,196,288	113,287	10,309,575	
Total	13,630,733	12,771	63,787	13,694,520	13,514,490	116,243	13,630,733	1

Percent of Condemnation N. J. State Inspection		**Percent Condemnation Federal Inspection (all states)*		*Percent Condemnation N. J. Federal Plants*	
Cattle	.093	Cattle	.30	Cattle	
Calves	.052	Calves	.46	Calves	
Sheep	.026	Sheep	.020	Sheep	
Swine	.05	Swine	.18	Swine	
Poultry	1.1	Poultry	..	Poultry	

Table 5. Ante and Postmortem Inspection Results for Cattle
Major Conditions and Diseases Resulting in Condemnation
of Carcasses and Parts

Cattle	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	14,998	14,997	50	1	....
Federal	376,364	373,467	92	2,897	....
Exempt	1,207	1,207	0	0	....
	392,569	389,671	142	2,898	....
Cattle					
Postmortem					
State	14,997	14,984	....	13	352
Federal	373,467	373,441	....	26	20,257
Exempt	1,207	1,207	....	0	0
	389,671	389,632	....	39	20,609

Major conditions which cause condemnation of parts:

Abscess (livers)
Sawdust (livers)
Abscess or pyemia
Actinomyces
Miscellaneous infectious diseases

Major diseases resulting in carcass condemnation:

Pleurisy, Pneumonia
Pregnancy
Abscess (pyemia)
Pericarditis

Table 6. Ante and Postmortem Inspection Results for Calves
Major Conditions and Diseases Resulting in Condemnation
of Carcasses and Parts

Calves	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	97,653	97,630	90	23	....
Federal	291,007	290,749	....	258	....
Exempt	206	206	0	0	....
	388,866	388,585	90	281	....
Calves					
Postmortem					
State	97,630	97,602	....	28	80
Federal	290,749	290,643	....	106	1,092
Exempt	206	206	....	0	0
	388,585	388,451	....	134	1,172

Major conditions which cause condemnation of parts:
Abscess (livers)
Abscess, pyemia (other parts)
Bruises
Contamination
Miscellaneous infectious diseases

Major diseases resulting in carcass condemnation:
Pleurisy, Pneumonia
Contamination
Injuries
Immaturity
Enteritis, Gastritis, Peritonitis

Table 7. Ante and Postmortem Inspection Results for Swine Major Conditions and Diseases Resulting in Condemnation of Carcasses and Parts

Swine	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	119,307	119,265	249	42	....
Federal	1,387,087	1,387,079	2,454	8	....
Exempt	1,706	1,706	0	0	....
	1,508,100	1,508,050	2,703	50	....
Swine					
Postmortem					
State	119,265	119,247	....	18	6,649
Federal	1,387,079	1,384,694	....	2,385	67,124
Exempt	1,706	1,706	....	0	0
	1,508,050	1,505,647	....	2,403	73,773

Major conditions which cause condemnation of parts:
Abscess, pyemia (other parts)
Tuberculosis
Miscellaneous inflammatory diseases
Contamination
Pericarditis

Major diseases resulting in carcass condemnation:
Icterus
Abscess, pyemia
Contamination
Pleurisy, Pneumonia
Enteritis, Gastritis, Peritonitis

Table 8. Ante and Postmortem Inspection Results for Sheep
Major Conditions and Diseases Resulting in Condemnation
of Carcasses and Parts

Sheep	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	19,217	19,216	73	1	....
Federal	1,015,424	1,015,259	0	165	....
Exempt	377	377	0	0	....
	1,035,018	1,034,852	73	166	....
Sheep					
Postmortem					
State	19,216	19,212	....	4	49
Federal	1,015,259	1,014,883	....	376	72,228
Exempt	377	377	....	0	0
	1,034,852	1,034,472	....	380	72,277

Major conditions which cause condemnation of parts:

Injuries
Enteritis, Gastritis, Peritonitis
Abscess, pyemia
Caseous lymphadenitis

Major diseases resulting in carcass condemnation:

Icterus
Pregnancy
Contamination
Pleurisy, Pneumonia
Abscess, pyemia

Table 9. Ante and Postmortem Inspection Results for Poultry
Major Conditions and Diseases Resulting in Condemnation
of Carcasses and Parts

Poultry	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	235,712	235,195	0	517	....
Federal	8,545,325	8,505,229	9,463	40,096	....
Exempt	1,588,930	1,569,151	300	19,779	....
	10,369,967	10,309,575	9,763	60,392	....
Poultry					
Postmortem					
State	235,195	232,974	....	2,221	2,042
Federal	8,505,229	8,394,163	....	111,066	20,957
Exempt	1,569,151	1,569,151	....	0	0
	10,309,575	10,196,288	....	113,287	22,999

Major conditions which cause condemnation of parts:
- Miscellaneous infectious diseases
- Tuberculosis
- Bruises
- Septicemia, Toxemia

Major diseases resulting in carcass condemnation:
- Miscellaneous general
- Miscellaneous inflammatory diseases
- Septicemia, Toxemia
- Bruises

Milk Control Program

Field inspections of dairies and plants and sampling of milk and milk products have been made on a regular basis to determine the degree of compliance with our sanitary requirements and product standards.

Supervision of the 405 milk plants, 1,272 frozen desserts plants, and the dairy farms supplying milk to those plants was aided by correlating reports received from other official agencies having reciprocal agreements with the Department with reports received from our field personnel and laboratories.

Thirty milk plants and their raw milk suppliers and seven frozen desserts plants have requested evaluation and were rated for compliance with the United States Public Health Service (U.S.P.H.S.) Recommended Milk Ordinance. Those ratings are made by especially trained personnel of the Department who have been designated by the U.S.P.H.S. as Approved Milk Survey and Laboratory Certifying Officers. Such ratings are used to certify those meeting the standards for interstate shipment. This cooperative activity provides additional marketing areas for New Jersey milk suppliers.

In order to provide better control over the health of dairy animals, a regulation was adopted and promulgated which requires an "abnormal milk" screening test be made on each producer's milk and follow-up procedures to be used if abnormal milk is found. This regulation replaced the requirement of an annual physical examination of each dairy animal. Since the screening test must be made at least once a month, checking herd health is placed on a more realistic and current basis.

Work continued on committees of the New York State Milk and Food Sanitarians and the Northeast Uniform Standards Committee leading towards uniformity of requirements and procedures in our milk shed. Studies were completed and guidelines developed for use by the northeast states in regu-

lating loose-housing of dairy animals, liquid manure handling systems, use of farm score sheets by industry inspectors, and in the use of standards for the installation and operation of milking machines.

Extension of the use of plastic materials for packaging milk will be rapidly increased if a proposal for reusing plastic bottles is approved. Initial investigation of systems for reusable plastic containers in other states indicates that additional controls are needed. Recommendations have been given to the manufacturer and changes are being made.

Official agencies in the reciprocity program submitted 457 reports of inspections and 2,147 reports of analyses during the year. These reports, together with our own, are used as a basis for quarterly releases to all local boards of health on the status of milk plants serving consumers in New Jersey.

Table 1. Number of Inspections and Samples Collected by Program Personnel, 1966

Milk Plants Inspected	276
Dairy Farms Inspected	3,229
Frozen Desserts Plants Inspected	98
Samples Collected	1,936

Shellfish Control Program

Shellfish for the Department includes "all edible species of clams, oysters and mussels either shucked or in the shell, fresh or frozen."

Special attention is given to this limited group of food products because:

1. shellfish are traditionally consumed uncooked (on the half shell) or only partially cooked (steamed);
2. the feeding habits of shellfish concentrate pathogenic organisms, if present in the feeding waters, in their alimentary tract;
3. therefore, shellfish reflect the quality of the waters from which they are harvested.

The Department assumes that all shellfish will be eaten raw or partially cooked and any pathogenic organisms which might be present would not be destroyed by cooking. In order to assure the consumer of a product of good sanitary quality, this Department must permit shellfish to be harvested only from clean waters.

This Department must determine where the clean waters are located. A continuing system of evaluating the various waterways in New Jersey by

means of sanitary surveys is carried out. The waters are then classified according to their acceptability for harvesting.

The Shellfish Program cooperated with the Stream Pollution Control Program and the Division of Laboratories in carrying out the following sanitary surveys in 1966:

1. Clamming Creek
2. Mullica River
3. Absecon Bay
4. Brigantine Area
5. Peck Bay
6. Ship Channel
7. Great Egg Harbor River
8. Ludlam Bay area
9. Sea Isle City to Great Sound
10. Great Sound—Jenkins Sound

During the course of these surveys, 10,798 water samples were collected and analyzed. This was an increase of 1,164 samples over 1965.

During 1966, there were changes made to the classification of harvesting waters. Approximately 5,372 acres of growing waters were condemned in addition to the 512 condemned in 1965. On the positive side, approximately 671 acres of growing waters were reopened in addition to the 1,200 acres opened in 1965.

It is important to disseminate information to all interested parties as to where it is permissible to harvest shellfish. In order to accomplish this, 1966 saw the development of new and improved charts showing the location of open and condemned waters. These were distributed to all licensing agents for distribution to each purchaser of a harvesting license for 1967.

New and improved metal signs indicating where the dividing lines are located between open and condemned waters were developed for use in 1966.

Prevention of harvest from condemned waters is carried out by a patrol organization under the Division of Shell Fisheries, Department of Conservation and Economic Development. There were 78 persons apprehended during 1966 for violations of shellfish regulations. Sixty-nine of these were found guilty and paid 101 fines totalling $2,760. Three persons were found not guilty. Three apprehensions did not result in arrest and three persons have their case pending. This is an increase over 1965 which had 35 apprehensions, 31 convictions and 37 penalties totalling $1,939.50.

Another Program function of the Shellfish Program is to supervise and control the handling of shellfish after harvesting. Certificates are issued to acceptable shellfish handling establishments. These establishments are classified by their function. Certifications issued increased in 1966 as compared below for 1965 and 1966:

	1965	1966
Shellstock Shipper	74	82
Reshipper	64	63
Shucker Packer	11	13
Repacker	6	7
Digger Retailer	5	7
	160	172

In support of the certification program, 744 inspections and follow-up visits were made during 1966 as compared with 667 in 1965.

Inspections include private water supplies. Water samples are collected as a part of these investigations. During 1966, there were 206 private water samples collected and analyzed as compared with 172 in 1965.

Still another part of the supervision of the industry includes the sampling of shellfish products. There were 743 samples of shellfish collected and analyzed in 1966 compared with 518 in 1965.

Evaluation of the New Jersey Shellfish Control Program by the United States Public Health Service indicated continued improvements in all phases of the Program and a very good overall rating. New Jersey was again certified as a member in good standing of the Cooperative Interstate Program made up of the shellfish industry, the United States Public Health Service, and the various state regulatory agencies.

An improved service during 1966 was the publication and distribution of pamphlet S-D1 which contains the laws and regulations governing the Sanitation, Handling, Shipping and Shucking of Shellfish. It also contains applicable excerpts from Selected Sections of Food, Drug and Cosmetic Laws and Regulations.

As in the past, the Program supervised the bay scallop shucking and shipping industry although scallops are not included in our definition of shellfish. During 1966, there were 35 shippers approved for handling bay scallops as compared with 31 in 1965.

Research on depuration of hard clams has continued at the Monmouth Beach Coast Guard Station laboratory by the Biology Department of Rutgers.

Studies have continued in Barnegat Bay to determine the effect of the Oyster Creek Nuclear Generating Station on the flora and fauna of Barnegat Bay. This study includes representatives of the United States Public Health

Service, the United States Department of Interior, the New Jersey Radiological Health Program, the New Jersey Division of Fish and Game, and Rutgers —the State University.

Camp and Bathing Program

Lake Bathing

Seventy-one lake bathing places were certified by this Department during the 1966 summer season. The total is significant for two reasons, the first being that it represents a continuation of the upward trend which began following a slump in 1964; the second being that it equals the 1963 figure which was the highest ever attained.

A certificate of compliance is a document issued to proprietors of lake bathing places who meet (comply with) minimum Departmental requirements in safety, sanitation, and water quality. The Department offers to each holder of a certificate a sign which can be posted on the premises showing the place has been approved by the State Department of Health.

Since participation in this activity is voluntary on the part of bathing lake owners and operators, the increased interest is taken as an indication that the value of good public relations is recognized. In that connection, this Department awarded to each lake bathing place certified a certificate and a sign for display. Additionally, the names and locations of places granted recognition were made available to the public through the medium of the press.

Efforts will continue to stimulate interest and promote increased acceptance of the certification program by bathing lake owners and operators in order that the public may be afforded as many certified lake bathing places as possible.

Camps

There were 276 camps known to this Department during the 1966 season, an increase of six over 1965 to establish an all time high figure. Of the 276, 248 were visited and inspected, with 220 being recommended for and granted certification.

As in the case of bathing lakes, participation in the camp certification program is voluntary on the part of owners and operators. Acceptance has been excellent and indications are that additional camps will swell the number known to the Department to even higher figures in coming years.

A list showing the names, locations and other data pertinent to camps for the 1966 season has been prepared for distribution to those having an interest.

Trends

The figures for this year indicate upward trends when viewed in the light of three-year comparisons. Previous figures are as follows:

	1963	1964	1965
Camps	258	265	270
Lake Bathing Places	71	62	64

Potable Water Program

In spite of problems in staffing, there has been a significant increase in the number of water supply projects submitted for examination for formal approval. The increased activity in planning new or expansions of existing supplies is attributed largely to the stress on the enforcement of the statutes, rules and regulations, to secure improvements to the physical structures for derivation, treatment and distribution of water for public potable and domestic purposes together with the maintenance of adequate pressure and volume and the reduction in the corrosive qualities of water supplies.

The administrative workload is summarized in Table 1 which, for comparison, shows the corresponding statistical data for the years 1964 and 1965. It will be seen that, over a two-year period, there have been increases of 80 percent in the number of combined projects examined, 160 percent in the number of new public water supplies approved, and 400 percent in the number of new water treatment plants approved.

Table 1. Summary of Administrative Work

	1964	*1965*	*1966*
Combined projects submitted for examination	110	137	198
Projects examined and disapproved	4	7	15
Combined permits issued	106	130	183
Estimated construction costs for approved projects	$13,576,000	$19,345,700	$20,241,400
Breakdown:	*1964*	*1965*	*1966*
New Public water supply systems	5	9	13
New supplies approved for schools, etc.	7	20	32
New sources of supply	53	106	80
New water treatment plants	31	48	157
Additions to existing water treatment plants	26	15	23
New water storage facilities	31	42	36
New transmission and distribution mains	10	10	32
Major additions to existing distribution systems	28	35	41
Original Physical Connection Permits issued	19	17	18
Renewal Physical Connection Permits issued	238	255	271
Formal Orders served	22	17	19

The need to utilize available staff on the examination of the large number of submitted combined projects precluded completion of the minimum desirable frequency of one routine inspection per year for each public water supply. Nevertheless, 45 percent of the supplies were inspected, which compares favorably with the inspection frequencies attained in 1964 and 1965, and a large number of special investigations and revisits were performed, usually as a result of consumers' complaints or of deficiencies discovered during routine inspections. Table 2 summarizes the field work accomplishments, the corresponding data for 1964 and 1965 also being shown for comparison.

Table 2. Summary of Field Work

	1964	*1965*	*1966*
Routine inspections of public water supplies	228	143	226
Percentage of public supplies inspected	46%	31%	45%
Special investigations and revisits	269	256	201
Routine inspections of "special" supplies (schools, etc.)	194	147	108
Inspections of supplies for U.S.P.H.S. Certification	5	6	12
Inspections of vessel, railroad and airline watering points	5	159	18
Inspections of new physical connections	24	34	27
New well tests (including schools)	68	99	87
Field meetings and conferences	114	163	142
Bacteriological samples taken and interpreted	4,648	5,093	5,406
"Complete" chemical samples taken and interpreted	355	337	629
"Partial" chemical samples taken and interpreted	930	714	1,122

Special intensive investigations were conducted of the water supply systems of two municipalities and a major industrial water supply, and water quality monitored over a long period to assure that the wells had not become contaminated with the pesticide "Endrin" following discharge of this toxic material into a brook. It was arranged that one of the municipal supplies should temporarily discontinue using its own prime source of water, and would draw its supply in the interim period from another municipality. This episode exemplifies the need for interconnections between public water supply systems, as advocated by this Department.

Other nonroutine field work included special investigations to discover and rectify the cause of bacteriological contamination in the water supply systems of three large municipalities, investigation of a water supply in an area where there was an outbreak of enteritis, and a special investigation of the water supply at a U.S. Navy installation where it had been erroneously reported that the water contained the specific organisms of cholera.

The Program cooperated with the United States Public Health Service in taking and testing water samples from commercial passenger aircraft at Newark Airport; assisted in developing the New Jersey Water Emergency Action Plan for the rehabilitation of public water supply systems following natural or wartime disasters; and participated in the Civil Defense exercise, "Operation Rebound."

During the continued drought during 1966, public water supplies fared generally better than in previous years in maintaining supplies, due to the encouragement by the Program in the provision of duplicate prime sources of water and interconnections between public water supplies, together with the interchange of water. Even so, the extremely hot weather in July, 1966, which resulted in abnormal water demands, created many problems of pressure and volume in small water supply systems of marginal adequacy, and gave rise to numerous consumers' complaints which had to be investigated by Program personnel.

Special investigations were made of 12 such supplies. In addition, acquiescence was given to several other water purveyors for the temporary emergency use of 13 unapproved water sources, subject to adequate treatment prior to distribution. In one case, temporary permission was given to pump water from a lake and distribute it for domestic and sanitary purposes only. Although this supply received chlorination, it was considered to be potentially hazardous for drinking purposes because of an inadequate chlorine contact period; so, a "Boil Water" Order was also issued.

Publicity was given to the proposed misuse of a readily available product as advocated in a widely circulated newspaper advertisement. The public was warned that its use in this manner would create potential hazards to public water supply systems. In another newspaper release, householders were warned to be on their guard against unscrupulous salesmen who use high pressure salesmanship and scare tactics to sell domestic water conditioning equipment which is often not needed. One such concern was referred to the Consumer Frauds Bureau through the Office of the Attorney General.

In response to the Department's Rules and Regulations requiring the mandatory chlorination of all public water supplies, chlorination facilities were installed at 115 water treatment plants. There has also been an encouraging response to the efforts by the Program to have water purveyors institute a routine bacteriological sampling program for quality control purposes. Sixty-six additional water purveyors commenced such a program during the year under review. It is eventually hoped to include a requirement for routine bacteriological sampling within the New Jersey Potable Water Standards.

In the field of legislation, the Governor signed into law two bills which aid in the administration of the Potable Water Program. One of them updated the law regarding the installation of physical connections between public water supplies and unapproved supplies to permit the use of modern backflow prevention devices; while the other revised the statutory definition of "public water treatment plant" in accordance with modern practice.

The Standards for the Construction of Water Supply Facilities, established under the provisions of Chapter 199, P. L. 1954, and the Individual and Semi-Public Water Supply Code, were revised, updated, and promulgated.

In a case heard in the New Jersey Superior Court in Atlantic City, taken by this Department against a municipality relative to inadequacies in water pressure and volume, the Court upheld that such inadequacies constitute a hazard to public health and ordered the municipality to take such steps as may be necessary to correct the deficiencies. In other cases, proceedings have been taken through the Office of the Attorney General to secure compliance with the law by water purveyors. Representatives of the Program have testified at numerous hearings of the Public Utilities Commission in relation to deficiencies in public water supply systems.

Several administrative improvements have been effected, including the development of a new multicopy form for analytical results and a newly designed routine inspection form, both of which have reduced the workload for typing personnel.

Program personnel have continued to be active in the educational field, having conducted courses on water supply for municipally employed sanitarians and migrant labor camp inspectors, and courses on chlorination and water treatment at Rutgers University for water works personnel. A paper on the tests conducted with the G. A. Reverse Osmosis Unit for Water Reclamation was read at the Conference of the New Jersey Section of the American Water Works Association. Program personnel served as consultants at the convention of the New Jersey League of Municipalities. Liaison with the water works industry is maintained by participation in the meetings of the North Jersey and South Jersey Association of Water Superintendents, and representatives of the Program serve on the Research and Development Committee, and Groundwater Committee of the New Jersey Section, American Water Works Association.

Solid Waste Program

It is estimated that New Jersey disposes of 12,600 tons of domestic refuse as well as 7,500 tons of commercial and industrial solid wastes each day. In addition 1,000 tons of similar solid wastes are brought to this state from the City of New York and Philadelphia daily. Some municipalities in Lower Bucks County, Pennsylvania, also bring refuse for disposal into New Jersey. It is also true that a few municipalities in Mercer, Hunterdon, and Warren Counties dispose of their solid waste in Pennsylvania and a few municipalities from Passaic and Bergen Counties dispose of their solid waste in refuse disposal areas located in New York State. However, the quantities of refuse transported from New Jersey to Pennsylvania and New York are minimal.

A marked reduction of fires on refuse disposal areas has been brought about in the Hackensack Meadows of Bergen and Hudson Counties. This was due to frequent inspections and to the resulting greater selectivity of loads of refuse acceptable for disposal by the operators of these disposal areas. Truckloads of refuse being brought into these areas from New York City have been decreasing rapidly.

Five underground fires in former refuse disposal areas in East Rutherford were controlled at a cash cost to the state of approximately $43,000. This Department, the State Highway Department, the New Jersey Turnpike Authority supplied support in the form of both personnel and equipment and a private contractor was engaged to extinguish three of the larger underground fires. Spurious dumping in East Rutherford still continues in spite of their no dumping ordinance, and underground burning on a small scale is still a recurring problem to East Rutherford.

Court cases were initiated against two Newark Operations by this Department. These are T. Fiore & Sons and Patrick Barone.

In one municipality, dumping was stopped on two disposal areas because of fires. The refuse was disposed of on other areas until the fires were controlled. North Arlington took this action and has taken steps to eliminate disposal areas when contracts held by the operators of disposal areas expire. The Department obtained a consent judgment against a disposal area in Lyndhurst as a result of a fire. The court ordered dumping to be discontinued until the fires were put out. This was done and the operations continued. A marked improvement in the operations of the refuse disposal areas in the Hackensack Meadows has followed this aggressive concentrated action on the part of this Department.

Inspections of refuse disposal areas throughout the state are made by the District offices. An average of two inspections a year is made of each landfill in this state.

Where more frequent inspections of refuse disposal areas are made, the ratings of these areas are raised to a satisfactory level.

A chemical waste disposal meeting was held with representatives of the Associations of Chemical Industries as well as with representatives of disposal areas to discuss problems associated with the disposal of chemical wastes. These meetings may lead to a better understanding of the problems of industry and the disposal operations. Technical know-how of these industries may help to solve the treatment of such wastes in order to make them less hazardous, less toxic, less odorous and more amenable for safe disposal on sanitary landfills and/or through the use of chemical waste treatment plants.

Through the State Health Aid Act of 1966, six county units and seven separate muinicipalities have been certified to receive a total sum of $84,454.53 in order to control the storage, collection, and disposal of solid wastes.

The solid waste planning grant obtained from the Public Health Service's Office of Solid Waste amounted to $61,625.00 of federal funds. Fifty thousand dollars of state funds made a total of $116,625 for the first fiscal year from June 1, 1966 to May 31, 1967. Of 12 budgeted positions, only five were filled by the end of the calendar year. Recruitment for these positions was vigorously pursued without success. Recruitment is still in progress. It may be necessary to employ persons at lower grades than originally planned.

Under this grant, a survey of one area of the state, consisting of Bergen, Hudson, Essex, and Union Counties, the most populated area in the northeastern part of this state, was completed. The area consists of 510 square miles with 123 municipalities having an estimtaed population of three million people. The survey included a general community data sheet, as well as landsite and plant-site investigation of each of the 32 refuse disposal areas, four incinerators and one transfer station.

The data collected from Area I of New Jersey which consists of the most populated counties of Bergen, Essex, Hudson and Union will be prepared for computer data processing.

Two additional municipal incinerators were found in our survey of Essex and Union Counties in Area I. Both are closed. A total of 38 municipal incinerators were constructed in New Jersey. Only nine are in operation, serving 10 percent of the population.

Members of the staff of the Solid Waste Program attended meetings with the Regional Project leaders of the Quad-City, Joint Meeting No. 1, Bergen

County, Tocks Island, and the Philadelphia-Delaware River-Pennsylvania Regional Group. Other meetings were held with members of the staff of the Division of State and Regional Planning, the county planners of Monmouth, Somerset, and Gloucester Counties, as well as discussions with planning officials from Ocean and Cape May Counties. The Program cooperates closely with demonstration grants for refuse disposal on a regional basis.

A supplementary planning grant for the fiscal year June 1, 1967 - May 31, 1968, was processed for approval by the Office of Solid Waste, Public Health Service. Funds to be made available for solid wastes planning would amount to $269,426; of this amount $125,000 would be made available from the Public Health Service's Office of Solid Waste.

General Sanitation Unit

Ragweed and Poison Ivy Program

The activities carried on by this Program have been limited to responding to requests for consultation and special assignments and surveys of municipalities carried out during the season with summer help.

A survey of the municipalities in the Island Beach area of Ocean County was made to determine the extent of the ragweed problem and to stimulate complete elimination of growth during the last half of August and the month of September. The total ragweed growth on Island Beach was shown to be very sparse. Less than 4,000 square feet of ragweed was found to be growing in this seven square mile area. This is equivalent to a strip of ragweed growth along the front edge of about 40 building lots. A municipal, centrally directed, ragweed control program would control this plant during any one season and practically eliminate growth after a few seasons of spraying and thus make this seashore area a hay fever haven for sensitive persons during the ragweed pollinating season.

Nineteen pollen collection stations were operated on a voluntary basis in various locations of this state.

Ragweed and other weeds were controlled along many of the roadsides of this state by the State Highway Department, Highway Authorities, and county and municipal officials.

An effort is made each season as time permits to stimulate more effective roadside maintenance work to reduce ragweed growth to a minimum. Much more could be done in this area with more man-hours of consultation work available for this activity.

Housing Program

The Housing Program had the services of a Program Coordinator for most of the year. Several surveys designed to determine the status of housing activities in New Jersey were completed.

Information is now available as to which municipalities have housing programs, which have the model housing code, and which health departments are involved in housing code enforcement activities.

One hundred and sixty-eight municipalities have codes on housing: 62 of these have adopted the state recommended Housing Code. Because of the federal grant programs to stimulate housing code inspection work and the State Certification Grand Program, many local health departments are interested in strengthening their housing efforts. Thirty applications for state grants to conduct housing programs were reviewed by the Program. This new interest in housing work has caused an increase in requests for consultation and support on the part of local health departments.

A task force was established in August to draft plans for raising standards and providing proper recognition of the qualifications of "Inspectors of Housing." A progress report will be ready early in 1967 with recommendations for action.

The Housing Coordinator participated in conferences, on committees, at round tables and work shops. The Department also participated in several teaching sessions during the year.

Three courses in housing, in cooperation with Rutgers University, have been given and certificates indicating a passing grade were awarded during the year to approximately 100 persons.

The Department has reviewed and approved plans for the installation of water supply and ground sewage disposal systems for 52 school buildings. This work involves the review of plans, specifications, percolation test data, and the evaluation of the general layout, potential sources of pollution, and availability of sewers.

Housing Program—Plumbing

The interest in plumbing which was manifested during 1965 continued during this year.

The consultant retained by this Department was active in promoting the Plumbing Code of New Jersey and in laying the ground work for its adoption by way of conferences with interested officials, as well as speaking appearances. Additionally, its administration and enforcement were implemented through

consultations with plumbing inspectors who had requested advice concerning interpretation of the code in specific local situations. Thirty-five specific engagements were involved in implementing the aforementioned activities, plus numerous informal telephone inquiries. The consultant participated in the round table conference for municipal officials in Atlantic City at the request of the New Jersey League of Municipalities.

Engineers and architects are becoming increasingly aware of the code and calls were received from them for guidance. General information was furnished in response to requests, but in every case the functions of local plumbing inspectors were stressed and the importance of contact and clearance with such officials pointed out as being obligatory.

The Standing Committee on Plumbing Matters met twice during the year. As a result of committee action, an amendment to the Plumbing Code of New Jersey was promulgated in April. The amendment related to the jointing of cast iron soil pipe.

The committee had requests on file at the close of the year for the incorporation of additional items in the code. These were scheduled for review at future meetings, subject to the usual requirements that an applicable nationally recognized standard be available.

Mobile Home Parks

The major emphasis has been on the sanitation of mobile home parks in the central and southern parts of the state, particularly in Burlington, Camden, Gloucester, and Salem Counties. Special efforts were made in Burlington County where a new county health department had been established. The greater bulk of mobile home parks in that county were subjected to an evaluational inspection tour in conjunction with military and county representatives during the last quarter of the year. Some military mobile home parks were inspected for the first time in the past five years. Another first was the inspection and evaluation of the 12 parks in Cumberland County in conjunction with the county health department. Some pioneering was done in Atlantic County with the county health department on a joint inspection tour of the parks in Galloway Township.

The Mobile Home Parks Program is now in its fifth year. Efforts are made to secure the effective support of local health departments. The Program Coordinator is presently working on possible ways to secure such effective support. The need for additional personnel is evident but an effort is now underway to provide statistical data that will assist in making accurate and realistic budget requests in the matter of workloads and staffing needs.

During the year the following activities were conducted:

Inspection Visits	87
Surveillance Visits	119
Special Investigations	13
Total	219
Conferences (Field)	19
Conferences (Other)	35
Total	64
Meetings (Night)	3
Meetings (Day)	6
Total	9

Court Appearances—None.

Occupational Health Program

There was a continuing high level demand for the services of the Occupational Health Program in 1966. A Statistical Summary for the 1966 calendar year and a statistical comparison for the years 1964, 1965, and 1966 are included at the end of this report. Field and laboratory analyses and office consultation services and inquiries also showed an increase.

Sources of Requests

Requests from management and those arising out of union and citizen complaints each account for 14 percent of the total 453 industrial plant visits. Requests from local health departments increased from 45 percent to 57 percent indicating an increased awareness of this field of activity. Previous educational efforts and demonstration surveys are now showing their worth. Community-wide occupational health surveys were completed in Clark Township and are continuing in Lodi, Edison, Montclair, Paterson, and Clifton. Similar surveys are scheduled for Cranford, Ridgefield, and Piscataway.

Thirty-two dry cleaning plants were evaluated for compliance with local ordinances and 26 requests were received for assistance in determining violations of local noise performance codes or for consultation on the writing of a noise control code. Specific ordinances for the regulation of air conditioning units are beginning to appear. This problem will involve other environmental health programs such as water supplies and sewers.

Examples of assistance to improve working conditions given to other governmental units included the evaluation of noise and difficulty in communications in the Health Department's Graphic Arts Print Shop; glare and light for the Department of Labor and Industry; beryllium standards of Rutgers—the State University; dermatitis from dust at a Jersey City disposal area; overcrowding and foul air in the City Hall in Jersey City; ventilation in the State Highway Department Laboratory; ozone from Ion Activators for the North Jersey Training School; fumes from caustic soda treatment in the water plant at New Lisbon State Colony; carbon monoxide in the cab of trucks of the U.S. Post Office Department; noise in the shoe and textile shops of the Rahway State Prison Farm; and ozone from air purifiers for the Ancora State Hospital.

In cooperation with the International Labor Office and through the U.S. Department of Labor, Bureau of Standards, Mr. Mahmoud Sabry Yousef from Egypt was given insight into occupational health work in New Jersey including field visits.

From the above, it is quite evident that there is a trend toward a concern for all environmental factors in addition to metals, solvents, and dust exposures which constantly require the attention of an occupational health program.

Lead poisoning continues to such an extent that the Occupational Health Laboratory processed 1,792 blood, urine, air, and material samples in the year 1966. Of this total, 301 had occupational involvement. The remaining 1,491 were from children suspected of having lead poisoning and were submitted to the laboratory by physicians and hospitals. Where lead poisoning is found in children, investigations are made by local health departments in the home to determine the cause and to take steps to eliminate such causes.

The demand for the New Jersey Occupational Health Bulletins continues. Requests have been honored from 1,982 persons representing every state in the Union and 13 foreign countries. Number 4 of Volume 6 entitled XYLOL was distributed to our mailing list. Under preparation for distribution in 1967 is the 58th bulletin entitled ASBESTOS and a revision of our bulletins on LEAD and on INDUSTRIAL NUTRITION.

The references to studies of too much ultraviolet light affecting Go-Go Girls in the year-end report of the Department hit the headlines of every major newspaper in this country and in London, England. The story was also repeated by newscasters on radio and television. Additional publicity was given studies of carbon monoxide gas concentrations existing in small delivery vehicles used by U.S. mailmen.

Table 1. Statistical Comparisons Showing Trends in Increased Occupational Health Program Activities

	1966	*1965*	*1964*
Number of establishments given service	453	376	355
Number of visits to perform plant environmental services	875	642	686
Number of worker health services	258	216	311
Number of recommendations made to management	1,143	1,083	947
Number of analyses made in the field	3,671	3,193	2,276
Number of laboratory analyses	2,028	2,026	1,393
Number of office consultation services and inquiries	1,385	1,226	931

Radiological Health Program

Introduction

Chapter 116, Public Laws of 1958 provides for control of radiation hazards within New Jersey. The Act creates a seven member Commission on Radiation Protection which is empowered to promulgate necessary codes, rules and regulations for radiation protection. The Department of Health is responsible for registering sources of radiation and for the administration of these codes, rules, and regulations.

Commission on Radiation Protection Membership as of December 31, 1966

Frank G. Dunnington, Ph.D., *Chairman*

Benjamin P. Sonnenblick, Ph.D., *Vice Chairman*

Philip D. Gilbert, M.D., *Secretary*

Roscoe P. Kandle, M.D.

Richard J. Sullivan, M.P.H.

Max M. Weiss, Ph.D.

Robert C. Axtmann, Ph.D.

Chapter I, General Requirements of the Radiation Protection Code became effective February 1, 1961.

On December 4, 1961, Chapter 124, of 1961, was enacted. This Act amends Chapter 116, P. L. 1958, and basically authorizes an agreement between the State of New Jersey and the United States Atomic Energy Commission whereby New Jersey could by agreement assume certain licensing and regulatory authority now conducted by the Atomic Energy Commission.

Effective February 1, 1962, Chapter II, Special Requirements, New Jersey Radiation Protection Code, bans fluoroscopic shoefitting machines.

A revision in the New Jersey Radiation Protection Code providing for licensing the possession and use of radioactive materials that are naturally occurring and those artificially produced in particle accelerators became effective February 1, 1965. The group of radioactive materials licensed by New Jersey includes all materials not subject to licensure by the United States Atomic Energy Commission.

Proposed amendments to Chapters I and II of the Code will be presented at a public hearing to be held on February 15, 1967.

The proposed changes affect both general requirements, (Chapter I) and special requirements (Chapter II). The changes proposed for Chapter I deal with purpose and responsibility, definitions, registration, licensing, permissible dose rates, radiation levels and concentrations, records, radioactive contamination control and labeling, posting, and controls.

The changes proposed for Chapter II deal with therapeutic installations, medical diagnostic X-ray installations, and dental installations.

A provision is included to require that dealers in X-ray equipment shall notify the Department of those to whom the equipment is sold within 15 days of sale.

Dr. Samuel Ingraham was welcomed to the Commission as the designated representative of Dr. Kandle, State Commissioner of Health, to attend all meetings of the Radiation Protection Commission and to act for him on those occasions when he is unable to attend Commission meetings.

Certification of X-ray Technicians

The substance of a proposed bill for certification of X-ray technicians continued under discussion with many groups: the New Jersey Society of Radiologic Technicologists; the New Jersey Association of Osteopathic Physicians and Surgeons; The Radiological Society of New Jersey; the Medical Society of New Jersey; and the New Jersey Hospital Association.

This proposed bill was developed by the Commission and the Department jointly. It was resubmitted to the Governor.

Other Discussions of the Commission

Other subjects considered at length by the Commission were:

1. The extent of the practice of nuclear medicine was considered by the Commission. An Advisory Committee on Nuclear Medicine is to be appointed early in 1967 to assist the Commission with these deliberations.

2. The advisability of expanding the responsibilities of the Commission to include the safe use of non-ionizing electro-magnetic radiation (super radar and Lasers and Masers).
3. The quality of training facilities for X-ray technologists.
4. Employer-State-Federal Records and Reports System for Radiation Workers, proposed by the Atomic Energy Commission, and workmen's compensation implications.

Radiological Health Laboratory

Gross alpha and beta laboratory determinations are made on all water, silt, vegetation, vegetables, and soil samples. Gross beta determinations are made on all precipitation and air samples. Milk is analyzed for strontium 89, strontium 90, iodine 131, and barium 140. Leak test smears are generally analyzed for gross alpha and beta activity and also for any specific radionuclides indicated.

The number of leak test smears has increased from 62 in 1963 to 440 in 1966 in support of New Jersey licensing activities.

Aditional marine and ore samples were analyzed in 1966.

Table 1. Radiological Health Laboratory Samples Processed

Environmental samples collected and determinations made during 1966

Type of Sample	*Samples*	*Determinations*
Total	3,160	6,273
Surface Water	100	200
Silt	11	22
Ground Water	5	10
State-wide		
Water	332	664
Silt	261	502
Precipitation	67	67
Air	374	374
Special		
Water	353	706
Silt	95	190
Vegetation	95	186
Soil	112	216
Milk	470	868
Marine	316	1,150
Ore	19	50
Leak Tests and Smears	440	843
Miscellaneous	110	225

Gamma-Spectroscopy

During the year, a multi-channel gamma analyzer was installed and the old one was upgraded. Extensive experiments were conducted for full exploitation of gamma-spectroscopy for environmental samples such as: milk, water, air, vegetation, soil, fish, etc.

An effort was made to find computer facilities to carry out complex calculations necessary for the full use of the gamma analyzers.

An inquiry has been made into exploitation of activation analysis. Since we have the gamma-spectroscopy instrumentation, and the Industrial Reactor Laboratories Reactor is close by, activation analysis could become an additional analytical tool for use in the conduct of state business and research.

A study was made of whole body counting at the Public Health Service's Northeastern Radiological Laboratory where the counting is done in an expensive shielded room. Further study may show that the whole body counting can be done with a simpler and not so expensive an arrangement.

Reactor Safety

Several stipulations were agreed upon in the matter of Oyster Creek (NJPDC Docket 652-60). This reactor is now behind schedule and operation may not commence until 1968. The application for an operating license is expected shortly after January 1, 1967.

Public Service has selected Burlington as the site for its first reactor, a Westinghouse 3038 Mwt, indirect cycle, pressurized water reactor. This reactor is scheduled for 1971 on-line operation. The Preliminary Safety Analysis Report was received on December 16, 1966. This proposed reactor is sited amid a fairly high population density (about 30,000 people within a three mile radius on both sides of the Delaware River). For this reason, this reactor may become a precedent setter. It is anticipated the Atomic Energy Commission will not hold a public hearing locally before early summer. Excellent communications have been established with Public Service.

Additional activities were directed toward evaluating the desirability of making the Industrial Reactor Laboratories available to the industry and institutions of higher learning through Rutgers—the State University.

Radioactive Materials Licensing Program

During 1966, 30 permanent licenses were issued to owners and users of naturally occurring and accelerator produced radioactive materials during 1966. A total of 49 permanent licenses were issued as of December 31, 1966. (See Table 2). Many of the 76 persons to whom temporary licenses were

issued will soon be in compliance with the New Jersey Radiation Protection Code and permanent licenses issued to them.

Approximately 25 percent (198 of 825) of the persons to whom applications for licenses were sent responded. About 120 of the 198 have material that is naturally radioactive or accelerator produced; the others have material licensed by the Atomic Energy Commission.

Table 2. Licensing of Radioactive Materials, 1966

		Jan.-Dec. 1966	*Total to date December 31, 1966*
License applications sent out		91	825
Number responding		63	198
Suppliers contacted re N. J. licensing		5	23
Suppliers indicating they will require a New Jersey license to ship		2	11
Applications received for a license to leak test sealed sources		3	24
New Jersey Licenses Issued:			
Hospitals	Temp.		51
	Perm.		31
Physicians	Temp.		10
	Perm.		4
Industrial	Temp.		14
	Perm.		14
Institutional	Temp.		1
	Perm.		0
Total	Temp.		76
	Perm.		49

Registration of Radiation-Producing Machines

There were 698 machines registered and 351 machine registrations cancelled in 1966 for a net gain of 347 machines registered. The machines registered during other years were 613 in 1965; and 728 in 1964.

Table 3. X-ray Machines Registered by Type of Registrant

Registrant	*Increases in No. of Machines Registered During 1966*	*Total Reg. Dec. 31, 1966*
Industries	9	937
Physicians	10	2,250
Dentists	295	4,756
Chiropractors	6	268
Chiropodists	4	274
Veterinarians	6	181
Institutions	17	1,200
Total	347	9,866

Table 4. Machines Registered by Type of Registrant As of December 31 of Each Year

Type of Registrant	*1966*	*1965*	*1964*	*1963*	*1962*
All Registrants	9,866	9,522	9,182	8,454	8,196
Dentists	4,756	4,461	4,375	3,943	3,694
Physicians	2,250	2,240	2,171	1,975	2,103
Chiropractors	268	262	254	236	230
Podiatrists	274	270	270	251	243
Veterinarians	181	175	169	162	149
Institutions and Schools	1,200	1,186	1,149	1,111	1,065
Industry	937	928	794	776	712

Field Inspections for Code Compliance of X-ray Machine Installations

There were 2,334 inspections of X-ray units in 1966 to determine compliance with the Radiation Protection Code. Table 5 gives the number of inspections by type of registrant.

Table 5. Inspection of X-ray Machines by Type of Registrant

Registrant	*No. of Inspections Made During 1966*	*Total Dec. 31, 1966*
Industry	91	508
Physicians	435	3,898
Dentists	1,470	7,291
Chiropractors	76	457
Podiatrists	82	548
Veterinarians	33	276
Institutions	147	2,037
Total	2,334	15,015

The Radiation Producing Machine Section of the Program continued a five-year reinspection plan whereby units in compliance with the Code are reinspected at five-year intervals.

X-ray Machine Code Compliance Inspection Results

A total of 1,289 X-ray units were brought into compliance with the Radiation Protection Code during 1966. The number of X-ray units in compliance with the Code as of December 31, 1966 was 7217 units or 73 percent of the 9866 units registered with the Program. Table 6 gives the number of units in compliance by type of registrant.

Table 6. X-RAY MACHINES IN COMPLIANCE WITH NEW JERSEY RADIATION PROTECTION CODE BY TYPE OF REGISTRANT

Registrant	*Units Placed In Compliance in 1965*	*Total December 31, 1965*	*% of Reg. Units*
Industry	108	335	34
Physicians	289	1,552	69
Dentists	509	3,881	82
Chiropractors	57	250	93
Podiatrists	25	219	80
Veterinarians	24	139	77
Institutions	277	841	70
Total	1,289	7,217	73

National Data System

The Radiological Health Program continued its cooperation with the National Data System devised by the United States Public Health Service for recording data obtained during inspections of X-ray machine installations. Under this system, Radiological Health Program inspectors use Public Health Service survey forms in addition to the Department's own inspection forms. The completed Public Health Service forms are forwarded to Rockville, Maryland, where the coded data are processed along with data obtained from other states in order to get more complete information regarding the status of X-ray installations in various categories, more accurate information on population exposure to X-rays, and types and speeds of film used by various professions.

Educational Activities

Ninety-seven (the same number as in 1965) technical conferences were held with representatives of industry, government, and various professions to provide relevant technical information on the Radiation Protection Code and radiation protection.

More than 120 persons attended an Institute on Therapeutic Radiation, Radium and Radioisotopes for Physicians held at St. Barnabas Hospital, Livingston, New Jersey.

An exhibit of X-ray tubes tracing their development from 1899 to 1966 was displayed at the annual meeting of the Medical Society of New Jersey in Atlantic City. The exhibit was also shown at the New Jersey State Fair and in the lobby of the Health-Agriculture Building on John Fitch Plaza.

A dental radiation protection exhibit was displayed at the annual meeting of the New Jersey State Dental Society in Atlantic City.

Members of the staff also manned an exhibit sponsored by the United States Public Health Service at the American Dental Association meeting of Greater New York.

An exhibit was provided and manned for the annual meeting of the New Jersey Association of Osteopathic Physicians and Surgeons.

Instruction in the safe handling of transportation accidents or fighting fires involving radioactive materials was given to eight groups involving 1451 emergency workers of all types. One lecture was given for 55 first aid squad chiefs and their assistants at the Fifth District New Jersey First Aid Squad meeting at the Somerset Hospital in Somerville.

A one-hour workshop on radiation problems as related to first aid squads was presented to 1100 attending the New Jersey First Aid Council State Meeting in Atlantic City.

Lectures and/or demonstrations on radiation protection were conducted at:

1. Annual meeting of New York, New Jersey Sections of the Society for Non-Destructive Testing.
2. State-wide Institute for Registered Nurses on Radiation Therapy and Cancer Nursing at Presbyterian Hospital, Newark.
3. Dental Assistant course at Union County Technical Institute in Scotch Plains.

Stream Pollution Control

After review, the Department issued permits for the construction and operation of 168 sewerage projects having a combined estimated cost of $48,200,000. This represents a considerable reduction from 1965 approvals involving some 315 projects at an estimated cost of $60,300,000. These reductions may be attributed to the tight money market that prevailed during the second half of 1966, together with anticipated Federal Construction Grant monies which, for the most part, had not been appropriated by Congress.

Forty-eight formal Water Pollution Abatement Orders were issued to municipalities and industries. Five orders were also issued to local boards of health requiring the abatement of nuisances and sources of foulness caused by inadequate, individual household sewerage facilities.

Twenty-nine permits were issued to locate factories or workshops on New Jersey watersheds. Orders of Necessity were granted to six municipalities permitting them to exceed their bonded debt limit for the construction of necessary sewerage projects.

Approximately 600 stream samples were obtained at 150 locations for sanitary, chemical, and bacteriological analyses. There were 1,017 routine surveillance inspections of existing sewage and industrial waste treatment plants and 400 special investigations or studies of suspected or known water pollution conditions.

The Department continued to establish, by regulation, anticipate surface water uses by classifying all of the waterways lying within the Hackensack, Hudson, and Passaic River Watershed Basins. In addition, minimum treatment requirements of wastewater effluents were adopted by formal regulation for the Raritan and Passaic Watershed Basins.

Under the provisions of the State Public Sanitary Sewerage Facilities Act of 1965, the Department offered 14 grants totaling $475,000 to cover the cost of preparing engineering feasibility studies for regional water pollution control projects. Under the same Act, the Department issued 13 interest free loans amounting to $1,275,000 to cover the cost of preparing engineering design plans for proposed sewerage projects.

A special oceanographic study was completed in the Atlantic and Cape May County oceanfront areas. The cost of this study was $200,000 made available to the Department by legislative appropriation. It is anticipated that these studies will constitute the initial step leading to the restoration and protection of South Jersey shellfish and recreational waters.

Four million dollars of Federal Construction Grant moneys were distributed by the Department to aid in the construction of 11 stream pollution control projects.

Three bills affecting stream pollution control were signed into law during 1966. One law enables a county to plan, design, construct, operate or acquire sewerage facilities as part of a total management program. The second law amends the existing sewerage authority's law now enabling two or more counties to create a sewerage authority. The third law amends existing statutes and enables the Department to give due consideration to community developments of comprehensive regional sewerage facilities in order that intermunicipal regional planning may be realized.

Veterinary Public Health Program

Veterinary Public Health

The Program on Veterinary Public Health is an administrative coordinating unit within the Division of Environmental Health. The basic objectives of the Program are the prevention and control of animal diseases transmissible to man, collectively known as the zoonoses. The zoonoses although

occurring in few numbers, as compared to other diseases and conditions, are of sufficient significance that detailed epidemiological methods must be employed in their early detection, control, and prevention. This report will cover in detail two of the more important zoonoses, Eastern Viral Encephalitis and Rabies. The above activities are accomplished through (a) persons assigned directly to the Program, (b) District Public Health Veterinarians, (c) other Health Department personnel having allied functions and close liaison with interdepartmental programs.

In addition to the above responsibilities, the Program acts in a professional, advisory and training capacity to the Meat Program of the Bureau of Food and Drugs whenever such advice and assistance are required. In this capacity, a member of the Bureau serves on the Department's Board of Examiners and is responsible for conducting examinations four times annually for the licensing of veterinary and meat inspectors. The Program is also responsible for administering and implementing the Insect and Rodent Control Program. Also the Chief of the Bureau acts in a consultative capacity to the Division of Fish and Game, Department of Conservation and Economic Development.

Rabies Control

Table 1. Laboratory-Confirmed Cases of Rabies Reported by this Department—1960-1966

1960— 1 Bat	1963—16 Bats
1961— 7 Bats	1964—16 Bats
1 Cat	1965—21 Bats
1962—10 Bats	1966—22 Bats
1 Raccoon	1 Raccoon

A total of 594 bats and 1,704 other animals were submitted to the laboratory for rabies diagnosis. An analysis of data concerning the bats submitted indicates a significantly higher percentage of rabies virus is isolated from suspiciously acting bats than from bats captured in their normal environment. Whenever a bat bite occurs in a human, thorough investigations are conducted as all persons bitten must receive anti-rabies treatment and any animal exposed must undergo a prolonged quarantine period not required when bitten by animals other than the bat. Rabies was confirmed in a raccoon from Bergen County. Control methods of dog control activities and canine rabies vaccination were increased. Wild animals were trapped in the area. No additional cases occurred.

Following is a breakdown by Districts of the number of animals given rabies vaccine supplied by the Department. The chart is a favorable progress

report on this phase of rabies control and indicates the success of the vaccinating campaign instituted in 1948. There is a trend in municipalities to use the office type clinic for compulsory rabies vaccination rather than the public free clinic. It is expected that this trend will continue. This will further increase the number of dogs given rabies vaccine.

Table 2. Animals Receiving Anti-Rabies Vaccine

District	*Calendar Year 1964*	*Calendar Year 1965*	*Calendar Year 1966*
Central	44,737	46,767	48,999
Metropolitan	61,530	66,951	67,397
Northern	28,238	31,854	34,079
Southern	17,488	18,922	19,824
	151,993	164,494	170,299

Rabies is endemic in Pennsylvania and New York. The predominant animals in which the virus has been isolated are skunks and foxes. New Jersey must continue to actively sponsor rabies vaccination in dogs so that if rabid animals from these neighboring states do bite New Jersey dogs an epidemic will not occur.

Ecology of Encephalitis

The study on the Ecology of Viral Encephalitis was operated for the sixth consecutive year. This project has been financed under federal funds with Dr. Martin Goldfield and Dr. Oscar Sussman, Co-principal Investigators. The Department of Conservation and Economic Development, Division of Fish and Game have assigned Mr. George Haws, Junior Wildlife Manager, to the project on a full-time basis. Dr. William C. Carter and Dr. Raymond E. Kerlin, Senior Public Health Veterinarians; Walter R. Gusciora, entomologist; and George Bordash, field representative are assigned to the project along with six part-time field representatives. Dr. Jeff Swinebroad, Chairman, Department of Biology, Douglass College, Rutgers, the State University, acts as a consultant to the project.

The design of the project is as follows:

Four study areas are maintained, located in Estell Manor, Atlantic County; Brigantine National Wildlife Refuge, Galloway Township, Atlantic County; Forked River Game Farm, Ocean County; and Great Swamp Area, Morris County.

The field work consists of netting, speciating and bleeding wild birds, trapping and bleeding mammals, reptiles and amphibians, and collecting mos-

quitoes and other ectoparasites. This work is accomplished four days a week during June, July, and August. Also sentinel flocks of chickens are kept in or near the study sites and are bled at two intervals during June through October, two days a week the other nine months. All specimens (such as dead animals, blood, nervous tissue, internal organs and insects) are delivered to the Program on Virology, Division of Laboratories for serological tests and virus isolations. Results of virus isolations are contained in that Program's report in a paper written by Oscar Sussman, D.V.M.; Ronald Altman, M.D.; and Martin Goldfield, M.D.

A new type of bird trap designed to capture starlings was used at two study sites. The starling is considered a nuisance as large flocks consume huge amounts of grain and deface buildings and other areas where they roost and are potential hosts of the zoonoses. The trap was successful at the study site. At the Forked River Game Farm, approximately 3,000 were captured. All except 10 percent were euthanized. These were banded for scientific study. The trap's effectiveness demonstrates it can be used on farms where the starling is a pest.

The following tabulation illustrates the volume of work in the project since it was initiated in 1961.

Table 3. Totals for 1961-1966 of Birds, Mammals, Amphibians and Chickens Captured and Bled in Each Study Area

Mammals, Reptiles and Amphibians	12,443
Wild Birds	42,263
Chickens	4,815
Mosquitoes	538,000
Other Arthropods	23,999

Dr. Oscar Sussman, Chief of the Bureau serves in an advisory capacity to the Florida State Board of Health concerning its St. Louis Encephalitis study. Experience gained in the above study is valuable first-hand information for the Florida study.

Entomologic Phase of Arbovirus Research

Isolates of western encephalitis (WE) virus were obtained from bloods from starlings taken from the Great Swamp Area during mid-winter. From January to December, 4,955 ectoparasites (fleas, mites, sucking lice, ticks, biting lice) were removed from host animals and tested for WE and eastern encephalitis (EE) viruses.

Hibernating mosquitoes, 5,900, were collected in the Philadelphia-Camden area in a search for gravid specimens to help determine whether Culex

mosquitoes can serve as overwintering reservoirs for arboviruses, on the assumption that the gravid mosquito has taken a blood meal. Over 70,000 mosquitoes were tested for arboviruses in 1,200 pools, from collections taken in four field-study areas. New screen-funnel traps, placed on tops of vehicles, were used to trap mosquitoes after sundown; the catches contained a high percentage of blood-engorged and gravid specimens and presumbaly a high number of mosquitoes which have had a blood-meal experience. The isolation potential to these catches may prove to be relatively higher. Last November, experimental daytime funnel-trapping for salt marsh mosquitoes appeared to be feasible in open grassy fields.

Insect and Rodent Control

Assignments in insect and rodent control included answers to letters of complaint, requests for consultation, information, and inspection, involving legislators, the Governor's Office, State Health Districts, municipal governments, and private citizens.

A survey of arthropods of public health importance was made in the Tocks Island area, within the proposed Delaware Water Gap National Recreation Area. We complied with requests for information from pest control operators; State Highway Department; other states, in matters of surveys; from students, as far as Texas and Louisiana, in regards to New Jersey Arbovirus Research; Agricultural Commodities Distribution, on stored-foods products; on termite control from private home-owners.

Sanitary engineers from the World Health Organization, with duty stations in Africa and Asia, were escorted by representatives of Veterinary Public Health, in a review of mosquito control practices throughout New Jersey.

Laboratory Supervision of Institutions Performing Animal Experimentations

Under the provisions of R. S. 4:22–16, the State Department of Health may authorize the conduct of experiments or investigations by agricultural stations and schools maintained by the state or federal government, or by medical societies, universities, colleges and philanthropic institutions incorporated or authorized to do business in this state and having among their corporate purposes investigation into the causes, nature, prevention and cure of diseases in men and animals.

Responsibility for this activity has been placed in the Bureau of Veterinary Public Health since December 19, 1963.

Twenty-two laboratories are currently authorized by the State Department of Health to conduct experiments or investigations under this law. All of these laboratories have been investigated and re-evaluated during the year.

Pesticide Project

The year 1966 was a fruitful one for the Pesticide Project. During this second year of operation, the staff was increased from four to its authorized complement of 12; the pesticide analytical laboratory became operational, and comprehensive medical studies were initiated on a group of highly exposed individuals. The laboratory is now routinely analyzing human body fluids and tissues for pesticides and their metabolites, and foods, air, water and other environmental samples for pesticide residues in the parts per million and billion ranges. Approximately 725 human and environmental samples were examined during 1966.

The Monmouth County Epidemiological Study has been organized with three population groups, i.e., agricultural, industrial, and control. Initial contacts have been made with many of the individuals in these groups. Long-term medical surveillance has commenced on selected individuals of the agricultural and industrial groups. In addition, investigations were conducted on approximately 30 known or suspected human cases of pesticide intoxication occurring in the state during the summer and autumn seasons.

Special medical and industrial hygiene studies were conducted in several environmental pest control programs of the State Department of Agriculture. The aircraft pesticide dispersal activities throughout the state were surveyed. A comprehensive multiprogram environmental health study of an endrin formulating operation of a central New Jersey manufacturing plant was conducted.

At the end of the year, plans were nearing completion for proceeding with detailed studies of various pesticide manufacturing, compounding, and distributing operations in New Jersey.

Division of Laboratories

MARTIN GOLDFIELD, M.D., *Director*

RONALD ALTMAN, M.D., *Assistant Director*

Programs:

Bacteriology ..... RUSSELL STEIN
Program Coordinator

Blood Bank ..... FEDERICO COLOSIMO
Program Coordinator

Chemistry ..... JOHN J. NELSON, M.S.
Program Coordinator

Pathology ..... MARTIN GOLDFIELD, M.D.
Program Coordinator

Serology ..... ELEANOR E. THOMAS
Program Coordinator

Virology ..... J. NORMAN WELSH, M.S.
Program Coordinator

Division of Laboratories

During 1966, the 140 persons who staff the Division of Laboratories helped to perform some 1.1 million complex technical procedures on close to one-half million specimens. Additionally, activities related to our proficiency testing and laboratory approval programs required the preparation and mailing of 24,000 evaluation specimens and 150 laboratory visitations. And, while we were busy evaluating the performance of laboratories under our aegis, we also participated in evaluation and collaborative studies to monitor and improve our own techniques through the processing of 200 unknown specimens. Also, 10 of our staff attended eight scientific courses or workshops and 16 technicians from hospital and public health laboratories were given bench training in their specialties. The enthusiasm and productivity inherent in this expression of our 1966 workload reflect the admirable dedication of employees to their job.

The reports of the component Programs of the Division that follow accurately and objectively present statistical data regarding the work performed during the calendar year.

Bacteriology Program

Demands for this Program's services reached an all-time high during 1966 when a record-breaking total of 158,412 specimens was received for examination. The more than 419,000 laboratory tests performed on these specimens also constituted a record work load effort. Moreover, new and improved services were instituted, while avenues to still further improvements were sought through a number of continuing special laboratory studies.

Highlights

Historical "Firsts"

In June, the sanitary bacteriology laboratory became the first Program unit to move from the State House to quarters in the new Health and Agriculture laboratory building.

First use of the new building's training facilities was made by Program personnel in December, when a multistate parasitology course was successfully presented in cooperation with the United States Public Health Service. Fourteen laboratory technologists from New Jersey, Pennsylvania, Ohio, and the District of Columbia attended the six-day session.

Phenylketonuria (PKU)

A total of 91,477 specimens was received for tests designed to detect PKU in infants. By far the largest specimen work load since the inception of the PKU-screening program early in 1964, it exceeded last year's total of 73,640 specimens by 24 percent and topped the 1964 total of 39,267 specimens by a gigantic 133 percent. Significantly, 10 positive findings occurred among the 89,184 newborns screened by this technique, for a positivity rate of approximately one per 9,000 live births tested. This compares with the overall positivity rate of approximately one per 16,000 live births tested since the beginning of the three-year-old program.

The preliminary phase of a program to evaluate and monitor PKU-testing competency in hospital laboratories was activated, and the first series of reference check specimens was mailed to seven such laboratories for analysis and report.

A new procedure, the testing of maternal blood specimens to detect phenylalenemia, was routinely applied in those instances where the newborn offspring's PKU test had produced suspicious results.

Rabies

Once again, more specimens were delivered to the rabies unit for examination than in any previous year. A total of 2,298 specimens was received, representing a 29 percent increase over last year's total of 1,785 specimens and an even greater 61 percent gain over the 1964 specimen total of 1,428. For the tenth consecutive year, no evidence of rabies was found in any specimens submitted from New Jersey's dog population; however, there were 22 instances of positive findings in bats.

The established policy of providing diagnostic services on all holidays and weekends continued without interruption throughout the year.

Enteric Bacteriology

The routine use of four new test media speeded the differentiation and final identification of many closely related enteric bacteria, while new combinations of enrichment media and incubation procedures increased yields of Salmonellae from food products. Use of these new techniques resulted in prompt detection and identification of the organism (Salmonella java) implicated in a major outbreak of food-borne illness involving more than 300 persons in New Jersey, Pennsylvania, and New York.

Food Microbiology

Despite limitations of budget and personnel, a pilot program providing laboratory support for the surveillance of potentially hazardous foods was started in March. Approximately 200 samples of refrigerated and frozen foods such as pies, salads, seafoods, and meat products were monitored for both coliform and total bacterial populations. Findings are detailed in Table 21.

Branch Laboratories

For the second consecutive year, the two shellfish laboratories at Bivalve and Nacote Creek were given an excellent rating by the survey officials of the U. S. Public Health Service during their annual April visit. The evaluation grade of 96.3 out of a possible 100 points topped last year's rating of 95 and continued to reflect marked improvement over the 81.7 rating obtained in 1964.

Dairy Bacteriology

Three municipal board of health laboratories discontinued bacteriological analyses for the Milk Control Program. Resultant transfer of this activity to the Central Laboratory produced a 23 percent increase in workload over last year.

The voluntary Cooperative State-Public Health Service Program for Certification of Interstate Milk Shippers calls for participating laboratories to merit approval from a state survey official by being in substantial compliance with standard methods as evidenced by a survey at least biennially and acceptable analyses of split samples of milk sent by the state to each laboratory every six months. Such split samples were mailed to each participating laboratory in March and again in September. Following review of their reported findings, analysts were advised by mailed critiques as to errors in calculation and obvious deviation from prescribed standard techniques. Wherever indicated, consultations and/or bench training and refresher instruction at the Central Laboratory were recommended for substandard performers. The following tables summarize the results of the split sampling evaluations and illustrate the trend of performance improvement achieved in the past two years.

Table 1. Results of Milk Split Sampling Program

Participant	1966 Spring Series			1966 Autumn Series		
	No. of Labs.	*No. of Analysts*	*% of Analysts Performing Acceptably**	*No. of Labs.*	*No. of Analysts*	*% of Analysts Performing Acceptably**
Official Labs**	5	12	75.0	5	11	81.8
Officially Designated Labs***	13	23	95.6	15	28	96.4

* Analyst's findings agreed within allowable limits in a minimum of 75% of sample tested.

** Laboratories under the direct supervision of local health authorities.

*** State-approved commercial and dairy industry laboratories.

Table 2. Comparision of Split Sample Results, 1966 vs. 1965

Participant	Percentage of Analysts Performing Acceptably 1965		1966	
	Spring	*Fall*	*Spring*	*Fall*
Official Labs.	33.3	50.0	75.0	81.8
Official Designated Labs.	45.0	85.2	95.6	96.4

Educational Activities

1. Courses attended by Program personnel:

Subject	*Sponsor*	*Attended*
Pulmonary Mycoses	U. S. Public Health Service	Bacteriologist
Liquid Egg Processing	Rutgers	Program Coordinator Principal Bacteriologist
Mycoplasma	U. S. Public Health Service	Bacteriologist
Fluorometric Techniques	U. S. Public Health Service	Principal Bacteriologist
Intestinal Protozoa	U. S. Public Health Service	Bacteriologist Lab. Technician

2. Bench training provided by Program personnel:

Trainee	*Subject*	*Instructor*
Army Lab Technician	Dairy Bacteriology	Bacteriologist
Industrial Lab Technician	Water Bacteriology	Bacteriologist
Hospital Bacteriologist	Phenylketonuria	Principal Bacteriologist
Hospital Medical Tech.	Phenylketonuria	Principal Bacteriologist
Industrial Food Microbiologists (4)	Fluorescent Antibody Techniques	Bacteriologist
Hospital Medical Tech.	Fluorescent Antibody Techniques	Bacteriologist
Industrial Food Microbiologist	Enteric Bacteriology	Principal Bacteriologist

Special Studies

In addition to the routine work load effort spelled out by the statistical breakdowns that follow, several thousand unrepresented special study tests were performed. In this vital area of public health laboratory endeavor to provide better and speedier diagnostic techniques, continuing lines of investigation were pursued in the tuberculosis laboratory unit relevant to the evaluation of sputum digestants, culture media, and procedures for the staining and microscopic screening of slide specimens.

Workloads and Trends

Table 3. Program Work Load Trend

	Specimens			*Examinations*		
	1966	*1965*	*1964*	*1966*	*1965*	*1964*
Program Total	158,412	150,087	110,910	419,694	413,561	279,801
Central Lab.	146,524	139,481	100,316	401,391	397,346	263,910
Branch Labs.	11,888	10,606	10,394	18,303	16,215	15,891

Table 4. Central Laboratory Work Loads

	Specimens			*Examinations*		
	1966	*1965*	*1964*	*1966*	*1965*	*1964*
Diagnostic Bacteriology						
Phenylketonuria (PKU)	91,477	73,640	39,267	183,868	147,230	78,534
Tuberculosis	23,303	25,053	19,468	142,148	151,570	97,340
Enteric Infections	7,640	10,468	7,993	33,007	43,825	27,975
Gonorrhea	5,093	4,331	4,269	5,093	4,331	4,269
Rabies	2,298	1,785	1,428	8,973	8,568	5,712
Respiratory Infections	1,016	8,139	11,027	2,032	16,278	22,054
Miscellaneous*	660	1,564	3,161	1,573	3,706	7,256
Sanitary Bacteriology						
Waters	12,250	12,344	11,157	18,375	18,516	16,735
Dairy Products	2,600	2,115	2,124	5,200	4,230	4,248
Potentially Hazardous Foods	187	....	....	1,122	....	....

* Includes: Staphylococcus cultures for phage typing, mycology specimens, food poisoning samples, wound cultures, sterility tests, and miscellaneous cultures for identification.

Program components showing significant workload increases during the report year were those pertaining to rabies (up 29%), PKU (up 24%), dairy products (up 23%), and gonorrhea (up 17%). Annual and biennial comparisons follow:

Table 5. Relative Increases in Program Component Workloads

Program Component	Specimens: Annual 1966 vs. 1965	Specimens: Comparisons 1965 vs. 1964	Specimens: Biennial Comparison 1966 vs. 1964	Examinations: Annual 1966 vs. 1965	Examinations: Comparisons 1965 vs. 1964	Examinations: Biennial Comparison 1966 vs. 1964
PKU	24%	87%	133%	25%	88%	134%
Gonorrhea	17%	1.5%	19%	17%	1.5%	19%
Rabies	29%	25%	61%	4.7%	50%	57%
Dairy Products	23%	...	23%	23%	...	23%

Phenylketonuria (PKU) Detection

Table 6. Workload Breakdown

Total Specimens Submitted	Acceptable Specimens: Total	Acceptable Specimens: Newborns	Unsatisfactory Specimens	Positive
91,477	89,868	89,184	1,609	10

Positivity rate = 10 out of 89,184 newborns or 1:8,918.

Table 7. Positive Findings Among Newborns Tested Since 1964

Year	Newborns Tested	Positives: Total	Positives: Rate
1966	89,184	10	1:8,918
1965	72,123	2	1:36,061
1964	35,890	0	.....
Total	197,197	12	1:16,433

Tuberculosis

Table 8. Workload Breakdown

Total Specimens	Acceptable Specimens: In Process	Acceptable Specimens: Completed	Unsatisfactory Specimens	Positives: Total	Positives: % of Completed
23,303	1,255	21,289	759	1,640	7.7

Table 9. Breakdown of Acceptable Specimens

Specimen Type	*Total*	*In Process*	*Completed*	*Positives* Total	*Positives* % of Completed
Sputum	21,471	1,207	20,264	1,376	6.8
Urine	450	16	434	8	1.8
Gastric	117	7	110	5	4.5
Pleural	39	0	39	1	2.6
Bronchial	33	5	28	1	3.6
Spinal	9	2	7	0	0.0
Others	38	2	36	1	2.8
Referred Cultures	387	16	371	248	66.8
Totals	22,544	1,255	21,289	1,640	7.7

Enteric Diseases

Breakdown of 7,640 Specimens:

Table 10. Specimens Submitted for Diagnosis of Bacterial Infection

Specimen Types	*Total*
Feces	4,347
Cultures for Identification	1,144
Rectal Swabs	572
Urines	281
Foods	260
Miscellaneous	92
Total	6,696

Table 11. Specimens Submitted for Diagnosis of Parasitic Infection

Specimen Types	*Total*
Feces (Fresh)	791
Feces (PVA*)	141
Blood Serum	6
Parasites for Identification	5
Pinworm Slides	1
Total	944

* Polyvinyl alcohol preservative.

Table 12. Sources of 1,138 Salmonella Isolations

Serotype	Total	Isolated at Central Laboratory				Cultures Referred to Central Laboratory			
		Human	Animal	Food	Environmental	Human	Animal	Food	Animal Feeds
S. typhimurium	198	82	2	1	1	82	24	1	5
S. java	135	103	..	18	..	14	..	..	..
S. heidelberg	87	52	..	..	..	30	3	..	2
S. typhimurium var. copenhagen	70	27	..	..	..	13	30	..	..
S. montevideo	55	20	..	1	..	17	..	..	17
S. livingstone	52	..	..	..	..	..	..	..	52
S. infantis	47	29	..	..	..	10	7	..	1
S. panama	47	37	..	..	..	10	..	..	..
S. saint-paul	43	18	..	..	..	20	5	..	..
S. tennessee	43	7	..	..	..	3	..	..	33
S. newport	36	19	1	..	..	16	..	..	..
S. oranienburg	35	13	..	..	..	4	17	..	1
S. worthington	32	8	..	..	..	2	..	..	22
S. senftenberg	32	..	..	..	..	..	..	..	32
S. typhi	31	18	..	..	..	13	..	..	..
S. meleagridis	23	1	..	..	..	..	..	..	22
S. blockley	22	7	..	..	..	10	4	..	1
S. johannesburg	20	..	..	..	..	..	..	..	20
S. enteritidis	20	2	..	..	..	18	..	..	..
S. thompson	14	4	..	..	..	10	..	..	..
S. B (4,12:z,—)	12	10	..	..	..	2	..	..	..
S. seigburg	9	4	..	..	..	..	..	..	5
S. litchfield	9	7	..	..	..	2	..	..	..
S. bredeney	7	4	..	..	..	3	..	..	..
S. cubana	7	1	..	6*	..	..	..	..	..

Table 12. SOURCES OF 1,138 SALMONELLA ISOLATIONS—Continued

Serotype	Total	Isolated at Central Laboratory				Cultures Referred to Central Laboratory			
		Human	Animal	Food	Environmental	Human	Animal	Food	Animal Feeds
S. anatum	6	..	..	..	..	2	3	..	1
S. chester	5	4	..	..	..	1	..	..	..
S. muenchen	5	3	..	..	..	2	..	..	..
S. give	5	..	..	..	..	5	..	..	..
S. manhattan	4	1	..	..	..	3	..	..	..
S. berta	3	..	..	..	..	3	..	..	..
S. derby	3	..	..	..	..	3	..	..	..
S. javiana	3	2	..	..	..	1	..	..	..
S. muenster	3	3	..	..	..	..	..	..	..
S. schwarzengrund	2	1	..	..	..	1	..	..	..
S. binza	2	1	..	..	..	1	..	..	..
S. duesseldorf	2	2	..	..	..	..	..	..	..
S. reading	2	1	..	..	..	1	..	..	..
S. hartford	1	..	..	..	..	1	..	..	..
S. newington	1	..	..	..	..	1	..	..	..
S. kentucky	1	..	..	..	..	1	..	..	..
S. bradford	1	..	..	..	..	1	..	..	..
S. madelia	1	..	..	..	..	1	..	..	..
S. paratyphi B	1	..	..	..	..	1	..	..	..
S. lagos	1	1	..	..	..	..	..	..	..
Total	1,138	492	3	26	1	308	93	1	214

In addition, two closely related pathogens, Arizona (9:24,31) and Arizona (26:29,30) were identified from human source referral cultures.

* Carmine dye.

Table 13. Sources of 33 Enteropathogenic E. Coli Isolations

Sero-Group	Total	Isolated by Central Laboratory: Stool	Rectal Swab	Food	Cultures Refered to Central Laboratory
0111:B4	8	2	1	1	4
0125:B15	7	6	0	0	1
055:B5	4	0	2	0	2
026:B6	3	2	0	0	1
0128:B12	3	1	0	0	2
086:B7	2	2	0	0	0
0119:B14	2	2	0	0	0
0126:B16	2	1	1	0	0
0127:B8	2	2	0	0	0
Totals	33	18	4	1	10

Table 14. Sources of 31 Shigella Isolations

Organism	Total	Isolated by Central Laboratory	Cultures Refered to Central Laboratory
Sh. sonnei	20		20
Sh. flexneri			
2a (II:3, 4)	4		4
4a (IV-:-:-)	3		3
1a (I:3, 4)	1		1
2b (II:7, 8)	1		1
3 (6:7, 8)	1		
Manchester bio-type	1	1	1
Totals	31	1	30

Table 15. Gonorrhea

A total of 5,093 specimen slides were submitted for staining and microscopic examination. Positive findings follow:

Total Specimens	Unsatisfactory for Examination	Satisfactory for Examination	Positives: Total	Positives: Percent of Examined Slides
5,093	39	5,054	1,256	24.8

Table 16. Rabies

Specimen Total	Acceptable Specimens	Unsatisfactory Specimens	Positive Total	% of Acceptables Found Postive
2,298	2,249	49	27	1.2

Breakdown of 2,298 Submitted Specimens

Bats	594	Skunks	20
Dogs	332	Ground Hogs	17
Hamsters	256	Monkeys	11
Cats	248	Muskrats	10
Squirrels	222	Opossums	7
Mice	197	Shrews	7
Rabbits	96	Birds	7
Chipmunks	83	Gerbils	3
Moles	56	Humans	2
Rats	40	Cow	1
Raccoons	30	Horse	1
Foxes	29	Weasel	1
Guinea Pigs	27	Mink	1

Of 27 positive findings, 22 occurred in bats:

Total Bats Submitted	*Unfit for Examination*	*Total Examined*	*Positive Total*	*% of Examined Bats Positive*
594	33	561	22	3.9

Other positive findings were made on five specimens (three foxes and two dogs) from an Air Force Base in Greenland. Since these animals were from out of state, they do not affect this Program's record of no positive laboratory findings of rabies in New Jersey canines since 1956.

Table 17. Respiratory Bacteriology

Specimen Total	*Diphtheria Swabs*		*Vincent's Angina Slides*		*Miscellaneous Total*
	Total	*Positive*	*Total*	*Positive*	
1,016	982	0	5	1	29

Table 18. Miscellaneous

Wound cultures, body fluids, exudates, etc.	191
Staphylococcus cultures for phage typing	154
Referral cultures for identification	151
Food poisoning samples	79
Mycology specimens	78
Malaria slide specimens	7
Total	660

Sanitary Bacteriology

Water Bacteriology

The Central Laboratory processed 12,250 water samples in accordance with procedures described in the 12th edition of "Standard Methods for the Examination of Water and Wastewater."

Table 19. Breakdown of 12,250 Tested Waters

Potable Waters:		Bathing Water:	
Public	3,965	Swiming Areas	466
Private	1,830	Pools	35
Migrant Camps	1,002		501
Schools	651		
Institutions	375		
Recreational Camps	284		
State Parks	176	Stream Pollution:	
Abattoirs	87	Streams	1,624
Ice Cream Stands	53	Sewage Effluents	1,547
Interstate Carriers (Air)	30	Trade Wastes	54
Food Establishments	25		3,225
Bottled Water	12		
Dairies	11	Miscellaneous	19
Egg Breaking Plants	4		
	8,505		

Dairy Bacteriology

A total of 2,600 samples of milk and other dairy products were tested in accordance with the techniques described in the 11th edition of "Standard Methods for the Examination of Dairy Products." Of these samples, 2,487 were examined for coliform counts and total viable bacterial populations. Findings were as follows:

Table 20. Dairy Products Tested

Type of Sample	*Sample Total*	*Acceptable Total*	*Below Standard*				*% of Total Below Standard*
			A	*B*	*C*	*D*	
Milk	1,140	978	84	56	22	162	14.2
Cream	516	413	44	28	31	103	19.9
Chocolate Milk	261	222	20	11	8	39	14.9
Skim Milk	266	215	32	7	12	51	19.1
Half and Half	171	146	14	4	7	25	14.6
Nonfat Milk	106	97	8	1	0	9	8.4
Frozen Eggs	6	1	0	5	0	5	83.3
Evaporated Milk	16	16	..	..	..	..	0.0
Milk Drinks	3	2	1	0	0	1	33.3
Egg Nog	1	1	..	..	..	..	0.0
Ice Cream	1	1	..	..	..	..	0.0
Totals	2,487	2,092	203	112	80	395	15.8

Key: A = Samples below standard due to high coliform count*
B = Samples below standard due to high total plate count**
C = Samples below standard due to high coliform and total plate count.
D = Total number of below standard samples (A + B + C)

* More than 10 coliforms per milliliter
** More than 20,000 bacteria per milliliter (milks), or more than 30,000 bacteria per milliliter (creams), or more than 50,000 bacteria per gram (ice cream)

Other dairy specimens:

Split samples for quality control	108
Penicillin Residual	5
Total	113

Overall Dairy Specimen Total = 2,600

Table 21. Potentially Hazardous Foods

Type of Sample	*Sample Total*	*Acceptable Total*	*Below Standard* A	B	C	D	*% of Total Below Standard*
Refrigerated Foods	34	21	0	4	9	13	38.2
Frozen Foods	153	113	11	17	12	40	26.1
Totals	187	134	11	21	21	53	28.3

Key: A = Samples below standard due to high coliform count*
B = Samples below standard due to high total plate count**
C = Samples below standard due to high coliform and total plate count.
D = Total number of below standard samples (A + B + C)

* 100 or more coliforms per gram
** 100,000 or more bacteria per gram

Branch Laboratories

The two Branch Laboratories, located at Bivalve and Nacote Creek, processed a total of 11,888 specimens. All analytical tests were performed in compliance with the procedures detailed in the third edition of "Recommended Procedures for the Bacteriological Examination of Sea Water and Shellfish," and the 12th edition of "Standard Methods for the Examination of Water and Wastewater."

Table 22. Workload Breakdown

Laboratory	*Specimens* Waters	Shellfish	Total	*Examinations* Waters	Shellfish	Total
Bivale	6,472	615	7,087	9,708	1,250	10,958
Nacote Creek	4,627	174	4,801	6,941	404	7,345
Total	11,099	789	11,888	16,649	1,654	18,303

Blood Bank Program

The duties of the program coordinator have been performed, under direction, by our Principal Serologist (Blood Bank), Mr. Federico Colosimo.

The major activities and objectives of the Program are conducted on a continuing basis consisting of the primary inspection and approval for licensing of new blood banks, re-visitations and approval for annual licensing of existing blood banks, and more significantly the continuation of our educational aims through the expansion of our performance evaluation program. Although four new blood banks were granted licenses this year, a like number ceased to operate, one of which had its license suspended by the Department. The growth of the program, however, is again reflected in the total number of vialed specimens mailed for evaluation.

Table 1. Workload Data

	1964	*1965*	*1966*
Number of Licensed Blood Banks	124	129	129
Number of Primary Inspections	129*	8	4
Number of Re-inspections and Visits	120	111	121
Number of Inspections in Institutions that claim no Blood Banking	12	2	2
Number of Blood Banks Participating in the Evaluation Program, not including Commercial Bleeding Stations	122	122	123
Number of Participating Referee Laboratories	1	2	2
Number of Participating Commercial Reference Laboratories	0	4	4
Number of Clinical Laboratories Voluntarily Participating	43	42	42
Number of Unknown Specimens Mailed for Evaluation	1,253	1,797	1,820
Number of Specimens Vialed as Whole Blood	1,253	887	0
Number of Specimens Vialed as Plasma	0	910	1,820
Number of Specimens Vialed as Packed Cells	0	910	1,949
Total Number of Vialed Specimens Mailed	1,253	2,707	3,769
Number of Evaluation Reports Processed	1,047	1,647	1,707
Number of Evaluation Critiques Prepared	12	20	20
Number of Evaluation Critiques Mailed	1,163	1,706	1,780
Number of Inspection Reports (letters) and other Miscellaneous Correspondence	116	111	110
Annual Statistical Data of Blood Used in New Jersey:			
Number of Blood Bank Summaries Processed	103	123	123
Number of Annual Summary Reports Mailed	103	126	126

* A few of these inspections were performed in the fall of 1963.

Highlights

The Program Coordinator attended the Pennsylvania Association of Blood Banks Annual Workshop in March and participated in two blood bank workshops in the state offered by commercial reference laboratories. He

continues to be a member of the executive committee of the New Jersey Antibody Club and attends its monthly meetings.

Investigations and Hearings connected with suspension of the license of the Suburban Blood Service, Inc. also occupied much of the Coordinator's time.

Note: The Program Coordinator further functioned as a member of the Health Department team surveying hospitals and laboratories for Medicare on 10 different occasions.

Chemistry Program

Significant increases in the number of samples received and the number of determinations conducted were experienced in 1966 as compared to the previous calendar year. Excluding automated screening tests, there was a six percent increase in the number of samples processed and a nine percent rise in the number of determinations performed.

Table 1. SUMMARIZED STATISTICS, JANUARY 1 - DECEMBER 31, 1966

Character of Samples	*Number of Samples*	*Number of Determinations*
Milk and Dairy Products	1,751	3,690
Other Foods	610	1,433
Drugs	119	727
Potable Waters	1,818	10,753
Sewages, Tradewastes and Streams	4,496	25,598
Clinical Chemistry Performance Evaluation	573	1,226
Miscellaneous	190	456
Totals	9,557	43,883

* Includes methods development, collaborative studies, and research.

The 5,382 blood sugar determinations conducted in 1966, through the use of automated equipment, were not included above since these relatively simple tests would serve only to distort the true work load picture. This figure was some 3,000 less than in the previous year. The reduction was due to the widespread use of a field screening device during Diabetes Detection Week in November; only marginal and presumptive positive blood specimens were submitted to these laboratories for confirmatory testing.

The single most important factor affecting this Program's work load in 1966 was the increased activity in stream pollution abatement. Some 1,100 more sewage, tradewaste, and stream samples were submitted for almost 6,000 more tests than was the case in 1965. There were even greater percentage

increases in workloads in the areas of foods and drugs but the relatively small numbers involved had a minor impact on our ability to absorb them.

Activity in the seven principal areas of the total workload, relative to 1965, varied as shown below:

Table 2. Workload Activity

	Samples	*Determinations*
Milk and Dairy Products	+ 2%	+ 9%
Other Foods	+ 5%	+ 58%
Drugs	+ 9%	+109%
Potable Waters	— 8%	— 16%
Sewages, Tradewastes and Streams	+32%	+ 30%
Clinical Chemistry Performance Evaluation	—43%	— 36%
Miscellaneous	—36%	— 58%

Highlights

Membership in our Clinical Chemistry Evaluation and Quality Control Program increased by four laboratories during 1966, for a total current enrollment of 96. Seven additional laboratories have requested participation but new enrollments were temporarily held in abeyance pending necessary funding of a comprehensive clinical laboratory proficiency testing program, plans for which are now underway. The program currently operating, now in its fifth year, formerly issued unknown specimens on approximately a monthly basis to evaluate clinical chemistry procedures in independent bioanalytical laboratories. The resignation of one member of its staff, however, curtailed the frequency of these studies in 1966. Nevertheless, some 810 specimens were issued, including two unknowns each for sodium, potassium, chloride, glucose and urea nitrogen and three unknowns for uric acid. This program is valuable in that it defines areas of difficulty encountered by an elite group of volunteer laboratories but without the funds and personnel to provide the necessary visitations, consultations, lectures, and training courses and without obligatory enrollment by all clinical laboratories, it can be of no real value in raising the level of performance in all clinical laboratories.

This Program moved to its new laboratory quarters on June 20, 1966. The move was accomplished with a minimum of disruption to routine activities and the advantages which the modern building offers far outweigh the temporary dislocations which any move entails.

Training and Conferences

This program was represented at the following courses and conferences:

A two-week course "Chemical Analyses for Water Quality"; given by the United States Public Health Service in Cincinnati; attended by a chemist.

Annual State Milk and Laboratory Rating Officers' Seminar; given by the United States Public Health Service, Region II, New York City.

Federation of American Societies of Experimental Biology, Atlantic City.

Robot Chemist (Warner-Chilcott), lecture and demonstration, New York City.

A one-week workshop on Fluorometric Methodology for Metabolic Disorders; given by the Communicable Disease Center, United States Public Health Service, at Simmons College, Boston; attended by a chemist.

Association of Official Analytical Chemists—80th Annual Meeting, Washington, D. C.

Training Extended

A laboratory technician from Fort Dix received two weeks of bench training in milk analysis, both bacteriological and chemical.

Collaborative Studies

Phosphatase determinations on split milk samples; two performance evaluations; by the Environmental Health Center, United States Public Health Service.

Twelve evaluation specimens for blood glucose and 40 for electrolytes, including sodium, potassium, chloride and carbon dioxide; by the Clinical Chemistry Evaluation Program, Laboratory Branch, Communicable Disease Center, United States Public Health Service.

An evaluation of procedures for the determination of phenols in water and tradewastes; by the Analytical Reference Service, Environmental Health Center, United States Public Health Service.

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

	Above Standard	*Below Standard*	*Total*	*Determinations*
Milk:				
Milk—Chemical	446	25	*	*
Milk—Chemical and Phosphatase	518	20		
Milk—Phosphatase	214	1		
Milk—Chemical, Phosphatase and Pesticides	50			
Milk—Chemical and Pesticides	27			
Goat Milk—Chemical and Phosphatase	6			
Cream—Phosphatase	315	5		
Chocolate Milk—Phosphatase	120			
Evaporated Milk—Chemical	4			
Totals	1,700	51	1,751	3,690

* The laboratory does not record separate totals on tests of specific items but only the grand total.

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

	Above Standard	*Below Standard*	*Total*	*Determinations*
OTHER FOODS:				
Apples—Pest., etc.	1		*	*
Apple Cider—Pest., etc.	8	1		
Apricot		1		
Asparagus—Pest.	4			
Baby Food		2		
Beans	3			
Blueberries	1			
Bread Crumbs	2			
Candy	1			
Cat Food	1			
Cereal	3			
Cheese	5			
Chicken	1			
Coffee	1			
Corn—Pest. etc.	3			
Corned Beef Hash	1			
Crab Meat		2		
Dog Food		1		
Eggs	5			
Evaporated Milk	12			
Fennel Seed	1			
Fish	3			

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

	Above Standard	*Below Standard*	*Total*	*Determinations*
Flour		3		
Fruit Ice	9	7		
Ice	1			
Ice Cream	98	6		
Ice Milk	3			
Lasagna	1			
Lobster Tail	1			
Macaroni	1			
Mayonnaise	1			
Meat	214	84		
Meat Binder	2			
Mushrooms	1			
Noodles	1			
Onions		2		
Ovaltine	1			
Paprika	1			
Peanut Butter	1			
Peas		1		
Pecan Meal		1		
Pickled Cucumbers	1			
Pickled Tomatoes		1		
Pork and Beans	1			
Potatoes	1			
Pudding	1			
Rolls	2	1		
Salad Dressing	3			
Salt	1			
Sausage Seasoning	1			
Scorb Powder	1			
Seasonings	14	2		
Smoked Fish	3			
Soda	2	2		
Soup	3			
Sugar		1		
Sweet Potatoes—Pest., etc.	50	1		
Tenderizer	1			
Tomatoes		1		
Tomato Puree	1	2		
Tuna Fish	7	1		
Turkey Dinner	2			
Totals	487	123	610	1,433

* The laboratory does not record separate totals on tests of specific items but only the grand total.

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

	Above Standard	*Below Standard*	*Total*	*Determinations*
DRUGS:				
Acetaminophen	1		*	*
Aminophylline Tablets	3			
Antihistamine	1			
Opthalmic Solution	1	1		
Ascorbic Acid Tablet	1			
Aspirin	1			
Caffeine plus Vitamins	1			
Castor Oil	1			
Cobalamin	1			
Cough Pops		1		
Drugs for Identification	7			
Enzobarb	1			
Hexavitamin	1			
Meprobamate	8	16		
Penphetamine	1			
Pentobarbital	1			
Phenobarbital	1			
Procaine—HCl	1			
Profetamine	1	1		
Progesterone	1			
Quinine Sulfate Tablets	1			
Reducing Tablets	3			
Reed Tablets	1			
Riboflavin Tablets	1			
Saccharin	1			
Salt for Silver Nitrate	1			
Sodium Aminosalicylic Acid	2			
Sodium Pentobarbital	6	20		
Sodium Salicylate	1			
Stelazine	1			
Sulfacetamide	1			
Sulfamerazine		1		
Sulfamethazine	1			
Sustac	2			
Tetracycline	1			
Theophylline, Ephedrine and Phenobarb	1			
Thyroid Amphetamine	1			
Thyroid Tablet	1			
Vitamins	2	16		
Vitron C	1			
Totals	63	56	119	727

* The laboratory does not record separate totals on tests of specific items but only the grand total.

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY

	Above Standard	*Below Standard*	*Total*	*Determinations*
DIABETES DETECTION:				
Blood Sugar			5,382	
Totals	5,382	5,382	5,382	5,382
CLINICAL CHEMISTRY:				
Cholesterol	8		*	*
Cholesterol (C.D.C. Study)	16			
Electrolytes	15			
Electrolytes (C.D.C. Study)	9			
Glucose	68			
Phenylalanine	283	25		
Phosphorus	3			
Protein	15			
Thymol Turbidity	8			
Urea Nitrogen	44			
Uric Acid	79			
Totals	548	25	573	1,226

* The laboratory does not record separate totals on tests of specific items but only the grand total.

MISCELLANEOUS:				
Air Samples	5		*	*
Bottle		1		
Clarinet Reed	1			
Dolls		3		
Kil-Ve (Vermin Solution)	1			
Toys	14	2		
Thermometers for Calibration	86			
Urines (Motor Vehicle)	24			
Urines (State Police)	53			
Totals	184	6	190	456

* The laboratory does not record separate totals on tests of specific items but only the grand total.

Table 4. NUMBER AND CHARACTER OF SAMPLES ANALYZED IN THE WATER AND SEWAGE LABORATORY

	Public	Miscellaneous	Camp	Slaughter-House	State and County Institution	Bathing	School	State Park	Food Establishment	Sewage	Stream	Waste	Sand	Total	Determinations
January	121	73	...	...	...	...	14	...	...	112	114	49	1	484	3,142
February	82	40	...	3	...	...	21	2	2	215	86	26	...	477	2,636
March	146	71	...	...	...	...	11	...	5	339	114	55	1	742	4,597
April	99	64	...	...	5	...	2	20	1	130	35	20	...	376	2,341
May	83	50	...	...	...	...	1	...	1	134	123	12	...	404	2,505
June	71	78	1	...	2	...	3	...	4	107	144	17	...	427	1,735
July	52	78	1	...	...	1	1	...	1	215	263	16	...	628	3,084
August	55	91	1	...	...	6	...	...	1	232	215	26	...	627	4,242
September	27	90	...	...	...	...	...	...	3	186	320	21	1	648	3,635
October	34	69	...	...	...	...	2	...	...	262	251	35	...	653	3,480
November	64	35	...	...	...	...	2	1	...	185	83	51	...	421	2,717
December	66	61	...	...	...	...	...	...	...	188	73	37	2	427	2,237
Totals	900	800	3	3	7	7	57	23	18	2,305	1,821	365	5	6,314	36,351

Pathology Program

The 16th Annual Slide Seminar sponsored jointly by the Department of Health and the New Jersey Society of Pathologists was held December 3, 1966, at the Princeton Inn, Princeton, New Jersey. The moderator was Dr. Leopold G. Koss, Chief of Cytology Services at Memorial Hospital, New York City. The seminar dealt with the study of cells and the early detection of cancer. Some 200 New Jersey physicians attended.

Table 1. WORKLOAD DATA

	1965	*1966*
No. Contributions to Tumor Registry	309	348
No. Consultation Cases	24	8
No. Slides Prepared	6,644	6,467
No. Slides Stained	6,569	6,429
No. Specimens Processed	1,186	1,614
No. Requests for Special Staining	36	67
No. Slides Distributed	4,637	2,510
No. Slides Stained with Special Stains	741	952
No. Pollen Slides Counted	....	258
No. Dog Lymphomas	....	192

Serology Program

Nationwide, there has been noted a 7.6 percent decrease in primary and secondary syphilis. New Jersey had the lowest number of primary and secondary syphilis cases reported since 1961. Seven hundred and four cases were reported to the Department in 1966, compared with 944 in 1965, with 41 percent of those cases still in the 15-24 age group. This reduction was attributed to the cooperation of physicians in the prompt reporting of diagnosed cases and to the intensive case-finding on the part of the Venereal Disease Control Program. The Serology program gave its support by routinely performing the Kolmer Reiter Protein (KRP) on all follow-up specimens and the Fluorescence Treponemal Antibody-absorbed technique (FTA-ABS), when necessary.

The modified test procedure of the Fluorescent Treponemal Antibody Test—the FTA-ABS—became the accepted procedure in reference testing beginning April 15th. On the same date, the policy of the Serology Program for multiple testing was changed to include all follow-up specimens.

A new form for reference testing was distributed to all the hospital and private laboratories in January to differentiate the reference testing specimens from the routine examinations. Initial analysis of the year's statistics showed

that 2.0 percent-2.5 percent of our workload were specimens for reference testing.

Eight additional laboratories were approved for syphilis serology in the year 1966, bringing the total of approved laboratories to 187. These laboratories received 10 unknown specimens plus a known control every month for five months. A preliminary evaluation of the test results proved that 98 of those laboratories had such high performance ratings that they merited receiving specimens every other month for the remainder of the year. Therefore, they received 70 specimens for the year instead of the 100 specimens. This allowed us to concentrate on the 94 laboratories whose performances were critical or erratic from month to month. The state serology laboratory served as the control laboratory. Reproducibility of test results at the control laboratory were checked daily for five days as well as reproducibility of test results on one given day among the laboratory personnel within the Program. Five laboratories were visited by the chief serologist regarding their approval for syphilis serology. In each instance, an evaluation of performance was made on the premises in an effort to resolve difficulties. Three Venereal Disease Investigators spent time in the laboratory to become acquainted with our procedures and policies, to assist them in their visits to the physicians. Two laboratory technicians representing hospital laboratories visited the serology laboratory to receive training in performance and reading levels.

New Jersey was one of 74 laboratories participating in the Federal Syphilis Serology Evaluation Study. One hundred specimens representing duplicates of 50 prepared specimens were received to test reproducibility and 100 specimens representing individual serums to test agreement with control performance on individual serums. Reproducibility of test results was 100 percent for all tests entered, qualitatively and quantitatively; agreement with control laboratory was above the *average* in all tests. New Jersey had a commendable record in the Federal Evaluation program.

From the statistics that follow it will be noted that the supplementary reference tests increased over 100 percent—the KRP from 2,060 to 4,519 tests and the FTA-ABS from 1,457 to 3,313 tests. The increase of these more time-consuming and complicated procedures occurred despite the fact that the number of specimens received and the total number of serologic tests performed for syphilis were no greater than the previous year.

Serology Program

Table 1. Comparison Statistics

	1964	*1965*	*1966*
Routine Specimens for Syphilis:			
Bloods	211,758	221,454	221,982
Spinal fluids	1,890	1,922	1,483
	213,648	223,376	223,465
Routine Tests for Syphilis:			
Bloods	228,191	232,695	232,259
Spinal fluids	1,890	2,375	1,925
	230,081	235,070	234,184
Reference Tests for Syphilis:			
KRP	3,048	2,060	4,519
FTA	1,474	1,457	3,313
Total Protein	871	1,110	1,266
Field Evaluation	17,953	21,628	19,178
Miscellaneous Tests:			
Antistreptolysin Titer	357	351	368
Cold agglutinins	87	99	94
Febrile agglutinations	....	267	411
Heterophiles	2,998	3,759	2,800
Leptospirosis	474	371	462
Q Fever	129	5	14
Trichinosis	159	205	194
Viral C. F.	578	458	270
	4,782	5,515	4,613
Premaritals	48,532	48,370	48,779
Prenatals	39,491	36,574	32,744

Virology Program

The most widely disseminated outbreak of viral disease in New Jersey during 1966 was that of Influenza B during the early part of the year. The virus was isolated from patients in most geographic areas of the state. This was the fifth consecutive year that influenza outbreaks occurred in New Jersey.

In the arbovirus surveillance program, no St. Louis Encephalitis activity was detected. St. Louis Encephalitis virus caused an outbreak of disease in the Camden-Philadelphia area in late 1964. Studies of convalescent patients from this outbreak as well as the Eastern Encephalitis outbreak of 1959 continued. Again this year, both Eastern and Western Encephalitis viruses were isolated from avian, non-avian, and mosquito specimens. The conditions necessary to spread these viruses to humans, however, were absent. In this sur-

veillance program in 1966, some types of serologic testing of field specimens were discontinued because of the limited results obtained and the greater need of personnel in other testing procedures.

A pilot study involving fatal cases in the Virology file from 1959 to 1966 was instituted with funds from the United States Food and Drug Administration. The findings were so rewarding that an application for funds for additional study was made.

Table 1. WORKLOAD DATA

	1964	*1965*	*1966*
Specimens received	29,608	23,000	28,773
Tests performed	245,995	375,000	364,173
Types of tests			
Virus isolation	108,866	97,610	234,833
Serologic tests	137,129	277,216	129,340

Division of Local Health Services

JESSE B. ARONSON, M.D., M.P.H., *Director*

MARIE A. SENA, M.D., M.P.H., *Civil Defense Administrator*

STATE HEALTH DISTRICTS

Central ..... ISIDOR MARKOWITZ, M.D., M.P.H.
District State Health Officer

Metropolitan ..... ADELE SHEPARD, M.D., M.P.H.
District State Health Officer

Northern ..... DONALD S. MYERS, M.D., M.P.H.
District State Health Officer

Southern ..... HUGH D. PALMER, M.D., M.P.H.
District State Health Officer

Division of Local Health Services

The regular and routine activities of the Division were overshadowed by the major emphasis and the spirited diligence with which the entire division staff directed its attention to the education and instruction of local officials concerning the proposed legislation for financial aid to local health agencies. After the passage of the State Health Aid Act of 1966, intensive attention was given to local health agencies meeting the criteria for participation under this act, consulting with them in planning the use of State Health Aid, and assisting in completing these applications. Not since the reorganization of the Health Department in 1947 has there been such a significant development in the administration of public health in New Jersey. Prior to the passage of the State Health Aid Act, there were six counties which had initiated county health departments. Since its passage, eight other counties have passed resolutions to establish county health departments. At the end of the year, each of the eight was in a varying stage of development in regard to the establishment of such a department.

Applications for State Health Aid were received, reviewed, negotiated and approved. Seventy local health departments serving 230 municipalities with a total population of approximately 3,900,000 are receiving State Health Aid. The major portion of the State Health Aid funds is being used to establish new positions in the municipal and county health departments. As an indication of the impact of these monies, approximately 17 health officers, 80 sanitarians, 35 public health nurses, five health educators and other positions of various levels and skills were included in the budgets for the local health agencies. The State Department of Health has established a recruitment and placement service to assist these agencies.

New federal legislation has imposed additional workloads on programs such as Home Health Agencies as required by the Health Insurance for the Aged Act, Neighborhood Health Centers funded by the Economic Opportunity Act and Demonstration Cities as provided in the "Demonstration Cities Act." Federal legislation as well as the establishment of a method of supporting local health agencies through the use of state funds have combined to give an impetus to improvement of local health departments and the organization of new local health departments. This necessitated a new look at the organization and operation of this Division in order that it could provide consultation and services to the local health agencies in keeping with the changing needs and patterns of public health in New Jersey.

The major development this year was the growth and acceptance of the county health department idea. This idea was first implemented in 1960 with the organization of a county health department in Cape May County followed by organization of similar departments in four additional counties up until 1966. In this year, eight additional county boards of chosen freeholders passed resolutions calling for the development of such departments in these counties.

Specific highlights of District activities as well as Emergency Health Preparedness and the State Health Aid Program are detailed in the following pages.

Grants-in-Aid

During the year 1966, there were in effect for all or part of the year, 21 grant-in-aid contracts consummated through the Division of Local Health Services. Twelve of these were primary contracts. The other nine were renewals. Seven counties, including Cape May, Burlington, Cumberland, Ocean, Salem, Somerset, and Sussex, were beneficiaries of grants for the improvement of county public health services. Other than counties, the grantees were two visiting nurse associations, a community nursing service, an organization for social service, and three local health departments.

Beginning on July 1, 1966 when "The State Health Aid Act of 1966" went into effect, a number of organizations which had been receiving regular grant-in-aid funds were transferred to obtain their financial assistance from the "Special Projects and Development Fund" as established under the State Health Aid Act.

The total amount expended in grants-in-aid through the Division of Local Health Services in 1966 was $94,370.22: of this amount $70,527.61 went to the counties named above for their public health services.

Emergency Health Services

Allocation of funds by the federal government for a full-time training officer to coordinate the Medical Self-Help Training Program and the part-time services of a Public Health Service assignee permitted increased emphasis on our stockpiling and training programs.

Medical Self-Help Training Program

The 16-hour Medical Self-Help Training was completed by 12,631 individuals making a total of 63,872 since March, 1963. This training will be incorporated into the 1966-67 curriculum in all nine school systems in Ocean county; in the largest regional high school system with over 5,000 students

and in several other high schools in Union county; the State Police Academy; State Municipal Police Training Academy; Mercer County Auxiliary Police Training; several schools of nursing and in physical education and recreation programs at Trenton State College.

Stockpiling Program

Our program anticipated the current federal concept that the core of planning at the operational level is the joint action of existing hospitals and local civil defense. About 80 percent of the 93 pre-positioned Packaged Disaster Hospital Units are sponsored by existing hospitals. These Packaged Disaster Hospital Units have the equivalent sponsorship by appropriate health personnel in their respective civil defense organizations.

Orientation Training Programs continued at the Rutgers School of Pharmacy; Rutgers and Seton Hall Schools of Nursing; State Colony, Woodbine; St. Elizabeth Hospital, School of Nursing, Elizabeth; St. Francis Hospital School of Nursing, Jersey City; Cooper Hospital School of Nursing, Camden; and the Perth Amboy Hospital School of Nursing. Two hundred nurse students and 100 pharmacy students were among the participants.

A five-day training program was held at the Essex County Civil Defense Training Center. Two hundred persons received supervised experience in setting up and taking down the Packaged Disaster Hospital Unit and 2,000 received orientation briefings and guided tours of the set-up unit.

A five-day training program at the Passaic County Control Center and a three-day training program at St. Joseph's Hospital, Paterson was attended by medical, nursing, technical, and service staffs of the county's hospitals. One hundred persons received supervised experience in setting up and taking down the Packaged Disaster Hospital Unit.

Health Resources Task Group

Upon the recommendations from the State Civil Defense Director and the State Health Commissioner, the Governor appointed representatives from the Medical Society of New Jersey; the New Jersey Pharmaceutical Society; the New Jersey Health Officers Association; drug wholesalers; health equipment wholesalers; manufacturers of drugs, health and sanitation equipment and supplies; and, appropriate state agencies to the Health Resources Task Group. After six revisions, the Task Group submitted the State's Health Resources Management Plan to the Governor. The Governor approved the plan in principle and had it forwarded to the U. S. Office of Emergency Planning for approval. The plan in essence has been approved except for some minor recommended changes which the Task Group will consider.

Members of the Task Group participated in the State Test "Operation Rebound" on October 29. The need for greater cross-integration between the water, the production, manpower and economic stabilization task groups was clearly established.

The State Health Aid Act of 1966

Much time and effort were devoted to informing citizen groups and local officials about the State Health Aid Act of 1966. Following its enactment, more promotional and education work was done, culminating in the submission of eight applications in October. These came from each of the six counties in the District, Camden City, and one township in Camden County. The applications from the Freeholders of Camden County and from Gloucester County represented the intent to set up new county departments of health.

Southern State Health District

Operations of the District were affected by several personnel changes. In April, a new District Consultant, Community Health Organization was employed. In March, the Principal Public Health Engineer resigned to accept a much better paying position in a consultant engineering firm. By year's end, it had not been possible to obtain a replacement. In September, the position of District Consultant Public Health Nurse, vacant since the previous year, was filled. Also in September, a Public Health Veterinarian was employed, filling a vacancy which had existed since February, 1965.

Throughout the year, District staff members gave consultation to representatives of local Community Action Program groups formed after funds had become available under the Economic Opportunity Act. Several projects planned or undertaken by the Community Action Program groups involved health services. Whenever possible, the municipal Health Officer or County Public Health Coordinator was included in these activities or plans.

The District State Health Officer met with the Health Facilities Planning Councils covering Atlantic and Cape May Counties, and Cumberland and Salem Counties during the spring. These meetings were held in connection with the implementation of the Health Insurance for the Aged Act (Social Security Amendments of 1965), so that the representatives of local hospitals could be apprized of the availability of the various services under the Act through certified Home Health Agencies.

Staff members had considerable success in their efforts to obtain complete coverage of the District by certified Home Health Agencies under the requirements of the Health Insurance for the Aged Act. New Home Health agencies

were formed within existing county health departments. In Camden County, years of effort culminated in two more bedside nursing agencies obtaining the services of well qualified full time nursing directors. In both instances, this was accomplished by means of a contract with a sister agency already eligible for certification.

As indicated above, progress in the organization and development of official health departments was influenced by the fact that senior citizens became eligible for most services under the Health Insurance for the Aged Act on July 1, 1966.

In its 1966 budget, Atlantic County took on responsibility for the $600 annual rental of the Hammonton Health Center. This expense was previously carried by the State Department of Health on behalf of the Regional Health Commission supporting clinic services there.

In Camden County, the Citizens Study Committee worked throughout the year on a major survey of services and needs in the fields of health, welfare and recreation. This study is carried on under the auspices of the United Fund, with assistance and coordination provided by the Health and Welfare Council of Camden County. Out-of-state consultants and citizen committees were used. The District State Health Officer, and the new Health Officer of Camden City were among those serving on the health task force of the study.

In April, the Camden City Health Officer resigned to accept the position of Burlington County Public Health Coordinator. He was replaced in June by another Health Officer having the Master of Public Health degree.

On September 7, the Executive Board of the Health and Welfare Council of Camden County passed a resolution urging the Board of Chosen Freeholders to set up a county department of health. This Resolution was presented to the Board the next day. On September 20, the Camden County Board of Chosen Freeholders passed a resolution to set up a county department of health and apply for financial assistance under the State Health Aid Act of 1966. At a meeting on November 10, representatives of 32 of the 37 municipalities in the county were present when it was announced that the Freeholders would offer the services of the proposed county department of health to any interested municipal board of health by contract for one dollar per year.

On September 29, the Gloucester County Board of Chosen Freeholders unanimously resolved to set up a county health department, offer contracts for one dollar per year, and apply for a subsidy under the State Health Aid

Act of 1966. This action made possible the creation of a sixth county department of health in the District and, in October, all six Boards of Chosen Freeholders or county health departments made formal application for State Health Aid to be used during 1967.

By year's end, Gloucester County municipalities representing over 70,000 people had sent resolutions to the Freeholders expressing their interest or intent to enter into a contract for the services of the proposed county health department.

Thus, by the end of 1966, the stage had been set for continuing financial subsidies under the State Health Aid Act to Camden City's Health Department and six county health units (four in existence and two planned). Coverage of all 129 municipalities by well organized health departments headed by full time licensed health officers was at last becoming an attainable objective.

Central State Health District

District Administration

District personnel continued their efforts toward development of larger local health units which would provide more comprehensive health services meeting the Department's standards. The State Health Aid Act of 1966 was a great stimulus for the establishment of such units. District personnel met frequently with county and local officials and with citizen groups to apprise them of the advantages of this legislation. Following its enactment on July 1, 1966, many requests were received from official and voluntary agencies to explain the various aspects of the law and the means by which they could attain eligibility for State Health Aid.

Burlington County established a County Health Department on February 1, 1966. By the latter part of the year, the Public Health Coordinator of this agency had arranged for contracts with 35 of the 40 municipalities in the County to provide them with comprehensive health services. Freeholders in Middlesex, Monmouth, and Mercer Counties passed resolutions for the establishment of County Health Departments. In Middlesex County, the Freeholders were ready to arrange for contracts with interested municipalities which did not have full-time health officers.

The Madison Township (Middlesex County) Board of Health placed under "Orders" by the Department for failing to meet minimum health standards acknowledged its deficiencies and subsequently employed a full-time health officer.

The financial assistance provided by State Health Aid funds should enable all applying municipalities to upgrade existing services and to develop new health programs which meet the Certified Health Services Program and Personnel Standards, as prescribed by the Public Health Council in accordance with Chapter 36, P. L. 1966 (State Health Aid Act).

Constructive Health

During 1966, the District Pediatrician was instrumental in the establishment of six new centers for well-child health supervision. Four of these centers are located in Middlesex County, one in Monmouth County, and Ocean County opened its first such facility.

The District Pediatrician attended 55 sessions of child health conferences and provided consultative services to the physicians and nurses working in them.

The Demonstration Child Health Conference in New Shrewsbury (Monmouth County) was attended by a total of 51 persons, representing 13 official and non-official agencies throughout the state. Some of the innovations growing out of this conference were initiation of routine vision screening on all four-year-olds, test for response to sound for one-year-olds, and emphasis of the importance of nurses' counselling sessions. Nurse interviews were tape recorded and used to demonstrate interviewing skills to visitors.

The District Pediatrician gave consultant services to the State Office of Economic Opportunity concerning Head Start health activities. Meetings were held with representatives of the New Jersey Chapter of the American Academy of Pediatrics, the New Jersey League for Nurses, the Directors of several Head Start programs, and representatives of Community Action groups of Ocean, Middlesex, and Monmouth Counties to explain details of the health programs.

Environmental Health

With the inception of the Burlington County Health Department, District environmental health personnel gave assistance by conducting a county-wide survey of existing and potential environmental health problems and training newly employed sanitarians. The information gathered provided the Health Officer with workload data to facilitate his development of program plans, preparation of budget, and the employment of necessary personnel.

During the year, three District Sanitarians attended a Smoke Observation Course to qualify them in Air Pollution Control. Routine inspections

of stack emissions were conducted and evaluated in relationship to Chapter IV of the New Jersey Air Pollution Control Code.

Investigation of housing problems indicated that most of them were concentrated in those municipalities which had failed to adopt the New Jersey State Housing Code or a comparable code. Accordingly, municipalities were urged to adopt and enforce the Housing, Solid Waste, Public Health Nuisance, Individual Sewage Disposal System and other state codes. Local health units were urged to conduct surveys to determine the existing need for housing ordinances to include inspection and enforcement procedures.

Three hundred thirteen ice cream plants were inspected either by local board of health officials or District sanitarians. With the improvement of local health services, there has been an ever-increasing number of establishments inspected by local health officials. As recently as 1963, District field personnel inspected all these establishments. It is anticipated that there will be further participation by local health departments, thus providing a saving of manhours for District personnel that can be used in other areas.

District sanitarians provided consultation and in-the-field training to many municipal health personnel in the areas of housing, individual sewage disposal systems, camps, lake bathing places, retail food handling establishments, individual wells and communicable disease control. In addition, the sanitarians supported local officials' efforts to gain compliance with various laws by giving testimony in court.

The sanitary facilities of nursing homes were inspected by District personnel in response to requests by the State Department of Institutions and Agencies. In each instance, a full report of the findings was forwarded to appropriate individuals in that agency to facilitate necessary action.

Inspections totaling almost 700 were made of refuse disposal sites by District sanitarians. Although there has been a general and gradual upgrading of the landfills, several violators who refused to comply with regulations of the State Sanitary Code were referred to the Attorney General's office for legal action.

In response to information received that an individual planned to operate a landfill in a swamp area in Monmouth County which was known to be an outcropping of the Englishtown Aquifer, the District initiated measures to discourage this operation. Had this landfill operation materialized, it could have polluted this important source of water for 15 public water supplies.

Sanitary surveys of individual sewage disposal systems were conducted in seven municipalities and reports of findings and recommendations were

submitted to local officials. Where no remedial action was initiated by the municipality, the Department issued "Orders" to cease and abate the source of foulness.

The District Public Health Engineer inspected the sites, witnessed the test borings and percolation tests, and reviewed the engineering plans for 13 proposed new schools or additions. Upon notice of completion of the schools, final inspections were made to determine compliance with the approved plans for the water and sewerage systems.

Technical guidance and assistance were provided to local boards of health for 15 realty subdivisions, including garden apartments and senior citizens housing units which are increasingly being constructed in the District. Efforts were made to foster public water and sewerage for such installations as well as encouraging municipalities to develop regional public water supplies and sewerage systems.

The Veterinary Public Health staff has continued efforts to promote more effective municipal rabies and dog control programs in the District through conferences with municipal and health officials, training local sanitary inspectors in rabies control, inspecting and approving sites for construction of new dog pounds and assisting local rabies control wardens in capturing stray and wild dogs.

During 1966, 144 municipalities conducted free anti-rabies vaccination clinics; 48,999 animals were vaccinated, an increase of 4.65 percent over last year.

A total of 132,525 dogs were licensed in 1966, an increase of 4.27 percent over 1965. The number of municipalities requiring compulsory rabies vaccination as a prerequisite for licensing increased 14.3 percent over the previous year.

Surveillance reports for 105 viral hepatitis cases, 118 salmonellosis cases and four shigellosis cases were received and epidemiological investigation of each was conducted. Other epidemiological investigations included Rocky Mountain spotted fever, brucellosis, meningo-encephalitis, and one case of typhoid fever.

Other Programs

Seventeen dietitians from counties within the District were among 35 participants in a four-day, state-wide workshop entitled "The Role of Nutritionists and Dietitians in Medicare." The workshop, sponsored by Columbia

University in cooperation with the Nutrition Program of this Department, served the two-fold purpose of acquainting dietitians with the "Standards of Compliance" for institutions participating in Medicare, and of recruiting qualified dietitians for consultant positions in small hospitals and extended care facilities. As a result of the workshop, these agencies have been able to recruit qualified dietary consultants. The District Nutrition Consultant served as a member of both the planning committee and the faculty for the workshop.

Plans to initiate educational programs for auxiliary food service personnel reached fruition in the establishment of the Trenton Food Service Supervisor Course held at the Vocational Division of Trenton Central High School. At the close of 1966, 24 food service employees had enrolled. The 90-hour course was open to persons employed in a supervisory capacity or those qualified to train for future supervisory positions in food service departments of hospitals, extended care facilities, and homes for the aged. The course, coordinated by the District Nutrition Consultant, had the endorsement of the Hospital Council of Mercer County, the New Jersey Dietetic Association, the Trenton Board of Education, and the New Jersey Department of Education.

A three-session food service workshop for operators of boarding homes for sheltered care in Monmouth County was conducted at the Monmouth Medical Center, Long Branch. An average of 18 persons attended each session of the workshop which was co-sponsored by the District and the Monmouth County Health Officers Association. The workshop was conducted on a pilot basis in Monmouth, the county having the greatest number of boarding homes in the District.

On June 1, 1966, Mercer County became the first county in New Jersey to participate in the Food Stamp Program funded by the federal government. At the request of the Division of Public Welfare of the New Jersey Department of Institutions and Agencies, the District Nutrition Consultant assumed co-chairmanship, on a temporary basis, of the Nutrition Education Committee for the Mercer County Food Stamp Program. The Committee, composed of representatives of social, welfare, health, education, labor and business agencies, has striven to promote maximum participation in the Food Stamp Program, and to promote improved nutrition for low-income families by means of nutrition and consumer education programs.

Public health nursing agencies in the District made significant progress in rendering improved and comprehensive nursing services, including bedside nursing care. Seven small agencies, both voluntary and official, having one or two staff nurses, merged or became affiliated with larger nursing agencies. State Department of Health standards for public health nursing agencies and

Medicare Conditions of Participation have helped to bring about this trend. Of the 12 Home Health Agencies certified for Medicare in 1966, nine are public health nursing agencies.

The District Nursing Consultant, in conjunction with the Public Health Nursing Program, initiated a comprehensive educational and orientation program for public health nurses throughout the District, including new public health nursing directors and supervisors and Army health nurses from Fort Dix, as well as senior students from hospital schools of nursing in Mercer County.

The Public Health Nurse Supervisor assisted the Diabetes Program and local public health nursing agencies in the follow-up of the positive Dextrostix screenees detected by the Diabetes Detection Program. Of the 359 positive screenees referred to the District for follow-up, 66 new cases and 48 borderline cases were diagnosed. The remaining 245 proved negative after definitive medical examination. Through the concerted efforts of the District Public Health Nurse Supervisor and local nursing agencies, follow-up was completed in three months, as compared to six months in previous years.

In preparation for the implementation of Medicare, the Social Work Consultant participated with the staff of the Office of Health Facilities Certification in surveys of hospitals, home health agencies, and nursing homes. The need for qualified social work staff to meet standards outlined for participation under Medicare was apparent. Several hospitals decided to move ahead in planning for professional social service departments. Some nursing homes requested assistance in arranging for consultation from qualified social workers.

The Social Work Consultant continued to serve on the Narcotic Addiction Study Committee of the New Jersey Welfare Council. During the year, the group sponsored two educational programs. An institute on "Treatment of the Addict in the Community" was attended by over 90 physicians, nurses, probation and parole officers, teachers, and social workers. A session on the role of clergymen and social workers from family agencies in working with addicts and their families was held at the annual conference of the New Jersey Welfare Council.

Joint community planning for services to agricultural migrants by health and welfare agencies in Burlington, Mercer, Middlesex, and Monmouth Counties continued during the year. Family clinics were established and close working relationships were developed between public health nurses and social workers from family counseling agencies. The Social Work Consultant continued to work cooperatively with her counterpart on the Migrant Health

Program in supporting these community efforts, particularly of the family counseling services to migrant workers which may become a permanent part of the family agency service.

Burlington County

The Visiting Nurse Society of Riverton, Cinnaminson, and Palmyra was incorporated into the Moorestown Visiting Nursing Association. The latter agency was trying to recruit a qualified public health nurse director at the end of the year. This agency and the Public Health Nursing Association for Burlington County have been certified as Home Health Agencies.

A qualified social worker was added to the staff of Burlington County Memorial Hospital, Mt. Holly, in November. This was the result of several months of joint planning by the Social Work Consultant with the hospital's administrative staff for development of a social service department.

Mercer County

The District Pediatrician assisted the Mercer County Medical Society and the Trenton Division of Health in planning a measles immunization program which was carried out in the public and private schools in the economically depressed and potentially high incidence areas of Trenton.

The Community Health Organization Consultant provided technical assistance to the Hopewell Valley League of Women Voters in the planning, conducting and tabulating a self survey designed to determine health activities in Hopewell Borough, Hopewell Township, and Pennington Borough. The results were published and a copy distributed to officials of the serveyed communities.

The Visiting Nurse Association of Trenton employed a new director who meets department qualifications, and has also increased its professional staff. This agency has expanded its rehabilitation program through the acquisition of a speech therapist and a physical therapist.

The Social Work Consultant assisted the Committee on Aging of the Social Service Council of Greater Trenton in formulating plans for "Operation Medicare Alert." The purpose of this project was to seek out persons over 65 who, for various reasons, failed to sign up for Health Insurance available to them under the Social Security Act of 1965. Bi-lingual persons over 65 were employed on the project.

Middlesex County

The nursing service of the Woodbridge Township Division of Health has been upgraded to meet state standards and now employs a qualified nurse director.

The Visiting Nurse Association in Middlesex County has expanded its program. It now covers the entire Township of Piscataway where it previously covered only a small portion. Also, it has been requested to assume the responsibility for the bedside nursing care program in the Carteret Borough Board of Health, which was previously and inadequately covered.

Recognizing the need for developing a professional social service department in Middlesex General Hospital, New Brunswick, the administrator requested assistance from the Social Work Consultant in outlining steps involved in developing a department, including the qualifications of personnel. When the hospital decided to move ahead with plans, assistance was given in recruiting and orienting the qualified social worker who joined the staff in June.

The Social Work Consultant has continued to support the efforts of a community group in Middlesex County whose goal has been to develop an occupational center designed to meet the rehabilitation needs of physically and mentally handicapped persons. Surveys have indicated the urgent need for this service.

Monmouth County

Four voluntary public health nursing agencies (Atlantic Highlands Public Health Association; Keyport Public Health Nursing Association; Rumson, Seabright and Fair Haven Public Health Nursing Association; and the Matawan Public Health Association) and one official agency (the Public Health Nursing Department of the Red Bank Board of Health) affiliated with Monmouth County Organization for Social Service, the largest public health nursing agency in the county. The Asbury Park Department of Health contracted with Monmouth County Organization for Social Service to have this agency provide Home Health services to its Medicare patients. The Long Branch Public Health Nursing Association, the other state-approved agency in the county, has arranged with the Ocean Township Board of Health to provide similar services to its Medicare patients.

Ocean County

The Public Health Nursing Division of the Ocean County Health Department has expanded its program to provide bedside nursing care for all

residents of the county; this care was previously rendered only to indigent residents. A qualified supervisor has been employed by the agency and it was seeking a qualified assistant director at the end of the year.

Following several years of cooperative efforts by interested citizens in Ocean County, the Executive Director of the Visiting Homemaker Association of New Jersey and the Social Work Consultant, the Ocean County Visiting Homemaker Service was established in April. This agency has received enthusiastic community support, with requests for service increasing rapidly. With the initiation of this homemaker service, all counties in the District can provide assistance to families in times of stress.

Metropolitan State Health District

District Administration

Community Health Services

Bergen County Health Department

With the relocation of the Bergen County Health Department, as recommended in the Report of the Study of Community Health Services by the School of Hygiene and Public Health of the Johns Hopkins University, September, 1964, efforts have continued toward developing a coordinated health program in the county. The Department, now located adjacent to the County Administration Building, Hackensack, is directly responsible to the Board of Chosen Freeholders.

District staff has continued to work with the Freeholders, the Bergen County Public Health Association, and staff of the Bergen County Health Department in further implementing recommendations made in the study. An Advisory Health Board has been organized to give guidance to the Department and the Board of Chosen Freeholders. This group is also responsible, together with the staff, for promoting and maintaining public support for the Department and its program.

Since the establishment of the first Department of Public Health and Preventive Medicine at Bergen Pines County Hospital, the staff has grown from three full-time employees serving 42,000 people to a staff of 12 serving 158,000 people. The following municipalities have contracted for services from the Bergen County Health Department: Oakland Borough, Montvale, Washington Township, Northvale, Rockleigh, Palisades Interstate Park Commission, Garfield, East Paterson, Rutherford, Leonia, Rochelle Park, Lyndhurst. Six other communities are considering contracting for services.

A well-qualified public health physician has been engaged as Director of the Department. Comprehensive public health programs are being contemplated including a well-rounded program of health education. 1967 finds the County Health Department in a good position to move ahead in overall planning for health needs in Bergen County.

State Health Aid Act of 1966

Forty-one of the 50 eligible local health departments in the District filed applications for financial assistance made available through the State Health Aid Act. Forty of the applications were approved. This was the culmination of a vigorous educational campaign designed to point out new opportunities available for improving public health services through financial assistance from the State Department of Health. Conferences were held with boards of health that met qualifying criteria as well as with boards that did not. Every opportunity was taken to urge all local health agencies to participate in the new State Aid Program.

An analysis of applications for financial assistance revealed that local health departments experienced a real need for help in the area of general administration. Twenty-six applications requested assistance in establishing the administrative apparatus to manage more efficiently the activities of the local agency. Additionally, particular benefits should accrue to the programs of health education, public health nursing, environmental health, chronic illness control, and dental health.

Newark Area Community Health Services Study

The Newark Area Community Health Services Study conducted under the sponsorship of the National Commission on Community Health Services was completed in July, 1965. The findings of the study groups were printed in three volumes and distributed widely.

One of the major recommendations was "that there be a planning and coordinating agency for the entire Newark area as included in this survey, covering both personal and environmental health facilities and services. Such agency should embrace within its sphere of influence all hospitals and other private voluntary health agencies and should integrate its efforts with the health activities of the various governmental agencies." The Hospital and Health Council of Newark and Vicinity took steps to reorganize as the Hospital and Health Council of Metropolitan New Jersey to function in the Regional Planning Area delineated as Region 3 by the Health Facilities Planning Council of New Jersey. The new council will encompass 55 munici-

palities in all of Essex County and in parts of Union, Hudson, and Bergen Counties.

A second major recommendation of the study was "that current efforts to secure medical school facilities within this area be supported and promoted in every way possible." The Hospital and Health Council of Newark and Vicinity has organized the "Committee to Support the New Jersey College of Medicine and Dentistry in Newark."

Annual District Meeting
County Parent-Teacher Health Chairmen

The annual meeting with County Parent-Teacher Health Chairmen continues as an instrument for good planning in the school year. The topics discussed at the conference in October were state aid to local health agencies, venereal disease education, environmental health, immunization in school health programs, and rabies control in school health education.

Union County Health Advisory Committee

The Board of Freeholders of Union County voted unanimously to establish the Union County Health Advisory Committee. The Committee is comprised of seven citizens "of all fields of endeavor" and has as its objective to look into ways and means of improving health services in Union County. District help has been offered to further this objective.

Constructive Health Programs

Maternal and Child Health Program

The Maternal and Child Health Program of the Metropolitan State Health District functioned with a reduced staff of two part-time pediatricians. Although the Director of the Maternal and Infant Care Project was not officially a part of the Maternal and Child Health staff, she provided many consultative services in cooperation with the pediatricians and the public health nursing consultants.

Consultant services were offered to aid Head Start, pre-school council, and school health programs. Consultations dealt particularly with crippled children, lead poisoning, and with communicable disease and tuberculosis control.

Newark Maternity and Infant Care Project

The year 1966 represented the first full year of service operation for the Newark Maternity and Infant Care Project providing comprehensive pre-

natal, obstetric, and post partum care to medically indigent, high-risk mothers and their infants through the first year of life. The basic design of the project is to reduce overcrowding at the Newark City Hospital by contracting for services to eligible patients at specified voluntary hospitals, and concurrently improving the clinic care offered at the City Hospital by the addition of personnel and supporting services.

Significant expansion in the scope of activities occurred as positions in several disciplines were filled. Overall administration was greatly expedited with the filling of the position of Administrative Assistant in May.

Before the submission to the federal agency of the first year's progress report (1965-66) with request for continuation, Newark's failure to meet obligatory reorganization of official health services and certain other commitments was reviewed. The State Department of Health continued to assume overall responsibility for the project and submitted the request for 1966-67. This budget, which was approved in June, 1966 for a total amount of $649,324 in federal funds, incorporated several new categories of service reimbursements to the participating hospitals. It allowed additional payments for necessary hospitalization for antepartal and postpartal complications, for clinics to provide dental care in two hospitals, and for family planning services to be incorporated in the post partum visit at two other hospitals.

Enlarged office space to meet the expanding staff needs was provided to the Project at Newark City Hospital before the close of the year as one item of the city's contribution.

As the vacancies in nursing and clerical staff were filled, new clinic operations were undertaken. In January, Beth Israel Hospital was added, and, in April, Columbus Hospital started its Maternity and Infant Care Clinic, completing plans for clinical expansion. Also in January, the special Child Health Conference known as the Young Mother's Conference was initiated at Scudder Homes to meet the needs of adolescent mothers for group and individual counseling.

Social work positions have remained difficult to fill, but Columbus Hospital was fortunate in hiring a project social worker for initiation of services there. In July, the Project position of Chief of the Bureau of Social Work (Family Health Services, Newark) was finally filled, and recruitment to fill the remaining vacancies was accelerated.

One leading recruitment problem was solved by the affiliation of the New Jersey College of Medicine and Dentistry with the Newark City Hospital, which put Dr. Franklin Behrle as the Chairman of the Pediatrics Department

in the vacancy for the Chief of Pediatrics at the City Hospital. This position had been established by the City of Newark under the terms of the original Maternity and Infant Care Project request.

With additional staff, it has been possible to extend the scope of teaching activities within the service operation. At each of the hospital clinics, the public health nursing staff now conducts regular prenatal classes of six instruction units. In one hospital, both project patients and regular prenatal clinic patients participate in these group sessions simultaneously. The project nutritionist and health educator have played active roles in developing the plan of instruction and presenting the material with appropriate visual aids. Group sessions with the young mothers at Scudder Homes have emphasized personal hygiene and nutrition, accident and fire prevention, and other areas of special interest to the adolescent parents. Extension of teaching activities into Newark City Hospital started in the fall of the year by regular assignment of the project nutritionist to prenatal clinic sessions there.

Environmental Health Programs

Sewerage Projects

Progress was made during 1966 for sewering the Pascack Valley area of upper Bergen County. The four communities of Hillsdale, Woodcliff Lake, Park Ridge, and Montvale, which lie in the valley, have been plagued with individual subsurface sewage disposal system failures. Several years ago, the Metropolitan State Health District surveyed the entire area which led to the Department issuing an order to correct the conditions.

The Bergen County Sewer Authority is now extending trunk facilities into the valley. Hillsdale is proceeding towards construction of its collection system, with eventual connection to the trunk scheduled for 1967. Complete sanitary sewer facilities for the entire valley will become a reality.

Completion of the South Side interceptor of the Passaic Valley Sewerage Authority was realized during 1966. This multimillion-dollar sewering project will handle industrial and domestic waste from the Weequahic section of Newark. Heretofore, these wastes were discharged without treatment through an open ditch to the Arthur Kill.

Rabies Control

There are only 12 communities in the District which did not hold any type of a rabies vaccination program during 1966. The total number of dogs vaccinated against rabies totaled 67,397.

Special Consultation Service Programs

Public Health Nursing

Hackensack Hospital Community Nursing Service was established in March, 1966. The hospital service area determines the geographical nursing service coverage. The staff consists of a nursing director, supervisor, and eight staff nurses.

Nursing Service, Inc., Ridgewood extended nursing services to the Borough of Wyckoff, and the Visiting Nurses of Northern Bergen County agreed to cover the Boroughs of Oakland and Franklin Lakes for Medicare clients.

The two largest nursing agencies in Essex County, the Visiting Nurse Association of Newark and Vicinity and the Visiting Nurse Service of the Oranges and Maplewood, have merged and are now called the Community Nursing Service of Essex and West Hudson. This agency now covers eight communities in Essex County and three in Hudson County.

The East Orange Health Department expanded its services to include all aspects of nursing care. It is a certified home health agency. East Orange now has two certified home health agencies providing service to its residents.

Under the impetus of the State Health Aid Act, the Bloomfield Health Department contracted with the East Orange Health Department for qualified nursing direction and supervision.

For the first time in history, nursing service is available to all communities in Passaic County. The nurse consultant worked closely with citizen and professional groups in establishing the Home Health Services of Passaic County with financial support from the State Department of Health. This new certified home health agency is progressing with support from many communities. The Visiting Nurse Association of Passaic has merged with the Home Health Services of Passaic County.

The Passaic City Health Department, in an effort to upgrade its nursing services, has contracted with the Home Health Services of Passaic County, Inc. for supervision.

One nursing agency was reconstituted and became a department of Overlook Hospital as a result of the consolidation of the Visiting Nurse Association of Summit with Overlook Hospital. The Visiting Nurse Association of Summit as a corporation entered into an agreement with the Hospital "that the nursing services heretofore furnished by the Visiting Nurse Association to area residents shall hereafter be furnished directly by the Visiting Nurse-Home Care Service of the Hospital." The employees of the Visiting Nurse

Association were accepted as employees of the hospital and a qualified nurse director-supervisor was employed by the hospital in October, 1966.

Social Work in Hospitals

Sixteen community general hospitals in the District now have a qualified social work staff. Continuing consultation was given to social work directors at East Orange General Hospital and at United Hospitals, Newark, in the establishment of new departments, and to the Hospital Center at Orange in the reorganization of a department. At United Hospitals, the consultation was formalized by an agreement between the State Health Department and the hospital administrator with approval of the National Association of Social Workers, in order to provide the consultee with experience qualifying for Association of Certified Social Workers certification.

As the need arose, social work directors in other hospitals requested and were given consultation. Such requests centered around program planning, expansion or reorganization of social services, inservice training and staff development, case management of difficult cases, and information about community resources. Almost every hospital social work department in the District has asked for help in filling staff vacancies.

Many requests came from hospital administrators for assistance in recruiting staff for new social work departments. Some of these were stimulated by the desire to meet the conditions for Medicare participation. Others represent recognition on the part of medical staff and administration for social work in the hospital.

Consultation services were given to a group of directors of hospital social service departments which meets bimonthly. This group was organized because the existing medical social work and generic social work organizations do not meet the specific needs of the department directors. Currently, consideration is being given to affiliation with the American Hospital Association's newly formed section for Directors of Hospital Social Service Departments.

As one approach to the problem of in-service training and staff development in the small departments and the one-worker department, the District Consultant organized and coordinated a series of psychiatric seminars for nine fully qualified hospital social workers, representing seven hospitals in Essex County, who do not have access to psychiatric consultation. The seminars, focused on the emotional component in chronic disease and based on case material contributed by the participants, were financed by the State Health Department.

Community and Professional Activities

The District Consultant in Public Health Social Work is chairman of the committee appointed to redefine the function and scope of the Social Work Section of the Hospital and Health Council of Newark and Vicinity.

The District Consultant, in addition to being the Chairman of the National Association of Social Workers Regional Institute Committee and the New Jersey representative for the institute, has participated in the professional social work organization by chairing the committee to draft a bill providing for state registration of social workers. The bill will be introduced in the March, 1967 session of the legislature.

Northern State Health District

District Administration

Community Health Services

With the passage of Senate Bill 14 (State Health Aid Act), there was much activity among the eligible and potentially eligible health agencies to qualify for financial assistance from the state. The Boards of Chosen Freeholders of three counties (Hunterdon, Somerset, and Sussex) passed resolutions to establish county health departments. Programs were laid out and applications submitted. At the end of the year, however, none had progressed to a functioning health department.

There were six municipalities in the Northern District that were eligible for state aid under the provisions of the law.

Warren County was the only county in the Northern District that had neither any eligible municipalities nor any plans for a county health department by the end of the year. The Board of Chosen Freeholders of Warren County, as individuals, expressed interest in the establishment of such a department but, when faced with the passage of a resolution as a Board, could not reach agreement. It became apparent, however, that Warren County had a dire need for Home Health Services in order to meet the requirements of Health Insurance for the Aged (Medicare) programs. The Board of Chosen Freeholders, therefore, passed a resolution establishing a county nursing agency. It then applied for a grant-in-aid to assist in the establishment and organization of the agency. This was approved and at the end of the year, efforts were being aimed toward the employment of a qualified director to administer the new agency.

Six public health nursing agencies, in the District have been certified as Home Health Agencies. The Family Nursing Service of Hunterdon County,

Inc., has a contractual arrangement with Hunterdon Medical Center (the Home Health Agency) for nursing services. With the assistance of the District Public Health Nurse Consultant the public health nursing agencies have spent many hours studying, interpreting, recruiting, and finally meeting the conditions of participation to qualify as Home Health agencies. Public health nursing continues to be the forerunner of other health services in many communities. With the encreased amount of chronic illness and long-term care required, more emphasis is being placed in home nursing services. This emphasis, together with the preventive services, makes increasing demands on public health nursing in both voluntary and official agencies.

Environmental Health Programs

A great deal of the environmental health staff time was spent in field training of local sanitary inspectors. Covered were food establishment inspections, individual water supply and sewage disposal system inspections and approvals, housing appraisals, and food, drug and beverage damage surveys and destruction following fires.

Routine inspections and surveillance required by our state programs covering ice cream manufacturing plants, solid waste disposal areas, camps and bathing places, and a continuing program of food sampling rounded out the field activities of the Northern District. Consultations and meetings with members of boards of health, planning boards, boards of education, governing bodies, the public, and the others continued throughout the year. These resulted in better administrative procedures, subdivision control, and improvement in environmental health fields.

Two major projects, the provision for sewers in the Borough of Watchung in Somerset County, and the approval of public sewerage and public water facilities for the Sergeantsville section of Delaware Township in Hunterdon County are the result of such consultations and meetings.

Veterinary Public Health

As requested, District staff gave assistance to Program personnel in their continuing study in the Great Swamp Area (Morris County) regarding viral encephalitis.

District staff devised a format which was adopted by the executive offices of leading chain stores. This format was for maintaining comprehensive records on sales, receipts, and disposition of psittacine birds as prescribed by the State Sanitary Code. Observations made in the field indicate that this format is being effectively used.

Upon request of the Montgomery County Health Department, State of Maryland, District staff demonstrated dog control activities and reviewed rabies control laws and administrative programs in New Jersey. The Montgomery County Health Department officials are anticipating a dog control program similar to the one administered by this Department.

A total of 43 consultations and investigations were conducted which involved insect and rodent problems and seven types of zoonoses including trichinosis, feline ringworm, bovine tuberculosis, psittacosis, staphylococcal food poisoning, dermatitis due to contact with dogs affected with sarcoptic mange, cryptococcis, and canine leptospirosis.

The Rabies Control Warden and District Staff have devoted considerable time encouraging local officials to adopt more effective dog control ordinances and employ qualified dog control personnel. All newly-appointed dog control wardens have received orientation by the Rabies Control Warden which included review of laws and regulations, acceptable equipment, standards, and referral for in-service training. Special visits were made to municipalities reflecting a sizeable drop in their dog registration population, and reviews made of their programs to determine the causes. Findings were made in writing to governing officials.

A total of 26 bats suspected of being rabid were submitted to the laboratory by this office. Three were found to be positive. All three originated from Hunterdon County. There were 21 persons who received preventive antirabies treatment.

During this period pound constructions were initiated or completed in Randolph Township (Morris County); Morristown (Morris County); and Montgomery Township (Somerset County).

District staff were responsible for promoting a regional pound facility which is now operating in Hackettstown providing dog impoundment services for Allamuchy Township, Hope Township, Liberty Township, Hackettstown, and Netcong Borough. The Sparta Township (Sussex County) Regional Dog Pound facility now provides dog impoundment facilities for five municipalities. There are eight municipalities that now have compulsory antirabies vaccination for dogs. These are Denville Township, Kinnelon Borough, Passaic Township, and Chatham Township (Morris County); Franklin Township, Montgomery Township, and Warren Township (Somerset County). The latter two initiated the programs during the year 1966.

Chronic Illness Control Programs

Aging

The Public Health Nursing Supervisor continued to serve as a member of the Phillipsburg Area Planning Council for Senior Citizens (Warren County). District nursing staff participated at a monthly meeting to interpret nursing services of the Medicare program.

Consultation visits were made to the House of Good Shepherd Nursing Home in Hackettstown (Warren County) and Heath Village (Morris County).

Cancer

District staff gave consultation to the Boonton (Morris County) public health nurse regarding a community educational program on cancer.

Diabetes

Fifty representatives from hospitals, local boards of health, and visiting nurse associations participated in the Northern State Health District refresher training session on diabetes.

Heart and Circulatory Diseases

District and Chronic Illness Program nursing staff met with Morristown Memorial Hospital (Morris County) rehabilitation unit to discuss use of the Activities of Daily Living bag, which had been provided to the hospital and to promote the recruitment and use of a rehabilitation nurse on the hospital rehabilitation team. Plans ultimately lead to the employment of a nurse.

Smoking

District Health Educator spoke to the students of the Pope John High School in Sparta (Sussex County) at the request of the Northwest Area Tuberculosis Association in Morris County. Smoking and health was the topic chosen as their primary interest for help with the School Press Project of the National Tuberculosis Association.

District Health Educator worked with voluntary and official agency personnel in Sussex County to determine if there is any interest in a long-range program on smoking and health. A long-range effort was initiated three years ago. The high school students who were freshmen at the time of that survey are seniors now. The National Congress of Parents and Teachers has recently embarked upon a three-year program to encourage seventh and eighth grade students not to smoke.

Constructive Health Programs

Crippled Children

Two cerebral palsy consultation clinics were held at Warren Hospital for 19 children.

Consultation regarding the Crippled Children's Program was given to the public health nursing agencies in the District.

Maternal and Child Health

At the close of 1966, there were 26 Child Health Clinics in the Northern District. Two new stations were established in the following Morris County communities: Parsippany-Troy Hills Township, and Mount Olive Township. Both stations were administered by the local boards of health and staffed by the Visiting Nurse Association of Morris County.

The Mount Olive Board of Health (Morris County) requested and received grant-in-aid assistance.

The Parsippany-Troy Hills Child Health Conference station (Morris County), located at Lake Parsippany, is the second station to be established in this township, and is financed entirely by the board of health.

The Riverdale Child Health Conference (Morris County), which was temporarily closed in 1965, was reopened at the beginning of 1966.

Grant-in-aid contracts were entered into with the following Morris County communities: Lincoln Park; Rockaway Township and Borough; Montville Township; and Mount Olive Township.

Consultant services were given to 23 Child Health Conferences by the District Consultant in Pediatrics.

District nursing staff attended the orientation session on pre-school eye screening in Trenton. A District in-service program on eye screening was attended by 19 public health nurses who staff the Child Health Conference stations in the District.

There is one licensed mid-wife in the Northern State Health District, located in Somerville. There were no mid-wife deliveries in 1966.

Preventable Disease Programs

Communicable Disease

Consultations and epidemiological investigations were completed on the following:

Gastroenteritis	8	
Typhoid fever	12	(Including annual surveillance on 7 carriers)
Specimens submitted to the laboratory for suspected viral or rickettsial infection	35	
Infectious hepatitis	68	
Meningococcal Meningitis	2	
Specimen to the laboratory for diagnosis of trichinosis	1	
Asceptic Meningitis	2	
Smallpox surveillance	2	
Tuberculosis	2	
Brucellosis	1	
Survey study of leukemia (Sussex County)	1	
Influenza, Type B	1	

Narcotics

District Consultant, Community Health Organization, consulted and worked with members of the Committee for Narcotics Prevention of Morris County. The "Kit Committee," composed mainly of professional people, had received pamphlets on drugs to review. A questionnaire on these had been distributed to the members and others. The returned questionnaires were tabulated and findings reported to the regular committee chairman. Other work with this committee was to help plan and present a public meeting. The District State Health Officer, who is a member of this committee gave 22 talks to community groups on narcotics during the year.

Tuberculosis Control

The District Nurse participated in an evaluation of the Sussex County Tuberculosis register review.

The District Nurse continued to serve on the nurse education committee of the Northwest Area Tuberculosis and Health Association. One hundred thirty nurses attended the Third Annual Nursing Conference on Tuberculosis.

District nursing staff attended the nurse education program offered by the staff of the New Jersey Hospital for Chest Diseases at Glen Gardner (Hunterdon County). Non-tubercular respiratory conditions were discussed.

Vaccination Assistance

The Vaccination Representative attended Parent-Teachers' Association meetings in several municipalities in Warren County. The objective was to present talks on immunization and show a film on tetanus immunization entitled, "Call of Duty."

The Representatives met with members of the Somerset County Medical Society to discuss activities involved in a tetanus program to be conducted at the Somerset County Health Fair. Meetings were held with health officers of the county, and 6,000 of each of the following were distributed to industry and schools: Tetanus flyers, posters, and registration forms. There were 1,800 persons immunized at the fair.

The Vaccination Representative assisted the Northern District in presenting an immunization conference in April in Madison (Morris County). Attending were health officers, sanitarians, visiting nurses, school nurses, and superintendents of schools of the District.

Meetings were held with the health officers of Somerset County to discuss the possibility of a measles vaccination program. Assistance was given to the health officer of Warren Township (Somerset County) in conducting an immunization program. Some 800 shots were given, utilizing the following vaccines: measles, D.P.T., smallpox, polio, and influenza.

Assistance was provided to the health officer of Pequannock Township (Morris County) in conducting a measles immunization program. Some 300 children were immunized.

The Northern District distributed some 300,000 forms of immunization literature to programs conducted on the following levels: Municipal, county, and school. Health brochures on immunization were prepared for the Sussex County School Nurses' Annual Conference.

The Vaccination Representative attended monthly meetings of the Morris Regional Health Council in 1966 to assist the council in conducting a county-wide tetanus program. Assistance was given in programming, publicity, distribution, site selection, manpower, records, and surveillance.

The Vaccination Program supplied the tetanus program with 200,000 leaflets and 1,000 posters. There were 27,000 persons who received inoculations on October 23, 1966.

The Vaccination Representative met with the school physicians, school nurses, and board of health members of the following communities to consult with them about the possibility of conducting measles susceptibility surveys in grades Kindergarten, 1, 2, and 3: Belvidere, Hackettstown (Warren

County); Hillsborough (Somerset County); Morris Plains, Victory Gardens, and Chatham (Morris County). Surveys were conducted in all the municipalities and measles programs were conducted in Victory Gardens and Belvidere immunizing some 250 children. Future programs are being planned for the remainder of the municipalities.

Special Consultation Programs

Health Education

The District State Health Officer and District Educator participated in two broadcasts sponsored by the Northwest Area Tuberculosis and Health Association. The subject matter was related to public health and health education.

Health Officer and Educator met with the three full-time local health officers of Somerset County to plan for an exhibit for the Somerset County Health Fair. Plans for the exhibit were made, and it was constructed and exhibited by the health officers.

District Educator gave individual consultation to groups and individuals in relation to their plans for health education projects and activities. These in the last half of the year included 22 school nurses. Health officers (full- and part-time), PTA members, students of colleges, high schools, elementary schools, nursing schools, and some public health nurses have contacted us. The initial request is usually made by telephone or letter for visual, radio, or audio-visual aids. In a discussion of the needs presented, health education has been a two-way process. The District Educator has obtained a much broader knowledge of the people of the District and their health needs and problems.

The director of a rehabilitation service did not know of the health careers literature. The mother of a neighborhood boy came into the office for a pamphlet on "everything about public health" for the boy's school essay. She left with a pamphlet on ways the cardiac housewife can reduce housekeeping physical activities; she was a cardiac.

Requests for program consultation have resulted from initial contacts for audio and visual aids. The District Educator addressed the Morris County School Nurses' Association on resources at the District Office of the State Health Department. Presently, the District Educator is giving planning and program assistance to school nurses for a school-community meeting on venereal disease.

Nutrition

The inauguration of Medicare with its Conditions of Participation for extended care facilities has strengthened the need for nutrition services. Nursing homes must meet certain standards in their dietary departments including administrative practices, nutritional requirements, and physical facilities. A number of nursing homes have requested nutrition consultation either prior to or following their evaluations by the Medicare team, for assistance in meeting the standards.

The most significant change for extended care facilities related to dietary administration is the requirement of a qualified dietitian or part-time dietary consultant. Formerly, it had been the exceptional nursing home which employed the services of a dietitian. Recruiting and orienting personnel to fill this need have occupied a substantial portion of the activities related to Medicare. A roster of available qualified personnel is being developed. Qualified dietitians who are unemployed because of family obligations are often available to the Medicare regulations. Much of this orientation has been done on an individual basis, and through a workshop supported by a grant from the Public Health Service and administered by Columbia University, "The Role of Dietitians and Nutritionists in Medicare." Four prospective dietary consultants from the Northern District attended the workshop which will be repeated next year. On a continuing basis, the Nutrition Consultant will establish group meetings of the dietary consultants for discussion of problems and updating of information.

There is a continued need for nutrition consultation to Boarding Homes for Sheltered Care. Inadequate or poorly planned meals and insanitary food service facilities are frequently observed. In the spring of 1966, a three-session workshop was held for operators of these homes in the Northern and Central Districts. Representatives of the Morris County Licensed Health Officers' Association assisted by presenting the sanitation portion. In the Northern District, approximately 14 persons attended the series, and there was enthusiastic participation.

Nutrition education for youth can be a significant influence on attitudes and eating habits. There is a continuing need for materials and motivation of teachers in this area of health education. Frequently, school nurses who observe the effects of poor nutrition, request visual aids, resources, and consultation regarding nutrition programs in their schools.

An article, written by the Nutrition Consultant of the Northern District, "A Community Nutrition Project in Nutrition Education," was published in the April 1966 issue of *The Journal of the American Dietetic Association.*

The article reported on the preparation and distribution of kits of nutrition education teaching aids to Morris County elementary schools in 1965. Since the publication, about 20 inquiries for further information have been received from other states, Puerto Rico, and Canada.

A demonstration project of nutrition education was conducted in an elementary school in Warren County. Because of the predominance of low-income families, the school obtained special funds to purchase kitchen equipment and to provide free school lunches for all students. A food intake survey, done by the District Nutritionist, revealed that for the majority of students, food eaten at home meals was inadequate. The school nurse prepared graphs which indicated significant height and weight increases as early as one month after the beginning of the free lunch program. The County Extension Home Economist cooperated with the Nutrition Consultant in a project for seventh and eighth grade girls, whereby classes were provided in nutrition, meal planning, food purchasing, and table service. The students then planned and prepared breakfast for their mothers. Nutrition education materials were made available to teachers of all grade levels for a concentrated teaching program, with emphasis on breakfast meals.

A Northwest Area Group of the New Jersey Home Economics Association was formed, composed of home economists of Morris, Sussex, and Warren Counties. The home economics teacher is a good school resource for the promotion of good nutrition, but is not always active in this capacity or available to health workers. The formation of a local organization allows for greater contact with this profession. The District Nutrition Consultant was elected vice president of the group.

Diet therapy in acute and chronic illness is an important part of total patient care. Dietitians and nurses often seek information on new trends in diet management from the District Consultant. One new topic requested from nursing groups has been diet in peritoneal dialysis. This information has been collected and developed for inclusion in the revised edition of the State Diet Manual.

Interest in weight control continues to be the most popular nutrition subject to the lay person. Both of the Diet Counseling Services in the Northern District, Morris and Warren Counties, provided series of classes for weight control. At least one adult education program employed a qualified dietitian to teach a similar course.

The popularity of non-medically supervised weight control groups, sponsored by incorporated groups, has increased. This is a lucrative business and frequently the information provided is fallacious. Our continued emphasis on

providing authentic information will help combat the unprofessional, commercial approach.

Public Health Nursing

During the year, the District Consultant, Public Health Nurse, had many conferences with administrative staff of the public health nursing agencies in the Northern State Health District regarding Medicare, contractual arrangements, staffing, in-service education, referrals, and services. Criteria evaluation visits were made to all agencies.

In January, the Visiting Nurse Association of Morris County opened a branch office in Pompton Plains. The increased case load and population increases necessitated this action.

The District Nurse was appointed by the New Jersey State Nurses' Association as its representative to the Advisory Committee of the Hospital-Nursing Home Working Relationship Project at the office of Hospital Research and Education Trust of New Jersey. This has been an active committee and has made considerable progress in promoting better relationships between hospitals and nursing homes throughout the State.

The District Nurse participated in the formation of a professional nursing group known as the Hackettstown Community Registered Nurses (Warren County). Hopefully, these nurses will eventually form a county unit of the New Jersey State Nurses' Association. Their objectives are to promote health activities in the Hackettstown area with particular emphasis on the proposed Hackettstown Hospital.

Division of Preventable Diseases

WILLIAM J. DOUGHERTY, M.D., M.P.H., *Director*

Programs:

Communicable Diseases Control ..... WILLIAM J. DOUGHERTY, M.D., M.P.H.
Acting Program Coordinator

Migrant Health ..... THOMAS B. GILBERT
Program Coordinator

Tuberculosis Control ..... WILLIAM J. DOUGHERTY, M.D., M.P.H.
Acting Program Coordinator

Vaccination Assistance Project ..... MICHAEL WISHENGRAD, M.D.
Project Director

Venereal Disease Control ..... MICHAEL WISHENGRAD, M.D.
Program Coordinator

Division of Preventable Diseases

Communicable Disease Program

Acute Central Nervous System Disease (Encephalitis and Aseptic Meningitis)

As a consequence of the recent arthropod-borne encephalitis epidemics experienced in New Jersey, the Division of Laboratories and the Division of Preventable Diseases have cooperated in an intensive encephalitis surveillance program. All reported cases of acute central nervous system disease are investigated through telephone consultation with the reporting physicians and through the active pursuit of laboratory specimens.

Fortunately, no cases of eastern or St. Louis encephalitis were reported during 1966. However, the first case of California encephalitis in the northeastern United States was diagnosed serologically in a 23-month-old female, a resident of southern New York, who had been hospitalized in New Jersey with a syndrome clinically consistent with encephalitis.

There were 79 reported cases of clinical encephalitis among New Jersey residents. Forty-one cases were classified as primary encephalitis the etiology of which was unknown, while 38 cases clinically consistent with encephalitis were secondary to infection with either Herpes Simplex, mumps, Rubeola, Varicella, or Coxsackie B2. The encephalitis cases are listed according to etiology, age, county of residence, and month of onset in Tables 1, 2, 3, and 4 respectively.

There were 15 deaths due to encephalitis; 12 of these were due to primary encephalitis, two to herpes simplex, and one due to measles.

Although the year 1966 saw 54 fewer cases of encephalitis reported, the number of cases of aseptic meningitis rose from 56 cases in 1965 to 174. Cases occurred in 17 of the 21 counties of the state. Although both adults and children were reported with the disease, 129 cases, 74 percent of those reported, occurred in persons less than 25 years old. In 112 cases, 69 percent of the total cases, the etiology could not be determined; however, 42 cases, approximately 24 percent, were secondary to infection with mumps virus. The distribution of aseptic meningitis by etiology, age, county or residence, and month of onset is shown in Tables 1, 2, 3, and 4 respectively.

No large epidemic of aseptic meningitis occurred; however, 99 of the reported cases occurred between July and August. Although during this

period cases were noted throughout the state, several household outbreaks were reported in which children suffered an illness characterized by fever, headache, and morbilliform eruption and in which older members suffered aseptic meningitis. In several of these instances, Echo 9 virus was isolated from an ill individual. Furthermore, it should be noted that 20 of the cases of aseptic meningitis, which occurred during the above period, were due to enterovirus infection as proven by viral isolation and/or serologic determinations.

Table 1. Acute Central Nervous System Disease by Etiology, New Jersey, 1966

Aseptic Meningitis		*Encephalitis*	
Mumps	42	Primary-type unknown	41
Echo 9	7	Post-infectious	
Echo 14	1	Mumps	16
Echo (untyped)	1	Measles (rubeola)	11
Coxsackie B5	4	Herpes Simplex	9
Coxsackie B2	4	Varicella	1
Coxsackie A9	2	Coxsackie B2	1
Coxsackie B4	1		
Unknown	112	Total	79
Total	174		

Table 2. Acute Central Nervous System Disease by Age, New Jersey, 1966

Age	*Aseptic Meningitis*	*Primary Encephalitis*	*Post-Infectious Encephalitis*
Under 1	4	4	1
1	10	2	3
2	9	1	1
3	9	2	2
4	11	1	2
5-9	52	8	20
10-14	21	1	2
15-19	9	8	0
20-24	8	1	0
25-29	11	3	0
30-39	14	6	4
40-49	3	1	3
50-59	3	1	0
60+	2	2	0
Unknown	8	0	0
Total	174	41	38

Table 3. Acute Central Nervous System Disease by County, New Jersey, 1966

County	*Aseptic Meningitis*	*Primary Encephalitis*	*Post-Infectious Encephalitis*	*Total*
Atlantic	10	1	2	13
Bergen	7	3	5	15
Burlington	12	2	2	16
Camden	23	5	2	30
Cape May	0	0	0	0
Cumberland	1	1	1	3
Essex	13	6	2	21
Gloucester	7	1	1	9
Hudson	6	1	0	7
Hunterdon	0	2	1	3
Mercer	9	2	2	13
Middlesex	8	4	4	16
Monmouth	34	5	1	40
Morris	8	2	1	11
Ocean	6	0	2	8
Passaic	3	0	6	9
Salem	0	0	0	0
Somerset	11	0	3	14
Sussex	0	0	1	1
Union	11	3	1	15
Warren	3	1	0	4
State Inst.	2	0	1	3
Military	0	2	0	2
Total	174	41	38	253

Table 4. Acute Central Nervous System Disease by Month of Onset, New Jersey, 1966

	Aseptic Meningitis	*Primary Encephalitis*	*Post-Infectious Encephalitis*
January	13	7	3
February	9	1	3
March	2	4	3
April	8	3	4
May	11	3	5
June	3	3	4
July	21	4	2
August	46	2	2
September	32	7	2
October	12	4	5
November	7	1	3
December	10	2	2
Total	174	41	38

Amebiasis

Seventy-two cases of amebiasis were reported to the State Health Department during the year 1966. This represents a decrease of 155 cases from the total reported during the year 1965. Sixty-four of the reported cases occurred in state institutions. There were no outbreaks of amebiasis in any of the reporting institutions or geographic areas of the state.

Anthrax

No cases of anthrax were reported in humans in New Jersey in 1966.

Brucellosis

There were two cases of brucellosis reported during the year 1966. One case involved a 22-year-old male, the son of a farmer, who assisted on the farm in the raising of garbage-fed hogs. The patient became ill with symptoms consistent with acute brucellosis. Upon hospitalization three weeks after the onset of illness, his initial agglutination titer was positive at a dilution of 1:1280. Repeat titers remained the same. Investigation of this case revealed that 20 of the 44 animals in a swine herd were brucella reactors. The herd had not been fed slaughter house offal; however, a new boar had been introduced into the herd. Epidemiologic investigation suggested that brucellosis had been introduced into the swine herd by the new boar. The resultant epizootic disease then spread to this patient.

A second case of brucellosis was reported to the State Health Department; this case occurred in 1966, however was not reported until 1967. It is currently being investigated.

Cholera

Five persons who had traveled through cholera endemic or cholera epidemic areas were placed under surveillance at the requests of the Department of Foreign Quarantine, United States Public Health Service. No cases of cholera developed in any of these individuals.

Diarrhea of Infancy

An epidemic of Enteropathogenic *E. coli* gastroenteritis in the newborn nursery of Newark, New Jersey hospitals, which began in November, 1964, and continued until March, 1965, resulted in an infant diarrhea surveillance system at the Newark City Hospital. Procedures introduced simultaneously with the surveillance systems were directed at the threat of future epidemics. Nevertheless, on October 3, 1966, report was received that the Newark City Hospital was experiencing diarrhea in the newborn nursery. Between September 25, and October 6, 1966, 21 newborn infants at the Newark City

Hospital experienced diarrhea. Five of these infants plus eight asymptomatic babies were found to have positive stool cultures for Enteropathogenic *E. coli*. A number of different serotypes were isolated; however, serotype 0119:B14 was the predominant organism. The epidemic spread to all areas of the normal newborn nursery as well as to the suspect nursery area and the premature nursery. An extensive epidemiologic investigation of the newborn area revealed that nursing techniques were inadequate and that infants were moved from nursery to nursery; both of these procedural inadequacies could be expected to facilitate person-to-person transmission of enteric disease as well as dissemination of disease to all quarters of the newborn area. Recommendations were made and carried out resulting in the improvement of these conditions. With the implementation of these suggestions the epidemic rapidly subsided. Surveillance of infant diarrhea in the newborn area of the Newark City Hospital since late October, 1966, has failed to reveal a recurrence of the epidemic situation.

Food Poisoning

Undoubtedly, hundreds of episodes of food poisoning occurred in the state during the year 1966. The vast majority of these were small family incidents involving a few persons and were investigated by local health authorities. Fifteen incidents involving larger groups were reported to the State Health Department and investigated. Four food poisonings were due to salmonella organisms; these are described in the salmonella section of this report. In two of the outbreaks, *Clostridium perfringens* was suspected; however, evidence was insufficient to definitely implicate this organism. One individual died during the course of gastroenteritis resulting from food poisoning.

In May, an outbreak of acute gastroenteritis occurred among undergraduates at Princeton University. The illness was characterized by nausea, vomiting, abdominal pain, and rather mild diarrhea. Only a low grade fever was noted and most individuals were well within 24 hours after the onset of symptoms. Illness was limited to those students eating in the under class dining room. A questionnaire distributed to a random sample of those at risk indicated an attack rate of approximately 12 percent. It could be estimated therefore that 150 students were ill. Epidemiologic data pointed strongly to a common source food-borne gastroenteritis; however, the implicated food item could not definitely be ascertained. Stool specimens in a sample of ill students were negative for bacterial pathogens and no food specimens were available for bacteriologic examination.

An outbreak of gastroenteritis occurred among fifth grade students in the Stuart School, Willingboro, New Jersey. Investigation of this outbreak

revealed that these students had visted the George Washington State Park in Bucks County Pennsylvania two days prior to the onset of their illness. Further investigation revealed that outbreaks of similar illnesses had occurred in other visitors to the park. A complete investigation was carried out through the combined resources of the New Jersey State Health Department and the U. S. Communicable Disease Center. This investigation revealed that an outbreak of gastroenteritis occurred due to contaminated water in the park. Vomiting and/or diarrhea was present in 323 of the 530 cases interviewed. The average incubation period was 39 hours. The attack rate in three of the groups investigated was approximately 67 percent. If this attack rate is applied to the estimated number of visitors to the park during the period of time when the water was known to be contaminated, it is possible that approximately 6,700 persons became ill with gastroenteritis resulting from consumption of contaminated water. Investigation of the water supply itself revealed coliform organisms in numbers indicative of fecal contamination. It was speculated that the water supply became contaminated by sewerage from a nearby septic tank system; however, this could not be documented definitively. Stool cultures on ill individuals failed to reveal a common pathogen. However, there was definite evidence of secondary spread of illness to members of the families who had not visited the park. In view of the lack of the uniform isolation of a bacterial pathogen and the evidence of secondary spread of disease, it was speculated that this epidemic may have represented gastroenteritis due to a non-bacterial, filterable agent—perhaps a virus.

Chicken a la king which was served in the dining hall of Trenton State Teachers College on September 26 caused an estimated 250 persons to become ill with cramps and diarrhea approximately nine hours following consumption of the meal. The chicken used for this dish was prepared three days prior to serving and was handled on at least two occasions before being served. Although no food items remained for bacteriologic analysis and stool specimens were not cultured anaerobically, the history of the handling of the implicated food item and the clinical picture presented by those who were ill suggest strongly that this was an episode of *C. perfringens* food poisoning.

Three hundred and eighty-one students attending Rider College, Trenton, suffered an episode of acute gastroenteritis during the week following the Thanksgiving recess. Students reported to the infirmary with complaints of cramps, diarrhea, and vomiting which occurred over a three day period. Investigation revealed that the students who were ill lived in campus dormitories and ate in dining facilities on the campus. Although the epidemiologic investigation indicated a common source food-borne outbreak, a suspected food could not be identified. Similarly, no foods were available for

bacteriologic analysis and no infecting agent was isolated from stools of ill individuals.

Hepatitis, Infectious

There were 1,092 cases of hepatitis reported in New Jersey during 1966. Nine hundred thirty-three cases were classified as infectious hepatitis. Eight hundred and ninety-three were transmitted by the oral route, whereas, 40 were transmitted by parenteral injections of contaminated material. The 893 reported cases of infectious hepatitis represents a decrease of 23 cases from the 916 reported in 1965. The incidence of hepatitis in New Jersey has steadily declined over the past four years. This is in agreement with the nationwide trend of hepatitis.

Five hundred twenty-eight cases of infectious hepatitis were reported from males; 365 were reported from females. Four hundred and three cases were reported from persons under 20 years of age; 490 cases were reported from persons over 20 years of age. The ratio of adult to childhood cases was 1.2 to 1. This ratio is, as in 1965, strikingly different from the ratio of adult to childhood cases seen in the nation as a whole. The nationwide experience indicates that hepatitis is, predominantly, a disease of persons less than 20 years of age.

The following table demonstrates the age specific attack rate for infectious and serum transmitted hepatitis in New Jersey during 1966. Strikingly high attack rates for serum transmitted hepatitis occurred in persons between the ages of 15 and 24 years. This phenomenon is due to the large number of hepatitis cases occurring among narcotic addicts. Forty-two percent of the reported cases of serum transmitted hepatitis were diagnosed among addicts.

Table 5. Infectious and Serum Transmitted Hepatitis
Age Specific Attack Rate per 100,000
Population, New Jersey, 1966

Ages	*Estimated Population*	*No. Cases Infectious Hepatitis*	*Attack Rate Infectious Hepatitis*	*No. Cases Serum Transmitted Hepatitis*	*Attack Rate Serum Trans. Hepatitis*	*Attack Rate All Cases Hepatitis*
Under 1	145,978	5	3.43	0	.00	0
1-4	590,864	21	3.55	1	.17	3.72
5-9	667,328	105	15.73	0	.00	15.73
10-14	597,815	104	17.40	2	.334	17.73
15-19	451,837	163	36.07	36	7.97	44.04
20-24	368,421	135	36.64	50	13.57	50.21
25-29	417,080	82	19.66	15	3.60	23.26
30-39	1,042,700	114	10.933	27	2.59	13.52
40-49	973,188	75	7.71	25	2.57	10.28
50-59	750,744	54	7.19	13	1.73	8.92
60+	945,381	35	3.70	30	3.17	6.88
Totals .	6,950,333	893	12.85*	199	2.86*	15.71*

* Crude Attack Rate.

Table 6 presents the monthly incidence of cases of infectious hepatitis.

Table 6. Infectious Hepatitis Cases by Month of Onset, New Jersey, 1966

January	73
February	73
March	84
April	93
May	83
June	45
July	56
August	59
September	111
October	90
November	65
December	61
Total	893

The following table demonstrates the occurrence of hepatitis by county of residence for the years 1965 and 1966.

Table 7. Infectious Heptitis Incidence by County of Residence, New Jersey, 1966

	1966			1965	
County	*No. Cases*	*Estimated population July, 1966*	*Attack Rate per 100,000 population*	*No. Cases*	*Attack Rate per 100,000 population*
Atlantic	3	179,552	1.67	5	2.84
Bergen	53	892,161	5.94	46	5.07
Burlington	41	287,896	14.2	18	6.50
Camden	45	456,565	9.86	36	8.18
Cape May	5	52,725	9.48	4	7.41
Cumberland	89	122,438	72.68	2	1.72
Essex	156	954,871	16.34	167	17.90
Gloucester	45	159,188	28.27	8	5.10
Hudson	63	608,617	10.35	27	4.57
Hunterdon	3	63,063	4.76	0	0
Mercer	52	302,402	17.20	59	20.63
Middlesex	28	548,281	5.11	60	11.47
Monmouth	37	426,691	8.67	40	10.20
Morris	31	341,480	9.08	145	46.33
Ocean	22	150,444	14.62	10	7.41
Passaic	56	452,520	12.38	97	21.90
Salem	39	64,866	60.12	0	0
Somerset	12	188,921	6.35	17	10.18
Sussex	16	63,493	25.19	70	122.81
Union	60	564,177	10.64	60	10.71
Warren	6	63,220	9.49	1	1.47
State Inst.	13	.....	....	17	....
Military	18	.....	....	27	....
Total	893	6,951,336	12.85	916	13.65

The striking rise in the attack rate of infectious hepatitis in Cumberland, Gloucester, and Salem counties is due to person-to-person contact spread epidemics which occurred in these areas. These are described later in this report.

Fifty-six of the reported cases of infectious hepatitis were classified as clam positive which merely indicates that raw clams had been ingested during a period 60 days prior to the onset of illness. It should be pointed out, that in spite of the past association of the ingestion of raw clams with infectious hepatitis, the mere consumption of raw shellfish during the period 60 days prior to the onset of illness does not indicate an etiologic relationship between clams and the cases reported during 1966.

Twenty-four deaths were attributed to infectious hepatitis. The case fatality ratio is 2.7 and is comparable with that observed in 1965. The mortality due to infectious hepatitis by age group is depicted in the following table.

Table 8. Mortality Due to Infectious Hepatitis by Age Groups, New Jersey, 1966

Under 1	0
1-4	1
5-9	1
10-14	0
15-19	1
20-24	1
25-29	1
30-39	1
40-49	3
50-59	7
60+	8
Total	24

One common source hepatitis outbreak occurred during 1966. Thirty-three cases of gastroenteritis of unknown etiology and four cases of viral hepatitis occurred among 128 persons who had attended a picnic in East Brunswick, New Jersey, on August 21, 1966. The gastroenteritis was related by food histories to the ingestion of raw clams served at the picnic. All four of the persons with hepatitis had an onset of illness compatible with exposure on the day of the picnic. All four had eaten raw clams. Three of the four had also experienced the gastroenteric illness. Inquiries as to the source of the clams seem to indicate an out-of-state dealer as the supplier.

Several outbreaks of infectious hepatitis occurred due to person-to-person contact spread of disease. Between January 3 and May 2, 1966, 28 cases of infectious hepatitis occurred in Pemberton Township, Burlington County. Ten of these cases were in military personnel at Fort Dix or McGuire Air Force Base or their dependents. All of the patients had jaundice. The available data suggested that the epidemic was propagated by person-to-person spread of disease.

In March, attention was called to the rapidly increasing incidence of hepatitis in Millville, Cumberland County. Investigation revealed 18 cases of hepatitis between January and April. These cases of hepatitis were concentrated in a group of families living in the same neighborhood. Many of the cases occurred among young children. A high incidence of contact with persons with known contagious hepatitis was noted. During the months of May and June, no icteric hepatitis was noted. Following this, an increased

incidence of hepatitis was observed in Millville. Between July and September, 28 cases occurred in 20 families. Again, the majority of these cases were among individuals less than 20 years of age and a high rate of contact with known cases of hepatitis existed. Epidemiologically, it appeared that a person-to-person contact outbreak of hepatitis had occurred in Millville beginning early in 1966 with a second peak in late summer and early autumn. The epidemic was probably continued between peaks by the occurrence of anicteric disease.

During the period August through October, 16 cases of infectious hepatitis were diagnosed in Franklin Township, Gloucester County. These cases occurred primarily in individuals less than 20 years of age. There was a 35 percent incidence of contact with persons having known infectious hepatitis among the reported cases. The investigation suggested that person-to-person transmission of infectious hepatitis had resulted in the outbreak.

Hepatitis, Serum Transmitted

One hundred and ninety-nine cases of serum transmitted hepatitis were reported to the State Health Department during the year 1966. Forty of these cases were classified as Type A, that is with an incubation period less than 60 days; 68 cases were classified as Type B, having an incubation period greater than 60 days. In 91 cases the incubation period could not be defined; hence, they were classified indeterminate. The 199 cases represent an increase of 65 cases from the 134 reported during the year 1965. This increase occurred primarily among those cases classified as indeterminate and occurred in narcotic addicts. Forty-seven more cases with indeterminate incubation periods were reported in 1966 than in the previous year. Forty-two percent of the total number of serum transmitted hepatitis cases occurred among known narcotic addicts.

Seventeen individuals with serum transmitted hepatitis expired. The case fatality ratio was 8.5 percent and is not significantly different from the 11 percent reported during 1965. Eight of the 17 deaths occurred in cases of Type B hepatitis, six in serum transmitted Type A hepatitis, and three deaths occurred in known narcotic addicts. The 11 percent case fatality ratio for serum transmitted hepatitis is significantly different from the 2.7 percent noted in infectious hepatitis.

Single unit blood transfusions accounted for 17 cases of serum transmitted hepatitis. Twelve of these single units were purchased from commercial blood banks. In no case was a narcotics addict identified as the donor of a unit giving rise to serum transmitted hepatitis.

The Division of Preventable Diseases has continued to maintain a blood donor register. Known narcotic addicts, individuals who are single unit donors

to cases of serum transmitted hepatitis, and individuals who were common donors to more than one case of hepatitis are prohibited from contributing blood in the State of New Jersey. Seventeen individuals were identified as single unit donors to cases of serum transmitted hepatitis; hence, they have been excluded from donating blood in the future.

The following table gives comparative data for serum transmitted hepatitis in New Jersey between 1961 and 1966.

This chart demonstrates a gradual increase in the number of cases of serum transmitted hepatitis reported during the past six years. Attention should be called to the fact that this increase occurred during a period when the total number of cases of hepatitis declined. Furthermore, it is evident that narcotic addiction resulting in serum transmitted hepatitis has increased. This increase accounts for a major portion of the increasing incidence of serum transmitted hepatitis in New Jersey.

Table 9. New Jersey Hepatitis, 1961-1966 (Serum Transmitted)

	1961	*1962**	*1963*	*1964*	*1965*	*1966*
Total cases	102	124	120	137	134	199
Information available	99	124	120	137	134	199
Incubation:						
Type A (under 60 days)	20	53	43	37	33	40
Type B	71	51	44	50	64	68
Indeterminate	11	20	33	50	37	91
Percent A of those with known incubation period	22%	51%	4%	42%	34%	45%
Cases in addicts	9	24	32	43	37	84
Cases with addict donors	6	4	2	1	1	0
Total addict related cases (%)	15(15%)	28(23%)	34(28%)	44(32%)	38(28%)	84(42%)
Cases in single pint recipients	16	19	11	9	15	13
Cases from commercial pints	10(63%)	12(63%)	6(54%)	4(45%)	13(87%)	12
Mortality:						
Type A cases (%)	2(10%)	3(6%)	4(9%)	0(0%)	3(9%)	6(3%)
Type B cases (%)	10(14%)	7(14%)	3(7%)	5(10%)	10(16%)	8(4%)
Indeterminate (%)	.....	.....	.....	6(12%)	2(5%)	3(1.5%)
Total cases (%)	13(13%)	11(9%)	10(8%)	11(8%)	15(11%)	17(8.5%)

* Does not include cases discovered during special intensive study.

Hospital Infections

On November 17, 1965, the Division of Preventable Diseases sponsored a conference on the "Principles of Surveillance of Infections in Hospitals;" at this conference, guest speakers from the Communicable Disease Center addressed an audience of physicians, hospital administrators, nursing personnel, and executive housekeeping personnel. From that conference was developed a hospital infections surveillance program in the State of New Jersey. On April 6, 1966, a second meeting regarding this subject was held at the New Jersey Hospital Association. Again members of the Investigation Section of the Communicable Disease Center participated in the program which was addressed to an audience of approximately 150 physicians, hospital administrators, and nurses. The program was enthusiastically received. The third in the series of meetings on this topic was held on May 24. Representatives of the Communicable Disease Center instructed physicians and nurses from 16 hospitals in the mechanics of conducting a one-day prevalence survey and organizing an on-going surveillance program.

Developing from the May meeting were prevalence surveys conducted at nine New Jersey hospitals. Four of the hospitals which participated in the prevalence survey have established an effective on-going hospital infections surveillance program. These programs are coordinated by a nurse epidemiologist who compiles monthly statements which are referred to the hospital infections committee and the New Jersey State Health Department for evaluation and review. These programs include aggressive case-finding in addition to the physicians and nurses of the hospital reporting infections. Case-finding methods include examination of bacteriology laboratory results, review of temperature charts on the wards, surveillance of white blood cell count reports, review of charts of patients receiving antibiotics, and other techniques directed at detection of unreported infections.

Influenza

During the winter of 1966, viral isolations and serological studies confirmed Type B influenza from several regions of the state. Illnesses occurred primarily among school age children and resulted in high rates of absenteeism from school. Little illness was reported in the adult population of the state. A similar pattern of illness due to Type B influenza was observed in other eastern states. No Type A influenza was confirmed in the state during the winter of 1966; however, extensive Type A influenza had occurred during the winter of 1964.

On the basis of the above findings, a statement was issued by the State Health Department regarding the use of influenza vaccine. It was predicted

that New Jersey would not suffer a major epidemic of influenza during the winter of 1966-1967. However, it was recognized that a limited potential for Type A influenza existed in the state. In view of this potential for influenza, the statement suggested that persons with chronic and/or debilitating illnesses and those at the extremes of the age spectrum be given influenza vaccine. Accordingly, the state provided influenza vaccine for those in high risk groups who could not afford its cost. Approximately 150,000 doses of influenza vaccine were distributed.

Four specific school systems were investigated and confirmed as having experienced influenza Type B. Each school was reported as having experienced excess absenteeism among the student population due to an illness clinically consistent with influenza. These reports prompted the investigations. The investigations were carried out during the months of March and April at the Allamuchy Township School; the Valley Road School, Princeton; Princeton University; and the Rumson Day School, Rumson. In none of these instances was an influenza virus isolated; however, in each instance serological evidence confirmed acute infection of influenza Type B virus.

The 1966-1967 influenza season was anticipated by the establishment of a surveillance system which called for the cooperation of public school administrators, school physicians and nurses, industrial nurses, health officers, and District health offices. This system was designed to detect excess absenteeism in schools, institutions, and industry due to influenza and report such absenteeism to the Division of Preventable Diseases whereupon it could be investigated.

Leptospirosis

There were no cases of leptospiral illnesses reported during the year 1966.

Malaria

Six cases of malaria were reported during 1966; three cases occurred in the military population and three cases were reported from the civilian population. Four cases were due to *P. vivax;* the fifth and sixth cases were caused by *P. malariae* and *P. falciparum* respectively. All cases were acquired outside of the United States and Puerto Rico; hence, they are classified as imported. The case of falciparum malaria was in fact a relapse of a case acquired by a member of the military while serving in Korea in 1950. This relapse occurred in spite of chloroquine and quinine therapy.

The civilian cases as mentioned were imported. Two cases occurred in members of the Peace Corps who had served in Africa; the third case was the 10-year-old daughter of a religious missionary who had recently returned from

West Africa. No cases of malaria acquired by mosquito transmission contracted from an imported case have been noted in New Jersey.

Measles (Rubeola)

Since the licensing of a safe measles vaccine in 1963, increasing public health interest has been focused on this disease. The ultimate goal as stated by the United States Public Health Service and reiterated by the individual state health departments has been the eradication of measles from the United States during the late 1960's. This goal will be achieved through extensive vaccine distribution. The New Jersey State Health Department, in addition to making Schwarz strain measles vaccine available to those physicians whose patients need be spared the cost of vaccine, has increased its effort at organized measles vaccine distribution programs. Publicity releases as well as material distributed to the physicians of the state through the Division of Preventable Diseases have urged that measles vaccine be given as a routine immunization during childhood. Furthermore, a more inclusive measles surveillance system has been designed. This surveillance system entails not only the reporting of measles by individual physicians but also requests that schools report absenteeism due to measles to the local health officer or the Vaccination Assistance Field Representatives in the respective State Health District. This system, it is hoped, will through the occurrence of disease indicate those areas where susceptibility to measles remains high and further vaccine distribution needed. It will also allow epidemic control measures to be instituted promptly where needed. The combination of increased routine measles immunization, epidemic control measures, organized community campaigns, and improved surveillance for the occurrence of measles should make major strides in the eventual eradication of the disease from the state. An additional measure which will further the effort to eradicate measles is the requiring of measles vaccine prior to entrance to elementary school. This practice has been adopted by two school systems and several individual schools and is under consideration in other systems.

The year 1966 saw 2,090 cases of measles reported; this compares with 4,160 cases of measles during 1965 and 12,691 cases during the year 1964. Examination of the cases reported by date of onset and county of residence suggests that the measles epidemic which began in the northeastern portion of the state in late 1965 spread south and west from that area during the year 1966. The incidence of measles according to month of onset and county of residence is as follows:

Table 10. Measles by Month of Onset, New Jersey, 1966

January	207
February	441
March	571
April	245
May	188
June	113
July	17
August	3
September	3
October	40
November	79
December	183
Total	2,090

Table 11. Measles by County of Residence, New Jersey, 1966

Atlantic	42
Bergen	107
Burlington	15
Camden	69
Cape May	3
Cumberland	0
Essex	927
Gloucester	4
Hudson	130
Hunterdon	0
Mercer	34
Middlesex	39
Monmouth	7
Morris	112
Ocean	4
Passaic	304
Salem	1
Somerset	6
Sussex	0
Union	256
Warren	0
State Institutions	10
Military	20
Total	2,090

Although the complications resulting from measles are not specifically reported, it should be noted that 11 cases of encephalitis were reported as secondary to measles. Tragically, one case of measles encephalitis expired.

The provision of measles vaccine by the State Health Department to the children of New Jersey residents who need to be spared its cost and the organ-

ized responses of the Immunization Activities Project to reported cases of measles have enabled widespread vaccine distribution. The Immunization Activities Project and the Communicable Disease Program in cooperation with local health authorities and local school systems have carried out approximately 60 immunization campaigns in which approximately 44,000 doses of measles vaccine were distributed. (The details of these programs are described in the Immunization Activities Project annual report.)

Two programs were conducted in the face of threatened measles epidemics. In Paterson, New Jersey, the report of 37 cases of measles, 34 of whom were students in eight of Paterson's 43 public and parochial elementary schools, prompted increased immunization efforts. An immunization program held on Sunday, October 30 in the core area of the city vaccinated 1,200 pre-school children against measles. A parallel campaign was held in grades K through 3 in the schools serving the low socio-economic area of the city; in this campaign, 1,342 children were immunized.

In Camden, the report of 44 cases of measles during the months of November and December and the discovery of 72 unreported cases in a single school prompted a measles immunization program. Between January 9 and 17, 2,716 doses of vaccine provided by the State Health Department were administered to susceptible children in grades K through 3 in the Camden public and parochial elementary schools. This vaccine was administered by school physicians, during their normal school consultation hours. In addition, on Sunday, January 15, following a week of intensive publicity, 2,126 pre-school children were vaccinated by volunteers from the Camden County Medical Society. This campaign was the result of efforts on the part of the local health officer, Mr. Arthur Hughson, and representatives of the Division of Preventable Diseases.

The Trenton health authorities and the school system took prophylactic steps to prevent a measles epidemic. Between November 28 and December 9, the susceptible children in grades K through 3 of those schools designated as serving the low socio-economic area were given measles vaccine; this effort resulted in the vaccination of 1,645 children.

Meningococcal Meningitis

One hundred thirty-five cases of meningococcal meningitis or meningococcemia were reported during the year 1966; this represents an increase of 49 cases over the total reported during the year 1965. Fifty-three of the cases were reported from military installations; this represents an increase of 35 cases from the military population. Hence, 75 percent of the increased incidence of meningococcal disease occurred within the military population.

Meningococcal meningitis occurred in every county except Cape May, Hunterdon, and Warren County.

The seasonal incidence of meningococcal disease corresponded roughly to that observed in the United States as a whole. The months of greatest incidence of meningococcal infection in New Jersey included the period January through May. Similarly, the age specific attack rate paralleled that observed in the United States with a peak attack rate in the population less than one year of age and a secondary peak occurring in the population between the ages of 15-24.

Pertussis (Whooping Cough)

Only six cases of pertussis were reported during the year 1966. This represents a decrease of 100 cases from the number reported during 1965. All cases were less than 20 years of age; three of the cases were less than one year of age. None of the reported cases expired.

The significance of the decrease of 100 during this one year must be viewed with caution. It should be remembered that pertussis is a disease which is poorly reported and often inaccurately diagnosed. Therefore, any interpretation of trends in this disease must be viewed with caution.

Poliomyelitis

No cases of poliomyelitis were diagnosed in New Jersey during 1966. Although this is an admirable record and is attributable to widespread polio virus vaccine distribution, it does not indicate freedom from the threat of poliomyelitis. On the contrary, three cases of poliomyelitis occurred in New Jersey during 1965, and during 1966, the State of Texas experienced 72 cases of poliomyelitis, 57 of whom had received no polio virus vaccine. Thus, in spite of the absence of poliomyelitis in New Jersey in 1966, the above mentioned cases illustrate the constant threat to the unprotected. Approximately 334,000 doses of trivalent poliomyelitis vaccine were distributed through state biological distribution stations in 1966. Nevertheless, efforts continue to assure widespread vaccine distribution among the pediatric population.

Psittacosis

A single case of psittacosis was reported to the State Health Department during the year 1966. The diagnosis in this 57-year-old male was suspected clinically on the basis of respiratory symptoms; it was confirmed serologically at an out-of-state hospital. Investigation of this case was continuing at the end of the year.

Rabies (See Veterinary Public Health Report for animal rabies report)

No cases of human rabies were reported during 1966.

Rocky Mountain Spotted Fever

There were 13 cases of rocky mountain spotted fever reported during the year 1966. This represents a decrease of four cases from the number reported during 1965. Two of the reported cases were confirmed serologically as illness due to Rocky Mountain spotted fever. The remaining 11 cases were reported on the basis of clinical evidence alone. Cases were reported from seven of the state's 21 counties. No county reported more than three cases. Mercer County, which had reported six cases during 1965, reported no cases during the year 1966. Twelve of the 13 cases reported occurred during the period May through August. The age distribution of the cases of Rocky Mountain spotted fever is as follows:

Table 12. Rocky Mountain Spotted Fever by Age Groups, New Jersey, 1966

Less than 1	0
1-10	5
10-20	3
20-30	1
Greater than 30	2
Unknown	2
Total	13

Salmonellosis (Excluding Typhoid Fever)

During 1966, 778 individuals were reported as having salmonellosis or having had salmonella isolated from their stools. This figure represents a marked increase from the 488 reported during 1965. This can be attributed to several major common-source outbreaks which occurred. The investigations of these outbreaks are described later in this report.

The age of those individuals ill with salmonella infections or from whom salmonellae were isolated is indicated in Table 8. This age distribution corresponds roughly with that observed in the United States as a whole. Forty-eight percent of the individuals reported as having salmonella infections or salmonella isolated from their stools were less than 20 years of age.

Table 13. Salmonella Isolations or Salmonellosis by Age, New Jersey Residents, 1966

Under 1	89
1	34
2	44
3	31

Table 13. Salmonella Isolations or Salmonellosis by Age, New Jersey Residents, 1966

4	15
5-9	79
10-14	42
15-19	40
20-24	28
25-29	27
30-39	50
40-49	86
50-59	59
60+	57
Unknown	97
Total	778

The following table illustrates the number of cases and the attack rate per 100,000 population in each county.

Table 14. Frequency of Salmonella Isolations or Illnesses, by County, New Jersey, 1966

County	*No. of Isolations or Cases*	*Estimated Population*	*Attack Rate per 100,000 population*
Atlantic	10	179,552	5.5
Bergen	55	892,161	6.3
Burlington	23	287,896	8.0
Camden	27	456,565	5.9
Cape May	4	52,725	7.5
Cumberland	21	122,438	17.2
Essex	197	954,871	20.6
Gloucester	12	159,188	7.5
Hudson	30	608,617	4.9
Hunterdon	4	63,063	6.3
Mercer	46	302,402	15.2
Middlesex	82	548,281	15.0
Monmouth	30	426,692	7.0
Morris	14	341,480	4.1
Ocean	5	150,444	3.3
Passaic	57	452,520	12.6
Salem	8	64,866	12.3
Somerset	22	188,921	11.6
Sussex	1	63,493	1.6
Union	125	564,177	22.2
Warren	3	70,894	4.2
Unknown	1	.....	....
Total	778	6,951,336	11.2

Forty-one serotypes were identified during 1966. Seventy-eight salmonella isolates were not identified beyond their antigenic grouping.

Table 15. Frequency of Salmonella Isolations from Humans by Serotype, New Jersey, 1966

anatum	2
berta	3
blockley	9
bradford	1
bredeney	2
chester	3
cubana	3
derby	3
duesseldorf	2
enteritidis	23
give	10
hartford	1
heidelberg	51
indiana	2
infantis	22
java	49
javiana	1
kentucky	1
litchfield	5
madelia	1
manhattan	3
melia gridis	1
montevideo	17
muenchen	3
muenster	1
newington	2
newport	24
oranienburg	10
panama	45
paratyphi B	7
paratyphi Cl	1
reading	1
saint-paul	27
schotmuelleri	3
schwarzengrund	2
seigburg	2
tennessee	3
thompson	15
typhimurium	151
worthington	3
Group A	2
B	53
C	2
C1	8

Table 15. Frequency of Salmonella Isolations from Humans by Serotype, New Jersey, 1966—Continued

C2	5
D	7
E	1
S 4,12:Z	4
java (by epidemiologic association)	150
unknown	31
Total	781*

* Two serotypes were isolated from three individuals.

The inclusion of the 150 cases of gastroenteritis epidemiologically associated with the whitefish-*Salmonella java* outbreak in the total number serotypes isolated causes *S. java* to become the most frequent serotype isolated from humans in New Jersey during 1966. *S. java* accounted for 25.5 percent of the gastroenteritis due to salmonella infection. Six of the eight serotypes most frequently isolated in New Jersey during 1966 correspond closely with the six serotypes most frequently isolated from the United States. *S. java* and *S. panama,* both of which were implicated in extensive outbreaks in the state during 1966, were less prevalent in the country as a whole.

Table 16. Salmonella Serotypes Most Commonly Isolated From Humans or Causing Gastroenteritis, New Jersey, 1966

Salmonella Serotype	*No. of Isolates or Illnesses*	*Percent of Total No. of Salmonella Isolates*
java	199	25.5%
typhimurium	151	19.3%
heidelberg	51	6.5%
panama	45	5.8%
saint-paul	27	3.5%
newport	24	3.0%
enteritidis	23	2.9%
infantis	22	2.8%
Total	542	69.4%

Furthermore, although 41 separate serotypes were identified during 1966, eight serotypes caused 69.4 percent of the salmonellosis observed in the state during 1966.

The incidence of reported salmonella infections and/or isolations was relatively constant throughout the year. The increased number of isolations noted in May and September correspond to two extensive common-source epidemics. The seasonal incidence, i.e., the late summer-early fall increased incidence of salmonella infections, is not as dramatic as that observed in the country as a whole.

Table 17. Salmonella Isolations or Salmonellosis by Month of Onset, New Jersey Residents, 1966

January	37
February	29
March	36
April	30
May	220
June	69
July	56
August	57
September	102
October	51
November	46
December	44
Unknown	1
Total	778

Salmonella was the etiologic agent responsible for four food-borne epidemics during the year 1966. It was the suspected agent in additional epidemics; however, documentation was not made. In late May, approximately 200 cases of gastroenteritis clinically consistent with salmonellosis were reported to the State Health Department. Common to these cases was the consumption of smoked whitefish at several independent social gatherings. *S. java* was isolated from approximately a third of the ill individuals. Similar outbreaks occurred in other states along the northeastern seaboard. Investigation of the suspected food item, smoked whitefish, revealed a common distributor. Investigation of the distributor and the smoke house where the fish were processed failed to reveal evidence of contamination in the processing or distributing operation. However, fish which had not been subjected to the smoking process were noted to be contaminated with *S. java*. Consequently, an investigation of the source of the contaminated shipment of whitefish was undertaken. A thorough investigation of the Great Slave Lake, Canada, whitefish harvesting operation was conducted by representatives of the Canadian Health Department and the U. S. Communicable Disease Center. This investigation revealed ample opportunity for contamination of fish during harvest, cleaning, and storage. Nevertheless, *S. java* could not be isolated from any area of the Great Slave Lake fish industry.

An outbreak of diarrhea in the premature nursery at St. Elizabeth's Hospital, Elizabeth, New Jersey, was reported in July. Nine infants were shown to be infected with *S. give*. In addition, a newborn baby in another wing of the hospital had an asymptomatic infection with *S. give*. The investigation revealed that the techniques used in the handling of liquid diets for premature infants and in the feeding of premature infants were inadequate.

It was suspected that a nurse having access to the asymptomatically infected newborn and also working in the premature nursery served as a vehicle for the transfer of *S. give* from the asymptomatic individual into the nursery. Once introduced, the feeding techniques employed at the time resulted in its rapid dissemination to nine infants.

An epidemic of gastroenteritis due to *Salmonella montevideo* occurred during November at the East Orange Veterans Hospital. By November 13, 15 cases of clinical illness and 11 cases of asymptomatic infection had been identified. Epidemiologic evidence pointed clearly to egg nog prepared on October 31 as the vehicle of infection. The raw eggs which were used in the preparation of this egg nog appeared to be the source of the organism. A special feeding formula prepared from the same shipment of eggs several days after the epidemic was positive for *S. montevideo*. Eggs used in the preparation of the egg nog and the special feeding formula were classified as Grade A. An attempted investigation of the source of these eggs was unsuccesful. The eggs had been shipped from multiple sources to a single distributor; hence, they could not be traced beyond the distributor. There was no evidence of contamination at the point of distribution. Appropriate control measures were suggested to the East Orange Veterans Hospital and have been applied.

In late September, an outbreak of gastroenteritis resulted from a common menu served to two individual dinner parties by a restaurant. The infecting organism was *S. panama*. Approximately 85 persons were identified as ill among a total of 279 having attended the two parties. Although this was clearly a food-borne epidemic, epidemiologic data did not clearly indicate the contaminated food item. Asymptomatic *S. panama* infections were found in two kitchen employees. However, it was impossible to determine whether these infections resulted from consumption of contaminated food at the restaurant or whether they had resulted in the contamination of food consumed at the dinner parties.

In late August, the State Health Department was notified that some carmine red dye had been found contaminated with *S. cubana*. A letter was sent to the hospital administrators and laboratory directors of all New Jersey hospitals alerting them of the dangers of human consumption of this dye. In addition, samples of the dye were obtained from hospitals and the distributors. Three of the four lot numbers sampled were strongly positive for *Salmonella cubana*. The two *S. cubana* infections noted in New Jersey could not be traced to this dye.

Shigellosis

Eighty-four cases of shigellosis were reported to the Division of Preventable Diseases during the year 1966. This represents an increase of 29 cases from the year 1965. Cases were reported from 11 of the state's 21 counties. The counties of Essex and Hudson, as during the year 1965, reported the greatest number of cases, reporting 29 and 27 respectively. No major epidemics occurred due to shigella infection; however, there were several instances of household clusters.

Classification of the organisms according to serotype is listed in table below:

Table 18. SHIGELLA ISOLATIONS BY SEROTYPE, NEW JERSEY, 1966

Group A: *S. dysenteriae*	1
Group B. *S. flexneri*	21
Group C: *S. boydii*	3
Group D: *S. sonnei*	51
Unknown	8
Total	84

Approximately 60 percent of the shigella isolations were *S. sonnei;* while another 25 percent of the isolations were typed as *S. flexneri.* This general pattern of isolated serotypes is consistent with that seen in the northern portion of the United States. In contrast, the southern portion of the United States, approximately 75 percent of the isolates are *S. flexneri,* and approximately 23 percent are *S. sonnei.* The seasonal pattern of shigella isolations conforms to the pattern generally seen in the northern United States. Although there is a suggested late summer-autumn seasonal peak, this is far less dramatic than that seen in the southern portion of the country.

Smallpox

Three possible cases of smallpox were reported to the State Health Department. Each of these was promptly investigated. The cases were not clinically consistent with smallpox. Furthermore, the laboratory investigation did not suggest the diagnosis of smallpox.

Fifty-four surveillance requests were received from the Division of Foreign Quarantine, United States Public Health Service; these were executed through the offices of local health authorities. No cases of smallpox developed.

The State Health Department distributed 250,000 doses of smallpox vaccine through its biological distributing stations. Continued efforts were directed at the promotion of adequate smallpox protection among health personnel, particularly those working in hospitals.

Tetanus

There were three cases of tetanus reported during 1966; two of these individuals expired.

A 53-year-old male, who had no known primary immunization series and had not had a "booster" injection since 1935, expired with the complete tetanus syndrome in spite of adequate bebridment, treatment with tetanus antitoxin, antibiotic therapy, and modern supportive measures. A second case resulted in the tragic death of a 52-year-old female who had never been immunized against tetanus. The third case involved an unimmunized 60-year-old carpenter who fortunately recovered from his illness with the aid of modern supportive therapy and the complete anti-tetanus regimen described above.

Tetanus is a tragic illness in that it is entirely preventable through vaccination. Hence, increased efforts were directed at the widespread distribution of tetanus toxoid to the adult population. Routine DPT shots given to children provide primary immunization to a large mass of children and young adults. However, the adult population is often unprotected because of the lack of primary immunization or inadequate booster immunizations. One such attempt to provide increased levels of protection against tetanus was an immunization clinic held at the Morris County Health Fair. At this clinic, 12,367 males and 14,236 females were immunized.

Trichinosis

During the year 1966, there were six cases of acute trichinosis reported to the State Health Department. Two cases were diagnosed on the basis of a positive muscle biopsy. The remaining four cases were diagnosed on the basis of three or more of the following findings: muscle tenderness, abdominal distress, periorbital edema, eosinophlia, positive skin tests, or positive serological analysis. A seventh case was reported. However, this case represents an old infection; the diagnosis was made on the basis of calcified organisms found in a biopsy specimen taken in the evaluation of another suspected disease. There were no acute symptoms of trichinosis in this case.

The epidemiologic evaluation of the six cases showed that except for two cases which occurred in the same family, these cases were sporadic incidents. The two cases occurred in siblings. Epidemiologic investigation revealed no apparent source of infection except hamburger which had been served at a picnic and had possibly been consumed after being only partially cooked. It was speculated that this hamburger had been adulterated with pork. However, no other members of the party who attended the barbecue became ill with symptoms consistent with trichinosis.

Epidemiologic investigation of the remaining four cases failed to reveal conclusive sources of their disease. In several instances, trichinella-infected housewives stated that they tasted raw ground meat when cooking. Again, it was speculated that the ground beef was adulterated with trichinella-contaminated pork and that this consumption of this contaminated meat resulted in infection.

It should be noted that an extensive survey recently conducted by the U. S. Department of Agriculture reported low levels of trichinella infestation in swine sampled at slaughter houses. Likewise, the State Department of Agriculture reports low levels of trichinella infestation in New Jersey hogs since the institution of rodent control and garbage cooking programs on swine farms. If the degree of contamination of pork in New Jersey parallels that of the country, the speculation that infection arose through consumption of poorly cooked hamburger meat adulterated with pork should be re-examined. Although chance infection could result from the quantity of raw pork consumed in this manner, statistically this mode of infection is unlikely. Future investigations will focus on other routes of infection.

Typhoid Fever

Eight cases of typhoid fever were diagnosed in 1966; all diagnoses were based on the isolation of *S. typhi* from the blood or stool. *S. typhi* was also isolated from the stool of two asymptomatic individuals not previously known to be carriers. The gall bladder was positive in a third individual who was not previously known to be a carrier of *S. typhi.* The cases of typhoid fever were distributed among the counties as follows: three cases occurred in Camden; two in Essex; one in Hudson; one in Bergen; and one in Morris County.

Interestingly, the cases of typhoid fever diagnosed in 1966 were not related to known typhoid carriers. However, two of the cases of enteric fever could be traced to previously undiscovered typhoid carriers in their family. In the case of one two-year-old female diagnosed bacteriologically and clinically as having typhoid fever, the mother of the family was found to be a typhoid carrier. No one else among 13 other members of the family was infected. In the second case, the father of a three-year-old male was found to be an unsuspected carrier. The two other additional family members were not infected with *S. typhi.*

Two cases which were diagnosed in New Jersey had been exposed outside of the United States. One case, a 38-year-old female, had been traveling in Italy during the five weeks immediately prior to developing typhoid fever. She had had no known exposure to typhoid carriers in this country prior to her

departure. A second case developed in a 17-year-old Thai exchange student who had arrived in this country two days prior to the onset of illness. Surveillance of the other members of the group with whom he had traveled failed to reveal any additional cases of typhoid fever. It was therefore concluded that his exposure to *S. typhi* occurred as a sporadic episode in his native country.

A cluster of three cases of typhoid were reported from Pennsauken Township, Camden County. The earliest case occurred in a 38-year-old male. Shortly thereafter, clinical symptoms appeared in the index case's daughter and in one of the daughter's playmates. Stool specimens of all three patients yielded *S. typhi* of the same phage type. No further cases occurred in the families involved nor the immediate environment. Environmental and contact investigations failed to document the original source of *S. typhi.*

Migrant Health Program

The migrant season in New Jersey in 1966 was stormy and turbulent. Representatives of the Industrial Union Department of AFL-CIO entered New Jersey to obtain signatures of migrants indicating that they favored a union. This was a prelude to a petition to the National Labor Relations Board to conduct an election over collective bargaining rights. A second major group who entered New Jersey were the Vista Volunteers of the Community Action Fund, Inc., an antipoverty migrant program in South Florida. The VISTA (Volunteers in Service to America) workers were confused with the labor organization representatives and were met with hostility, rejection, and defense. The National Association for the Advancement of Colored People stirred interest in the education of migrant children by drawing attention to children working in the field. Efforts to provide for job training antagonized farmers who alleged that it took workers from their fields. The reaction of the farmer was described as an uneasy, resentful, bitter silence. This was followed by restriction of entrance on farms and later by an intemperate description of migrants by a prominent farmer.

Strenuous complaints arose from many interested groups before the Migrant Labor Board. The complaints were directed against members of the Board and some of its functions. This action was publicized in the *New York Times* of September 22, 1966. In response to the issues raised, the Governor has appointed a task force to study the entire problem of Migrant Labor in the state. This action was met with approval and interest by community groups and agencies.

The average seasonal work force at peak during the past 10 years was 24,000 workers. Discounting changes in timing of agricultural activities caused

primarily by the weather, and considering that reporting criteria cover one day, peak employment has held at a constant level during the past decade.

The agencies cooperating with the Migrant Health Program functioned in the midst of this turmoil. Depending upon a long established rapport with the farmers and migrants, they maintained a balance that permitted health services to flow in a manner consistent with the interests of the migrant family, the farmer, and the community.

The effective work of public health nursing and social service agencies among the migrant workers has led to the discovery of many problems involving physical health with the result that the demand for medical services in field and family migrant health clinics and for diagnostic and therapeutic services is constantly increasing. Further, the migrant by his own devices now seeks medical services for conditions which he formerly would have overlooked. It is important to recognize that, as this program moves forward, an increasing number of physicians are serving in the clinics and providing medical care in their offices. It is interesting to note that, prior to 1963, there were relatively few physicians involved in migrant health services in this state. Now it may be said that the medical practitioner is becoming increasingly alert to the medical problems of the migrant worker and that the standard of care which they receive is moving forward continuously.

The issue of emergency hospital care for migrant workers has been repeatedly discussed in previous reports. The present report documents over $50,000 worth of hospital services in a 12-month period.

The prenatal and obstetrical services provided by the Maternal and Child Health Program for the past four years were continued in the recent agricultural season. Sixty-eight prenatal patients were served in 10 participating hospitals. While the number of patients is small, nevertheless, it is interesting to note that a number of patients sought prenatal care without the stimulus of a public health nurse visit and that others who had received prenatal care in New Jersey previously returned for service again. There is indication that the teaching concerning the value of prenatal care is beginning to bear fruit. This activity should be sponsored with great intensity throughout the entire migrant program.

Migrant health clinics were continued at field locations and in hospitals where family health clinics were met with increasing acceptance. As the program of health services moves from simple protective services such as immunizations to more refined procedures, involving complete physical examination and more complicated tests, it becomes apparent that the migrant workers themselves become selective. The basic screening procedures for

tuberculosis and venereal disease, while considered necessary in this deprived population, nevertheless, are not accepted by the workers. This year, only one case of active tuberculosis was discovered in the tuberculosis screening effort. A second case of inactive tuberculosis completed the yield. The extension of tuberculosis screening services in other migrant programs now creates a situation where the diagnosis of tuberculosis should be relayed to communities in the upstream areas. This is also true where children have been placed on prophylactic therapy. The amount of health education necessary to prepare the migrant to alert other health facilities that he is a patient with tuberculosis on chemotherapy requires careful and specific attention.

It has been noted that relatively few major problems associated with heart disease, cancer, or diabetes are discovered during clinic sessions.

Diabetes screening was introduced into the migrant clinic by the Diabetes Program.

Public health nursing continued to bear the brunt of the front line attack upon migrant health problems in the summer of 1966. One of the major difficulties in the past season was the shortage of professional personnel. Personnel are now rarely available for short-term employment, particularly during the summer months. There is increasing competition for personnel on the part of other programs that provide more interesting and attractive salaries and hours. The Migrant Health Program demands a tremendous amount of work. While it is satisfying and morale may be high, to quote a public health nurse, "Only the stout of heart and body are willing to repeat the experience after one exposure."

Four Day Care Centers were opened through a project sponsored by the Southwest Regional Economic Opportunity Corporation. The New Jersey State Department of Health's Maternal and Child Health Program assisted with the health services in all of the centers.

There were seven schools providing educational experience to children of migrant agricultural workers and their families during the summer of 1966. The State Department of Education was administratively responsible for the overall school program operating on state funds and federal anti-poverty funds. All of the schools were offered the opportunity of using the State Department of Health in planning for and assisting with their school health program. Five accepted the offer to the fullest, including financial assistance, while the remaining two did so in varying degree.

A total of 3,519 persons were reported who received individual services in seven counties. This represents an increase of 770 persons over the total

of 2,749 persons reported in 1965. Noticeable increases in service occurred in Burlington, Gloucester, Mercer, Middlesex, Monmouth, and Salem Counties.

The clinic and public health nurses accounted for the large majority of persons who came to service. Most of the people who participated in the program were served only once. A small percentage of persons received a large bulk of the individual services rendered. One of the most important activities was that of health promotion and health education. These activities attempt to construct an attitude and motivation for participation in health services.

The Dental Health Program continued to make a major contribution to the migrant health services in the summer of 1966, providing screening services in migrant clinics, contacts with private practititioners and preventive and therapeutic services to migrant children in the migrant schools.

The stimuli which the program provides to dental students prepares them for future responsibilities and understanding of the public health approach of dental care.

Several steps forward were accomplished in the year 1966 in the field of social service. These steps were undertaken with one point in mind, namely more and improved services for the migrant worker. They involved direct participation with hospitals and social work agencies, gradually building a liaison between the community and the hospital where the migrant is served. They involved direct effort to improve the understanding of the various forms of assistance which are available to the migrant and the manner by which they may be obtained. They involved direct efforts to increase the services for migrants and rural poor in the agricultural sections of the state.

During the 1966 season, public health nurses, social workers, and other components of the Migrant Program made 756 visits to migrant labor camps in the state. At the peak of the season, Migrant Health Services were available, through the camp visits, to nearly 4,500 persons or one-quarter of the state's migrant population.

The major thrust of Migrant Health Program activity has been to develop in the counties a local willingness on the part of official and voluntary agencies to undertake the planning and execution of the Migrant Health Program. The example of Cumberland County in the summer of 1966, developing and administering its own Migrant Health Program, has served as a good example to others. Potentials for such actions exist in Monmouth County and in Burlington County where, with the support of State Aid, new county health units may emerge.

The counties of Salem and Gloucester where a large number of the migrant workers work are developing embryonic health departments. It is in this area that community acceptance of the migrants, social attitudes, and economic considerations weigh most heavily. The variables that may influence the judgment of newly formed health departments may be clear and distinct to a person at state level, yet within the realm of local political, social and economic thought, the decisions are not as clear cut. It is in this area that patience and persistence plus the art of friendly persuasion must continue to exert influence in the direction of local assumption of responsibility for the migrant Health Program.

Tuberculosis Control Program

During calendar year 1966, there were 2,567 cases of tuberculosis in all stages reported; of these, 1,592 were diagnosed and reported as cases of active tuberculosis. These figures represent a slight decline in numbers and rates per 100,000 in both total cases and new active cases. The last 10 years of tuberculosis morbidity and mortality records are reflected in Table 1.

Table 1. Tuberculosis Cases and Deaths Numbers and Rates per 100,000 Population New Jersey 1957 - 1966

	Estimated	*Deaths*		*Total Cases*		*Active Cases*	
Year	*Population*	*Number*	*Rate*	*Number*	*Rate*	*Number*	*Rate*
1957	5,728,000	519	9.1	3,543	61.9	1,806	31.5
1958	5,851,000	443	7.6	2,790	47.7	1,622	27.7
1959	5,974,000	443	7.2	2,909	48.7	1,619	27.1
1960	6,098,000	354	5.8	2,928	48.0	1,601	26.3
1961	6,221,000	389	6.3	3,120	50.2	1,570	25.2
1962	6,344,000	326	5.1	2,769	43.6	1,504	23.7
1963	6,467,000	364	5.6	2,867	44.3	1,634	25.3
1964	6,590,000	307	4.7	2,970	45.1	1,738	26.4
1965	6,713,000	304	4.3	2,614	38.9	1,602	23.9
1966	6,951,336	291	4.2	2,567	36.9	1,592	22.9

The counties of the Metropolitan District, Bergen, Essex, Hudson, Passaic, and Union account for 927 cases of active tuberculosis, more than one-half of the total reported in the state. Nearly two-thirds of the active cases in these counties are found in the cities of: Newark, Jersey City, Paterson, and Elizabeth. Table 2. shows Reported Active Tuberculosis Cases and Case Rates per 100,000 population for the counties and cities of the state.

Table 2. Active Tuberculosis Cases and Case Rates per 100,000 Population New Jersey Counties and Major Cities, 1965*

Area	Active Cases	
	Number	Rate
State Total	1,674	24.6
Atlantic County	71	40.2
Atlantic City	56	91.0
Bergen County	84	9.6
Burlington County	31	11.2
Camden County	76	17.0
Camden City	43	37.3
Cape May County	8	15.4
Cumberland County	45	37.6
Essex County	429	45.2
Bloomfield	8	14.9
East Orange	24	31.0
Irvington	8	12.7
Newark	336	84.5
Gloucester County	32	20.6
Hudson County	241	39.6
Bayonne	10	13.5
Hoboken	28	59.6
Jersey City	149	55.1
Union City	11	20.9
Hunterdon County	17	27.6
Mercer County	111	37.4
Hamilton Twp.	20	25.5
Trenton	68	62.0
Middlesex County	79	14.9
Woodbridge Twp.	11	11.5
Monmouth County	58	14.1
Morris County	44	13.4
Ocean County	32	22.3
Passaic County	126	28.3
Clifton	13	15.3
Passaic City	24	42.6
Paterson	78	52.9
Salem County	7	11.0
Somerset County	19	10.5
Sussex	5	8.2
Union County	123	22.2
Elizabeth	43	36.7
Union Twp.	12	21.8
Warren County	16	23.0
State Institutions	18	
Military Establishments	1	

* Final 1966 data not available when this table was prepared.

Tuberculosis Case Register

On December 31, 1966, there were 21 County Tuberculosis Case Registers working cooperatively with the State Case Register system. These registers maintained active surveillance over 14,188 patients. This is a slight decrease in registrants from 14,474 in the year 1965.

The following Table 3. depicts the status of cases on the register on December 31, 1965 and compares them with four previous years.

Table 3. Tuberculosis Patients Under Registration
New Jersey 1962, 1963, 1964, 1965

Status	*1962*	*1963*	*1964*	*1965*	*1966*
Total	15,498	15,640	15,432	14,474	14,188
Hospitalized	1,852	1,750	1,629	1,016	1,430
Non-hospitalized	13,646	13,890	13,803	12,143	12,758
Active	1,092	793	727	646	564
Probably Active	268	246	184	160	150
Probably Inactive	340	372	290	448	361
Inactive	11,593	11,781	11,876	10,889	10,368
Non-Pulmonary	416	698	726	815	888

It is of interest to note that over the five-year period, the number of patients with active tuberculosis who were non-hospitalized and residing in the community has diminished from 1,092 to 564 cases. It is anticipated that in 1967 the number of patients under surveillance at home will increase because increasing casefinding activity will be directed toward persons who have had active tuberculosis previously. This type of surveillance is undertaken because diagnostic reports indicate that an increasing number of cases of active tuberculosis arise due to reactivation of pre-existing disease. It is anticipated that a systematic search, therefore, among previously known cases will reveal increasing numbers of reactivations. (Note: Increasing pressure must be brought to bear on diagnoses listed as, probably active and probably inactive.)

Table 4. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Examination Status
New Jersey 1961, 1962, 1963, 1964, 1965, 1966

Status	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*
Total	100.0	100.0	100.0	100.0	100.0	100.0
Not Due for Examination	57.0	60.0	61.7	59.2	64.2	69.1
Overdue Up to 12 Months	17.0	15.0	19.2	16.1	21.2	17.0
Overdue 12 Months or More	11.0	4.0	5.5	2.9	3.2	1.6
No Date Assigned	15.0	21.0	13.6	21.8	11.4	12.2

As Tuberculosis Control is systematized and extended throughout the state, it is to be expected that the medical examination status of patients who are under care at home will increasingly become more current. Improvement in the follow-up and examination status of patients is evidenced by the fact that 69.1 percent of all patients are current in comparison to 64.2 percent in 1965. The percentage of patients who are overdue 12 months or more is also diminished.

Continued pressure is being applied upon clinics and physicians to assure that all patients under care are assigned the date for the next examination in order that the systematic follow-up procedures may return patients to examination on time. In this way, many patients who might become delinquent are returned to examination and maintained under care.

Table 5. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Sputum Status New Jersey 1961, 1962, 1963, 1964, 1965, 1966

Sputum Status	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*
Total	100.0	100.0	100.0	100.0	100.0	100.0
Studied within 6 months	30.0	58.6	64.3	75.5	76.7	81.1
Studied over 6 months	50.0	27.5	30.4	19.4	19.7	16.3
Not Studied	20.0	13.9	5.3	5.1	3.6	2.6

It has been recognized that without modern bacteriologic examination of sputum, the management and care of tuberculosis are inadequate. Table 5. reveals the degree of success obtained in New Jersey in obtaining sputum studies on non-hospitalized patients with active tuberculosis. It is noteworthy that in the year ending December, 1966 that 81 percent of active patients at home had been examined for sputum status within the last six months. In comparison with the preceding years, there has been increasing efficiency in sputum studies within six months. The number of patients who have not been studied has been reduced to a level of 2.6 percent.

The continuous use of anti-tuberculous drugs by non-hospitalized active tuberculosis patients is a primary concern and a necessity in the proper outpatient care of tuberculosis.

Table 6. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Drug Status New Jersey 1962, 1963, 1964, 1965, 1966

Drug Status	*1962*	*1963*	*1964*	*1965*	*1966*
Total	100.0	100.0	100.0	100.0	100.0
Receiving Drugs	63.1	66.0	63.0	73.2	77.1
Not on Drugs	6.1	5.0	4.5	3.2	2.9
Status Unknown	30.8	29.0	32.5	23.6	20.0

In Table 6., the drug status of non-hospitalized patients with active tuberculosis is compared for the years of 1962 through 1966. It is gratifying to note the increasing numbers of patients who are receiving drugs. This means that increasing numbers of patients are receiving drugs each quarter. The percentage of patients whose drug status was unknown has gradually diminished from 30 percent in 1962 to 20 percent in the quarter ending December 31, 1966. The receipt of drugs from the biological stations or drug stores does not assure that the full therapeutic value of the drug is obtained. Increasingly, public health nurses, clinics, and physicians are being stimulated to assure that the patients do take the drugs while they are at home. No formal recording of such data has been made; however, there is reason to believe that many patients with active tuberculosis fail to maintain continuous drug therapy while at home.

This area of activity demands increasing pressure from health department officials to assure that maximum benefits of the medications are obtained.

Drug Distribution

During 1966, 60,000 bottles of isoniazid were dispensed to patients in the state. This number is 8,000 more than in 1965. Likewise, 9,720 bottles of para aminosalicylate acid were dispensed, 256 more than last year.

In addition small amounts of streptomycin, seromycin, and trecator were dispensed.

A study was initiated late in 1966 to determine the frequency with which isoniazid was distributed from the biological stations to persons who had been placed upon prophyliactic medication. This study has been accomplished for all counties of the state for the years 1965 and 1966. Subject to some limitations imposed by incomplete data, this study tends to indicate that patients seen by physicians and advised to use prophylactic medication fail to return for subsequent observation and additional medication. These observations cast serious doubt upon the efficiency with which prophylactic medication is being used in the state and creates an urgent need to add a study of prophylaxis to the computerized tuberculosis case register system.

Contact Register and Investigation

Contact investigation which has proved to be most effective way of discovering new cases of active tuberculosis has moved forward with increasing momentum throughout the year 1966.

Table 7. Patients Giving Contact, Number of Contacts Given, Contact Index and Number of Registers, 1965

Quarter Ending	*Number Active and Reactivated Patients Giving Contacts*	*Number Contacts Given*	*Contact Index*	*Number of Contact Registers*
Total	847	6,273	7.4	8
March	240	1,639	6.8	8
June	188	1,964	10.4	8
September	198	1,165	5.2	8
December	221	1,505	6.8	8

At the close of 1965, there were 7,186 contacts in the contact register for whom follow-up and examination had not been completed. In the year 1966, contact information was obtained from 847 new patients with active or reactivated tuberculosis. Investigation elicited 6,273 contacts. These added to the contacts at hand in the beginning of the year constituted a total of 13,459 contacts potentially available for follow-up and examination during the year 1966. A total of 1,535 contacts were removed from the register system for other reasons other than examination. They were:

Total	1,535
Death	43
Change of Diagnosis	438
Moved Away	240
Other	197

This number subtracted from the total available for follow-up leaves 11,924 contacts upon whom follow-up activity and examination could be conducted. Throughout the year, 11,457 persons received their first, second, third, or fourth examinations with the results described in the following Table.

Table 8. Results of Examination of Contacts by Quarters, 1966

Quarter	*Number Exams*	*New Tuberculosis*		*Known TB*	*Rate/1000 Contact Exams*
		Total	*Active*		
Total	11,457	190	136	166	11.8
March	2,934	48	33	45	11.2
June	2,846	56	42	54	14.6
September	2,968	45	36	30	12.1
December	2,709	41	25	37	9.3

The 11,457 examinations conducted in 1966 represent an increase of four times the contact examination work accomplished in the year 1965. The ex-

aminations revealed 136 new cases of active tuberculosis, a case discovery rate of 11.8 new cases of active tuberculosis per 1,000 contacts examined. As of December 31, 1966, 9,732 contacts remained in the contact register system. At the end of December, 1966, there were 3,566 contacts who were overdue for examination. Three hundred and thirty-one of these persons had not been observed in over 12 months.

Table 9. CONTACTS OVERDUE FOR EXAMINATION BY DURATION OF DELINQUENCY, 1966

Quarter	*Total*	*Within 3*	*3-6*	*6-12*	*12+*
March	3,509	1,696	649	1,001	163
June	3,818	1,878	535	929	502
September	3,640	1,565	887	844	299
December	3,566	1,564	1,130	541	331

The systematic development of Contact Registers is anticipated in the counties of Camden, Burlington, and Atlantic in 1967.

Table 10. TUBERCULIN TESTING IN NEW JERSEY PAROCHIAL SCHOOLS SCHOOL YEARS—1964-65 AND 1965-66

	Number in Grade		Number Tested		Number Reactors		Percent Reactors		Number Followed		Number Active Found	
School Year	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66
TOTAL	42,580	55,599	39,059	47,001	885	1,192	2.3	2.5	749	1,034	1	3
Grade I	14,231	16,395	13,655	15,415	108	148	0.8	1.0	97	120	0	2
Grade V	12,685	14,450	12,045	13,859	185	231	1.6	1.7	166	193	0	0
Grade IX	5,907	7,096	5,695	6,594	148	238	2.6	3.6	139	228	0	0
Grade XII	4,981	5,050	4,613	4,753	115	163	2.5	3.4	96	155	1	0
Post Graduates	44	0	44	0	1	0	2.3	...	1	0	0	0
Unclassified	1,754	518	1,584	406	49	6	3.1	1.5	36	5	0	0
Other Grades	0	7,615	0	3,517	0	88	...	2.5	0	74	0	1
Teachers and Employees	2,978	4,475	1,423	2,457	279	318	19.7	12.9	214	259	0	0

Table 11. TUBERCULIN TESTING IN NEW JERSEY PUBLIC SCHOOLS SCHOOL YEARS—1964-65 AND 1965-66

	Number in Grade		Number Tested		Number Reactors		Percent Reactors		Number Followed		Number Active Found	
School Year	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66	64-65	65-66
TOTAL	574,166	611,256	441,734	446,585	14,800	12,999	3.40	2.9	13,694	12,282	15	23
Grade I	100,205	101,472	97,767	98,753	868	863	0.90	0.9	807	833	1	4
Grade V	88,548	91,252	87,254	89,054	1,420	1,433	1.60	1.6	1,347	1,384	2	3
Grade IX	87,208	94,213	82,079	88,314	2,409	2,886	2.90	3.3	2,375	2,764	2	2
Grade XII	74,889	74,760	70,316	69,739	1,983	2,450	2.80	3.5	1,903	2,297	2	3
Post Graduates	6,240	1,230	995	662	81	42	8.10	6.3	68	40	0	1
Unclassified	53,681	74,928	33,933	35,914	957	1,001	2.80	2.8	731	812	1	2
Teachers and Employees	85,810	93,629	34,812	35,489	5,070	3,036	14.60	8.6	4,806	2,839	0	1
Newark Public Schools	77,585	79,772	34,578	28,660	2,012	1,288	5.80	4.5	1,657	1,313	7	7

Public School Tuberculin Testing

The public school tuberculin testing program included 446,585 persons in 1966. There were 12,999 reactors discovered among whom there were 23 cases of active tuberculosis. The yield of the testing program is 5.2 cases per 100,000 persons tested.

The first grade testing program included 98,753 children and yielded a reactor rate of 0.9 percent and four cases of active tuberculosis. The percentage of reactors equals the findings of 1965. However, three more cases were discovered in 1966.

In the fifth grade, 89,054 children were tested, resulting in a reactor rate of 1.6 percent and discovery of three cases of active tuberculosis. A yield equivalent to 1965. Testing in high school involved 88,314 ninth graders and 69,739 twelfth graders. The five cases of active tuberculosis discovered matched the yield of 1965.

The Newark school system tested 28,600 persons and discovered seven cases of active tuberculosis, a finding which equaled the yield of the 1965 program.

Parochial School Tuberculin Testing

Increasing numbers of parochial school students were tuberculin tested in 1966. The program covered 47,001 persons and resulted in the discovery of three cases of active tuberculosis.

A surprising number of public and parochial school personnel sought advice regarding management of contacts to a diagnosed case of active tuberculosis discovered in a school child or employee. Many of these requests came late in the school year after screening programs had been accomplished. Screening is mandatory in 1, 5, 9, and 12 grades; teachers, and other employees are tested every year. Retesting negative reactors every year and closer medical supervision of inactives, suspects, and known reactors, including chemoprophylaxis for those in the high risk groups, deserve further emphasis in some areas of the state.

Child Health Conference—January to December, 1966

Child Health Conferences in general serve those families who are unable to afford pediatric care. The presence of a reactive tuberculin test in a child attending a Child Health Conference is significant, indicating the presence of active tuberculosis in the family environment of the child.

Six thousand three hundred and thirty-two children under 10 years of age were tuberculin tested in the Child Health Conference. Fifty children (0.8 percent) were discovered to be reactive. Among them, there were four cases of primary active tuberculosis, a yield of 0.63 per 1,000 tested. The finding of a tuberculin reactivity prevalence rate of less than one in 1,000 among pre-school children indicates that the risk of spread of tuberculosis is becoming very small. However, these data are highly selective and represent only a small sample of New Jersey's children. The evidence cannot be applied generally but may be used in a suggestive fashion to indicate a level of achievement in the children.

Table 12. Results of Tuberculin Testing Child Health Conferences, 1966

Age	Total			Male			Female		
	Number Tested	Reactor No.	Reactor Percent	Tested	Reactor No.	Reactor Percent	Tested	Reactor No.	Reactor Percent
All	6,544	82	1.3	3,205	37	1.2	3,339	45	1.3
Under 1	1,000	2	0.2	481	0	0.0	519	2	0.4
1-4	4,633	38	0.8	2,298	19	0.8	2,335	19	0.8
5-9	699	10	1.5	337	6	1.8	362	4	1.1
10-19	75	3	4.0	30	0	0.0	45	3	6.7
20 and over	42	20	4.8	11	7	64.0	31	13	42.0
Unknown	95	9	9.5	48	5	10.4	47	4	8.5

Table 13. Cases of Tuberculosis Discovered Tuberculin Testing Child Health Conferences, 1966

Age	Number Tested	Number Reactive	Number Followed	Active Tuberculosis Primary	Active Tuberculosis Reinfect.	Rate Per 1000 Primary	Rate Per 1000 Reinfect.
All	6,544	82	82	4	1	0.62	0.15
Under 1	1,000	2	2	..	..	...	...
1-4	4,633	38	38	3	..	0.65	...
5-9	699	10	10	1	..	1.4	...
10-19	75	3	3	..	..	...	...
20 and over	42	20	20	..	1	...	238.0
Unknown	95	9	9	..	..	...	...

Clinical Services

The tuberculosis clinics distributed throughout the 21 counties render screening diagnostic and therapeutic services. During the year, 37,051 persons registered for the first time. These persons made a total of 102,691 visits to the clinics during the year.

Eighty-two thousand X-ray examinations, 14,000 sputum examinations, and 26,874 tuberculin tests were performed; 768 sputum specimens were reported as positive and over 5,600 tuberculin reactors were discovered.

In association with the clinic activity, public health nursing services were provided to 3,941 persons with tuberculosis, and to 9,772 contacts and persons suspected of tuberculosis. This is a marked increase over the 6,990 persons in this category in 1965.

Home visits to cases of tuberculosis numbered over 20,000 and to contacts and suspects over 17,000.

Public Health Nursing Consultants

Intensification of tuberculosis control was emphasized through in-service educational programs for various groups of nurses. These sessions were planned to bring the most recent knowledge and nursing responsibilities involved in casefinding, prevention, patient care, and treatment to attention. Twenty-nine hours were spent in teaching. Atlantic County public health nurses and the Atlantic City visiting nurses each received four hours of training; public health nurses in the Elizabeth, Hamilton, Ewing, and Lawrence Townships' Boards of Health received four hours. A class of nurses attending Trenton State College and a group of foreign exchange nurses working at Beth Israel Hospital, Newark, received tuberculosis education with varying degrees of emphasis. The public health nurse consultant participated with the Patient Services Coordinator in an informal program for staff nurses at the New Jersey State Sanatorium. Two all-day sessions were held with nurses representing public health nursing agencies throughout the state. This was part of an orientation program for public health nurses, planned and implemented by the State Nursing Program. Approximately 147 nurses attended these tuberculosis nursing sessions.

Many requests for information came to the Tuberculosis Program. These requests were referred to the public health nurse consultant. An appraisal of the information sought by 15 of the health officers indicated a lack of understanding of the Regulations in the Sanitary Code and of the management of recalcitrant tuberculosis cases, contacts, and suspects. Others have apparent difficulty in understanding concepts, policies, and procedures related to tuberculin testing in schools, child health conferences, follow-up of reactors, associates, and contacts.

The public health nurse consultant assisted and participated in group presentations and in-service education concerning tueberculosis control for lay groups, such as the Metropolitan Associates and student nurses at St. Michael's School of Nursing.

Consultant services were provided to the New Jersey State Highway Department and the New Jersey Division of Motor Vehicles upon request for

information and assistance in planning a tuberculin testing program for employees.

The public health nurse consultant attended the Annual Conference of State and Local Health Officials 1966 at Princeton and participated in the question and answer clinic concerning morbidity reporting. The consultant nurse had an opportunity to gain some understanding of the problems and difficulties which arise within community agencies. Many of the difficulties seem to stem from a lack of communication at the local levels. Most of the audience at the clinic felt communication between the state and local level was good.

Consultation services were provided to the staff of the New Jersey State Home for Girls in the implementation of a tuberculin register. The register will aid in tuberculosis detection and control for patients and employees in the institution. The increasing numbers of persons in our population who are tuberculin negative make it possible to conduct tuberculosis screening and maintain surveillance over transmission of tuberculosis with increased sensitivity, simplicity, and reduced cost. The procedures at the state institution are designed to initiate and maintain casefinding and surveillance among patients and employees.

Supervisor

A study of the care of 35 children, ages birth to 14 years, who were reported to have active tuberculosis in Jersey City during the period July 1, 1963 to June 30, 1964 was completed during 1966. Twenty-eight of the patients had been reported to the New Jersey State Department of Health as the result of diagnosis established prior to the study. An additional seven cases were discovered during the evaluation of hospital charts of children hospitalized during the study period.

The study included an evaluation of hospital care, out-patient treatment, home evaluation, and the results of contact investigations.

Twenty-three of the children in the study were in the age group one to four years, thus, approximately, two-thirds of the pediatric study dealt with primary active tuberculosis or complications of this disease. Twenty-two of the children had a total of 1,876 days. The average length of stay for all cases of tuberculosis in the hospital was 75 days.

It is fair to state that while the children were hospitalized, chemo-therapy for tuberculosis was maintained. The study was unable to determine precisely the efficiency with which drugs were administered to those children who were not hospitalized and those who had been returned home. Records were er-

ratic concerning the duration of time a patient had been taking medication as well as the dosage that was used. The longest span of time that isoniazid was used was almost two years, the shortest span of time about one month. Dosage varied from 200 mgms., four times a day to 25 mgms., four times a day.

Observations in the pediatric ward of the hospital left a great deal to be desired in terms of discipline of the ward and the participation of the parents with the hospital staff in the basic care of the patient.

The study led to discovery that there were two clinic services available in Jersey City, (1) the Pediatric Clinic of the Jersey City Medical Center and (2) the Pediatric Chest Clinic at the B.S. Pollak Hospital.

During the course of the study, arrangements were made for the pediatric clinic at the B.S. Pollak Hospital to assume responsibility for all the patients. The clinic routine associated with the out-patient care of the tuberculosis patients was analyzed. Each patient was expected to visit clinic for X-ray and return two to three days later for instructions. This was followed by a longer interval of home care. On the premise that the Guidelines for Care of Tuberculosis in New Jersey state, "every patient reported to have active tuberculosis is scheduled to see the clinic physician at least every two months for as long as drug therapy continues," it is reasonable to expect that in a span of two years observation, the patients at this clinic under its appointment system would have at least 24 clinic visits and possibly each patient would have 48 visits. Thirty-two of the 35 patients in the study made a total of 301 visits to the pediatric tuberculosis clinics at the Jersey City Medical Center and the B.S. Pollak Hospital for Chest Diseases. The three patients who did not visit the clinics included one patient who died and two others who did not report for service. Only 48.5 percent of patients made 10 or more visits in the two-year period of observation and practically none approached 24 visits. One child was observed 27 times in the period. The 27 patient visits made by the patient included separate visits for streptomycin injections, x-ray, and sputum examinations. Occasionally, the patient received streptomycin injections and saw the physician on the same visit. Streptomycin was ordered twice each week, but the patient obviously did not adhere to the schedule. Six children were seen less than five times.

On the basis of expectancy, it is clear to see that the study population did not adhere to the routine for clinic visits. The patient management and care achieved under an irregular system such as this leaves a great deal to be desired.

The primary responsibility for follow-up of tuberculosis patients in Jersey City has been assigned to the field representatives working in the city. They

are supported by state, federal, and municipal funds. These men are trained and supervised by the Hudson County Tuberculosis and Health League and the New Jersey Project. The fact that these patients are under the observation of the field representatives does not necessarily mean that supervision of patients with tuberculosis in New Jersey is adequate.

At the present time, two health investigators are assigned in Jersey City to cope with high incidence areas. They spend a great deal of time in interviewing new active patients, giving tuberculin tests to contacts in the homes, and reading the tests and referring persons to clinic. Numerous man hours are spent trying to locate the active non-hospitalized tuberculosis patients who move between clinic visits. The present staff of health investigators in Jersey City face an almost impossible task.

Contact investigation was studied in this undertaking. Record searches and family interviews revealed that 27 index cases had 136 contacts, 109 of whom were examined for tuberculosis on one or more occasions. Among the contacts who were examined, 17 cases of tuberculosis were discovered. The greatest yield was among the contacts of infected adults. No cases of active tuberculosis were discovered among the adult contacts of children who were index cases. This leaves in doubt the source of the pediatric cases in this group. This is especially disconcerting when one observes that there were small, familial epidemics of tuberculosis associated with adult index cases. It is expected that the childhood cases should lead back to an adult who is infected.

Home visits were made to the families who were associated with children in the pediatric tuberculosis study to evaluate the home conditions in which the children lived and to evaluate the results of the follow-up care provided. A total of 57 visits were attempted to 34 families in order to achieve 42 successful home contacts. In part, this may be due to the fact that because of financial circumstances, the families move frequently to avoid paying rent or paying higher rent. Their new home is always in another slum area. One family moved four times within a month and a half after the patient was discharged from the hospital. Of the 35 families included in this study, 33 or 94 percent lived in substandard housing. This included dwelling units in city housing projects and private dwellings over stores and bars. Housing units occupied by the families were usually unfit for use or in need of major repairs. Some dwellings were in the process of being torn down for other future improvements in the city. Apartments were infested with roaches and bed-bugs. Too often, the hygienic habits of the people were very unsatisfactory.

With the exception of two families upon whom no home evaluations were made, the mothers assumed all of the responsibilities in their family. Men

showed a complete lact of interest in family responsibility. Alcoholism is a problem in almost all of the families. In most homes, the mother is the part-time bread winner and her income is subsidized by welfare. All families with the exception of two received assistance from the welfare department at one time or another.

Many of the families in this study have had serious educational deprivation. The greatest percentage of families did not seem to accept tuberculosis as a serious disease. Most patients were under the impression that if the child looked all right and played, medication was not neccessary. They did not seem to be influenced by the need for adequate medical care. The outlook for good pediatric care of ignorant persons with poor motivations is grim.

Public Health Project Nurse

The first few months of services in Union County were spent chiefly in becoming acquainted with personnel responsible for tuberculosis control in that county.

The Union County Tuberculosis League provided desk space in its office which afforded an excellent opportunity to learn first hand some of the problems within the county. In addition to being on the spot and receiving and sharing information, it was of great advantage to participate at the weekly clinic sessions conducted by the Tuberculosis League at St. Elizabeth's Hospital.

Several major problems were observed at the St. Elizabeth's Hospital Clinic. Clinic service was rendered on an appointment basis. The clinic had about the average number of broken appointments, but the problem was compounded because: the Tuberculosis League contracted with St. Elizabeth's Hospital for 200 x rays a month, only 10 a day. Priority appointments were given to the known case. However, the first 10 were accepted for x ray without regard for diagnosis.

The patient had to make two separate visits, one for x ray and another visit for medical evaluation. Frequently, the patient would report for x ray but delay in returning for his clinic visit.

Drugs had been dispensed at the clinic, but due to a change in Tuberculosis League policy, this was no longer permitted. The patient had to obtain his prescription at the clinic, and then go to a distant biological station to obtain medication. The medicine was dispensed by a clerk not connected with the clinic; this was not a good situation because it eliminated or reduced the opportunity for good instruction to the patient regarding the importance of taking his drugs properly.

There was evident need for improvement in communication between the clinic staff, the case register, and the follow-up agency, particularly the Elizabeth Board of Health. There were frequent delays and misunderstandings but there was no deliberate lack of cooperation. Formerly, the Elizabeth Board of Health had assigned a staff nurse to assist at clinic and coordinate the services. This has been discontinued by mutual agreement of the Tuberculosis League and Board of Health.

The quality of service at the St. Elizabeth's Clinic was exceptional. The staff are eager to cooperate and open to suggestions for improvement.

The public health nurses of the Elizabeth Board of Health perform a generalized service exclusive of bedside nursing. The Eastern Union County Visiting Nurse Association provides the bedside service.

The Board of Health Nurses' participation in the tuberculosis program encompasses follow-up of overdue patients according to recommended priority; Tine testing at child health conferences and parochial schools; and contact investigation.

There is a need for assistance in returning the "hard core" patient to supervision. There are undesirable areas in Elizabeth that present problems of location and cooperation of the patient. The services of a male epidemiologist are indicated.

Services for the tuberculosis patient are available at the Out-Patient Department, John E. Runnells Hospital. Schedules have been revised so the known case is seen on Wednesday. There is no charge for tuberculosis patients or contacts. Others are charged according to the service rendered. The major problem here is the distance from the local community to the hospital. Public transportation is not adequate and is costly. The hospital shuttle bus service has been discontinued. Several of the communities transport their patients to the hospital. This is costly, especially in Rahway where the sanitarian and a public health nurse make the trip.

By the end of November, 1966, all the Union County tuberculosis patients who had been hospitalized at John E. Runnells Hospital were transferred and all new cases were being admitted to the New Jersey State Sanatorium. The transition was smooth. The first few patients to be a part of the new policy complained about the distance from their homes, problems of family visiting, etc., but generally speaking there were no unusual problems. A need arose for a person to serve as liaison because the patients often were transferred directly from a general hospital in the community to Glen Gardner and had no opportunity to take care of their personal problems. Also, there

was frequent need to assist this type of patient in planning for his post discharge living.

Initial visits had been made to the local health officers in the county. When the Health Representative came to work in Union County, other appointments were made with each health officer to meet with him and review tuberculosis control activities.

The Union County Tuberculosis League's policy to discontinue tuberculin testing presented a new problem. This service was needed for an active contact investigation or casefinding program. The nursing agencies were not prepared to assume this function. The problems of adequate professional insurance coverage and medical orders needed to be resolved in most areas. Plans to meet this need were formulated.

Health Educator

A knowledge and attitude survey among non-hospitalized tuberculosis patients was completed during 1966. This project was initiated by the Tuberculosis Control Project staff to evaluate and improve tuberculosis patients' education. The study was specifically designed to determine the patient's knowledge of existing services, problems, and shortcomings as seen by patients and sources of patients' information.

The inquiry dealt with current knowledge about tuberculosis, the principal sources of information, attitudes towards tuberculosis, and problems associated with the disease which may influence patient's behavior.

In devising the study, a total of 155 tuberculosis patients were informally interviewed in the clinic. These clinic patients submitted statements which were carefully reviewed and evaluated by the Program staff and a survey questionnaire was developed. The questionnaire was pretested with clinic patients and results discussed. Necessary changes were made and the final survey instrument was developed.

A sample of 82 non-hospitalized patients with active tuberculosis were selected from the quarterly register report of June, 1965 by using a table of random numbers. This constituted a 20 percent sample of the 411 non-hospitalized patients with active tuberculosis who lived in the four survey areas which included the City of Newark, and the counties of Hudson, Passaic, and Union.

The patients selected were interviewed between September, 1965 and March, 1966 by the Health Education Consultant assigned to the State Tuberculosis Control Program.

Seventeen of the 82 non-hospitalized patients with active tuberculosis selected for the survey were not interviewed, nine could not be located, four had moved out of the state, and four had died. Six of the remaining 65 refused to participate. Thus, the final sample comprised 59 persons, a participation rate of 71.9 percent.

Eighty-one percent of the males and 40 percent of the females in this study were over 40 years of age. Thirty-two percent of the patients interviewed came from New Jersey, 10 percent from Georgia, eight percent from North Carolina. The remaining patients originated in 19 states and foreign countries.

Over half of the patients interviewed lived in households of less than four persons, and, approximately two-thirds of the patients lived in the survey area 10 years or more.

Sixteen percent of the sample had less than a fourth grade education; on the other hand, over 30 percent of the patients had completed one or more years of high school.

Over 90 percent of the patients were living in rented dwellings. About one-fifth of the patients were employed at the time of the interview.

It is interesting to note that nearly one-half of the patients learned that they had tuberculosis after going to a doctor for an illness or following admission to a hospital for another complaint. Practically all of the patients discovered either by physicians or hospitals were over 45 years of age. Two-thirds of the patients indicated that their diagnosis had occurred within four years of the interview date. The remaining patients had diagnoses that extended back over the years for more than 15 years.

Three-quarters of the patients were on medication at the time of their interview. A number of the patients indicated that they had been taken off medication by their physicians. While this fact was not specifically confirmed in the study, this observation when made by patients in future studies will require precise and adequate confirmation. Only one patient in the entire group had rejected the diagnosis of tuberculosis.

Two-thirds of the patients quickly named the medications which they were receiving from their physicians. Those that were unable to do so were able to describe the medication by size or type. While most said they took their medication every day, discussions concerning the frequency and intervals with which the drugs were taken led to the suspicion that the use of medication is highly irregular.

Three-quarters of all patients had been hospitalized prior to their interview. Seventeen patients who had not been hospitalized included 11 adults all under supervision of private physicians and six children who were on medication under clinic care.

When questioned concerning the common symptoms of tuberculosis, the patients interviewed mentioned 20 different symptoms. When the symptoms mentioned by patients are considered, they cover a wide area and also serve as signals of other illnesses. There is no doubt that this complicates the patient's understanding of the physician's diagnosis.

Most had very inadequate knowledge concerning the method by which tuberculosis is transmitted. Those who attempted to describe the mode of transmission revealed a host of misconceptions.

Most were quite aware that tuberculosis had the capacity to strike down healthy people. Over two-thirds indicated that one could have tuberculosis without feeling sick. As a corollary, it is interesting to note that among many of the poor interviewed in another survey, the first motivation to seek medical attention comes when the person feels so bad that he cannot work or go about his daily tasks. This may explain in some degree the reasons why the older tuberculosis patients were diagnosed by physicians and hospitals as a consequence to seeking medical attention for another complaint.

The knowledge tuberculosis patients have concerning the purposes of various tuberculosis screening programs is exceedingly limited. On the other hand, nearly half of the patients had fair understanding of the reasons behind repeated chest x rays and sputum tests.

Most of the patients were thoroughly aware of the need for periodic examinations, and most had substantial understanding also of the need for the examination of contacts. While they understood the need for care, they nevertheless mentioned problems associated with examinations. A reason commonly mentioned indicated that it is often difficult and sometimes impossible to keep an appointment because of lack of funds, personal or family illness, or a conflict with more pressing problems.

Over one-half of the patients interviewed said they have been told or read that it would take up to three years under effective treatment to become well again. Some, however, said you are never cured.

Most of the patients indicated when they were interviewed that they did receive good attention in the hospital or clinic. However, a few gave negative answers and a smaller number refused to answer the question completely. It would seem that this question should be proposed again in depth, since it

is commonly observed that the persons who exist in deprived circumstances are frequently able to telegraph the answer most acceptable to the interviewer.

When questioned about sources of information, standard answers were given in relation to pamphlets, newspapers, and television. Relatively few said that they have received information from their close friends. However, when more specifically interviewed concerning persons who may have provided them with information regarding tuberculosis, over 50 percent of patients indicated that physicians, especially those who saw them early in their disease, were most helpful. Family members and nurses were cited in second and third places as source of information. Social workers and others were not mentioned by a single patient. This area of the survey requires careful study and evaluation in a subsequent study.

Open ended questions about the kind of problems and difficulties patients experienced after contracting tuberculosis brought out many comments related to the methods by which financial assistance may be obtained and methods of reaching local clinics which may be distant or in another city.

One patient indicated that "my major gripe concerns my long wait at the clinic for service and the appointments that are too frequent. This interferes with my work and family responsibilities. The waiting room is so dreary; it could be made more cheerful."

Another series of comments included expressions such as "The physician never told me I had tuberculosis, so why should I take pills?" "Why bother me, go find a sick person, I'm doing fine." "We are talked to like dirt at the hospital and clinic by some of the workers."

As a result of this survey, it is recommended that a priority in tuberculosis control should be to develop the program activities around the needs of the patient and not the patient around the needs of the program.

All personnel working with tuberculosis patients should strive to be more sensitive and to understand the patient's total needs, to win the patient's confidence and cooperation, to make the patients feel that private physicians and clinic staff are interested in them as individuals, to give them help with their total problem, and to provide them with facts including the latest medical developments pertaining to tuberculosis. This information must be suited to the individual patient's level of understanding and need. It should be brief and to the point. The patient should be provided with practical ways of handling stress in their daily lives. All patients should be encouraged and motivated to accept responsibilities for assisting in the control of their disease. They should become better acquainted with all available community services and resources and use them when needed.

Agencies serving tuberculosis patients should strive to develop effective two-way communication systems between one another. They should make every effort to report pertinent tuberculosis information accurately and promptly and provide in-service training for their staff.

Camden Project

The activities of joint planning in Camden County undertaken in 1965 to affect regionalization of tuberculosis control services in Camden County moved forward. Continuing participation included the Director of Camden County Hospital for Chest Diseases at Lakeland, the Camden County Tuberculosis Controller, the Director of the Camden Visiting Nurse Association, the Health Officer of Camden, and personnel of the New Jersey State Department of Health.

Public health nurse consultation has continued to contribute to the implementation of a joint plan for effective coordination of tuberculosis control services in Camden County. Data seem to indicate that some progress has been made in up-dating the Camden County Case Register. According to the quarterly case register reports for 1966, significant changes were noted in regard to drug status, medical examination status, and medical supervision status for the inactive patient. Equal changes have not occurred in the "priority" patient group. More time and greater emphasis need to be spent on the priority group.

Efforts were made to visit local community agencies in an attempt to identify and define existing problems. The general lack of communication between agencies and the variations in agency policies have made it almost impossible for tuberculosis control services to function effectively.

Attempts were made to initiate and establish a system of communication for patient, referrals, records, reports and methods for disposition of various referrals. Visits were made to community agencies as an aid to developing a system for routing to the case register all reports and information about tuberculosis patients and contacts in Camden City. Planning and implementation were initiated for a contact register.

As part of the joint program, consultation has been provided to the Camden Visiting Nurse Association and the out-patient department clinics in the city. The favorable working relationships that have emerged have resulted in the extension of contract services to the Merchantville-Pennsauken Visiting Nurse Association and the initiation of negotiations with the Collingswood and Haddonfield Visiting Nurse Association.

The Camden County Hospital for Chest Diseases has undertaken the relocation of its clinic facilities. In the course of the year, the X-ray Department was moved to an area more accessible for out-patient services. With the aid of the New Jersey State Department of Health, equipment for the nebulization of sputum specimens was installed and an orientation and training program initiated for the nebulizer technician.

During the year, the Camden County Tuberculosis Controller and Chest Clinic physician became ill, resulting in a request from Camden County Hospital for Chest Diseases for physician assistance. This assistance was provided by the New Jersey State Department of Health for the out-patient care of tuberculosis patients.

In the later part of 1966, it became apparent that tuberculin testing of parochial schools in Camden County was not organized in a systematic fashion. Discussions and meetings were held with persons responsible for this activity. It is anticipated that early in 1967 an integrated program of tuberculin testing will be carried out in the parochial schools throughout the county and at other interested private schools.

On December 31, 1966, there were 540 patients on the Tuberculosis Case Register in Camden County, 95 of these patients were hospitalized, the remainder were non-hospitalized and were maintained under medical care and public health surveillance at home.

The 95 hospitalized patients plus the 16 non-hospitalized patients with active tuberculosis total 111 patients who may be considered under care for active pulmonary tuberculosis.

There were 354 patients diagnosed as inactive pulmonary tuberculosis who were not hospitalized.

Study of the examination status of non-hospitalized patients with active tuberculosis on December 31, 1966 revealed that 63 percent of patients were receiving medical examination on time compared to 41 percent in 1965. In December, 1966, 6.3 percent of patients with active tuberculosis were overdue for medical examination in excess of 12 months contrasted to 15.4 percent in December, 1965.

In spite of the fact that nebulizing equipment was installed in the late fall, the percentage of patients receiving sputum examinations within six months was not improved over that noted at the end of the year 1965. A small but noticeable increase occurred in the percentage of patients who are recorded on drug therapy at the end of 1966. This area of tuberculosis case surveillance continues to remain a serious communications problem.

Hudson County Project

The Hudson County Tuberculosis Project has been established for a number of years. Among the serious problems still facing the project are the availability of clinic space and clinic services for working persons in North Hudson, Hoboken, and Bayonne.

Throughout 1966, negotiations were carried out with the Board of Chosen Freeholders. Part of the negotiations included the establishment of an evening clinic at the B.S. Pollak Hospital for Chest Diseases and the cooperation of that agency in the establishment of outlying clinics in North Hudson and Hoboken. A final decision was rendered by the Medical Director of the B.S. Pollak Hospital that if clinic services were to be rendered in the communities outside of the B.S. Pollak Hospital, they would have to be worked out with the local municipalities. Accordingly, meetings were held with the health officials in North Hudson, Union City, and in Hoboken. The municipal officials in Hoboken indicated their preference for the establishment of a chest clinic at St. Mary's Hospital in Hoboken. A proposal for a chest clinic to include detection, diagnostic, and treatment services was presented to the St. Mary's Hospital on the premise that funds would be provided for the reimbursement of the hospital for the services rendered. Negotiations with the officials indicated that the hospital did not wish to assume responsibility for the staffing and management of the clinic, but rather they would reconsider the issue on the basis that space would be rented to the department to render services to patients. Repeated discussions were held concerning the value of the rental, without decision, by the end of December, 1966.

In Union County, negotiations proceeded along another vein. There, it was desired that the services be centered in the health department. A survey of the health department building indicated that sufficient space for a small chest clinic was available. Accordingly, a plan for the development of such a clinic was worked out together with an estimate of expenditures necessary to modify the existing space. The modification of the space has proceeded together with the preparation and installation of equipment for chest clinic services to provide for detection, diagnosis, and treatment services in the area. The clinic will serve Union City, West New York, North Bergen, and Gutenberg. The clinic will provide services in the afternoon and one evening clinic per month. It will be staffed by part-time personnel who will be recruited from the surrounding area.

The project, in joint agreement with the Jersey City Health Department, has accepted the responsibility of the training and supervision of field representatives who are employed by the Jersey City Health Department. The

activities of training and supervision include instruction relative to the nature and scope of tuberculosis in Jersey City, methods of contact interviewing and investigation, referral and the follow-up of patients. During the training program, members of the staff also attended a symposium held at the New Jersey State Hospital at Glen Gardner. The symposium served as a review for the old employees and also assisted in instructing the newly employed personnel.

Certain administrative decisions were reached to increase the efficiency of contact investigation in Jersey City and Hudson County. Evidence indicated that non-household, non-related tuberculosis contacts are not productive of new cases of tuberculosis. Since the contact register was carrying a large number of contacts in this category, plans were made to withdraw these contacts from the file.

It was necessary also to assure that new cases of active tuberculosis were promptly interviewed. Several solutions to this problem were proposed to the medical director of the B.S. Pollak Hospital. He desired that hospital personnel conduct the tuberculosis contact interview on a continuing basis and provide the information directly to the New Jersey State Department of Health and the Hudson County Tuberculosis Project. This function has been carried out by the Hudson County Tuberculosis Clinic in a satisfactory manner since October, 1966.

Abstract of the Contact Register Report for this County

The following presents information concerning the status of tuberculosis patients on the Case Register in Hudson County as of the 31st of December, 1966. It is important to note that throughout 1966, between 240 and 250 patients were hospitalized continuously. The number of non-hospitalized tuberculosis patients was approximately 1,400 and the number of active patients varied greatly from 63 to 126. However, there has been a corresponding increase in the diagnosis of quiescent tuberculosis that must be examined in the future with increasing intensity. Of the patients with active tuberculosis at home, 88.9 percent received medical examinations within the scheduled period of time. Eighty-one percent were studied for bacteriological status within the past six months, and 74.6 percent were recorded as having received drugs within the three-month period ending December 31, 1966. In essence, the tuberculosis control activity in Hudson County is slowly approaching the standards of performance established by the Tuberculosis Council of New Jersey several years ago.

Throughout the year, the Patient Service Coordinator in Hudson County has assisted patients and their families with social and economic problems that have resulted from tuberculosis. All newly reported active cases or their families, as well as known cases or their families who have a problem caused by tuberculosis, have been referred to the Coordinator.

All persons are first interviewed to ascertain their need and eligibility for assistance. If assistance is warranted, it is the Coordinator's function to direct the client to those agencies which can provide help for his specific needs, to act as liaison between client and agency, and to guide and educate the client for his future independence.

The Coordinator has not only assisted the patients, but also attempted to analyze various facts about these patients. These facts point out the background of patients and offer a basis upon which a program to meet their needs may be developed. Many of the observations about tuberculosis patients give information which are important to all engaged in tuberculosis control, the physicians, the nurses, the health educators, the social workers, and the epidemiologists.

Approximately 90 percent of those assisted in the quarter ending March 31, 1966 may be designated among the lower income groups. Twenty-six were receiving local or county welfare, 17 were receiving social security benefits as their only source of income, one was being supported by a charitable organization, two were receiving veterans' pensions as an only source of income and one was a vagrant with no source of income.

None had graduated from high school and only five attended school beyond the eighth grade. Twenty persons saw financial need to be their major problem. Upon investigation of 18 cases, it was determined that tuberculosis had aggravated a pre-existing financial dilemma.

An ignorance of the services and agencies available was common to all 53 persons assisted.

Of the 64 persons assisted, 17 in the quarter ending June 30, 1966 had attended school beyond the eighth grade. Four were graduated from high school. This level of educational attainment is reflected in the patients' employment: one barber, one mason, and one florist. The remaining patients were unskilled or semi-skilled.

The median income of families of tuberculosis patients, prior to the onset of illness, was approximately $3,000 a year. The sole income for three families, prior to the onset of tuberculosis, was public assistance.

Two-thirds of the unrelated individuals (widows, bachelors, older people living alone), earn under $3,000 a year and 42.9 percent earned less than $1,000 a year prior to the onset of illness.

In the quarter ending September 30, 1966, there appears to be a prevailing inclination toward the delayed manifestation of social problems among the tuberculous. Of the total 24 cases closed this quarter, three or 12.5 percent needed social assistance when they first discovered they had tuberculosis; 21 or 87.5 percent needed social assistance some time after the onset of the disease.

Personal savings and temporary disability insurance provide finances for the initial months of illness; but when the illness extends beyond six months, additional financial help is needed.

Patients identify problems in terms of their immediacy and their materiality. Lack of finances is a more frequently stated problem than is the lack of education or job training.

In the quarter ending December 31, 1966, respondents were hard to locate; only 55 percent have a telephone, the mobility rate is high, and housing units often have no designation or name.

Respondents frequently tailor responses to authority. Alcoholics are less inclined to admit their condition because it is not sanctioned by society. Facts are distorted unconsciously. Six or 11.5 percent of cases closed this period had discrepancies in marital status when all records were compared.

Three, or six percent, of cases had Spanish as their mother tongue. Difficulty arises in obtaining exact information about dates employed.

Passaic Project Report

Late in 1965, the New Jersey State Department of Health provided the Freeholders in Passaic County information relative to the responsibility and authority of boards of freeholders in regard to community tuberculosis control activities. In addition, the freeholders were also provided with information concerning the appointment of a tuberculosis coordinator for the county. Subsequently, the Board of Chosen Freeholders advised that William L. Weintraub, M.D. had been appointed Passaic County Director for Tuberculosis Control. With this appointment, basic stability was provided to the Passaic County Project. In the early months of the year, arrangements were completed for clinic services so that by June 30, Passaic County residents had available to them complete, comprehensive, out-patient clinic services, including x-ray, nebulization, bacteriological and physical examination, medication, tuberculin testing, medical and nursing services in three locations: in the

Passaic General Hospital, at the Paterson Health Department, and the Wayne Health Center.

The Preakness Hospital under the County Board of Chosen Freeholders continued to supply supplementary out-patient services as required. These services included blood studies for all clinics, nebulization and x-ray for the Clifton Clinic which does not have the services locally.

Clinic services were provided in the evening to accommodate those persons unable to attend the daily sessions. The Project staff provided for services at all clinic sessions; local boards of health participated by providing nursing services. Health officers, private physicians and other agencies have been most cooperative throughout the year. As the services became better understood, individual participation by the professionals and patients increased.

In August, 1966, the United States Public Health Service assigned a physician to work with the Tuberculosis Project in Passaic County. This physician has worked primarily in the area of Paterson but has assisted also in the outlying clinics. His service has been effective and has served a great need because local physicians to man the clinics are extremely scarce.

Progress achieved under this project may be measured against the basic standards of performance which were designed by the Tuberculosis Council of New Jersey a number of years ago. Ninety-seven percent of tuberculin reactors are being x-rayed within two months of the end of a tuberculin survey, compared to a standard of 90 percent. Ninety-four percent of the known active cases are either in hospitals or on drug therapy. This in relationship to the standard of 90 percent. Ninety-six and one-half percent of active cases at home have had sputum examinations within six months; this in comparison to a standard of 80 percent. Ninety-four percent of non-hospitalized active tuberculosis patients are being seen on time for their re-examinations. These percentages serve to indicate the activity and progress made during 1966. Improvement to some degree has been realized in nearly every area. Services to the active cases have improved and have proved to be highly satisfactory.

Every active case is under medical supervision and services have been pressed vigorously in the area of contact investigation. Contact examination is being speeded up, particularly in the congested areas of the county. In this most important area, performance at the present time is only about 50 percent. While the contacts seem to pose the most difficult problem, the examination of this group proves fruitful and worthwhile but is slow moving. A great deal more effort must be expended to reach each contact. In the last quarter, out of 1,132 contacts, 481 were not reached or persuaded to be tested. However, 399 contacts were examined with the discovery of five new active

cases of tuberculosis. This means obviously that among those persons not examined there is a high expectancy that additional cases of tuberculosis will be discovered.

Throughout the year, consultation and in-service training sessions have been held with the nursing agencies with the primary purpose of increasing their understanding and interest in tuberculosis control. Conferences held with nursing agencies have included the following types of agenda:

A review of currently administratively active cases.

Improvements in contact follow-up.

Follow-up of clinic patients in the home with considerable emphasis placed upon tuberculin testing in the schools. Many of the nurses, not only have tested their school personnel and students, but have developed skill in the application of the Mantoux test. While this is not universal, nevertheless it indicates decided improvement over the status of one year ago. Tuberculin testing for special groups has moved forward.

In the head-start program, both teachers and children were tuberculin tested. Among other agencies and groups involved are the child health conferences, nursing homes, summer playground employees, and business and occupation groups who have been in contact with cases of tuberculosis. An estimate of the workload is presented in the following table covering 12 months of activity. These activities have increased decidedly since the beginning of this project.

Table 14. Summary of Passaic Tuberculosis Project Activities, 1966

Clinic Activities	
Visits to clinics	5,148
X-ray taken	3,824
Tuberculin tests done	3,400
Other laboratory tests	300
Nebulized specimens	1,742
Epidemiologist Activities	
Number of persons referred	823
New for this period	990
Closed for this period	991
Service completed	794
Referred to others	20
Moved, died	103
Unable to locate	105
Others	109
Continued to next month	822

Nurses Activities

Number of persons referred	4,018
New for this period	3,728
Closed for this period	4,455
Service completed	4,119
Referred to others	951
Moved, died	162
Unable to locate	89
Others	182
Continued to next month	3,061
Office visits	883
Conferences in behalf of patients	621
Conferences with physician or nurse	618
Services	1,798
Conferences with other persons or agencies	311

Union County Project

Throughout the early months of 1966, consultation and evaluation visits were conducted with agencies involved in community tuberculosis control in Union County. These visits sought to gain further information upon which to justify the development and execution of a federal project grant for assistance in community tuberculosis control. Throughout this period, there were discussions relative to the closing of the tuberculosis services at the John E. Runnells Hospital for Chest Diseases. These discussions placed emphasis upon the continuing need for community tuberculosis control activities.

In the later part of the spring, a meeting was held at the John E. Runnells Hospital to discuss the tuberculosis case register, the tuberculosis contact register, and to clarify many points of misunderstanding which existed among health officers, nurse directors, physicians, and case register personnel in Union County. This meeting brought to attention a wide variety of problems that required solution since some involved major points of administration. It was decided that a second meeting should be held in the fall to clarify the administrative detail.

In July, the Department of Institutions and Agencies advised the Union County Board of Chosen Freeholders that future new or suspected cases of tuberculosis could be referred to the State Sanatorium at Glen Gardner for care. This immediately increased the importance of a clear definition of administrative activities and professional functions associated with the community control of tuberculosis.

In September and October, meetings were held with the health officers and community agencies for the specific purpose of clarifying activities in tuberculosis control. It resulted in the assignment of two personnel to Union

County to work full-time in consultation and coordination related to tuberculosis control activities.

One of the major areas of misunderstanding involved the follow-up of tuberculin reactors and diagnostic services applied to the associates of tuberculin reactors in the first grade. Joint action involving the State Department of Health, the County Superintendent of Schools, and health officers resulted in a clarification of this activity. As it stands, tuberculin reactive first grade students are referred to the local health officers and the families of these children are subject to medical examination to determine their freedom from active tuberculosis. The search for source cases among families having tuberculin reactive first grade children will be increased.

On the basis of studies conducted in late November and December, a major budget for community tuberculosis control services was presented to the Union County Board of Chosen Freeholders. This budget was worked out cooperatively with the Union County Tuberculosis and Health Association, the St. Elizabeth, Muhlenberg, and Rahway Hospitals and was discussed with the health officers in Union County. It is anticipated that a total of over 7,000 clinic visits will be needed to serve satisfactorily the out-patient requirements of Union County. It is anticipated that the St. Elizabeth Hospital will provide 3,500 of these and Rahway and Muhlenberg Hospitals will provide 1,750 each.

The need for additional community services to maintain medical supervision of patients was clearly brought out. At the end of September, 1966, there were 42 patients with active tuberculosis who were delinquent for medical and laboratory examination. This number was essentially one percent of the total cases of non-hospitalized active tuberculosis in the county and represents very poor management and follow-up. Further, 311 of 744 cases of inactive tuberculosis were overdue for medical examination. Since the major safeguard against breakdown of cases of inactive tuberculosis is constant medical supervision, a level of 58 percent efficiency is hardly protective of the public health.

The Contact Register Report for September 30th revealed that 399 of 688 contacts have not been examined on schedule. The efficiency of this operation in the county appeared to be approximately 42 percent. In view of the fact that the accepted average in New Jersey is five new cases of tuberculosis per 1,000 contacts examined, this level of efficiency had to be improved.

At the end of December, plans for submission of a modified federal project request were prepared and submitted to the federal government for funding.

Newark

To the present time, the people of New Jersey have received service directed at the alleviation of the state's very significant tuberculosis problem through the joint efforts of the State Deparment of Health and the several local health departments throughout the state. These efforts, however, have followed different patterns in each locality and have met with varying degrees of success. The City of Newark, which reported 213 new cases of active tuberculosis in calendar year 1966, has represented one of the most striking examples of this situation.

Recognizing the need to bring about major changes in the Newark program, a total re-organization was undertaken months ago with the intention of providing the City of Newark with a modern chest disease program. It is anticipated that this program will further serve as a model in the development of a program for the entire state.

The design and institution of this "Total Program to Ameliorate the Problem of Tuberculosis in the City of Newark, New Jersey," and the consequent re-organization of the Newark Bureau of Chest Diseases, is presently in the transition phase. In January, 1967, the dual operation represented by the Newark program and the Federal Project Staff has merged into one organization under the Bureau of Chest Disease, Newark Division of Health. This merger has been accomplished physically as well as on paper. Staffing has been virtually completed with the realignment of personnel to staff the operating sections set forth thus far on the organizational charts and in the formal program.

The re-organization and the concomitant reassignment of function and responsibility will eventually have a sweeping effect on the organizational tone of the program in Newark. Perhaps the one most significant result, in terms of personnel alignment, brought about by these changes will be the revision of the nursing role, both in the clinic and out in the community. Whereas in the past, the nursing staff of five clinic nurses and 19 public health nurses has borne the burden of many administrative duties, the re-organization of the nursing service and institution of a formal nursing program will relieve the nurses of the onus of administrative duties, freeing them to function full time as professional staff.

Two staffing concepts, new to the Bureau of Chest Diseases, have been introduced. An administrative assistant, responsible to the Newark Health Officer for carrying out the administrative implementation of the program, has been included in the organizational structure. The Public Health Advisor

filling this position will act as an assistant to the Health Officer and the Director of the Chest Clinic by acting for them administratively in their absence and performing such delegated duties as required. He will act as administrative liaison between those offices. The second new concept in staffing which has been introduced is the appointment of a Clinic Manager. This administrative individual is directly responsible to the Director of the Chest Clinic and acts as the clearing point for all administrative channels to the Director. The Clinic Manager acts in an overall supervisory capacity for the total operation of the Chest Clinic. Both of these positions are obviously to play key roles in the administrative realignment of the program in Newark.

Basic to the development of a formal program which is fully operational has been the revision of the record system in Newark. This has meant the design and installation of a completely new clinical and radiologic record system. The implementation of such a system has required the tedious, piece-by-piece review of approximately 300,000 patient records and their adaptation to the new system. This alone has taken months to accomplish. However, the result will more than justify the time and labor. Patients on the current case-load will now have sophisticated and dignified clinical charts. Further, the new record system includes a service register which will provide a modern and efficient means of maintaining complete and immediate surveillance of patients and other persons requiring services.

Much remains to be done to complete the development and institution of a modern program in Newark. Until this monumental task is accomplished, the program remains inefficient and only moderately effective at best. This fact is borne out by the data which follow.

Tuberculosis Case Register

On December 31, 1966, the Essex County case register data for the City of Newark reflected a total of 2,461 cases of tuberculosis. There were 2,090 non-hospitalized cases, of which 1,861 were recorded with pulmonary disease. Of these patients in the community, 76 were diagnosed as having active tuberculosis—seven primary and 69 reinfection cases. Six months previously, the case register indicated that there were 101 patients at home with active tuberculosis.

Active Cases—Examination Status

The examination currency status of non-hospitalized patients with active tuberculosis in Newark as of December 31, 1966, and compared with corresponding data for June 30, 1966, is indicated in the following table.

Table 15. Examination Status of Non-Hospitalized Cases of Active Tuberculosis
Newark—December 31, 1966 and June 30, 1966

Examination Status	*December 31, 1966 Percent*	*June 30, 1966 Percent*
Total	100.0	100.0
Not Due for Examination	35.5	33.8
Overdue 0 to 6 Months	15.9	18.9
Overdue 6 to 12 Months	1.3	4.1
Overdue 12 Months or More	2.6	2.7
No Examination Date Assigned	44.7	40.5

The low percentage of patients who are receiving examinations on time remains consistent with similar figures reported from Newark for previous periods. These data offer support to the conclusion that the modernization of the program in Newark is essential.

Active Cases—Bacteriologic Status

Standard F, set down in "Goals and Standards for the Control of Tuberculosis in New Jersey," provides that "at least 80 percent of all active cases at home should have had a bacteriological examination and report within the preceding six months."

Only 35 percent of non-hospitalized patients with active tuberculosis are receiving medical examination on schedule.

However, 87 percent have been studied bacteriologically within a six months period. A direct relationship exists between examination status and drug status. Only 45 percent of patients have a record of medication within a three month period.

Tuberculosis Contact Register

Newark is at present the only city in New Jersey for which a separate city contact register is maintained. The remaining eight contact registers in the state provide service at the county level. As of June 30, 1966, there were 1,681 contacts remaining on the register. During the six month period which followed, 426 contacts were added to the register, resulting in a total of 2,107 contacts potentially available for examination. Of these, 480 contacts were removed during that period from July 1, 1966 to December 31, 1966 for reasons other than examination leaving 1,627 contacts. Six hundred forty-one contacts were examined of which 222 were removed from the register as a result of examination.

Data indicating the results of contact examination in Newark have fluctuated greatly. The contact register indicated on March 31, 1966 that 262 contacts had been examined during the preceding quarter, resulting in the identification of 13 new active cases of tuberculosis, for a rate of 49.6 new active cases per 1,000 contacts examined.

Vaccination Assistance Program

The primary focus in the Vaccination Assistance Program in the calendar year 1966 has been in the area of community immunization programming aimed at the eradication of measles as a source of morbidity and mortality in New Jersey.

There are approximately 1.2 million children in the state aged one through nine years. An estimated 300,000 of these children, on the basis of completed surveys and other existing data, are judged to be susceptible to measles.

A trend toward school based immunization programs aimed at locating and immunizing the susceptible child against measles was developed during 1966. Most commonly, the school physician and school nurse conducted the actual clinic sessions. The responsibility for planning and implementing such programs has generally been assumed by the local health officer. Occasionally, the above format was modified to include preschool children either in conjunction with the school children in the school setting, or more commonly, the preschool children were provided for through a special program held on a Saturday or Sunday utilizing voluntary (medical and lay) help.

Two measles programs were held during the year in large communities in epidemic control situations (Paterson, Camden) where a "saturation" approach was used to reach and motivate persons in the poverty-impacted areas of a city. In these situations, a variety of community organization approcahes were utilized, including involvement of local Office of Economic Opportunity people, use of volunteer help from local organizations, a bilingual mechanical answering device which carried a pre-recorded measles message installed on telephones located in the local health department, sound equipment and door to door canvassing. Motivation surveys were conducted during clinic periods. Eighty-two percent of the parents of 1,200 immunization clinic participants in one large program apparently were reached and successfully motivated through the medium of personal "face to face" contact by a health professional or volunteer worker.

Following a letter from the State Commissioner of Health to health officers regarding measles surveillance, project personnel personally visited

all full-time licensed health officers in the state during the year to acquaint them with project objectives and to familiarize them with Department resources.

Meetings were held with 21 county school superintendents to encourage the reporting of measles morbidity by the school system. In areas covered by a licensed health officer, the schools reported directly to the health officer. In areas not covered by a health officer, schools reported directly to the Vaccination Program field staff. This approach provided access to previously unreported morbidity. It also enabled division and program personnel to work more effectively with local health and education personnel to plan programs centered around "index" cases of reported measles morbidity in the school environment.

Table 1. MEASLES PROGRAMS CONDUCTED 1966 BY DISTRICT

Community	*Total Number Immunized*	*District Total*
Central District		
Madison Twp.	632	
New Gretna-Burlington Co.	47	
Trenton	1,645	
Woodbridge	1,092	
		3,416
Metro District		
Jersey City	3,107	
Montclair	279	
New Providence	500	
Newark	10,200	
North West Bergen	325	
Passaic	180	
Paterson	6,962	
		21,553
Northern District		
Belvidere	150	
Boonton	36	
Morristown	673	
Victory Gardens	99	
		958
Southern District		
Alloway Township	150	
Atlantic City	880	
Camden City	600	
Camden County	1,200	
Clayton	510	
Deptford Twp.	1,200	
Elmer	26	

Gibbsboro	174	
Glassboro	800	
Hammonton	324	
Harrison Twp.	140	
Logan Twp.	101	
Mantua Twp.	498	
Millville	318	
National Park	211	
Paulsboro	265	
Pine Hill	176	
Pitman	407	
Pittsgrove	68	
Runnemede	370	
Salem	798	
Upper Pittsgrove	83	
Wildwood	268	
Williamstown	340	
Winslow Twp.	600	
Woodbury	279	
Woodbury Heights	390	
		11,176
State Total		37,103

In summary, the Department distributed 155,000 doses of measles vaccine in 1966. Of this total, program staff worked closely with local personnel in 42 situations involving the immunization of 37,103 children.

Poliomyelitis

There were no cases of poliomyelitis reported during calendar 1966. The momentum generated by the "Sabin on Sunday" oral poliomyelitic programs is apparently continuing as evidenced by the fact that the Department distributed 333,950 of trivalent poliomyelitis vaccine during the reporting period.

Tetanus

Three tetanus cases (including two deaths) were reported to the Department in 1966.

Fifty thousand doses of diphtheria, tetanus (pediatric vaccine); 80,000 doses of diphtheria, tetanus (adult vaccine); and 375,000 doses of DPT vaccine were distributed during the reporting period.

During June, a tetanus immunization program was conducted in cooperation with the Bergen County Osteopathic Society at a health fair held at the Garden State Shopping Plaza in Paramus, New Jersey. Two thousand three hundred and three tetanus immunizations were given.

The Morris County Regional Health Council conducted a one-day county-wide tetanus immunization program in October, 1966. A local industry donated $4,000 to help defray the cost of the program. Thirty clinic sites were established and manned by volunteer help. Twenty-six thousand six hundred and three persons were immunized. The following table reflects the response to the program:

Table 2. Persons Immunized Against Tetanus, by Age in Morris County One-Day Program

Age	*Male*	*Female*	*Total*
Under 1 year	20	23	43
1-4	790	738	1,528
5-9	2,561	2,576	5,137
10-14	2,423	2,702	5,125
15-19	874	1,118	1,992
20-29	622	1,118	1,740
30-39	1,996	2,707	4,703
40 years and over	3,081	3,254	6,335
	12,367	14,236	26,603

Program Administration

A newborn infant maintenance system utilizing a personalized "plastic card" immunization record was endorsed by the East Orange Board of Health and the Essex County Medical Society. This is viewed as a pilot demonstration project for this type of activity in the State of New Jersey.

Venereal Disease Control Program

I. *Morbidity*

A. *Syphilis*

Following a trend that began in 1962, the reported incidence of infectious syphilis continued to decline during 1966. For the year there were 704 cases of primary and secondary syphilis among civilians and 31 cases of primary and secondary syphilis among military personnel reported to this Department. By comparison, during 1965 there were 944 cases of infectious syphilis reported among civilians and 41 cases from among military personnel. In 1966, the 25.4 percent decline in reported civilian cases of infectious syphilis represented the largest single year decline since the onset of the trend.

Civilian early latent syphilis morbidity (recently infectious syphilis) declined 34.5 percent from 798 cases in 1965 to 522 cases in 1966. In the same category, military morbidity decreased from nine to three cases.

The total number of syphilis cases reported during 1966 was 3,731 cases. This is the lowest reported morbidity since 1946.

B. *Gonorrhea*

There were 4,327 cases of gonorrhea among civilians reported to the New Jersey State Department of Health in 1966. An additional 627 cases were reported among military personnel in New Jersey. In 1965, the totals were civilian 3,938 and military 616.

C. *Trends*

The major emphasis of the Venereal Disease Control Program was on the practical eradication of syphilis.

The downward trend of syphilis morbidity is a reflection of the stress being placed upon this aspect of the Venereal Disease Control Program. Also of interest is the continuation of a second trend in which the number of infectious syphilis cases exceeded the number of early latent syphilis cases. Maintaining this situation and a downward morbidity trend are essential if the practical eradication of syphilis is to become a reality.

An examination of the gonorrhea morbidity for the last three years shows a steadily increasing trend. Shortage of funds, personnel, and diagnostic problems precluded the establishment of an effective gonorrhea control program. Furthermore, there is evidence that suggests that underreporting of gonorrhea is widespread and that the actual incidence of the disease may be rising much faster.

II. *Program Activity*

A. *Infectious Syphilis Epidemiology*

The keys to effective epidemiology of infectious syphilis are speed, thoroughness and good medical care, including prophylactic treatment. Given an index case, it is known that there exists a source and potentially an infinite number of spread cases.

Thoroughness is essential if the maximum number of contacts related to a particular case are to be identified, located, and examined.

The longer it takes to bring the potentially infected individual to medical examination and treatment, the greater the opportunity for spreading the infection, thus the necessity for speed. For those who are examined and at that time found not infected, it is essential that prophylactic treatment be administered. The administration of prophylactic treatment to a not infected contact to infectious syphilis negates the possibility that the individual may be incubating the disease and at some future time become symptomatic thus becoming a source of further spread.

The following are indices of the quantity and quality of the epidemiology performed:

a. Interviewing: In calendar 1966, of 704 cases of infectious syphilis reported 686 or 97.5 percent of the cases were interviewed. From these cases 1,941 contacts, 816 suspects and 411 associates were identified and assigned for investigative follow-up.

b. Re-interviewing: 668 cases or 97.4 percent of the cases interviewed were re-interviewed one or more times.

c. Investigation: During the course of follow-up around the 704 cases of infectious syphilis, 3,168 epidemiologic investigations were performed. In 2,438 instances the individual concerned was located and brought to medical attention. This investigative activity resulted in 183 new cases of infectious syphilis and 111 cases of early latent syphilis being brought to treatment.

B. *Early Latent Syphilis Epidemiology*

Epidemiology of varied intensity was also performed around 522 cases of early latent syphilis. These are latent syphilis cases for which the infection is estimated to be of less than four years duration. Three hundred and forty-seven of these cases are believed to have had a duration of infection not exceeding one year. For these cases, the epidemiologic effort was similar to that applied to infectious syphilis cases. For those early latent cases where the duration of infection exceeded one year, the intensity of the epidemiologic effort varied and was dependent upon personnel being available and the potential for yield from the individual case.

The results of epidemiology performed on early latent syphilis cases of less than one year's duration are summarized as follows:

a. Interviewing: Of 347 cases of early latent syphilis less than one year's duration reported, 333 or 96 percent were interviewed.

b. Re-interviewing: Re-interviewing was performed on 318 of the 333 cases interviewed for a re-interview percentage of 95.5 percent.

c. Investigation: Epidemiologic investigation centering around the 333 cases of early latent syphilis resulted in the investigation of 931 contacts, 323 suspects and 169 associates. Investigators were able to locate and bring to examination 1,102 of the 1,431 persons investigated. This phase of the epidemiologic activity was responsible for bringing to treatment 50 new cases of primary and secondary syphilis and 68 cases of early latent syphilis.

C. *Epidemiologic Treatment*

Whenever possible, contacts to early syphilis who are negative on initial examination but may be incubating syphilis were prophylactically treated. Seven hundred and seventy of 1,123 not infected contacts did receive epidemiologic treatment. It is conservatively estimated that at least 55 cases of infectious syphilis were aborted through this procedure.

D. *Surveillance of Serologic Reactors*

a. Laboratory Visitation

During 1966, 519 visits were made to laboratories of all classifications that tested or processed specimens submitted for a serologic test for syphilis. The purpose of these visits was to secure base line data on the number of specimens tested, the reactor rate, secure up-to-date information on the services offered by each laboratory, and through an exchange of information promote better cooperation between the State Department of Health and the individual laboratory.

b. Follow-up of Serologic Reactors

Field investigation was performed on 4,674 serologic reactors. This was a very nominal decrease over the preceding year.

A total of 32,439 reactive test specimens was reported to the Venereal Disease Control Program. These were screened to eliminate duplicate reports, reports on known patients and some were used for administrative reasons. The 6,640 reactive reports that were followed were grouped by priority. Highest priority was given to reactors with a high titer, (VDRL 1:8 and above), positive prenatals and persons with suspicious symptoms. All high priority reactors were telephoned to the field to minimize the time lapse needed to secure a disposition. The follow-up of serologic reactors was responsible for bringing to

treatment 174 cases of primary and secondary syphilis, 136 cases of early latent syphilis and 1,152 cases of syphilis in other stages.

E. *Congenital Syphilis*

During 1966, there was a continued emphasis on the elimination of congenital syphilis. For the year, 117 cases of congenital syphilis were reported. However, only six cases were less than one year of age. By comparison, in 1965 there were 182 cases reported and 11 were less than one year of age.

The congenital syphilis program operates on the premise that congenital syphilis can and should be eliminated. The low incidence of congenital syphilis that has been achieved is a testimony to the validity of this contention.

Each woman with a positive serologic test for syphilis during pregnancy, all newborns of syphilitic mothers and newborns of mothers with positive serologies are followed to assure that the child receives adequate evaluation for the possibility of congenital syphilis. All reported congenital syphilis morbidity is also followed.

During 1966, 277 women in gestation or having recently delivered were made available to the congenital syphilis program for follow-up. It is the intent of the program to follow the mother and, after delivery, also the child.

Two hundred and five investigations were closed and 72 babies are still being followed. Of the 205 investigations that were closed, complete follow-up could not be performed on 61 of the babies for the following reasons: moved 40, stillbirths 18, infant deaths three.

Of the 144 investigations that were completed, in 111 instances the mother did receive some prenatal care. However, in only 16 cases did the mother receive prenatal care during the first trimester. An additional 35 mothers received their first prenatal care during the second trimester. The remaining 60 or 59 percent of the mothers were not seen until the third trimester. From the standpoint of aborting congenital syphilis, this is an intolerable situation. From this group of 111, only two cases of congenital syphilis developed.

By contrast, the dispositions of the babies of the 33 mothers who did not receive prenatal care were as follows: four congenital syphilis, two acquired syphilis, and 27 not infected.

As has already been mentioned, complete studies were not done on the 18 stillbirths. However, it was determined that in 15 of these cases, no prenatal care was received. For the other three cases, prenatal care did not begin until the third trimester.

In the case of the three infant deaths, one mother began prenatal care immediately before delivery. The other two mothers received no prenatal care.

In addition to the 18 stillbirths and three infant deaths for which complete follow-up was not possible, two of the six congenital syphilis infants also expired. The mother of one infant received no prenatal care. The mother of the other infant received prenatal care on one occasion during the first trimester. Epidemiologic evidence suggests that the mother was infected sometime after the prenatal visit.

Once under observation, 26 mothers did receive prophylactic treatment thus aborting the possible delivery of a congenital syphilitic infant.

If mothers can be motivated to seek and remain under competent prenatal care, the majority of congenital syphilis cases and syphilis caused stillbirths currently occurring could be prevented.

F. *Physician Visitation*

For three years prior to 1966, a concerted effort was made to visit all physicians in private practice in this state. The major objectives of this program were and still are to acquaint the physician with the Venereal Disease Program and State Health Department policy, to familiarize the physician with the services offered by the Program, enlist physician cooperation in reporting all morbidity (infectious syphilis cases by telephone), and to secure physician cooperation in permitting the performance of epidemiology.

In 1966, there was a decrease in the number of physician visits, from 2,891 in 1965 to 782. The major reason for this decline in activity was a de-emphasis in this aspect of the Program. Since most physicians had been visited, a more selective approach was used. Visits were made to physicians newly entering practice in New Jersey, in response to a request by the physician, and in cases where a particular problem suggested that a visit may be advisable.

G. *Venereal Disease Education*

During 1966, members of this staff participated in 137 venereal disease information and education programs. The total audience was just under 30,000 people. These presentations were made to groups of students, teachers, parents and to professional groups such as nurses and physicians.

Members of this staff participated in one 30-minute TV program and one two hour "open mike" radio show. The television audience was estimated to be 300,000. The radio audience was estimated to be 50,000.

An estimated 200 articles appeared in various periodicals throughout the state. The majority of these articles either covered speaking engagements by Program personnel or discussed information made available via various press releases.

Four venereal disease workshops were held during the year. The purpose of these sessions was to provide health teachers and school nurses with the information and confidence needed to begin teaching a unit on venereal disease. The number of schools engaged in providing some venereal disease education for their students is increasing. And, persons having attended these workshops are among the most vocal exponents of the necessity for venereal disease education in high schools.

Approximately 5,000 pieces of literature and other information on the venereal diseases were distributed to interested persons. In addition, staff members in conjunction with medical societies and other groups helped to man booths at various conventions and meetings. An additional 6,500 pieces of literature were distributed in this way.

Several small industrial concerns cooperated with this Program by distributing venereal disease information to all employees.

In the area of professional education, there was continued activity at the professional schools including the post graduate level. This Department has worked closely with the New Jersey College of Medicine in an effort to improve the training of future physicians. The result has been an increase in the classroom time devoted to venereal disease. Also students are given a greater opportunity to observe clinic procedures. In the area of post graduate education, members of the staff have participated in sessions designed to up-date the knowledge of practicing physicians.

III. *Training*

All new employees participated in an intensive four week orientation course. One week was devoted to a generalized orientation program to the Department and to the area in which the new employee would be working. Two weeks were spent attending a training course on Venereal Disease Interviewing and Contact Investigation. The medical aspects of venereal disease and the theory and background of the syphilis eradication program were also covered during the course. The final week of the orientation program was spent in the field working with a trained epidemiologist.

At the conclusion of the formal training, the new employee progresses to an on-the-job training situation. Under close and continuous supervision, he is assigned a workload the volume of which is increased as the employee demonstrates greater capability.

Venereal Disease Program personnel attended bi-monthly staff meetings. The agendas for these meetings covered not only venereal disease but other subjects of interest in the field of public health.

Table 1. SYPHILIS AND GONORRHEA CASES BY COUNTIES AND MAJOR CITIES NUMBERS AND RATES PER 100,000 ESTIMATED POPULATION NEW JERSEY: 1966

Area	Syphilis						Gonorrhea	
	All Stages		Primary and Secondary		Early Latent			
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
State Total	3,751	54.0	721	10.4	525	7.6	4,954	71.3
Atlantic County	208	115.8	54	30.1	20	11.1	26	14.5
Atlantic City	149	240.7	49	79.1	18	29.1	9	14.5
Bergen County	154	17.3	43	4.8	25	2.8	54	6.1
Burlington County	73	25.4	4	1.4	6	2.1	39	13.5
Camden County	214	46.9	18	3.9	16	3.5	77	16.9
Camden City	162	141.0	15	13.1	13	11.3	49	42.7
Cherry Hill Twp.	3	5.9	1	2.0	....	....	2	4.0
Cape May County	31	58.8	5	9.5	1	1.9	1	1.9
Cumberland County	122	99.6	15	12.3	5	4.1	17	13.9
Essex County	1,152	120.6	233	24.4	157	16.4	2,514	263.3
Bloomfield	18	33.2	....	....	2	3.7	2	3.7
East Orange	69	89.0	8	10.3	9	11.6	80	103.2
Irvington	22	34.7	1	1.6	2	3.2	4	6.3
Newark	933	235.7	211	53.3	134	33.8	2,334	589.5
Gloucester County	62	38.9	4	2.5	2	1.3	8	5.0
Hudson County	448	73.6	96	15.8	125	20.5	233	38.3
Bayonne	20	27.0	1	1.3	6	8.1	1	1.3
Hoboken	32	68.5	5	10.7	7	15.0	7	15.0
Jersey City	314	116.6	82	30.4	101	37.5	212	78.7
Union City	34	64.6	4	7.6	5	9.5	4	7.6
Hunterdon County	15	23.8	1	1.6	1	1.6	1	1.6
Mercer County	271	89.6	67	22.2	46	15.2	471	155.8
Hamilton Twp.	3	3.7	....	....	....	....	3	3.7
Trenton	231	212.5	61	56.1	40	36.8	455	418.5
Middlesex County	170	31.0	20	3.6	16	2.9	125	22.8
Edison Twp.	16	25.8	2	3.2	....	....	4	6.4
Woodbridge Twp.	18	18.2	2	2.0	2	2.0	5	5.1
Monmouth County	150	35.2	25	5.9	30	7.0	76	17.8
Middletown Twp.	2	3.9	....	....	....	....	....	....
Morris County	50	14.6	4	1.2	7	2.0	57	16.7
Parsippany-Troy Hills	3	6.0	....	....	....	....	3	6.0
Ocean County	24	16.0	4	2.7	2	1.3	16	10.6
Passaic County	207	45.7	68	15.0	27	6.0	294	65.0
Clifton	12	14.0	3	3.5	....	....	2	2.3
Passaic City	48	84.4	10	17.6	6	10.6	20	35.2
Paterson	136	91.7	54	36.4	19	12.8	261	176.0
Salem County	67	103.3	1	1.5	3	4.6	11	17.0
Somerset County	40	21.2	5	2.6	4	2.1	14	7.4
Sussex County	8	12.6	....	....	....	....	7	11.0
Union County	213	37.8	30	5.3	24	4.3	274	48.6
Elizabeth	91	76.4	22	18.5	17	14.3	166	139.4
Union Twp.	5	8.9	....	....	....	....	14	25.1
Warren County	15	21.1	1	1.4	1	1.4	10	14.1
State Institutions	32	....	2	....	3	....	2	....
Military Posts	20	....	17	....	3	....	627	....
Job Corps Center	5	....	4	....	1	....	....	....

Note: Rates not computed for State Institutions, Military Posts and Job Corps Center due to lack of

Table 2. VENEREAL DISEASE CASES (INCLUDING MILITARY) BY AGE GROUPS
NUMBERS AND RATES PER 100,000 POPULATION
NEW JERSEY: 1966

Age Group	Total		Syphilis		Gonorrhea		Other Venereal Diseases	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Ages	8,721	125.5	3,751	54.0	4,954	71.3	16	0.2
Under 1	11	7.5	6	4.1	5	3.4	....	....
1- 4	10	1.7	1	0.2	9	1.5	....	....
5- 9	9	1.3	....	....	9	1.3	....	....
10-14	35	5.9	11	1.8	24	4.0	....	....
15-19	1,024	226.6	190	42.1	831	183.9	3	0.7
20-24	2,397	650.6	471	127.8	1,922	521.7	4	1.1
25-44	3,486	177.2	1,505	76.5	1,973	100.3	8	0.4
45-64	1,221	80.6	1,109	73.2	112	7.4	....	....
65+	365	56.5	358	55.4	7	1.1	....	....
Unstated	163	....	100	....	62	..	1	....

Table 3. SYPHILIS CASES (INCLUDING MILITARY) BY AGE GROUPS
NUMBERS AND RATES PER 100,000 POPULATION
NEW JERSEY: 1966

Age Group	Total All Stages		Primary & Secondary		Early Latent		Late Latent		Late		Congenital	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
All Ages	3,751	54.0	721	10.4	525	7.6	2,248	32.3	140	2.0	117	1.7
Under 1	6	4.1	1	0.7	...	..	....	...	...	..	5	3.4
1- 4	1	0.2	...	..	1	0.2	....	...	...	..	...	..
5- 9	..	...	...	0.5	..	..	...	..	...	..	...	..
10-14	11	1.8	6	1.0	2	0.3	1	0.2	...	..	2	0.3
15-19	190	42.1	94	20.8	64	14.2	20	4.4	...	..	12	2.7
20-24	471	127.8	227	61.6	146	39.6	83	22.5	..	..	15	4.1
25-44	1,505	76.5	351	17.8	267	13.6	807	41.0	28	1.4	52	2.6
45-64	1,109	73.2	41	2.7	41	2.7	931	61.4	73	4.8	23	1.5
65+	358	55.4	..	1.9	...	...	324	50.1	34	5.3	...	..
Unstated	100	...	1	...	4	...	82	...	5	..	8	..

Table 4. CIVILIAN CASES OF SYPHILIS BY STAGE AND GONORRHEA
NUMBERS AND RATES PER 100,000 POPULATION
NEW JERSEY: 1947-1966

Year	Population Estimate	Syphilis						Gonorrhea	
		Total Cases		Primary and Secondary		Early Latent			
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
1947	4,435,000	8,735	197.0	1,670	37.7	3,138	70.8	6,449	145.4
1948	4,729,000	8,352	176.6	1,182	25.0	2,978	63.0	4,069	86.0
1949	4,786,000	7,795	162.9	771	16.1	2,511	52.5	4,449	93.0
1950	4,832,000	5,838	120.8	360	7.5	1,768	36.6	3,933	81.4
1951	4,989,000	4,016	80.5	228	4.6	1,125	22.5	3,559	71.3
1952	5,112,000	3,846	75.2	180	3.5	1,029	20.1	3,596	70.3
1953	5,236,000	3,742	71.5	168	3.2	1,005	19.2	3,682	70.3
1954	5,359,000	5,285	98.6	184	3.4	1,175	21.9	3,761	70.2
1955	5,482,000	4,854	88.5	214	3.9	1,095	20.0	4,150	75.7
1956	5,605,000	4,263	76.1	92	1.6	578	10.3	3,828	68.3
1957	5,728,000	5,429	94.8	114	2.0	462	8.1	4,789	83.6
1958	5,851,000	6,055	103.5	170	2.9	638	10.9	5,493	93.9
1959	5,974,000	4,863	81.4	302	5.1	609	10.2	4,646	77.8
1960	6,098,000	5,265	86.3	665	10.9	752	12.3	4,778	78.4
1961	6,221,000	5,170	83.1	864	13.9	721	11.6	4,302	69.2
1962	6,344,000	6,291	99.2	1,191	18.8	864	13.6	3,557	56.1
1963	6,467,000	5,613	86.8	1,177	18.2	756	11.7	3,968	61.4
1964	6,590,000	4,958	75.2	1,140	17.3	930	14.1	3,744	56.8
1965	6,713,000	4,927	73.4	944	14.1	798	11.9	3,938	58.7
1966	6,951,336	3,731	53.7	704	10.1	522	7.5	4,327	62.2

Note: Data for 1947 through 1956 include all New Jersey resident cases plus all nonresident cases diagnosed in New Jersey, but exclude military cases. Data for 1957 to date include New Jersey resident cases only. Included in 1966 figures are cases occurring in the Job Corps Center.

PRIMARY AND SECONDARY SYPHILIS CASES BY SPECIAL AGE GROUPS FOR COUNTIES AND MAJOR CITIES, NEW JERSEY: 1966

Area	Total	Age Group									
		<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Not Stated
State Total	721	1	....	....	6	94	227	351	41	....	1
Atlantic County	54	....	....	....	....	11	15	22	6	....	....
Atlantic City	49	....	....	....	....	11	14	19	5	....	....
Bergen County	43	....	....	....	....	5	11	22	5	....	....
Burlington County	4	....	....	....	....	....	....	4	....	....	....
Camden County	18	....	....	....	....	2	6	10	....	....	....
Camden City	15	....	....	....	....	2	6	7	....	....	....
Cherry Hill Twp.	1	....	....	....	....	....	....	1	....	....	....
Cape May County	5	....	....	....	....	1	2	2	....	....	....
Cumberland County	15	....	....	....	....	3	2	8	2	....	....
Essex County	233	....	....	....	6	31	89	101	6	....	....
Bloomfield	...	....	....	....	....	....	....	....	....	....	....
East Orange	8	....	....	....	....	....	4	4	....	....	....
Irvington	1	....	....	....	....	1	....	....	....	....	....
Newark	211	....	....	....	6	30	79	91	5	....	....
Gloucester County	4	....	....	....	....	....	....	4	....	....	....
Hudson County	96	....	....	....	....	11	28	46	11	....	....
Bayonne	1	....	....	....	....	....	....	1	....	....	....
Hoboken	5	....	....	....	....	....	1	4	....	....	....
Jersey City	82	....	....	....	....	11	26	34	11	....	....
Union City	4	....	....	....	....	....	1	3	....	....	....
Hunterdon County	1	....	....	....	....	....	....	1	....	....	....
Mercer County	67	1	....	....	....	6	22	33	4	....	1
Hamilton Twp.	...	....	....	....	....	....	....	....	....	....	....
Trenton	61	1	....	....	....	4	19	33	3	....	1
Middlesex County	20	....	....	....	....	1	8	11	....	....	....
Edison Twp.	2	....	....	....	....	....	1	1	....	....	....
Woodbridge Twp.	2	....	....	....	....	....	1	1	....	....	....
Monmouth County	25	....	....	....	....	10	7	8	....	....	....
Middletown Twp.	...	....	....	....	....	....	....	....	....	....	....
Morris County	4	....	....	....	....	....	....	3	1	....	....
Parsippany-Troy Hills	...	....	....	....	....	....	....	....	....	....	....
Ocean County	4	....	....	....	....	1	1	2	....	....	....
Passaic County	68	....	....	....	....	4	16	43	5	....	....
Clifton	3	....	....	....	....	....	....	1	2	....	....
Passaic City	10	....	....	....	....	....	4	6	....	....	....
Paterson	54	....	....	....	....	4	12	35	3	....	....
Salem County	1	....	....	....	....	1	....	....	....	....	....
Somerset County	5	....	....	....	....	1	1	3	....	....	....
Sussex County	...	....	....	....	....	....	....	....	....	....	....
Union County	30	....	....	....	....	1	9	20	....	....	....
Elizabeth	22	....	....	....	....	1	8	13	....	....	....
Union Twp.	...	....	....	....	....	....	....	....	....	....	....
Warren County	1	....	....	....	....	....	....	1	....	....	....
State Institutions	2	....	....	....	....	....	....	1	1	....	....
Military Posts	17	....	....	....	....	1	10	6	....	....	....
Job Corps Center	4	....	....	....	....	4	....	....	....	....	....

SYPHILIS CASES BY STAGE OF DISEASE BY COUNTIES AND MAJOR CITIES NEW JERSEY: 1966

Area	Total	Syphilis				
		Primary and Secondary	Early Latent	Late Latent	Late	Congenital
State Total	3,751	721	525	2,248	140	117
Atlantic County	208	53	20	121	11	2
Atlantic City	149	49	18	73	9	....
Bergen County	154	43	25	74	8	4
Burlington County	73	4	6	60	....	3
Camden County	214	18	16	162	8	10
Camden City	162	15	13	122	5	7
Cherry Hill Twp.	3	1	....	2	....	....
Cape May County	31	5	1	22	1	2
Cumberland County	122	15	5	92	7	3
Essex County	1,152	233	157	684	31	47
Bloomfield	18	....	2	11	3	2
East Orange	69	8	9	49	1	2
Irvington	22	1	2	17	1	1
Newark	933	211	134	532	21	35
Gloucester County	62	4	2	53	2	1
Hudson County	448	96	125	195	21	11
Bayonne	20	1	6	13	....	....
Hoboken	32	5	7	19	1	....
Jersey City	314	82	101	113	12	6
Union City	34	4	5	19	4	2
Hunterdon County	15	1	1	12	....	1
Mercer County	271	67	46	139	9	10
Hamilton Twp.	3	....	....	3	....	....
Trenton	231	61	40	115	8	7
Middlesex County	170	20	16	123	8	3
Edison Twp.	16	2	....	13	....	1
Woodbridge Twp.	18	2	2	14	....	....
Monmouth County	150	25	30	85	6	4
Middletown Twp.	2	....	....	2	....	....
Morris County	50	4	7	35	2	2
Parsippany-Troy Hills	3	....	....	3	....	....
Ocean County	24	4	2	15	2	1
Passaic County	207	68	27	103	7	2
Clifton	12	3	....	9	....	....
Passaic City	48	10	6	30	2	....
Paterson	136	54	19	58	4	1
Salem County	67	1	3	62	1	....
Somerset County	40	5	4	26	2	3
Sussex County	8	....	....	6	1	1
Union County	213	30	24	145	8	6
Elizabeth	91	22	17	49	1	2
Union Twp.	5	....	....	4	1	....
Warren County	15	1	1	11	1	1
State Institutions	32	2	3	23	4	....
Military Posts	20	17	3	....	....	....
Job Corps Center	5	4	1	....	....	....

Division of Special Consultation Services

RALPH T. FISHER, M.P.H., *Director*

Programs:

Health Education ..... LILLIAN H. BAJDA, M.P.H.
Program Coordinator

Library ..... ROBERT E. HOAGLAND, M.S.L.S.
Librarian

Nutrition ..... MARGARET P. ZEALAND, M.S.
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Physical Therapy ..... SUSAN B. GLOCKE, B.A., P.T., M.A., M.P.H.
Program Coordinator

Public Health Nursing ..... JOHANNA E. KENNEDY, M A.
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Public Health Social Work ..... ADRIANE V. DUFFY, M.S.
Program Coordinator

Training ..... (Vacancy)

Division of Special Consultation Services

1966 has been a year of basic changes in public health. The designation of the State Department of Health as the State Agency for administration of Title XVIII, Public Law 89-97 (Medicare) was the outstanding manifestation of these changes. Comprehensive State Health Planning, mandated by the Congress in 1966 (Public Law 89-749), will produce further changes in the basic philosophy and concepts of public health.

The Programs of this Division have been heavily involved in the certification of facilities under Medicare, in the development and expansion of home health service agencies, and in the development of certified health service standards for the administration of the State Aid Act. The progress which was made in all of these areas is a direct result of the effective consultation services and working relationships which have been established over the past years. The highlights of these changes and of the accomplishments are detailed in the Program reports which follow.

Health Education Program

Trends and Developments

The demand for health education services has far exceeded the supply of such services.

In the course of the year, all but one of the health education staff received new assignments, one vacant position was filled, one health educator died, and the U. S. Public Health Service health education assignment was terminated.

In addition, eight new local health education positions have been established (two county positions, six municipal positions).

Although there has been concerted effort at recruitment throughout the year, lack of professionally trained qualified staff and the increasing salary competition for such staff by other agencies are serious deterrents in providing the services demanded.

In spite of this, major activities throughout the year reflect accomplishment of health education aspects of Departmental objectives.

Program

Considerable time and health education skill were spent in the promotion and implementation of the State Health Aid Act of 1966, the development of new local health service units, the development of priority and potential for local health educators, functional distribution of workload, and determination of budget needs.

In cooperation with the New Jersey Tuberculosis and Health Association, a project survey to ascertain knowledge and attitudes of non-hospitalized tuberculosis patients was designed, initiated, and completed.

Demonstration of the effectiveness of educational activities in congestive heart failure was successfully completed in the project at St. Peter's Hospital, New Brunswick.

Health education personnel in cooperation with concerned programs planned, staffed or actively participated in the following:

Interstate Migrant Health Conference, Atlantic City

Conference on Medicare, New Jersey Public Health Association, Far Hills

Conference on External Cardiopulmonary Resuscitation, New Brunswick

Annual Convention, New Jersey League for Nursing, Cherry Hill

Conference for Hospital Administrators, re. Nursing Homes, Princeton

Governor's Conference on Natural Beauty, Atlantic City

Teaching Skills and Techniques Course, Northern District, Bedminster

Diabetes Training and Planning Conferences, Metro District, East Orange and Passaic General Hospitals

Third Annual Health Education Workshop on Post Hospital Planning, Mountainside Hospital

Two-day Health Education Seminar, Trenton

In cooperation with the New Jersey State Department of Education and with the concerned programs in the Department, the new Smoking and Health Reference Guide was made available and distributed; assistance was given to the development of the Narcotics Reference Guide; planning was initiated for a Stream Pollution Reference Guide; and assistance was given to the New Jersey Society of School Physicians in the development of an in-service training course on school health.

Assistance was given to other educational institutions: Seminar regarding Disadvantaged at Montclair State College; Triple-track Seminar for Administrators, Montclair State College; planning and devising health education

materials for reaching and motivating the disadvantaged, Montclair State College; and Community Health Resources Seminar for Guidance Counsellors, Seton Hall University.

A supervised field training experience was provided in the Northern District for a master's degree student from the University of Michigan.

Materials

In cooperation with Graphic Arts Program and appropriate Program Coordinators, the following materials were revised and/or prepared:

Exhibits: State Aid, Diabetes

Posters: Immunization, Nutrition

Leaflets, cards, etc.: Health education recruitment
Health Careers Newsletter re. Health Education
Food Stamp Symbol
Maternal and Child Health
Arthritis
Alcoholism
Diabetes
Venereal Disease

All existing exhibit materials were reviewed and plans made for withdrawal or revision of outdated material.

The wide variety of new film material previewed and evaluated is too numerous to list.

Exhibits and/or other materials were supplied for the following meetings or health fairs:

Medical Society of New Jersey
New Jersey League of Municipalities
Annual State P. T. A. Convention
New Jersey League for Nursing
New Jersey Welfare Council
Greater Philadelphia Health Fair

New Jersey Health—Agriculture Library

The second year of operations showed the Library making some headway into the backlog of work while continuing to perform its regular services.

Whereas the first year was a period of organizing and planning, the second was one of increased service to users, an adjustment of certain methods and procedures, and the launching of a cataloging project.

The Library added an impressive quantity of books, pamphlets, and periodicals to its collection during the calendar year. A total of 598 books (396 new books and 202 gift copies) were prepared for circulation. Also processed were 1,113 pamphlets and 35 new subscriptions.

A total of 70 books were withdrawn. The majority of these books were discarded because they were obsolete while the others were transferred to the State Library.

The circulation of books, periodicals, and pamphlets indicates a growing use of the Library. Book circulation reached 442. There was a total of 2,738 periodicals circulated. In September, the Library instituted a new method of group routing of periodicals which reduced the number of individual circulations. (Thus, the total for the year would have been higher without this new system.) In addition, there were 80 pamphlets issued and 181 items charged out on indefinite loan.

The number of books charged out on indefinite loan has decreased slightly, but the total is still high. It is hoped that this figure will continue to drop so that the Library can become a more effective information center. The Library will not be able to satisfy its users if books of quality and specialized information are scattered in many different offices.

Although a fully functioning reference information service cannot be set up until the collection is completely cataloged, 313 reference questions were handled during 1966, giving an average of 26 per month. Most of these questions were answered by consulting standard works in the reference collection. The answers to others were found either through the texts in the circulating collection, periodicals or documents from the information file.

The Library borrowed 163 journal articles or photocopies in lieu of journal articles from cooperating libraries. Most of these items were obtained within two weeks of the date of request.

A total of 194 volumes were bound of which 189 were bound periodicals and five were books. The Library inherited a great number of incomplete volumes of journals but was able to obtain the missing issues for many of them from the Medical Library Exchange.

The Library handled 50 photocopy requests during the year, there being an average of five pages per request.

Late in 1965, it became evident that the size of the Library staff was inadequate to handle the steadily increasing workload. A request for a clerk typist and professional cataloger was submitted in January, but unfortunately there were no funds for these positions. Miss Rebecca Schlam of the State Library suggested we employ a college student under the Work-Study Program, and a student from Trenton State College was hired for this purpose in September. Since this date, the Library has cataloged 179 pamphlets, 40 proceedings, and annual reports and 254 books.

The clerk-stenographer position was vacated twice during the year which affected the internal operations as well as the quality of service. As a result of the turnover, the Librarian met several times with Miss Schlam to discuss possible ways of simplifying library operations. To work within the limits of a two-man staff, it was decided to sacrifice circulation control of periodicals and give them group routing. Although there are a number of drawbacks to this system, it has proved to be less time consuming than routing items to one person at a time. It was also suggested that our answer to the problem of cataloging of books was to seek the assistance of college students under the Work-Study Plan as referred to above.

In order to deepen his knowledge of medical bibliography and to become better acquainted with reference tools and resources in the field of health sciences, the Librarian took and completed a five-month course in medical librarianship at the Drexel Institute of Technology in Philadelphia.

A list of duplicate and unwanted periodicals was prepared for the Medical Library Exchange by high school students during the summer. The list was sent to the Exchange headquarters in the fall and was then published in the December list. Medical librarians from the United States, South America, Europe, the Middle East, and Japan sent requests to us and 1,500 items were mailed out to these libraries.

Seasonal assistant also typed book cards for the entire collection of circulating books.

The first step in the process of cataloging of books in office collections was undertaken during the summer. With the aid of high school students, the Library ordered Library of Congress printed catalog cards for books in the Divisions of Special Consultation Services and Local Health Services.

The Librarian met with Mr. Stuart Anderson from the Rehabilitation Commission and offered him suggestions and recommendations on how to set up a special library. Mr. Anderson was later appointed as the librarian for the Department of Labor and Industry.

A meeting of State Department librarians was held in November to discuss areas of cooperation. The Department librarians voted for a cataloging project which would help to establish a union catalog at the State Library.

The medical librarians in the Trenton area met at the New Jersey Health—Agriculture Library in December to discuss possible areas of cooperation. It was suggested and agreed upon that a union list of serials of medical libraries in the Trenton area should be prepared. The union list, which is to be based on the one used by Philadelphia medical libraries, should prove to be a great benefit to each library in borrowing periodicals from one another.

Two book lists were published and distributed to the various divisions in the Departments of Health and Agriculture, the State Library, and surrounding medical libraries. These book lists were arranged by subject and gave bibliographical descriptions of recent acquisitions. Also published in 1966 was a pocket-size brochure describing the circulation rules of the Library.

Nutrition Program

The enactment of federal and state health legislation during 1966 has given new urgency to the development and expansion of nutrition and dietary services at all levels. Strengthening dietary services through in-service training and assisting hospital and nursing home administrators in recruiting qualified personnel to meet the federal standards for certification under Medicare have been challenging frontiers for the Nutrition Program.

Among the highlights for 1966 were the following:

1. The State Consultant was a speaker and resource person at a five-day workshop for full-time health officers on the "Role of the Health Department in Community Institutions."
2. All Nutrition Program personnel had an opportunity to participate in the evaluation of dietary departments of hospitals and extended care facilities.
3. On October 1, 1966, a well-qualified dietitian was employed by the Office of Health Facilities Certification as a member of the certifying health team.
4. The State Consultant was coordinator for a four-day resident workshop on the "Role of Nutritionists and Dietitians in Medicare" offered by Columbia University School of Public Health and Administrative Medicine and sponsored by the New Jersey Dietetic Association, New

Jersey Hospital Association, and the New Jersey State Department of Health.

5. Two county and six local health departments specified nutrition as a certified health service under the State Health Aid Act.
6. Jersey City was the first city in New Jersey to hire a full-time Public Health Nutrition Consultant.
7. On June 1, Mercer County became the first county in New Jersey to participate in the Food Stamp Program funded by the federal government, thus increasing the food purchasing power of low-income households and improving the dietary adequacy of such families.
8. Attention has been focused on the need for trained food service personnel at all levels and in various institutions throughout the state.

The Nutrition Program staff has endeavored to develop a well-rounded nutrition program both on state and District level by consulting with and assisting other health department programs to plan the nutrition components of their programs. All Nutrition Program personnel have worked with other state and local departments such as Education, Welfare, Agriculture, and professional organizations.

Maternal and Child Health and Crippled Children

Nutritionists are becoming increasingly aware of the problems of genetics because of the evidence that genetic factors are responsible for the development of many forms of disease that occur in man due to inborn errors of metabolism. Dietary treatment is effective in some of the inherited diseases of man such as diseases of amino acid metabolism, and in carbohydrate and fat metabolism. The State Consultant attended a national conference for Public Health Nutritionists and Dietitians on "Nutrition and the Inherited Diseases of Man as Related to Public Health" at the University of Minnesota in May. Information on the dietary treatment of inherited diseases of man has been included in the Revised New Jersey State Diet Manual.

A demonstration project of nutrition education was conducted in an elementary school in Warren County. Because of the predominance of low-income families, the school obtained special funds to purchase kitchen equipment and to provide a free school lunch for all students. The District Consultant in Public Health Nutrition, Northern State Health District did a food intake survey showing the need for supplementing the home diet. The County Extension Home Economist cooperated with the Nutrition Consultant in a nutrition project for seventh and eighth grade girls and their mothers.

The former Diet Counselor for the Passaic Heart Association was employed as the full-time nutritionist for the Newark Maternal and Infant Care Project July 1 and attended a Nutrition Conference for the Maternal and Infant Care Project Nutritionists in Kansas City in October.

Chronic Illness Control

Diet Counseling Services

The Nutrition Program has continued to promote and expand the Diet Counseling Services in the 11 counties where they have been established. In cooperation with the Division of Chronic Illness Control, the Diet Counseling Service in Passaic County participated in the Diabetes Screening Program. Diet Counseling Service in Middlesex County participated in the Special Heart Project at St. Peter's Hospital. The Camden County Service has continued to work with the Stroke Projects. With the approval of the component County Medical Societies and the New Jersey Dietetic Association, four Diet Counseling Services offered group sessions for weight control. Diet Counselors have also provided services for prenatal patients. In Morris County, the diet counselor was able to serve the family of a child with leucine—induced by poglycemia and another with cystic fibrosis. This type of specialized consultation is not often available in small communities. To assist small hospitals and extended care facilities a number of Diet Counseling Services have contracts with small institutions and provide professional dietary consultation on a part-time basis as required. The need for nutrition consultation to health workers in Home Health Agencies has also increased because of the Medicare demands.

New Jersey has continued to attract national attention for its Diet Counseling Services. The Nutrition Consultant in the Division of Chronic Illness Control has been appointed by the Executive Board of the American Dietetic Association to be Chairman of the Committee to Develop Guidelines for the Establishment of Community Diet Counselling Services. This committee functions as part of the activities of the Community Nutrition and Diet Therapy Sections of the Association and the guidelines will be distributed nationally.

Three of the 11 diet counselling services had vacancies for various periods during 1966 but in spite of these, 2,046 individual patients were served and 128 group classes were attended by 2,911 patients.

Age of patients referred for counseling:

0-20 years	10.4%
21-39 years	10.4%

40-64 years	35.5%
65 and over	43.7%

Physicians' diagnosis on patients referred for counseling:

Heart and circulatory disease	39%
Diabetes	24%
Complications of pregnancy	10%
Obesity	8%
Digestive system diseases	8%

The diet modifications most frequently prescribed were sodium restrictions, diabetic diets, and calorie modifications.

Medicare

With the onset of Medicare, a need has developed among small hospitals and extended care facilities for the consultative services of qualified dietitians on a regular, routine basis. To meet the needs for dietary consultants, a workshop entitled "The Role of Nutritionists and Dietitians in Medicare" was held on September 20-21 and October 4-5 at the Brunswick Inn, Middlesex County. The State Nutritionist and District Consultants participated in the workshop, both as members of the Planning Committee and faculty. The workshop was offered by Columbia University in cooperation with the New Jersey Department of Health, the New Jersey Hospital Association, and the New Jersey Dietetic Association. The workshop served a two-fold purpose of acquainting dietitians, dietary consultants, and nutritionists with the "Standards of Compliance" for agencies participating in Health Insurance for the Aged and of recruiting dietitians who were homemakers and not employed professionally to return to, at least, part-time employment to fill current needs. As of January 1, 51 extended care facilities were certified by Social Security throughout the state.

Southern State Health District	11
Central State Health District	19
Metropolitan State Health District	16
Northern State Health District	5

Of the 51 extended care facilities certified, 37 have American Dietetic Association qualified Dietitians as consultants and the remainder have consultants who meet the B.S. degree requirement.

Training Programs

The State Consultant was a panel participant and acted as a resource person for two institutes held for nursing home administrators on Medicare. All District Consultants have assisted administrators in recruiting for qualified personnel.

At the request of the Director, Extended Care Program, Hospital Research and Educational Trust of New Jersey, the State Consultant and the District Consultant, Public Health Nutrition, Central District attended a meeting of nursing home administrators and hospital administrators in Monmouth County. The topic of dietary consultation to nursing homes was discussed. The group showed considerable interest in training courses for food service supervisors currently employed. The possibility of establishing a food service training course in Monmouth County is being explored with representatives of the State Department of Education and the Monmouth County Vocational School.

The District Consultant in the Central District is coordinating a training program for food service employees in Trenton. The course is sponsored by the Hospital Council of Mercer County, the New Jersey Dietetic Association, the Trenton Board of Education, and the New Jersey State Department of Education.

Professional Information Prepared

Diet therapy in acute and chronic illness is an important part of total patient care. Dietitians and nurses often seek information on new trends in diet management from the District Consultants. One new topic requested by a nursing group in the Northern District was for a diet in peritoneal dialysis. This information was prepared and presented by the District Consultant and material has been developed for inclusion in the revised edition of the New Jersey State Diet Manual.

The District Consultant, Public Health Nutritionist in the Southern District spoke to the South Jersey Astomy Club for persons with colostomies and ileostomies. Good nutrition and special modifications following this type of surgery were discussed.

The District Consultant, Southern District was asked to recruit a nutritionist, give consultation and prepare an outline of nutrition talks to be given at the Salem City Diabetes Project.

Public Health Nursing—In-service Training Program

The State Consultant has been on the planning committee and has participated as a faculty member of the Public Health Nursing In-service Training Program offered to the nursing staff of public health agencies throughout the state.

Food Stamp Plan

Mercer County was the first county in the state to participate in the Food Stamp Plan and the project was set up as a pilot project. The State Consultant, Public Health Nutrition, is a member of the State Advisory Committee to the Nutrition Education Committee for the Mercer County Food Stamp Plan. The District Consultant, Central State Health District is co-chairman of the County Nutrition Education Committee made up of representatives from Mercer County social agencies, County Extension Service, newspapers, anti-poverty organizations, unions, public health nursing agencies, Division of Aging and the office of the Mercer County Superintendent of Schools. The purpose of this committee is to promote maximum participation in the plan and to develop nutrition education programs to improve the nutrition of families using food stamps. In the first month of operation, all welfare recipients were signed up for the plan and in addition more than 800 families not on welfare but with a limited amount of income to spend for food also signed up. In 1967, Food Stamp Programs will be established in Camden, Cumberland, and Bergen Counties.

Bureau of Community Institution, Department of Institutions and Agencies

Requests by the Bureau of Community Institutions, New Jersey Department of Institutions and Agencies to give consultation in food service management to operators of boarding homes and homes for the aged continue to be more numerous than time and priorities permit. To alleviate this problem, the District Consultants in the Central and Northern Districts offered three-session Food Service Workshops for Operators of Boarding Homes in the Central and Northern Districts. A questionnaire was designed by the District Consultants to determine the interest of boarding home operators and the workshops were planned accordingly. Sanitation was covered by representatives of the Health Officers Association.

New Trends

New Jersey consumers have become health conscious, diet conscious, vitamin conscious, mineral conscious, weight conscious, protein conscious, and fat conscious but their ability to deal with all these concepts is limited. Continuity of patient care is important. A new concept of patient care is developing. It envisions a wide spectrum of medical and health services and facilities—coordinated on an area basis for both in- and out-patient care. Recent federal legislation brings the realization of this trend much closer and places great emphasis on changing roles of therapeutic dietitians, diet counselors, and public health nutritionists.

Physical Therapy Program

The State Physical Therapy Program has broadened its initial responsibilities of consultation, education, and promotion to include the evaluation of physical therapy facilities and personnel in hospitals, nursing homes, and local health agencies. This additional responsibility developed with the Social Security Title 18 amendment concerned with Medicare being assigned to the State Department of Health. During this past year, January, 1966-December 31, 1966, the State Physical Therapy Consultant has had the responsibility for visiting and evaluating 20 hospitals and home health agencies and 36 nursing homes for the Medicare program.

Major emphasis for the Physical Therapy Program in the past year has been on education. The educational endeavors have included consultation visits to physical therapists in the field, assisting in the coordination of seminars and in-service program with other Departmental personnel, and in planning specific educational courses for active and inactive physical therapists.

Following are the highlights of the Physical Therapy Program:

Consultation

It was part of the responsibility of the State Consultant, Physical Therapy Program on each evaluation visit for the Medicare program to interpret the role of the physical therapist as stipulated in Title 18 of the Social Security Act to the administrators and the physical therapists providing service in the institution or the local health agency. Fifty percent of the local health agencies visited had not used physical therapy services prior to the introduction of this program. It was important therefore, that the physical therapy personnel under contract to the agency be made fully aware of their public health duties and responsibilities.

Education

The State Consultant, in cooperation with the public health nurse consultant, diabetes and arthritis assisted in the development and coordination of a workshop on arthritis for nurses and physical therapists and an in-service education workshop on basic rehabilitation nursing techniques for public health nursing staff of a local health agency. The workshop on arthritis was concerned with the general management of the arthritic and included diagnosis drug management, nursing, and physical therapy used in the care of the arthritic. The in-service educational workshop on the basic rehabilitation nursing techniques was conducted with the assistance of a public health nurse and the physical therapist on the agency's staff, as well as several of the state

public health nurse consultants. The five sessions covered the various different rehabilitation techniques that may be employed in giving patient care in the home.

Upon request of the 30 physical therapists who attended the physical therapy refresher course in October, 1966, three one-day additional seminars on the basic principles and procedures used in the treatment of the emphysema patient, the physical and psychological aspects of electro-therapy, and a workshop on the didactic principles of orthetics and prosthetics were developed by the State Consultant and held in April, May, and June, 1966.

The State Consultant with the cooperation of the New Jersey Chapter of the American Physical Therapy Association developed a four-day workshop for New Jersey physical therapists on "The Role of the Physical Therapist in Medicare" to be held on two weekends in the early part of 1967.

Grants-in-Aid

The New Jersey State Department of Health provided 13 home health services grants-in-aid to local public health agencies to assist them in developing or strengthening the already available physical therapy services in their agency in order that they would be prepared to meet the increased demand for direct physical therapy treatment that would come with the institution of the Medicare amendment. Two additional grants-in-aid, one to a community hospital and the second to a local public health agency enabled them to employ a full-time Medicare qualified physical therapist to organize, administer and coordinate their physical therapy programs.

Public Health Nursing Program

This past year will go down in history as the most exciting and productive period in the development and strengthening of local public health nursing services in New Jersey. Although there has been steady growth in the past, the Health Insurance for the Aged legislation provided the spark that greatly accelerated activity throughout the state. Nursing consultation was available by nursing personnel of this Department whenever and wherever it was needed. The following achievements are noteworthy:

a. Three new agencies were started—one county health department, one voluntary agency covering the major portion of a county, and one hospital based service.

b. Five mergers of agencies were completed. Eight other agencies are in the process of negotiating cooperative relationships and possible mergers with neighboring larger agencies.

c. Six existing health department nursing programs were broadened and strengthened to provide comprehensive, quality services.

d. Thirty-one agencies received financial aid under contract with the Department to strengthen their nursing programs in preparation for Medicare. With this aid, nurses from community agencies established closer working relationships with hospitals, in order to assure uninterrupted nursing care from hospital to home; many agencies employed licensed practical nurses in order to stretch the available nurse power; and some agencies improved their statistical reporting systems and their office management.

The public health nursing agencies in New Jersey came through with flying colors in making changes needed to meet the certification requirements of Medicare. Forty-nine agencies that provided bedside care in the home have met the standards of the Department, compared to 41 last year. Residents throughout the state, with the exception of part of one county, now have access to bedside care services in the home. Plans are well underway to establish a public health nursing service in the uncovered area. Site evaluation visits and intensive consultation by nursing personnel of this Department contributed to the state's outstanding record in availability of home nursing services.

The New Jersey Chapter of the American Cancer Society has accepted the Department's list of approved nursing agencies as a basis of eligibility for contracts. The Welfare Department and Veterans Administration continue to accept our standards.

Relative to home health services under Medicare, the Social Security Administration recognizes the high standards for public health nursing agencies that have been operative in New Jersey. In order to maintain the progress that has been made and to enable us to continue to build soundly for the future, the Social Security Administration granted this state approval for two amendments to the Conditions of Participation for Home Health Agencies.

Governor's Task Force on Nursing

The Governor's Task Force on Nursing, which is under the chairmanship of the State Commissioner of Health, with staff work done by personnel of the Public Health Nursing Program, has met regularly throughout the year. Upon recommendation of a committee of the Task Force, a nurse educator was employed on a short-term basis to develop and propose a Master Plan for Nursing Education in New Jersey. It is anticipated that the final draft of this Plan will be completed by January 1, 1967 and will subsequently be studied by the Task Force.

The refresher training program for inactive nurses, under the sponsorship of the New Jersey Hospital Association, has been continued for the second year with Manpower Training funds. Five hundred sixty-nine nurses have completed the course and 500 of that number are now in the active labor force.

Two new four-year baccalaureate programs for nurses were started, one at Trenton State and the other at Paterson State. Three new two-year community college programs for nurses have started in Middlesex, Ocean, and Cumberland counties.

Nurses Employed in Public Health

A Public Health Nurse Census was conducted as of January 1, 1966 at the request of the U. S. Public Health Service. The following comparisons of nurses employed in public health nursing agencies are available for the last three census counts:

Year	*No. of Nurses*	*Qualified Public Health Nurses*
1962	894	105
1964	928	178
1966	955	205

Although the numbers of nurses and those fully prepared have risen slightly, the numbers are not keeping up with current needs due to population growth. An interim assessment based on staffing patterns during this year shows increased numbers of nurses, especially part-time workers, and increased employment of licensed practical nurses in public health nursing agencies.

Educational Programs

With the large number of nurses with little or no formal preparation in public health nursing and the need to improve services, the Department has continued the short-term training course begun in the fall of 1965. Fifty-five nurses from all kinds of agencies and all parts of the state have completed the three programs offered. There has been a most enthusiastic response to this course and each class has many more applicants than can be accommodated. Reports coming back indicate that the nurses who attend the course have improved their service, especially in quality of patient care and in record keeping.

At the request of the Public Health Nursing Program, in cooperation with the Occupational Health Program, a nursing consultant from Public Health Service evaluated the nursing consultation services being provided in occupational health. One of the major recommendations made was to establish a

planned in-service education program, to be offered to the more than 800 nurses employed in industry in New Jersey. A questionnaire was sent to industries employing more than 250 persons to ascertain whether the nurses and management wolud be receptive to such a program if it were offered. Approximately 100 industries welcomed the idea. The first course is scheduled to begin April 27, 1967.

Assistance was provided Rutgers University in planning and in conducting an Epidemiology Course for Nurses. Similar help has been given to other institutions and agencies in their education programs for nurses.

The first resident Workshop for Directors of Public Health Nursing Agencies was held in Princeton in March and was most successful. The group requested a one-day follow-up conference, which was held in September.

The nursing consultants provided in-service educational programs in hospitals, nursing homes and public health nursing agencies as follows:

	1964	*1965*	*1966*
Programs	114	152	135
Attendance	3,355	3,285	5,231

Speeches to other professional and citizen groups:

	1964	*1965*	*1966*
Speeches	17	21	20
Attendance	1,616	1,310	1,907

Provision of Consultation Services

Nursing consultation visits showed a slight total increase, even though there was a consultant vacancy in pediatrics for the entire year and another vacancy for the last four months of the year.

Consultation Visits	*1964*	*1965*	*1966*
Official Agencies	144	144	208
Voluntary Agencies	184	258	203
District Health Offices	50	73	51
Hospitals	205	299	231
Nursing Homes*	3	21	7
Clinics	44	61	62
Industry	77	38	54
Universities and Colleges	14	16	27
Other	70	65	31
Total	791	875	889

* Exclusive of programs provided by nurses assigned to the Nursing Home Project.

The nursing consultant who has worked closely with the Migrant Health Program served as a resource person at a National Migrant Health meeting that was sponsored and paid for by Public Health Service. Her services were requested and provided on loan to Public Health Service for the first six months of 1967.

Materials Developed

Proceedings of the Workshop for Directors of Public Health Nursing Agencies were published in the September issue of *Public Health News.*

The Public Health Nursing Service Guide was revised and supplemented.

Under contract from this Department, the Bureau of Economic Research of Rutgers—the State University, has prepared a manual to accompany the booklet, "Standard Accounting Terminology for Public Health Nursing Agencies," which was published last year. The new manual was field tested in one of the visiting nurse associations prior to publication and is the third in the series that has been written.

Nurses and other interested persons throughout the country have requested copies of the above mentioned materials.

"Bibliography on the newborn, full-term and premature," Supplement No. 4 has been completed and prepared for printing.

In-Service Education Received

Public Health Nurse Consultant, Tuberculosis:
Tuberculosis Control—(2 weeks)
Battey State Hospital, Rome, Georgia

Public Health Nurse Consultant, Occupational Health:
American Industrial Health Conference—(1 week)
Detroit, Michigan

Assistant Chief Public Health Nurse:
American Nurses' Association Convention—(1 week)
San Francisco
Regional Workshop on Programmed Instruction—(2 days) sponsored by Public Health Service

Public Health Nurse Consultant, Mental Health:
Two-(2 day) *Regional Conferences of Psychiatric and Mental Health Nurse Consultants,*
Hartford, Connecticut

Six members of the Public Health Nursing Program staff completed the Civil Defense course sponsored by the Department.

Administrative Changes

Resignations—1 Public Health Nurse Consultant, Hospitals, at termination of a special study relating to bed utilization in obstetrical units in hospitals.

Transfers —1 Public Health Nurse Consultant, Disadvantaged Youth Project, was transferred to Southern State Health District to serve as District Consultant, Public Health Nursing, upon termination of the Project.

1 Public Health Nurse Consultant, formerly in Southern State Health District, was re-assigned to the Public Health Nursing Program office.

Vacancies —1 Public Health Nurse Consultant, Pediatrics (a nurse has been recruited to begin on March 1, 1967.)

1 Public Health Nurse Consultant, Crippled Children.

Public Health Social Work Program

Medicare

Enactment of Medicare legislation has pointed up the critical need for additional qualified social work staff necessary to meet Conditions of Participation in hospitals, Home Health Agencies, and extended care facilities. The Program Coordinator and District Consultants, Medical Social Rehabilitation have participated in field surveys with the staff of the Office of Health Facilities Certification of this Department in evaluating the qualifications of social workers employed in all three types of facilities. In addition, consultation has been given by Program personnel to aid in recruiting qualified social work staff for these facilities.

The Program Coordinator has attended the bi-weekly evaluation conferences of the Office of Certification to present survey findings of the Program staff.

The Program Coordinator participated as a resource consultant in two Seminars jointly sponsored by the University Extension Division, Rutgers—the State University and this Department for nursing home administrators and selected Public Health Service personnel.

Five community hospitals have newly established professional social service departments, where only untrained personnel had been employed previously. Three of these are receiving grant-in-aid support from this Department.

Medical Social Work

The Developmental Training Project sponsored by this Department in cooperation with the Graduate School of Social Work, Rutgers—the State University has continued to expand field work training opportunities for graduate students in community hospitals and health-related settings. This year, 10 students were placed in medical settings. Next year, 10 additional field placements will be available through the cooperation of five community hospitals in this state.

An advanced "Seminar on the Health Setting" was held at the Graduate School of Social Work this year for eight graduate students, incorporating theory and site visits to health settings.

Enrollment at the Graduate School of Social Work has now grown to 210 students, all of whom attend courses focused on the medical component in patient care.

Fifteen graduate students received scholarship stipends this year jointly supported by Veterans Administration, the National Institute of Mental Health, and this Department.

Summer Experience in Social Work

This Department has continued support of this Project in cooperation with 29 participating health and welfare agencies in this state. A total of 468 inquiries were received this year from undergraduate students, 66 of whom were men and 402 women, representing 123 colleges. Ninety-five students were employed in 30 participating agencies during the summer months in an effort to interest them in professional social work as a career.

Volunteer Friendly Visitors

This year, the Volunteer Friendly Visitor Project of New Jersey was introduced as a national program of the Woman's Auxiliary to the American Medical Association at the Annual Workshop-Conference for State Presidents and Presidents-elect of the Woman's Auxiliary by the president of the Woman's Auxiliary.

As Project Director, the Program Coordinator presented a paper at this conference, held in Chicago, on this New Jersey State Department of Health Project.

Over the past four years, the project has trained 891 Volunteer Friendly Visitors in 30 training courses. Volunteers have given 12,474 unpaid hours in class attendance. Ages of volunteers have ranged from 16 through 79 years of age.

The project has been expanded to include the training of teenage volunteers serving in hospital and institutional settings. The first training course for teenage volunteers was held in a community hospital this year.

Visiting Homemaker—Home Health Aid

In cooperation with the Division of Chronic Illness and the Visiting Homemaker Association, Inc., the Program Coordinator has continued to participate in the program for training of homemaker—home health aides. Fifteen training courses were held this year, given by 23 Visiting Homemaker Agencies. Instructors were screened for educational background and work experience by the Program Coordinator.

The Program Coordinator has served as Social Work Consultant to the Board of Trustees and has maintained close liaison with the Directors of Visiting Homemaker Service throughout the state.

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