NINETIETH ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1967

STATE OF NEW JERSEY

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 1967.

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 1967-1968

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

WILLIAM S. LITTLE, *Vice-Chairman* ..... Ridgewood

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

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

MICHAEL S. KACHORSKY ..... Manville

MRS. J. DUNCAN PITNEY ..... Mendham

SYLVIA S. RISKIN, Ph.D. ..... Passaic

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

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

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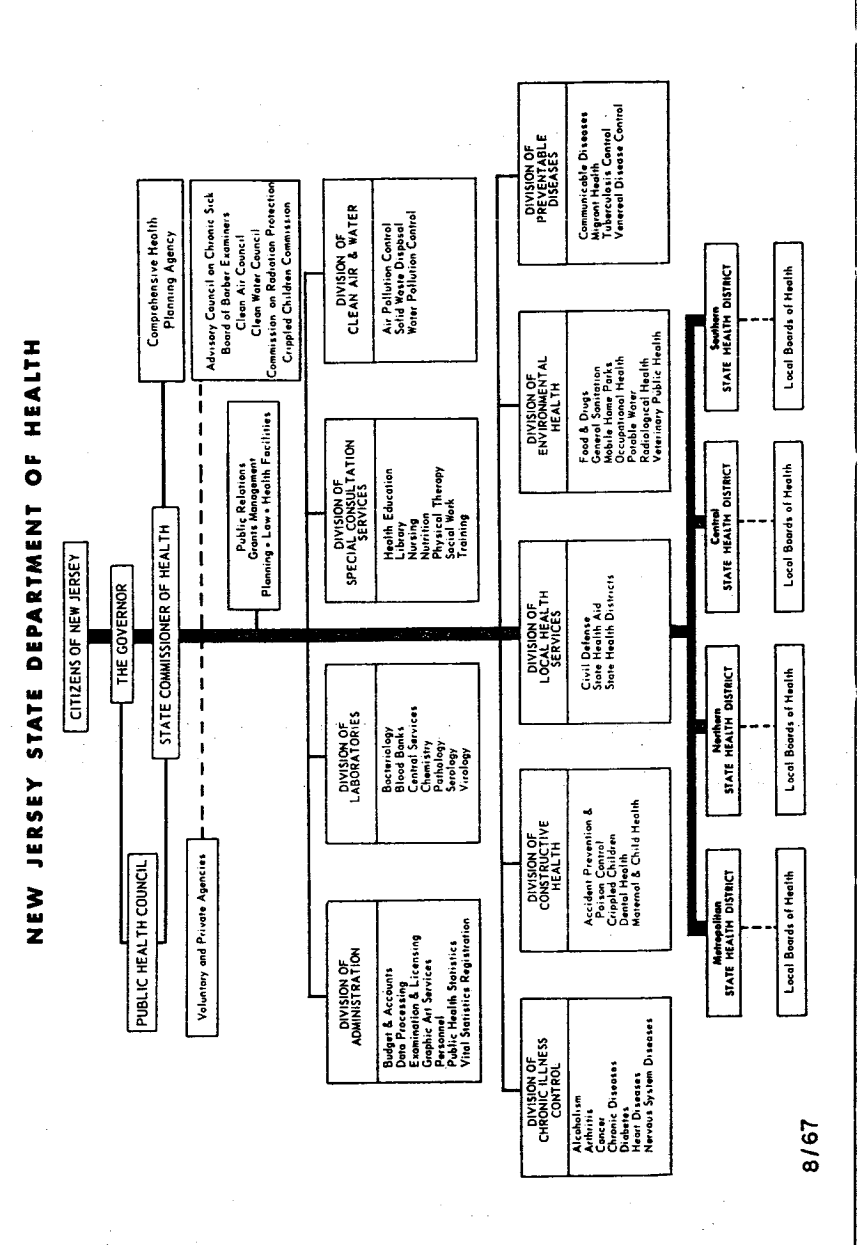
Tables are numbered according to Program.

*The Division of Special Consultation Services existed for most of the year but was abolished near the end of the year and the office of Program Planning and Education was created. There was created at the same time the Division of Health Facilities. Thus the Table of Contents shows ten divisions in the department although there are only nine.



Annual Meeting
Public Health Council

The annual meeting of the Public Health Council was held on July 10, 1967. The following officers were elected for the fiscal year beginning July 1, 1967 and ending June 30, 1968: Henry L. Drezner, M.D., chairman; William S. Little, vice-chairman; and Nelson S. Butera, secretary.

The membership of the Council was as follows:

	Address	*Term of Office Expiration Date*
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
Sylvia S. Riskin, Ph.D.	Passaic	June 30, 1974
John J. Cane, D.D.S.	Phillipsburg	June 30, 1975
Michael S. Kachorsky	Manville	June 30, 1975

Office of the Commissioner

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

Assistant Commissioner for Operations ..... William R. Peebles

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

Program Plans and Grants ..... Jule Erdie*

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

Director, Office of Comprehensive Health Planning .... Samuel Ingraham, II, M.D.**

Secretary ..... Miss Angela Piontek

*In 1968, Mr. Erdie was transferred to the Office of Program Planning and Education and Walter Trommelen was assigned to handle Program Plans and Grants.

**Early in 1968, Miriam Sachs, M.D., was named director of this office and Dr. Ingraham was named Director of the Office of Emergency Medical Services.

Office of the Commissioner

The Commissioner provides leadership, over-all 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 [is] 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 coordinator 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. Coordinator 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 development 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 390 contracts in 1967.

The Office of Health Facilities Certification which had been located in the Commissioner's Office was changed to the Division of Health Facilities in 1967. There were transferred to it programs on nursing, nutrition, physical therapy, and social work which had been in the Division of Special Consultation Services.

The Division of Special Consultation Services was phased out in a reorganization late in the year. There was created the Office of Program Planning and Education which was placed in the Commissioner's Office. This unit embraces the Health Education and Training programs and the Health-Agriculture Library.

The Office of Comprehensive Health Planning was established during the year and placed in the Office of the Commissioner.

The Public Relations Unit issued 147 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.

Public health statistics are published annually as a separate document entitled "New Jersey Health Statistics."

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 prescribed budgeting and accounting procedures of all departmental funds.

Requisitions for materials, supplies, services and equipment are cleared through Budget and Accounts for control purposes. Departmental revenue is channeled through the program. The program is also responsible for warehousing of office supplies, printed forms, and biologicals.

Federal formula grants were received for general health services, cancer control, heart disease control, tuberculosis control, chronic illness control, radiological health, water pollution, maternal and child health, and services to crippled children.

Other federal funds were received to continue project and research studies as follows: coronary heart disease, air pollution, ecology of eastern encephalitis, venereal disease casefinding, tuberculosis, pesticides, migrant health, and maternity and infant care.

Three new federal grants were received for a diabetic demonstration project, a solid waste study project, and a motor vehicle emission program.

In cooperation with the Division of Local Health Services, budget and expenditure forms were designed for the use of local health agencies receiving state aid funds. The Budget and Accounts Program has the responsibility for the audit of these funds.

Four random sampling time study periods, each of one-week duration, were conducted to develop criteria on which to validate the use of federal and state funds in accordance with Public Health Service and Children's Bureau regulations.

During the fiscal year, 394 grant-in-aid contracts were processed. There were 239 federal fiscal reports processed, 13,602 vouchers passed to payment, and 1,156 detailed requisitions forwarded to the Division of Purchase and Property.

Following is a consolidated financial statement of the department as of June 30, 1967.

STATE DEPARTMENT OF HEALTH
FINANCIAL STATEMENT
July 1, 1966 — June 30, 1967

Receipts

Received for transfer to State Treasury:	
Licenses and permit fees	$434,352.75
Penalties	16,405.00
Certified certificates	94,440.55
Examination fees	23,912.00
Program reimbursements	52,701.47
Miscellaneous	9,515.22
Net total	$631,326.99
Available for disbursements:	
State appropriation and transfer	$12,018,818.34
United States Department of Health, Education and Welfare—Public Health Service	3,339,465.89
Children's Bureau	2,100,478.00
Other federal funds	706,818.76
Private grants	8,262.00
Private donations to Crippled Children's Program	273.51
Net total	$18,174,116.50

DEPARTMENTAL ALLOCATIONS
July 1, 1966-June 30, 1967

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	$108,952.00	$239,640.76	.....	$45,035.00	$170,633.00	.....	$153,987.00	$410,273.76	.....	$564,260.76
Administration	574,709.00	87,750.00	.....	104,098.00	87,526.00	.....	738,797.00	145,276.00	.....	884,073.00
Environmental Health	774,181.00	206,253.00	.....	4,298,211.34	133,838.00	.....	5,072,392.34	340,121.00	.....	5,412,513.34
Preventable Diseases	271,827.00	307,241.00	.....	286,933.00	527,293.51	.....	558,760.00	921,531.51	.....	1,483,291.51
Chronic Illness	100,752.00	107,983.00	.....	301,903.00	772,889.00	.....	402,715.00	880,827.00	.....	1,343,542.00
Laboratories	555,538.00	128,879.00	$5,500.00	198,488.00	77,607.93	$1,293.00	693,821.00	206,386.93	$6,702.00	900,972.93
Constructive Health	113,582.00	292,304.00	1,060.00	357,076.00	1,724,371.83	713.51	470,658.00	2,016,675.83	1,773.51	2,489,106.89
Special Consultation Services	185,349.00	59,199.00	.....	21,977.00	13,628.00	.....	207,326.00	72,825.00	.....	280,151.00
Local Health Services	657,139.00	198,062.00	.....	2,319,317.00	246,902.00	.....	2,976,456.00	444,964.00	.....	3,421,420.00
Clean Air and Water	402,088.00	301,278.00	.....	281,815.00	403,401.07	.....	683,903.00	704,679.07	.....	1,388,582.07
Total Allocations	$3,743,917.00	$2,018,574.76	$6,560.00	$8,274,901.34	$4,159,187.89	$1,975.51	$12,018,818.34	$6,146,762.65	$8,535.51	$18,174,116.50

DEPARTMENTAL EXPENDITURES
July 1, 1966-June 30, 1967

Office of the Commissioner	$114,806.86	$235,085.70	.....	$45,864.39	$140,425.87	.....	$160,171.25	$384,511.57	.....	$544,682.82
Administration	574,689.14	81,066.87	.....	105,894.37	44,832.19	.....	740,583.51	126,049.06	.....	866,632.57
Environmental Health	763,400.09	174,375.36	.....	3,670,158.91	81,715.51	.....	4,433,619.00	256,090.86	.....	4,679,709.86
Preventable Diseases	260,816.89	337,159.78	.....	281,622.43	387,934.14	.....	542,439.28	695,143.92	.....	1,237,583.20
Chronic Illness	94,131.72	91,124.89	.....	328,104.71	553,945.51	.....	422,236.43	645,070.40	.....	1,067,306.83
Laboratories	527,680.82	126,614.47	$5,145.39	136,883.07	70,444.66	$755.26	664,563.89	197,059.03	$5,900.65	867,523.57
Constructive Health	99,611.15	276,240.03	1,056.23	300,890.38	1,486,632.00	223.51	400,501.53	1,761,772.77	1,281.79	2,172,556.09
Special Consultation Services	175,402.82	57,219.57	.....	22,534.06	12,506.91	.....	197,936.90	69,726.48	.....	267,723.38
Local Health Services	624,489.25	155,450.98	.....	1,439,952.69	33,256.02	.....	2,064,441.94	188,707.00	.....	2,253,148.81
Clean Air and Water	416,769.80	272,229.46	.....	269,000.88	374,898.41	.....	685,770.68	647,127.87	.....	1,332,898.55
Total Expenditures	$3,641,418.45	$1,806,167.75	$6,203.67	$6,609,905.86	$3,165,092.11	$978.77	$10,311,324.41	$4,971,260.86	$7,182.44	$15,289,766.71
Balances, June 30, 1967	$102,498.55	$212,407.01	$356.33	$1,664,995.38	$993,095.78	$996.74	$1,707,493.93	$1,175,502.79	$1,353.07	$2,884,349.79

Data Processing Program

During 1967, data processing services were rendered to the following programs as indicated (comparisons with 1966 are also given).

	Percentages of time Allotted 1967		*Percentages of Time Allotted 1966*	
DIVISION OF ADMINISTRATION		35.11		60.69
Vital Statistics	26.00		50.99	
Examination and Licensing	4.10		2.85	
Budgets and Accounts	3.89		5.52	
Personnel	1.12		1.33	
PREVENTABLE DISEASES		21.00		5.56
Tuberculosis	16.41		.86	
Venereal Disease	3.47		4.70	
Other	1.12		0.00	
DIVISION OF CLEAN AIR AND WATER		10.39		14.27
Air Pollution	9.49		14.17	
Solid Waste	.90		.10	
DEPARTMENT OF AGRICULTURE		5.51		2.97
DIVISION OF CONSTRUCTIVE HEALTH		5.43		8.27
Crippled Children's Program	3.38		3.40	
Maternal and Child Health Care	1.92		4.00	
Other	.13		.87	
DIVISION OF ENVIRONMENTAL HEALTH		5.40		2.39
Food and Drugs	3.58		.44	
Radiological Health	1.82		1.95	
SPECIAL CONSULTATION SERVICES		3.96		0.00
OTHER HEALTH PROGRAMS		13.20		5.85

A. *Tuberculosis*

The New Jersey Tuberculosis Case Registration System is being expanded to make use of the department's computer capabilities. The goal of the new system is to provide and have record of, all services being rendered to tuberculosis patients through the use of a central registry maintained in Data Processing. This system will enhance New Jersey's position as a leader in the fight against tuberculosis.

B. *Examination and Licensing*

Data Processing is now issuing licenses on an annual basis for water and sewage treatment plant operators. In addition to the issuance of licenses, statistical reports are also being prepared.

C. *Special Projects*

During 1967, the Data Processing Program cooperated with a five year cytology study. Data Processing is compiling all statistics for the necessary federal reports.

A study of inactive nurses is being conducted by the Public Health Nursing Program.

The purpose of the study is to assist nurses in returning to nursing. Data Processing is providing the statistical analysis for this project.

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 assured the course contents encompass license responsibilities and that questions asked are valid and reliable.

During the period covered by this report, 807 applications were processed for examination. Five days were spent in examining 572 persons of whom 322 received licenses during the year 1967.

There were 1,776 licenses renewed covering water supply systems, water treatment plants, and sewage treatment plants.

The amount of $20,977.50 was deposited to the credit of the general treasury; of this amount, $3,100.00 represented penalties collected for licensing violations.

Two hundred forty-five licensed operators of water or sewage facilities were issued authorization to operate more than one water or sewage facility.

Seventy-nine persons who failed examinations requested, and were granted, reviews of their examination papers.

Records were established for 55 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 six initial blood bank licenses, and renewed 130 blood bank licenses.

During this period, nine informal hearings were held on alleged violations and/or infractions of rules and regulations relating to sewage and water licenses. Five appearances in court were required on violations after referral by the department to the attorney general's office. Numerous conferences were also held with the deputy attorneys general in reference to licensing cases referred for necessary action.

During 1966, it was reported that initial steps were taken to place current records on data processing. This transfer of records was completed in 1967 by placing 7,185 license holders of record to data processing and 1,242 plants or systems required to employ licensed operators. By a continuous updating procedure in this program, data processing is able to furnish upon our request a more current status of license holders or need for employment of licensed personnel to all interested programs and/or public.

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 the Examination and Licensing Program. The board investigated three alleged violations of the Civil Rights Law and the barber laws of New Jersey. A satisfactory solution was obtained without formal hearings.

The board instituted a change of policy in the administration of the barber law. An applicant for license may now take the written examination in either English or Spanish. Previously all examinations were given in English.

Workload of the Board of Barber Examiners

January 1, 1967 - December 31, 1967

Shops Inspected	14,759
Special Investigations	1,399
Shops Found with Sanitary Violations	312
Reinspections	312
Hearings Held	50
Persons Assessed Penalties by Board	39
Court Cases	1
Convictions	1
Barbers Found Working with Expired Certificates	12
Persons Found Working without Certificates	13
Shops Found Operating with Expired Licenses	4
Shops Found Operating without a License	4
Shops Reported Out of Business	162
Complaints Received from Public and Investigated	67
Barbers Reported Deceased	79
Applicants Scheduled for Examination	485
Applicants Failed to Appear for an Examination	50
Applicants Examined	435
Applicants Passed Examination	392
Applicants Failed to Pass Examination	43
Examination Days	28
Examination Fees Forfeited	5

Graphic Art Services Program

This program provides for printing and addressographing as required by the department as well as the design and production of exhibits and audio-visual services.

Outside printing jobs required 126 requisitions with follow-up to delivery during 1967.

The department's print shop, a combined activity with the Department of Agriculture, produced 6,165 short-run jobs amounting to approximately 6,700,000 impressions. The workload ratio was 66 percent Health and 34 percent Agriculture. This activity includes plate making, press work, and bindery as required.

The addressograph section processed over 403,000 pieces, totaling 282 mailing jobs in its function of handling the department's bulk mailing requirements from over 80 special lists maintained by this program.

The graphic art section designed and produced printing mechanicals as required as well as completed requests for charts, transparencies, slide mechanicals, and conference signs.

In collaboration with the Health Education Program, six new exhibits were designed, constructed, and installed as required. Subsequently, these exhibits became part of the department's exhibit loan service which handled 41 bookings throughout the state as required 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; 838 bookings were made. As part of the program's audio-visual function, 388 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 130 of the department's non-professional films, covering a wide variety of public health activities, 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 1967. This required approximately 7,100 individual bookings by the State Museum Film Library. This program expedited the ordering of new prints and replacement footage as required.

This program supervises the receptionist-training room operation on the main floor of the Health-Agriculture Building. In addition to aiding visitors and dispensing parking permits, approximately 875 bookings were made for the use of training rooms during 1967.

Personnel Program

The Personnel Program is responsible for recruiting and screening applicants; processing of employment; intra- and inter-departmental personnel and payroll forms; maintaining an adequate classification of positions; processing of all regular and supplemental payrolls for all programs and projects; maintaining centralized accurate and current personnel records of all departmental employees; providing orientation courses for new employees; coordinating and supplying data for salary accounting and assisting in preparing salary data for department budgets.

Personnel of this program maintain 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.

Many 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, Department Safety Committee, miscellaneous fund raising committees and the savings bond drive.

The Personnel Office provided services to over 1,090 departmental employees requiring the processing of approximately 55,000 records, forms, letters, etc., relative to personnel actions, changes, payroll, time reports, etc., during the year. A number of job specifications were reviewed and 85 were revised. The department issued 98 service awards to employees for their length of state service.

This office also handled other projects such as employee relations and recreation programs.

At the end of this period, there were 253 classifications in the department. Of the 844 employees on the payroll at the end of this period, 116 were at the minimum of their salary range, 569 at intervening steps, and 159 at their maximum or in no range positions. These positions were filled by 588 employees with permanent civil service status, 203 employees with temporary status and 53 with unclassified status. There were 449 female employees and 395 male employees.

As of the end of this period, 572 employees were paid from state funds and 272 were being paid from federal or project funds.

During this reporting period, 247 employees were separated for various reasons and 328 employees were appointed.

At the end of this period, there were 89 true, vacant, budgeted positions which this program was attempting to fill. Most of these positions require incumbents with specialized professional background for which the recruiting is extremely difficult due to low state salaries and shortages of applicants which exist in these fields throughout the country.

Public Health Statistics Program

The Public Health Statistics Program prepares 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 12,280,000 records of births, marriages, deaths, and fetal deaths. These date back to June 1, 1878. All original records, indexes, and microfilm images of birth, marriage, and death reports for the period May, 1848 through May, 1878 were transferred in 1967 to the Bureau of Archives and History, State Department of Education. 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 an act of 1887. Records of births in 1848 through 1903, marriages in 1848 through 1935, and deaths in 1848 through 1957 have been microfilmed. These original records are stored several miles away from the film and the film is used in place of the source documents.

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 1967, the program received, processed, and filed 229,182 original reports of vital events, about 1,000 delayed reports of births, and approximately 1,500 corrections to current records and 2,400 corrections to old records. To obtain missing or additional information for coding purposes, approximately 4,000 queries were prepared and mailed. New birth records were prepared for 3,344 persons who were adopted in 1967 or prior years. There were 2,040 office visits and 17,129 telephone calls by persons needing help in various registration matters.

Over 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 70,939 applications for searches of the vital records of one or more years under one or more names.

A large amount of the free work listed in Table 2 of this report is done to furnish 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. On behalf of the Cancer Program, approximately 700 man-hours were spent searching for death records of 1,503 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.

The volume of the major activities of the program is shown in the following tables:

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

	Calendar Year		
Certificate Type	*1967**	*1966*	*1965*
Birth	113,025	117,301	121,482
Fetal Death	1,745	1,710	1,850
Marriage	49,139	47,074	46,364
Remarriage	1,027	1,278	1,489
Death	64,246	64,724	63,398
Total	229,182	232,087	234,583

* Provisional

Table 2. SEARCHES REQUESTED AND FEES RECEIVED

	Fisal Year		
Item	*1967*	*1966*	*1965*
Searches made and/or copies issued for which fees were received	37,764	40,739	35,352
Searches made and/or copies issued for which no fees were received	35,410	42,595	31,977
Total searches	73,174	83,334	67,329
Fees received for searches and cetified copies	$91,220.61	$92,003.53	$48,689.33

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

*Consolidated with other units. July 1, 1967.

Division of Chronic Illness Control

Introductory Statement

The expanding and strengthening of existing community health facilities and stimulating the development of new services to provide comprehensive health care without duplication of service continued to be a major activity of the Division of Chronic Illness Control in 1967. Consultation services and financial assistance in the form of 158 grants-in-aid were provided to 90 different health and welfare agencies including hospitals, local health departments, homemaker-home health aide agencies, home health agencies, Rutgers—the State University, and the New Jersey College of Medicine and Dentistry. These demonstration grants aided in providing community services such as diet counseling, physical therapy, public health nursing, homemaker-home health aide, social work, and friendly visitor services; 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 disease, chronic renal disease and pulmonary disease; special studies in chronic respiratory disease and health service patterns; professional education and training programs for specialized personnel.

Alcoholism Control Program

Two local councils on alcoholism were established during the year. This represents many hours of work over the past several years on the part of interested citizens in the Princeton area and in Monmouth County. Staff members of the Alcoholism Program of this department have served as consultants on both committees along with members of the National Council on Alcoholism. In July, a part-time executive director was secured for the Princeton Council. The program is funded by the Princeton Area United Fund. The Alcoholism Council of Monmouth County is currently recruiting a full-time executive director. This council is being funded by several foundations, local industries, and individual contributors. An office has been secured in downtown Red Bank.

The establishment of these two councils makes a total of four councils on alcoholism operating in New Jersey. These councils function as the voluntary arm of the alcoholism control movement throughout the United States. They conduct community and professional education on alcoholism and point

out needs for specific kinds of services for the alcoholic in their communities. As the councils develop, information, referral, and counseling centers are developed in order to provide a central resource for helping the alcoholic and members of his family.

Services

During the past year, the Essex Council on Alcoholism and the Family Service Association of Atlantic City provided services to 397 persons with alcohol problems. Alcoholics, members of their families, and concerned persons such as clergymen and employers made a total of 722 visits to the information centers operated by the councils. In addition, 1,961 telephone calls were received from individuals seeking help or information.

Programs supported by this department served 2,995 individuals. These included the 397 persons served by the two information referral and counseling centers, 1,512 in the nine out-patient alcoholism treatment centers located in community general hospitals, county hospitals, and one guidance center, and 1,086 institutionalized alcoholics who were served through weekly group sessions conducted by the field representative of the Alcoholism Program.

The 1,512 alcoholics treated in the out-patient clinics made a total of 11,116 visits to the centers. In most instances, the individuals made weekly visits; the average person being in treatment for a period of 17 weeks.

A subjective evaluation of the treatment success of those 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 month period. The results for this year are as follows:

21 percent showed marked improvement.
26 percent showed reasonable improvement.
19 percent showed no change.
4 percent showed deterioration.
30 percent were unable to be evaluated or were lost to follow-up.

Educational Activities

Training in alcoholism and alcohol education was given to 82 persons at workshops, institutes, and summer schools sponsored by this department.

Scholarships to attend the Rutgers Summer School of Alcohol Studies and to the Northeast Institute of Alcohol Studies were awarded to 12 individuals. The recipients were social workers, parole and probation officers, nurses, clergymen, state police, and a lay counselor.

There were 70 teachers and school nurse teachers in attendance at three two-week workshops held at State Colleges at Montclair, Jersey City, and Glassboro. The workshops on alcohol education are designed to provide an opportunity for the classroom teachers 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 564 film showings with more than 26,983 persons in attendance during this period.

Members of the speakers bureau gave 92 lectures to various professional and civil groups on the subject of alcohol and alcoholism.

"Alcoholism—A Treatment Digest for Physicians" has now completed its 16th year of publication. This is a quarterly publication mailed to all practicing physicians in New Jersey, as well as other interested individuals. Much of the material included in the digest is syndicated and obtained from the Center of Alcohol Studies at Rutgers—the State University and is distributed in New Jersey solely by this department through the digest.

Alcoholics seen in county jails and workhouses throughout the United States are commonly known as chronic drunkenness offenders or revolving door alcoholics. These individuals are the most difficult group of patients to work with because they have little or no resources such as a job or home. Furthermore, they have never been able to function adequately in society because of their social and emotional inadequacies. It has been estimated that 60 to 75 percent of those individuals sentenced to county jails, workhouses or workfarms fit this definition. Recently, there has been concern over the lack of treatment available to this group of alcoholics. As a result, a number of test cases have been held in district courts in the United States. Currently, there is a case pending (Powell vs. Texas #405) before the United States Supreme Court to determine whether or not under the U. S. Constitution, an alcoholic may be convicted for public intoxication.

Program Emphasis

The shortage of trained social workers and psychologists has been increased by the development of new programs in the area of drug addiction, community mental health centers, and the new community programs of all

kinds being established under the Office of Economic Opportunity. As a result, greater consideration must be given to the employment of sub-professional persons who can be supervised by existing professional staff. One experience in Salem County, using this type person, has been very favorable. Efforts along these lines will be pursued during the coming year.

Arthritis and Allied Disorders

There were 45 persons in attendance at the Arthritis Conference for nurses, physical therapists, and occupational therapists sponsored by the New Jersey State Department of Health and the Monmouth Medical Center, Long Branch. Both the medical and surgical aspects of management of the chronic arthritic were presented. The afternoon session consisted of demonstrations by the rehabilitation team emphasizing positioning and exercises.

A workshop on arthrtis for nurses and physical therapists was held at the Kessler Institute for Rehabilitation. The participants were enthusiastic about the program which included lectures, case presentations, and techniques of maximum range of motion. Registration was limited to 30 persons.

There were eight showings of the films "Prevention of Disability from Rheumatoid Arthritis" and "The Home Management of Disability from Arthritis." These films are designed primarily for professional and semi-professional personnel.

A "Source Book on Arthritis" emphasizing the prevalence of the disease by age, sex, income, and geographical area has been distributed by the U. S. Public Health Service together with color slides to highlight certain points. These slides are self-explanatory and are being used to disseminate statistical information on rhumatism and arthritis.

The Rheumatology Unit of the New Jersey College of Medicine is receiving assistance from the Arthritis Program through its support of a clinical nurse. The office and research facilities of the unit are located at the Veterans Administration Hospital in East Orange. Additional clinics are being maintained at the Jersey Medical Center and Newark City Hospital. The Acting Director of the Division of Rheumatology is Dr. J. M. Marchesano.

A report of the activities of this unit during the year follows:

Number of Patients seen according to Clinical Categories:

Rheumatoid Arthritis	998
Degenerative Joint Diseases	342
Rheumatic Fever	129
Gout	224
Other	349

Types of Tests Performed:

Joint Fluid Analysis	187
Rheumatoid Arthritis Factor Tests	1830
Rheumatology Research Tests	3100

The Arthritis Unit of the Hospital Center at Orange is receiving support for a clinical nurse and physical therapist. This support is shared by the Arthritis Program and the New Jersey Arthritis Foundation and enables the arthritis unit of the hospital to expand its community coverage and services to the residents of that area.

Clinical activities for the year included the following:

Patients Served	377
Patient Visits	3729
Communities Served	29

Cancer Control Program

During 1967, efforts by the U. S. Public Health Service and the Cancer Program of the State Department of Health to expand cancer detection in New Jersey culminated in the development of six new hospital-based cervical cytology screening programs. Four of these projects, at Atlantic City Hospital; Perth Amboy General Hospital; Paul Kimball Hospital, Lakewood; and Bayonne Health Department are being funded by state monies while projects at St. Michael Hospital, Newark; and Newark City Hospital are being supported by grants from the Cancer Program, U. S. Public Health Service.

Fifteen screening programs for the early detection of cervical cancer located in 11 community hospitals and four local health departments are supported by grants from this program. Of the 11,815 persons screened during this calendar year, 23 persons were positive for cervical cancer and referred for appropriate treatment; 83 were suspicious and are being continued under surveillance.

With the availability of state health aid funds, 10 local health departments are developing cancer detection programs. This is in addition to the three programs which were in existence prior to January 1967. It is anticipated that as the staffs of the local health departments are expanded, the activities in the area of cancer detection will be increased.

Death Certificates

In an effort to assist cancer registries in this state, as well as other states, the Cancer Program in conjunction with the Public Health Statistics Program provides death certificates as requested. During the past year, of the 1,503

requests received, the Public Health Statistics Program was able to provide 690 copies of death certificates.

Cytotechnician Training

The cytotechnician training program co-sponsored by this department and the Presbyterian Hospital Unit of the United Hospitals of Newark continues to attract more interested technicians than can be accommodated. The program, which trains cytotechnician screeners, admitted eight students this year and has trained a total of 55 technicians to date. It is unique in that it enables technicians to receive training while maintaining a full time job in a New Jersey laboratory. The program is designed to run one day a week for nine months and includes lectures, laboratory demonstration, and the practical application of these techniques in the laboratory.

Nursing Activities

Ninety-two nurses participated in the clinical nursing observation program at the Black-Stevenson Clinic and Presbyterian Hospital which continues to provide an effective means of keeping both hospital and public health nurses abreast of the latest nursing methods for cancer patients. Small groups of nurses from official and voluntary agencies throughout the state attend the head and neck clinic every other Wednesday, September through May of each year. In addition to nursing care, the patient's cosmetic appearance after surgery is emphasized, as well as his increased personal comfort. An opportunity is often provided for the nurses to observe the actual fitting and care of oral prosthesis. During the afternoon, the group observes cobalt therapy in the isotope unit where the nursing implications of this therapy are stressed.

At inservice education programs for nurses held at the Atlantic County Health Department, Community Nursing Service of Hackensack Hospital, and a nursing refresher program at St. Joseph's Hospital, Paterson, the nurse consultant demonstrated a three-dimensional plastic anatomic model of the abdomen to indicate some major disabilities that result from cancer surgery. The discussion included nursing care of the patient after surgery indicating changes in physiological function due to surgery, plus care of special equipment which must be used by the patient. Attention is given to community agencies that are available to assist in the social and vocational adjustments of these individuals.

In addition, the nursing consultant discussed the psychological aspects of cancer nursing and the services available through the State Department of Health Cancer Program at meetings sponsored by the American Cancer Society, New Jersey Division, at Overlook Hospital and Hackensack Hospital.

Educational Activities

A grant to the Academy of Medicine of New Jersey from the Cancer Control Program enabled the academy to provide seminars on cancer at three hospitals in New Jersey. "Therapy of Lymphomas: Chemotherapy vs. Radiation" was attended by 80 physicians at Passaic General Hospital. "Gastrointestinal Malignancy" was discussed at St. Peter's General Hospital, New Brunswick, and attended by 30 physicians. The same topic was discussed at Somerset Hospital, Somerville and attended by 75 members of the medical staff.

The program supported the 17th annual slide seminar of the New Jersey Society of Pathologists held at Princeton, in December. This annual event attracted almost 200 pathologists from New Jersey and adjacent states. The moderator was Sheldon Sommers, M.D., Professor of Pathology at Columbia University College of Physicians and Surgeons. The subject, "Problems in Endocrine Pathology," dealt with the histo-pathological changes in endocrine tissues and the biochemical impact of altered structure and function in diseases involving these organs.

This seminar was a part of the program of continuing education of pathologists with the interest and support of the department. The proceedings have been published and distributed to the participants for further study and teaching purposes.

The Cancer Program has placed a number of films on cancer in the film library of the State Department of Education. These films continue to be used by health and welfare groups throughout the state, as well as by health teachers in public and private secondary schools. During the year, approximately 6,021 individuals attended 128 film showings of these films.

Pathology Tumor Registry

The tumor registry of the Society of Pathologists maintained in the Bureau of Pathology of the department for 17 years has been moved to Middlesex General Hospital, New Brunswick. It will be under the direction of Sylvan Moolten, M.D. and function as a source of reference material for teaching purposes in cancer and related histo-pathology.

Bergen Pines Tumor Registry

The county cancer registry demonstration at Bergen Pines County Hospital, Paramus, has completed its sixth year of operation. Ten community hospitals in the county are participating in the central registry. The fifth

annual report of the registry indicates that 1,875 cases were added to the registry during the year, bringing the total cases now listed to 9,113.

Chronic Disease Control Program

Friendly Visitor

There were 206 Volunteer Friendly Visitors trained during 1967 in nine courses sponsored by the following agencies: Morristown Chapter, American National Red Cross; New Jersey Neuro-Psychiatric Institute, Princeton; SAGE, Summit; St. John the Baptist Church, Jersey City; Bergen Pines County Hospital, Paramus; Perth Amboy General Hospital, and the Volunteer Bureau of Bergen County. Twenty-six teenagers were trained at the course sponsored by the Perth Amboy General Hospital.

Almost 1,100 Volunter Friendly Visitors have been trained since 1963. The one thousandth Friendly Visitor trained was awarded a special certificate during the course sponsored by the Bergen Pines County Hospital.

During the past year, the Department of Health assumed the responsibility for administration of the training course. The course was previously given under the auspices of Rutgers—the State University with grant-in-aid assistance from this department. The department now approves and pays instructors, supervises the course, issues certificates of attendance, and provides identification cards. Because of the change in procedure and minor courses outline revisions, the training course manual was reprinted. More than 100 copies were distributed on request within the state and to various cities in California, Texas, Maryland, Louisiana, and Kentucky.

Questionnaires were sent to 19 individuals who acted as county coordinators for Volunteer Friendly Visitor training courses since the beginning of the program. Seven replies were received representing 15 courses which, at that time, was one-half of the total courses held. Based on those particular courses, the following information was obtained:

Four hundred thirty-six individuals, 27 men and 409 women, were trained. Of the 436, 281 (64 percent) were reported to be active volunteers. Of the 281 active visitors, 11 per cent were under 21 years of age; 25 percent were between 21 and 50 years; 26 percent were between 51 and 60; and 38 percent were over 60.

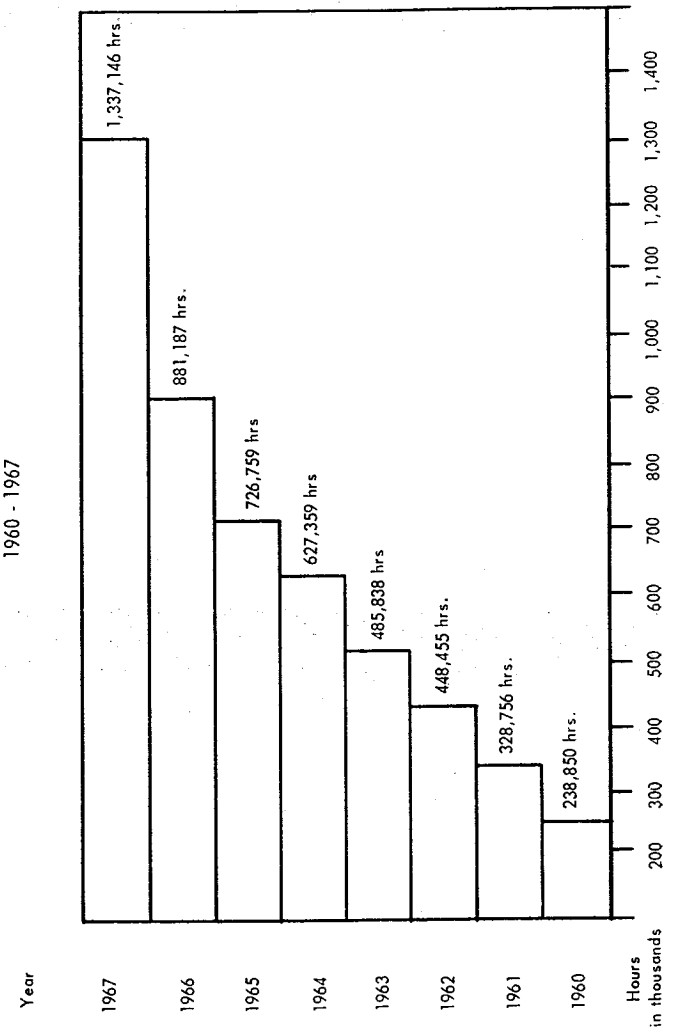
The following is a breakdown of the areas in which the Volunteer Friendly Visitors were assigned: 20 percent visited patients in a person-to-person setting; 11.3 percent visited patients in institutions; 54.4 percent visited patients in hospitals; 8 percent visited patients in nursing homes; 0.3 percent visited patients in homes for the aged; and, 6 percent visited patients in other settings such as homes for the blind, meals-on-wheels projects, etc.

Thirty persons attended the Supervisors Seminar—A Working Conference held in May, 1967, at the New Jersey Hospital Association, Princeton. The majority indicated that planned follow-up training sessions should be held for those who complete the initial 14-hour training course. It was also suggested that regular, informal group discussions be planned for supervisors of Volunteer Friendly Visitors.

Homemaker-Home Health Aide

The largest increase in service hours in the history of New Jersey's Homemaker-Home Health Aide program occurred in 1967. Almost 8,000 patients received approximately one and one-third millions of hours of service, an increase of 52 percent over the previous year. Each of the 23 homemaker agencies showed an increase in hours of service, ranging from less than one percent to 435 percent. The steady and significant growth over the past eight years is reflected in the following table.

Table 1. NEW JERSEY HOMEMAKER HOME HEALTH-AIDE SERVICE



As in the past, heart and circulatory diseases was the leading diagnostic classification, accounting for more than one-third (35 percent) of the total hours of service rendered last year. Diseases of the bones followed with 12 percent; accidents and injuries and conditions associated with aging were 9 percent each; cancer 7 percent; diseases of the nervous system 6 percent; neurophychiatric and personality disorders 4 percent; diseases of the digestive system 4 percent; respiratory diseases 2 percent; diseases of the genito-urinary system 2 percent; maternity 2 percent; infectious diseases one percent; other 7 percent. The most significant change in homemaker-home health aide service hours during the past seven years has been the steady decline in the use of these services in maternity cases, as illustrated in the following chart.

Table 2. Percentage of Total Homemaker-Home Health Aide Hours By Diagnosis

1961 - 67

Diagnosis	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*
Heart and Circulatory	27	25	29	26	28	31	35
Maternity	13	11	9	8	8	5	2
Diseases of Bones	8	11	11	11	11	11	12
Accidents and Injuries	5	4	4	5	6	7	9
Aging	7	7	7	9	9	11	9
Cancer	5	7	6	6	7	7	7
Neuro-psychiatric and personality disorders	10	9	8	8	7	6	4
Digestive System	1	4	4	5	5	4	4
Nervous System	3	6	7	7	6	6	6
Genito-urinary	1	4	4	4	3	2	2
Respiratory	1	3	3	2	2	3	2
Infectious Diseases	3	1	1	1	1	1	1
Other	16	8	7	8	7	6	7

During the past year, the availability of homemaker-home health aide services made possible earlier hospital discharge for 1,933 persons and eliminated the need for institutionalization for an additional 2,073 individuals. Employment or school absenteeism was prevented in 2,197 instances.

There were 741 new homemaker-home health aides employed and trained in 38 courses held throughout the state during the year. The Division of Chronic Illness Control approves and pays the instructors and issues certificates to those persons successfully completing the course. The basic 30-hour course includes didactic teaching and demonstrations in subjects such as

working with people; understanding the elderly; care of the home; food; care of the ambulatory patient; care of the bed patient; understanding children; accident prevention and safety in the home; the well baby; mental health and mental illness; and the patient and activities of daily living. Once the homemaker-home health aide begins to work, she participates in regularly scheduled in-service training sessions sponsored by the homemaker agency.

The Visiting Homemaker Service of Greater Trenton, with assistance from this program, the City of Trenton, and the federal government, continued its project of utilizing specially trained homemakers to strengthen the family life of economically and culturally disadvantaged urban families. The homemakers relate to their clients with respect for their individuality and confident optimism in their eventual capacity for self-help, and undertake to educate in the skills and values of responsible homemaking. There were 108 new families admitted to the project, making a total caseload of 195 families during the year. Four part-time and two full-time homemakers provided 5,298 hours of service to these families. Similar projects are being planned for other urban areas of the state.

Nursing

Five home health agencies—the Collingswood Community Nursing Service; Home Health Services of Passaic County; North Hudson Public Health Nursing Service; Overlook Hospital; and Paterson Health Department—were provided grants-in-aid to strengthen their generalized public health nursing services. During the year these agencies provided 40,593 visits, 61 percent of which were attributable to chronic illnesses, as follows: arthritis—5 percent; cancer—10 percent; diabetes—7 percent; heart disease—29 percent; and other chronic diseases—10 percent.

Subsidy for the services of a public health nurse coordinator was provided to four agencies: the Community Nursing Service of Essex and West Hudson; the Public Health Nursing Service of Burlington County; the Monmouth County Organization for Social Service; and the Paterson Health Department. The nurse coordinator is employed by the home health agency to work with area hospitals in order to develop, on an individual basis, a plan to assure uninterrupted service for the patient from the day of hospital admission through hospital discharge and rehabilitation. These four agencies received and handled 1,068 referrals from 11 participating hospitals.

Two agencies were provided short-term (three months and nine months) grants for the employment of licensed practical nurses who made 1,113 visits.

A four-month contract was entered into with the Community Nursing Service of Montclair to enable that agency to provide nursing consultation in restorative services to the Madison Nursing Home in Montclair in order to improve patient care. Staff of the nursing agency made 27 visits to the home spending a total of 75 hours in instruction and consultation.

A grant was provided to the Visiting Nurse Association of Eastern Union County for the services of an associate director to assist in implementing plans for the amalgamation of this agency with the District Nursing Association of Westfield. This merger was completed and the combined agencies now function under the name of Visiting Nurse and Health Services, Elizabeth. The agency also initiated an in-service education program in supervision to prepare staff nurses to meet some of the supervisory needs of the agency in order to insure continuity of quality nursing service.

Nutrition

Arrangements were completed late in 1967 for the establishment of the 12th community diet counseling service in the state. The service will be housed at the Hunterdon Medical Center, Flemington, and will serve the entire county on a part-time basis beginning early in 1968. The 11 established diet counseling services experienced several staff changes during the year but all vacancies were filled except two, leaving one service inactive for six months and one for the entire year. During the past year, 1,993 patients were served as compared with 763 served in 1963, representing a 161 percent increase during this five-year period.

Table 3. Growth in Diet Counseling Service

Agency	*Patients served 1963*	*Patients served 1967*
Atlantic County	non-existent	6 (6 mos. only)
Bergen County	29	92
Burlington County	150	457
Camden County	402	873
Essex County	106	214
Middlesex County	69	154
Monmouth County	non-existent	90
Morris County	7	28
Passaic County	non-existent	48
Union County	non-existent	31
Totals	763	1,993

Forty percent of the patients served in 1967 had a diagnosis of heart and circulatory disease; 24 percent—diabetes; 12 percent—diseases of the digestive system; 8 percent—obesity; 3 percent—pregnancy; 2 percent—cancer; and 11 percent—other.

Fifty-six percent of the patients were women while slightly less than half (46 percent) of the total served were age 65 and over.

The services continue in their efforts toward self-support, concentrating on income-producing activities such a weight control group classes, patient fees, consultation to extended care facilities, and contracts with home health agencies.

Two in-service workshops were held during the year for the diet counselors and other interested nutritionists. The subjects were "Working through other People," "Role of the Diet Counselor in Medicare" and "The Food Stamp Program." Additional training was provided by attendance at an institute on the "Role of Nutritionists and Dietitians in Medicare," presented by Columbia University, the U. S. Public Health Service, and this department.

The revised edition of the *New Jersey Diet Manual* was completed in 1967 and available for distribution in mid-November.

Physical Therapy

Physical therapy was given to 1,175 patients in a total of 4,367 visits by the six agencies provided grants-in-aid by this program for all or part of the year. Thirty-six percent of these patients had cardiovascular disease and another 22 percent were classified as diseases of the bones.

Renal Disease

In its efforts to develop further with the medical school a demonstration center for chronic renal disease, this program continued its support of the Renal Dialysis Unit of the New Jersey College of Medicine and Dentistry. This unit has been transferred to the Newark City Hospital and the East Orange Veterans Hospital. A full-time dialysis nurse is now assigned to the program at the Newark City Hospital where a new artificial kidney machine has also been installed. The program is involved in training patients, their families, physicians, and nurses in the techniques of home and in-hospital dialysis.

During the year, five new patients were started on chronic hemodialysis. Two are being maintained at Bayonne Hospital, one at Newark City Hospital

in preparation for a kidney transplant, one at home, and one died. One of the original patients of the unit is still on home peritoneal dialysis three years after the initiation of her program.

Studies in improved techniques of home peritoneal dialysis have continued and the development of the home peritoneal dialysis cycler is now in its final stage. This cycler, combined with the Palmer peritoneal dialysis prosthesis, should make the home peritoneal dialysis machine completely independent of the physician and allow for six hours of uninterrupted peritoneal dialysis.

For the first time this year, modest assistance was provided to another chronic kidney failure program, at Newark Beth Israel Hospital. During June and July, five patients were admitted to this program for chronic hemodialysis. These patients and one or two members of their families participate in an eight-week training course in preparation for home dialysis. The curriculum is planned to impart an elementary understanding of medical and treatment principles; to provide practical training in the operation and maintenance of the equipment; training in aseptic technique and required laboratory procedures; instruction in record keeping; and guidance in family and environmental relations. Patients are provided with a manual on home dialysis which serves as a text during the training period and as a reference thereafter. Upon completion of the training, the patients are provided with written instructions including diet sheets, a four-week stock of supplies and medication, and record-keeping forms for medical diary and inventory. Installation of the equipment is made at the patient's home and proper functioning is ascertained by a member of the project staff. Arrangements are made with a nearby laboratory for the handling of specimens and reporting of laboratory data. Routine medical surveillance and emergency care of the patient are then placed in the hands of the patient's private physician, with the hemodialysis center available at all times for telephone consultation or in-hospital evaluation. In the case of home equipment breakdown, the patient reports to the center for dialysis until his home equipment is restored to proper functioning. Thereafter, the patient reports to the hemodialysis center at Newark Beth Israel Hospital for quarterly examinations.

Social Work

Since 1960, the Division of Chronic Illness Control has provided subsidy to, and worked closely with, the Graduate School of Social Work at Rutgers—the State University in developing field placement opportunities, particularly in hospitals, for social work students. During the school year which ended in

June, 1967, nine second-year and three first-year students completed their field training. Of the nine who graduated in June, seven remained in New Jersey, six of them having secured employment as social workers in hospitals and health agencies.

Field placement opportunities for the 1967-68 school year has been provided for 14 Rutger's students as follows:

Perth Amboy General Hospital	2
Roosevelt Hospital, Metuchen	2
Hunterdon Medical Center, Flemington	2
East Orange Veterans Administration Hospital	4
East Orange Veterans Administration Hospital, Out-Patient Department	3
Child Guidance Clinic, East Orange	1

There were 256 applicants from 134 colleges for the 1967 Summer Experience in Social Work Program. This program, which is provided a small grant by this division, makes it possible for students interested in social work as a career to spend the summer months working in health or social agencies. Placements were secured in 18 public agencies and 12 voluntary agencies for 122 of the applicants in 1967.

Two additional social workers were placed in hospitals this year with grant-in-aid assistance from this division. Jersey Shore Medical Center, Neptune, began providing service in June and an additional social worker was employed at Hunterdon Medical Center, Flemington, in November. Assistance to three programs, at Bridgeton Hospital, Perth Amboy General Hospital, and Princeton Hospital, which began in 1966 was continued. These programs offer case work services to hospital and clinic patients who have social or emotional problems related to their medical care. One participating hospital reported this year that two-thirds of the patients referred to the service required help with discharge arrangements.

During the year, these five hospital social service departments served 2,900 patients; 64 percent or 1,844 were new patients. Twenty percent of the new patients were under medical care for diseases of the heart and circulatory system; 15 percent for pregnancy; 10 percent for arthritis and other diseases of the bones; 9 percent for accidents; 8 percent for cancer; 8 percent for diseases of the central nervous system; 5 percent for diseases of the digestive system; and 25 percent were other which included infectious diseases, senility, diseases of the respiratory system, congenital defects, diseases of the genito-urinary system, and diabetes.

Special Projects

The Health Facilities Planning Council carried out a study to gather information on the extent of delayed discharges from acute general hospitals because of the lack of appropriate extended care facilities. As a first step, a survey was made of the use during a three-month period of general hospital beds by patients requiring extended long-term care. Questionnaires were sent to 22 hospitals; 12 replied. Fifty percent of the replies furnished no information. The other six hospitals reported excess stays for less than one percent of the total admissions.

Among the excess stay population, female patients (51) outnumbered males (38). The median age of patients was 75 years with the largest group between 75 and 80. More than 40 percent were classified in the cardiovascular disease group. Seventy-five percent were Medicare patients. The type of post-acute care most frequently needed was nursing home care (67 percent).

Diabetes, Endocrine, and Metabolic Disease Program

In 1967, the Diabetes Control Program continued its activities with the basic premise that case-finding, education, and selective research and special projects were its main responsibilities. However, in this introductory year to the "Health Aid Act," greater efforts were made to fulfill the opportunities available in this direction.

Case-Finding

The basic screening method in 1967 continued to be the Dextrostix (R) test, followed by an immediate venous "back-up" quantitive blood glucose determination in those persons who screened positive at 130 mg. percent or higher. The concept of high risk screening was emphasized in all projects, including Diabetes Detection Week, 1967, as well as in the long-term screening centers. With continuous de-emphasis on short-term projects in favor of more comprehensive programs, Diabetes Detection Week was used as a springboard for initiating on-going programs. Although fewer individuals were screened than in 1966, the yield of newly diagnosed diabetes, based on statistical evaluation of 20 completed reports from local groups, was 10.8 per 1,000 screened, a rise of 2.4 per 1,000 screened over 1966.

Referral to physicians for diagnostic studies was the essence of follow-up, with decentralization of the public health nursing contribution to this effort. The latter proved to be a positive influence in the high percentage of cases whose follow-up was completed.

When one compares the quantitative (work-load) data with the qualitative (absolute number of new cases discovered and yield, i.e., number of new diabetics per 1,000 screened), one is struck with the fact that the 1967 figures disclose a threefold increase in the total tests as compared to five years ago, with a 10-fold increase times in number of diabetics and an increase of almost four times in yield. (See Table.) This is a tribute to the test methodology, the diagnostic acumen, and the high quality of follow-up services.

Table 1. Comparative Yield of Diabetics, 1962 and 1967

Year	Number Tested	Positive Reactors	Newly Diagnosed	Potential	Known	Not Diabetic*	Follow-up Incomplete	Yield Per 1,000
1962	15,274	233	36	4	34	11	148	2.4
1967	45,490	2,081	383	137	361	377	823	8.4

* Screened positive but later diagnosed negative by physician.

Diabetes programming, especially case-finding, proved to be attractive to 12 health departments (nine local and three county), which received grants of state health aid money. The Diabetes Control Program staff advised and assisted these centers in the development of their case-finding programs, which were essentially the same as described above. These included:

Bergen County Health Department
Camden Health Department
Elizabeth Health Department
Orange Health Department
Westfield Health Department
Passaic Health Department
Burlington County Health Department
Cranford Health Department
Hamilton Health Department
Newark Health Department
Verona Health Department
Union Health Department

The Newark City Health Department implemented a comprehensive diabetes program in 1967. Initially, a total of nine nursing homes and senior citizen housing projects were screened by a team of nurses from the health department; next, diabetes screening was combined with eye health screening and other programs and set up in poor areas of Newark. Reports show that 1,657 individuals were screened with 17 new and 14 potential diabetics found. In addition, 14 known diabetics were alerted that their diabetes was out of control. Individuals who could not afford a private physician were referred to the Newark Health Department Diabetes Clinic for treatment and therapy.

The Somerset County Tuberculosis and Health Association program was the most impressive local effort in 1967 in terms of organization and achievement of program goals of high risk screening. The program was well promoted in terms of emphasizing the testing of the high risk groups of those over 40 years of age and overweight or those over 40 years old and related to a diabetic. Screening, open to the public, was held daily from 10 A.M. to 2 P.M. and Thursday evenings. In addition, a chest x ray or tuberculin test was offered, depending on the individual. Of the 487 persons who availed themselves of the test, 24 were found to have diabetes. This impressive yield of 49.2 per 1,000 screened was the highest yield yet achieved by any program.

The Morris County Diabetes Program continues to be the outstanding project in the state. It is accepted by the County Medical Society and enthusiastically supported by the 50 municipalities and various industries throughout the county. In 1967, 25 municipalities and industries were screened for diabetes. Emphasis is now on selective, high risk screening of those 35 years old and overweight or 35 years old and related to a diabetic. The screening procedure is a one-hour postprandial blood specimen. The specimens are processed on the autoanalyzer at the Morristown Memorial Hospital laboratory and all individuals positive are retested, utilizing a two-hour glucose load. All positives are then referred to their private physicians for final diagnosis. Following is the breakdown of the 1967 results:

Table 2. Results of Morris County Diabetes Program

Total Screened	Screened Positive	Newly Diagnosed Diabetics	Known Diabetics	Not Diabetic	Incomplete
3,998	165	55	97	13	0

The following tables of results for 1967 includes Diabetes Detection Week and year-round diabetes screening programs, continuous and periodic:

Table 3. Experience in Diabetes Detection Week 1967

Total Screened	Dextrostix (R) Positive at 130 value block on initial screening	Retest on Auto Analyzer Venous Samples Negative (less than 130 mg. %)	Positive (130 mg. % or higher)
20,684	2,186	1,194	992

Yield per 1,000 screened 8.2, an increase of 1.2 over Detection Week 1966.

A total of 66 detection centers were established during Diabetes Detection Week 1967 as follows: hospitals 29; health departments 29; and medical societies 8.

Table 4. YEAR-ROUND (STATE HEALTH AID ACT PROGRAMS) REPORTED 1967

Center	Total Screened	Positive Dex-trostix	Venous Retest	New	Poten-tial	Known	Not Dia-betic	In-complete
J. F. Kennedy Memorial Hospital	475	..	57		Not reported			57
Passaic Health Dept.	25	14	6	1	1	3	1	
Bergen County Health Department	1,324	34	34	13	7	3	3	8
Elizabeth Health Dept.	341	62	32	12	2	11	1	6
Orange Health Dept.	437	62	21	5	..	4	9	3
Burlington County Health Department	1,993	275	126	17	7	2	20	80
Newark City Health Department	1,657	126	75	17	14	14	18	12
Totals	6,252	573	351	65	31	37	52	166

Yield: 10.0 per 1,000 screened.

Professional Education

In conjunction with the development of diabetes control programs by local health departments through state health aid grants, the staff organized and presented a workshop attended by 20 physicians, health officers, public health nurses and others from health department staffs, and personnel of the State Health Department. The purposes were to review current concepts of technical methodology and to make recommendations for introducing diabetes control into health department activities, including patient education.

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

"Diabetes and Its Long Range Control"	30
"Diabetes and You, Too"	15
"Diabetes: What You Don't Know Can Hurt You"	65
"Finding the Hidden Diabetic"	4
"Chiropody Clinic in Hospital Routine"	2
"Diabetes in Youth"	10
"Diabetics Unknown"	63
"Understanding Diabetes"	7
"Quiet Victory"	7

The Utilization and Distribution Section of the National Medical Audio-Visual Facility made 138 loans of "Diabetes and Its Long Range Control" during the same period.

Medical Film Guild, Ltd., producers of the film "Diabetes and Its Long Range Control," reported 27 showings of the film.

The program coordinator served as medical consultant for script content, animation and production of two motion picture films on diabetes for nurse education, sponsored by the American Nurse Association and the National League for Nurses Film Board, with a federal grant. These films, "Quiet Victory" and "Understanding Diabetes," had their premiere showing at the National League for Nursing convention in New York in March, 1967; the program coordinator was a panel member and discussant. These films were available for purchase in the late summer and were introduced very successfully in New Jersey and have proved very effective as educational tools.

A symposium: "Oxford Revisited: An Evaluation of Diabetes Detection Over the Past Two Decades and its Significance in 1967" was co-sponsored with the Metabolic Section of the Medical Society of New Jersey at its 201st Annual Convention in Atlantic City. The Diabetes Control Program was responsible for all arrangements and the program coordinator acted as moderator. Speakers included Doctors Glen McDonald, John O'Sullivan, and Hugh Wilkerson.

A symposium on "Basic and Clinical Concepts of Diabetic Neuropathy" co-sponsored with the New Jersey Diabetes Association in Trenton was attended by 54 physicians and six medical students.

A series of workshops, lectures at special courses, and symposia were directed at nurses in various parts of the state during 1967. The subjects included screening and follow-up of diabetes suspects, the broad subject of diabetes itself, diabetes in industry, guidance counseling and employability, psychological and adjustment problems, etc.

A second-year medical student from the Tufts College School of Medicine spent the summer in a unique training experience with the Diabetes Control Program. The unusual aspects of his tenure were the combined exposure to clinical aspects of diabetes and internal medicine, as well as the broad aspects of public health, including diabetes.

A special program for physician members and guests of the Mercer County Component Medical Society was arranged by the program coordinator, who presented a paper and acted as moderator. The subjects covered were diabetes and pregnancy, surgery and the diabetic, juvenile diabetes, and current concepts of treatment.

Patient and Non-professional Education

The following brochures and pamphlets were supplied on request to diabetic patients, their families, and other interested persons:

"Diabetes and the School Child"	1,580
Miscellaneous	4,500

During Diabetes Detection Week, the following pamphlets were distributed:

"Diabetes Runs in Families"	17,460
"Overweight? Check for Diabetes"	16,980
"A Quiz Game"	15,990
"Over Forty? Check for Diabetes"	9,550
Total pieces distributed	59,980

A program of patient education was offered to selected agencies utilizing the AutoTutor (R) and TutorFilm (R) "Taking Care of Diabetes." The technique, a grant-in-aid for the rental of the equipment and film, was accepted and used with great success at Perth Amboy General Hospital.

A public forum on diabetes was organized and presented as part of the Mercer County Component Medical Society-Trenton Times series of forums on health. This was held in conjunction with Diabetes Detection Week.

Activities of Program Staff

The program coordinator served as a consultant to U. S. Public Health Service, Diabetes and Arthritis Program, and as medical consultant for the Upjohn *Newsletter* "Diabetes Research Detection Therapy."

The program coordinator served as chairman or member of site visit teams for the National Institutes of Health on grant requests from Oakland, California; Seattle, Washington; and Pittsburgh, Pennsylvania. These requests dealt specifically with diabetes or automated biochemical determinations, including blood glucose and a number of other parameters.

The program coordinator maintained a teaching appointment in the Department of Graduate Medicine, University of Pennsylvania School of Medicine. Lectures were relative to the public health aspects of diabetes control, including methodology.

As a member of the board of governors of the New Jersey Diabetes Association, the program coordinator was able to participate actively in the program of this state-wide professional organization, as well as to keep it informed of the Diabetes Control Program activities.

The program coordinator served as chairman of the Mercer County Component Medical Society's Committee on Diabetes Detection and Education for 1967.

The nurse consultant to the Diabetes Control Program conducted two classes at State College, Trenton, on: "Public Health Nursing and Public Health Nurse Responsibilities," and an additional session on "Division of Chronic Illness Control and the Nurses' Responsibilities in the Division." She was much involved in the Salem City Diabetes Research Project and in supervision of follow-up of diabetes suspects.

The field representative held many meetings with personnel of health departments and others to assist them in setting up programs for diabetes detection and education. He was especially involved in those agencies receiving state health aid funds. He also maintained all statistics during the year.

Special Lectures and Published Papers

"Diabetes Detection, Education and Treatment," was the title of a paper presented by the program coordinator to the Worcester District Medical Society, Worcester, Massachusetts.

Program coordinator presented a paper at the Region III Annual Convention of the American Podiatry Association in Atlanic City.

Program coordinator contributed a chapter, "Treatment of Vascular Complications of Diabetes Mellitus" to *Modern Treatment*, published by Hoeber Medical Division of Harper and Row.

Research and Special Projects

In conjunction with Opinion Research Corporation of Princeton, New Jersey, Phase I of a two-part study on "The Diabetic Employee in New Jersey Industry" was completed.

The second year of the special study of a total diabetes control program in a community was entered into in 1967. This project in Salem sponsored by a contract with U. S. Public Health Service, Diabetes and Arthritis Program, was strengthened by the assignment of a full-time public health service physician. All activities, including case-finding, follow-up, patient and professional education have progressed.

Grants-in-Aid

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

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

A grant was provided to the Academy of Medicine of New Jersey for four roving symposia on diabetes.

Diseases of the Nervous System and Special Senses

Ten thousand copies of the *Directory of Epilepsy Services* have been distributed since its publication in 1962 by this program and the New Jersey Consultation Service for Neurological Diseases. This booklet lists the major agencies, clinics, and diagnostic and rehabilitation facilities available in New Jersey to persons with epilepsy and neurologic problems. In response to the demand, a revised edition will be published in the near future.

The State Health Department has sponsored an annual symposium for electroencephalograph technicians for the past several years as part of its continuing professional education program. During the past year, in cooperation with the American Society of Electroencephalographic Technicians, this program arranged for non-member technicians to attend the annual meeting of the society in Atlantic City. This conference provided a comprehensive program and attendance by New Jersey technicians was markedly increased.

Electroencephalograph Machines

Electroencephalograph machines have been placed in 22 community hospitals since the inception of this demonstration project in 1953. The "EEG" machine enables a more accurate diagnostic approach by recording brain wave patterns. It has its greatest application in detecting convulsive disorders and brain tumors. Each of the participating hospitals is required to submit quarterly reports during the useful life of the instrument. (See Table 1.)

Neurological Consultation Service

The New Jersey Consultation Service for Neurological Diseases continued to function under a U. S. Public Health Service grant made to this department. The unit presently maintains six general neurological clinics located throughout the state. The majority of referrals made to this unit falls within the categories of seizures, brain damage, and mental deficiency. The broad spectrum of other neurological disorders is being evaluated with increasing frequency. Table 2 shows the locations and activities of the six clinics.

Table 1. Report of Electroencephalograph Services in 20 Hospitals
January 1, 1967 - December 31, 1967

	Number of Patients Examined	*Number of EEG Examinations*		
		Total	*Normal*	*Abnormal*
All Souls Hospital (Morristown)	229	254	185	69
Atlantic City Hospital	875	875	591	266
Burlington County Memorial Hospital (Mount Holly)	407	458	255	152
Clara Maass Memorial Hospital (Belleville)	607	671	372	235
East Orange General Hospital	382	382	189	193
Elizabeth General Hospital	725	667	428	311
Englewood Hospital	529	529	313	216
Hunterdon Medical Center (2 Quarters) (Flemington)	86	86	65	21
Jersey Shore Medical Center (Neptune)	629	629	437	192
Mercer Hospital (Trenton)	725	725	516	209
Monmouth Medical Center (Long Branch)	1,317	1,317	754	563
Morristown Memorial Hospital	1,601	1,601	1,073	528
Mountainside Hospital (Montclair)	745	745	443	302
Paterson General Hospital	825	841	483	358
Perth Amboy General Hospital	898	898	605	193
Presbyterian Unit Hospital (Newark)	506	506	392	114
Princeton Hospital	309	311	235	73
St. Elizabeth Hospital (Elizabeth)	582	592	346	237
St. Francis Hospital (Trenton)	532	549	372	177
St. Mary's Hospital (Hoboken)	269	288	183	86
Total	12,778	12,924	8,237	4,495

Table 2. Clinic Activities
Neurological Consultation Service
1967

Total number of patients referred—497

District	*Number of patients seen*	*Number of clinics held*	*No. of patients awaiting evaluation as of 12/31/67*	*Clinic Location*	*Counties served*
Northern	81	11	16	Hunterdon Medical Center, Flemington	Hunterdon, Morris, Somerset, Sussex, Warren
Southern	70	10	20	Ancora State Hospital Hammonton	Atlantic, Cape May, Camden, Cumberland, Gloucester, Salem
Central:					
Trenton	71	11	23	St. Francis Hospital Trenton	Burlington, Mercer, Middlesex
Long Branch	66	11	26	Monmouth Medical Center, Long Branch	Monmouth, Ocean
Metropolitan:					
Paterson	71	11	16	Paterson General Hospital, Paterson	Bergen, Passaic
Newark	81	11	31	Presbyterian Hospital Newark	Essex, Hudson, Union
Totals	440*	65	132		

* New patients—349 Revisits—91

Total number of patients admitted to Neurology Unit, New Jersey Neuro-Psychiatric Institute, Princeton—39

Heart and Circulatory Diseases

Heart disease in New Jersey, as in the nation, ranks as the leading cause of death in adults. This group of diseases continues to draw largely from the ranks of those in the upper age groups, being the cause of death for 56 percent of persons 65 years of age and over and for 45 percent among the 45-64 age group. The prevention of untimely death and disability continues to be the immediate goal of this program.

Congestive Heart Failure

The final year of the special heart project at St. Peter's General Hospital, New Brunswick, was essentially a follow-up period during which 10 patients expired, making a total of 21 of the original 50 patients who died during the term of the project. However, only six of the 10 deaths occurring in 1967 were attributed to heart disease. Of the remaining 29 patients on the project, 21 still attend the cardiac clinic, four have been discharged, one withdrew, and four moved. In general, the results of the project parallel those of similar projects in other states where a striking decrease in in-patient days for treatment of heart failure was noted but with less of an absolute decrease in total in-patient days.

Cardiopulmonary Resuscitation

Ten one-day training sessions in cardiopulmonary resuscitation were held at the B. S. Pollak Hospital, Jersey City, sponsored by this department in cooperation with the New Jersey College of Medicine and Dentistry. One session for industrial nurses only was included. During the year, 249 persons were trained, 84 physicians, one dentist, 132 hospital nurses, 22 industrial nurses and 11 para-medical personnel, making a total of 923 persons trained in 36 courses held since the inception of the project. Those trained cooperate with their local heart associations and community hospitals to train staff personnel and rescue squad members in their communities. The training course manual and examinations used in these follow-up training sessions have been revised. A wallet-sized certification card has been printed and is distributed to those persons who successfully complete the course and are authorized to use the technique.

Nutrition

The Diet Manual was revised and available for distribution in November, 1967. Diet is assumed to be one of the key etiological factors in coronary

atherosclerosis and resultant disease. It is evident that diet plays an important role in the prevention and control of heart disease. The four diet pads (bland, low calorie, fat restricted 1,800 calorie, and fat restricted 2,600 calorie) continue to be popular with professional persons in the state. During the year, 381 pads were requested and distributed to physicians, dietitians, and hospitals.

Diet counselors continue to function as part of the team of the Camden Area Stroke Project; the Atherosclerosis Research Project at St. Vincent's Hospital, Montclair; and the Home Economics Department of Douglass College of Rutgers—the State University.

Intensive Coronary Care

Intensive coronary care units continue to be the most feasible solution for the treatment of acute myocardial infarction patients. The six-bed intensive care units at Bergen Pines County Hospital, Paramus, and the Newark City Hospital have proved to be a valuable adjunct to the hospitals. The equipment for these units was loaned to the hospitals by this program and financial assistance has been provided for nursing personnel.

There were 150 hospital nurses working in intensive coronary care units who participated in the training courses held at Overlook Hospital, Summit, and Hackensack Hospital and sponsored by this program in 1967, making a total of approximately 800 nurses trained since the courses were started.

The School of Nursing of Rutgers—the State University, with the assistance of the Heart Program, obtained a U. S. Public Health Service grant to conduct six four-week courses in intensive coronary care for registered nurses. This department provided funds for the employment of an educational nurse-coordinator by the university to prepare the grant proposal and organize the course. Three hospitals, Overlook Hospital, Summit; Monmouth Medical Center, Long Branch; and, St. Barnabas Hospital, Livingston; are participating in the clinical practice sessions. Sixty-four nurses have completed the three courses given by the university to date.

Atherosclerosis Research Project (Anti-Coronary Club)

The Atherosclerosis Research Project at St. Vincent's Hospital, Montclair, instituted planned work on evaluation of blood lipids in hard- and soft-water areas during the past year and completed the first phase. Two groups of 30-39-year-old men were selected at random from two plants of the Western Electric Company, one in Winston-Salem, North Carolina (soft-water) and the other in Omaha, Nebraska (hard-water). All 400 men (200 in each group) had resided in the immediate area for a minimum of eight years to

insure a water effect if it were in evidence. Preliminary analysis of the data showed the blood cholesterol distribution in both areas to be the same but the triglyceride data in the hard-water area suggested a bimodal distribution and a possible protective effect. Also shown and somewhat unsuspected was a higher serum calcium level in the hard-water area of Omaha. These data were most encouraging and added impetus to the previously formulated plans for conducting such an evaluation in the United Kingdom. Should a similar pattern of lipid distribution appear in the United Kingdom study, plans are being made to expand the project to Norway using Gudbrandsal as the hard-water area and Oslo for soft-water. Doctor Paul Leren of Oslo, Norway, a well-known epidemiologist, has tentatively agreed to help with this phase.

It has been suspected from previous calcium studies in animals that Vitamin D might have an adverse effect on blood lipids in the human adult. Accordingly, a two-month trial was run on 10 normal volunteers using one supplemental therapeutic capsule of Vitamin D (50,000 IU) daily and then sampling lipids. The data analyses showed a significant rise in both cholesterol and triglycerides after only three weeks of ingestion with a return to starting levels in an additional five weeks. In an attempt to see if dosage was critical in this problem, a repeat study was started on the same volunteers using a 1,000 IU Vitamin D capsule as the dosage.

Accumulation of data in the studies reported last year on the modified fat diet study of the young coronary male and on the effect of calcium in animals has continued during the year. In the latter area, studies were extended to rabbits to see if the development of atherosclerosis could be retarded and perhaps even reversed with supplementation of calcium. This work has not yet been completed but several animals in the pilot study showed a definite protective effect by calcium when an atherogenic diet was fed to them.

Stroke Projects

Vascular lesions affecting the central nervous system continued to account for nine percent of deaths in New Jersey in 1967. Residual disability is estimated to have occurred in 20,000 additional persons as a result of a non-fatal stroke. This condition causes severe disruption in individual family and community life and imposes a staggering economic burden on the community. Stroke victims require extensive and prolonged medical care and many ancillary services to combat the social, vocational, and psychological problems involved. This program has attempted to assume leadership in stimulating and assisting community programs in this area.

Six hospital-based programs are currently functioning in the state with assistance from this department. These programs, located at Cooper Hospital, Camden; Morristown Memorial Hospital; East Orange General Hospital; Bayonne Hospital; Overlook Hospital, Summit; and, Presbyterian Hospital, Newark, were established to demonstrate the efficacy of early and intensive diagnostic, treatment and rehabilitative techniques for the stroke patient and to provide a planned follow-up program to return the stroke patient to his highest functional level in the community. A total of 1,700 cerebrovascular disease patients has been admitted to these projects since the program began in 1962. During 1967, 733 patients (526 new and 207 carried over from the previous year), were served.

The 526 new patients were evenly divided between the sexes. Twenty-seven percent were under 60 years of age. Eighty-four percent of the patients were admitted to the project within one month after their cerebrovascular accident. Private physicians referred 66 percent of the total patients with the remaining 34 percent being referred by resident physicians and other health personnel or agencies.

The average stay for two-thirds of the hospitalized patients was between three and eight weeks; only 12 percent were hospitalized longer than two months. On hospital discharge, 54 percent of the patients returned to their own homes or homes of relatives; 25 percent were admitted to long-term institutions; four percent were transferred to rehabilitation centers; and 17 percent were admitted to other facilities.

The assurance of an accurate diagnosis and modern treatment of the underlying conditions are prime objectives of these projects. As all patients remain under the care of their private physicians, the educational process is the method used to attain these goals. The following statistics tell the story for 526 new patients admitted in 1967.

A neurological consultation was obtained for one-half of the patients; 42 percent had spinal fluid studies; 43 percent skull x rays; 20 percent arteriography; 31 percent electroencephalography; 84 percent electrocardiography; and one percent ophthalynodynamonetry studies.

Treatment of the underlying conditions showed that 18 percent received anticoagulant therapy; four percent had cerebral surgery; and 3.4 percent had carotid surgery.

The educational patient re-socialization objectives of these projects were carried out by conducting 267 team conferences; 829 family conferences; 16 "stroke alumnae" social gatherings; 211 patient education sessions; 49 stroke project staff education sessions; and 22 general hospital or other education sessions.

Table 1. Services Provided by Stroke Projects

Service	*Clinic*	*Home*	*Hospital*	*Nursing Home*	*Other*	*Totals*
Physiatrist	205	..	1,587	113	..	1,905
Physical Therapist	3,184	680	7,862	1,199	81	13,006
Nurse (rehabilitation)	105	1,262	1,783	130	..	3,280
Occupational Therapist	1,785	..	1,929	40	..	3,754
Speech Therapist	1,070	..	1,444	261	..	2,775
Social Service	398	8	1,025	59	..	1,490
Nutritionist	2	173	173	..	..	348
Vocational Counselor	54	3	82	..	..	139
Psychiatric-Psychological	..	1	6	..	..	7
Homemaker-Home Health Aide	..	404	..	..	..	404
Totals	6,803	2,531	15,891	1,802	81	27,108

Accurate evaluation of results of these projects is difficult as it must necessarily be subjective and expressed in hidden, hard-to-measure, intrinsic values. However, the educational value may be expressed in terms of the slowly changing attitude toward cerebrovascular disease as a hopeless, untreatable condition of the aged to the modern, positive attitude of hopefulness through the application of preventive knowledge in early age and diagnostic, therapeutic and rehabilitation techniques at all ages to lead to the eradication of strokes as a major cause of disability and death in middle and old age.

The economic value may be expressed in terms of raising of medical costs but lowering the costs of welfare and loss of human productivity. Although no accurate figures are available, it may be said empirically that it costs the community more not to apply modern medical knowledge to this problem than it does to apply it.

Of the 733 patients served in 1967, 31 percent completed the program by reaching pre-determined goals, 16 percent died, 12 percent moved or left the program, and 42 percent are current cases carried over to 1968. The average length of patient activity in these projects is from six months to one year. Adequate community follow-up continues to be a limiting factor.

A breakdown of the 226 patients reaching pre-determined goals shows that 71.5 percent became completely independent in activities of daily living with almost half of them returning to pre-stroke activity including gainful employment. Another 17 percent became partially independent, being able

to care for themselves except in one or two activities. The remaining 11.5 percent required complete nursing care at home or in a nursing home.

Community Based Stroke Programs

The pattern of stroke service must be tailored to reflect the special nature of the community, its needs, resources, and potential. In some areas where the community hospital does not lend itself as a center for stroke coordination, a visiting team consisting of a physician (physiatrist), a visiting nurse, and a physical therapist, may be organized under a home health agency. This approach has been utilized in Atlantic City under the visiting nurse association. Since its inception, this project served 343 patients. During 1967, 37 new patients and 70 patients carried over from 1966 received service. Of the 37 new patients, one-half were referred within one month of their acute cerebrovascular accident; 86 percent were referred by private physicians; and 30 percent were under 60 years of age. There were 94 team conferences and 92 family conferences held. The educational activities consisted of 96 patient and family education sesssions and 22 staff education sessions.

Of the 63 patients reaching pre-determined goals, 76 percent attained independence in activities of daily living and an additional 15 percent attained independence in activities of daily living but required assistance with one or more activities. Only three patients needed total nursing care. Since no local support could be secured, the project was terminated at the end of the year having reached the limit of its demonstration value.

Table 2. Services Provided in Atlantic City's Community—Based Stroke Project, 1967

Service	*Clinic*	*Home*	*Hospital*	*Nursing Home*	*Other*	*Total*
Physiatrist	82	140	1	38	..	261
Physical Therapy	241	531	..	78	..	850
Nursing (rehabilitation)	244	553	..	184	..	981
Speech Therapy	28	..	..	..	..	28
Nutrition	..	2	..	..	..	2
Homemaker-Home Health Aide	..	91	..	..	..	91
Totals	595	1,317	1	300	..	2,213

Special Projects

The Transient Ischemic Attack Project to identify the "pro-stroke" patient, treat him and, hopefully, prevent a stroke continued at Cooper Hospital, Camden. Patients referred to this project are admitted to the hospital, investigated thoroughly by a team of medical and para-medical personnel, and treated as indicated. Upon hospital discharge, the patients are followed up by their private physicians or, in the absence of a private doctor, by a team physician.

The program continued to provide the services of a part-time cardiac consultant at Bridgeton Hospital where 198 patients were seen in the cardiac clinic in 1967.

Modest grant-in-aid assistance for part-time nursing and clerical services in the cardiac clinic at Newcomb Hospital, Vineland, was continued for the final year in 1967. Seventy-six patients were served this year.

Education

This program continued its support of the on-going professional education activities of the Academy of Medicine of New Jersey. Ninety physicians attended the two roving symposia on heart disease held at Atlantic City Hospital and Muhlenberg Hospital, Plainfield.

The program coordinator was a program participant at the annual meeting of the Association of State and Territorial Chronic Disease Program Directors and at the National Health Forum.

The following papers written by program personnel were published during the year:

1. Bierenbaum, M. L., Green, D. P., Florin, A. A., Fleischman, A. I., and Caldwell, A. B.: "Modified-Fat Dietary Management of the Young Male with Coronary Disease—A Five-Year Report," *J.A.M.A.* 202:119-123.
2. Fleischman, A. I., Hayton, T., and Bierenbaum, M. L.,: "Serum Lipids and Certain Dietary Factors in Young Men with Coronary Heart Disease," *J. Am. Dietetic Assoc.*, 50:112-115.
3. Fleischman, A. I., Yacowitz, H., Hayton, T. and Bierenbaum, M. L.: "Long-Term Studies on the Hypolipemic Effect of Dietary Calcium in Mature Male Rats Fed Cocoa Butter," *J. Nutr.* 91:151-158.
4. Fleischman, A. I., Hayton, T., and Bierenbaum, M. L.: "Objective Biochemical Determination of Dietary Adherence in the Young Coronary Male," *Amer. J. Clin. Nutr.*, 20:333-337.
5. Yocowitz, H., Fleischman, A. I., Amsden, R. T., and Bierenbaum, M. L.: "Effects of Dietary Calcium Upon Lipid Metabolism in Rats Fed Saturated or Unsaturate Fat," *J. Nutr.*, 92:389-392.
6. Fleischman, A. I., Hayton, T., and Bierenbaum, M. L.: "Serum Lipid Assay by Automated Methods: Analysis of Variation in Sample Preparation and Automated Chemistry," *Abstracts Technicon Symposium,* New York, p. 3.

7. Fleischman, A. I., Hayton, T., and Bierenbaum, M. L.: "Effect of a Polyunsaturated Diet Upon Adipose Tissue Fatty Acids in Young Coronary Males—A Five Year Cohort Study," *J. Amer. Oil Chem. Soc.*, 44:135A.
8. Fleischman, A. I., Hayton, T., and Bierenbaum, M. L.: "Seasonal Variations in Serum Lipids in the Young Coronary Male in Controlled Fat Diets," *Circulation, Part II, October* 1967.
9. Bierenbaum, M. L., Caldwell, A. B., Watson, P., and Mollek V.: "Fats and Fatty Acids in Excess," *J. Amer. Diet. Assoc.* 50:368-371.
10. Fleischman, A. I., Yacowitz, H., and Bierenbaum, M. L.: "Hypolipemic Effects of Different Sources of Dietary Calcium," *Federation Proc.* 26:795.

Division of Clean Air and Water

RICHARD J. SULLIVAN, *Director*

ROBERT S. SHAW, *Assistant Director for Water Pollution Control*

Programs:

Air Pollution Control ..... WILLIAM MUNROE
Program Coordinator

Solid Waste Disposal ..... ARTHUR PRICE
Program Coordinator

Water Pollution Control ..... ROBERT S. SHAW
Assistant Director

Division of Clean Air and Water

Air Pollution Control Program

The year 1967 was a period of significant activity in air pollution control in New Jersey. One era of the program ended and another began with the transfer of the Air Pollution Control Program (formerly Air Sanitation) from the Division of Environmental Health to the newly-created Division of Clean Air and Water. Further progress in the program resulted from the passage by the state legislature of four important air pollution control bills which the governor signed into law on June 15. Also, enforcement activity was intensified, the air monitoring system was expanded, a southern field office was opened, the motor vehicle project was advanced, the scope of the public information activity was broadened, Chapter VIII of the State Air Pollution Control Code went into effect, and public hearings on two additional chapters were held. Details of these and other developments will be found in the succeeding pages.

Transfer of the Air Pollution Control Program Into the New Division

On February 16, 1967, Governor Richard J. Hughes announced that Richard J. Sullivan was appointed by Dr. Roscoe P. Kandle, State Commissioner of Health, to head the Division of Clean Air and Water created on that date by the Commissioner's administrative order. Assigned to the new division were three programs: Air Pollution Control, Water Pollution Control, and Solid Waste Disposal. The Air Pollution Control Program had been known previously as the Air Sanitation Program, and all three programs had been a part of the Division of Environmental Health.

Mr. Sullivan came to the Division of Clean Air and Water from the Department of Labor and Industry, to which he transferred in 1956 from the State Department of Health. In the Department of Labor and Industry, he served as deputy director of the Division of Labor. In that capacity, he headed the Bureau of Engineering and Safety. No stranger to the problems of air pollution, he had served for 10 years on the New Jersey Air Pollution Control Commission.

New Jersey Air Pollution Control Commission Is Discontinued

The New Jersey Air Pollution Control Commission was discontinued June 15, 1967, when Governor Hughes signed into law Senate Bill No. 345. This law also transferred the commission's powers to the State Department of Health and provided for establishing a Clean Air Council in the department to advise the State Commissioner of Health.

1967 Air Pollution Control Legislation and Regulations

During the spring session of the 1967 New Jersey State Legislature, four major pieces of air pollution control legislation were passed. These four bills were signed into law by Governor Hughes on June 15, 1967. They amend or supplement the 1954 Air Pollution Control Act.

Specifically, the pieces of legislation were:

S–345, which amended the 1954 Air Pollution Control Act by abolishing the Air Pollution Control Commission and transferring its powers to the State Department of Health; required a permit and certificate system; set up the Clean Air Council, and supplemented the 1954 Act by establishing a clean air scholarship for graduate and undergraduate study and an intern program involving recipients of such scholarship aid;

A–228, which supplemented the 1954 act by conferring emergency powers upon the Governor for use during air pollution emergencies;

S–180, which amended the 1954 act by providing much stiffer penalties for violators;

S–443, which established (subject to approval by the federal government) a Mid-Atlantic States Air Pollution Compact with New York and the federal government, and, if any of them should join, with Delaware, Connecticut, and Pennsylvania.

During September and October, public hearings were held on two proposed regulations: Chapters 9 and 10 of the New Jersey Air Pollution Control Code. Chapter 9 spells out the procedure to be followed in obtaining permits to construct, install or alter, and certificates to operate equipment or control devices. These regulations were made necessary by the signing into law of S-345. In Chapter 9, the State Department of Health defines the categories of control apparatus and equipment for which a permit to construct and a certificate to operate are required. Chapter 9 was filed with the secretary of state on November 15, 1967, to become effective on January 15, 1968. This allowed for the required 60 days which must elapse between the promulgation of a code and the date when it becomes effective.

The hearing on Chapter 10 began on September 11. Because of the interest generated by this chapter, additional sessions of the hearing were necessary. These took place on September 18, October 6, and October 9. About 400 persons attended the sessions, representing coal, railroad and utilities companies, citizen groups, and others. The proposed code was designed to regulate the amount of sulfur in fuels, with the objective of removing 740,000 tons of sulfur dioxide annually, about 75 percent of the total, from the New Jersey atmosphere. The first phase of this three-phase program was to begin January 1, 1968, with the second phase intended to begin on October 1, 1970, and the third on October 1, 1971. The proposed code contained regulation of both commercial and noncommercial fuels, including both oil and coal. The oil provisions and coal provisions were promulgated separately in 1968 as Chapter 10 (oil) and Chapter 10-A (coal).

The chapters of the New Jersey Air Pollution Control Code which had been proposed, promulgated, or were in effect during 1967 were:

Chapter 1—Definitions
Chapter 2—Control and prohibition of air pollution from refuse disposal and salvage operations
Chapter 3—Municipal ordinances or regulations
Chapter 4—Control and prohibition of air pollution by smoke
Chapter 5—Control and prohibition of air pollution from combustion of solid fuel
Chapter 6—Prohibition of air pollution
Chapter 7—Control and prohibition of air pollution from solid particles
Chapter 8—Control and prohibition of air pollution from sulfur compounds in the forms of gases, vapors, or liquid particles
Chapter 9—Permits to construct, install, and alter, and certificates to operate control apparatus or equipment
Chapter 10—Control and prohibition of air pollution from sulfur dioxide caused by the combustion of fuel

Enforcement

Enforcement activity was intensified in 1967.

One of the first administrative steps taken was the appointment by Attorney General Arthur J. Sills, of a three-man pollution litigation team.

In March, to give added strength to the enforcement effort, the settlement penalties for violating the Air Pollution Control Code were doubled

within the limits then prescribed by law. Also, with the approval of the commissioner of health, procedures for processing cease-and-desist orders were streamlined. Under the new plan, such orders were issued directly by the division director. Cases requiring prosecution were referred immediately to the attorney general's office.

In 1967, there was expansion of the Technical Services Section, with increased emphasis on source sampling. In 1967, tests for compliance with the air pollution control code were made on 32 plants and 66 stacks. Table 1 analyzes the stack tests by chapter of the state code.

Table 1. Stack Compliance

Chapter	*Total*	*Compliance*	*Non-Compliance*	*Inconclusive*
5	13	8	4	1
7	32	10	21	1
8	21	14	7	0
Total	66	32	32	2

As an added measure in the enforcement of Chapter 5, the staff undertook a comprehensive review of the state's solid-fuel-burning installations. No court actions or penalties resulted from Chapter 5 investigations. One administrative hearing, involving Worthington Corporation, Pump and Heat Exchange Division, Harrison, took place. Worthington agreed to a schedule of changes designed to bring it into compliance with Chapter 5 by March 1, 1969.

Relative to Chapter 7, there was continued emphasis on ferrous foundries. Of New Jersey's 42 ferrous foundries, nine were found to be in compliance; 30 either under order and in the process of installing control devices, or under study; three out of business or moved out of state. Bituminous asphalt manufacturers and plants in several other manufacturing fields were also checked carefully for Chapter 7 compliance. Court cases on Chapter 7 violations involved three companies. There were eight administrative hearings concerning Chapter 7 violations and two penalty actions.

Chapter 8, which controls and prohibits air pollution from sulfur compounds in industrial processes, became effective March 1, 1967. Staff training sessions for enforcement personnel were held in March and the first order for a violation of this chapter was issued on May 11 to National Lead Company, Titanium Division, Sayreville, for failure to monitor stacks emitting sulfur dioxide. Other companies which were cited under Chapter 8 in 1967 include Columbian Carbon Company, Inc., South Brunswick; American Cyanamid Company, Linden; and Stabilized Pigments, Inc., Edison.

Table 2. Enforcement Actions, 1967

Chapters	*2*	*4*	*5*	*6*	*7*	*8*	*Total*
New violations	124	64	1	2	0	0	191
Repeat violations	32	18	0	1	0	1	52
Follow up	1,037	249	44	163	54	23	1,570
Plant evaluations	18	46	113	537	419	67	1,200
Complaint investigations	25	20	6	190	12	7	260
Departmental hearings	2	2	2	13	7	3	29
Effects surveys	5	13	5	355	14	6	398

The state received a total of $17,025 in penalties from violators of the various chapters of the air pollution control code. This includes the monies taken in by the attorney general's office and listed in his report.

Chapter 9, and the law on permits, necessitated setting up in the enforcement group, the Permits and Certificates Section. This section administers the Permits and Certificates Program under Chapter 106, P. L. 1967 (Title 26, 2C: 9.2) and the Tax Exemption Program for Air Pollution Abatement Facilities under Chapter 127, P. L. 1966 (N. J. S. A. 54:4–3 et seq.).

Up to December 31, 1967, 183 applications for permits to construct, install or alter control apparatus or equipment were received. After engineering evaluations, 151 of the applications were approved and 20 rejected. Action had not been completed on the other 12 applications by the end of 1967. Sixty-eight certificates to operate equipment upon completion of construction were requested, in response to which 40 90-day temporary and 27 permanent certificates were issued, along with one temporary certificate which was issued and later withdrawn after it proved unsatisfactory. The temporary certificates are replaceable with permanent ones after it is proven the operations are in accord with the New Jersey air pollution control code as well as with the information furnished on the application.

During the period covered by this report, 34 claims were submitted for tax exemption of 481 items of equipment, facilities, or devices which reportedly were used primarily for the purpose of abating or preventing pollution of the atmosphere. After technical review and evaluation, 288 certifications were issued. The original investment cost to the claimants of the items covered by these certifications was stated to be $7,769,927.

The estimated initial cost of air pollution control apparatus included in the applications for permits to construct, install, or alter control apparatus or equipment was $6,884,787. The added annual cost to the applicants for the operation of this control apparatus was $1,055,695.

On July 3, 1967, the southern field office of the Air Pollution Control Program was opened in Pennsauken.

The southern field office enables the air pollution control staff to be in closer contact with major sources of air pollution, to maintain tighter surveillance, to give speedier emergency services, and faster processing of air pollution complaints.

Research and Development

The Research and Development Section provided information and extensive data used in the development of New Jersey's new codes limiting the sulfur content of fuels. The New York-New Jersey air pollution abatement activity conducted by the federal government led to a federal recommendation that the sulfur content of fuels be limited by a one-step mechanism to be effective October, 1969. This recommendation was studied and it was decided that it would be more realistic in terms of availability of fuels to strive for the same essential goal in a three-step progressive reduction commencing in 1968 and ending in 1971.

The section helped develop the recommendations for sulfur limitations in each step. Detailed studies were made to determine the net effect of the reduction of sulfur dioxide emissions with each step. The section prepared tables and charts to accompany the public announcement of the new sulfur-in-fuels code and participated in the review of testimony gathered during the four days of public hearings.

The section assisted in the development of a new incinerator code for New Jersey which was scheduled for public hearing early in 1968. The code is designed to require the control of air pollution from incinerators to the best possible level attainable with the control systems presently available.

The section also prepared a treatise which dealt with the conversion of the various systems of units in use for measuring particulate emissions from incinerators. This was prepared to accompany the public announcement of Chapter 11, the proposed incinerator code.

The system of "alert" monitoring stations was expanded with the addition of stations located in Paterson, Perth Amboy, and Hackensack. Each

of these stations is equipped with apparatus to measure, on a continuous basis, sulfur dioxide, smoke shade, and carbon monoxide. The stations are connected by a telemetering network to central headquarters in Trenton.

The section engaged in the preparation of plans for a greatly expanded monitoring system for use in emergency air pollution control and air quality management. Approximate locations of proposed air monitoring stations and laboratories were determined and the specifications and physical arrangements for a comprehensive air monitoring laboratory, and for the central station in the headquarters in Trenton, were drawn up. A presentation on the status of the present monitoring system and a 10-point proposal for its future development was prepared.

The continuous monitoring of the ambient atmosphere in New Jersey was carried on throughout 1967 at the sites of three mobile air pollution laboratories: Bayonne, Newark, and Ancora. The record of levels of various major pollutants throughout the year is shown in Table 3 along with information on temperature and wind speed.

Motor Vehicle Project

The motor vehicle project entered upon phase II and phase III in August, 1967. These phases, which were in process as the year ended, involved trying out systems for testing air pollution from gasoline-powered vehicles with air pollution devices (phase II), and those without such devices (phase III). The testing systems, for which two prototypes were developed during the year, were designed for use in the testing lanes of state motor vehicle stations, to test all vehicles. In addition, these parts of the total project commenced during the year to provide baseline data on auto exhaust characteristics, as well as on the prototypes themselves, for eventual use in developing standards for exhaust emissions.

Scott Research Laboratories of Perkasie, Pennsylvania, was placed under contract by the State Department of Health for this research and to provide the department with a third prototype system, incorporating information gained from testing the earlier systems. The project includes plans that the third generation prototype be tested and evaluated in a pilot lane of a testing station. Plans also include time studies, system checkouts, and generation of continuing baseline data from vehicles being inspected. From these data, emission standards are to be determined for gasoline powered vehicles.

On December 1, 1967, Davidson Laboratory of Stevens Institute of Technology, Hoboken, N. J., submitted to the State Department of Health its final report on diesel powered vehicles. At the year's end, specifications

were being prepared for a smokemeter which would meet state requirements. Winslow Tele-Tronics, Inc., was also under contract to the State Department of Health to develop a prototype density smokemeter. Development of portable smoke guides for use by state and local enforcement agencies for on-the-road smoke evaluation in diesel vehicles was carried on during 1967. The 1967 diesel research work pointed to establishment of standards for diesel exhausts in 1968.

Laboratory

The Air Pollution Control Program laboratory furnished analytical laboratory service in the analysis and evaluation of particulate matter for quantity and for particle size of samples of stack emissions as collected by three stack sampling crews. The analysis of all particulate samples was geared to the expressed code requirements of Chapters 5 and 7. For Chapter 8 (control of sulfur compounds from industrial processes), analytical methods for determining concentrations and rate of emission of sulfur dioxide, sulfur trioxide, sulfuric acid mist, and other sulfur compounds such as hydrogen sulfide, were tested and applied to stack testing techniques. The laboratory staff conducted calibrations, standardizations, and analytical applicability of methods to meet a variety of requirements arising from practical sampling and testing of process emission of sulfur compounds into the atmosphere.

Chemical petrographic microscopy procedures were used to establish the identity of particle air pollutants for samples collected by personnel in field investigations of complaints.

Major New Equipment

To provide more accurate and complete data upon which to base decisions regarding air pollution emergencies in New Jersey, specially designed warning system sensing stations were developed in 1967. Personnel in the Research and Development section of the Air Pollution Control Program and the department's Graphic Arts Services section designed the prototype of the sensing station. The first such station to be installed for operation was located in Perth Amboy. Other 1967 installations took place in Paterson in July and in Hackensack in September.

The monitoring station consists of a cabinet which stands about six feet tall and five feet wide and contains an infrared carbon monoxide analyzer, a smoke index unit, and an electroconductivity sulfur dioxide analyzer. Each of these sensors is equipped with its own transmitter which sends signals representing the levels of the three contaminants in the area where the sensing station is located directly to the program's central office in Trenton over telephone lines. In Trenton, recorders automatically and continuously register the levels on continuous strip charts for instant reading.

Other major articles acquired by the Air Pollution Control Program in 1967 were two-way radios installed in field cars of the metropolitan field office, Newark, and the southern field office, Pennsauken.

The Enforcement Section was provided with additional stack sampling equipment.

Interstate Cooperation

Federal Abatement Conference

Phase I of the Federal Abatement Conference on Interstate Air Pollution in the New York-Northern New Jersey Metropolitan Area was held in New York in January, 1967. The control of air pollution by sulfur dioxide from industrial processes and fuel combustion was the subject of this conference. At its conclusion, the conference made seven recommendations to the secretary of the Department of Health, Education, and Welfare for abatement of sulfur dioxide and carbon monoxide in the metropolitan area. The federal government presented standards for sulfur dioxide in the ambient atmosphere.

In mid-March, an emissions inventory of particulates in the New York-New Jersey metropolitan area was begun, in preparation for phase II of the Interstate Conference, which was scheduled to be held in January, 1968.

Three-State Conference

Another instance of interstate cooperation was the representation of New Jersey, along with New York and Connecticut, at the Three-State Conference on Air Resource Management held at the City College of the City University of New York in May, 1967.

The technical advisory committee of the conference prepared a summary report. It made three recommendations: that the control agencies in the three-state area develop a strategy to reduce the number and severity of high pollution episodes; that the states initiate a systems analysis study of solid waste collection and disposal; that a permanent agency be established solely concerned with developing and maintaining a long-range program for air pollution control of the metropolitan region.

Air Pollution Emergencies

New Jersey continued to cooperate with New York in the regional air pollution warning system, which was originally set up by the New York-New Jersey Cooperative Committee on Interstate Air Pollution. The coordinating body of this committee is the Interstate Sanitation Commission.

On January 26, 1967, the commission recommended a first alert because of weather conditions and high levels of sulfur dioxide. New York and New Jersey declared a first alert. At midnight, the commission recommended that the states call off the alert but continue a watch. This they did until 7:00 A.M. on January 27, when atmospheric conditions warranted terminating the emergency period.

Watches were called August 16 to August 18, on September 8 and 18, and October 3 and 4.

DEPUTY ATTORNEY GENERAL

Legal action in pollution cases was markedly increased. A statistical summary of the air pollution cases is given below.

Table 4. LEGAL ACTIONS

Number of air pollution cases	48
Actions in superior court	8*
Actions in district court for recovery of penalties	23
Number of days in court on hearings	47
Motions	12
Orders to show cause (verified complaints)	6
Permanent injunctions	6
Administrative air pollution hearings	17
Departmental orders issued as a result of administrative hearings	17
Number of days at administrative hearings	35

*In two of these cases, the deputy attorney general's office was not a party to the action but was asked by the appellate division to file an *amicus curiae* (friend of the court) brief.

A statistical summary of the chapters of the state air pollution control code involved in the cases follows:

Chapter	*2*	*4*	*5*	*6*	*7*	*8*
Cases	18	4	1	7	14	2

Penalties for violations of various chapters of the state air pollution control code collected by the deputy attorney general's office totaled $8,609.

Decisions rendered in favor of the State Department of Health in two cases—against Shahmoon Industries, Inc., Phillipsburg, and against Salem Pipe and Iron Manufacturing Company, Salem—were especially notable in that the department was not only granted injunctive relief but also a financial penalty.

In 1967, violators of Chapter 6, at the urging of the attorney general's office, filed corrective programs with the understanding that failure to comply with any phase of the pollution abatement program would subject the companies to immediate court action.

The following air pollution cases were handled by the attorney general's office in 1967.

Cases tried in Superior Court:

1. Laytham Foundry, Paterson
2. Stabilized Pigments, Inc., Edison
3. Shahmoon Industries, Inc., Phillipsburg (Appellate Div.)
4. Luzerne Rubber Company, Trenton
5. Shahmoon Industries, Inc., Phillipsburg (Chancery Div.)
6. Salem Pipe and Iron Manufacturing Company, Salem
7. Borough of Verona vs. Benjamin Shalit, Verona (amicus curiae)
8. Township of Woodbridge vs. Hatco Chemical Company, Middlesex County (amicus curiae)

Administrative Hearings:

1. Worthington Corporation, Newark
2. Columbian Carbon Company, South Brunswick Township
3. U. S. Pipe and Foundry Company, East Orange
4. Agway, Inc., Hamilton Township
5. Southbridge Plastics, Clifton
6. National Lead, Sayreville
7. Palmyra Foundry, Palmyra Borough
8. Pitt-Consol Chemical Company, Newark
9. Hatco Chemical Division, W. R. Grace & Company, Woodbridge Township
10. Omni Chemical Corporation, Union City
11. Allen Industries, Inc., Rahway
12. H. G. Enderlein Company, Washington Township
13. The Ruberoid Company, Division of General Aniline & Film Corporation, Bridgewater Township
14. Wood Industries, Inc., Plainfield

15. U. S. Mineral Products Company, Stanhope
16. Agrico Chemical Company, Division of Continental Oil Company, Carteret
17. Owens-Corning Fiberglas Company, Barrington

Penalty Actions:

1. M & N Modern Hydraulic Press Company, Clifton
2. Edward Cantor, Linden
3. Towne Cleaners Inc., Roselle
4. J & J Equipment, Jersey City
5. James Matteo & Sons, Inc., Thorofare
6. Manno Dining Car Company, Caldwell
7. A & A Kaplan, Inc., Hightstown
8. Leimpeter's Disposal Service, Carteret
9. Totowa Wayne Airport, Totowa
10. Dewey's Garage, Inc., Newark
11. Derrickson, Trenton
12. Palmiere t/a Pre-Cast Concrete, Caldwell Township
13. Anglino Devino, Newark
14. Richlee Dyeing & Finishing Company, Paterson
15. Central Wrecking & Building Supply Corp., Little Falls
16. Shahmoon Industries, Inc., Phillipsburg
17. Salem Pipe and Iron Manufacturing Company, Salem
18. Leimpeter's Disposal Service, Carteret
19. Pre-Cast Concrete Company, Fairfield
20. Concrete Plank Company, Jersey City
21. Arrow Mercerizing & Dyeing Company, North Bergen
22. Pre-Cast Concrete Company, Fairfield
23. Senrich, Inc., Bridgewater

Personnel and Training

To carry on the increased functions of the Air Pollution Control Program, it was necessary to add new personnel in 1967. The Enforcement Section added 14 men in the central field office, seven on stack testing teams and a senior chemist. Three men and two secretaries were added in the metropolitan field office, Newark, one of the men being a senior field representative. Four men were added to the southern field office. A research scientist was added to the research and development staff of the headquarters office. At the beginning of 1967 the program's staff numbered 61; at the end of 1967 it numbered 80.

Financial

The air pollution control effort continued to be supported during 1967 by both federal and state funds. Due to the expiration of certain contracts, the federal funds provided during 1967 amounted to $401,175 as compared to $485,300 in 1966. State funds, on the other hand, increased to $674,807 in 1967 as compared to $400,000 for 1966.

Table 5. Financial Data

Item	*State Funds*	*Federal Funds*	*Total*
Salaries	$431,591	$99,450	$531,041
Motor vehicle project	19,898	204,400	224,298
New cars for motor pool	21,030	.....	21,030
New scientific equipment	59,935	14,382	74,317
New office equipment	4,284	88	4,372
Printing and office	14,138	13,605	27,743
Rental of metro. field office	11,125	8,520	19,645
Rental, central motor pool	16,852	8,439	25,291
Data processing	2,880	15,466	18,346
Other professional	29,428	.....	29,428
Other	63,646	36,825	100,471
Total	$674,807	$401,175	$1,075,982

Public Information

The growing scope of the Air Pollution Control Program is reflected in the increased public information activity in 1967. The growing public awareness of the problem of air pollution is also reflected in the number of requests for information which the public information office handled in the last 12 months.

During 1967, this office processed 2,500 requests for information, the queries coming from individuals ranging from municipal officials and graduate students to children in the elementary grades at schoool.

Six issues of the bi-monthly newsletter AirSan were printed, giving news of air pollution control activity in New Jersey to 23,000 persons.

The work of the Air Pollution Control Program was discussed in 125 speeches. Almost half of these speeches were either by the director of the division or the chief of the program.

Twenty-one film requests were filled during 1967.

Solid Waste Disposal Program

This program became a part of the Division of Clean Air and Water on February 16, 1967.

A considerable part of the effort during the year was the planning of the program to achieve maximum federal financial support. A great deal of project writing was devoted to this objective.

It was decided to evaluate waste disposal practices and problems in each municipality of the state. The evaluation was to include a determination of the kinds of refuse to be disposed of and the methods of disposal, such as landfill, incineration, and composting. Considerable time was spent in developing standard inspection forms that would permit collection of data in a uniform manner. A start was made on the collection of data.

There was initiated a review of state laws and local ordinances which affect solid waste disposal to determine what legal resources existed and what additional legal strength was needed.

Attention was also given to activities in other departments of state government which affect solid waste disposal. For example, working with the Department of Agriculture, it will be possible to determine the magnitude of the waste disposal problem as it pertains to waste from crops, animals, and poultry.

As 1967 ended, the program had made progress in defining the areas in which more information was needed and in developing the information-gathering activities to obtain that information.

Water Pollution Control Program

After engineering review of plans and specifications, the department issued 242 permits for construction of sewerage projects to reduce the pollution of New Jersey waters. The estimated cost of these projects was $53,600,000. This is to be compared with 168 permits at estimated aggregate cost of $48,200,000 in 1966.

The state has a program, administered by the Health Department, under which it makes grants to pay for area studies for the determination of feasibility of sewerage plans. Grants were made to 18 applicants in 1967, for a total cost of $722,350. During the year, nine feasibility studies were completed and paid for in the amount of $366,300.

State funds are made available for loans to sewerage authorities for preparation of engineering plans and specifications for sewerage facilities. During 1967, loans were approved to 22 applicants in the amount of $2,202,152.

Orders of Necessity were issued to 16 municipalities permitting them to exceed their allowed bonded indebtedness for the construction of needed sewerage facilities.

An oceanographic study for Ocean and Monmouth counties was approved to cover a two-year period.

Fourteen permits were issued for the location of factories or workshops on New Jersey watersheds.

Pursuant to R. S. 58:10–1, eight orders were issued requiring the abatement of pollution of waters of the state.

There were 120 orders issued pursuant to R. S. 58:12–2 requiring the up-grading of sewage treatment.

Two orders were issued pursuant to R. S. 26:1A–26 (nuisances).

In addition, amended water pollution abatement orders were issued to 21 communities.

The state water pollution control function administers a program of federal and state grants-in-aid to construction of sewage treatment facilities. These programs operate on a fiscal year basis (July 1 to June 30). In the year starting July 1, 1967, federal funds in amount of $5,790,000 and state funds in amount of $2,898,200 were made available. After careful determination of priorities, these monies were allotted to construction projects.

Several items of legislation affecting the Water Pollution Control Program were passed into law in 1967. They include provision for the clean air and water scholarship program, property tax exemption on facilities built primarily for water pollution control, construction grants for sewage treatment plants, grants for sewerage feasibility studies, state loans for preparation of sewerage plans and specifications, and the establishment of a clean water council to act in an advisory capacity to the State Health Department in matters pertaining to water pollution control.

Work was started in 1967 and finished early in 1968 on a comprehensive survey of sewerage facilities needed throughout New Jersey. The results of this study were used in the preparation of a statement made to the Governor's Commission on Capital requirements. The cost of treatment plants needed in the next five years totals $762,000,000.

Major sewerage projects were completed in 1967 by: (1) Hamilton Municipal Utilities Authority (Atlantic County); (2) Town of Hammonton and; (3) Cinnaminson Township Sewerage Authority.

Program Activities

There were 2,090 routine surveillance inspections made.

There were 12,540 routine samples collected.

The laboratory analyzed 25,080 samples.

There were 189 special water pollution investigations made.

There are 190 stream sampling stations, each of which was sampled four times during 1967, four samples each time, and laboratory determinations made.

Some special assignments included:

(1) West New York—An engineering representative of the department was assigned by the Hudson County Superior Court to straighten out deficient operating practices. The assignment actually involved three engineers who spent a total of 37 man-days on the job.

(2) Special surveillance of 15 waste-water treatment plants on the ocean front involved four field workers for a total of 83 man-days.

(3) Sanitary surveys of communities without sewers required a total of 90 man-days.

(4) Court appearances required a total of 48 man-days.

(5) Other assignments for engineering personnel involved presentation of talks before various groups and organizations, participation in conferences, seminars and lectures, meetings with municipal and other governmental agencies, as well as public hearings.

(6) Approximately 10 engineering man-days were spent developing proposals, networks, parameters, and on liaison with other agencies for an automatic water quality monitoring, telemetering, and data processing system.

(7) The engineering staff spent approximately 20 man-days performing audits at treatment plants which were constructed under the federal construction grants program.

The hydro-biologist assigned to the program performed the following work details:

Field inspection of pollution related problems	86 days
Special reports and memos on field studies	60 days
Laboratory work	20 days
Meetings and conferences	10 days
Equipment purchase and maintenance	5 days

A conference on the pollution of navigable waters of eastern New Jersey from Shark River to Cape May was held in Atlantic City by the Federal Water Pollution Control Administration. Conclusions and recommendations were agreed upon by the conferees concerning the pollution problems in the area and upon New Jersey's plans for pollution abatement and control.

The department promulgated regulations concerning treatment of waste-waters, domestic and industrial, separately or in combination, discharged into the waters of the Delaware river basin, the Wallkill river basin, and the Atlantic coastal basin from Sandy Hook to Cape May.

The third session of the Interstate Conference on Pollution of the Raritan Bay and adjacent interstate waters was held in New York City on June 13th and 14th. The conferees, including representatives of the Federal Water Pollution Control Administration, the Interstate Sanitation Commission, the State of New York, and the State of New Jersey, reached agreement on the pollution abatement plan and program for the area.

The second session of the Interstate Conference on the Pollution of the Interstate Waters of the Hudson River and its Tributaries was held in New York City on September 20th and 21st. The same interests were represented in this conference as in the aforementioned conference on the Raritan Bay. Agreement was reached among the parties present on the pollution abatement plan and program for the area.

Regulations classifying surface waters of the Delaware River basin and of the Wallkill River basin were adopted. These actions now complete the formal classification measures initiated by the department early in 1965 for all state and interstate surface waters.

Effective liaison was maintained throughout the year with all interstate agencies with which we are concerned and with the Federal Water Pollution Control Agency.

Progress was made during the year on bringing into effect the regional concept of dealing with pollution problems.

Division of Constructive Health

WATSON E. NIEMAN, M.D., M.S.H.A., *Director*

Crippled Children's Program	WATSON E. NEIMAN, M.D., M.S.H.A. *Program Coordinator*
Dental Health Program	DAVID R. WALLACE, D.D.S., M.P.H. *Program Coordinator*
Maternal and Child Health Program	BERNARD N. MILLNER, M.D., F.A.A.P. *Program Coordinator*
Accident Prevention and Poison Control Program	EDMOND D. DUFFY, JR., M.P.H. *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 28,625 children registered with the program at the end of 1967 as compared with 27,183 children registered in 1966 and 25,880 in 1965. There were 3,442 children added to the program in 1967 compared with 3,279 in 1966, and 3,845 in 1965. Of the total number of children registered with the program, 9,370 received services in 1967 as compared with 9,807 in 1966, and 11,282 in 1965.

Hospitalization and Convalescent Care

The program assisted in underwriting 20,013 hospital bed days and 30,930 convalescent bed days for 825 children in 1967 as compared with

23,467 hospital bed days and 29,946 convalescent bed days for 866 children in 1966, and 21,488 hospital bed days and 30,308 convalescent bed days for 698 children in 1965. In 1967, the total expenditure for these services amounted to $753,593.99.

P. L. 89-97, July 30, 1965, required the Crippled Children's Program to pay reasonable costs for in-patient hospital care not later than July 1, 1967. This requirement was implemented on that date. Up until July 1, 1967, the program was paying a maximum of $20 per day for hospital care and up to $12 per day for convalescent care. Since July 1, 1967, the program has been required to pay over $98 per day for hospitalization in certain hospitals in New York City and over $40 per day for convalescent care in approved convalescent centers. The average cost for hospitalization at the end of the calendar year was well in excess of $50 per day and the average cost for convalescent care was in excess of $30 per day.

During 1967, we agreed to participate with 69 New Jersey hospitals, nine New York hospitals and six Philadelphia hospitals. We cooperated with five convalescent centers in New Jersey and one in the State of New York. Effective November 20, 1967, the program withdrew its participation in New York hospitals when the same services are available in New Jersey, as costs in New Jersey are much lower.

Prosthetic Devices, Bracing and Appliances

In 1967, the program assisted in providing 2,421 braces and artificial limbs for 1,152 children as compared with 2,252 appliances to 1,011 children in 1966, and 2,827 appliances to 990 children in 1965. The total cost of these devices in 1967 was $249,470.00.

Nursing Services

The program helped pay for 9,983 nursing visits to 6,307 children in 1967. This is an increase from the 9,071 nursing visits provided to 6,180 children in 1966. In 1965, 9,962 nursing visits were provided to 7,686 children. Nursing agencies were paid $49,652.27 for services rendered in 1967. 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 1967 and children served, compared to similar categories in 1966 and 1965.

Table 1. Evaluations and Children Served, 1965-1967

	1967		1966		1965	
	Evaluations	*Children Served*	*Evaluations*	*Children Served*	*Evaluations*	*Children Served*
Asthma	22	22	8	8	18	18
Amputee	46	45	12	11	18	18
Cardiac	8	5	41	20	36	36
Cleft Palate	27	25	28	25	51	51
Cystic Fibrosis	7	7	21	8	21	21
Hearing and Speech Evaluations	312	312	274	213	250	250
Hearing and Speech Therapy	2,522*	150*	5,649	203	4,282	240
Orthodontia	71	71	323	125	32	32
Physical Therapy	935*	45*	1,179	52	1,620	100

* For the period ending June 30, 1967, at which time these programs were discontinued.

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

Hospital, Convalescent Care—Total Number of Children	825
Total Bed Days	50,943
Hospital	
Number of children receiving hospital services	616
Number of bed days	20,013
Convalescent Care	
Number of children receiving convalescent services	209
Number of bed days	30,930
Payment of Bed Days (Hospital and Convalescent Care) Total	$753,593.99
State and Federal Funds	$463,518.79
County Boards of Chosen Freeholders	260,893.47
Others	8,321.66
Parents	20,860.07
Appliances	
Total Number of Children	1,152
Total Number Purchased	2,421
Total Payments	$249,470.00
State and Federal Funds	$142,162.61
County Boards of Chosen Freeholders	92,559.14
Others	4,847.40
Parents	9,900.85

Table 3. Clinic, Hospital, and Convalescent Services

Section I—Children who received clinic, hospital, and convalescent services, and the number of services:

Services	*Number of Children*	*Number of Visits or Days*
Clinic	10,989	17,930 Visits
Hospital	616	20,013 Days
Convalescent	209	30,930 Days
Total Count of Children and Services	11,814	68,873 Units

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

Total Number of Children 9,370

County	*Number of Children*	*County*	*Number of Children*
Atlantic	276	Middlesex	658
Bergen	621	Monmouth	490
Burlington	314	Morris	637
Camden	693	Ocean	189
Cape May	52	Passaic	260
Cumberland	229	Salem	83
Essex	2,259	Somerset	295
Gloucester	259	Sussex	134
Hudson	662	Union	733
Hunterdon	117	Warren	54
Mercer	317	Military	14
		Institutions	24

During 1965, the Crippled Children's Program offered to all counties an opportunity to reverse the program-county participation ratio. In 1965, 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 were paying 60 percent of the cost; while at the end of 1967, 16 counties were paying 40 percent of the cost and five counties still were paying 60 percent. As in the past, some counties have had difficulty in meeting their share of the cost and no county has been willing to add new diagnostic categories of crippled children because of the extra cost involved. Before the end of the year, four counties ran out of money to pay their share of costs. All counties which ran out of money had appropriated the maximum amount permitted by law; therefore the program picked up their share of the costs for the balance of the year.

Dental Health Program

Introduction

Long range planning is the major objective for the Dental Health Program as interest in dentistry continues to grow. The goals of implementing prevention, better utilization of manpower, continuing education, new educational programs, and restorative programs cannot be reached suddenly. The priority that dentistry has for public funds has been recognized as low. However, the Dental Health Program made preparations in 1967 to best utilize the available monies and plan for broader programs.

The Dental Health Program actively supported the New Jersey State Dental Society and the New Jersey Public Health Association in promoting fluoridation. We are well aware that prevention in dentistry is the only approach that has realistic goals. Were dentists to line up on the east coast and restore all the people's teeth, they would get only as far as Harrisburg before they would return to maintain oral health—good health. Manpower and money cannot solve the problem; prevention is the real hope.

Proper nutrition was emphasized during the summer programs. The beneficial results of this were shown on subsequent examinations. The professional interest that was elicited by this program was evidenced by the number of pamphlets and inquiries received from nurses and dentists.

Dr. Donald R. Cowan, the assistant dental coordinator, left to head the Dental Health Program in Delaware. Dr. John G. Long completed his residency on June 30 and replaced Doctor Cowan. He is the first dentist in the residency program who remained to join the staff. The national residency program in dental public health has been in operation here since its inception five years ago. The graduates are throughout the country: California, New York State, Alabama, etc. They will be eligible to become diplomates starting next year.

Program efforts suffered a severe loss when Dr. John G. Carr passed away. He was the secretary of the New Jersey State Dental Society. He had many years experience in dental organizational activity. Doctor Carr's broad knowledge of current issues and understanding of the operation of the various American Dental Association Councils made him eminently qualified to represent the Dental Society in cooperating with the program. His election to the office of second vice-president of the American Dental Association to serve during the year 1967 was an acknowledgement of his contributions. His loss is great.

Preventive Programs and Dental Health Education

Fluoridation in New Jersey in 1967 we view as again another year of preparation. We were consultants. In the immediate future as more and more people see the need of dental restorative services for all groups, fluoridation must assume a dominant place—PREVENTION. We know of no other measure today to radically alter the need of restorative services than adding fluoride to the community water supply to reach the optimum level.

The dental treatment services were extended from 206 to 223 school districts. We had as one objective to reduce the number of examinations (inspections) and increase the number of operations per child. We accomplished these objectives during the year and hope to keep up the trends of more treatments per child and less looking for the sake of looking. (Table 1)

We increased the number of dentists in the program from 114 to 134 but decreased the number of hours of operating time due to less available funds from 14,812 to 13,666. (Table 2)

The pre-school dental inspection program has changed its emphasis. We are encouraging the school districts to have the parents take the pre-schoolers to the family dentist. The family dentist signs a form that he examined the child's teeth. This has a two-pronged impact. The child will get treatment along with the examination and the pattern of relating to the family dentist is established.

A great deal more effort must be expended in this area to change the pattern. We are attempting to encourage less duplication of service by the schools. Our objective is for all pre-schoolers to have examinations and treatment by the family dentist where possible and by agencies for the dentally indigent when there is the economic barrier. Tables 3 and 4 show the trend away from inspections without facilities for treatment. It also shows the gradual decline in (def) decayed, extracted and filled teeth per child. This is the expression of caries experience of the particular teeth in a child.

We participated in the dental program of the Newark Pre-School Council, Inc. Seven dentists examined the children and rendered services in private offices. A total of 621 treatments were performed. Only 15 of these were extractions of deciduous teeth.

A symposium for school dentists was conducted in cooperation with the New Jersey State Dental Society. One hundred and thirty-two school dentists participated. The results of this meeting should yield stronger school programs.

Pulp treatment saves teeth and we cooperated with Fairleigh Dickinson University School of Dentistry in developing a course for "Pediatric Dentistry with Emphasis on New Concepts in Pulp Treatment." Forty-eight older dentists participated. The faculty of the New Jersey College of Medicine and Dentistry in cooperation with the Dental Health Program brought two courses in "Emergencies in a Dental Office" to convenient locations for the dentists.

Treatment for cleft palate patients is improving as new concepts are developed. One hundred and twenty dentists attended a symposium that the Dental Health Program developed in cooperation with the New Jersey State Dental Society.

We continued our interest in cancer of the oral regions by assisting in a program that the Dental Society sponsored. We cooperated in a course at Fairleigh Dickinson and made plans to have the course at Monmouth Medical Center in Long Branch during 1968 to encourage broader participation because of location.

Handicapped children present an identifiable problem for the dentists. We planned to have the faculty of the New Jersey College of Medicine and Dentistry participate in programs in three locations in hospitals in 1968.

We are acting as consultants to Mercer County Community College. They are planning a future program for dental assistants.

The Dental Health Program provided the 13 migrant schools in 1967 with seven clinical dentists, each with a dental assistant. The United States Public Health Service provided eight dental students. They were on a traineeship grant and assisted the dentists. They were imaginative and functioned well in making a strong impact in the schools. They not only taught the children, but educated the school personnel and by cross fertilization enriched the clinical dentists. (Table 5.)

The Dental Program related to the Crippled Children's Program by providing dental services to those with crippling handicaps. Children with gross malocclusions are classified as having a crippling defect. Dental services for all crippled children were provided in the following hospitals: All Souls' Hospital; Camden County General Hospital; Cooper Hospital; Monmouth Medical Center; Morristown Memorial Hospital; and St. Barnabas Medical Center.

Studies

During the summer, the dental students, one dental public health resident, and an assistant dental coordinator participated in a study to learn the needs of an indigent population and to approximate the amount of time and units of work necessary to restore the child to good dental health. This then could be translated into budgeting of money. While this study only relates to one population, there is absolutely no study that identified the unmet needs of indigent populations. This study was published in the *New Jersey State Dental Society Journal.*

The studies on hospital dental facilities and the dental needs in a specific school population in two communities, one with a dental health program and the other without a dental health program, has provided the Dental Health Program with useful information.

Today, Title XIX—Medicaid—with dental implications is of great interest to the dentists in New Jersey. One of the new residents is gathering information on what the dentists think in certain specific areas. This information will be useful to any agency interested in this broad area. The other resident is gathering information from senior dental students on their views of certain dental problems. When this information is analyzed, hopefully we can improve our programs of continuing education for the dental practitioners.

Cooperation with Other Agencies

The Dental Health Program acted as consultants to the State Department of Education and cooperated with them in a dental treatment program in 13 schools during the summer of 1967. We also 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 migrant laborers and their families.

The Dental Health Program cooperates with the New Jersey College of Medicine and Dentistry, Fairleigh Dickinson University School of Dentistry, and the New Jersey State Dental Society in continuing education courses for dentists.

The Dental Health Program continued to cooperate with the Crippled Children's Program in providing rehabilitation services for patients with cleft palates. We provided complete dental services for handicapped children, including orthodontic treatment for those with a handicapping condition.

The Dental Health Program, because of its residency program, will make available to the dental director of the Department of Institutions and Agencies information about what the dentists think about certain areas of Title XIX. This is a manifestation of the coordination of efforts of the two departments.

Statistical Data

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

Table 1. DENTAL TREATMENT PROGRAM, FIVE-YEAR COMPARISON

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
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
1967	134	223	59,763	7,719	52	17	774

Table 2. TREATMENT PROGRAM STATISTICAL DATA

January 1, 1967 to December 31, 1967

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.	2	2	390	836	656	1,778	125	51	41
Bergen	1948	P. O.	7	5	582	1,985	860	2,494	227	168	74
North Arlington	1940	Cl.	1	1	527	1,815	2,493	1,472	181	165	91
Rutherford	1945	Cl.	1	1	75	845	156	372	60	48	80
Burlington	1943	P. O.	4	6	165	1,773	321	1,117	99	64	65
Burlington City	1943	Cl.	2	1	171	445	476	1,083	78	23	29
Camden	1943	Tr.	1	9	425	3,304	518	1,365	276	257	93
Lawnside	1944	P. O.	1	1	28	17	56	148	22	6	27
Cape May	1958	P. O.	5	6	298	200	505	1,497	211	72	34
Cumberland	1955	Tr.	1	15	702	1,199	1,502	1,209	793	349	44
Essex	1966	P. O.	8	2	208	192	375	606	204	59	29
Bloomfield-Montclair	1964	Cl.	3	2	641	576	1,187	5,039	482	254	53
Orange—Parochial	1944	Cl.	3	1	490	191	1,019	3,153	191	170	89
Orange—Public	1964	Cl.	2	1	378	91	767	1,559	229	63	27
Gloucester	1947	Tr.	2	11	440	16,780	771	491	380	183	48
Hudson	1966	P. O.	1	1	155	70	313	332	70	13	18
Hunterdon	1940	Cl.	1	25	330	618	830	702	473	120	25
Mercer	1966	P. O.	2	1	93	23	46	251	23	.....	...
Middlesex	1942	P. O.	14	5	473	204	744	2,502	166	90	54
Edison Township	1963	Cl.	1	1	76	31	121	240	53	.....	...
Kiddie Keep-Well Camp	1942	Cl.	1	1	198	306	469	589	271	102	38
New Brunswick	1967	Cl.	2	1	59	28	108	239	24	.....	...
Monmouth	1941	P. O.	11	10	504	1,912	978	2,582	356	243	68
Matawan	1945	Cl.	3	3	296	4,851	449	1,003	116	41	35
Union Beach	1946	Cl.	1	1	102	899	224	306	168	39	23
Collier Foundation	1945	Cl.	1	1	52	86	88	148	33	10	30
Morris	1943	P. O.	18	30	1,156	570	2,148	4,967	656	340	53
Dover	1964	Cl.	7	1	300	125	356	789	80	25	31
Ocean	1944	P. O.	5	4	206	130	308	1,190	97	49	50
Trailer	1946	Tr.	2	9	661	527	1,361	9,894	312	245	78
Passaic	1962	P. O.	3	3	143	67	235	1,065	50	27	54
Wayne	1967	Cl.	1	1	337	141	425	1,036	124	71	57
Salem	1955	Cl.	1	17	81	158	162	400	142	.....	...
Somerset	1942	Tr.	1	6	926	10,153	524	1,594	284	161	57
Sussex	1942	P. O.	12	28	685	378	1,195	2,862	334	245	73
Warren	1947	Tr.	1	9	926	335	1,876	3,599	329	277	84
Phillipsburg	1954	Ed.	2	1	387	.....	......	......	.....	.....	...
TOTALS (20 Counties)			134	223	13,666	50,817	24,682	59,763	7,719	4,036	52

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

Table 3. Pre-School Dental Inspection Program in Four Counties

Counties	*Number of School Districts*	*Number Examined*	*Number Requiring Treatment*	*Percent Requiring Treatment*	*Number of d e f Per Child*	*Number of Dentists*
Gloucester	14	969	322	33	1.8	12
Ocean	8	656	306	46	2.6	4
Passaic	2	424	225	53	2.5	2
Warren	16	676	323	47	2.9	10

All of the above inspections were conducted during the spring of 1967.

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*
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
1967	4	40	2,725	1,176	43	2.4	28

Table 5. Migrant Dental Treatment Program For Children of Migrant Workers
July 3, 1967 to August 25, 1967

County and Community	No. of Dentists	No. of Examinations	No. of Visits	Permanent Extractions	Deciduous Extractions	Amalgam Fillings	Other Fillings	Temporary Fillings	Lisings	Prophylaxis	X-rays	Fluoride Treatments	Children Treated	Cases Completed	Percentage of Completed Cases
ATLANTIC COUNTY															
Hammonton	1	54	82	1	6	81	7	1	..	44	..	14	54	16	29.6
BURLINGTON COUNTY															
Jobstown	1	46	141	..	..	71	2	..	..	98	..	69	46	..	..
Vincentown	(1)*	69	107	..	55	78	4	..	2	62	..	62	69	15	21.7
CUMBERLAND COUNTY															
Cedarville	1	107	115	3	9	..	1	..	..	101	..	100	98	..	..
Port Norris	1	179	192	4	18	..	..	15	20	168	..	155	179	9	5.0
Rosenhayn	(1)*	93	100	1	11	..	..	..	..	90	..	90	91	..	..
Stow Creek	(1)*	53	57	1	2	..	..	..	..	51	..	52	52	10	19.2
GLOUCESTER COUNTY															
Franklinville	1	35	32	..	2	1	..	5	..	24	..	24	35	..	..
MIDDLESEX COUNTY															
Cranbury	2	97	206	4	4	164	4	5	87	88	13	77	97	57	58.7
South Brunswick	(1)*	58	104	..	6	102	1	1	88	54	..	54	58	32	55.1
MONMOUTH COUNTY															
Clarksburg	(1)*	67	101	..	..	57	..	..	..	50	..	46	53	..	..
Englishtown	(1)*	136	225	6	18	144	4	11	142	134	22	134	136	75	55.1
SALEM COUNTY															
Woolstown	(1)*	80	88	6	6	23	7	5	4	82	1	82	77	1	1.2
TOTALS	7	1,074	1,550	26	137	721	30	43	343	1,046	36	959	1,045	215	20.5

* Same dentist worked in more than one county or community.

Maternal and Child Health Program

General Statement

During 1967, the Maternal and Child Health Program carried out a variety of activities designed to accomplish its objectives of the prevention, early detection, diagnostic evaluation of health problems of mothers and children, and case registration.

PKU Testing of Newborns

The PKU screening program continues to grow. Having started in 42 hospitals in 1964, it served 81 in 1967. Of the 101,000 babies born in these hospitals, over 96,000 were screened for PKU. This is 12,000 more than in 1966, and 25,000 more than in 1965. Ten new cases of PKU were diagnosed as a result of the screening program.

Suspected cases were evaluated at the two clinics established and supported by the program, and medical supervision and treatment of cases were carried out by them. They are located at Babies' Hospital, Newark, and the Bancroft School, Haddonfield. Screening and definitive blood tests and paper chromatography were performed by the Division of Laboratories of the State Department of Health. In 1967, a total of 280 quantitative determinations were done, compared to 241 in 1966 and 300 in 1965.

Hospitalization of Premature Babies and Infant Exchange Transfusions

Fifteen premature infants had treatment and were hospitalized for a total of 121 hospital bed days. Eleven infants had blood transfusions and used 96 hospital bed days.

Child Health Conferences

The 304 Child Health Conferences in New Jersey provided facilities for 191,384 visits by children in 1967; 226,030 in 1966; and 16,953 in 1965. The Maternal and Child Health Program provided financial support for only 19 of these conferences, but afforded consultation services, educational materials, and immunizing biologicals to all.

Table 1. Services Provided in 1967 in Child Health Conferences

	Infants Under 1 yr.	*Children 1-4 yrs.*	*Children 5 yrs. and over*	*Total*
Complete Examination by Physician	40,045	43,466	9,081	92,592
Smallpox Vaccine	3,713	10,879	3,926	18,518
Diphtheria, Initial Series	31,517	23,097	9,037	63,651
Diphtheria Booster	255	13,313	6,965	20,533
Pertussis, Initial Series	30,906	22,618	5,601	59,125
Pertussis Booster	255	13,313	6,965	20,533
Tetanus, Initial Series	31,517	23,097	9,037	63,651
Tetanus Booster	255	13,313	6,965	20,533
Polio, Initial Series	22,566	20,972	11,323	54,861
Polio Booster	5,845	14,560	4,788	25,193
Measles Vaccine	1,792	21,058	47,491	70,341
Tuberculin Tests	3,481	11,602	1,533	16,616
PKU Tests (Urine)	13,825	381	24	14,230
Referrals for Medical or Dental Care	1,654	1,580	178	3,412
Other Services	25,554	48,655	24,671	98,880

Complete Diagnostic Evaluation of Children

Seven clinics were in operation to evaluate children for mental retardation and similar defects in 1967, two more than in 1966, and three more than in 1965. New clinics were started at Barnert Memorial Hospital, Paterson, and Jersey Shore Medical Center, Neptune in 1967, and at the Hunterdon Medical Center, Flemington in 1966. The other four clinics are located in Babies' Hospital, Newark; Bancroft School, Haddonfield; Hackensack Hospital; Hackensack; and Morristown Memorial Hospital, Morristown. There were 254 evaluations and follow-up services done in 1967; 321 in 1966; and 216 in 1965.

Maternity Service Record Book and Annual Report

The revised (1966) Maternity Service Record Book was supplied to all hospitals in the state which had maternity services. During the year the program, in conjunction with the Medical Society of New Jersey, revised the annual report form, which is keyed to the information contained in the Record Book.

Consultation Services

Fifty-six hospitals and two maternity homes received nurse consultation services relating to maternity and newborn care. The nurse consultant in pediatrics, who started work in March 1967, provided five hospitals with

consultation services. Two nurse consultants in obstetrics and gynecology were employed in 1967, and provided 65 consultation services to hospitals. Thirty-seven hospitals received consultation visits by our physician obstetrical consultant. The nurse consultant-MCH provided consultation services to 32 child health conferences sponsored by voluntary agencies and local health departments, nine consultation visits to migrant day care centers, and participated in 11 planning sessions for migrant health programs; this consultant was on leave to the Children's Bureau from February 15, 1967 through August 14, 1967.

Maternity Bed Utilization

During 1967, the State Board of Control and the Licensing Board authorized the mixing of obstetric and gynecologic patients under strictly controlled conditions in selected hospitals. The department was assigned the responsibility for instituting, coordinating, and supervising the program. At the end of the year, the following 12 hospitals were included in the program:

Atlantic City Hospital, Atlantic City
Bridgeton Hospital, Bridgeton
Elizabeth General Hospital, Elizabeth
Hackensack Hospital, Hackensack
Helene Fuld Hospital, Trenton
Mercer Hospital, Trenton
Monmouth Medical Center, Long Branch
Newcomb Hospital, Vineland
Rahway Hospital, Rahway
St. Francis Hospital, Trenton
Somerset Hospital, Somerville
West Jersey Hospital, Camden

Surveillance of this program required the full-time activity of two public health nurses employed for this purpose.

Maternal Deaths

In conjunction with the Special Committee on Maternal and Infant Welfare of the Medical Society of New Jersey, maternal deaths are investigated. In 1967, 30 of the 47 maternal deaths reported were investigated; this compares with 48 of 53 in 1966 and 40 of 57 in 1965.

Ocean, Salem, and Warren Counties do not have field physicians to investigate maternal deaths at the present time.

Unattended Births

Investigations of 163 unattended births were made in 1967, compared to 191 in 1966 and 168 in 1965.

Midwives

In 1967, there was one delivery by a midwife; in 1966, three midwives delivered six babies, and three midwives delivered three babies in 1965.

Migrant Health

The Maternal and Child Health Program provided prenatal and obstetrical services to migrant workers through agreements with 10 hospitals in 1967, one more than in 1966 and 1965. The hospitals were:

Bridgeton Hospital, Bridgeton
Burlington County Memorial Hospital, Mount Holly
Cooper Hospital, Camden
Elmer Community Hospital, Elmer
Underwood Memorial Hospital, Woodbury
Newcomb Hospital, Vineland
Salem County Memorial Hospital, Salem
St. Francis Hospital, Trenton
William B. Kessler Memorial Hospital, Hammonton
St. Peter's General Hospital, New Brunswick

There were 92 mothers served in 1967, 41 of whom had their babies while in New Jersey. Hospital days totalled 166. In 1966, 51 women were cared for under this program; of this number 37 were delivered, and they used a total of 132 hospital bed days. In 1965, 60 mothers were served, of whom 32 delivered, with a total of 121 bed days of care. In 1967 there were 172 prenatal visits, compared to 120 in 1966 and 100 in 1965.

The program provided financial support for health services in 11 of the 13 schools for migrant children. Consultation services were provided to all the schools, which are as follows:

Deerfield Township, Cumberland County
Clarksburg, Monmouth County
Woodstown, Salem County
Cedarville, Cumberland County
Cranbury, Middlesex County
Indian Mills, Burlington County
Hammonton, Atlantic County
Franklinville, Gloucester County
Stow Creek, Cumberland County
Port Norris, Cumberland County

Jobstown, Burlington County
Englishtown, Monmouth County
South Brunswick, Middlesex County

There were a total of 76 clinic sessions, compared to 36 clinic sessions in 1966 and 30 in 1965. A total of 2,448 children were seen and 1,070 children had physical examinations compared to 1,345 children seen and 525 examined in 1966, and 1,079 seen and 438 examined in 1965.

Table 2. 1967 Services of Migrant Workers

	Infants Under 1 yr.	*Children 1-4 yrs.*	*Children 5 Yrs. and over*	*Total*
Smallpox vaccine	....	53	109	162
Diphtheria, initial series	....	94	318	412
Diphtheria booster	....	12	198	210
Pertussis, initial series	....	94	103	197
Pertussis booster	....	12	38	50
Tetanus, initial series	....	94	318	412
Tetanus booster	....	12	198	210
Polio, initial series	....	94	351	445
Polio booster	....	13	229	242
Measles vaccine	....	45	278	323
Tuberculin test	....	134	485	619
Referral for medical care	....	15	75	90
Referral to p.h. nurse	....	11	38	49
Referral to social service	....	....	4	4
Referral for dental care	....	14	114	128

Dental examinations were provided to 1,700 children and 1,045 children were treated by the Dental Care Program in conjunction with the schools for migrant children. There were 751 fillings, 163 extractions and 215 completed cases. This was more than double the service in 1966, when 419 examinations were done, and 416 children treated. In 1965, 506 children were examined and 489 children treated. These services were provided in the communities of Cranbury, Cedarville, Clarksburg, Englishtown, Franklinville, Hammonton, Jobstown, Port Norris, Rosenhayn, South Brunswick, Stow Creek, Vincentown and Woodstown.

Educational Activities

1. The program, in cooperation with the Department of Pediatrics at St. Francis Hospital, Trenton, held a series of six lectures pertaining to various diseases of children.

2. A three-day post-graduate course for school physicians, held at Rutgers University, was sponsored by the program in cooperation with the State Department of Education and the New Jersey Association of School Physicians.
3. In cooperation with the Academy of Medicine of New Jersey, a symposium was held on "The Dangers of the First 10 Days of Life."
4. Four in-service training courses were held on public health nursing responsibilities in maternal and child health.
5. Two in-service training courses were held on "Phenylketonuria."
6. There were six consultation services provided to hospitals outlining in detail the criteria to be followed where mixing of obstetrical and gynecological patients is permitted.
7. The program continued to sponsor and participated in 10 sessions of demonstration child health conferences at Bodman Health Center, New Shrewsbury.
8. The program coordinator and the public health nurses in Maternal and Child Health participated in 76 in-service educational activities throughout the state.

Health Education Materials

Various health education materials were purchased and provided to the public on maternal and child care, nutrition, and sex education. Films on various aspects of child growth and development were distributed to large audiences through the State Museum. Special films were distributed through the audio-visual aid service in the department. Other educational materials are handled directly by the program.

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

Accident Prevention—Poison Control Program

General Statement

A total of *3,853* accidental poisonings was reported by *35* of the 38 Poison Control Centers for the year 1967, *3,655* in 1966 and *3,600* in 1965. Accidental ingestions of such products as medicines, household cleaning products, insecticides and other substances were among the poisonings reported. Home follow-up investigations were conducted by local sources in *1,450* cases in 1967, *1,706* in 1966 and *1,500* in 1965.

Industrial Safety

The Poison Control Program assisted the following industrial safety programs:

1. The off-the-job safety program of the Public Service Electric and Gas Company, Burlington.
2. The off-the-job safety program at Mobile Chemical Company, Metuchen.
3. The off-the-job safety program, Monsanto Company, Bridgeport.

Education

Educational materials on poison prevention were provided by the program to:

1. The Englewood Cliffs Board of Health, for distribution to elementary school students.
2. The Accident Prevention Committee of the American Academy of Pediatrics for physician office distribution.
3. The Newark Health Department to promote the Poison Control Program in the Newark area and to assist the health educator in preparing for a two-hour presentation on WOR-TV Channel 9.
4. The Caldwell Safety Council and the Junior Women's Club of West Essex for distribution by local druggists and Boy Scouts in connection with their old medicine collection campaign.
5. The director of the safety first demonstration and exhibition held at the Willingboro Plaza Shopping Center.
6. The Red Cross and Civil Defense for training courses.
7. The State Hospital at Ancora for distribution at the in-service intern training program.
8. The Southern District for distribution to all full-time health officers in the district. Posters in English and Spanish were provided for a special distribution in Camden.

The program coordinator provided consultation, film and poison prevention materials for an educational program conducted at Deerfield School, Mountainside and for the Point Pleasant Junior Women's Club poison prevention campaign in the local schools.

The program coordinator and the pesticide coordinator, Rutgers College of Agriculture and Environmental Science, cooperated in providing the following:

1. A lecture and exhibit on poison prevention at the fall institute of the Burlington County Homemakers.
2. An in-service training program for interns, residents, and student nurses of the Jersey Shore Medical Center.

The program had a part in the observance of National Poison Prevention Week. In cooperation with the New Jersey State Pharmaceutical Association, the program provided promotional materials to communities throughout the state. Intensive use was made of radio, television, and newspapers and the governor's proclamation was given wide distribution. An editorial on poison prevention by the Commissioner of Health appeared in the New Jersey Safety Council's monthly magazine "Safety Briefs." In Boonton, the Chamber of Commerce featured a poison display in a store window and a large industrial company in Somerville inserted an article each day in its house bulletin, pointing out different aspects of the poisoning problem with recommendations for handling that particular hazard.

During the year the program also:

1. Received the cooperation of the New Jersey Pharmaceutical Association in the establishment of a state-wide speakers bureau for poison prevention talks.
2. Completed a summary and analysis report of accidental poisonings for the state which was distributed to all poison control center directors and to all follow-up agencies. The report was also submitted for publication in *Public Health News* and the *New Jersey Journal of Pharmacy.*
3. Provided poison prevention information upon request to numerous individuals throughout the state.

Lead Poisoning

Lead poisoning continues to pose a serious threat to the health and development of children in the state. Many children who do not die as the result of lead poisoning suffer permanent brain damage. The program continues to provide lead-free collecting equipment* to physicians and hospitals in the state. During the year, the Burlington County Health Department was added to the list of locations where the kits are available. The other locations include the Jersey City Medical Center, and the health departments in Newark, Paterson, Camden, and Trenton.

Blood-lead level analyses were performed in *1,563* suspected cases in 1967, *1,628* in 1966 and *1,501* in 1965. Values of .06 or over, which are indicative of abnormal absorption of lead, were found in 245 children. Repeat determinations in many of these children raised the total number of abnormal blood-lead levels detected in 1967 to 338. A total of 617 abnormal blood-lead levels were detected in 1966 and 579 in 1965. Epidemiologic follow-up investigations were conducted on 155 of the abnormal lead absorption cases. The highest incidence occurred during the summer months. Deaths appear to follow the same trend. Of the six deaths reported, three occurred in June, two in July and one in August. Increased emphasis on the prevention of lead poisoning in the Metropolitan District resulted from the death of a child in Paterson. Educational materials in the form of posters and leaflets, in English and Spanish, were provided to the nursing supervisor in Paterson for distribution by the nurses. Resource materials on lead poisoning were also supplied to the Newark Health Department.

The program coordinator participated in a symposium on lead poisoning sponsored by the Pediatric Department of St. Joseph's Hospital in Paterson.

Domestic Accident Prevention

The program's "Resusci-Annes" continue to be on loan to the Trenton and Newark chapters of the Red Cross. They are being used for education and demonstration in the techniques of oral resuscitation. During the year, *15,411* people participated in these demonstrations including persons in the Red Cross first aid and small craft and water safety courses. Boy and Girl Scout troops, parent-teacher associations, schools, civil defense, private groups and clubs, church groups, hospitals, and fire departments.

A massive project in pediatric as well as general accident prevention was initiated by the New Jersey Chapter of the American Academy of Pediatrics in cooperation with the Department of Health. The project involves an interdepartmental effort and will continue through 1968. The Commissioner of Motor Vehicles and the executive directors of both the New Jersey Turnpike

* Special glass containers completely free of lead.

and the Garden State Parkway have agreed to distribute 4,000,000 leaflets entitled "Safe Driving. a Parental Responsibility" reproduced by the Department of Health. Each motorist will receive a copy of the leaflet during the mandatory annual motor vehicle inspection at motor vehicle inspection stations throughout the state. In addition, the leaflets will be distributed at gas stations and restaurants along the turnpike and parkway and on certain weekends—especially holiday weekends—distribution will also be made by the toll collectors.

A training course in accident prevention and safety in the home was conducted by the program coordinator for new personnel of the Trenton Visiting Homemakers' Service.

Assistance was provided to the health officer of Woodbridge Township in developing an accident prevention program. A home safety education program was conducted by the program coordinator for members of the Woodbridge Advisory Committee on Accident Prevention.

Twenty films are made available through the State Museum Film Library on poisonings, accidents, and safety.

	1967	*1966*	*1965*
Films	20	22	26
Number of Film Showings	354	253	139
Total Film Attendance	16,998	12,966	7,078

Emergency Medical Services

The Department of Health was assigned responsibility for Emergency Medical Services under the standards promulgated by the Highway Administrator, U. S. Department of Transportation in compliance with the Federal Highway Safety Act. Prior to becoming a separate program, Emergency Medical Services was assigned to the Accident Prevention and Poison Control Program. During this period the coordinator:

1. Participated in two radio programs at Seton Hall and discussed the role of the Health Department in highway safety.
2. Represented the Department of Health at Interdepartmental Highway Safety Program Committee meetings.
3. Prepared a 10 year cost estimate report.
4. Prepared a base year criteria report.
5. Prepared a project grant application to conduct a survey of emergency medical services. The grant, in the amount of $28,000.00, has been approved.

Division of Environmental Health

ALFRED H. FLETCHER, M.S. in Engineering, *Director*

Programs:

Food and Drugs ..... FRANCIS A. TIMKO, *Acting Chief*
- 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*
- Mobile Home Parks ..... LLOYD HIGGS, *Program Coordinator*
- Noxious Weed ..... (Vacancy)
- Housing ..... ARCHIE B. FREEMAN, *Program Coordinator*

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

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

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

Project:

Pesticide Project ..... NORMAN PLUMMER, M.D., *Director*

Division of Environmental Health

The Division of Environmental Health has directed its efforts to developing and implementing plans designed to control or change the environment, in areas of its assigned responsibilities, in order to prevent or alleviate conditions that adversely affect health.

The Programs of Air Sanitation, Stream Pollution Control, and Solid Waste Disposal were transferred from the Division of Environmental Health to a new Division of Clean Air and Water by Executive Order dated February 16, 1967.

The division's programs since February 16, deal with the safety and wholesomeness of milk, meat, poultry, shellfish and other foods as they are grown, harvested, processed, and distributed; sanitation of swimming and camping places; the health aspects of housing and mobile home parks; and conditions to which workers are exposed. Programs are carried out to protect persons from unnecessary sources of radiation and workers in industry from toxic fumes, gases, dusts, and noise that adversely affects hearing.

Epidemiologic study and field research are carried out to determine reservoirs of infection and mode of transmission of diseases of animals to humans and to develop practical methods of control. Continuing efforts are made to coordinate information and activities relative to comparative medical aspects of diseases of man and animals and to provide ways and means to disseminate such information. The division also fosters programs and undertakes surveys and investigations to control insects, weeds, and animal pests to protect and promote health.

The division is organized into six major units or programs and one special project as follows: Occupational Health, Radiological Health, General Sanitation, Food and Drugs, and Veterinary Public Health. The activities are grouped into the following programs and project:

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

Occupational Health

Radiological Health

Pesticide Project

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

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

Recommendations were agreed upon for amendments to the Plumbing Code by a Standing Committee on Plumbing Matters. It is anticipated that

these amendments dealing with the use of asbestos cement pipe for storm water drainage and with certain installation procedures will be implemented in 1968.

An advisory committee to update Chapter 9 of the State Sanitary Code dealing with Mobile Home Parks Sanitation Requirements completed its work in 1967 and after a public hearing the revised Code may be approved in 1968 by the Public Health Council as Chapter 9 Revised.

The department recommends various codes to local boards of health for adoption by reference. The following is a list of such recommended codes pertaining to environmental health in existence to date:

*Boarding Homes 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)
*Mobile Home Parks Code
Plumbing Code (Revised 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 (1966)
Weed Control Code (1953)
Sewage Disposal Code (1963)

* Sanitary standards for mobile home parks and boarding homes for children are included in the State Sanitary Code and are enforceable by local boards of health.

The work of the Joint Drainage Committee continued through the year. A two-volume report with recommendations on a state drainage policy was published and submitted by the Bureau of Government Research of Rutgers to the Joint Drainage Committee in August, 1967. A public forum was held on November 2, 1967, at Rutgers—the State University, to discuss the report and receive comments from interested persons and groups. The public forum was well attended and the proceedings will be published.

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 or shellfish)
Meat
Milk and frozen desserts
Shellfish

Each program is designed to provide maximum protection to the consuming public. 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, devices, and cosmetics that are adulterated, misbranded, or otherwise unfit for human 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.

Program coordinators constantly survey changes in federal laws and policies and adjust program activities to keep pace with changing conditions.

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 1967

Establishments		*Licenses*	*Permits*	*Cert.*	*Regs.*	*Revenue*
Drug Manufacturers and Wholesalers	....	....	...	...	630	$55,390.00
Egg Breaking Establishments	.....	43	...	...	...	No fee
Frozen Desserts Plants	.....	1,452	...	...	...	23,820.00
Frozen Desserts Plants Inspection Fees	..	....	...	...	...	1,575.00
Milk Plants	.....	....	382	...	...	16,000.00
Narcotic Manufacturers and Wholesalers	..	87	...	...	...	795.00
Non-Alcoholic Beverage and Water Bottling Plants	.....	148	...	...	...	No fee
Refrigerated Warehouses and Locker Plants	.....	167	...	...	...	7,000.00
Shellfish Establishments	.....	....	...	181	...	No fee
Slaughterhouses:						
Red Meat	 74	....	...	...	...	.....
Poultry	 158	232	...	...	...	No fee
Totals	.....	2,129	382	181	630	$104,580.00

Penalties amounting to $4,417.00 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 under provisions of P. L. 1967, C. 92, amended C. 24:10–57–23 of the milk law requiring that containers of pasteurized milk be marked with the day of the week in which the milk was pasteurized or the use of the term "pasteurized during the 24 hour period ending 6 A.M." followed by the day of the week at the end of this period.

Effective January 1, 1967, the department adopted regulations redefining areas condemned for the taking of oysters, clams, and mussels.

Effective February 16, 1967, the department adopted regulations under which paregoric will be regarded as a narcotic drug and requiring a prescription except when sold or dispensed in compounds containing not more than one fluid drachm of paregoric in each fluid ounce.

Food Program

(Other than Meat, Milk, and Shellfish)

This year might very well be remembered as the year of change in methodology associated with food protection activities at all levels of enforcement.

Federal, state, and local agencies are exploring means and methods that will supply maximum protection to the consuming public.

As federal activities move in this direction, it has caused a much closer direct relationship between federal, state and municipal enforcement authorities. Meetings that will develop a bi-lateral approach to mutual problems are frequent. The idea that we are all part of the same team striving for better protection for the consuming public is now emerging. The wastefulness of unnecessary duplication of inspections and multiple enforcement may soon be eliminated.

Federal emphasis on disease related food commodities is similar to the emphasis the program has placed on our Potentially Hazardous Foods Program since 1963.

Development of Good Manufacturing Practices Criteria by the United States Food and Drug Administration for different types of food manufacturing establishments is another example of developing programs that will assist in upgrading sanitation in many different types of food manufacturing establishments.

The program is participating in all of the new activities indicated.

The Food Program moved forward in the area of upgrading sanitation in retail food establishments.

At the request of the program, the United States Public Health Service conducted a training course for Food Service Sanitation Survey Officers and certified department personnel by jointly inspecting 25 eating and drinking establishments on an independent basis; qualifying personnel were then certified.

Department personnel so certified will train and certify all state sanitarians. Certified sanitarians will then conduct surveys of food inspection programs of local boards of health and make constructive criticism of existing programs to stimulate and upgrade retail food establishment sanitation throughout the state.

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

Egg Breaking

The department continued to study the problem of compulsory pasteurization of liquid and frozen broken eggs as a means of preventing transmission of salmonella through foods made in whole or part with such eggs.

All broken eggs shipped in interstate commerce must now be subjected to treatment to assure freedom from salmonella.

Meetings were held with Rutgers University and State Department of Agriculture representatives exploring the effect of compulsory pasteurization of eggs on New Jersey breakers shipping eggs in intrastate commerce. At the present time, six firms are using pasteurization to eliminate salmonella organisms, but it is questionable whether more than five additional firms are in a position to install the necessary equipment. The smaller breakers are being encouraged to enter into cooperative agreements whereby their products can be pasteurized in a central location assuring a salmonella free organism for the trade.

Potentially Hazardous Foods

During the period covered by this report, there was continued emphasis on this important disease related phase of our program. This year the emphasis was on fresh and frozen coconut cream and custard pies, fresh and frozen clam cakes and sticks, fresh and frozen beef pies, bavarian and party cream puffs and eclairs, pumpkin and banana cream pies, and herring salad.

There were 300 samples collected and analyzed for total plate count and coliform determinations. Of this number, 65 or 21.7 percent of the samples analyzed contained over 100,000 bacteria per gram and 28 or 9.3 percent indicated coliform counts in excess of 100 per gram. The figures of 100,000 bacteria per gram and 100 coliform organisms per gram were established as index guides for contamination by the Commissioner's Advisory Committee on Potentially Hazardous Foods which was appointed in 1963.

In connection with our sampling program, field personnel conducted 58 inspections and reinspections of potentially hazardous food manufacturing establishments. Prompt follow-up inspections and resampling resulted in securing improved food products for the consuming public.

As in the past, the program continued to notify surrounding states and municipalities of imported products that failed to meet our standards.

The Commissioner's Advisory Committee on Potentially Hazardous Foods met during the year and proposed that the program be expanded at the manufacturing and wholesale distribution level and that the retail phase of the program be stimulated by having two or three local department of health laboratories approved for testing samples taken at the retail level. At least one laboratory should be located in the northern distribution area of the state and one in the southern distribution area. Expansion at the state level has been approved and will start as soon as necessary laboratory personnel are hired. Implementation of the retail phase of the program was not completed in 1967.

Salmonella in Foods

Salmonella in foods continues to be a major concern with all enforcement agencies. A large percentage of recalls made of foods by the United States Food and Drug Administration involves foods contaminated by Salmonella.

New programs at federal and state levels are directed to protection of the consuming public by increasing program activities in the area of foods having food borne disease potential.

Salmonella has been 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. As Salmonella surveillance is expanded, other foods not previously suspect are found to contain Salmonella organisms.

Interstate Cooperation

The program continued our reciprocity exchange program with official food control agencies in Pennsylvania, Connecticut, and Rhode Island for inspection and/or licensing of bakeries and non-alcoholic beverage plants shipping products into their respective jurisdictions. During the year, program personnel made a total of 207 inspections and reinspections of 95 bakeries and 43 inspections and reinspections of 25 non-alcoholic beverage plants in their behalf. A number of inspections were made upon specific requests of other state departments and local boards of health.

The Office of Federal-State Relations, United States Food and Drug Administration, has continued to improve liaison with our program. Important telegrams concerning contaminated foods that result in recall by the manufacturer are forwarded to this office promptly so that state and local boards of health can take action should the situation indicate need for follow-up.

Catering Program

Our reciprocity program for the supervision and control of general caterers in cooperation with local boards of health continued during the year. Under the program, state inspection personnel inspected 25 catering establishments. Thirty-three inspections were conducted by 23 local boards of health participating in the program. Ninety-two establishments forwarded for entry by local boards of health participating in the program, are now listed in the General Registry of Caterers maintained by the program. Reports covering individual caterers were forwarded to participating local boards of health and the entire list of caterers including inspection results was forwarded during the year.

The Food Program plans to intensify this activity to include more municipalities and establishments.

Wholesale Food Plant Inspection Activities

With the assistance of personnel from the Meat Inspection Program on a part-time basis, we were able to continue to expand program activities. One major activity of the program is to locate, inspect and list all food establishments doing business in interstate commerce. During the year, 619 inspections were conducted at 421 food establishments doing business in interstate commerce. This represents an increase of 54 establishments that were located during the year. In addition, there were 380 inspections conducted at food establishments not engaged in interstate commerce. Representatives of the

department made 484 visits associated with locating unlisted and uninspected establishments, special surveys, special food sampling projects, and similar activities.

Increased inspection activities resulted in locating and licensing 29 new refrigerated warehouses.

Approximately 110 consumer complaints were handled through the program during the current year.

The following table lists the number and type of establishment inspected under the Food Program.

Table 1. Establishments Inspected, 1967

Bakeries	207
Restaurants	6
Confectionery Plants	61
Egg Breaking Establishments	83
Refrigerated Warehouses	71
Non-alcoholic Beverage Bottling Plants	64
Wholesale Food Distributors	148
Other Food Establishments	359
Total	999

In connection with 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, 1967

Dairy Products	140 lbs.
Dried Beans and Vegetables	22,628 lbs.
Eggs, Frozen	2,970 lbs.
Eggs, Shell	42,300 lbs.
Grocery Items, Assorted	1,390,654 lbs.
Syrup	61,230 lbs.
Misc. Food	85,566 lbs.

In addition, 24,496 lbs. of meats 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.

An extensive fire at a distillery resulted in the embargo and eventual destruction of approximately 83,000 pounds of liquors because of contamination.

Approximately 10,000 pounds of food were released from embargo after being cleared for removal by reconditioning, relabeling, or found to be satisfactory by laboratory analysis.

During the year, the program responded to seven calls from the Turnpike Authority due to accidents and fires involving foods. Approximately 110,200 pounds of damaged foods were destroyed. The remainder was allowed to proceed to its destination after alerting responsible agencies in the receiving area.

A total of 668 samples of food and 41 samples of water of private water supply systems was collected during various food establishment inspections and special sampling surveys and investigations.

One food establishment was fined a first offense penalty of $42.00 (settlement by Attorney General) for operating under unsanitary conditions.

Adulterated Meats

The program continued effective enforcement efforts in the area of consumer protection through surveillance of retail markets, wholesale processors, and other establishments distributing hamburger, sausage, and other combinations of fresh ground meats. Hobart fat tests to detect excessive added fats and Malachite Green tests to detect the presence of sodium sulphate used to conceal inferiority were conducted in the field by program and district personnel. There were 269 Malachite Green tests made with 13 suspicious samples collected for official laboratory confirmation. Four of the 13 suspicious samples (1.48 percent) were confirmed as positive for sodium sulphate by laboratory analysis. This year's total of 1.48 percent unsatisfactory samples compares with 0.37 percent for 1966.

The program conducted 139 Hobart field tests on ground meats to detect the presence of excessive fat. Eighteen suspicious samples were collected and submitted to the laboratory for official sample analysis. Seven of the 18 suspicious samples (5.07 percent) were confirmed in the laboratory as being below standard by chemical analysis. This year's total of 5.0 percent unsatisfactory samples compares with 4.5 percent for 1966. An overall total of 7.5 percent of all field and laboratory samples analyzed this year were unsatisfactory. This compares with 4.7 percent during 1966. The increase is due in part to the fact that district personnel were requested to increase sampling activity in low income area retail outlets.

Six first offense penalties of $50 (one penalty settled by Attorney General for $25), three $100 second offense penalties and one $200 third offense penalty were collected for excessive fat. One $50 first offense penalty for added sulphites and one $50 first offense penalty for added cereal were also collected. A total of $875 in penalties was collected.

General

Program personnel 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 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 to secure samples of raw agricultural commodities in a limited surveillance program to detect the presence of pesticides in such products; 86 samples were submitted to the laboratory for analysis.

The program continues to be represented on the Governor's State Food Advisory Council that is responsible for supplying foods for New Jersey residents in the event of enemy attack. The council operates in cooperation with the Division of Civil Defense, Department of Defense.

Drug, Device and Cosmetic Program

The Drug Program is primarily concerned with the manufacture and sale of drugs, including narcotics, and the health of the consumer of these drugs. Legislative action in past years has greatly expanded the Drug Program and includes hazardous substances labeling, control of depressant, stimulant and hallucinatory substances, narcotics and the manufacture of air used in SCUBA* diving.

In the first year of operations pursuant to Chapter 262, P. L. 1966, entitled "New Jersey Hazardous Substances Labeling Act," the Drug Program participated in 407 routine investigations, 20 special investigations, and 48 market surveys. Inspections were made of such products as: rust and stain removers, antifreeze, paint, paint thinners and removers, most bleaches, lighter fluids, some toilet bowl cleaners, and certain photo chemicals.

The New Jersey Public Health Council has approved a Hazardous Substance Labeling Program as a certified public health service to be implemented within a local health department. To date, one large township and one county health department are actively engaged in such a program. A close association is being maintained within the Accident and Poison Control Program with particular attention directed to case follow-up when reported at various Poison Control Centers. Personnel are also assisting in special investigations jointly with U. S. Food and Drug Administration District offices. Consultation was also provided to the Bureau of State Use of the Department of Institutions and Agencies in connection with precautionary labeling on containers of hazardous substances manufactured or repackaged for use within state institutions.

*Self contained underwater breathing apparatus.

On December 29, 1966, Governor Richard J. Hughes, signed into law, Assembly Bills Nos. 547 and 548, known as Chapter 313 and Chapter 314, Public Laws of 1966. Chapter 313 amended certain sections of Chapter 18 of Title 24, "The New Jersey Uniform Narcotic Drug Law." This amendment became effective immediately. It established the categories of Class A, B, X, and M narcotic drugs in conformity with the Federal Narcotic Act. Under the provisions of the amendments, telephonic prescriptions by a practitioner of Class B narcotics are permitted. It was also deemed necessary to control the sale and distribution of paregoric. To establish this control, the Commissioner promulgated a regulation on February 16, 1967, which provided that paregoric must be dispensed on prescription only, and limits the contents of paregoric in compounds to not more than one fluid dram in each fluid ounce.

Chapter 314, P. L. 1966, was signed into law by Governor Richard J. Hughes on December 29, 1966, adding a new Chapter "6C" to Title 24 of New Jersey Statutes. This chapter provides controls for the handling and sale of depressant and stimulant drugs often referred to as "pep pills" or "goofballs." This act promotes uniformity with existing federal legislation by affording comparable regulatory authority to state health and law enforcement officials.

Implementation of the provisions of Chapter 6C was in two steps. All defined depressant and stimulant drugs were immediately placed under statutory control, and secondly, the inspections and enforcement provisions became effective on June 29, 1967. In the initial stage, all manufacturers and wholesalers registered pursuant to N. J. S. A. 24:6B were required to amend their drug registration statement if they manufactured or wholesaled these controlled drugs. Also, a list of permitted pharmacies was established. All hospitals, clinics, and public health agencies were requested to file an exemption statement pursuant to this act. In the final summation of all parties subject to this act, it was determined that due to the vast number of inspections that would be required, to achieve most effective use of manpower and elimination of duplication of effort, it would be advantageous for the department to enter into an agreement with the Federal Bureau of Drug Abuse. It was mutually agreed that Drug Program personnel would control these drugs within pharmacies, hospitals, clinics, and where indicated, by inspections of

practitioners. The Federal Bureau of Drug Abuse would exercise their efforts in control over manufacturers and wholesalers within this state.

In February, 1967, two additional registered pharmacists were employed in the program. These men were assigned to the Controlled Drug Accountability Activity in Pharmacy Inspections. Prior to participation in this area, they received training from the Federal Bureau of Drug Abuse and the Federal Bureau of Narcotics. One field representative, also a registered pharmacist, was transferred from drug plant inspections to this activity.

Since the effective date of the act, June 29, 1967, 143 pharmacies have been inspected. The State Board of Pharmacy by agreement with the department has undertaken to review 16 cases referred to them for penalty action for violation of the Narcotic Act and the Controlled Drug Act. To date, five pharmacies have been fined a total of $1,900.00.

In the planning of the implementation of Chapter 314, it was recognized that inspection reports and other pertinent information should be available to other enforcement agencies in this field. A principal sanitarian was designated to devise suitable forms for the use of Electronic Data Processing (EDP) by the program. To date, inspections of controlled drugs are using EDP, and further use of EDP is contemplated in the areas of drug plant inspection, hazardous substances labeling, and narcotic inspections.

In other activities in the enforcement of the Uniform Narcotic Drug Law, the program issued 87 narcotic licenses or renewals. Statutory fees collected for this activity amounted to $795.00. These funds are placed in the state's general treasury. Agents of the program on 12 occasions witnessed and certified the destruction of narcotic drugs damaged in fires or residues from manufacture, chemical analysis, or research establishments. Agents also made 18 inspections, special investigations and consultations relative to compliance with the New Jersey Narcotic Drug Law.

Pursuant to R. S. 26:2–81 and 82, agents of this program reported and certified a total of 8,783 marihuana plants growing in New Jersey. With the assistance of the county prosecutors, these plants were destroyed. This represented a loss to the illegal market of 7.5 million dollars, an increase of 1.5 million dollars over 1966.

Pursuant to N. J. S. A. 24:6B, New Jersey Drug Registration Law, in the 12 month period covered by this report, there were 630 firms registered as drug manufacturers and drug wholesalers, with a total of 739 locations. Each location should be inspected at least once a year. For this period, 65 inspections of manufacturers were made, and 171 inspections of wholesale

dealers; or a total of 236 inspections. This represents about 30 percent coverage. (However, there was a 66 percent loss in manpower due to two field representatives on educational leave.) The program placed 10 embargoes on misbranded or adulterated drugs and supervised six destructions of drugs so embargoed. As a result of an explosion involving a drug plant, we expended 400 manhours in supervising the embargo and releasing quantities of these drugs for uses other than as a food, drug, or cosmetic. This embargo consisted of 57.2 tons of drug products with an estimated value in excess of one million dollars. Statutory fees collected pursuant to this act totaled $55,390.00.

Members of this program also inspected 44 SCUBA (Self Contained Underwater Breathing Apparatus) shops for compliance with regulations governing the safety of such air. Personnel in this activity assisted in police investigations involving two fatalities to SCUBA divers.

In cooperaton with the department's Medicare responsibilities, a field representative in the Drug Program has been made available to inspect the drug room or pharmacy at nursing homes requesting certification. Eighty of these inspections were made, each involving one to two man days.

For several years, the Commissioner has assigned the Drug Program Coordinator to serve on a Standardization Committee on Drugs, Pharmaceuticals, Medical Hospital Equipment and Supplies Committee of the Division of Purchase and Property of the Treasury Department. As a service to the committee, program personnel evaluated 11 pharmaceutical firms supplying a total of 70 different drug items to various institutions. Evaluation consisted of sanitary inspections and sampling of any of the 70 items manufactured or distributed by these firms.

Other significant highlights and major accomplishments of the program are as follows:

1. Through a series of bulletins, all physicians and pharmacies were provided an up to date and comprehensive inventory of all controlled drugs and narcotics.
2. Immediately after the July riots in Newark, program personnel conducted a survey of all pharmacies involved. As a result of this survey, discussions were commenced with the Governor's office for a detailed policy on the safeguarding of controlled drugs and narcotic drugs during periods of civil unrest.
3. An in-service program was held for members of the Division of Community Hospitals, Department of Institutions and Agencies, relating

to their activities involving controlled drugs and narcotics. Four additional instruction sessions were held with nurses in the Occupational Health and Nursing Programs of the department.

4. The program coordinator presented a progress report on "Medicare and the Pharmacist" at the mid-winter conference of the New Jersey Pharmaceutical Association. Due to audience interest, the program was requested to present an annual report of our activities concerning pharmacists.

5. In August, 1967, this program embargoed at four locations a product falsely claiming a cure for arthritis. Summary proceedings were commenced in the District Courts of Union, Essex, and Bergen Counties for seizure of the articles, and hearings concerning the department's plea for destruction of the drugs are scheduled for January, 1968.

Meat Program

The program regulates and licenses all red meat and poultry slaughterhouses as provided by 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." Meat processing is controlled by "Regulations Concerning Construction, Operation and Maintenance of Meat Processing Establishments and Labeling of Meat Products Processed for Food" permitted by Title 24, Chapter II.

In 1967, 74 red meat and 158 poultry slaughterhouses were licensed and 302 wholesale meat processing establishments were listed.

A review of the sanitation ratings of slaughtering and processing establishments for an eight-year period reflects that a desirable level of sanitation has been maintained generally in these operations. Ninety or better is considered a good rating.

Table 1. Licensed Poultry Slaughterhouses*

Year	*Number of Establishments*	*Sanitation Rating*
1960-61	212	88.8
1961-62	236	91.2
1962-63	214	93.4
1963-64	198	92.7
1964-65	212	90.3
1965-66	193	95.8
1966-67	183	95.7
1967-68 (Feb. 28)	158	95.6

Table 2. Licensed Red Meat Slaughterhouses*

Year	*Number of Establishments*	*Sanitation Rating*
1960-61	70	86.4
1961-62	76	90.9
1962-63	79	89.8
1963-64	79	89.5
1964-65	81	92.4
1965-66	78	94.1
1966-67	78	94.5
1967-68 (Feb. 28)	74	93.7

*Figures are based on the licensing year, April 1 to March 31.

Several large poultry slaughterhouses have provided improved industrial waste disposal systems for their large volumes of waste water containing fats and other byproducts. No stream pollution is apparent now, and odor complaints have been reduced.

Program personnel cooperated with U. S. Department of Agriculture Meat Inspection Service agents in conducting investigations of the illegal distribution of meats in New Jersey on 30 occasions. As a result of information collected jointly, the federal agency instituted court action in four cases involving 29,158 pounds of uninspected or illegally branded meat products which were removed from the market in the state. One penalty of $2,000 was also collected for unauthorized use of the federal inspection legend following a joint investigation of a New Jersey dealer. The federal agency also issued 32 warning letters covering almost 10,000 pounds of meat offered for sale in New Jersey in violation of federal statutes.

Some of the joint investigations were made as a result of information received from local boards of health or legitimate meat dealers.

Table 3. Program Activities for 1967

Red Meat Slaughterhouses	
Number of applications received	75
Number of licenses issued	74
Number of applications pending	1
Number of establishments out of business	2
Poultry Slaughterhouses	
Number of applications received	160
Number of licenses issued	158
Number of applications pending	2
Number of establishments out of business	3

Inspection Data for Slaughterhouses

Number of sanitary inspections	441
Number of visits and investigations	218
Number of water samples collected	91
Number of water supply samples unsatisfactory	19
Number of water supplies corrected	19
Number of meat inspection evaluations	13
Number of conferences with local boards of health	199

Wholesale Meat Processing Establishments

Number under supervision	302
Number of sanitary inspections	372
Number of visits and investigations	121

The number of licensed red meat slaughterhouses is four less and there are 24 fewer poultry slaughterhouses than before. The trend seems constant regarding smaller plants going out of business due to pressure from competition of larger plants with more economical and more varied operations to meet today's consumer needs.

The number of wholesale meat processors under program control has increased 21 percent over the previous year and represents 60 percent of the estimated total of such establishments in the state. Speed in locating these operations could be increased by requiring plant licensing and compulsory in-plant meat inspection. Sanitary and labeling regulations are the present controls exercised over the wholesomeness of processed meats.

Following a spate of nationwide publicity critical of federal and state meat inspection programs, Congress enacted and President Johnson signed, on December 15, 1967, the Wholesome Meat Act of 1967 (P. L. 90–201). Besides strengthening the federal meat inspection program (other than poultry) the law provided for financial and technical assistance to the states in developing more effective meat inspection programs covering intrastate meat plants. By enacting standards equal to federal standards, states would be eligible to share matching federal funds up to 50 percent of the total cost of the state programs.

Governor Hughes recommended transfer of meat inspection activities within the state from the Department of Health to the Department of Agriculture. Since that time, department representatives have assisted the latter department and the Attorney General's Office in planning to effectuate a smooth transfer of meat inspection responsibilities during 1968 if legislation is enacted.

It was agreed by both agencies that transfer of meat inspection responsibilities to the Department of Agriculture would in no way interfere with

enforcement by this department or local boards of health of other provisions of our statutes relating to environmental health or communicable diseases.

Meat Inspection

There were 14,673,204 animals of all classes slaughtered in New Jersey slaughterhouses in 1967; 299,073 whole carcasses and 99,282 parts were condemned as inedible. There were 492,933 animals, or 3.5 percent of the total slaughtered, inspected by veterinary and lay meat inspectors licensed by this department and 3,461 whole carcasses were condemned. There were 1,700,467 animals, or 11.5 percent, slaughtered in establishments exempt from meat inspection. It is interesting to note that all but one of the 32,148 animals condemned on a voluntary basis in the exempt establishments were accomplished in poultry plants.

A detailed breakdown comparing condemnations in establishments under the supervision of New Jersey licensed and federal meat inspectors is as follows:

Cattle—The higher percent of cattle condemned in the federal plants is unusual as the condemnation rate should be higher in New Jersey supervised plants wherein older dairy animals are slaughtered. Federal plants slaughter a much higher percent of young cattle. The disease rate is lower in young animals.

Calves—The difference in percentages between federal and state supervised establishments is so narrow that it is probably insignificant. However, New Jersey slaughterhouses do slaughter a dairy type of calf that is marketed at a much younger age than those slaughtered in federal plants and the percent of condemnation of New Jersey calves should be significantly higher due to the immaturity factor.

Swine—The higher percent of condemnation of federally supervised plants fails to indicate any material significance since both state and federal totals are very close.

Sheep—Comparison, of any validity, cannot be made due to the small numbers slaughtered in New Jersey plants.

Poultry—The 2.44 percent of fowl condemned in federal plants as compared to 1.12 percent in New Jersey supervised plants is as expected because an older laying fowl is slaughtered after it is no longer an efficient egg producer. The poultry slaughtered in New Jersey supervised plants are classified principally as broilers and fryers ranging from 6-14 weeks of age and the disease rate is generally very low.

Table 1. ANTE AND POST MORTEM INSPECTION RESULTS

KIND OF ANIMAL—NUMBERS AND PERCENTAGES

Kind of Animal	Antemortem Inspection				Postmortem Inspection			
	Passed	Suspected	Condemned	Total	Passed	Condemned	Total	Parts
Cattle	322,004	61	2,747	324,751	321,959	45	322,004	18,443
Calves	329,119	6	184	329,303	328,978	141	329,119	1,580
Swine	584,815	2,141	40	584,855	583,159	1,656	584,815	28,930
Sheep	874,680	4	159	874,839	874,517	163	874,680	39,201
Poultry	12,486,520	217	72,936	12,559,456	12,265,618	220,902	12,486,520	11,128
Total	14,597,138	2,429	76,066	14,673,204	14,374,231	222,907	14,597,138	99,282

Percent of Condemnation N. J. State Inspection	
Cattle	.20
Calves	.13
Sheep	.11
Swine	.04
Poultry	1.12

**Percent Condemnation Federal Inspection (all states)*	
Cattle	.26
Calves	.577
Sheep	.58
Swine	.14
Poultry	..

Percent Condemnation N. J. Federal Plants	
Cattle	.88
Calves	.08
Sheep	.03
Swine	.349
Poultry	2.44

* 1966 statistics were repeated due to the unavailability of the 1967 report.

Table 2. STATISTICAL ANALYSIS OF ANTE MORTEM AND POST MORTEM INSPECTIONS FOR CATTLE

Cattle	Total	Passed	Suspect	Condemned	Parts
Antemortem					
State	12,429	12,425	61	4	....
Federal	310,808	308,065	0	2,743	....
Exempt	1,514	1,514	0	0	....
	324,751	322,004	61	2,747	....
Cattle					
Postmortem					
State	12,425	12,403	....	22	505
Federal	308,065	308,042	....	23	17,938
Exempt	1,514	1,514	....	0	0
	322,004	321,959	....	45	18,443

Table 3. STATISTICAL ANALYSIS OF ANTE MORTEM AND POST MORTEM INSPECTIONS FOR CALVES

Calves	Total	Passed	Suspect	Condemned	Parts
Antemortem					
State	86,594	86,558	5	36	....
Federal	242,341	242,193	1	148	....
Exempt	368	368	0	0	....
	329,303	329,119	6	184	....
Calves					
Postmortem					
State	86,558	86,481	....	77	250
Federal	242,193	242,129	....	64	1,330
Exempt	368	368	....	0	0
	329,119	328,978	....	141	1,580

Table 4. STATISTICAL ANALYSIS OF ANTE MORTEM AND POST MORTEM INSPECTIONS FOR SWINE

Swine	Total	Passed	Suspect	Condemned	Parts
Antemortem					
State	109,844	109,807	29	37	....
Federal	473,048	473,046	2,112	2	....
Exempt	1,963	1,962	0	1	....
	584,855	584,815	2,141	40	....
Swine					
Postmortem					
State	109,807	109,794	....	13	6,633
Federal	473,046	471,403	....	1,643	22,297
Exempt	1,962	1,962	....	0	0
	584,815	583,159	....	1,656	28,930

Table 5. Statistical Analysis of Ante Mortem and Post Mortem Inspections for Sheep

Sheep	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	6,690	6,689	4	1	....
Federal	867,676	867,518	0	158	....
Exempt	473	473	0	0	....
	874,839	874,680	4	159	....
Sheep Postmortem					
State	6,689	6,682	....	7	97
Federal	867,518	867,362	....	156	39,104
Exempt	473	473	....	0	0
	874,680	874,517	....	163	39,201

Table 6. Statistical Analysis of Ante Mortem and Post Mortem Inspections for Poultry

Poultry	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Antemortem					
State	277,376	276,958	217	418	....
Federal	10,585,929	10,545,549	0	40,380	....
Exempt	1,696,151	1,664,013	0	32,138	....
	12,559,456	12,486,520	217	72,936	....
Poultry Postmortem					
State	276,958	274,262	....	2,696	2,365
Federal	10,545,549	10,327,343	....	218,206	8,763
Exempt	1,664,013	1,664,013	....	0	0
	12,486,520	12,265,618	....	220,902	11,128

Milk Control Program

The number of milk cows in New Jersey continued to decline during the year. The trend toward fewer but larger dairy farms and milk processing plants continued. Overall milk production in the state dropped about three percent and we rely increasingly on milk from other states in order to supply consumer needs which presently amount to about 0.41 quarts per day per person.

There were 354 milk plants, 1,192 frozen desserts plants, and more than 45,000 dairy farms supplying milk to those plants which were supervised by the department and official agencies having reciprocal inspection and sampling agreements with the department. Meetings and discussions were held with reciprocal agencies to strengthen and realign responsibilities. New procedures and requirements were reviewed in line with further dvelopment of uniformity in field and administrative activities of the participating agencies.

In cooperation with Rutgers University, regional meetings were held with haulers handling farm bulk milk. These meetings were instructional in nature, stressing responsibilities of the haulers as related to the organoleptic* examination of milk, sanitary procedures to be followed in transferring the product, handling equipment, and sampling procedures.

The law requiring the dating of whole milk containers as to the day on which the milk was pasteurized was amended. Containers of whole milk must now show the "day of the week" on which the milk was pasteurized. This presents some enforcement problems since it is impossible in many instances to determine whether the milk in question is old or has been misbranded as to the time of pasteurization. The revised dating system also caused much confusion among the consuming public as evidenced by the numerous complaints, written and verbal, received following enactment of the new requirement.

Meetings of the Northeast Uniform Standards Committee were instrumental in developing a model Fair Packaging and Labeling Regulation for Fluid Milk and Fluid Milk Products for adoption by all state milk regulatory agencies.

Representatives of the program also served on committees of the New York State Association of Milk and Food Sanitarians in developing uniform guidelines for the design, fabrication, and installation of milking machines for use in our milkshed.

Official agencies making inspections and sampling products under reciprocal agreements with the department submitted 311 reports of surveys of milk plants and their supplying dairy farms, and 2,357 reports of analysis of milk and milk producers for review. Those reports, together with our own, were used as a basis for quarterly releases to all local boards of health on the status of milk plants supplying New Jersey consumers. This eliminates the need for duplication of effort and expense in supervising those establishments.

* Organoleptic—based on the senses. Dirt could be seen; sour milk would smell, etc.

Table 1 shows the number of inspections made and samples collected by program personnel (four men) during the year.

Table 1. Inspections Made and Samples Collected, 1967

Milk Plants Inspected	245
Dairy Farms Inspected	2,461
Frozen Desserts Plants Inspected	103
Samples Collected	1,263

Shellfish Control Program

Shellfish, as defined by New Jersey regulation, include oysters, clams, and mussels. New Jersey is a producing state for several of these shellfish species, including hard clams, soft clams, surf clams, eastern oysters, and mussels.

Recent statistics showed that of 20 producing states, New Jersey ranked first in the nation in production of sea clams with 95.5 percent of the national production landed here. New Jersey ranked second in the nation in the production of hard clams with 12 percent of the national production. We ranked sixth in production of soft clams with less than one percent of the national production, and number 12 in the production of oysters with one percent of the national production.

Since shellfish are traditionally eaten uncooked (on the half shell) or partially cooked (steamed), harvest of shellfish is restricted to approved waters.

By conducting comprehensive sanitary surveys of shellfish growing and harvesting areas, the department is able to classify these areas as to their acceptability for harvesting shellfish. With the assistance of the Stream Pollution Control Program and the Division of Laboratories, the following sanitary surveys were carried out in 1967:

1. Delaware Bay (Cape Shore)
2. Delaware Bay (Ben Davis Pt. to Dunks Pt.)
3. Nantuxent and Cedar Creeks (tributaries of Delaware Bay)
4. Jenkins Sound
5. Great Sound
6. Great Egg Harbor Bay
7. Absecon Bay
8. Brigantine Area
9. Sandy Hook Bay
10. Raritan Bay

A total of 9,051 water samples was collected and analyzed as a part of the sanitary survey work. This compares with 9,634 in 1965 and 10,798 in 1966.

The results of reclassification of waters during the last three years are indicated below:

	1965	*1966*	*1967*
Acres opened	1,200	671	260
Acres closed	512	5,372	432

The classification of New Jersey shellfish waters is shown below as of December 31, 1967:

Acres of Potential Shellfish Harvesting Waters

Approved	*Condemned*	*Seasonally Approved*	*Total*
313,068	77,653	2,131	392,852

Identification of the condemned waters is important so that harvesters know where they must not work. A two phase program to develop new signs for this purpose was undertaken in 1966. The first phase brought about signs to indicate the dividing line between condemned and approved waters. These were erected during 1967. Also during 1967, the second phase sign was developed to be placed within the condemned areas. Delivery of these signs is scheduled for early 1968.

In addition, condemned area charts, which are distributed to all licensed harvesters, were revised and updated along with the rules and regulations governing condemned waters. Both items are scheduled for early 1968 publication.

There is also a physical patrol of condemned waters which is carried out by the Division of Shell Fisheries, Department of Conservation and Economic Development. Comparative patrol results are shown below for three years:

	1965	*1966*	*1967*
Apprehensions	35	78	73
Charges	..	..	123
Guilty	31	69	96
Not Guilty	4	3	12
Dismissed	..	..	6
Suspended	..	..	2
Dropped	..	3	2
Pending	..	3	5
Fines	$1,939.50	$2,760	$3,470

Certification of shellfish dealers is another function of this program. Comparative listings for three years are shown below:

	1965	1966	1967
Shellstock Shipper	74	82	95
Reshipper	64	63	55
Shucker Packer	11	13	18
Repacker	6	7	6
Digger Retailer	5	7	7
Total	160	172	181

In addition to the defined shellfish establishments, this program supervised the bay scallop shipping establishments in New Jersey. A list of approved shippers was published. The number of establishments approved is shown below for the last three years:

	1965	1966	1967
Bay scallop shippers	31	35	36

As a guide to certification and approval of the above shellfish handling establishments, the program conducts sanitary inspections and follow-up visits, collects samples of potable water, and collects samples of shellfish. The statistics below reflect these activities over a three year period:

	1965	1966	1967
Sanitary inspections and follow-up visits	667	744	437
Potable water samples	172	206	186
Shellfish samples	518	743	740

The drop in the number of sanitary inspections and follow-up visits during 1967 reflects a shift in personnel responsibility, the training of two new sanitarians, and the lack of a full staff of summer part time personnel.

Evaluation of the New Jersey Shellfish Control Program by the U. S. Public Health Service showed continued improvement and a high rating in 1967, resulting in continued certification as a member in good standing of the National Cooperative Shellfish Sanitation Program.

Research on depuration of hard clams was continued by Rutgers—the State University at its laboratory at Monmouth Beach, New Jersey.

The Federal Water Pollution Control Administration (FWPCA) called a hearing in New Jersey based on its report indicating economic damage to the shellfish industry in New Jersey because of water pollution. The hearing dealt with the estuarine waters from Shark River south to Cape May. This department presented a long range proposal to alleviate the water pollution problem in those waters. The proposal was acceptable to the FWPCA and is being implemented by this department.

Camp and Bathing Program

Lake Bathing

The department certified 74 lake bathing places or areas during the 1967 summer season, the highest number of certifications since the inception of the program. As has been customary in the administration of the program, each facility certified was awarded an official State Department of Health certificate of compliance, together with a large sign for public display attesting to the certification. Publicity was also given to the certified places or areas by way of the public press.

Participation in the certification program is voluntary on the part of lake owners and operators and requires considerable outlay of money to provide and maintain facilities in accordance with established guidelines, as well as to engage the services of private laboratories to check on water quality.

The public relations aspect of this program is intangible insofar as dollars and cents are concerned, but its existence cannot be discounted, particularly in the light of increased interest by lake bathing owners and operators.

Camps

A total of 203 camps was certified by this department for 1967. Although this certification figure is lower than that for 1966, it cannot be interpreted as indicating a decline in camp quality, since 27 units were listed in the "N" (not inspected) category. It is reasonable to anticipate that a good percentage of the "N" camps might have achieved certification and our efforts will be directed toward reducing unreported facilities.

Acceptance of this voluntary certification program has been excellent. As additional camps become known, their owners and operators will be encouraged to participate.

A list of camps known to this department during 1967 has been compiled and is available to all interested parties.

Table 1. Trends in Certification

	1964	1965	1966	1967
Camps Certified	206	218	220	203
Lake Bathing Facilities Certified	62	64	71	74

Potable Water Program

When the Division of Clean Air and Water was formed in mid 1967, the Potable Water Program was retained within the Division of Environmental Health. The prime function of the program is to supervise the many "public" water supplies in New Jersey and the water supply systems of state and county owned institutions. In addition, it provides services to other state agencies owning water supplies, (e.g. Department of Conservation and Economic Development and Department of Transportation), and to several federal agencies such as the Coast Guard, United States Public Health Service, Federal Aeronautics Administration, and the National Parks Service. Through the state health district offices, it exercises supervision over the water supply and water treatment facilities which exclusively serve public schools.

There are 450 "public" water supplies in New Jersey as defined by statute, which provide an estimated 6,000,000 persons with piped supplies of water from community sources. Of the total number of public supplies, almost exactly 50 percent are under municipal ownership and 50 percent are investor owned. Although only approximately 25 percent of the supply systems serve more than one municipality, these account for 80 percent of the population in this state which receives water from "public" water supplies.

Because of the continued inability to fill the two vacancies for senior public health engineers, it has been impossible to provide adequate coverage of the public water supply systems in the northern and metropolitan areas of New Jersey. In order to relieve the existing engineers from some of the nonengineering functions, such as the inspection and sampling of new wells and routine sampling of water supplies, and thereby utilize their professional knowledge and skills to better advantage, a public health field worker was recruited towards the end of the year.

Table 1, shows the statistical data on a portion of the administrative workload for the subject year, and corresponding figures are shown for the two previous years for comparison. The examination of submitted plans, specifications, and other engineering data for water supply projects occupies a significant portion of each engineer's time on the days he is in the office, but this work is considered to be an important function of the program for the protection of public health and the prevention of future problems.

Table 1. Summary of Permits, etc. Issued

	1965	*1966*	*1967*
Combined projects submitted for examination	137	198	193
Projects examined and disapproved	7	15	18
Combined permits issued	130	183	175
Estimated construction costs for approved projects	$19,345,700	$20,241,400	$27,828,600
Breakdown:			
New public water supply systems	9	13	11
New supplies for schools, etc.	20	32	27
New sources of supply	106	80	81
New water treatment plants	48	157	113
Additions to existing water treatment plants	15	23	42
New water storage facilities	42	36	55
New transmission and distribution mains	10	32	35
Major additions to distribution systems	35	18	33
Water supply projects examined for Mobile Home Park Program	0	4	10
Original Physical Connection Permits issued	17	18	16
Renewal Physical Connection Permits issued	255	271	268
Formal Orders served	17	19	17

During the year under review, emphasis was placed on securing compliance with the rules and regulations requiring the mandatory chlorination of all public water supplies which became effective in July 1966. The success of these endeavors is shown by the statistical data in Table 2. In the event of their continued noncompliance, legal action will be taken against the remaining 37 public water supplies which have not yet instituted chlorination.

Table 2. Status of Chlorination of Public Water Supplies as of December 31, 1967

Number of "public" water supplies in New Jersey	449
Number of public supplies now chlorinated*	412
Percentage of public supplies now chlorinated	92
Estimated number of persons served by public supplies	6 million
Number of persons on public supplies now receiving chlorinated water	5.89 million
Percentage of persons now receiving chlorinated water	98

The program inspected and sampled 40 percent of the public water supplies, and appropriate procedures were taken to secure rectification of the defects discovered. Special emphasis was placed on the adequacy of water storage facilities to meet peak summer demands, the provision of at least two prime sources of supply to maintain service in the event of well failure, and the need for water purveyors to practice a quality control program whereby

*Includes some supplies for which Permits were issued, but where chlorinated facilities may not have been completed by December 31, 1968.

they take sufficient samples to assure the continued bacteriological quality of the delivered water.

It is the aim of the program to achieve 100 percent routine inspections each year but this goal has so far been unattainable because of staff shortages, the heavy load of projects submitted for examination, and the need to conduct special investigations in response to consumers' complaints. In addition, during 1967, a special effort was made to inspect each vessel, railroad, and airline watering point in New Jersey. This is an important public health protection for the traveling public, and is performed on behalf of the United States Public Health Service. Table 3 summarizes the field work accomplishments for 1967, and shows the corresponding data for the two previous years.

Table 3. SUMMARY OF FIELD WORK

	1965	*1966*	*1967*
Routine inspections of public water supplies	143	226	177
Percentage of public supplies inspected	31	45	40
Special investigations and revisits	256	201	232
Routine inspections of "special" supplies (institutions, etc.)	147	108	42
Inspections of water supplies for U.S.P.H.S. certification	6	12	10
Inspections of vessel, railroad, and airline watering points	159	18	133
Inspections and tests of new physical connections	34	27	35
New well tests (including schools)	99	87	117
Field meetings and conferences	163	142	219
Bacteriological samples taken and interpreted	5,093	5,406	4,921
Chemical samples taken and interpreted	1,051	1,751	1,115

Special field work included the investigation of the spillage of toxic chemicals from nine derailed railroad cars into a potable watershed, and the execution of appropriate procedures to protect the public water supplies derived from this source. Similar investigations were made of the discharge of arsenical and hexavalent chromium compounds in watershed areas.

The problem of copper pickup in the water service lines of a high school was investigated and rectified. Intensive surveys were conducted to determine the cause and extent of a widespread bacteriological contamination of the ground water in a semirural township. Adverse bacteriological samples of a major water supply were investigated; an illegal cross-connection at an industrial premises was found and removed; and subsequent bacteriological tests were satisfactory. A similar problem at a state institution was investigated and rectified. At the request of the Brotherhood of Locomotive Firemen

and Engineers, investigation was made of a complaint about the insanitary conditions of drinking water containers placed in railroad locomotives. The complaint was found to be justified, and recommendations for corrections were made to the concerned railroad.

Extensive assistance was given to the Migrant Labor Program in relation to water supplies at such camps, including discussions, lectures, and practical field instruction for inspection personnel of the Department of Labor and Industry.

The termination of the severe drought conditions of the previous five years provided welcome relief during 1967 when no major shortages of water developed. The widespread power failure on June 5, 1967, however, posed difficulties for many water purveyors, and exemplifies the need for adequate elevated storage and/or auxiliary power, which is being enforced by the program. The effects of the occurrence were minimized by the extent of the "blackout" which necessitated cessation of operations by almost all industries which consume vast quantities of water. Local power failures, affecting water utility pumping equipment but permitting continued industrial operation, would have produced more serious results.

In the field of legislation, the governor signed into law Chapter 179, P. L. 1967, which amends Title 40 of the Revised Statutes of New Jersey to enable the governing body of a municipality, by ordinance, to require buildings to be connected to a public water supply main if one is located in the adjoining street. Another bill, supported by the Potable Water Program, which sought to revise and update certain sections of Title 58 of the Revised Statutes under which the program operates, failed to pass the senate. In October 1967 revised potable water standards were promulgated which, among other things, make better provision for routine quality control sampling of water supplied to the public at restaurants, motels, commercial and industrial premises, camps, etc. as well as from public water supplies.

Several administrative improvements have been made to achieve greater efficiency and to improve economy including a revision in the statutory quarterly mailing program for bacteriological analysis of water supplies. A considerable monetary saving has been accomplished by no longer sending out the results of satisfactory samples taken under this program which total approximately 3,800 per year. In future, the water purveyors and the local boards of health will be advised only of adverse results.

Mobile Home Parks Program

During 1967, the Mobile Home Parks Program conducted a state-wide survey by mail to obtain statistical data relating to mobile home parks. Of the 568 municipalities contacted, 565 replied. The information obtained enabled this program to make an accurate and realistic budget request in respect to staffing needs for 1968-69.

Also this year, the program coordinator served as a member of the Commissioner's Committee for the Revision of Chapter IX of the State Sanitary Code. A final draft of the proposed revisions was completed in December for submission to the commissioner.

Due to the above, routine mobile home park inspections were reduced, with greater emphasis being placed on special investigations and surveillance of sub-surface sewage disposal facilities at mobile home parks. It has been observed during field activities that most sub-surface sewage disposal systems, which were installed to serve mobile home parks, without department approval, are inadequate, improper, and usually insanitary. Therefore, top priority is being given this activity.

Special efforts were made this year to encourage a greater degree of compliance to the requirement for departmental approval of water supply and sub-surface sewage disposal systems proposed for use in our mobile home parks.

The program continues to coordinate the review and examination of plans for proposed water supply and sub-surface sewage disposal systems for mobile home parks. It is assisted by Potable Water Program personnel and other engineering services provided as required.

Table 1. Field Activities, 1967

Inspection Visits	24
Surveillance Visits	93
Special Investigations	61
Conferences (Field)	16
Conferences (Other)	37
Meetings (Night)	2
Meetings (Day)	31
Court Appearances	2

Noxious Weed Control Program

The program to promote and assist local municipalities in developing and carrying on noxious weed, ragweed, and poison ivy control programs was continued during 1967. A state-wide survey of local health agencies revealed that the recommended Noxious Weed Ordinance (Weed Control Code of New Jersey—1955) has been adopted by 46 municipalities and counties, with noxious weed control programs now in operation in 184 municipalities. Seven local health agencies have been granted state financial aid in conducting noxious weed control programs.

During the ragweed pollen season, August through September, the department, in cooperation with local health agencies, operated 16 pollen sampling and counting stations. One new station was added at Beach Haven and two stations, one at Jersey City and one in Caldwell, were not operated in 1967. Trenton and Flemington showed the highest ragweed pollen concentrations of the municipalities covered by the state air pollen sampling and counting network.

A new leaflet entitled "Root Out Annoying Ragweed" was developed and published by the department. This publication designed to acquaint the general public with the ragweed and hay fever problems and to serve as a promotional aid has been distributed to local health agencies.

Representatives of the division were instrumental in planning and developing an outstanding program for the annual meeting of the Public Health Section of the Northeastern Weed Control Conference. There appears to be a growing awareness of the need to assist the large number of hay fever sufferers, estimated at five to 10 percent of the population, by conducting new or more effective ragweed elimination and control programs.

Plans have been developed to provide increased assistance to local health agencies and other interested organizations in developing effective noxious weed control programs in 1968.

Housing Program

The Housing Program is directly concerned with the public health aspects of housing. The need for placing increased emphasis on hygiene of housing was clearly indicated in the 1960 Bureau of Census Reports, which showed 52,141 dwelling or housing units in the state were dilapidated and 179,650 in a state of deterioration. These reports also showed 26,495 dwelling units lacked hot water and 78,277 lacked other needed plumbing facilities, such as adequate flush toilets, lavatories and bath facilities. It has been well documented that the incidence of communicable and filth-borne diseases is much higher in crowded substandard housing areas than in areas with adequate, clean, and safe housing.

In order to meet the urgent need for more and better trained local housing inspectors, major emphasis was given to planning and conducting a training program for housing code enforcement officials. The training program activity is being carried on in cooperation with the Bureau of Government Research, Rutgers—the State University. The university issues certificates to local housing officials that satisfactorily complete the 10 day, 60-hour course entitled "Principles of Housing Inspection."

A Housing Course Planning Committee was organized during the year to aid in the development of an acceptable training course for housing inspectors. In addition to representatives of the department and the Bureau of Government Research, Rutgers—the State University, the committee included representatives of local municipal housing code enforcement agencies and the New Jersey Association of Certified Housing Inspectors. This committee was later renamed the "Code Enforcement Training Study Committee" and enlarged to include representatives from the State Departments of Community Affairs and Civil Service, other departments of the state university, and all of the local code enforcement agencies, housing, building, zoning, plumbing, electrical, and fire prevention. The Bureau of Government Research is now offering short-term training courses in all of these fields of local code enforcement, and the committee is conducting a study of the duties, education, training, and experience requirements of the various kinds of local code enforcement officials in order to more effectively plan the type and level of training courses that should be provided through the state university.

The coordinator of the Housing Program actively promoted the adoption and enforcement of the "New Jersey State Housing Code," which is recommended for local adoption. There has been a steadily increasing demand for copies of the code, with many municipalities reporting that they have adopted or are considering the adoption of the housing code. The adoption of adequate local ordinances and codes is one of the requirements of the United States Department of Housing and Urban Development for participation in federally assisted housing projects and programs.

Data are now being collected to publish an up-to-date list of housing code adoptions and local enforcement agencies.

A procedure for investigating and handling housing complaints through the cooperation of the four state district offices and local health and housing code enforcement agencies was established. The Housing Program was able to bring about the correction or improvement of many housing problems through this cooperative action, particularly in connection with complaints of lack of heat, garbage storage and collection, rodent control, and private sewage disposal systems.

Housing Program—Plumbing

During 1967, there was a continuing expression of interest in the Model State Plumbing Code on the part of municipalities. Two large cities, Newark and Elizabeth, adopted the code, with minor revisions. The smaller municipalities of Hamilton Township (Atlantic County), Scotch Plains Township, and Denville Township also adopted the recommended state plumbing code.

At the request of the New Jersey State League of Municipalities, the plumbing consultant participated in the round-table discussion for municipal officials at the Annual Meeting in Atlantic City. He also served as a panel member in a discussion of the Model State Plumbing Code at a meeting of the New Jersey Plumbing Inspectors Association. The plumbing consultant also provided consultation to municipal officials in connection with the adoption, interpretation and enforcement of the state plumbing code. Engineers, architects, and individuals raising questions concerning the plumbing code requirements in a specific locality were referred to the local plumbing inspectors for assistance in solving their problems.

The Standing Committee on Plumbing Matters met four times during the year to consider requests for changes, additions and inclusion of new materials. Recommendations were agreed upon for amendments to the plumbing code. It is anticipated that the amendments will be implemented in 1968.

Occupational Health Program

Occupational Health and the State Purpose

New Jersey is a state of industrial workers. More than 2,000,000 persons are employed in some 32,000 widely divergent industries. Nowhere else in the world will you find as great a variety of products manufactured as in our state, often termed the "Industrial Crossroads of the World."

Since 1950, New Jersey has been engaged in a technological revolution which has tremendous implications for the health of all the people, and particularly for the health of workers. New processes and new sources of energy present occupational health problems of unprecedented complexity. During the last 12 months, personnel of the Occupational Health Program worked diligently to prevent or control diseases in industry. A statistical summary for

the 1967 calendar year and a statistical comparison for the years 1964 through 1966 are included at the end of the report.

The Occupational Health Program conducted technical studies in 387 industrial establishments that have a combined working population of 114,608. There were 1,079 recommendations made to management for the protection of the workers.

In order to evaluate the environment in these 387 establishments, personnel processed 3,759 air samples in the field and submitted 568 samples to the laboratory for analysis. In addition, the Occupational Health Laboratory processed 1,815 blood and urine samples for lead content in the continuing campaign to assist physicians and hospitals in their battle with lead absorption, particularly among children. Lead poisoning is a serious disease since it frequently leaves children mentally retarded as wards of the state or is the cause of death.

Noise is an increasing problem. At least one United States Senator rates it as a pollutant entitled to as much consideration as those that contaminate the air and the water. Municipalities, with the help of the program, are adopting codes to authorize action to protect their citizens from excessive noise, especially during normal sleeping hours. These range from trying to prevent railroads from bumping cars, preventing the placement of air conditioning units under neighbors' bedroom windows, to controlling actual industrial operations. One incident involves the heating and cooling units on a group of portable classrooms allegedly reducing property values on an attractive street.

Coincidental with the rise in neighborhood noise complaints is the awareness that deafness can be caused by exposure to noise in industry. Since 1964, management of 225 plants was informed of the potential hazard through noise measurements made by the program. Progress is being achieved. More plants are providing ear protection. Industries with medical programs are adding audiometer testing to the extent that a special school for training nurses to conduct such tests is oversubscribed.

Data Processing Machines

Noise not in the hearing loss range was studied for annoyance, interference with speech and telephone use and for fatigue in areas devoted to data processing. Barriers and acoustically treated ceiling and walls will be installed. The study resulted from employees' complaints.

Noxious Gases

The program investigated a report of headaches and nausea suffered by warehouse employees. A defective flue was discovered in the heating system which permitted the exhaust fan to draw fumes throughout the area. The owner immediately rectified the situation.

Complaints by teachers and students of dizziness, nausea, nosebleeds, and sleepiness led to a study of a newly constructed school building. Although concentrations of noxious fumes were extremely low, it was recommended that the furnace chimney be raised in order to more adequately diffuse its output. A ventilation engineer from the Public Health Service Research and Training Center provided advice and guidance in this investigation.

Self-propelled railroad cars were examined to determine the cause of diesel fumes which affected passengers. The problem was corrected by the installation of new door gaskets and the replacement of exhaust ducts. The practice of leaving the car doors open between stations was also discontinued.

Urethane Foam Hazards

An appalling exposure to amines being used in the production of the very popular urethane foams was uncovered during a community survey. Corrective methods in the form of exhaust hoods and other ventilation devices were rapidly applied. It was then decided to study other plants manufacturing foams. This self-initiated project found only one of the five plants with due concern for the health of their employees.

Other Program Activities

The activities of the program took its six man staff into 106 different communities and into several locations of state government such as inspection stations of the Division of Motor Vehicles; laboratory and shops of the Department of Transportation; offices of the Department of the Treasury; offices of the Department of Labor and Industry; shops and tunnels at the Ancora State Hospital; shops of the Johnstone Training Center of the Department of Institutions and Agencies; several areas at the McGuire Air Force Base and cell areas of the Union County jail.

Education and Training

Workshops on occupational health were conducted by program personnel for new sanitarians being oriented by the Bergen County Health Department, Burlington County Health Department, and the Trenton City Health De-

partment. Several industries cooperated in a demonstration of occupational health protection in action.

Training courses for nurses employed in New Jersey industries were given throughout the year. These were arranged by the occupational health nurse consultant. Two courses presented were limited to 25 nurses each and lasted one day each week for 10 weeks.

During the spring of 1967, a one-day institute on occupational health was provided for 80 health officers and sanitarians in which all members of this program participated. This resulted in requests from six municipalities to assist in occupational health surveys of industries. These communities are East Hanover Township, Lyndhurst, Parsippany-Troy Hills, Teaneck, Englewood, and Livingston. Such surveys are continuing in Jersey City and Kearny and were completed this year in Montclair and Boonton. These visits constitute a portion of the 254 requests for assistance received from health officers during the year. Actual distribution of the requests for our services is: local health officers—254, management—55, plant medical departments—10, citizens—28, and labor—11.

Table 1. Occupational Health Program

Statistical Summary of Occupational Health Activities
For period 1967 Calendar Year
Field Activities

*Number of industrial establishments given service	325
*Number of employees in establishments visited	114,608
*Number of workers affected by services	58,832
*Number of other places and areas visited	62

Number of field visits made:
Requested

a. Management	55	e. District Health	18
b. Labor	11	f. Citizen	28
c. Plant M.D. or nurse	10	Other gov't. agencies	9
d. Local Health	254	Total Requests	387
Self Initiated			4
*Total			391

* Starred items represent minimum requirements for a national system for standard reporting of occupational health activities.

Plant Environmental Services	*No. of Visits*
Introductory visit	251
Industrial hygiene survey	248
Technical study of hazards	194
Noise and vibration	25
Consultation only (advisory)	10
Follow-up on recommendations	16
All other	1
*Total	745
Worker Health Services	
Promotion of plant health programs	212
Consultation on medical aspects	11
Consultation on nursing aspects	28
Consultation with local health dept. on plant health services	2
Other	...
*Total	253

Environmental Recommendations:	
Number made	1,079
Number complied with	...
Estimated cost	...
Field Determinations:	
Atmospheric contaminants	765
Physical conditions	3,494
Radition monitoring	...
*Total	3,759
Laboratory Analyses:	
Routine	568
Air pollution	0
Diagnostic	1,826
Research	29
*Total	2,423
*Occupational diseases investigated	14
*Occupational diseases reported	560
Plans reviewed	2

Related Activities

Office consultation services and inquiries handled			1,393
Lectures given	28	Publications	1
Meetings attended	105	Attendance	677
Demonstrations	4		

Table 2. Trends in Occupational Health Program Activities, 1964-1967

	1967	*1966*	*1965*	*1964*
Number of establishments given service	387	453	376	355
Number of visits to perform plant environmental services	745	875	642	686
Number of worker health services	253	258	216	311
Number of recommendations made to management	1,079	1,143	1,083	947
Number of analyses made in the field	3,759	3,671	3,193	2,276
Number of laboratory analyses	2,423	2,028	2,026	1,393
Number of office consultation services and inquiries	1,393	1,385	1,226	931

Radiological Health Program

Introduction

Almost 10 years ago, on July 8, 1958, Chapter 116, P. L. of 1958, for the first time clearly provided 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 made responsible for registering sources of radiation and for the administration of these codes, rules, and regulations.

Chapter I, General Requirements of the Radiation Protection Code were drafted by the Commission on Radiation Protection and became effective February 1, 1961.

On December 4, 1961, Chapter 124, Public Laws of 1961, was enacted. This act amended Chapter 116, P. L. 1958, and basically facilitates an agreement between the State of New Jersey and the United States Atomic Energy Commission whereby New Jersey would 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 was adopted. This chapter basically delineates medical and dental x-ray requirements and also bans fluoroscopic shoe-fitting machines.

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

Further changes dealing with purpose and responsibility, definitions, registration, licensing, permissible dose rates, radiation levels and concentrations, records, radioactive contamination control, labeling, posting, and controls, therapeutic installations, medical diagnostic x-ray installations, and dental installations became effective August 1, 1967.

Commission on Radiation Protection Membership as of December 31, 1967

FRANK G. DUNNINGTON, Ph.D., *Chairman*
MAX M. WEISS, Ph.D., *Vice Chairman*
PHILIP D. GILBERT, M.D., *Secretary*
ROBERT C. AXTMANN, Ph.D.
RICHARD L. HIGGINS, E.E.
ROSCOE P. KANDLE, M.D.
BENJAMIN P. SONNENBLICK, Ph.D.

Certification of X-ray Technicians

The substance of a proposed bill for the certification of x-ray technicians continued under discussion with many groups: the New Jersey Society of Radiologic Technologists; 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 submitted to the Counsel to the Governor for consideration.

X-ray Machine Sale Notification

The Radiation Protection Code was amended August 1, 1967, to require that dealers in x-ray equipment notify the department of those to whom the equipment is sold within 15 days of sale.

Nuclear Medicine

The extent of the practice of nuclear medicine has been considered by the commission with regard to adding appropriate sections to the code. An Advisory Committee on Nuclear Medicine was organized early in 1967 to assist the commission with its deliberations.

Nonionizing Radiation

The advisability of expanding the responsibilities of the commission to include the safe use of nonionizing electromagnetic radiation was considered. An Advisory Committee on Nonionizing Radiation was appointed.

The program augmented its reactor environmental surveillance by using film badges. These environmental badges were placed at stations surrounding a reactor site. Twenty sites were selected and in order to obtain informative base line data, these badges were exposed for 30-day periods.

Table 1. Radiological Health Laboratory Samples Processed
Environmental samples collected and determinations made during 1967

Type of Sample	*Samples*	*Determinations*
Total	4,637	8,449
Surface Water	253	496
Silt	153	316
Ground Water	123	246
State-wide		
Water	379	758
Silt	245	490
Precipitation	82	82
Air	359	359
Special		
Water	632	1,276
Silt	313	626
Vegetation	453	866
Soil	303	606
Milk	552	1,186
Marine	98	230
Radiogas	180	180
Ore	1	3
Leak Tests and Smears	389	485
Miscellaneous	162	254

Table 2. Licensing—Radioactive Materials, December, 1967

		Jan.-Dec. 1967	*Total to date December 31, 1967*
License applications sent out		26	852
Number responding		22	220
Applications received for a license to leak test sealed sources		8	32
New Jersey Licenses Issued:			
Hospitals	Temp.		12
	Perm.		59
Physicians	Temp.		1
	Perm.		3
Industrial	Temp.		0
	Perm.		39
Institutional	Temp.		0
	Perm.		2

Radioactive Materials Licensing Program

During 1967, 51 permanent licenses were issued to owners and users of naturally occurring and accelerator produced radioactive materials. This brings the number of permanent licenses issued to an even 100.

This program, through its educational and specialized assistance efforts, has been responsible for removing from use, with ultimate disposal, 2.9 grams representing 263 individual sources.

Surveillance is also maintained over 473 Atomic Energy Commission license holders using, or in possession of, radioactive materials under its (AEC) jurisdiction.

Registration of Radiation Producing Machines

There were 219 machines registered and and 329 machine registrations cancelled in 1967 for a net gain of 347 machines registered. The machines registerd during other years are 698 in 1966; and 613 in 1965.

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

Registrant	*Changes in No. of Machines Registered During 1967*	*Total Reg. Dec. 31, 1967*
Industries	— 16	918
Physicians	+ 5	2,255
Dentists	+147	4,903
Chiropractors	+ 4	272
Chiropodists	+ 1	275
Veterinarians	+ 1	182
Institutions	+ 61	1,270
Total	219	10,075

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

Type of Registrant	*1967*	*1966*	*1695*	*1964*	*1963*
All Registrants	10,075	9,866	9,522	9,182	8,454
Dentists	4,903	4,756	4,461	4,375	3,943
Physicians	2,255	2,250	2,240	2,171	1,975
Chiropractors	272	268	262	254	236
Podiatrists	275	274	270	270	251
Veterinarians	182	181	175	169	162
Institutions and Schools	1,270	1,200	1,186	1,149	1,111
Industry	918	937	928	794	776

Field Inspections for Code Compliance of X-ray Machine Installations

There were 1,995 inspections of x-ray units in 1967 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 1967	Total Dec. 31, 1967
Industry	99	607
Physicians	348	3,332
Dentists	1,058	7,650
Chiropractors	58	443
Podiatrists	55	532
Veterinarians	33	262
Institutions	344	1,652
Total	1,995	14,478

The Radiation Producing Machine Section of the program continued a 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 808 x-ray units was brought into compliance with the Radiation Protection Code during 1967. The number of x-ray units in compliance with the Code as of December 31, 1967, was 8,025 units or 80 percent of the 10,075 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 1967	Total December 31, 1967	Percent of Reg. Units
Industry	84	419	46
Physicians	265	1,817	80
Dentists	255	4,136	84
Chiropractors	1	251	92
Podiatrists	11	230	84
Veterinarians	4	143	78
Institutions	188	1,029	81
Total	808	8,025	..

Reactor Safety and Development

During calendar year 1967, the Jersey Central Power and Light Company continued construction of its first nuclear power reactor at Oyster Creek.

This reactor was originally scheduled for fuel loading and approach to criticality by May 15, 1967. Fuel loading is now scheduled for August 15, 1968. No power output of any significance from this plant can be expected before the end of 1968. The delay is due to a number of factors including a high incidence of jurisdictional disputes among the construction unions and detection of shallow, localized intergranular cracks in the sensitized type 304 stainless steel control rod drive penetrations. There were 108 crack indications located using dye penetrants and 106 cracks removed as verified by dye penetrant examinations as of December 4, 1967. The utility has stated the cracks, in its opinion, are characteristic of intergranular stress-assisted corrosion cracking. The corrosion medium has not been identified but the reactor pressure vessel cleaning solution is one possibility. This problem was brought to light when a routine hydrostatic test of the pressure vessel at 1,800 psi,* (design operating pressure is 1,000 psi), at the site revealed a single, small, drop type leak identified with one of the control rod drive penetrations (there are 137 such penetrations).

Stack, site, (not plant), release limits have not yet been finalized but there has been a steady decline in their proposed value by a factor of almost 10 from the value originally proposed. These release rates apply to releases during normal operating conditions; the values proposed at the end of the year are;

0.6 Ci/sec annual averaged continuous for noble gasses.
2.0 Ci/sec (not to exceed 48 hrs. in any 7 consecutive days).
8.0 Ci/sec instantaneous rate (not to exceed 15 minutes in any hour).
14.0 μ Ci/sec annual averaged continuous release rate for radiohalogens.

Liquid discharge activity rates have also been proposed for treated and assayed discharges from the radwaste facility. They are:

annual averaged concentrations in the exit canal at site boundary following dilution	100 F Ci/cc
one day average concentrations	$\leq$ 10 x above figure
maximum activity in liquid radwaste tanks	0.8 Ci for a period in excess of 72 hrs.

The liquid values are those for an "unidentified" mixture containing tritium.

*psi pounds per square inch.

Discussions were begun with respect to stack gas isotopic mix composition under normal and abnormal operating conditions and the effect of mix composition on monitor response insofar as it relates to energy dependence.

It was agreed to postpone discussions of the reactor radiological laboratory procedures and quality control until the utility's facility is completed.

Development of notification procedures based on State Police Operations Order No. 215 was completed and off-site emergency plan development was begun.

The Public Service Electric and Gas Company relocated the proposed Burlington nuclear power reactors to a site on Artificial Island located in Salem County about opposite the mouth of Alloways Creek. The new site was viewed from the shores of both New Jersey and Delaware. A sampling program coordinated with and in cooperation with the State of Delaware will be developed in 1968.

Radiological Health Laboratory

The program's radiological laboratory was placed temporarily under the control of the program's nuclear engineer. Quality control procedures are on a more formal basis and quality control procedures have been tightened. Steps were begun to develop a capability for detecting weak beta emitters using liquid scintillation spectrometry and to replace wet chemical analysis for hard beta emitters by instrumental means (solid state beta spectrometry at ambient or cyrogenic temperatures). The multichannel analyzer for the mobile lab plus some support equipment was also received.

The environmental monitoring program developed over the years and at a time when state-wide fall-out was a concern was reviewed and is being modified. The number of sample points, sample programs and sample frequency is being reduced. In addition, scout determinations for "hard" beta and gamma activity is made adequate to generate a 10 percent sample error at the 95 percent confidence level. These scout runs replace absolute determinations which will now only be made if the scout runs indicate activity is present. The services of a consulting satistician have been obtained. Dr. Ronald Snee, who is considered an expert in statistical sampling, is reviewing our work and will apply sample theory on a state-wide basis and facility basis as needed so we can arrive at the minimum number of samples to obtain a given level of assurance and a permissible (sometimes called acceptable level of error), margin of error or risk. The first three phases of this work are in progress or have been completed.

During the year, Rutgers accepted the donation of the Industrial Reactor Laboratory (IRL) to become effective January 1, 1969; Rutgers replaced Columbia University as the operator of IRL as of July 1, 1967.

Nuclear Engineering

The program's nuclear engineer developed several "white papers" at the request of the Commissioner of Health pertaining to the nuclear radiation industry and nuclear reactor siting.

The program's nuclear engineer maintained liaison with the Nuclear Safety Information Center of the Oak Ridge National Laboratory, the Nuclear Facilities Section of the National Center for Radiological Health of the Public Health Service, the Atomic Industrial Forum, the U. S. Atomic Energy Commission, and the States of Pennsylvania and New York, and the City of New York.

He also attended a course at the University of Tennessee in nuclear reactor safety, siting, and economics. A paper pertaining to state-wide radiological, environmental monitoring was developed and was presented at a national meeting of the Health Physics Society.

Development of a single, state-wide nuclear reactor emergency plan with the cooperation of the New Jersey State Police continued. This plan is evolutionary and subject to annual review and modification following rehearsal. The only comparable plan is a tentative one developed by the Connecticut State Department of Health and the Connecticut State Police for the Connecticut Yankee reactor. This plan differs from the one for this state since it is based on a regional compact in existence.

By the end of the year, New Jersey's utilities announced firm plans calling for the construction and operation of four nuclear power reactors, including Oyster Creek at two different sites, and of two different designs supplied by three different vendors. The capital cost of these machines totals approximately $417,000,000. When they are all operative in 1973, these four machines will have a capacity exceeding the presently installed and operating generating capacity in the state and will operate on a base-loaded program supplying one-third of the state's power (contributions to power from out-of-state mine mouth plants reduce nuclear's percent contribution).

Educational Activities

The program held 133 technical conferences with representatives of industry, government and various professions to provide relevant technical information on the radiation protection code and radiation protection.

The program participated in two one-day institutes on "Radiation Protection for X-ray Technicians" and a one week course on "Radium Hazards and Control" with the cooperation of the Training Section, National Center for Radiological Health, Public Health Service.

Instructions in the safe handling of transportation accidents, fighting fires and incidents involving radioactive materials were given to respective emergency workers.

Staff members presented "Public Exposure to X rays," "Biological Effects of Radiation," "X-ray Physics and Radiation Biology," "Radiation Detection Equipment," and "Instrument Calibration," to graduate students, undergraduate students, dental and medical students and civil defense instructors, respectively.

Staff Training Activities

Staff attended courses on "Radiation Protection for X-ray Technicians" and "Radium Hazards and Control."

The Radiological Laboratory personnel attended a 50-hour lecture program given by the department's nuclear engineer.

Veterinary Public Health Program

Rabies Control

No person contracted rabies in New Jersey during 1967. The last human case of this disease in the state occurred in a four-year old boy in 1949. No pets or other domestic animals in New Jersey were afflicted with rabies in 1967. The last naturally-occurring case of rabies in a domestic animal appeared in a dog in 1956. However, rabies is *still* with us.

A positive diagnosis of rabies was made in 21 bats during 1967. Our surrounding states still provide a potential source of introduction. During 1967, New York reported 89 cases, Pennsylvania 16 cases, and Delaware no cases.

The rabies laboratory accepted specimens of animals suspected of being rabid. Specimens are accepted on a 24-hour a day seven-day a week basis, and reports are promptly sent to physicians, health officers and other appropriate persons. During 1967, 2,204 specimens were examined for rabies. Bats constituted 468 of these animals and rabies was confirmed in 21 of these bats.

The laws and regulations relating to rabies control, sometimes referred to as the State Uniform Dog Control Act, provide the basis for rabies control activities by the State Department of Health and by the local boards of health.

One of the important principles of rabies control is the establishment and maintenance of a high degree of immunity in the dog population. Public rabies vaccination clinics sponsored jointly by local boards of health and the State Department of Health resulted in the mass vaccination of 184,959 pets against rabies. This continues an upward trend in numbers of pets vaccinated at public clinics (Table 1.). In addition, pets may be vaccinated against rabies by private veterinarians at owner's expense. Although there is no reporting system for such vaccinations, evidence indicates that a significant number of pets receive this protection.

Dog licensing, stimulated by police canvass of unlicensed dogs, is the starting point for dog control activities. Local and state officials use dog licensing to provide dog population information, both geographical and numerical. During 1967, 482,867 dogs were licensed in New Jersey. The listing by counties provides a distribution picture (Table 2.).

The state rabies control program provides consultation to physicians and veterinarians when humans or pets are exposed to possible rabies infection.

Arbovirus Surveillance and Research

Arbovirus surveillance and research activities were conducted the entire year at the four study areas that have been operated since 1961. Additional work was conducted for limited periods at other areas.

In connection with this project, 11,154 blood specimens were collected from wild birds, mammals, reptiles, amphibians, and domestic chickens (Table 3.).

The program collected 200,000 mosquitoes routinely by means of light traps, funnel-trapping, sweeping, and artificial resting-shelters, from four study-sites: Great Swamp and Brigantine Wildlife Refuges, Forked River Game Farm, and Mays Landing area. The total catch included specimens from a fifth study-site in the Woodbine area collected by Rutgers' personnel who joined the departmental project from August to November. A representative from Cape May County Mosquito Commission participated in the operation of the mosquito traps at Woodbine area.

Additional trapping of mosquitoes was conducted within areas of horse cases of encephalities reported by veterinarians.

For viral testing, 1,300 pools of mosquitoes were submitted to the Bureau of Virology; however, speciation and pooling are not completed.

A field study of winter activity of mosquitoes, related to the possibility of a winter carry-over of arboviruses, was carried out until late December.

Precipitin tests of mosquito blood meals, in a joint project with the Rutgers Department of Entomology, have been conducted to determine the host animals.

Approximately 1,500 ectoparasites (fleas, sucking lice, mites, and ticks), were taken from various species of wild animals and submitted to the Bureau of Virology for viral testing.

Plans for Vector Control at Proposed Tock's Island National Recreation Area

The New Jersey State Department of Health in cooperation with the States of New York and Pennsylvania and the Tock's Island Regional Advisory Council have initiated plans for the formation of a Vector Control Demonstration Project to obtain federal funds to develop a proposed plan to insure the well-being of visitors to the proposed Tock's Island National Recreation Area.

Salmonella in Wildlife

The increasing awareness of the importance of Salmonella organisms in human health prompted the collection of rectal swabs from wild animals which were handled in connection with arbovirus and rabies surveillance activities. Although this was started late in the year, swabs were obtained from 300 turtles and 25 wild mammals. Salmonella organisms were found in five opossums, four turtles, and one raccoon. The public health significance of these findings has not yet been evaluated.

Insect and Rodent Control

Insect and rodent control activities were revitalized during the year. Liaison was established with other organizations and agencies to increase the effectiveness, especially of rat control, in urban areas. A seminar on rat, mouse, and roach control was conducted during December.

In cooperation with the State Department of Community Affairs, this department conducted studies and participated in conferences preliminary to requesting a federal grant under the provisions of the Comprehensive Health Planning Act.

Three major objectives developed:

1. To demonstrate to communities how an effective rodent and insect program can be carried out on a permanent basis.

2. To stimulate and educate the indigenous poulations to the environmental and household sanitary practices needed to sustain a healthful physical and mental environment, thereby improving their health status.
3. To provide a framework for these municipalities to continue the project on a permanent basis within the organization so created in the project.

Table 1. Animals Vaccinated at Public Clinics by State Health District—by Calendar Year

District	*1964*	*1965*	*1966*	*1967*
Central	44,737	46,767	48,999	54,098
Metropolitan	61,530	66,951	67,397	72,295
Northern	28,238	31,854	34,079	36,580
Southern	17,488	18,922	19,824	21,986
Totals	151,993	164,494	170,299	184,959

Table 2. Dogs Licensed in 1967 by Counties

County	*Number of Dogs Licensed*
Atlantic	13,181
Bergen	61,232
Burlington	24,266
Camden	25,379
Cape May	3,602
Cumberland	10,723
Essex	39,914
Gloucester	15,331
Hudson	14,101
Hunterdon	12,025
Mercer	25,785
Middlesex	41,426
Monmouth	35,646
Morris	36,200
Ocean	17,042
Passaic	26,969
Salem	6,957
Somerset	20,761
Sussex	9,378
Union	33,993
Warren	8,956
Total	482,867

Table 3. Arbovirus Surveillance and Research Blood Specimens Collected From Animals by Kind of Animal

1967	Birds Except Starlings	Starlings	Non-Avians	Chickens	Total
January	114	528	15	0	657
February	80	285	11	0	376
March	42	647	37	0	726
April	215	297	27	0	539
May	631	180	31	0	842
June	710	168	165	124	1,167
July	885	229	204	139	1,457
August	985	500	261	150	1,896
September	322	702	134	117	1,275
October	593	557	58	109	1,317
November	277	348	19	32	676
December	60	125	41	0	226
Year	4,914	4,566	1,003	671	11,154

Pesticide Project

Introduction

The basic objectives of the Pesticide Project are to determine the short-term and long-term effects which pesticides have in the health of man. In-depth studies of people acutely and chronically exposed to pesticides are carried out to determine the type and quantity of pesticide exposure, the distribution and prevalence of clinical or subclinical changes, and the levels of pesticide residues and metabolites in body fluids and tissues. These data will form the basis for developing a clearer understanding of the benefit versus risk equation of pesticides as related to human health.

In 1967, the Pesticide Project had a staff of 12 full-time and one part-time employees and became fully operational. A Public Health Service physician was assigned to the project, giving additional strength to the medical and epidemiological aspects. The pesticide latboratory, after two years of experience, developed considerable competency in the chemistry and biochemistry of pesticides. The laboratory is routinely analyzing human body fluids and tissues for pesticides and their metabolites, and foods, air, water, and other environmental media for pesticide residues in the parts per million or parts per billion ranges. The laboratory performed more than 1,700 analyses of human and environmental samples in 1967.

Industrial Exposure Groups and Controls

The project recruited 24 state office employees to serve as a laboratory control group. Biological sampling of this group continued on a regular basis. This cohort is comparable by sex and age to our other study groups, and the pesticide exposure of these controls is considered to be average for the general population.

The main thrust of our endeavors was directed to a detailed study of the effects of pesticide exposures on the people working in the pesticide industry, including manufacturers, formulators, and applicators. A survey of the state indicated that there are more than 150 plants manufacturing and formulating pesticides. Most of the manufacturing plants and 31 formulating plants were visited. One hundred four of the formulators were started on periodic biological sampling and 23 were given a complete medical work-up.

Pesticides in Human Tissues of the General Population

The levels of pesticide residues in the tissues of the general population were studied. Three hundred sixty-two tissues, including postmortem, surgical, placental and fetal specimens, were analyzed for pesticide content.

Community Profile

Updated profiles of the state and of Monmouth County were prepared in 1967. These profiles included demographic and agricultural data, and statistics on morbidity, mortality, and pesticide usage and exposure.

Detection and Study of Pesticide Intoxications and Pesticide Incidents

In 1967, an increased surveillance was established for case of pesticide intoxications. As these cases were reported, investigations were initiated. An increasing rapport was developed with physicians in the state, as well as with hospitals, laboratories, poison control centers, and other organizations. The project compiled a registry of 29 cases of pesticide intoxications, which included cases of both accidental and occupational origin. These cases were studied retrospectively and are being followed prospectively.

Additional Activities

Medical, biochemical, and industrial hygiene studies were conducted in several pest control programs of the state and counties, and in the aircraft pesticide applicators industry.

The Monmouth County Epidemiological Study continued, and included complete medical surveillance and periodic biological testing of selected individuals, including 48 farmers and 23 commercial pest control operators.

The project was involved in programs of environmental monitoring of food, air, water, soil, and hay specimens. A total of 147 samples was processed and analyzed for pesticide content.

The project investigated a fatal airplane crash, involving the aerial application of pesticides, which occurred in Burlington County.

Division of Health Facilities

CURTIS F. CULP, M.D., *Director*

Office of Certification of Health Facilities ..... CURTIS F. CULP, M.D.
Director

Unit for Consultation Services ..... JOHANNA E. KENNEDY, M.A.
Chief

*Programs**

Nursing ..... JOHANNA E. KENNEDY, M.A.
Program Coordinator

Nutrition ..... MARGARET P. ZEALAND, M.S.
Program Coordinator

Physical Therapy ..... SUSAN B. GLOCKE, P.T., M.A., M.P.H.
Program Coordinator

Social Work ..... ADRIANE V. DUFFY, M.S.
Program Coordinator

* These are included in the annual report here because they were a part of the Division of Health Facilities at the end of the year. For most of the year, they were a part of the Division of Special Consultation Services and their reports are a part of the report of that division.

Division of Health Facilities

The Division of Health Facilities was established by order of the State Commissioner of Health on November 14, 1967. For the greater part of the year, it functioned as the Office of Certification of Health Facilities and the annual report is based on the operations of this office. The office continues as a part of the division.

There were also transferred to the division on November 14, 1967, these programs which had been in the Division of Special Consultation Services: Nursing Program, Nutrition Program, Physical Therapy Program; and Social Work Program. The annual reports of these programs are found in the annual report of the Division of Special Consultation Services of which they were a part for most of the year. The four programs listed above are now within the Unit for Consultation Services in the Division of Health Facilities.

Office of Certification of Health Facilities

The main functions of the Office of Certification of Health Facilities are to provide consultation, make surveys, and prepare reports of facilities for participation in the Health Insurance for the Aged Program.

Extended Care Facilities

January 1, 1967 was the beginning date for participation of extended care facilities in the Health Insurance for the Aged Program. Therefore, a concentrated effort in this area was made in order to process late applications.

The following represents the workload for the year:

24 applications received
33 surveys
60 resurveys
32 special visits
15 team revisits

As of December 30, 1967, there were:

33 additional certified facilities
24 denials
5 deferments
14 withdrawals

Hospitals

July 1, 1966 was the beginning date for participation of hospitals in the Health Insurance for the Aged Program. Therefore, all 118 certified hospitals were due for resurvey during the period of July 1, 1967 through June 30, 1968. One hundred and twelve hospitals are JCAH* or AOA** accredited and only required a visit to review functioning of the Utilization Review Plan. During 1967, 44 JCAH and AOA accredited hospitals were visited and recommended for recertification.

Eight hospitals were not JCAH or AOA accredited and required a resurvey of the entire facility. All eight were resurveyed; one hospital withdrew from the program, one hospital received its JCAH accreditation, and four were recommended for recertification. One application was received and recommended for initial certification.

Home Health Agencies

July 1, 1966 was the beginning date for participation of home health agencies in the Health Insurance for the Aged Program. Therefore, all 55 certified home health agencies were due for a resurvey during the period September 1, 1967 through June 30, 1968.

One agency withdrew from the program, one application was received and processed, and two agencies merged.

Ten agencies were resurveyed and eight recommended for recertification during 1967.

Laboratories

July 1, 1966 was the beginning date for participation of laboratories in the Health Insurance for the Aged Program. Therefore, all certified laboratories were due for a resurvey during the period August 1, 1967 through June 30, 1968. Fifty-seven laboratories were resurveyed and recommended for recertification during 1967.

Certain laboratory directors were required to take United States Public Health Service sponsored examinations. Of these, eight laboratories were surveyed and given interim approval, but were not recommended for certification because of failure to take the required examinations or unsatisfactory results.

* JCAH Joint Commission on Accreditation of Hospitals.
** AOA American Osteopathic Association.

As of December 31, 1967, the following facilities were certified to participate in the Health Insurance for the Aged Program.

124 laboratories
54 home health agencies
74 extended care facilities
119 hospitals

Division of Laboratories

MARTIN GOLDFIELD, M.D., *Director*

Program:

Bacteriology ..... RUSSELL STEIN
Program Coordinator

Central Services ..... JOHN WOREK
Program Coordinator

Chemistry ..... PETER E. VENTURA
Program Coordinator

Clinical Laboratory Improvement ..... JOHN J. NELSON, M.S.
Program Coordinator

Pathology ..... MARTIN GOLDFIELD, M.D.
Program Coordinator

Serology ..... ELEANOR E. THOMAS
Program Coordinator

Virology ..... BERNARD TAYLOR
Program Coordinator

Division of Laboratories

The 150 persons who staff the Division of Laboratories assisted in conducting over 1.3 million complex technical procedures on some one-half million specimens in 1967.

This whopping workload, increased by some 200,000 procedures over 1966, required the processing of 4.6 million pieces of glassware, the preparation of 15.8 million milliliters of media, the procurement, caging and feeding of some 328,000 animals and the assembly and mailing of over one-quarter million specimen kits.

Activities related to our laboratory approval and improvement programs required the preparation and mailing of 27,000 evaluation specimens and 145 laboratory visitations. While we were busy evaluating the performance of laboratories under our jurisdiction, we also participated in evaluation and collaborative studies to monitor and improve our own techniques through the processing of 233 unknown specimens. Also, 30 of our staff attended scientific courses, workshops, or seminars. A total of 104 technicians from hospital and public health laboratories was given formal workshop or informal bench training in their specialties. The enthusiasm and productivity inherent in this description of our 1967 workload reflects the admirable dedication of employees to their job.

The reports of the division's several programs that follow, accurately and objectively present narrative and statistical data regarding the work performed during the calendar year.

Bacteriology Program

For the third consecutive year, the workload generated by the demand for this program's services exceeded 150,000 submitted specimens and required an analytical effort in excess of 400,000 examinations. In addition, improved and expanded laboratory services were effected, and some 7,800 special study tests were performed in a continuing effort to evaluate and improve still other services. Also, educational activities were busily engaged in as a number of program personnel attended seminars, workshops, and training courses, while others furnished orientation and bench training to laboratorians from various public health oriented institutions and agencies.

Highlights

Phenylketonuria (PKU)

Ten cases of PKU were detected among the 87,334 babies screened by the Guthrie Inhibition Assay Test, for a positivity rate approximating 1 per 8,700 live births tested as compared with the overall positivity rate of 1 per 10,500 live births tested throughout this four-year-old program (table 6). A total of 81 hospitals routinely submitted specimens from their newborns, while six other hospitals elected to perform their own screening routines. The proficiency of the latter group was monitored through a mailed series of check specimens, prepared, distributed and evaluated by the central laboratory.

Tuberculosis

The number of performed examinations (145,534) exceeded the 1966 total by almost 3,400, as a result of the following improved and expanded services:

1. The frequency of drug sensitivity tests on positive specimens from any given patient was increased from a once-a-month basis to a routine testing of *every* such specimen. This made earlier detection and reporting of changes in drug sensitivity patterns possible and assisted the physician in his choice of appropriate medication.
2. Two additional tests were used to further differentiate and classify organisms similar to, but distinct from, M. tuberculosis. The division of these organisms into sub-groups of (a) probable disease and (b) probable non-pathogenic strains, provided another extremely valuable tool in determining the patient's proper course of treatment.

In addition, more than 6,300 special study tests, not included in any of the accompanying workload data, were performed in a continuing attempt to provide further procedural improvements related to culture media and decontamination techniques.

Rabies

Although no evidence of rabies was detected in any examined specimens from New Jersey's dog population for the eleventh consecutive year, positive findings did occur in 21 (4.8 percent) of 437 examined bats.

Around-the-clock diagnostic service was provided seven days a week, without interruption, throughout the entire year.

Food Bacteriology

Laboratory support for the surveillance of potentially hazardous foods was substantially increased. More than 2,000 analyses were performed on 334 samples of frozen and refrigerated items such as salads, seafoods and pies. This represented a *78 percent increase* over both the number of submitted samples and tests performed during 1966.

Stream Pollution

Workloads in this vital area of environmental pollution control were significantly higher. The 7,773 analyses made on 5,182 samplings of streams, trade wastes, and sewage treatment plant effluents represents a *60 percent increase* over each of the preceding year's workload totals of 4,838 tests and 3,225 specimens.

Dairy Bacteriology

Continued high level of performance by industry and commercial laboratory analysts participating in the voluntary cooperative State-Public Health Service Program for Certification of Interstate Milk Shippers[1] was noted.

Table 1. Milk Split Sampling Program[1] Results for 1967

Participants	Spring Series			Autumn Series		
	No. of Labs.	*No. of Analysts*	*% of Analysts Performing Acceptably*[2]	*No. of Labs.*	*No. of Analysts*	*% of Analysts Performing Acceptably*[2]
Official Labs.[3]	6	7	100	6	11	72.7
Officially Designated[4]						
Dairy Industry	10	16	100	10	16	100
Commercial	4	6	100	4	8	100

[1] Participating laboratories 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.

[2] Analysts findings agreed within allowable limits in a minimum of 75 percent of samples tested.

[3] Laboratories under the direct supervision of local health authorities.

[4] State approved laboratories.

Table 2. Comparison of Split Sample Results—1967 vs. 1966

Participants	Percentage of Analysts Performing Acceptably			
	1967		1966	
	Spring	*Autumn*	*Spring*	*Autumn*
Official Labs.	100	72.7	75	81.8
Officially Designated				
Dairy Industry	100	100	94.1	95
Commercial	100	100	100	100

Workloads and Trends

Table 3. Three-Year Comparison of Program Workloads

	Specimens			Examinations		
	1967	1966	1965	1967	1966	1965
Program Total	153,137	158,412	150,087	411,766	419,694	413,561
Central Lab.	143,029	146,524	139,481	396,196	401,391	397,346
Branch Labs.	10,108	11,888	10,606	15,570	18,303	16,215

Table 4. Central Laboratory Workloads

	Specimens			Examinations		
	1967	1966	1965	1967	1966	1965
Diagnostic Microbiology						
PKU	89,457	91,477	73,640	179,809	183,868	147,230
TB	22,711	23,303	25,053	145,534	142,148	151,570
Enteric Infections	7,285	7,640	10,468	30,163	33,007	43,825
Gonorrhea	4,192	5,093	4,331	4,192	5,093	4,331
Rabies	2,204	2,298	1,785	8,816	8,973	8,568
Miscellaneous*	1,293	1,522	2,314	3,052	3,297	5,206
Sanitary Bacteriology						
Waters	13,435	12,250	12,344	20,153	18,375	18,516
Dairy	2,118	2,600	2,115	4,236	5,200	4,230
Potentially Hazardous Foods	334	187	none	2,004	1,122	none

*Includes: mycology specimens, food poisoning samples, malaria slides, throat cultures, sterility tests and bacterial cultures referred for identification.

Phenylketonuria (PKU) Detection

Table 5. Workload Breakdown

Specimens Submitted	Unsatisfactory Specimens	Satisfactory Specimens		PKU Cases Detected
		Total	Babies Tested	
89,457	1,531	87,926	87,334	10

Table 6. Summary of Positive Findings Among Babies Tested Since 1964

Year	Babies Tested	Cases Detected	
		Total	Rate
1967	87,334	10	1: 8,733
1966	89,184	13	1: 6,860
1965	72,123	3	1:24,041
1964	35,890	1	1:35,890
Total	284,531	27	1:10,538

Tuberculosis

Table 7. Workload Breakdown

Total Specimens	Unsatisfactory Specimens	Satisfactory Specimens		Positive TB	
		In Process	Completed	Total	% of Completed
22,711	1,212	881	20,618	1,673	8.1

Table 8. Breakdown of Satisfactory Specimens

Specimen Type	Total	In Process	Completed	Positive TB	
				Total	% of Completed
Sputum	20,721	854	19,867	1,443	7.2
Urine	232	0	232	3	1.3
Gastric	121	2	119	8	6.7
Bronchial	13	1	12	1	8.3
Pleurel	7	0	7	0	0
Spinal	3	0	3	1	33.3
Others	35	1	34	5	14.7
Referred Cultures	367	23	344	212	61.6
Totals	21,499	881	20,618	1,673	8.1

Enteric Diseases

Table 9. Breakdown of 7,285 Specimens

1. Specimens Submitted for Enteric Bacteriology

Type	Total
Feces	3,831
Cultures for identification	1,030
Food surveillance	483
Rectal swabs (animal)	466
Rectal swabs (human)	304
Urines	128
Others	17
Total	6,259

2. Specimens Submitted for Enteric Parasitology

Type	Total
Feces ("Fresh")	959
Feces (PVA*)	58
Worms for identification	7
Pinworm slides	2
Total	1,026

*Polyvinyl alcohol fixative.

Educational Activities

Orientation and bench training in varied diagnostic procedures were provided for a total of 26 laboratorians from hospitals, municipal health departments, state institutions, and foreign governmental health agencies. These activities included a one-week field course in general medical bacteriology presented at the Trenton laboratory training facility, in cooperation with the National Communicable Disease Center.

Fifteen program personnel received training through participation in three workshops and five formal National Communicable Disease Center training courses.

A detailed breakdown of all educational activities follows:

Courses Attended by Program Personnel:

Subject	*No. Of Trainees*	*Sponsor*
Fluorescent Antibody Technique	1	U. S. Public Health Service
Thin Layer Chromatography Workshop	1	Gelman Instrument
Basic Medical Mycology	1	U. S. Public Health Service
Water Bacteriology Workshop	3	Federal Water Pollution, Control Administration
Dairy Bacteriology Workshop	1	U. S. Public Health Service
Special Medical Bacteriology	1	U. S. Public Health Service
Anaerobe Bacteriology	1	U. S. Public Health Service
General Medical Bacteriology	6	U. S. Public Health Service

Orientation and Bench Training Provided by Program:

Subject	*No. Of Trainees*	*Organization*
Enteric Bacteriology	1	State Hospital
General Medical Bacteriology	1	County Hospital
Fluorescent Antibody Techniques	6	Private Hospitals (3)
General Medical Bacteriology	1	Private Hospital
Mycobacteriology	1	Municipal Health Department
Laboratory Diagnosis of Rabies	1	South American Governmental Agency
Laboratory Diagnosis of Rabies General Medical Bacteriology	1	Central American Governmental Hospital
General Medical Bacteriology	14	State Institutions

Table 10. Sources of 950 Salmonella Isolations

Serotype	*Total*	*Isolated at Central Laboratory*				*Cultures Referred to Central Laboratory*				
		Human	*Animal*	*Food*	*Environmental*	*Human*	*Animal*	*Food*	*Environmental*	*Animal Feeds*
S. typhimurium	194	89	4			68	17			16
S. saint-paul	73	26	1			22	24			
S. infantis	72	25				10	37			
S. heidelberg	60	21				27	12			
S. enteritidis	51	9				42				
S. typhimurium var. copenhagen	50	20	1			17	11		1	
S. livingstone	50					2	9			39
S. montevideo	49	2				5	18			24
S. oranienburg	41	20	3			17				1
S. newport	35	19	1			15				
S. senftenberg	32						4			28
S. thompson	31	1				16				14
S. java	21	10				11				
S. tennessee	18	4				4	1			9
S. worthington	15					1	2			12
S. derby	14	1	1			10	2			
S. bredeney	12					8				4
S. anatum	11	2	2			3	1			3
S. muenchen	11					5	6			
S. bareilly	10	3				6				1
S. blockley	10	5				5				
S. give	10	4	6							
S. cubana	9					1				8
S. thomasville	9						8			1
S. binza	7					1				6

Table 10. Sources of 950 Salmonella Isolations—Continued

Serotype	Total	Isolated at Central Laboratory: Human	Animal	Food	Environmental	Cultures Referred to Central Laboratory: Human	Animal	Food	Environ	Animal Feeds
S. braenderup	7	3	1	..	..	2	1	..	..	..
S. california	6	..	..	..	..	..	..	..	..	6
S. typhi	6	4	..	..	..	2	..	..	..	..
S. manhattan	5	..	..	..	..	..	5	..	..	..
S. kentucky	3	1	..	..	..	2	..	..	..	..
S. orion	3	3	..	..	..	..	..	..	..	..
S. javiana	3	..	..	..	..	3	..	..	..	..
S. eimsbuettel	2	1	..	..	..	1	..	..	..	..
S. indiana	2	..	..	..	..	2	..	..	..	..
S. manchester	2	1	1	..	..	..	..	..	..	..
S. mission	2	..	..	..	..	2	..	..	..	..
S. miami	2	1	..	..	..	1	..	..	..	..
S. paratyphi B	2	2	..	..	..	..	..	1	..	..
S. alachua	1	..	..	..	..	..	..	..	..	..
S. berta	1	..	..	..	..	1	..	..	..	..
S. cholera suis var. kunzendorf	1	..	..	..	..	1	..	..	..	..
S. drypool	1	..	..	..	..	1	..	..	..	..
S. eppendorf	1	1	..	..	..	..	..	..	..	..
S. lexington	1	..	..	..	..	..	..	..	..	1
S. newington	1	..	..	..	..	1	..	..	..	..
S. ohio	1	..	..	..	..	1	..	..	..	..
S. stanley	1	1	..	..	..	..	..	..	..	..
S. urbana	1	..	..	..	..	1	..	..	..	..
Totals	950	279	21	..	..	317	158	1	1	173

In addition, a closely related pathogen, Arizona (7:1,7,8) was isolated from an animal feed.

Table 11. Sources of 71 Shigella Isolations

Organism	Total	(Stools) Isolated by Central Laboratory	Cultures Referred to Central Laboratory
Sh. sonnei	49	16	33
Sh. flexneri			
2a (II:3,4)	9	2	7
3a (III:6,7,8)	3	3	
2b (II:7,8)	2		2
4a (IV:-,-,-)	2		2
5 (IV:-,-,-)	2	2	
6 (VI:-,-,-)	2		2
2a (-:3,4)	1		1
Sh. dysenteriae 1	1		1
Totals	71	23	48

Table 12. Sources of 37 Enteropathogenic E. Coli Isolations

1967 E. E. Coli	Total	Isolated by Central Laboratory: Stool	Rectal Swab	Cultures Referred to Central Laboratory
0128:B12	9	7		2
0111:B4	8	7		1
026:B6	8	7		1
055:B5	4	1	1	2
0119:B14	3	1		2
0125:B15	2	2		
0126:B16	1			1
0127:B8	1			1
086:B7	1	1		
Totals	37	26	1	10

Table 13. Breakdown of Positive Findings

	Total	*T. trichiura (whipworm)*	*Hookworm*	*Giardia lamblia*	*Ascaris*	*E. vermicularis (pinworm)*	*Taenia sp. (tapeworm)*	*Entamoeba histolytica*
Feces ("Fresh")	190	78	52	41	12	3	2	2
Feces (PVA)	0							
Cellulose Tape Slide	1					1		
Parasite for Identification	1				1			
Totals	192	78	52	41	13	4	2	2

Table 14. Rabies

Specimen Total	*Unsatisfactory Specimens*	*Satisfactory Specimens*	*Positive Total*	*% of Satisfactory Found Positive*
2,204	46	2,158	23	1.1

Breakdown of 2,204 Submitted Specimens

Bats	468	Muskrats	12
Hamsters	360	Skunks	12
Dogs	343	Opossums	12
Cats	272	Monkeys	11
Mice	204	Ground Hogs	6
Squirrels	150	Moles	5
Rabbits	116	Weasels	3
Chipmunks	63	Parakeets	2
Rats	53	Owl	1
Foxes	25	Mink	1
Guinea Pigs	25	Ocelot	1
Shrews	23	Calf	1
Gerbils	21	Iguana	1
Raccoons	13		

Of 23 positive findings, 21 occurred in bats:

Total Bats Submitted	*Unsatisfactory Specimens*	*No. of Bats Examined*	*Positive Total*	*% of Examined Bats Positive*
468	31	437	21	4.8

Rabies was also detected in 2 foxes submitted by the Air Force Base, Thule, Greenland, through McGuire Air Force Base.

Table 15. Gonorrhea

A total of 4,192 specimen slides were submitted for staining and microscopic examination. Positive findings follow:

			Positives	
Total Specimens	*Unsatisfactory Specimens*	*Satisfactory Specimens*	*Total*	*% of Examined Specimens*
4,192	25	4,167	1,378	33.1

Table 16. Miscellaneous

Throat swabs	361
Referral cultures for identification	210
Malaria slides	199
Specimens related to food poisoning	160
Body fluids, exudates, etc.	145
Biologicals for sterility testing	111
Mycology specimens	107
Total	1,293

Sanitary Bacteriology

Water Bacteriology

The Central Laboratory processed 13,435 water samples in accordance with procedures described in the 12th edition of "Standard Methods for the Examination of Water and Wastewater".

Table 17. Breakdown of 13,435 Tested Waters

Potable Waters:		*Bathing Waters:*	
Public	3,562	Swimming Areas	511
Private	1,682	Pools	42
Migrant Camps	885	Total	553
Schools	520		
Institutions	336		
Recreational Camps	297		
State Parks	152		
Abattoirs	105		
Ice Cream Stands	79	*Pollution Control:*	
Food Establishments	40	Sewage Effluents	3,432
Dairies	6	Streams	1,663
Miscellaneous	36	Trade Wastes	87
Total	7,700	Total	5,182

Dairy Bacteriology

A total of 2,118 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, 2,030 were examined for coliform counts and total bacterial populations. Findings were as follows:

Table 18. Dairy Products Tested

Type of Sample	*Sample Total*	*Acceptable Samples*	*Below Standard Samples*				*% of Total Below Standard*
			A	*B*	*C*	*All*	
Whole Milk	927	812	59	40	16	115	12.4
Cream	421	333	39	20	29	88	20.9
Skim Milk	229	198	20	7	4	31	13.5
Chocolate Milk	205	174	16	5	10	31	15.2
Half and Half	142	125	12	2	3	17	11.9
Nonfat Milk	86	85	1	0	0	1	1.2
Frozen Eggs	14	5	1	2	6	9	64.3
Imitation Milk	2	1	0	0	1	1	50.0
Ice Cream	2	0	1	0	1	2	100.0
Ice Cream Mix	2	0	0	0	2	2	100.0
Totals	2,030	1,733	149	76	72	297	14.6

Key: A = Samples below standard due to high coliform count[1]
B = Samples below standard due to high total plate count[2]
C = Samples below standard due to both high coliform and high total plate counts.
[1] More than 10 coliforms per ml.
[2] More than 20,000 bacteria per ml. (milks), or more than 30,000 bacteria per ml. (creams), or more than 50,000 bacteria.

Table 19. Potentially Hazardous Foods

Type of Sample	*Sample Total*	*Acceptable Samples*	*Below Standard Samples*				*% of Total Samples Below Standard*
			A	*B*	*C*	*Total*	
Refrigerated foods	122	87	4	23	8	35	28.7
Frozen foods	212	166	8	27	11	46	21.7
Totals	334	253	12	50	19	81	24.3

Key: A = Samples below standard due to high coliform count[1]
B = Samples below standard due to high total plate count[2]
C = Samples below standard due to both high coliform and high total plate counts.
[1] 100 or more coliforms per gram.
[2] 100,000 or more bacteria per gram.

Branch Laboratories

The two Branch Laboratories, located at Bivalve and Nacote Creek, made 15,570 examinations on a total of 10,108 specimens. All analyses were performed in compliance with the procedures detailed in the 3rd 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 20. Workload Breakdown

Laboratory	Specimens			Examinations		
	Waters	*Shellfish*	*Total*	*Waters*	*Shellfish*	*Total*
Bivalve	5,802	674	6,476	8,703	1,348	10,051
Nacote Creek	3,491	141	3,632	5,237	282	5,519
Totals	9,293	815	10,108	13,940	1,630	15,570

Central Services Program

This program, operating in its new quarters in high gear and adjusting its personnel to the new and sophisticated machinery, was able to perform efficiently the task of supplying all glassware, reagents, media, specimen kits, care of animals and other appropriate services related to all programs in the Division of Laboratories.

The activities of this program and workload data during calendar year 1967 are tabulated below.

A total of 228,580 specimen kits was assembled and mailed.

Wassermann	184,185
Tuberculosis	28,270
Feces and Urine	5,424
Gonorrhea	4,201
Water Samples	3,723
Throat Swab	636
Spinal Fluid	334
Viral Blood	851
Viral Stool	720
Viral Throat	162
PVA	74

In addition, 38,375 Pre-Marital certificates, 30,345 Serology-1 forms and 1,164 Viral-1 forms were mailed.

A total of 260,562 specimens was received and sorted, as follows:

Wassermann	219,271
Tuberculosis	22,711
Feces and Urine	7,257
Gonorrhea	4,192
Water Sample	3,701
Throat Swabs	361

Spinal Fluid	811
Viral Blood	900
Viral Stool	950
Viral Throat	150
PVA	58

Some 2,364,440 pieces of glassware were sorted, washed and sterilized, 15,848,740 mls. of media were prepared and dispensed and 3,688 animals were procured, caged and fed in the central laboratory during 1967.

An additional 2,300,000 pieces of glassware were processed and 324,476 animals procured, caged and fed at Donnelly Memorial Hospital, the present location of the Virology Program.

Comparative calendar year workload statistics are not available for 1966 for this new program, but there is every indication that these figures have increased dramatically in all areas. This is not surprising since there have been corresponding drastic increases in the several laboratory programs' workloads serviced by Central Services.

Chemistry Program

This program supplied analytical services for over a dozen departmental programs that submitted a record number of samples during this calendar year. A grand total of 12,580 samples was submitted and 62,322 determinations were conducted. The number of samples submitted and the number of determinations conducted were 32 percent and 42 percent, respectively, in excess of the workload figures of 1966.

Table 1. Summarized Statistics, January 1 - December 31, 1967

Character of Samples	*Number of Specimens*	*Number of Determinations*
Milk and Milk Products	1,682	3,334
Other Foods	434	1,086
Drugs	141	794
Potable Waters	1,493	9,604
Sewage, Tradewastes and Streams	6,584	43,673
Clinical Chemistry	1,984	2,854
Miscellaneous*	262	977
Totals	12,580	62,322

* Includes methods development and collaborative studies.

Excluded from the summarized statistics given, were the biochemical analyses performed in the Lipid Laboratory for Atherosclerosis Research at St. Vincent's Hospital in Montclair, where 2,678 blood, urine, feces, and tissue specimens were processed and 15,216 routine tests were conducted.

Also, 3,405 relatively simple automated sugar determinations, conducted for our Diabetes Program, were excluded to give a truer picture of the important workload trends. The volume of bloods processed for glucose determinations was 2,000 less than in 1966 and 5,000 less than in 1965. This dramatic downward trend has been due to the efficacy of the newer enzymatic paper strip screening technique used during Diabetes Detection Week in November and the laboratory follow-up of only presumptive positive bloods for confirmatory testing.

Comparison of 1967 workloads to those of the previous calendar year indicates that an imposing increase in workload was absorbed in the area of water pollution. Upward trends were manifest also in the areas of drugs. Large increases in workload were also experienced in clinical chemistry as related to clinical laboratory proficiency testing and in the diverse group of services lumped in the miscellaneous category that are itemized in Table 3.

Table 2. WORKLOAD TRENDS

Analyses	*Samples(%)*	*Determinations(%)*
Milk and Dairy Products	—4	—10
Other Foods	—29	—24
Drugs	+18	+9
Potable Waters	—13	—18
Sewages, Tradewastes, and Streams	+46	+71
Clinical Chemistry	+247	+133
Miscellaneous	+38	+114
Totals	+32	+42

Highlights

Stream samples were processed during the last quarter of this calendar year under a contract between the state and the Delaware River Basin Commission Estuary Study Group. Accordingly, stream samples are collected from twenty tributaries of the Delaware River from Trenton to Deepwater on a routine monthly basis by state personnel, analyzed in our laboratory, and the data forwarded to the Commission for processing.

Supportive services in clinical chemistry were provided to our Clinical Laboratory Improvement Program to the extent of preparing, analyzing and shipping some 2,600 proficiency testing specimens to participating and reference laboratories.

Training and Conferences

This program was represented at the following courses and conferences:

A two-week course "Chemical Analysis of Water Quality"; given by the United States Department of the Interior, Federal Water Pollution Control Administration, Metuchen, New Jersey; attended by a chemist.

A three-week course "Hazardous Substances" given by the United States Department of Health, Education, and Welfare, Food and Drug Administration, New York Bureau; attended by a chemist.

Seminar and workshop on the application of automated continous chemical analysis to the measurement of air and water pollution, given by Technicon Controls, Incorporated, in Elizabeth.

Interstate Proficiency Testing Program Conference, National Communicable Disease Center, United States Public Health Service, in Atlanta.

Eastern Analytical Symposium, in New York City.

Seminar and discussion on steroid analysis by gas chromatography, given by Beckman Instrument Company, in Bala Cynwyd, Pennsylvania.

Dairy Products Improvement Institute, Incorporated, in New York City.

Association of Official Analytical Chemists, 81st Annual Meeting. in Washington.

19th Annual Meeting American Association of Clinical Chemists, in Philadelphia.

Delaware River Basin Commission Estuary Study, Federal State Officials Meeting, in Philadelphia Regional Office.

A two-day "Supervisor Safety Training Course", given by State Safety Engineer; attended by a chemist.

Training Extended

Three industrial chemists were given informal bench training in the procedures used for dissolved oxygen, biochemical oxygen demand, and chemical oxygen demand determinations.

The 21 students enrolled in the department's "Orientation for Sanitary Inspector Trainees" course were given a tour of the laboratory and instructed as to how the laboratory could best serve them in their careers in public health.

Collaborative Studies

Phosphatase determinations on split milk samples; five performance evaluations; by the Environmental Health Center, United States Public Health Service.

Three specimens to evaluate a procedure for ascorbic acid in foods, by the Environmental Health Center, United States Public Health Service.

One-hundred and seventy-two evaluation specimens for cholesterol, creatinine, electrolytes (calcium, carbon dioxide, chloride, magnesium, potassium), glucose, hemoglobin, phenylalanine, urea nitrogen, and acid; by Clinical Chemistry Evaluation Program, Laboratory Branch, Communicable Disease Center, United States Public Health Service.

Three evaluation specimens for glucose, cholesterol, urea nitrogen, total protein, chloride, sodium, potassium, uric acid, creatinine and total iron; by American Association of Bioanalysts.

Three samples to evaluate the methylene blue procedure for linear alkyl sulfonic acid (LAS), a surfactant; by Analytical Reference Service, Environmental Health Center, United States Public Health Service, Cincinnati.

This program issued phosphatase proficiency evaluation specimens, semi-annually, to nineteen dairy laboratories that conduct phosphatase tests on milk and dairy products.

Table 3. Number and Character of Specimens Analyzed in the Food and Drug Laboratory

Milk and Dairy Products	*Above Standard*	*Below Standard*	*Total*	*Determinations**
Milk—Chemical and Phosphatase	555	15	570	
Milk—Chemical	378	16	394	
Milk—Phosphatase	175		175	
Milk—Chemical and Pesticide	1		1	
Milk—Filth	4		4	
Goat Milk—Chemical and Phosphatase	11		11	
Cream—Phosphatase	283	3	286	
Cream—Chemical	4		4	
Chocolate Milk—Phosphatase	106		106	
Butter	2	2	4	
Cheese	54	8	62	
Ice Cream	59	1	60	
Ice Milk	3		3	
Sour Cream	1		1	
Yogurt	1		1	
Totals	1,637	45	1,682	3,334

* Totals of determinations by item are not recorded; only grand totals are maintained.

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

Other Foods	*Above Standard*	*Below Standard*	*Total*	*Determinations**
Beer	2		2	
Bread	2	1	3	
Candy	3		3	
Chinese Vegetables	7		7	
Cider	10		10	
Eggs	1	12	13	
Fish	7	1	8	
Fruit Drink	2	1	3	
Fruit Ice	10	15	25	
Fruit Juice	19	2	21	
Macaroni	1	1	2	
Mayonnaise	2		2	
Meat	221	62	283	
Meat Filler	2		2	
Pickles	2		2	
Pickled Tomatoes	1		1	
Ravioli	1		1	
Soda	9	5	14	
Soup	2		2	
Sugar and Cinnamon	1		1	
Sweet Potatoes and Yams	13	1	14	
Vegetables	11	2	13	
Wheat		2	2	
Totals	329	105	434	1,086

* Totals of determinations by item are not recorded; only grand totals are maintained.

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

Drugs	Above Standard	Below Standard	Total	Determinations*
Achromycin	2		2	
Aminophylline Injection	1		1	
Aminophylline Tablets	2	3	5	
Amobarbital	4		4	
Ascorbic Acid	4	1	5	
Ascriptin and Maalox		1	1	
Aureomycin		1	1	
Atropine Sulfate	1		1	
B-Complex Injection	1		1	
Bihydroxycoumarin	1		1	
Bufferin	2		2	
Caffeine and Sodium Benzoate	1		1	
Calcium Gluconate	1		1	
Chloral Hydrate Capsules	1		1	
Chlorpheniramine Maleate	3		3	
Declomycin Capsules	2		2	
Demerol	1		1	
Dextramphetamine	1		1	
Diethylstilbestrol		1	1	
Dicumarol		1	1	
Digitoxin	1		1	
Digoxin	3		3	
Epianhydrotetracycline in Tetracyline Syrups	5		5	
Ephrinyl		1	1	
Ergonovine Maleate	1	1	2	
Glace—Ine	1		1	
Hydrogen Peroxide	1		1	
Isoniazed	2	2	4	
Lanizaid	1		1	
Lustre Cream Spray		1	1	
Maalox		1	1	
Mariahuana	1		1	
Mephenesin	1		1	
Meprobamate	2		2	
Methacycline	1		1	
Milk of Magnesia		1	1	
Mouth Wash	1		1	
Niacin Tablets	1		1	
Nikethamide	1		1	
Parapectolin		1	1	
Pas Tablets	2		2	
Pazozide	1		1	
Pentaerythrithol	1		1	

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory—Continued

Drugs	Above Standard	Below Standard	Total	Determinations*
Phisohex	4		4	
Potassium Chloride Injection	1		1	
Predisone		1	1	
Procaine Hydrochloride Injection	13	1	14	
Pyridoxine Hydrochloride Injection	1		1	
Rauwolfia	1		1	
Reserpine	2	3	5	
Rondomycin Syrup	1		1	
Saccharin	1		1	
Sodium Chloride Injection	1		1	
Sodium PAS	1	1	2	
Sodium Pentobarbital	1		1	
Sodium Salicylate	2		2	
Sodium Secobarbital		3	3	
Sodium Sulfadiazine Injection	1		1	
Solutions For LSD and Solvents	2	1	3	
Stilbestrol		2	2	
Sulfadiazine		2	2	
Sulfathiazole	1		1	
Sulfasoxazole		2	2	
Tablets for Identification of Amphetamines and Barbiturates	6		6	
Terramycin Capsules	1		1	
Terramycin Syrup	1		1	
Teebacin	1		1	
Tetrachel Hydrochloride	1		1	
Tetracycline Hydrochloride Tablets	1		1	
Tetracycline Syrup	1		1	
Tetramed	1		1	
Theofel		1	1	
Thiophenyllin		1	1	
Thiamine Hydrochloride	1		1	
Thyroid	1		1	
Triple Sulfa	2		2	
Vitamin A Capsules	1	1	2	
Totals	106	35	141	794

Table 3. Number and Character of Specimens Examined in the Food and Drug Laboratory

Clinical Chemistry	*Number of Specimens*	*Determinations**
Calcium	7	
Carbon Dioxide	8	
Chlorides	10	
Cholesterol	338	
Creatinine	198	
Glucose	618	
Hemoglobin	32	
Magnesium	9	
Phenylalanine	276	
Potassium	14	
Serum Iron	1	
Sodium	14	
Protein	37	
Total Nitrogen in Bacterial Suspensions	30	
Urea Nitrogen	300	
Uric Acid	92	
Totals	1,984	2,854

Diabetes Detection	*Number of Specimens*	*Determinations*
Blood Sugar	3,405	3,405

* Totals of determinations by item are not recorded; only grand totals are maintained.

Miscellaneous	*Above Standard*	*Below Standard*	*Total*	*Determinations**
Detergent	5		5	
Eye Liner	1		1	
Perfume		1	1	
Phosphatase Referee Samples	5		5	
Sponge		1	1	
Tetracycline Degradation Products in Tetracycline Preparations (EXP)	63		63	
Thermometers	16		16	
Toy Doll	1		1	
Urines (STATE POLICE EXAM.)	169		169	
Totals	260	2	262	977

* Totals of determinations by item are not recorded; only grand totals are maintained.

Table 4. Number and Character of Samples Analyzed in the Water and Sewage Laboratory January 1 - December 31, 1967

	Public	*Miscellaneous*	*School*	*Food Establishment*	*State Park*	*Bottle Water*	*Stream*	*Sewage*	*Waste*	*Sand*	*Total*	*Determinations*
January	92	26	6	...	...	...	112	341	57	...	634	4,271
February	50	56	3	1	...	...	36	279	20	1	446	2,513
March	65	49	...	1	...	...	123	467	19	...	724	4,341
April	138	65	2	...	9	1	55	440	16	...	726	4,723
May	84	64	...	...	18	...	101	591	9	...	867	6,094
June	40	53	...	...	...	...	272	283	4	2	654	4,354
July	35	46	...	...	1	...	334	359	2	1	778	4,379
August	159	55	...	...	...	...	153	358	19	...	744	5,058
September	40	41	1	...	...	...	151	343	47	...	623	4,173
October	108	32	...	...	1	2	140	450	48	1	782	5,577
November	50	45	...	...	...	...	114	448	4	3	664	4,789
December	33	21	...	...	...	...	84	268	29	...	435	3,005
Totals	894	553	12	2	29	3	1,675	4,627	274	8	8,077	53,277

Clinical Laboratory Improvement Program

The Clinical Laboratory Improvement Program was established July 1, 1967. Accordingly, this is but a six-month report for this new program. Since proficiency testing and laboratory improvement activities were in effect within the Division of Laboratories prior to the inauguration of this program in the areas of blood banking, chemistry and serology, however, workload data for all of calendar 1967 will be cited in the statistical portion of this report.

Working within the framework of a modest initial budget and against a national competition for the necessary highly specialized scientists, the recruitment of a highly competent staff has been one major activity of this program during its first six months. The current staff, supplemented by competencies previously existent in the Division of Laboratories, now permits some degree of proficiency testing and/or performance improvement activity in the areas of serology, immunohematology and clinical chemistry. A hematologist has been hired and laboratory improvement measures in that discipline will commence upon his arrival in March, 1968. Funding for similar specialists in bacteriology and chemistry must be made before effective laboratory improvement measures may be taken in those areas.

Another major activity of this program during its first six months of life has been the planning of courses, seminars and workshops in clinical chemistry to improve the quality of performance. Five years of experience in a program limited to proficiency testing with an elite group of some 100 volunteer clinical laboratories has demonstrated that such a program by itself does not result in improved performance. Remedial measures must be applied once the problems are delineated through proficiency testing. Plans now underway for teaching clinical laboratory personnel proper statistical and quality control concepts and correct analytical procedures should prove fruitful in 1968.

This program is also the instrument for certifying clinical laboratories' performance to the federal government under the provisions of Medicare participation. The integration of some 80 laboratories, many not previously participating, into our proficiency testing and improvement programs has been another major endeavor of this program during the report period.

Clinical Chemistry

Some 2,650 test specimens were prepared and distributed to 128 participating and six referee laboratories in 1967 relative to proficiency testing in the areas of blood sugar, creatinine, blood urea nitrogen and cholesterol determinations. The number of participating clinical laboratories grew from

91 at the beginning of 1967 to 128 at the end of the year. Four to six referee laboratories were used for each study.

The first evaluation conducted in 1967, blood sugar, was repeated a month later to include newly enrolled laboratories requiring Medicare certification. This maneuver, and the lack of a full-time staff member for clinical chemistry, did not permit as many evaluations during the year as we would have liked; a minimum of ten such studies annually is the goal we have set for subsequent years.

Immunohematology

New Jersey's 133 blood banks and 41 volunteer or Medicare certified clinical laboratories performing immunohematologic procedures received over 4,400 proficiency testing specimens in 1967. This was supplemented by 122 primary inspections, reinspections or visitations and two blood bank workshops, held in the Division of Laboratories' training facilities in Trenton. Additionally, the program was represented and assisted in the monthly meetings of the New Jersey Antibody Club. Seven new blood banks were granted licenses in 1967 and four ceased operations. One of the latter had its license revoked by the department.

The Principal Serologist in charge of these activities attended the annual meeting of the Pennsylvania Association of Blood Banks in March, the Conference on Intrastate Proficiency Testing Programs in April, the Technicon International Symposia in October, the American Association of Blood Banks, also in October, and he continues to serve as a member of the Executive Committee of the New Jersey Antibody Club.

Workload Data

	1965	*1966*	*1967*
Number of Licensed Blood Banks	129	129	133
Number of Primary Inspections	8	4	7
Number of Re-inspections and Visits	110	121	115
Number of Blood Banks participating in the Evaluation Program, excluding bleeding stations	122	123	126
Number of Participating Referee Laboratories	2	2	2
Number of Participating Commercial Reference Laboratories	4	4	4
Number of Clinical Laboratories Voluntarily Participating	42	42	41
Number of Evaluation Mailings	1,797	1,820	1,910
Number of Specimens Vialed as Whole Blood	1,887	0	142
Number of Specimens Vialed as Plasma	910	1,820	1,828
Number of Specimens Vialed as Packed Cells	910	1,949	2,112
Number of Specimens Vialed as Hemolysates	0	0	330
Total Number of Vialed Specimens Mailed	2,707	3,769	4,412

WORKLOAD DATA

	1965	1966	1967
Number of Evaluation Reports Processed	1,647	1,707	1,871
Number of Evaluation Critiques Prepared	20	20	21
Number of Evaluation Critiques Mailed	1,706	1,780	1,894
Number of Inspection Reports (letters) and other Correspondence	111	110	122
Annual Statistical Data of Blood Used in New Jersey:			
Number of Blood Bank Summaries Processed	123	123	124
Number of Annual Summary Reports Mailed	126	126	127

Serology

Proficiency testing in syphilis serology required the distribution of 19,976 test specimens among the 252 participating laboratories in 1967. The numbers of test specimens made available to each laboratory were not necessarily equal but depended rather on the laboratory's past performance and upon the time of their entry into this program.

The 252 participating laboratories sought premarital and prenatal serology approval for different reasons: 157 under the requirements of the State Sanitary Code, 33 under blood banking regulations, and the balance (62) under Medicare certification requirements. Two hospitals and one private laboratory received State Sanitary Code approval for premarital and prenatal serology in 1967.

Training activities during the year included four workshops in V.D.R.L. procedures and darkfield microscopy to 65 technicians and individual bench training to 10 others. Also, a Principal Laboratory Technician attended a two-week N.C.D.C. course entitled "Fluorescent Antibody Methods in the Diagnosis of Syphilis."

Pathology Program

The 17th Annual Slide Seminar sponsored jointly by the Department of Health and the New Jersey Society of Pathologists was held December 2, 1967, at the Nassau Inn, Princeton, New Jersey. The seminar dealt with problems in endocrine pathology. Some 200 New Jersey physicians attended.

WORKLOAD DATA

	1966	1967
No. Contributions to Tumor Registry	348	330
No. Consultation Cases	8	6
No. Slides Prepared	6,467	7,729
No. Slides Stained	6,429	5,485
No. Specimens Processed	1,614	1,437
No. Requests for Special Staining	67	6
No. Slides Distributed	2,510	1,713
No. Slides Stained with Special Stains	952	560
No. Pollen Slides Counted	258	225
No. Dog Lymphomas	192	143

Serology Program

For the fifth consecutive year the number of reported cases of infectious syphilis declined in the State of New Jersey. Of the 220,082 specimens processed and tested in the state laboratory, 8,869 were reactors as against 223,376 specimens in 1966 with 10,933 reactors. The workload for the reference tests increased substantially and since they are more complex procedures and require a much longer time to complete, the increase was much greater than the figures would imply.

The participants in the Serology Evaluation program increased 34 percent in 1967—from 187 to 252. In addition to the laboratories approved under the Sanitary Code for premarital and prenatal testing and the blood banks which are required to participate in this program under the Blood Bank regulations, the program included for the first time certain laboratories accredited to perform serologic tests under Medicare. The total number of specimens sent out had to be restricted because we were limited in materials and personnel. Therefore, the number of specimens each laboratory received was dependent upon its performance in the previous evaluation survey or the time the laboratory entered the evaluation program.

For the first time we required the quantitative procedure to be performed by the participtaing laboratories. For many of the laboratories this was a new procedure and many requests were received for training in this exercise. Fortunately, the Serology Laboratory had moved to its new quarters on the third floor of the Health and Agriculture Laboratory Building by the end of January and the move was completed in February when the equipment and the one laboratory technician functioning in Camden were transferred to Trenton. With excellent facilities and space available for training, a March class was arranged for 30 laboratory personnel. A second class had to be held the following week to accommodate the overflow of requests. This time 15

persons attended. Enthusiasm to improve in performance in the Evaluation Program continued. The American Medical Technologists (AMT) requested that we hold a one-day training session for their members. Eleven members received bench training in the qualitative and quantitative procedures of the V.D.R.L. test (Venereal Disease Research Laboratory). Still other hospital and private laboratory directors, anxious to raise their level of performance, made arrangements for their technicians to visit the serology laboratory to receive individual training. Ten such appointments were made during the year. Serology personnel assisted in a training session in Darkfield Microscopy, sponsored by the Venereal Disease Program for their investigators. This was a two-day session of bench work for nine members of their staff. Thus, one of the highlights of the activities of the Serology Program was in the area of assistance and training. The 75 persons who received training in 1967 constituted the largest number ever to receive bench training in any one year. Two hospital and one private laboratory received approval for premarital and prenatal serology in 1967. These laboratories were visited by the chief serologist before the approval was granted, an evaluation of performance was made on the premises, and a written report was sent to the director of the laboratory.

Upon the request of the laboratory director, the syphilis serology testing activities and program were reviewed by the Chief of Consultation and Training Services of the Venereal Disease Research Laboratory. Recommendations were made and were incorporated immediately into our routine practice. During this visit the program coordinator and the Chief of Consultation and Training Services, visited the Newark City Health Department Laboratory to do a cooperative review of their syphilis serology procedures. From the facts gathered during that visit, the Director of Laboratories of the N. J. Department of Health prepaerd a comprehensive report which was forwarded to the Health Officer of Newark.

New Jersey participated in two Federal Evaluation studies: one in syphilis serology and one in the serology of Infectious Mononucleosis. In syphilis serology no criteria were established this year for adequate performance; however, the records showed a high level of performance when compared with the control laboratory. In the Infectious Mononucleosis survey, the results of the New Jersey laboratory duplicated the results of the reference laboratory. One senior laboratory technician attended a course in "Fluorescent Antibody Methods in the Diagnosis of Syphilis", held at the Communicable Disease Center.

The statistics that follow belie the magnitude of the activities of the Serology Program. With a workload in routine testing that was but slightly

depressed and with an increasing number of complex reference tests, a record number of persons was trained. Statistics do not show the tremendous effort in the preparation of samples and controls, and calibration of hypodermic needles for use in the testing procedure, in addition to the notifications and contacts necessary to arrange such classes. Statistics do not relate the effect of an increase of 65 participants in the Serology Evaluation Program: the follow-up of poor performance, the contacts that must be made continuously to make the program effective and productive.

SEROLOGY

COMPARISON STATISTICS

	1965	*1966*	*1967*
Routine Specimens for Syphilis:			
Bloods	221,454	221,982	219,271
Spinal fluids	1,922	1,483	811
	223,376	223,465	220,082
Routine Tests for Syphilis:			
Bloods	232,695	232,259	228,475
Spinal fluids	2,375	1,925	1,094
	235,070	234,184	229,569
Reference Tests for Syphilis:			
KRP	20,600	45,190	51,300
FTA	21,855	49,695	52,995
	42,455	94,885	104,295
Total Protein	2,220	2,532	1,564
Field Evaluation	21,628	19,178	19,976
Miscellaneous Tests:			
Antistreptolysin Titer	3,510	3,680	3,040
Cold agglutinins	198	188	196
Febrile agglutinations	534	822	482
Heterophiles	30,072	22,400	21,688
Leptospirosis	371	462	498
Trichinosis	408	388	272
	35,093	27,940	26,176
Total Tests	314,838	359,541	361,604
Premaritals	48,370	48,779	49,755
Prenatals	36,574	32,744	31,830

Virology Program

During 1967, the Virology Program was involved in numerous noteworthy activities that resulted in record breaking demands for laboratory services amounting to 476,507 tests, representing a whopping 74 percent increase over tests performed in the previous year.

For the sixth consecutive year, evidence of influenza was detected in New Jersey during 1967. The Virology Program acted effectively as a unit of the world-wide network of laboratories involved in influenza surveillance, being once again the first laboratory in the United States to detect influenza A_2 epidemic activity along the Atlantic seaboard, and to isolate strains of the virus for studies by the International Reference Center laboratories to determine whether presently constituted vaccines could be expected to be effective against the current strain of influenza. Outbreaks of influenza were detected by laboratory studies in widely scattered localities throughout New Jersey.

During the summer of 1967 a rather dramatic outbreak among a large group of day campers was studied and found to be caused by an uncommon type of coxsackie virus which has only been incriminated on a few occasions as a cause of human illness characterized as "Hand, Foot and Mouth Disease." Laboratory studies permitted prompt definition of the outbreak and prompt cessation by interruption of personal contacts among the campers for a two-week period.

The five-year period of drought in New Jersey was ended in 1967, and with its close came increasing populations of mosquitoes, as revealed by our mosquito surveillance activities. Eastern Encephalitis virus was detected with unprecedented frequency last summer in mosquitoes, birds and other animals collected in South Jersey as part of our mosquito-borne virus surveillance activities. State and local Mosquito Extermination Commissions were informed of the possible hazards when an outbreak of Eastern Encephalitis was identified in horses throughout the eastern part of South Jersey, permitting redoubled efforts at mosquito control in danger areas. Subsequently, only one human case of Eastern Encephalitis was recognized, that of a 67 year old man who succumbed to the disease. Studies of a second patient suspected of having succumbed to Eastern Encephalitis infection revealed, with the assistance of the Pathology and Chemistry Programs, that the death was in reality due to previously unrecognized fulminating hepatitis. This discovery led to an investigation which uncovered an epidemic of 30 cases of hepatitis in a group of families associated with ingestion of water from a faulty contaminated well. Correction of the latter put an end to the outbreak.

New fluorescent antibody procedures developed in this laboratory have been instituted as routine tools for the very rapid identification of mosquito-borne encephalitis viruses, such as Eastern Encephalitis. These permit the laboratory to identify such cases in less than 24 hours and represent a significant contribution to the rapid recognition of such public health hazards in New Jersey.

A non-fatal case of encephalitis due to California encephalitis virus was detected in New Jersey. This case is the first one ever recognized in the state. California encephalitis is another of the mosquito-borne viruses which, in recent years, has been shown to be responsible for human disease in the U. S.

Finally, technological advances in virology permitted the development of laboratory services for the recognition of rubella (german measles), an infection of great importance in the case of women early in pregnancy. Laboratory services for rubella diagnosis were instituted and were used heavily by New Jersey's physicians.

WORKLOAD DATA

	1965	*1966*	*1967*
Specimens received	23,000	29,100	29,226
Tests performed	375,000	273,700	476,507
Types of tests:			
Virus isolation	97,610	133,300	185,798
Serologic tests	277,216	140,410	290,709

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

*Dr. Aronson resigned and was succeeded by William J. Dougherty, M.D., M.P.H., October 1, 1967.

Division of Local Health Services

State Aid

By October 15, 1966, 80 applications had been received from local health agencies to participate in 1967 in the financial benefits of the State Health Aid Act of 1966. The first checks, which would support new or expanded local health services, were mailed to the 70 local health agencies which were approved to receive state health aid.

Participating agencies programmed over $2,500,000 into 482 certified health services.

Table 1. Certified Health Services Programmed

Functional Activities	*Number of Certified Health Services Programmed*
Administration	91
Environmental Sanitation	204
Communicable Disease	44
Maternal and Child Health	67
Chronic Illness	76
	482

State-wide population coverage represented by the participation of local health agencies within state health districts is charted below:

Table 2. State Health Aid Participation By District

District	*Population*	*Number of Local Health Agencies*	*Population Local Health Agencies*	*Percent of Population Participating*
Central	1,729,020	18	999,010	57
Metropolitan	3,468,130	38	2,363,610	68
Northern	728,820	7	197,780	27
Southern	1,033,680	7	754,420	72
Total	6,959,650	70	4,314,820	61

The 39 percent of the population that is not participating in state health aid represents 296 municipalities. It is this group that presents the challenge for increasing participation in state health aid during 1968.

During 1967, all participating health officers had to plan and budget for new or expanded health programs. During the last quarter of 1967, many local health agencies realized there were large unexpended balances in various programs. Crash re-budgeting was necessary to channel balances into services prior to December 31, 1967. This experience gave rise to the creation of a faculty composed of selected health officers who had little or no difficulty with the administration of state health aid during 1967. It is planned to use the faculty to guide their peers in the principles of budgeting, rebudgeting, control, and evaluation in the administration of state health aid for 1968.

Grants-in-Aid

During the calendar year 1967, the Division of Local Health Services was involved in 15 grant-in-aid contracts. The total amount of money paid to the grantees was $60,367.63, all of which came from the Special Projects and Development Fund available under the provisions of the State Health Aid Act.

Grants made to four county health departments and to two city health departments, for the support of nine sanitarian trainees, accounted for $23,719.32 of the total amount expended.

Eight grants were made to six other grantees for a variety of purposes, largely for nursing services. The amount spent under these grants was $36,648.31.

Central State Health District

The most significant progress in providing adequate health services to the people in the Central State Health District came about when the county Board of Chosen Freeholders established a County Health Department with a licensed, full-time health officer as public health coordinator. The County Health Department provided services in 1967 to a population of 258,000 in 35 of the 38 municipalities. During the year, 12 new child health conferences were established on a regional basis, primarily servicing the more rural areas of the county.

The Middlesex County Board of Freeholders initiated the establishment of a county health department and began the negotiation of contracts to provide health services to as many as possible of the 18 uncovered municipalities. It began recruitment of a qualified health officer to administer the department.

Four municipalities in Mercer County, with a total population of approximately 22,000 residents, have indicated a desire to participate in a

county health department unit when established. At the close of the year, negotiations were being carried out to obtain participation of at least one or two additional municipalities in order to achieve the minimum population of 25,000 and, thus, enable the county health departments to become eligible for state health aid funds.

The Monmouth and Ocean County Boards of Freeholders indicated intent to establish a county health department and have applied for state health aid for the uncovered municipalities in their respective counties for the year 1968. However, at the close of the year, the freeholders had not progressed further, nor had they negotiated contracts with municipal boards of health.

Full-time health officer coverage in the Central State Health District and the status of state health aid by county and municipalities as of December 31, 1967, is shown in the attached table.

FULL-TIME HEALTH OFFICER COVERAGE IN CENTRAL STATE HEALTH DISTRICT AND STATE HEALTH AID
STATUS AS OF DEC. 31, 1967, BY COUNTY, MUNICIPALITIES AND PERCENT

Name	County Population	# of Municipalities	Municipalities with Full-time Health Officers			Municipalities without Full-time Health Officers			State Health Aid Status—1967 Number Municipalities Receiving Aid	Amount Aid Received by County
			#	Population	Percent	#	Population	Percent		
Burlington	301,281	40	37	286,071	95%	3	15,210	5%	36	$161,019.75
Mercer	293,575	13	5	225,530	77%	8	68,045	23%	2	150,179.50
Middlesex	556,705	25	7	335,842	60%	18	220,863	40%	7	131,875.12
Monmouth	437,362	53	11	198,616	45%	42	238,746	55%	10	103,886.00
Ocean	157,169	33	0	0	0%	33	157,169	100%	None	None
Total	1,746,092	164	60	1,046,059	60%	104	700,033	40%	55	$546,960.37

35—Municipalities participate in the Burlington County Health Dept. receive State Health Aid
Burlington City receives State Health Aid
Moorestown Twp. not eligible for State Aid, pop. less than 25,000
Lawrence Twp. and Princeton Twp. have full-time Health Officers, but not eligible for State Aid, pop. less than 25,000
Princeton Boro eligible, but did not apply
Howell Twp. not eligible for State Aid, population less than 25,000
Piscataway Twp. received State Health Aid for first part of 1967—no longer eligible

A new health center was completed in Woodbridge Township with the aid of Hill-Burton funds.

The District Consultant in Community Health Organization, assisted individuals and groups; related to their needs for planning health education projects and activities; and provided printed materials for elementary, junior, and senior high school and college students. A total of 11,000 pieces of printed materials was distributed.

The consultant also participated in 20 meetings with local official and non-official agencies to help them plan public health programs.

This past year was one in which significant progress was made in the enforcement of Chapter 8 of the State Sanitary Code. Recalcitrant dump operators were summoned to district courts by the Attorney General's office to answer charges of violations of Chapter 8. Aided by testimony of district sanitarians, together with colored pictures and slides for evidence, the Attorney General was successful in securing injunctions and fines against operators of open dumps located in Maple Shade, Medford and Tabernacle Townships (Burlington County); Carteret Boro (Middlesex County); and Allentown Boro and Upper Freehold Township (Monmouth County).

Ten lake bathing places and 51 camps received certificates of compliance after inspections disclosed them to be in compliance with departmental requirements.

Routine surveillance was maintained on stack emissions to determine violations of Chapter 4 of the New Jersey Air Pollution Control Code. Special emphasis was placed on establishments which were under "order" by the department for previous violations.

District personnel embargoed and supervised the destruction of 400 pounds of flour, 600 cans of assorted foods, 75 cases of eggs, 60 pounds of black-eyed beans and the partial contents of three stores involved in fires.

Inspections of ice cream plants, bottling plants, refrigerated warehouses, and catering establishments were conducted by district personel as part of our commitment to respective programs. Where qualified health officers were available, they were urged to make the inspections and forward their findings, along with recommendations for licensure, to the district office. In addition to conducting field tests using the Hobart machine to check the fat content in ground meat and malachite green to determine the presence of sulfites in meats, samples of a wide range of food products were collected and submitted to the Division of Laboratories as part of a surveilance maintained in cooperation with the Food Program.

At the request of the director of Health Facilities Certification, district sanitarians conducted inspections of nursing homes in the Central District and submitted reports.

In conjunction with epidemiological investigations of food poisoning outbreaks, the district sanitarians conducted sanitary inspections of eating establishments in Princeton Boro and Trenton (Mercer County); Dunellen Boro and Piscataway Township (Middlesex County); Wall Township (Monmouth County); and Island Heights Boro (Ocean County).

District sanitarians participated in the collection of data relative to sludge disposal operations which will be used in a study to determine the need for laws regulating sludge disposal operations.

Sanitary surveys were conducted in seven municipalities. Reports of the findings, together with recommendations, were forwarded to local officials. Where no remedial action was instituted or planned, orders were issued by the department to cease and abate the source of foulness.

Training new sanitarians and up-grading the skills of established sanitarians in local health departments was an important activity of our personnel this past year. Sanitarians were also engaged in monitoring contracts between this department and local health departments for monies appropriated to train new health personnel. In conjunction with field training courses, district personnel provided assistance to the health officers of the following municipalities: Trenton and Lawrence Township (Mercer County) and Woodbridge Township (Middlesex County).

During 1967, 150 of the 165 municipalities in the district conducted free anti-rabies vaccination clinics. A total of 54,098 dogs was vaccinated; this represents and increase of 5,099 dogs, or 10.4 percent, over 1966, and 11 percent increase over 1965. The goal is to achieve 100 percent participation of all municipalities.

Investigations of 169 animal bites were conducted, of these, 40 were out-of-state.

The Division of Laboratories examined 756 animals for rabies; 261, or 34.5 percent were bats, of which 12, or 4.6 percent were positive.

The Veterinary Public Health staff conducted 125 inspections of kennels, pet shops, shelters, and pounds.

Epidemiological investigations were conducted in 120 cases of salmonellosis, 18 shigellosis, 169 viral hepatitis, seven Rocky Mountain spotted fever, one trichinosis, and one typhoid fever.

With personnel of the Division of Preventable Diseases, the public health veterinarian investigated several food poisoning outbreaks; three in Mercer County, one in Middlesex County, each with about 200 victims; one in Monmouth County with about 320 victims; and two in Ocean County with approximately 140 victims.

In two of the three outbreaks in Mercer County, the causative agents were Clostridium perfringens and Staphylococcus coagulese positive; in the third, no etiological agent was determined. In the outbreaks in Middlesex and Monmouth Counties, the clinical symptoms and the incubation period were compatible with Clostridium perfringens food poisoning. In the two outbreaks in Ocean County, the etiological agent was not determined.

Nutrition program activities have focused on the nutrition components of the State Health Aid Act of 1966 and the Health Insurance for the Aged Program (Medicare). The promotion of educational programs for food service personnel at various supervisory levels and in various types of community health care institutions has also been emphasized.

In 1967, the Division of Health of the City of Trenton established a full-time public health nutrition program. Made possible by the State Health Aid Act of 1966, this was the first full-time nutrition program to be sponsored by a local health department in the district. State health aid has also initiated the sponsorship of part-time diet counseling services by the Burlington County Health Department. Nutrition services in child health conferences were provided, also, by the Health Departments of South Brunswick, Madison and Piscataway Townships (Middlesex County) by means of local funding. The district nutrition consultant provided assistance in the orientation of the newly appointed nutritionist for the City of Trenton, and in the technical aspects of developing all of these new services.

Continuing education programs in the form of informal "share and compare" meetings have been conducted to provide assistance in food service management to administrators and dietary consultants of extended care facilities and nursing homes. At the present time, 26 dietary consultants are providing service to 36 nursing homes and extended care facilities. Invitations to the meetings were extended to all 68 licensed nursing homes and 19 incorporated homes for the aged in the district.

On June 9, 1967, 25 Trenton area residents, representing nine health care institutions, were the first graduates of the Trenton Food Service Supervisor Course held in the Vocational Division of Trenton Central High School. Plans were developed, also, for a two-phase, on-the-job training experience following the classroom instruction. The purpose of this educational program

is to train supervisory food service personnel for health care institutions as well as provide a career ladder for nonprofessional institutional food service workers. The course, coordinated on a temporary basis by the district nutrition consultant, had the endorsement of the Hospital Council of Mercer County, the New Jersey Dietetic Association, and the Trenton Board of Education.

The district nutrition consultant has continued as chairman of the Nutrition Education Committee for the Mercer County Food Stamp Program. During 1967, the committee conducted a food stamp poster contest in cooperation with United Progress, Inc. (Trenton's Office of Economic Opportunity agency) and the Zonta Club of Trenton in an effort to foster an understanding of the food stamp program and to promote participation by low-income families. A food stamp club and a Head Start parent education program were also initiated by committee activities. Approximately 1,100 families (representing 4,500 persons) are presently benefiting from the food stamp program in Mercer County.

Significant changes occurred in the public health nursing agencies of the district in 1967.

We encouraged voluntary public health nursing agencies with a staff of less than four to look critically at their operation and to determine whether they could deliver modern-day public health nursing services and meet the needs of their communities. As a result, two such agencies (Red Bank and Mattawan) in Monmouth County have become part of the Monmouth County Organization for Social Service, and three agencies (serving Keyport, Atlantic Highlands, Rumson, Sea Bright and Fair Haven) have contracted for nursing direction and supervision from the same agency. The Princeton Visiting Nurse Association (Mercer County) became a department within Princeton Hospital. The Moorestown Visiting Nurse Association (Burlington County) absorbed the Visiting Nurse Society of Riverton, Cinnaminson, and Palmyra.

State health aid assisted two official agencies to strengthen their public health nursing program. The Trenton Division of Health contracts for qualified nursing direction from the Visiting Nurse Association of Trenton. The Lawrence Township Board of Health (Mercer County) contracts for all public health nursing services from a qualified agency, thus eliminating the employment of a township nurse who functioned without nursing direction and supervision. Through the assistance of state aid, the Public Health Nursing Association for Burlington County developed 12 regional child health

conferences. There has long been a need to cross township lines in providing services to people.

The public health nursing staff of the district had increased demands for orientation to the district of newly employed nurses in New Jersey. A total of 138 diploma school senior nursing students has been oriented by the public health nurse supervisor.

The educational preparation of two public health nurses working in administration was upgraded. Both have received a master's degree in nursing from New York University, a school approved by the National League for Nursing.

A closer working relationship with hospitals was developed. District personnel gave more consultation to hospital personnel regarding educational programs.

There are now four public health nurses from voluntary agencies acting as coordinators within hospitals. This has facilitated referral of patients from hospitals to community public health nursing agencies and to extended care facilities.

The social work consultant continued to work cooperatively with the Division of Health Facilities in reference to service for Medicare patients. With an increase in the number of patients admitted to extended care facilities, the administrators have recognized the need for qualified social workers to fill these part-time positions.

Joint community planning for services to agricultural migrants by health and welfare agencies in Burlington, Mercer, Middlesex, and Monmouth Counties was strengthened during the year. The social work consultant continued to work cooperatively with her counterpart on the Migrant Health Program in supporting community efforts related to family clinics and family counseling services to migrants.

Mercer County

Assistance was provided to the City of Trenton's Division of Health in the initiation, planning and implementation of a neighborhood health council in a low-income area of the city. The council, with a membership of about 75 persons, is determining health needs and working toward their solution.

Middlesex County

At the request of the Madison Township League of Women Voters, the district consultant in community health organization assisted in developing

procedures and techniques to conduct and evaluate a study of the health facilities in the township. Methods of making the survey results public were recommended.

The public health veterinarian participated in the investigation of an outbreak of viral hepatitis at the State School at Woodbridge involving 155 cases.

With cooperative planning by the social work consultant and the field instructor in medical social work of Rutger's Graduate School of Social Work, Roosevelt Hospital, Metuchen, and Perth Amboy General Hospital, were evaluated and approved by the school for accepting social work students for field work placements. Two students were assigned to each hospital. These are the first medical-social training units in the district.

Requests for services from the Social Service Department of Perth Amboy General Hospital increasing rapidly during the year and two professional staff positions were added. This department was established two years ago through a grant-in-aid for employment of a qualified social worker to serve as its director. The staff has increased to three qualified social workers and two social work assistants.

Monmouth County

Through a grant-in-aid, the first qualified social worker was added to the staff of Jersey Shore Medical Center, Neptune. 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.

Ocean County

Under professional guidance, 49 emotionally disturbed, mentally retarded, and physically handicapped persons have received training in Ocean County Sheltered Workshop in Lakewood. This facility, which was opened in May, was established through community efforts and with support from the social work consultant.

During the year, two nursing homes in Ocean County employed qualified social workers on a part-time basis. These positions were established as a result of a project of the Ocean County Nursing Home Council to demonstrate the value of social work in nursing homes. The Ocean County Mental Health Clinic participated in the project which was sponsored by the Hospital Research and Educational Trust of New Jersey.

Metropolitan State Health District

District Administration

Community Health Services

Bergen County Health Department

During 1967, under the leadership of Ira Lubell, M.D., M.P.H., Medical Director of the Bergen County Health Department, the staff grew from 12 full-time employes serving 158,000 persons to a staff of 24 serving 895,485. In addition to the medical director, the staff includes a deputy health officer, chief sanitarian, two senior sanitarians, a public health educator, and a nursing consultant. There are 13 field sanitarians.

Thirteen municipalities contracted for their required services as stipulated under "Recognized Public Health Activities and Minimum Standards of Performance for Local Health Departments in New Jersey." They were Hasbrouck Heights, Oakland, Montvale, Rockleigh, North Vale, Washington Township, Leonia, Rochelle Park, East Paterson, Garfield, Rutherford, Lyndhurst, and Palisades Interstate Park. As the enforcing agents for these contracting municipalities, the Bergen County Health Department enforces laws and local ordinances.

The following programs have been instituted on a countywide basis free of any charge or contractual obligation.

Educational Programs—A public health educator was recently added to the staff. Her services encompass such fields as smoking, narcotics, and sex education and are offered to all towns in the county who request them as well as to public and private schools, voluntary agencies, and any other interested public health group.

Rabies Control—Recognizing its responsibility to any resident of Bergen County bitten by a possible rabid animal and to coordinate the activities of the 70 local departments, the Bergen County Health Department was designated as the central transport service for all specimens to be examined.

Air Pollution Control—Through the cooperative efforts of a voluntary agency and the State Department of Health, a "Hot Line" has been installed to facilitate rapid investigation and remedy of air pollution problems in Bergen County.

Tuberculosis Case Register—The register, located in the Bergen County Health Department, contains statistical and epidemiologic data concerning tuberculosis countywide.

Dental Programming—A comprehensive dental education program, via a dental bus, will be available to all public and private schools in contracting towns.

Preventive Medical Information—A diabetes detection program was coordinated and put into action at the annual health fair and in municipalities of Bergen County. With the cooperation of the Tuberculosis Respiratory Disease Association, chest x rays were taken throughout Bergen County and follow-up procedures for medical treatment were promoted.

County Institutions—Upon request from county officials, all food purveyors to county institutions are inspected, as well as food preparation areas and handlers in county institutions.

County Parks—Are kept under constant surveillance to assure the public the best environment for healthy enjoyment.

Consultation and Evaluation Service—The Bergen County Health Department consults with and evaluates services at the request of a local board of health. Services to be evaluated may include: vital statistics, laboratory services, environmental sanitation, dental health, maternal, child and adult health, communicable disease control, chronic illness control, health education, and general administration. Evaluation recommendations are made so that local health departments can upgrade their programs.

Communicable Disease Control—Consultation is available to private physicians and health departments regarding communicable disease outbreaks and their control.

Nursing Consultation—A nurse consultant gives consultation to local health departments, voluntary agencies, and school districts that request assistance.

Professional Education—Free courses to benefit locally employed sanitarians are offered.

Food Service and Sanitation—In conjunction with the Bergen County Vocational and Technical School, a food service and sanitation seminar has been developed to teach owners, managers, and employees of food preparation and service establishments about safe practices of food service and sanitation.

Temporary services of the Bergen County Health Department are available to any municipality during any period that health personnel are unavailable for reasons of illness, death, or any emergency.

Hospital and Health Council of Metropolitan New Jersey Organized

The Hospital and Health Council of Metropolitan New Jersey, Inc., was organized in April, 1967. Mr. Henry M. Kennedy, a vice president of the Prudential Insurance Company, was elected president.

The council is the planning group for Region 3 which includes 55 municipalities in Essex County and parts of Union, Hudson, Morris, and Bergen Counties. It will function as the regional planning council for health and hospital facilities under the Health Facilities Planning Council of New Jersey.

Countywide Health Careers Conference

A Health Careers Planning Committee organized by Dr. S. William Kalb, Chairman, Health Careers Committee, Essex County Medical Society and the Veterans Administration Hospital, East Orange, sponsored a two-day Medical-Health Careers Conference in April at the Veterans Administration Hospital in East Orange. Representatives from 23 health-related professions served on the Planning Committee.

Approximately 200 sophomores and juniors from public and private schools attended the conference.

Afternoon working tours were conducted throughout the hospital. Students who had indicated their special interest were given the opportunity to work in three groups in the hospital where the chief of each department served as consultant.

In an evaluation of the activity, one student said that: "The conference was highly remarkable in my eyes because it gave me the feeling that we are needed. Most teen-agers are sneered at and looked down as a kind of delinquent and are unneeded in many persons' eyes. This conference made me feel that everyone can help in the medical field."

The district consultant in community health organization was chairman of the planning committee.

Comprehensive Health Planning Discussed at Fourth Annual Health Education Workshop

A total of 118 representatives from health and welfare organizations in Region III attended the Fourth Annual Health Education Workshop in Newark.

Annual workshops have developed as a result of the interest in the health education project at United Hospitals, Newark. Twelve agencies and a planning committee sponsor and plan the program.

Constructive Health Programs

Maternal and Child Health Program

Newark Maternity and Infant Care Project

Quality health services in some areas of Newark have been a fact of life for almost 1,000 expectant mothers who might otherwise rarely have seen a physician.

A working relationship between the State Department of Health and the federal government permitted the channeling of close to $2,000,000 in three years into a better health care effort for many of Newark's underprivileged mothers and their infants. The result has been a high standard of prenatal and postnatal attention for mothers who could not ordinarily expect the kind of quality service provided.

The costs have been borne by funds made available by the U. S. Children's Bureau in a state-directed project with the name "Maternity and Infant Care Project."

In its third year, the project was funded with $1,250,000 in federal money in the first two years while the current level of spending in the fiscal year ending June 30, 1968 was at the rate of $500,000 annually. For every $3 of federal money put into the project, the city of Newark is putting up $1.

One of the achievements visible since the project got underway in May, 1965, is a substantial cutback in the infant mortality rate among underprivileged Newark mothers who are covered by the project.

The grants were made because of overcrowding at city hospital clinics. Part of the idea was to relieve the clinics by having more underprivileged patients cared for in voluntary hospitals nearer their homes with payments

made to these hospitals for clinic visits, delivery costs, and for care of the newborn.

Cooperating hospitals have been Newark Beth Israel, St. Michael's, and Columbus. For homemaker services, contracts were arranged with Chr-Ill Service, Inc. Community nursing services were supplied by the Community Nursing Service of Essex and West Hudson. The New Jersey College of Medicine and Dentistry supplied obstetrical consultant services.

More than 800 mothers have had babies under medical supervision since the project began in 1965.

More than 600 prospective mothers under the age of 16 were seen in the prenatal clinic in Newark City Hospital in 1966. Through June, 1967, 300 prospective mothers under 16 were seen in the prenatal clinic in Newark City Hospital and 200 others also under 16 were seen in prenatal clinics in private hospitals. It was found desirable to establish a night clinic for many of the prospective mothers who were in school during the day. Many of these young, prospective mothers were unmarried. They have problems requiring more than medical attention.

Better Services for Infants and Children in Five Communities

Combined efforts of local and state health department staffs resulted in the development of child health conference in three communities—West New York, North Bergen, and Roselle Park—to provide better services with complete care to infants and children where heretofore such services were nonexistent. State health aid was instrumental in starting a child health conference in Irvington. In Passaic, the state health aid also helped relocate and coordinate several child health conferences.

Approximately two dozen child health conferences have received at least one consultative visit and in some cases multiple visits. Emphasis was placed on early auditory screening in infancy and visual screening in preschool children. Active recruitment to replace physicians in three Children Health Conferences was successful.

Environmental Health Programs

Veterinary Public Health

Rodent Control Project in Paterson

An intensive rodent control project was undertaken in Paterson. Young people from the Neighborhood Youth Corps were trained to bait rats. Prior to baiting selected yards, cellars, and apartments, an educational program

was held for the landlords and tenants. A movie was shown, a short talk given, and there was a question-and-answer period. A Spanish translator was on hand. The district rabies control warden participated in the training and supervision of the boys from the Neighborhood Youth Corps and in the health educational process.

Inspections Aid in New Pound Facilities

During the calendar year of 1967, 358 inspections of kennels, pet shops, shelters and pounds were made. Partly as a result of these inspections, a new pound facility is under construction in West Milford Township, and South Orange has completed construction of a new pound.

Rabies Control

Hudson County has joined Essex, Passaic, and Union Counties in having 100 percent of its municipalities hold a rabies vaccination program. There were 565 clinic conferences held leading to the inoculation of 68,000 animals with antirabies vaccine. There were 260 in-state animal bites investigated and 156 out-of-state animal bites investigated.

Health Facilities Programs

Nutrition

Nutrition Programs

As a result of state health aid, nutrition programs have been developed in Jersey City and in Orange.

The Jersey City Health Department has hired a full-time nutritionist to give consultation to nursing and related health agencies. She presents nutrition programs when requested and in some cases gives direct diet counseling. She has conducted studies on food prices in various areas of the city as well as on food consumption of low-income persons.

The Orange Health Department has hired a nutritionist for one day a week to plan programs for health agencies. A series of lectures for senior citizens was developed. The nutritionist also developed a nutrition program related to the diabetes detection week.

Dietetic Interns

A pilot program, in conjunction with the internship program of the Veterans Hospital, Bronx, New York, was conducted in New Jersey to give

the dietetic interns perspective on public health nutrition in the four districts. In this district, the nutrition consultant planned and directed a two-week schedule for two dietetic interns from this hospital. The schedule included visits to hospitals, agencies, and a college.

Nursing and Boarding Home Consultants

The state was involved in a four-day workshop cosponsored with Columbia University to give information to consultants. The district held "Share and Compare" meetings for those active in this work.

Head Start Activities

The Head Start Programs expanded their nutrition educational activities for the mothers of eligible children, aides, and directors. Programs included nutrition for the preschool and the young school child, low-income budgeting, and weight control.

In-service Training in Nutrition

In-service training programs in nutrition for public health nurses and for nurses who have come back in the field after a period of time away from their professions were increased during the year.

Food Stamp Programs

Much time and effort went into promoting the Food Stamp Program. All counties in this district have the program except Essex County.

Meals-On-Wheels Programs

Jersey City and Paterson set up "Meals-On-Wheels" programs. East Orange, Summit, and Montclair also have this service.

Public Health Nursing

Newark Takes Step to Generalize Public Health Nursing

The Newark Health Department has taken the first step towards generalizing its public health nursing service. A director and assistant director of nursing have been appointed and departmental reorganization is on the way. Included in the reorganization will be a new program—home nursing visits to selected prenatal patients. This service has been provided, on a limited basis, to those patients attending Newark City Hospital's prenatal

clinic. The Maternity and Infant Care Project in Newark has been making a dent in maternity service but most prenatal patients have not had public health nursing service in the home.

State Aid Improves Nursing

Several health departments, such as Passaic and Bloomfield, through state health aid have improved their nursing programming and administrative procedures by purchase of qualified direction.

Medicare Changes Personnel

The impact of Medicare has caused a change in the types and levels of personnel employed in public health agencies. The number of licensed practical nurses has more than tripled this year. For example, Community Nursing Service of Essex and West Hudson now employs eight as compared to two in 1966. Home Health Services of Passaic County employs three as compared to none in 1966. Nurses' aides are now being employed by some agencies, as in Paterson Health Department and East Orange Health Department.

Consolidation of Eastern Union and Westfield Nursing Agencies

The Visiting Nurse Association of Eastern Union County and the District Nursing Association in Westfield have consolidated. The new name of the single agency is Visiting Nurse and Health Services. The main office is located in Elizabeth with a branch office in Westfield.

Qualified Nursing Director Employed

The Visiting Nurse Association of Northern Bergen County and the Community Nursing Service of Hackensack Hospital both employed qualified nursing directors.

Public Health Social Work

Increase in Social Workers

The number of social workers employed in health services in the Metropolitan State Health District increased markedly during the year. Nineteen hospitals now have professionally qualified directors of social work. Several have added social workers at the staff level. The Newark Maternity and Infant Care Project has also added eight social workers to community health

services in Newark. Some of the Maternity and Infant Care staff have augmented already existing departments in contracting hospitals. However, through the project, one voluntary hospital, the Newark Division of Health, and the Newark City Hospital had their first experience with professional social work.

The district social work consultant has served as consultant to hospitals and health agencies in recruitment of staff and in establishing and strengthening departments. Because many of these social workers are professionally and geographically isolated in small departments, the district consultant has emphasized group opportunities for professional growth. This has included the organization of a group of hospital social work directors who meet regularly.

Seminars on Psychiatric Consultation in Chronic Diseases

A series of 10 seminars, providing psychiatric consultation on emotional problems in chronic diseases for social workers in small hospitals which do not have access to psychiatric consultation, was organized by district consultant and financed by the State Health Department. The seminars were later continued and financed by the hospitals involved.

The district consultant is a member of a seven-state planning committee for the National Association of Social Workers Annual Regional Institute, which provides postgraduate education on various aspects of social work in health services. The 1967 Institute "New Dimensions for Social Work in the Delivery of Health Services" was an unusual opportunity for in-service training and updating medical social work thinking. Attendance at the institute was urged by the district consultant and 18 New Jersey social workers attended the institute. The highest previous attendance from New Jersey was seven in 1965, when the institute was held in Atlantic City.

New Emphasis on Social Work in Local Health Departments

Legislation providing state health aid to local health agencies has already resulted in new emphasis on social work in local health departments in the Metropolitan State Health District. Two of the larger departments, Newark and Bergen County, are planning to initiate social work services. Jersey City's contract with Mount Carmel Guild for mental health services includes a large social work component, and River Edge has contracted with a Family Service Agency for mental health services.

Northern State Health District

Community Health Services

Six municipalities in the Northern District were eligible for state aid; only five applied for 1967. These were Boonton Town, Dover Town, and Parsippany-Troy Hills Township (Morris County); Franklin Township and Somerville Borough (Somerset County). Madison Borough (Morris County) elected not to apply for state aid, although eligible.

The boards of chosen freeholders of three counties (Hunterdon, Somerset, and Sussex) had passed resolutions to establish county health departments. Hunterdon and Sussex put these resolutions into effect and both began operations in April. In Sussex County, a health officer was employed; a health officer and a sanitarian comprised the professional staff in Hunterdon County.

In Somerset County, no agreement could be reached between the board of freeholders and the several municipalities regarding the establishment of a county health department. Because of this, no action was taken on the resolution that had been passed by the board to establish such an agency. Two factors contributed to this; the untimely, sudden death of the freeholder who was most enthusiastically supporting a county health agency, and the defeat for re-election of his successor to the health committee of the board, who also supported the county concept.

On June 1, 1967, grant-in-aid assistance was made available to the Warren County Board of Chosen Freeholders to establish the Public Health Nursing Agency of Warren County as an official county-wide agency. Subsequently, the agency was certified as a Home Health Agency and absorbed the Warren County Medicare case load from the Easton Visiting Nurse Association. The establishment of this new agency provides public health nursing coverage in all five counties of the Northern State Health District. All agencies have added staff during this year.

Until June, 1967, the public health nurse supervisor was part of the nursing staff, and had primary responsibility for coordinating the activities of the 26 child health conferences, the Warren County Crippled Children's Program, and nursing referrals in Warren County. Effective June 1, 1967, she was assigned to the newly organized Public Health Nursing Agency of Warren County.

Over a period of several months, the District State Health Officer conferred with officials from five communities in the southern part of Warren

County in reference to the establishment of a regional health commission. Final organization was accomplished in time to submit an application for state aid for the year 1968. Municipalities involved are Alpha Borough, Greenwich Township, Lopatcong Township, Phillipsburg Town, and Pohatcong Township. The official name of the organization is "The South Warren County Regional Health Commission."

The senior public health veterinarian served as a member of the executive board of Morris Regional Health Council and assisted in the council's health planning activities. He was chairman of the Comparative Medicine Committee of the New Jersey Public Health Association and assisted in the planning for the Fifth Annual Comparative Medicine Seminar to be held in May, 1968, the subject being "Comparative Gerontology." He was also chairman of the Veterinary Public Health Committee of the New Jersey Health Officers' Association and served as a member of the Environmental Health Committee of that Association.

Environmental Health Programs

Our professional staff under the realignment of programs has been, to a greater degree, functioning as consultants and advisors to local boards of health in order to promote better environmental health programs. Whenever possible, the promotion of larger health units was undertaken. The lack of qualified sanitary inspectors in some of our smaller municipalities opens the doors for such discussions.

Routine inspections and surveillance still continue in those activities required by our state programs. Special investigations covering wells contaminated by petroleum products are time-consuming and in some instances are non-productive, insofar as location of the source of contamination is concerned. Subsurface contamination of underground potable water sources is an ever-present threat, even when local authorities take precautions against it. Strict enforcement of the provision of the standards promulgated under Chapter 199, P. L. 1954, appears to be the first line of defense against such contamination.

The Camp Certification Program, along with the certification of our lake facilities, continues to be a major program during the summer months.

Investigations of suspected food contamination indicated a need for closer surveillance of food establishments. Local boards of health were alerted to this need and plans have been formulated for a Northern District Caterers' Certification Program for 1969. Sanitary inspectors of local boards of health will be trained by district staff.

Veterinary Public Health

Cooperative efforts have continued with representatives of the Extension Division, Rutgers—the State University and the Morris County Agricultural office relative to investigating complaints of an agricultural and health nature. The activities of a poultry establishment reportedly were affecting the health and well-being of adjacent residents. This occurred in Hanover Township (Morris County). District staff conferred with local officials of Hunterdon County relative to their responsibility in maintaining surveillance on local pet shops, kennels, and pounds.

Orientation programs were held for newly-appointed local rabies control wardens by the rabies control warden.

Arrangements were made for exhibits depicting veterinary public health activities for the first local health fair sponsored by Franklin Township (Somerset County).

Assistance was given the State Health Careers Committee wherein a presentation was given on veterinary public health activities to students in Linden Junior High School. This request was made to the Health Careers Service by the guidance department of the school. A similar presentation was given to the Careers Youth Club, Morris County Urban League.

Consultations were held with the president and representatives of the New Jersey Science Teachers' Association to assist them in directing science teachers and students to the proper resources in regard to writing science projects concerning health or health activities.

Meetings were held with the editorial staff of "The Interchange," a national publication of the Purina Company. A request was made that all local dog wardens in the Northern State Health District be placed on its mailing list.

The senior public health veterinarian participated in a special project to combat insects and rodents in Paterson during July and August. He also attended an in-service observation training conference on insects and rodents at the Baltimore City Health Department. Nine conferences and consultations were held relative to this problem in the district.

Letters were sent to all camps notifying them of their responsibility in reporting cases of gastroenteritis. They were also advised of their responsibility in reporting animal bites.

A total of 28 consultations and investigations were conducted regarding 11 types of zoonoses.

Assistance was given program personnel in their study of arbor virus and rabies in wildlife. Six specimens were submitted to the laboratory for examination.

District staff assisted program personnel in the review of the proposed amendments to the rules and regulations governing pet shops, kennels, and pounds.

There were 183 anti-rabies inoculation clinics held during this period at which time 36,580 animals received anti-rabies inoculations, as compared to 34,579 animals inoculated in 1966, an increase of 2,001.

Four bats submitted to the laboratory from the district were positive for rabies.

Twenty-one persons residing in the district underwent anti-rabies inoculations.

There were 565 consultations, inspections, and conferences held with local officials by the rabies control warden to promote good control in the district. In each instance, efforts were made to involve local officials.

There were 360 visits made and conferences held by the rabies control warden in connection with the promotion of anti-rabies inoculation clinics.

All municipalities were urged to comply with annual dog census requirements and follow-up on delinquents. Priority was given to visiting and contacting municipal officials wherein dog licensing shows a significant drop.

Recommendations have been made to the local boards of health by the district staff, and efforts have been made to initiate procedures for the proper transportation to the state laboratory of heads of animals involved in bites. It is the responsibility of the local boards of health to assure that this is done by the owner of the animal, by the parents (or guardian) of the person bitten, or by the person bitten.

During this period, pounds were completed in Morristown, Roxbury Township, Randolph Township, and Montgomery Township.

Chronic Illness Control Programs

Aging

The District Consultant in Public Health Nursing arranged for the showing and evaluation of the film "The Critical Decades" at the New Jersey Nurses' District No. 1 spring meeting. Approximately 150 nurses attended

the conference and 50 completed questionnaires. The consensus was that the film was a small-town documentary—rather fragmented and lacking in continuity. On the positive side, it did depict the value of good nutrition, exercise, and regular check-ups.

Cancer

The consultant assisted the directors of the nursing agencies in Warren, Sussex, and Hunterdon Counties in planning for the in-service education program on cancer nursing which was held on three consecutive Tuesdays in December at Warren Haven (Warren County). Approximately 35 hospital, public health, and nursing home staff attended the sessions.

Disorders of Nervous System and Sense Organs

District staff participated in the planning of an educational program for nurses on the "Management of the Multiple Sclerosis Patient" held at the Multiple Sclerosis Nursing Home of New Jersey located in Chester Township (Morris County). Forty-four nurses from various areas of the state attended.

Later in the year, a national conference was held at the same facility. This conference was attended by and the program was presented by Multiple Sclerosis Service Units from coast to coast. The District Health Officer presented a paper entitled "State Health Departments and Multiple Sclerosis."

Heart and Circulatory Disease

The District Consultant in Public Health Nursing continued to participate on the Nurse Education Committee of the Morris County Heart Association. Primary efforts were directed toward plans for a county-wide coronary care training course for selected nursing staff from the six Morris County hospitals. The consultant collaborated with Morristown Memorial Hospital nursing administration to promote the recruitment and use of a rehabilitation nurse on the hospital rehabilitation team. The hospital selected a nurse from its staff and arranged for a stipend from the Morris County Heart Association for a three-week training course at New York University-Bellevue Rehabilitation Center. A six-month evaluation of her activities was done by the Morristown Memorial Hospital Administrator, the nursing service director, the director and public health nurse coordinator of the Visiting Nurse Association of Morris County, and the district consultant. Recommendations were made.

Smoking

The Sussex County Interagency Council on Smoking and Health was formed after several months of personal interviews with community people to determine the acceptability of the idea. Work had been done on smoking in the high schools three years before. The subject proved to be an acceptable one for a health education program, and as an area to promote more cooperation among the health agencies of the county. National publicity that accompanied the World Conference on Smoking held in New York City aided the effectiveness of the Council.

The District Health Officer gave five talks to various groups on the dangers of smoking. Most of these groups were youngsters in junior high school, although one consisted largely of adults who had smoked heavily for several years and wanted to quit.

Narcotics

The District Health Officer and the District Consultant in Community Health Organization continued to be active on the Committee for the Prevention of Narcotics, Inc., of Morris County. This is a voluntary rather than an official committee. Informational kits were compiled by the committee and placed in the libraries of high schools in Morris County and in the Morris County Library and its branches. Money to purchase films on narcotics was provided by the Woman's Auxiliary to the Morris County Medical Society. The committee maintains a roster of speakers. The District Health Officer made nine talks during the year to service clubs, parent-teachers associations, and to high school students. The committee was instrumental in the establishment of the Morris County After-Care Clinic at All Souls Hospital, Morristown. The purpose is to provide psychiatric after-care to narcotics addicts who have undergone withdrawal from drugs.

Rehabilitative Services

A 14-week program on "Community Focus on Restorative Nursing" was planned by nurse representatives of the Warren County Area nursing homes and the public health nursing agency. The formation of this planning committee came as the result of a request from the administrator of an extended care facility for in-service education.

Constructive Health Programs

Crippled Children

An excellent program on "The Management of the Cerebral Palsied Child" was held at the Matheny School (Somerset County). Seventy-three persons attended.

The public health nurse consultant assisted at the Phillipsburg and Washington Elks Crippled Children Clinics held at Warren Hospital.

Consultation in public health nursing was given to all public health nursing contractual agencies as well as to several local health department nurses and hospital personnel.

Maternal and Child Health

District nursing participated in a training session of volunteers for vision screening in Child Health Conference Stations at the Parsippany-Troy Hills Department of Health.

A schedule for visits to child health conferences by the Public Health Nurse Consultant in Maternal and Child Health was set up during the year. These visits have been very helpful to the public health nurses staffing these stations, and to the agencies planning the maternal and child health programs with local boards of health.

The District Consultant in Public Health Nursing is serving as chairman of the Morris County Health and Welfare Agency committee to investigate the potentials of non-professional counselling for parents of handicapped children. Representatives include the maternity, nursery or pediatric supervisors from the six hospitals in Morris County, as well as social workers from Catholic Charities, Morristown Memorial Hospital, Family Service, the Executive Director of the Morris Unit for Retarded Children, and the Visiting Nurse Association of Morris County. Each hospital administrator was requested to participate in a pilot program and to set up an administrative structure for counseling parents of newborn handicapped children within five days after delivery. The suggested team would consist of a physician, nurse, medical-social worker, and public health nurse coordinator. The need to share the resources that are available to the child and his family is well known.

Implementation of this service is dependent upon the acceptance of it by the medical staff of each hospital. This is where the efforts are currently being made by the respective hospital representatives.

Preventable Disease Programs

Communicable Disease

Consultations and epidemiological investigations were completed on the following:

Gastroenteritis (Salmonellosis, Shigellosis, and Staphylococcus)	38
Typhoid fever	5
(Annual surveillance)	6
Hepatitis	75
Follicular tonsillitis	1
Neurological disorders	1
Tuberculosis	2
Impetigo	1
Lead poisoning	3
Malaria	1
PKU	1
Psittacosis	2
Specimens sent to the laboratory for suspected viral or rickettsial-type illness	33

Tuberculosis Control

The district arranged for 375 Tine tests students at St. Pins School, Montville. The health officer arranged for medical supervision, and the Morris County Visiting Nurse Association offered nursing assistance.

Venereal Disease Control

A venereal disease educational program was planned for the nursing students of All Souls Hospital School of Nursing, Morristown. The Paterson venereal disease supervisor lectured and also showed the film "A Quarter of a Million Teenagers."

Consultation for a spring venereal disease program for members of the board of education, faculty, and school nurses, health officers, and others was provided at Parsippany-Troy Hills Township High School. The precipitating reason was a difference of opinion among the board members concerning the subject of sex education in the curriculum. There was an accompanying interest in venereal disease. Two major activities were a film showing attended by members of the administration and faculty, of the board of education, and parents, members and school nurses.

A meeting during school hours was set up. Approximately 50 persons attended. A few of these were school personnel from other counties. In the

fall, a sex education program for the students was started with the backing of the board of education, and the Parent-Teachers Association.

Vaccination Assistance

The vaccination project representative met with school physicians, nurses, and board of health members of communities in the five counties of the district with regard to conducting measles susceptibility surveys and measles immunization programs. As a result of these programs, 4,020 children received measles vaccine inoculations. A breakdown of the municipalities in the district that conducted measles programs follows:

Table 1. Administration of Measles Vaccine in the Northern State Health Districts by County and Municipality

Hunterdon County

Municipality	*Number of Children Immunized*
Lambertville	255
Total	255

Morris County

Parsippany-Troy Hills Twp.	186
Chatham Twp.	54
Rockaway Boro.	77
Chatham Boro.	23
Morris Twp.	208
Hanover Twp.	158
Boonton Town	106
Long Valley (Washington Twp.)	153
Denville Twp.	245
Mt. Arlington Boro.	148
Total	1,358

Somerset County

Manville Boro.	257
Hillsborough Twp.	314
Bound Brook Boro.	318
Bridgewater Twp.—Raritan Boro. School District	360
Somerville Boro.	193
Total	1,442

Sussex County

Municipality	*Number of Children Immunized*
Stillwater Twp.	70
Hopatcong Boro.	204
Total	274

Warren County

Hackettstown	322
Belvidere Town	122
White and Liberty Twps.	63
Independence Twp.	84
Frelinghuysen Twp.	50
Blairstown Twp.	50
Total	691

The representative met with the health officer of Warren Township and Franklin Township with regard to planning and conducting a multiphasic immunization program. A combined total of 2,967 diphtheria—pertussis—tetanus, measles, polio, influenza, and smallpox immunizations was given.

The representative met with the health officer of Pequannock Township to plan and administer a tetanus immunization program for municipal employees. Fifty employees received inoculations.

Assistance was provided in conducting an epidemiological survey in Oxford Township, Warren County, to determine the attack rate of an unusual outbreak of mumps in one school. It was reported that 35 percent of the enrollment was absent due to mumps.

The district distributed 75,000 immunization literature folders to municipalities and 5,000 posters to the five northern county medical societies, pharmacists' associations, beauty shops, and shopping centers.

Special Consultation Programs

Nutrition

Professional Education

Emphasis in the Nutrition Program in the district during 1967 was on professional education. The largest portion of the nutrition consultant's time was spent on consultation and educational programs for professional workers in health-related fields.

The Medicare requirement of qualified dietary consultants for extended care facilities has accentuated the need to recruit and train professional dietitians. The nutrition consultant, as State Community Nutrition Chairman for the New Jersey Dietetic Association, conducted a survey of qualified dietitians in the state to determine their work interest and availability. Information obtained has been used in every district for locating potential consultants, as requested by nursing homes and hospitals.

A series of in-service conferences for dietary consultants to extended care facilities has been organized for sharing of resource material, problem-solving and encouraging uniformity of standards. Orientation was provided to new dietary consultants.

The nutrition consultant assisted in program planning and participated as faculty member for the second four-day workshop, financed by U. S. Public Health Service and administered by Columbia University, "The Role of Dietitians and Nutritionists in Medicare Services." About 35 dietitians attended the workshop, designated as preparation for dietary consultation.

Consultation was provided to hospital dietitians on technical nutrition information, dietary management, and teaching media. Other professionals who requested and received nutrition consultation were diet counselors, extension service home economists, public health nurses, school nurses, home economic teachers, and instructors for homemaking services.

The nutrition consultant was a program committee member for both the local dietetics and home economics associations. One project of the latter group was a "home economics careers night" for teenage girls and guidance counselors in Morris County. The nutrition consultant prepared an exhibit for nutrition and dietetics careers. There were 150 persons in attendance.

Institutional Food Service

Consultation to extended care facilities for assistance in meeting the conditions of participation in Medicare was an important activity. Nursing home administrators frequently request this assistance either prior to or following evaluation by the Medicare team.

Since there are too few qualified dietitians, some hospitals and homes for the aged do not have professional supervision of their dietary departments. The nutrition consultant is often requested to make evaluations and recommendations for improvement of dietary services in these facilities. Boarding homes for sheltered care and summer camps for children also frequently lack

personnel knowledgeable in menu planning, food purchasing, sanitary food preparation, and service.

The most prominent need in institutional food service is in the area of sanitation. Inadequate equipment, lack of knowledge by food service managers, and inability to train and manage kitchen employees, result in very poor sanitary conditions in many facilities. Local health departments are often unable to provide constructive assistance. There is an urgent need for more training programs in sanitation for both administrators and kitchen managers who have direct supervision of food service employees.

Diet Therapy

The nutrition consultant provided information on the newer dietary modifications to hospital dietitians through individual communication and educational programs of the district Dietetic Association.

A new diet counseling service was initiated at the Hunterdon Medical Center. The nutrition consultant worked with local physicians and community agencies to organize the service which is available to all Hunterdon County residents. A well-qualified nutritionist was recruited for the position and the nutrition consultant has provided orientation.

Two educational programs for the public were presented by county heart associations. A symposium on weight control with 100 persons in attendance was held in Hunterdon County at which the nutrition consultant was a speaker. In Morris County, a low-sodium luncheon program was presented for about 50 persons who were referred by physicians.

Child Nutrition

Whether poor or not, some children are not well nourished. The nutrition consultant is a member of the Nutrition and Physical Fitness Subcommittee of the New Jersey Youth Commission, a group which identifies and studies problem areas concerning children. In 1967, the dangers of fad diets among young people were stressed.

The nutrition consultant provided resource materials to many school nurses for educational programs in nutrition. In an elementary school in a low-income area of Warren County, a food intake study was conducted to estimate food consumed at home. This school had been provided free-lunch assistance the previous year because of obvious malnutrition. Records of the children showed great improvement in growth rates and in general health since institution of the lunch program, in spite of no significant increase in food intake out of school.

The need by teachers and school nurses for nutrition education guidelines and resource materials continues. Studies have documented the beneficial effects of nutrition education on eating habits, and the subsequent benefits to total health of children.

Public Education

Educating the public in good nutrition practices is a monumental task. Talks given to community groups are fragmentary at best and all too seldom requested. Consumer information on selection and purchase of food was the focus of two conferences attended by the nutrition consultant. The public, faced with a fantastic array of food products, needs to know how to make wise choices.

The bi-weekly short radio program "Let's Talk About Nutrition" has continued over WMTR, a Morris County station. A listening audience is apparent by the written responses for literature occasionally offered, and by questions telephoned to the radio station and directly to the district office. This is one method of reaching large numbers of people.

The popularity of certain unqualified nutrition "experts" reveals the interest on the part of the public.

Public Health Nursing

During the year, consultation was provided for the public health nursing agencies in the following areas: home health, crippled children, cancer, multiple sclerosis, heart, maternal and child health, personnel policies, in-service education, and resource areas for direct patient care. Group conferences were held with Franklin Township (Somerset County), Madison Borough (Morris) and Somerville Borough (Somerset), regarding expansion of services and an increased amount of direction and supervision for nursing staff.

Evaluation visits were made to the Easton Visiting Nurse Association (Easton, Pennsylvania); Somerset Valley Visiting Nurse Association, Somerset Hills Visiting Nurse Association (Somerset County); Family Nursing Service of Hunterdon County, Inc.; Morris County Visiting Nurses Association and the Division of Public Health Nursing, Sussex County Health Department. Consultation by district and program staff was also provided to the Warren County Public Health Nursing Agency.

The District Consultant in Public Health Nursing participated in two class sessions for the Morris Regional Practical Nursing Program students. A discussion of the scope of public health prompted many questions and interest from the students and faculty.

The director of the Public Health Nurse Agency of Warren County was given requested assistance in setting up an accounting system.

Consultation was provided to Heath Village (Morris County) with the State Consultant in Physical Therapy regarding rehabilitation needs.

Use of beds by Medicare patients became an acute problem at Riverside Hospital, Boonton Town (Morris County). The services of the public health nurse coordinator of the VNA of Morris County were offered and accepted. The problem gradually was alleviated.

Southern State Health District

When the District office was formed in February, 1951, only four of the district's 129 municipalities (all four in Camden County) were served by two full-time health officers. These two health officers covered 22 percent of the 700,000 people in the six counties. By mid-July 1967, there were seven full-time health officers covering 73 percent of the population, as shown in the following table. Five of these were county public health coordinators, whose positions were filled between May, 1960 (Cape May County) and February, 1967 (Camden County).

Table 1. Coverage with Full Time Health Officers as of Mid-July, 1967

County	*Total Population**	*Population Covered*	*Percent of Population Covered*	*Health Officers*
Atlantic	183,320	183,320	100	1
Camden	460,490	417,950	91	3
Cape May	54,000	36,670	68	1
Cumberland	125,350	77,420	62	1
Gloucester	163,160	.....	..	..
Salem	66,250	52,640	79	1
Southern District	1,052,570	768,000	73	7

* Population Estimates, July 1, 1967, New Jersey Department of Conservation and Economic Development.

In April, the new buildings of the Institute for Medical Research (formerly the South Jersey Medical Research Foundation) in Camden were dedicated, and a $100,000 grant-in-aid contract from the State Department of Health was announced. This contract covers studies in cell culture techniques related to cancer research. The Institute has been compared with the Rockefeller Institute and has a world-wide reputation.

In October, the 1967-68 series of Pennsylvania Hospital Radio Seminars began on FM radio stations in New Jersey, Delaware, and Pennsylvania.

Twenty-four broadcasts and 24 re-broadcasts were scheduled, many in the field of chronic illness or preventable disease. Four New Jersey hospitals participated in this program which permits physicians at the respective hospitals to make direct queries to the lecturer and hear his reply. Programs were mailed to all physicians in the counties within the broadcasting stations' effective ranges. The department has given partial financial support through grant-in-aid contracts for these programs during each fiscal year since 1963.

Beginning in May, the District State Health Officer served as representative of the State Commissioner of Health on the Regional Advisory Group of the Greater Delaware Valley Regional Medical Program. This group must approve all grant applications to the National Institutes of Health in the areas of heart disease, cancer, stroke, and related diseases.

Operations of the district were affected by the following personnel changes. In June, the District Consultant in Medical Social Rehabilitation retired, and in October, the district consultant pediatrician, whose services were shared with the Central State Health District, became Coordinator of the Maternal and Child Health Program.

Atlantic County

In April, Atlantic City entered into a contract with the Board of Chosen Freeholders to employ the county public health coordinator as the Atlantic City Health Officer. The contract provided that the salary budgeted for the city health officer would be paid directly to the county treasurer. The status of the county public health coordinator as the full-time health officer for all of the 23 municipalities in Atlantic County was thus clarified. The Atlantic City Bureau of Health, however, retained the rest of its budget and staff. In September, special consultation was provided on an ongoing basis to the Atlantic City Visiting Nurse Association to assist them during the period they were without the services of a nurse director.

Camden County

On February 1, the Board of Chosen Freeholders employed a full-time licensed health officer as the county's first public health coordinator. He began his duties with immediate contractual responsibility for 33 of the county's 37 municipalities. He shortly employed two sanitary inspectors, first grade, and in July employed a senior sanitarian. By June, he had been named as the reporting officer for notifiable diseases by 20 of the 33 boards of health concerned. In July, the new county department of health set up a diabetes detection clinic through contractual arrangement with a voluntary

hospital serving the central portion of the county. This was one of a number of activities financed through the state health aid grant received by the new department from the State Department of Health.

The Camden City Division of Health employed a qualified health educator in April and a qualified medical social worker in May. Both full-time positions represented firsts in local health departments in the district. The services of both individuals were used for the first time in child health stations beginning in May.

On July 3, a full-time health officer was employed for the first time in its history by Cherry Hill Township, which had a population in excess of 52,000.

In May, the District State Health Officer was elected to a three-year term on the Board of Directors of the Health and Welfare Council of Camden County. He and other district staff members have been active in this important coordinating health and welfare agency since the early 1950's. The District State Health Officer accepted this new term with the understanding that he would represent the interests of the full-time health officers in the county, as well as those of the State Department of Health. In July, the citizens' study committee report on health, welfare and recreational needs and services of Camden County was published. This study involved the services of outside consultants and a number of local committees and task forces. The study was endorsed by the United Fund of Camden County in November, 1965, and was conducted with the assistance of the Institute of Community Studies of the United Community Funds and Councils of America. The district state health officer, the health officer of Camden city, and the public health coordinator, Camden County Department of Health served on the Health Services Task Force. The report contained many recommendations concerning the services of agencies engaged in health activities. Committees were named to work toward implementation.

In May, the executive director of the Collingswood Community Nursing Service, a certified home health agency, announced her resignation. She had also served in the same capacity under contract with the Haddonfield Visiting Nurse Association.

Cape May County

In March, the nurse director of the certified home health agency maintained by the Cape May County Department of Health resigned, and arrangements were made for special nursing consultation to assist this agency

until it could obtain a new fully qualified director. In September, the public health coordinator resigned. He was replaced by a full-time health officer with a master's degree in public health on December 18.

Cumberland County

In May, with state health aid, the Cumberland County Department of Health entered into a contract with Bridgeton Hospital to set up a prenatal clinic, designed to meet the program and personnel standards of the Certified Health Service pertaining to prenatal and post-partum services.

In September, a licensed health officer with a master's degree in public health was employed as assistant to the county public health coordinator, using state health aid money.

Gloucester County

In October, the Gloucester County Board of Freeholders announced the selection of a licensed health officer to be their first county public health coordinator, the position to be filled in January, 1968. Twelve of the county's 24 municipalities signed contracts with the freeholders for the services of the proposed Gloucester County Department of Health. Each contract provided that the municipal board of health would name the public health coordinator as its local health officer.

In January, the Gloucester County Visiting Nurse Association, a certified home health agency, employed a qualified executive director.

Salem County

In January, the public health coordinator announced his resignation in order to accept the position of Camden County Public Health Coordinator. In July, this vacancy was filled by a physician with extensive experience in occupational health and licensed as a health officer in New Jersey. In October, the new coordinator formed an Advisory Council to the Salem County Department of Health. Officers were elected and committees formed. In September, the nurse director of the certified home health agency maintained by the County Department of Health resigned. In September, the one-nurse voluntary nursing agencies in Salem and Woodstown relinquished all their service activities, and their functions were assumed by the county department of health.

Division of Preventable Diseases

RONALD ALTMAN, M. D., *Acting Director*

Programs:

Communicable Disease Control	RONALD ALTMAN, M.D.
Migrant Health	THOMAS B. GILBERT, *Coordinator*
Tuberculosis Control	RONALD ALTMAN, M.D.
Vaccination Assistance	RONALD ALTMAN, M.D.
Venereal Disease Control	MICHAEL WISHENGRAD, M.D., *Coordinator*

Division of Preventable Diseases

Communicable Disease Program

Amebiasis

There were 22 cases of amebiasis reported this year. Mental institutions reported 11 cases; the remainder were among migrant workers and the general population. No outbreaks, however, were reported. This is a marked decrease from the 72 cases reported during 1966 and the 227 cases reported during 1965.

Anthrax

No cases of anthrax were reported in humans in New Jersey in 1967.

Brucellosis

There were three cases of brucellosis reoprted during 1967. Two cases, a 13-year-old girl from Peru, and an adult male from Puerto Rico, reacted to the Brucella abortus antigen and are believed to have received their exposure prior to entering the United States by consuming raw milk from infected cattle. The third patient was a Gloucester County adult male resident who reacted to the Burcella suis antigen. His occupation as a pig farmer offers opportunity of exposure to infected animals. The brucellosis eradication program which has been so effective for cattle does not include infected swine.

The Central Nervous System Diseases (Viral Encephalitis and Meningitis)

An intensive program of surveillance of viral diseases of the central nervous system is maintained by the New Jersey State Department of Health through the joint efforts of the Divisions of Laboratories and Preventable Diseases and the Bureau of Veterinary Public Health. This surveillance led to the recognition of an outbreak of eastern encephalitis in 1959; an outbreak of St. Louis encephalitis in 1964; isolated cases of eastern and St. Louis encephalitis in 1965; and identification of a case of California encephalitis in 1966.

The summer of 1967 was one of heavy rainfall which led to unusually high mosquito populations. These were particularly prevalent in the shore areas. There was also considerable eastern encephalitis viral activity during this period and several isolations of EE virus were made from Aedes so-

licitan mosquitoes which are our hypothesised epidemic vector of eastern encephalitis. There were 27 confirmed horse cases of EE in New Jersey during 1967. Fears of a possible human epidemic fortunately did not materialize. Only one confirmed human case of EE was confirmed in New Jersey in 1967. This patient was a 67 year old retired male from Woodbine, Cape May County. His residence was in an area from which virus was isolated from Aedes solicitan mosquitoes and also in area in which several horse cases of EE occurred. The patient had a history of fever and lethargy progressing to coma. He died 20 days after the onset of illness. Serologic confirmation of the diagnosis of EE was determined by our virology laboratory.

As in the past years, when an arthropod-borne encephalitis outbreak threatened, hospitals throughout the southern part of New Jersey were periodically contacted to inquire about the admission of patients with central nervous system disease. Several of these patients were visited by physicians from the Division of Preventable Diseases but no other cases of arbovirus encephalitis other than that cited above were discovered.

A total of 31 cases of encephalitis and 146 cases of aseptic meningitis was reported to the division during 1967. These cases are listed according to etiology, age, county of residence, and month of onset in tables 1, 2, 3, and 4.

Table 1. Acute Central Nervous System Disease by Etiology, New Jersey, 1967

Aseptic Meningitis	
Mumps	26
Echo 1	1
Echo 5	1
Echo 6	4
Echo 9	3
Echo 14	2
Echo 15	1
Coxsackie A9	2
Coxsackie B2	1
Coxsackie B5	3
Unknown	102
Total	146

Encephalitis	
Primary type unknown	15
Eastern Equine Encephalitis	1
Post-Infectious	
Mumps	7
Measles (Rubella)	1
Herpes Simplex	5
Varicella	2
Total	31

Table 2. Acute Central Nervous System Disease by Age, New Jersey, 1967

Age	*Aseptic Meningitis*	*Primary Encephalitis*	*Post-Infectious Encephalitis*
Under 1	5	1	0
1	1	0	0
2	4	0	0
3	2	1	1
4	4	1	0
5-9	45	4	6
10-14	17	5	2
15-19	20	0	2
20-24	14	0	0
25-29	7	0	0
30-39	12	0	1
40-49	6	0	1
50-59	2	0	0
60+	3	4	2
Unknown	4	0	0
Total	146	16	15

Table 3. Acute Central Nervous System Disease by County, New Jersey, 1967

County	*Aseptic Meningitis*	*Primary Encephalitis*	*Post-Infectious Encephalitis*	*Total*
Atlantic	14	0	0	14
Bergen	14	1	2	17
Burlington	13	1	2	16
Camden	17	5	1	23
Cape May	0	1	0	1
Cumberland	1	0	0	1
Essex	6	1	1	8
Gloucester	6	0	1	7
Hudson	5	1	1	7
Hunterdon	1	0	0	1
Mercer	11	0	1	12
Middlesex	6	1	0	7
Monmouth	21	1	3	25
Morris	11	1	2	14
Ocean	2	0	0	2
Passaic	4	0	0	4
Salem	0	0	0	0
Somerset	6	1	0	7
Sussex	1	0	0	1
Union	5	1	1	7
Warren	2	0	0	2
State Inst.	0	1	0	1
Military	0	0	0	0
Total	146	16	15	177

Table 4. Acute Central Nervous System Disease by Month of Onset, New Jersey, 1967

Month	Aseptic Meningitis	Primary Encephalitis	Post-Infectious Encephalitis
January	9	2	2
February	7	2	2
March	7	2	1
April	12	2	2
May	9	5	1
June	9	0	1
July	15	0	0
August	37	1	0
September	18	1	0
October	9	1	1
November	10	0	1
December	4	0	4
Total	146	16	15

Cholera

There were 21 cholera surveillance investigations completed in New Jersey during 1967. All patients were located and none showed evidence of disease.

Diarrrhea of Infancy

A surveillance system continues in the Newark City Hospital since the epidemic of Enteropathogenic *E. coli* gastroenteritis occurred in the newborn nurseries of Newark hospitals. Fortunately, this year there was no epidemic. However, during the months of May and June, 20 cases of diarrhea were present in Newark City Hospital's nursery, pediatric, and emergency wards. Salmonella, Enteropathogenic E. coli and Shigella were the organisms isolated. Investigation revealed that 15 of the 20 cases were believed to have been community acquired, since symptoms of diarrhea occurred prior to admission. The other five cases strongly suggested that their infection was hospital acquired by person-to-person spread in the hospital.

An investigation of infant diarrhea in a home housing children awaiting adoption revealed that 16 of 87 infants admitted between December 1, 1966 and March 21, 1967, had diarrhea. Unfortunately, no pathogens were isolated from stool cultures. Investigation revealed that the onset of the 16 illnesses had occurred in three clusters within the nursery. Techniques used in the handling of infants were inadequate. A cohort system of admissions and improvement of nursery techniques were recommended and carried out.

All other laboratory reports for Enteropathogenic E. coli sent to the Division of Preventable Diseases suggest that the Newark City Hospital cases primarily are community-acquired and the cases from other areas are single isolates.

Food Poisoning (other than Salmonellosis)

During 1967, 47 food poisoning incidents involving public groups were brought to the attention of this office. All were appraised and 22 were investigated in detail. Numerous incidents involving illness in the home were also reported. One hundred and eighty-nine food samples (which were associated with these illnesses) were collected and submitted to state or federal laboratories.

Viral Hepatitis

There were 1,534 cases of hepatitis reported in New Jersey during 1967, of which 1,303 cases were classified as infectious hepatitis. It was discovered that 1,260 cases were transmitted by the oral route, whereas 43 were transmitted by parenteral injections of contaminated material. The 1,534 reported cases of hepatitis represents an increase of 40.5 percent as compared to the reported cases of 1966. The incidence of hepatitis in New Jersey has taken a turn upward after a decline over the past four years. This is consistent with the nationwide trend of hepatitis.

Records show 820 cases of infectious hepatitis occurred in males; 440 occurred in females. This represents a two to one ratio of males to females. (See Table 5.) Five hundred seven cases were reported for persons under 20 years of age; 753 cases were reported for persons over 20 years of age. The ratio of adult to childhood cases was 1.2 to 1. This ratio is, as in 1965 and 1966, 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 under 20 years of age. The reason for this will be explained further in the report.

Table 6 demonstrates the age specific attack rate for infectious and serum transmitted hepatitis in New Jersey during 1967. Significantly 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. Fifty-nine percent (151 cases) of the reported cases of serum transmitted hepatitis occurred in addicts. This represents an increase of 67 cases or 79.8 percent over the 84 cases reported in 1966.

The total attack rate for narcotics-related hepatitis is 2.13 per 100,000 population. The striking rise in the attack rates for narcotics-related hepatitis can be seen in the 15-19 year age group and the 20-24 year age group. The age specific attack rates for these groups are 10.00 per 100,000 and 22.66 per 100,000 respectively. A significant comparison can be seen in the attack rate for the same age groups in the attack rate for all cases of hepatitis. The attack rates for these age groups are 72.16 and 94.63 respectively.

Table 5. Infectious Hepatitis by Sex and Age

	M	*F*
Under 1	1	1
2	1	3
3	1	2
4	4	1
5-9	43	54
10-14	59	55
15-19	192	90
20-24	178	64
25-29	97	16
30-39	125	57
40-49	58	46
50-59	36	33
60+	25	18
Total	820	440

Table 6. Infectious and Serum Transmitted Hepatitis
Age Specific Attack Rate Per 100,000
Population, New Jersey, 1967

Ages	*Estimated Population 1967*	*No. Cases Infectious Hepatitis*	*Attack Rate Infectious Hepatitis Per 100,000*	*No. Cases Serum Transmitted Hepatitis*	*Attack Rate Serum Transmitted Hepatitis Per 100,000*	*No. Cases Narcotics Hepatitis*	*Attack Rate Narcotics Per 100,000*	*Attack Rate All Cases Per 100,000*
Under 1	148,646	2	1.35	1	.67	..	..	2.02
1-4	601,664	12	1.99	3	.50	..	..	2.49
5-9	679,527	97	14.27	1	.15	..	..	14.42
10-14	608,742	114	18.73	2	.33	..	..	19.06
15-19	460,096	282	61.29	4	.87	46	10.00	72.16
20-24	375,155	242	64.51	13	3.47	85	22.66	94.63
25-29	424,704	113	26.61	5	1.18	12	2.83	30.61
30-39	1,061,760	182	17.14	13	1.23	7	.659	19.03
40-49	990,976	104	10.49	27	2.62	1	.100	13.22
50-59	764,467	69	9.03	21	2.75	..	..	11.83
60+	962,663	43	4.67	32	3.32	..	..	7.79
Totals	7,078,400	1,260	17.80	122	1.72	151	2.13	21.67

Table 7. Monthly Incidence of Cases of Infectious Hepatitis, New Jersey, 1967

January	116
February	164
March	131
April	168
May	81
June	74
July	86
August	75
September	99
October	98
November	83
December	85
Total	1,260

The increased number of cases from January through April reflects the outbreak in the Woodbridge State School. The increase during September and October represent the common source and secondary person-to-person outbreak in Cape May and Atlantic Counties.

The following table demonstrates the occurence of infectious hepatitis by county of residence for the years 1966 and 1967.

Table 8. Infectious Hepatitis Incidence by County of Residence, New Jersey, 1967

County	*No. Cases*	*Estimated Population July, 1967*	*Attack Rate Per 100,000 Population 1967*	*1966 Attack Rate*
Atlantic	28	183,320	9.82	1.67
Bergen	112	901,550	12.42	5.94
Burlington	5	306,540	8.16	14.2
Camden	46	460,490	9.99	9.86
Cape May	27	54,000	50.00	9.48
Cumberland	28	125,350	22.34	72.68
Essex	243	960,410	24.05	16.34
Gloucester	7	163,160	4.29	28.27
Hudson	87	608,740	14.29	10.35
Hunterdon	2	65,120	3.07	4.76
Mercer	51	307,130	16.61	17.20
Middlesex	68	566,240	12.00	5.11
Monmouth	60	439,880	13.64	8.67
Morris	57	350,640	16.26	9.08
Ocean	13	157,970	8.23	14.62

Table 8. Infectious Hepatitis Incidence by County of Residence, New Jersey, 1967 —Continued

County	*No. Cases*	*Estimated Population July, 1967*	*Attack Rate Per 100,000 Population 1967*	*1966 Attack Rate*
Passaic	97	458,060	21.18	12.38
Salem	12	66,250	18.11	60.12
Somerset	33	194,220	16.99	6.35
Sussex	10	65,240	15.33	25.19
Union	70	571,190	12.26	10.64
Warren	4	72,900	5.49	9.48
State Institutions	179	.....	13.00	....
Military	21	.....	....	....
Total	1,260	7,078,400	17.80	13.65

The marked increase in cases in Cape May and Atlantic Counties was due to a common source outbreak due to a contaminated well in the Woodbine area of Cape May. The initial 12 cases were followed by two generations of cases spread in both counties by person-to-person transmission. The increased attack rates in Bergen and Passaic Counties were due in part to an active search for cases in hospital record rooms. Only 50 percent of hospitalized hepatitis cases were found to be reported. Morris and Monmouth Counties both had outbreaks of hepatitis among narcotic addicts and their associates. This factor accounts for their rise in attack rates. The rise in Somerset County was due to better hospital reporting. Cases in state institutions rose from 13 cases in 1966 to 179 cases in 1967. This rise reflects the outbreak at the State School at Woodbridge.

Cases of Hepatitis With a History of Recent Raw Clam Ingestion

There were 201 reported cases of infectious hepatitis which were classified as clam positive. This indicates that raw clams had been ingested during a period of 60 days prior to the onset of illness. Of these, 144 were male and 57 were female. 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 1967.

Table 9 demonstrates clam-associated hepatitis by month of onset. The 34 cases in February had no other epidemiologic characteristics which tied them together. Table 10 shows the incidence of clam-associated hepatitis by county of residence. The history of clam ingestion in the 11 cases in Cape May County is questionable and all of the cases were involved in the common source outbreak associated with a contaminated well.

Table 9. Clam Associated Cases by Month of Onset* New Jersey, 1967

January	18
February	34
March	24
April	22
May	17
June	9
July	11
August	11
September	22
October	13
November	11
December	9
Total	201

*144 males
57 females

Table 10. Clam Associated Infectious Hepatitis Incidence by County of Residence, New Jersey, 1967

County	No. Cases	Population	Attack Rate per 100,000 Population
Atlantic	2	183,320	1.09
Bergen	16	901,550	1.77
Burlington	4	306,540	1.30
Camden	6	460,490	1.30
Cape May	11	54,000	20.37
Cumberland	0	125,350	0.00
Essex	36	960,410	3.75
Gloucester	1	163,160	.61
Hudson	11	608,740	1.81
Hunterdon	0	65,120	0.00
Mercer	12	307,130	3.91
Middlesex	21	566,240	3.71
Monmouth	16	439,880	3.64
Morris	11	350,640	3.14
Ocean	3	157,970	1.90
Passaic	11	458,060	2.40
Salem	0	66,250	0.00
Somerset	8	194,220	4.12
Sussex	1	65,240	1.54
Union	24	571,190	4.20
Warren	1	72,900	1.37
State Institutions	1	.....	...
Military	5	.....	...
Total	201	7,678,400	2.84

Twenty-six deaths were attributed to or involved infectious and serum hepatitis. Nine deaths were attributed to infectious hepatitis. Six deaths were attributed to serum transmitted hepatitis. This represents a death rate of 1.3 deaths per 10,000 for infectious hepatitis and 0.8 deaths per 10,000 for serum hepatitis.

Table 11. Mortality Due to Hepatitis (Primary or Contributory) by Age Groups, New Jersey, 1967

Age	Infectious		Serum	
	Primary	Contributory	Primary	Contributory
Under 1	..	..	..	..
1-4	..	..	..	..
5-9	1	..	..	..
10-14	1	..	..	..
15-19	..	..	..	..
20-24	1	..	..	..
25-29	..	..	1	1
30-39	2	2	..	..
40-49	1	1	2	1
50-59	1	..	..	1
60+	2	1	3	4
Total	9	4	6	7

Woodbridge Outbreak

One hundred and fifty-five cases of hepatitis were observed among the 976 residents of the State School at Woodbridge between January 30 and June 6, 1967. This represented an overall attack rate of 15.9 percent. The attack rate of hepatitis among females was 14.8 percent while the rate in males was 17.5 percent. The age of cases ranged between six and 54 years; the median age group was 16. Since 52 cases occurred among residents of cottages 3 and 16, investigation of the introduction of hepatitis into the school focused upon these cottages. Although an employee was described as having an illness in early January, she had known no prior exposure to hepatitis. The behavior of residents and the nursing techniques used in patient care may have contributed to the transmission of hepatitis once it was introduced into this environment.

Facilities in the isolation wards were generally overcrowded. There was a shortage of nurses during the outbreak. Both of the above prevented the proper isolation techniques from being employed. It is important to note that the school is a new school for the mentally retarded. Thus hepatitis had not yet been endemic as it is in many mental institutions.

The epidemic curve of hepatitis in cottage 16 raised the question of two possible common sources; however, no event or procedure provided a common source exposure. Epidemiologic evidence suggested that person-to-person contact resulted in the spread of disease between and within cottages. Recommendations to confine and control the epidemic were made.

Narcotics Hepatitis, Morris County

An outbreak of 14 cases of viral hepatitis among a group of 57 known or suspected narcotics addicts occurred in Morris County between September, 1966 and May, 1967. Twelve of the 14 cases were reported during February, March, and April, 1967. Among the 43 non-ill addicts, a high proportion (67 percent) had serum transaminase (SGPT) values above 40. This would indicate anicteric infection. Furthermore, SGPT values were significantly higher in asymptomatic people who had shared needles with a jaundiced person versus those who had not. Epidemiological evidence indicated that the disease was parenterally transmitted by means of sharing syringes and needles.

Since 90 percent of the cases in the Morris County outbreak were males in the 15-29 year old age range, a review was made of all the cases of hepatitis in this age group with onsets over a 45-month period, July, 1963 through March 31, 1967, in order to ascertain the incidence of narcotic associated hepatitis. During this time period and for the age group, there were 1,599 cases which had surveillance records which provided affirmative or negative data relating to the parental use of narcotics as a possible means of acquisition of hepatitis. There were 184 cases who admitted narcotic use which represents 11.5 percent of the hepatitis in the age group 15-29.

In an effort to expand the data, all 1,599 surveillance case records were compared in a case cross-check with the New Jersey State Police and with four municipal narcotics files. Another 79 cases were felt to be narcotic associated, bringing the total to 263 or 16.5 percent of the hepatitis in the age group 15-29. With respect to the four municipalities, the percentage of narcotic associated cases of hepatitis in the age group 15-29 varied from 1.5 percent in Camden, 14.5 percent in Trenton, 30.3 percent in Jersey City, and 36.0 percent in Newark.

Since narcotic associated hepatitis is not always reported as such and since addicts can spread hepatitis via the fecal-oral route, the age specific attack rates were generated for various New Jersey counties and municipalities to see if males 15-29 had a disproportionately high attack rate. Table 12 compares the age specific attack rates for New Jersey versus the United States as a whole. As can be seen, New Jersey's distribution is skewed toward the 15-24 year old age group.

Morris County, Bergen County, Newark, and Paterson had attack rates two to four times the United States figures for males 15-24 years old. In Morris and Bergen Counties, the attack rate in females for this age group is not elevated, whereas in Paterson and Newark it is. In areas where narcotic addiction has not been a major problem, such as Burlington County and Jersey City, the attack rates in this age group for males and females were not significantly different from the United States.

Epidemiologic data on the 151 cases of narcotic associated hepatitis in New Jersey are given in Tables 12 through 15. Higher attack rate for specific counties or months can be explained by specific investigation by the department.

Table 12. Age Distribution of Cases of Reported Viral Hepatitis Attack Rate Per 100,000 Population Per Year New Jersey, 1967

	*New Jersey**	*United States***
0-4	3.3	6.9
5-9	15.3	32.4
10-14	22.4	30.8
15-19	45.2	30.9
20-24	54.4	37.1
25-29	25.9	26.7
30-39	19.0	15.5
40-49	13.2	9.8
50+	8.6	6.2

* Data based on 3-year period 1964-66.
** Data from 46 States; 1-year period 1965.

Table 13. Narcotics Associated Hepatitis by County of Residence, New Jersey, 1967

County	No. Cases	Estimated Population July, 1967	Attack Rate Per 100,000 Population
Atlantic	5	183,320	2.73
Bergen	22	901,550	2.44
Burlington	1	306,540	.33
Camden	3	460,490	.65
Cape May	0	54,000	0.00
Cumberland	0	125,350	0.00
Essex	44	960,410	4.58
Gloucester	1	163,160	.61
Hudson	3	608,740	.49
Hunterdon	0	65,120	0.00
Mercer	2	307,130	.65
Middlesex	7	566,240	1.24
Monmouth	7	439,880	1.59
Morris	28	350,640	7.99
Ocean	1	157,970	.63
Passaic	18	458,060	3.93
Salem	0	66,250	0.00
Somerset	1	194,220	.51
Sussex	0	65,240	0.00
Union	6	571,190	1.05
Warren	2	72,900	2.74
State Institutions	0	.....	...
Military	0	.....	...
Total	151	7,078,400	2.13

Table 14. Narcotics Associated Hepatitis Cases by Month of Onset New Jersey, 1967

January	12
February	7
March	17
April	19
May	13
June	9
July	12
August	7
September	10
October	10
November	24
December	11
Total	151

Table 15. Narcotics Addicts by Age, New Jersey, 1967

Age	Cases	Male	Female
15-19	46	40	6
20-24	83	71	12
25-29	12	10	2
30-34	7	6	1
35-39	3	1	2
Total	151	128	23

Hepatitis Serum Transmitted

There were 274 cases of serum transmitted hepatitis reported during the year 1967. Fifty-eight of these cases were classified as type A, having incubation periods of less than 60 days; 65 cases were classified as type B, with incubation periods greater than 60 days. A total of 151 cases was classified as indeterminate because their incubation periods could not be defined. There were also 16 cases reported of suspected narcotics addicts with known incubation periods. These cases are included in the 58 type A infections. The 274 cases represent an increase of 75 cases over serum transmitted hepatitis during the year 1966. This increase, as in 1966, occurred primarily among those cases classified as indeterminate and occurred in narcotics addicts. Sixty-seven more cases with indeterminate incubation periods were reported in 1967 than in the previous year. Fifty-five percent of the total number of serum transmitted hepatitis occurred among known narcotic addicts. There has been an increase of 45 percent in cases occurring among narcotics addicts in 1967 over 1966.

Single unit blood transfusions accounted for five cases. Eight cases occurred after having transfusions from a common donor. Thirteen infected donors have been excluded from donating blood in New Jersey in the future. The following table gives comparative data for serum transmitted hepatitis in New Jersey between 1961 and 1967. This chart demonstrates a gradual increase in the number of cases of serum transmitted hepatitis reported during the past six years. It is evident that narcotic addicition resulting in serum transmitted hepatitis has increased. Attention should be directed to the fact that this increase may account for the major portion of the increase noted in serum hepatitis during the past years.

Table 16. New Jersey Hepatitis, 1961-1967 (Serum Transmitted)

	1961	1962*	1963	1964	1965	1966	1967
Total Cases	102	124	120	137	134	199	274
Information available	99	124	120	137	134	199	274
Incubation:							
Type A (under 60 days)	20	53	43	37	33	40	58
Type B	71	51	44	50	64	68	65
Indeterminate	11	20	33	50	37	91	151
Percent A of those with known incubation period	22	51	4	42	34	45	16
Cases in addicts	9	24	32	43	37	84	151
Cases with addict donors	6	4	2	1	1	0	1
Total addict related cases (%)	15(15%)	28(23%)	34(28%)	44(32%)	38(28%)	84(42%)	151
Cases in single pint recipients	16	19	11	9	15	13	5
Cases from commercial pints	10(63%)	12(63%)	6(54%)	4(45%)	13(87%)	12	8
Mortality:							
Type A cases (%)	2(10%)	3(6%)	4(9%)	0(0%)	3(9%)	6(3%)	5(4%)
Type B cases (%)	10(14%)	7(14%)	3(7%)	5(10%)	10(16%)	8(4%)	7(5%)
Indeterminate (%)	.....	.....	.....	6(12%)	2(5%)	3(1.5%)	1(.8%)
Total cases (%)	13(13%)	11(9%)	10(8%)	11(8%)	15(11%)	17(8.5%)	13(5%)

*Does not include cases discovered during special intensive study.

Table 17. Serum Hepatitis Cases by Month of Onset, 1967
New Jersey, 1967

January	24
February	12
March	29
April	36
May	23
June	20
July	18
August	23
September	21
October	17
November	32
December	19
Total	274

Hospital Infections

The increased incidence of antibiotic resistant bacteria and a more susceptible population of chronic disease patients has made hospital infection control of immediate importance.

The Division of Preventable Diseases has maintained a hospital infection control activity since November, 1965. This activity grew out of three conferences in 1965 and 1966 at the New Jersey Hospital Association's offices. At these conferences, members of this department and the Investigation Section of the Communicable Disease Center talked to hospital administrators, physicians, and nurses and explained a comprehensive approach to the surveillance of institutionally acquired infections.

The surveillance system involves keeping a weekly rate of infections occurring after admission, by service and by ward, by a nurse epidemiologist so that any evidence of an outbreak can be readily seen. This allows hospital infections committees to recognize when and where in the hospital infections are occurring so that control measures can be rapidly instituted before a problem reaches epidemic levels.

Four hospitals have employed this surveillance system since the inception of the hospital infections control activity. In 1967, one additional hospital joined in active surveillance of infections in all departments, and a large metropolitan city hospital undertook surveillance of infections in the newborn and pediatric areas.

A full-time public health nurse from the Division of Preventable Diseases assists the nurse epidemiologist in the development of the hospital infections

control activity and receives a monthly report from each hospital for evaluation and review. The over-all monthly rate of infections which developed after admission for the different participating hospitals varied between 0.5 to 4.8 percent in 1967, a rate which was well below the national average.

The following example shows how the system is helpful. In July, 1967, a large hospital in Middlesex County noted that the infection rate in the newborn nursery jumped to five percent from the usual 0.2 percent rate of infections per month. The infections included one death due to meningitis from proteus mirabilis. There was no increase in the infection rate in the other services. Environmental and skin cultures were then performed and an aspirator tubing was found to be contaminated with proteus. Changes in overall technique were instituted and the infection rate fell to its previous level.

Another example of how this surveillance system aborted a major hospital infection problem occurred in April and May of 1967. During this time, five post-operative beta-hemolytic streptococcal infections, including one death, occurred on the obstetrical-gynecological service of one of the community hospitals participating in the surveillance program. The offending organism was then found in the nasal flora of an asymptomatic gynecologist. It was postulated that he infected the first and fourth patients and a nurse, who subsequently infected the second and third patients. The hospital infections committee played a decisive role in limiting the spread of this infection to other patients.

There are continuing efforts on the part of this division to interest more hospitals in participating in this activity.

Influenza

The 1967-68 influenza season will be described in this report, as the 1966-67 was covered in the 1966 annual report. In September, 1967, a letter was sent to all physicians, health officers, hospitals, and nursing homes stating that "substantial numbers of cases of influenza of the A2 type, may be expected during the 1967-68 season in New Jersey."

The use of polyvalent and bivalent vaccine was recommended for persons in older age groups and individuals of all ages with chronic debilitating illness.

Large amounts of vaccine were distributed by state (136,520 doses of polyvalent vaccine) and private sources.

Other preparations included activation of our usual influenza surveillance system. Letters were sent to all public and parochial schools asking them

to report to the Communicable Disease Control Program absenteeism greater than 15 percent due to febrile respiratory diseases. Through the Occupational Health Program, a surveillance was established in 15 large factories throughout the state; the same was done for the state institutions. Once outbreaks of influenza occurred, there was daily communication between the Communicable Disease Control Program and the Respiratory Disease Unit of the National Communicable Disease Center.

When reports of increased absenteeism due to febrile respiratory disease were received, investigators were sent to involved schools and specimens were obtained for virologic tests. Serologic confirmation of A_2 influenza was obtained in 60 children in 10 schools in seven counties. A_2 influenza was isolated from three separate throat washings from students at Westfield High School, Union County.

A total of 142 schools reported absenteeism greater than 15 percent due to flu-like illness in 16 out of 21 counties. Table 18 shows the number of schools reporting excess absenteeism and date of the first report by week and by county.

Table 18. Influenza Outbreak in New Jersey as Described by School Absenteeism, 1967

Week of	*County*	*Total number of schools reporting excess absenteeism (15% or more)*
Dec. 4, 1967	Bergen*	23
Dec. 18	Essex*	42
Dec. 18	Union*	18
Dec. 18	Passaic*	1
Dec. 18	Middlesex*	8
Dec. 18	Monmouth*	7
Jan. 1, 1968	Hudson	11
Jan. 1	Ocean	6
Jan. 1	Morris	4
Jan. 1	Warren	1
Jan. 8	Mercer	9
Jan. 8	Gloucester	2
Jan. 8	Cape May	5
Jan. 8	Camden*	3
Jan. 22	Cumberland	2
Jan. 22	Salem	1

*Indicates serologic confirmation of A_2 influenza.

The greatest numbers of illnesses were in counties near New York City where influenza was considered to be epidemic. Philadelphia reported very few cases.

Of the schools reporting excess absenteeism, 32 percent were high schools, seven percent in junior high schools, and 61 percent elementary schools.

Rutgers and Princeton Universities both experienced sporadic cases of influenza, and serologic results at the former were diagnostic of A_2 influenza. Increased absenteeism was not reported from factories; state institutions did not report influenza activity, but scattered nursing homes did report increased mortality due to febrile respiratory illness.

Leprosy

Two cases of leprosy were reported during 1967. The first was a 45 year old Jersey City man who was admitted to the United States Public Health Service Hospital in June where the diagnosis of leprosy was made.

The other case is a 64 year old Basking Ridge woman in whom the diagnosis of leprosy was made in September at the Mayo Clinic, Rochester, Minnesota.

Both persons presumably acquired their disease outside the United States.

The United States Public Health Service Hospital on Staten Island has in- and out-patient facilities for the treatment of these cases.

Leptospirosis

Two cases of leptospirosis were reported during 1967. One patient is an army captain who became infected while on jungle maneuvers in Panama and became acutely ill while stationed at Fort Dix. He also had shigellosis.

A case was also reported in an adult male resident of Pitman. Agglutination test results were 1:200 for *L. ballum*, 1:400 for *L. canicola* and 1:6400 for *L. icterohemorrhagiae*. He is an engineer on a tugboat in Philadelphia. His exposure to the disease probably occurred when he fell into polluted water of the Schuylkill River. His illness commenced five days after the incident.

Malaria

With the return of servicemen from Vietnam, there has been a tremendous increase in the number of cases of malaria in New Jersey, with 122 cases reported in 1967.

Table 19. Reported Malaria Cases by Year among New Jersey Residents

Year	*No. of Malaria Cases*
1965	4
1966	6
1967	122

Table 20. Reported Malaria Cases among New Jersey Residents by Month, 1967

Months	*No. of Malaria Cases*
January	4
February	11
March	10
April	7
May	6
June	17
July	6
August	2
September	18
October	13
November	14
December	14
	122

All but three of these 122 cases were servicemen who had been in Vietnam. Almost all of these cases had been treated at the Walson Army Hospital (Fort Dix). Surveillance reports were received on 84, or 70 percent of these cases. Plasmodium vivax was responsible for almost all of these cases.

Table 21. Malaria Cases Identified by Species among New Jersey Residents, 1967

Plasmodium species	*No. of Cases*	*Percent*
P. Vivax	79	94
P. falciparum	5	6
P. malariae	0	0
	84	100

Two of the three civilian cases were in individuals returning from Africa. One was a 26 year old man who had been with the Peace Corps in Nigeria for two years and developed fever and a positive smear for vivax malaria six months after his return. A 15 year old boy was diagnosed as having vivax malaria two years after returning from Liberia. The third civilian case was a 44 year old woman who was diagnosed as having vivax malaria two years after returning from India and Pakistan.

Meningococcal Infections

A total of 124 cases of meningococcal meningitis was reported during 1967. This is a decline of 11 cases from 1966, but 38 cases above 1965. Fifty-eight of the cases were reported from military institutions (46 percent of the total number of cases). This is an increase of five cases from the military meningococcal disease reported last year. Cases were reported from every county except Cape May, Gloucester, Hunterdon, Salem, Somerset, and Sussex.

The months of greatest incidence of meningococcal infection in New Jersey included the period January to May. This was similar to the seasonal incidence observed last year. The age specific attack rate paralleled that of last year with peaks at less than one year of age and then again at age 15 to 24. See tables 22 and 23.

During 1967 there were no reported clusters of cases.

Table 22. Meningococcal Infections by County and Month among New Jersey Residents, 1967

County	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
Atlantic	1	..	..	..	1	..	..	..	..	..	..	..	2
Bergen	1	..	..	1	..	..	..	..	..	1	..	..	3
Burlington	2	1	..	..	..	..	..	..	1	2	..	1	7
Camden	1	..	..	2	..	..	..	..	..	1	..	..	4
Cape May	..	..	..	..	..	..	..	..	..	..	..	..	0
Cumberland	..	..	..	1	..	1	..	..	..	..	..	..	2
Essex	1	1	1	6	4	..	..	..	..	..	..	1	14
Gloucester	..	..	..	..	..	..	..	..	..	..	..	..	0
Hudson	..	..	..	..	1	..	..	..	..	..	..	1	2
Hunterdon	..	..	..	..	..	..	..	..	..	..	..	..	0
Mercer	..	..	..	1	..	..	3	..	..	..	..	..	4
Middlesex	..	1	1	..	..	..	..	1	..	1	..	..	4
Monmouth	..	..	..	2	..	..	..	..	..	..	1	..	3
Morris	..	..	..	..	3	..	1	..	..	..	1	..	5
Ocean	..	..	..	2	..	..	1	..	..	..	..	1	4
Passaic	1	..	1	..	..	1	..	..	..	1	..	..	4
Salem	..	..	..	..	..	..	..	..	..	..	..	..	0
Somerset	..	..	..	..	..	..	..	..	..	..	..	..	0
Sussex	..	..	..	..	..	..	..	..	..	..	..	..	0
Union	1	..	1	..	..	..	1	..	..	1	2	..	6
Warren	1	..	..	..	..	1	..	..	..	..	..	..	2
State Inst.	..	..	..	..	..	..	..	..	..	..	..	..	0
Military	7	9	8	9	6	3	2	1	3	4	3	3	58
Total	16	12	12	24	15	6	8	2	4	11	7	7	124

Table 23. Meningococcal Infection, New Jersey, 1967

Age	*Cases*
Under 1	15
1	3
2	7
3	7
4	3
5-9	7
10-14	4
15-19	28
20-24	33
25-29	3
30-39	3
40-49	5
50-59	4
60+	2
Total	124

Mumps

On October 1, 1967, mumps was declared a reportable disease for surveillance purposes according to the State Sanitary Code, Chapter 2, Regulation 2. In addition to reporting of this disease by physicians and institutions, schools were requested to report mumps. The decision to institute surveillance for mumps was based on the need for basic descriptive epidemiologic data regarding the occurrence of this disease.

In the last three months of 1967, there was a progressive increase in the number of mumps cases reported, as physicians and schools became accustomed to reporting this disease. Cases were reported from all but two of the 21 counties in the state. It is still too early to make any conclusion regarding geographic concentration of cases. A total of 1,837 cases of mumps was reported in the last quarter of the year.

Table 24. Mumps Incidence by County, New Jersey, Fall 1967

County	*October*	*November*	*December*	*Total*
Atlantic	1	1	..	2
Bergen	28	118	131	277
Burlington	..	24	55	79
Camden	3	33	47	83
Cape May	2	1	26	29

Table 24. Mumps Incidence by County, New Jersey, Fall 1967—Continued

County	October	November	December	Total
Cumberland	..	9	..	9
Essex	3	68	129	200
Gloucester	1	3	3	7
Hudson	2	20	25	47
Hunterdon	2	4	13	19
Mercer	20	69	104	193
Middlesex	10	22	95	127
Monmouth	4	38	48	90
Morris	..	43	108	151
Ocean	13	11	135	159
Passaic	..	72	67	139
Salem	..	..	..	..
Somerset	..	4	59	63
Sussex	..	..	..	..
Union	11	20	60	91
Warren	..	21	50	71
State Institutions	1	..	..	1
Total	101	581	1,155	1,837

The age and sex distribution of two-thirds of these cases was analyzed. The results, tabulated below, show a concentration of cases in the pre-pubertal years, with nearly 80 percent occurring between the ages of five and nine years. There was a slight sex inequality with about 10 percent more cases occurring in males than females.

Table 25. Age and Sex Distribution of Mumps Cases, New Jersey, 1967

Age	Male	Female	Total	Percent
Under 1	3	3	6	.48
1	2	3	5	.40
2	7	5	12	.96
3	9	6	15	1.21
4	17	10	27	2.17
5-9	545	422	967	77.74
10-14	72	65	137	11.02
15-19	12	22	34	2.73
20-24	2	3	5	.40
25-29	5	2	7	.56
30-39	..	..	..	..
40-49	1	..	1	.08
50-59	1	..	1	.08
60+	..	1	1	.08
Unknown	15	11	26	2.09
Total	691	553	1,244	
Percent	55.6	44.4	100	

As a result of the intensive surveillance effort, attention was called to an isolated outbreak of mumps in an elementary school in the rural community of Oxford in Warren County. More than 100 cases of mumps occurred in the school, which had an enrollment of 370 students, over the fall and winter of 1967-68, giving an attack rate of about 30 percent. The peaks in the epidemic curve were about two weeks apart as would be expected from the incubation period. Although the previous history of mumps did not vary greatly among different classes, the attack rate was significantly greater in the lower grades. This suggests that subclinical infection, either during the recent epidemic or during previous years also occurred among the older students.

There were 26 cases of mumps meningitis and seven cases of mumps encephalitis reported in 1967. This is less than 1966 when there were 42 cases of mumps meningitis and 16 cases of mumps encephalitis. Because the total number of cases of mumps in 1967 is unknown, it is not possible to define the risk of developing central nervous system disease with mumps.

An important medical achievement in late 1967 was the licensure of a live-virus mumps vaccine by the federal government. Until more data become available, this division has agreed with the recommendation of the Public Health Service that the vaccine be used only for males approaching or past puberty who have not undergone natural mumps infection or in certain institutional settings where an outbreak among a closed population could disrupt patterns of usual activity.

Pertussis (Whooping Cough)

There were 13 cases of pertussis reported by eight health officers to this department during 1967. All the cases occurred in the fall and spring months, and all but three of the patients were under nine years of age. Pertussis is not on the required list of reportable diseases. Therefore, these figures cannot be considered an accurate estimate of the disease frequency in the state.

Polio

Although New Jersey had no cases of polio during 1966 or 1967, efforts persist to maintain high levels of immunization.

In April, 1967, a letter was sent to physicians stressing the need for continuing extensive poliomyelitis immunization. In addition to stating the current polio immunization practices, the letter also explained where trivalent oral poliovirus vaccine could be obtained for those residents who need to be spared the cost.

Surveys, to evaluate the level of immunization for polio, were undertaken in Paterson, Atlantic City, and Jersey City. In Paterson, where a "Sabin on Sunday" program had been held in 1964, the results from census tract 15, a low socio-economic area, were as follows: Of the children sampled between ages one to five, 51 percent had received one or more doses of polio vaccine. Only 21 percent had a satisfactory immunization level, i.e., two or more doses. This survey was followed by a meeting with the health officer and the Paterson task force and a polio immunization program was held in December.

The results of a survey in the indigent areas of Jersey City revealed that 76 percent of the children age one to five had some degree of polio immunization. The combined results of the three socio-economic areas in Atlantic City found that 83 percent were immunized.

Most schools require polio immunization prior to school entrance. Immunization for the pre-school population, however, still needs to be encouraged.

Rocky Mountain Spotted Fever

Eighteen cases of Rocky Mountain Fever were reported and confirmed by complement fixation test and/or Proteus OX19 agglutination test. Four of the cases were in one family where the pet dog carried the vector Dermacentor Variabilis (dog tick) into the home. The dog had a positive complement fixation test for Rocky Mountain spotted fever.

Table 26. Incidence of Rocky Mountain Spotted Fever by Month of Onset New Jersey, 1967

Month	*Cases*
May	6
June	2
July	5
August	5
Total	18

Table 27. Incidence of Rocky Mountain Spotted Fever by County of Residence New Jersey, 1967

County	*Cases*
Camden	5
Monmouth	3
Gloucester	2
Burlington	2
Middlesex	2
Cumberland	2
Somerset	1
Atlantic	1
Hunterdon	1
Total	18

Table 28. Reported Cases of Rocky Mountain Spotted Fever, New Jersey, 1964-1967

Year	*Cases*
1964	17
1965	17
1966	13
1967	18

The sex distribution of these cases shows a 2:1 male-female predominance. Fifty percent of the cases are under 15. This distribution is probably due to the fact that young boys are more apt to be playing in the woods or with pets. Thus they have a greater chance of exposure to ticks.

There were no fatalities in 1967, probably due to the fact that the tetracycline chemotherapeutics are effective.

Rubella (German Measles)

In September, a letter was sent to 44 health officers asking that they set up a surveillance system for German measles and that they make it a reportable disease in their municipalities. Since a vaccine for Rubella will soon be forthcoming, it was felt important to gather data on the epidemiology of the disease to evaluate the need and use of the vaccine. Outbreaks will be investigated by the department.

Table 29. Monthly Reports of Rubella Cases, New Jersey, from October 1, 1967

Month	*Cases*
October	25
November	25
December	51

Rubeola (Measles)

On November 15, 1966, the State Sanitary Code, Chapter 2, Regulation 1, Reportable Diseases, was revised to include measles. In addition to physician and institutional reporting of measles, school systems were requested to report measles absenteeism. The inclusion of school systems in the reporting network for measles has greatly increased the efficiency of the surveillance system.

Despite an increased interest in reporting measles, there was a continued dramatic decline in the number of cases reported this past year. *In fact, there was a 70 percent decrease in the number of measles cases in 1967 as compared with 1966.*

Table 30. Number of Cases of Measles by Year in New Jersey

Year	*No. Cases*
1964	12,691
1965	4,260
1966	2,090
1967	625

An examination of the 625 cases by month of onset confirms that measles occurs primarily during the school year, and rarely during the summer months. Only 3.8 percent of the measles cases in 1967 occurred between July and September.

Table 31. Measles Cases by Month of Onset, New Jersey, 1967

Month	*Number*	*Percent*
January	73	11.68
February	42	6.72
March	92	14.72
April	70	11.20
May	115	18.40
June	44	7.04
July	11	1.76
August	6	.96
September	6	.96
October	21	3.36
November	51	8.16
December	94	15.04
Total	625	100.00

A breakdown of measles cases by county indicates a geographic concentration of cases in the more heavily populated counties. More than half of the cases were reported from three counties, Essex, Passaic, and Union. Ten percent of the cases were reported from Mercer County and these came mainly from Trenton.

Table 32. Measles Cases by County, New Jersey, 1967

County	*No. Cases*	*Percent*
Atlantic	1	.16
Bergen	17	2.72
Burlington	14	2.24
Camden	29	4.64
Cape May	0	....
Cumberland	0	....
Essex	161	25.76
Gloucester	19	3.04
Hudson	19	3.04
Hunterdon	27	4.32
Mercer	67	10.72
Middlesex	14	2.24
Monmouth	22	3.52
Morris	22	3.52
Ocean	2	.32
Passaic	98	15.68
Salem	3	.48
Somerset	7	1.12
Sussex	5	.80
Union	94	15.04
Warren	4	.64
State Institutions	0	....
Total	625	100.00

The age of the patient developing measles was available on 75 percent of the cases reported. The age distribution of the cases shows that 85 percent of the cases were in children 10 years of age or younger, and only 3.6 percent under one year.

Table 33. Measles Cases by Age, New Jersey, 1967

Age	No. Cases	Percent
Under 3 months	0	...
3 months to 1 year	17	3.62
1 year	14	2.99
2	24	5.12
3	24	5.12
4	23	4.90
5	54	11.51
6	60	12.79
7	54	11.52
8	60	12.80
9	42	8.96
10	23	4.90
11	18	3.83
12	15	3.20
13	10	2.13
14	11	2.35
15	3	.64
16-20	16	3.41
21-25	1	.21
Over 25	0	...
Total	469	100.00

There were no cases of encephalitis due to measles in 1967 compared to 11 cases of measles encephalitis reported in 1966.

The marked decrease in the number of cases of measles is undoubtedly due to cumulative and continuing statewide efforts to immunize all children between the age of one and 10 years against measles. More and more physicians are including measles immunizations in their routine primary immunization series for children. Another stimulus to increased measles immunization was the enactment of legislation to permit that "the board of education of any school district may require all pupils to have received immunizing treatment against measles as a prerequisite to attendance at school." This is being put into effect by more and more boards of education.

The New Jersey State Department of Health, 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. More than 123,000 doses of vaccine were distributed by the State Department of Health in 1967. Nearly 23,000 doses of vaccine were administered in special community programs and in child health clinics. The remainder was distributed to private practitioners and local health departments. (This will be discussed further in the Vaccination Assistance portion of this report). An unknown amount of vaccine was purchased by practitioners and administered to private patients. The effect of these multiple efforts at measles immunization is that we are beginning to approach the goal of measles eradication in New Jersey.

Salmonellosis (Excluding Typhoid Fever)

During 1967, 539 individuals were reported to have one or more salmonella serotypes isolated from the blood, urine and/or feces. Eight people presented two serotypes. These figures are representative of the anticipated annual findings. During 1966, 778 persons were reported having salmonellosis, 280 of which were associated with two large outbreaks. No large outbreaks were identified during 1967. The outbreaks that did occur, however, will be described later in this report.

Out of 539 cases, 273 were male and 266 were female. The age breakdown is described in the following table. This age distribution corresponds with that observed in previous years, with the majority of cases occurring in very young or old people. Twenty-seven percent of the individuals reported as being positive for salmonella were less than three years old. More than half the patients were less than 10 years old. There was also a rise in incidence in persons over 50 years of age. The lowest incidence occurred among persons between 15 and 30 years old.

Table 34. Salmonella Isolations by Age in New Jersey Residents, 1967

Age	Cases	Percent of Total Known
Under 1	58	11.2
1	38	7.5
2	42	8.3
3	30	5.8
4	17	3.3
5-9	73	14.0
10-14	40	7.8
15-19	20	4.0
20-24	31	6.1
25-29	21	4.1
30-39	35	6.9
40-49	29	5.7
50-59	40	8.0
60+	37	7.3
Total, age known	511	100.00
Age unknown	28	
Case total	539	

The following table illustrates the number of cases and the attack rate per 100,000 population for each county.

Table 35. Frequency of Salmonella Isolations by County in New Jersey, 1967

County	No. of Cases	Attack Rate per 100,000 Population
Atlantic	15	8.4
Bergen	92	10.3
Burlington	7	2.4
Camden	28	6.1
Cape May	8	15.4
Cumberland	13	10.7
Essex	87	9.1
Gloucester	9	5.7
Hudson	25	4.1
Hunterdon	2	3.2
Mercer	44	14.6
Middlesex	43	7.9
Monmouth	40	9.4
Morris	34	10.0
Ocean	1	0.7
Passaic	27	6.0
Salem	3	4.7
Somerset	11	5.9
Sussex	2	3.2
Union	45	8.0
Warren	1	1.4
Total known in N. J.	537	7.7
Institutions	1	
Unknown	1	
Total cases	539	

Salmonellae were isolated on 547 initial occasions among the 539 patients. Eight patients had two different serotypes. Forty-two different serotypes were identified. There were 112 isolates which were not serotyped. Eleven of these serotypes were identified for the first time in New Jersey. One serotype, *S. typhimurium,* accounted for 27.35 percent of the isolates and 80 percent of all the isolations involved only 10 serotypes which is a usual finding. During 1967, 348 cases occurred among the top 10 serotypes as compared to 372 cases in 1966.

Table 36. Frequency of Salmonella Isolations from Humans by Serotype, New Jersey, 1967

Serotype	No. Isolations	Percent of Total Isolations Identified by Serotype
Anatum	4	.92
Bareilly*	7	1.61
Berta	1	.23
Blockley	5	1.15
Braenderup	4	.92
Bredeney	6	1.38
Cholerasuis Var Kunzendorf*	2	.46
Cubana	1	.23
Derby	9	2.06
Drypool*	1	.23
Eimsbuettel*	1	.23
Enteriditis	50	11.48
Eppendorf*	1	.23
Give	2	.46
Hiedelberg	40	9.20
Indiana	2	.46
Infantis	24	5.52
Java	11	2.53
Javiana	1	.23
Kentucky	3	.69
Livingstone*	1	.23
Manchester*	1	.23
Miami*	2	.46
Mission*	2	.46
Montevideo	6	1.38
Muenchen	7	1.61
Newington	1	.23
Newport	19	4.37
Ohio	1	.23
Oranienburg	21	4.83
Orion*	1	.23
Panama	1	.23
Paratyphi A	3	.69
Paratyphi B	4	.92
Reading	1	.23
Saint Paul	24	5.52
San Diego*	1	.23
Tennessee	4	.92
Thompson	13	2.99
Typhimurium	119	27.35
Typhimurium Var Copenhagen	27	6.21
Urbana	1	.23
Total known serotypes	435	100.00
Untyped	112	
	547	

* Newly isolated seroptypes.

Table 37. Salmonella Serotypes Most Frequently Isolated among New Jersey Residents, 1967

Serotype	*No. Isolations*	*Percent of Total Known Isolations*
Typhimurium	119	27.35
Enteritidis	50	11.48
Heidelberg	40	9.20
Typhimurium Var Copenhagen	27	6.21
Infantis	24	5.52
Saint Paul	24	5.52
Oranienburg	21	4.83
Newport	19	4.37
Thompson	13	2.99
Java	11	2.53
Total	348	80.00

The incidence of salmonellosis was typically greater during the warmer months and peaked in August. This is also characteristic for the nation.

Table 38. Salmonella Cases by Month of Onset among New Jersey Residents, 1967

Month	*No. Cases*	*Percent of Total Cases*
January	19	3.52
February	14	2.60
March	17	3.15
April	35	6.49
May	37	6.86
June	69	12.80
July	58	10.76
August	78	14.47
September	53	9.83
October	64	11.87
November	56	10.39
December	39	7.24
Total	539	100.00
Monthly Average	45	8.33

Of the 539 persons identified as having salmonella infections, 532 recovered. The seven others are deceased. Three were terminal cancer cases who remained asymptomatic to the infection. A fourth cancer patient developed peritonitis subsequent to an exploratory operation which was due to *S. heidelberg*, and subsequently expired. *S. oranienburg* is believed to have been the primary cause of death in an acutely ill two month-old infant and *S. typhimurium* was isolated from the bowel of a 54 year-old male whose primary cause of death was listed as acute enterocolitis.

One hundred and fifteen persons with salmonellosis were secondary cases in 71 different households. Two outbreaks were documented, involving 32 persons. The remaining 392 cases are considered to be isolated incidents and no common sources could be established.

Salmonellae were isolated from two food items which are commercially prepared in New Jersey. Frozen breaded fish sticks were the source of one isolation and several candy items produced by a company in northern New Jersey were found to contain a variety of serotypes. No human infections were associated with the fish item. Subsequent attempts to isolate salmonella and identify the serotype in the fish were unsuccessful.

S. cubana, S. newington and *S. bareilly* were isolated from the candy items. They were probably introduced through contaminated non-fat dried milk powder which was used in making the chocolate. No human infections were associated with the candy. *S. bareilly,* however, is a rare serotype in New Jersey and was not identified in any residents before this year. There were seven cases during 1967. One person may have been a secondary case but the other six were singular incidents with no apparent common association and were scattered geographically. This would suggest that a commercial food item may have been the vehicle for the organism.

On November 17, a northern New Jersey hospital reported five cases of *Salmonella bredeney* among its patients who supposedly entered the hospital from various municipalities during a two-week period. This is an uncommon serotype and is not presently being reported elsewhere in New Jersey. Consideration was therefore given to the possibility of these having been hospital acquired infections. Laboratory procedures are being appraised at the hospital since a break in their technique is the probable source of this unusual situation.

Shigellosis

During 1967, a total of 192 cases of shigellosis was reported. This is a distinct increase over the 84 cases reported during 1966 and the 55 cases reported in 1965. Thirty-one cases were of secondary origin which occurred in 15 households. The remaining 161 cases were isolated incidents. There were no known community or institutional outbreaks during the year.

The rise in reported cases is probably due to the increased diagnostic efforts in Newark City Hospital and the Jersey City Medical Center. Nearly half the reported cases are from Essex and Hudson Counties although this area contains only 22.5 percent of the state's total population. This disease is usually found where inadequate sanitary facilities or practices prevail.

Table 39. SHIGELLA ISOLATIONS BY COUNTY IN NEW JERSEY, 1967

County	*No. Cases*	*Attack Rate per 100,000 Population*
Atlantic	0	...
Bergen	5	0.56
Burlington	5	1.74
Camden	6	1.32
Cape May	0	...
Cumberland	2	1.64
Essex	45	4.72
Gloucester	4	2.52
Hudson	49	8.06
Hunterdon	0	...
Mercer	6	1.99
Middlesex	6	1.09
Monmouth	12	2.82
Morris	5	1.47
Ocean	0	...
Passaic	10	2.21
Salem	0	...
Somerset	2	1.06
Sussex	1	1.59
Union	33	.53
Warren	0	...
Institutions	0	...
Unknown	1	...
Total	192	
		Average 2.76

S. Sonnei was isolated from 60.94 percent of the reported cases and *S. flexneri* was identified among 26.56 percent. These findings are consistent with this area of the United States. Apparently all cases recovered from the infection.

Table 39. SHIGELLA ISOLATIONS BY SEROTYPE IN NEW JERSEY, 1967

	No. Cases	*Percent of all Cases*
Group A. S. dysenteriae	3	1.56
Group B S. flexneri	51	26.56
Group C S. boydii	4	2.09
Group D S. sonnei	117	60.94
Unknown	17	8.85

Eighty-seven cases, representing 45.31 percent of all cases during 1967, were male and 105 were female. The difference among various age groups, however, is more variable. More than 25 percent of the cases are under three years old and nearly 62 percent of the cases are nine years old or under.

Table 40. SHIGELLA ISOLATIONS BY AGE IN NEW JERSEY, 1967

Age	*Cases*	*Percent of Total Cases*
Under 1 year	18	9.38
1	10	5.21
2	20	10.42
3	22	11.46
4	14	7.29
5-9	35	18.23
10-14	16	8.33
15-19	6	3.13
20-24	12	6.25
25-29	11	5.73
30-39	5	2.60
40-49	2	1.04
50-59	3	1.56
60 +	5	2.60
Unknown	13	6.77

The peak incidence of cases occurred during October, which is a usual finding. Several family outbreaks occurred during late spring which tended to exaggerate the incidence during that season and accounts for much of the increase in cases over 1966.

Table 41. SHIGELLA CASES BY MONTH OF ONSET, NEW JERSEY, 1967

Month	*No. Cases*	*Percent of Total Cases*
January	7	3.65
February	11	5.73
March	10	5.21
April	20	10.42
May	23	11.98
June	23	11.98
July	13	6.77
August	15	7.81
September	18	9.37
October	27	14.06
November	12	6.25
December	13	6.77
Monthly Average	16	8.33

A survey was conducted among mental institutions in New Jersey. Fourteen responded and all indicated that shigellosis had not been a recent problem.

Smallpox

Seventeen smallpox surveillance requests were forwarded to New Jersey for investigation from quarantine stations. All patients were located and all were completely asymptomatic.

Tetanus

One case of tetanus was reported during 1967 in a 63-year-old male. The patient cut his left hand on an electric saw while working in the basement of his home. He received emergency treatment which included a toxoid booster although there was no previous history of immunization. He remained under medical care during the 10-day incubation period and was then hospitalized for seven days until he expired.

Tetanus is preventable by vaccination. Many adults, however, are unprotected because they were never immunized or did not receive boosters. The cases seen in New Jersey during the last few years have been in persons over 50 years of age.

Trichinosis

Four cases of acute trichinosis were reported during 1967. A muscle biopsy was performed on two patients and both were positive. The other two cases were diagnosed on the basis of three or more of the following findings: muscle tenderness, periorbital edema, abdominal distress, eosinophilia, positive skin tests, a positive serologic analysis or a history of having eaten raw pork. Two patients ate raw pork on several occasions, as chopped meat. One case was allegedly associated with dining in a restaurant, although this was not confirmed. All four occured as sporadic cases and eventually recovered. The pork in all cases was a commercially purchased product.

Typhoid Fever

Three cases of acute infections and two carriers of typhoid fever were diagnosed in 1967. Two infections are believed to have originated in foreign countries.

The third case was an 11-year-old boy who had contact with a typhoid carrier. The carrier, his grandmother, had not been previously identified. Her acute infection occurred 50 years ago and she was believed to have made a complete recovery. She has recently undergone a cholecystectomy and is on antibiotic therapy in an attempt to terminate her carrier status.

The other carrier which was identified is a 52-year-old male who was acutely affected 35 years ago. This man had a recent history of repeatedly bruising his left knee on his desk. The knee became painful and was treated unsuccessfully for several months. An aspirate was cultured and revealed *S. typhi.* It is believed that a carrier state existed and the organism was able to establish a focus of infection in the bruised tissue. Repeated fecal, urine and blood specimens remain negative upon culture for the organism. The infection in the knee, however, has resisted all surgical and medical attempts to resolve it.

Miscellaneous

Lead Poisoning—In August, there were four fatal cases of lead encephalopathy in young children in Paterson. The patients were children between 19 months and three years of age, who came from the lower socio-economic housing area where peeling paint is common. Three of the four children had a known history of pica or chewing non-edible objects. The children were hospitalized with a history of lethargy, convulsions, vomiting and abdominal pain. Only one of the children had fever. Diagnosis was made by analysis of tissue obtained at autopsy for lead. Siblings in the same age range in two of the families showed abnormal serum lead levels and were treated for lead poisoning. No common source exposure to lead by the children could be identified, and it is presumed that the cases were due to the ingestion of peeling paint which contained lead.

Coxsackie A16

An outbreak of Coxsackie A16 was investigated in a summer day camp in Haledon. The overall attack rate in 547 children was 11.6 percent with equal distributions for male and females. The secondary attack rate was 15.8 percent with the following age specific attack rates:

0-9	36 percent
10-19	10 percent
20+	8.7 percent

There were 16 cases in families of campers who were not themselves ill.

The clinical symptoms were those of hand, foot, and mouth disease and the illness was mild with no serious sequelae.

Coxsackie A16 was isolated from the stool of eight cases and paired sera were diagnosed by neutralization tests.

New Developments:

Beginning in October, the "Communicable Disease Summary" was started. This is a monthly newsletter which goes to all health officers, hospital and institutional administrators, and several of the universities. One side has a county monthly and cumulative summary of selected reportable diseases. The other side is reserved for text which covers either developments on communicable diseases in New Jersey or excerpts from the "Morbidity and Mortality" Weekly Report.

A summary is also sent to and printed in the *Journal of the Medical Society of New Jersey*. Both of these summaries are written on the first of the month.

The major communicable diseases are now coded and punched for use on an automatic sorter. The aim of this semi-automation is to speed the analysis of data for the annual report as well as various studies done during the year.

Biologics Unit

Requests for biologicals and drugs for tuberculosis from physicians and local health agencies from our distributing stations ran 10 percent higher in 1967 than in the previous year. Large quantities of measles and polio vaccine were distributed and the distribution of tuberculosis drugs showed a slight increase over the previous year. Comparison of the biological distribution between 1967 and 1966 is shown in the following table.

DISTRIBUTION OF BIOLOGICALS AND DRUGS FOR TUBERCULOSIS

	Jan. 1-Dec. 31, 1966 Doses	*Jan. 1-Dec. 31, 1967 Doses*
Smallpox vaccine	250,000	228,010
Diphtheria-Pertussis-Tetanus	375,000	429,375
Typhoid	7,250	8,230
Gamma Globulin (10cc)	500	120
Gamma Globulin (2cc)	2,050	1,512
Trivalent Polio Vaccine	333,950	369,240
Measles Vaccine	155,000	90,954
Influenza Vaccine	150,000	139,520
Diphtheria & Tetanus (Adult)	80,000	151,840
Diphtheria & Tetanus (Ped.)	50,000	101,760
Rocky Mt. Spotted Fever Vaccine	50	50
Tetanus Immune Globulin	100	None
Rabies (Human) Vaccine	1,500	1,885
Anti-Rabies Serum	None	25
INH (100 tabls per btl.)	60,000 btls.	69,319 btls.
PAS (1,000 tabs per btl.)	9,720 btls.	7,335 btls.
Tine Tests (25 tests per box)	50,000 tests	89,125 tests
Streptomycin (1 gram) with disposable syringe	Small amts.	177
P.P.D. (50 tests per pkg.)	Small amts.	102 boxes
Blastomycin	5	5
Histoplasmin	5	5
Coccidioidin	5	2

Migrant Health Program

A few important occurrences in the latter part of the 1966 season set the stage for a dramatic series of events that held public interest in migrant labor at a continued high pitch throughout the year 1967.

This was the year a New Jersey Minimum Wage of $1.25 per hour for farm workers became effective. In January, New Jersey Farmers' Week featured a half-day general session, the subject being "The Crisis in Farm Labor." During that same month, the Governor's Task Force on Migrant Labor took office. Legislation was introduced to abolish the Migrant Labor Board which had served for over 20 years. Heated debates received national news coverage and stimulated public interest in the conditions of life in migrant camps. Programs of education and information to raise the level of knowledge of the workers were carried on by civil rights organizations and the community action programs.

In 1967, the downward trend in seasonal hired farm employment continued. This year's worker peak and monthly employment, with one exception, were less than in 1966.

The season's work force peak occurred during the first week in August when employment reached 22,600.

Although the total number was less than a year ago, southern migrant crews arrived with more workers in 1967 and crews on potato farms stayed longer. The big Philadelphia day-haul operation and its smaller counterparts in Bridgeton, Camden, and Trenton proved to be the most fluid worker source which meshed ideally with employers' changeable labor needs. The New Jersey State Minimum Wage and Hour Law helped attract better workers by guaranteeing earnings of at least $1.25 per hour.

Indications are that more new harvesting machines were used for the first time on more crops in 1967 than in any single year since machines began replacing crop harvesting workers in New Jersey. The experience gained from initial field-condition-operation of several new harvesters overshadows any immediate influence upon crop harvesting labor demand. It was a "trial year" in which harvesting implements made an imprint but did not exert significant impact on agricultural employment.

In 1967, approximately 7,500 contract workers from the Commonwealth of Puerto Rico were brought into New Jersey through interstate clearance procedures. Their employment period was from April to November and included work on all major labor-user crops. All contract Puerto Ricans were male and lived in housing provided by their employers. On August 31, contract Puerto Rican employment reached its peak, with approximately 5,600 workers employed by New Jersey growers.

A stronger sanitation and inspection law became a prime objective of the task force. During the latter half of 1967, almost daily headlines reported events in the camps and statements by officials. Following the tragic death of five children in a fire in a camp, the amendments to the Migrant Labor Law passed the legislature on December 21.

Under the leadership of the Migrant Health Project, the voluntary and official health agencies continued to extend their services and to promote community support for the program. The seasonal migrant health services encompassed five public health nursing organizations, four family counseling agencies, and three county health departments. The month of April featured a three-day interstate conference on continuity of service and family planning sponsored by the Planned Parenthood World Federation. In May, the New

Jersey Welfare Conference presented a discussion program on migrant services. In October, the project again organized a presentation on migrant services at the annual institute of the New Jersey Welfare Council.

Increasingly comprehensive health service programs planned and operated at the county level carried forward the objectives of the project. For the first time, the newly organized Burlington County Health Department accepted a contract that placed under the direction of its county health coordinator the provision of migrant health services. These services included public health nursing, medical social casework, out-patient hospital care, physician and dental services, and sanitation in migrant camps. A coordinated medical student migrant worker project introduced a new approach to migrant care and medical education.

In April, the first contract in Gloucester County for migrant services with the Visiting Nurse Association was signed. Through project assistance, that agency organized and operated a migrant family clinic professionally staffed by local practitioners. These efforts will provide the experience upon which eventual coordination of the county services will pass to the newly organized county health department.

In Salem County, support of the Board of Freeholders was delayed because of a vacancy in the position of county health coordinator. However, the active participation of the county health department in field sanitation was encouraging. Later, with the appointment of a county health coordinator, further progress was made toward county operation of the program. In the meantime, a summer nursing staff based at the Woodstown field office conducted and extended the field nursing and clinic programs to 612 migrant workers who received 1,643 nursing visits. Of those served, 41 percent were children. A day care center, under sponsorship of the Community Action Program, was staffed full-time by a project nurse for four months.

With the cooperation of the Board of Chosen Freeholders of Monmouth County, two long-established voluntary agencies provide services under contract. Both agencies have increased the volume of their services to migrant workers. The public health nursing agency provided space in its health center for the installation of an x-ray machine which was used in the migrant family clinic for tuberculosis casefinding.

In Middlesex and Mercer Counties, four voluntary nursing and social agencies have cooperated to provide fuller coverage in this changing rural-urban-suburban area. To obtain citizen interest, volunteer participation, and social understanding, an area migrant committee was formed by the two family service agencies. A delay in the growing season caused complications

in timing of the scheduled services. A hospital-based migrant family clinic was organized by the public health nursing agency. The establishment of a well-attended day care center at the Monmouth Junction School in South Brunswick Township, Middlesex County, also presented the nursing agency with an exceptional demand for health services.

The program of Emergency Hospital Services served migrant workers in 15 hospitals located in nine counties. Although the admissions and days of care are only two-thirds of previous years' totals, the total hospital in-patient charges are nearly as much, reflecting higher costs. A separate accounting of hospital admissions of migrants working in Cumberland County formerly covered in this project is now reported separately by the Cumberland project. Total charges are continuing to rise and the amount, not including Cumberland County, is nearly as large as it was when that county was included. This increase is especially notable in regard to hospital out-patient services which are 25 percent higher than in 1966. The expanded migrant family clinics are serving as sources of referral for hospital services.

Physicians continue to serve more patients in private offices and in organized family clinics. The cooperation of local practicing physicians in serving migrants is encouraging. More than 40 physicians provided 2,200 migrant children and adults with physical examinations in different settings. A number of physicians served clinics, migrant schools and day care centers.

The acceptance of the family health clinic by hospital administrators has provided a better standard of clinic care. The possibility of a more detailed physical examination under favorable conditions enabled health personnel to improve casefinding. At the same time, more than 1,000 patients derived health education benefits from this more comprehensive type of service. Family health clinics were organized for the first time in hospitals in two counties.

The Dental Health Program, faced with a huge task in terms of total dental needs, used the larger share of its limited resources in directly serving the children in the expanded migrant schools. Prophylaxis, fluoride treatment, and detailed examination were provided for 1,070 children. Much valuable preventive, reconstructive, and educational work was provided. Limited emergency services for adults found in the highest priority of need were financed from project funds.

For a number of years, health services in the migrant schools received major financial support and direction from the State Department of Health. As a result of closer coordination with the project, our consultant services were used in the State Department of Education's plan for a more comprehensive program of health services in the greatly expanded educational schedule. A total enrollment of 1,600 children received physical examination, immunization, dental services, and correction of some major physical defects.

The prenatal and obstetrical service for migrant mothers, operating in 10 New Jersey hospitals, recorded 93 pregnancies and 52 deliveries during 1967. Nearly $12,000 was reimbursed to hospitals through the Maternal and Child Health Program which has supervised this service for the past five years.

Six New Jersey counties had day care centers for migrant children funded by the Office of Economic Opportunity and operated by the respective community action programs. Some centers were established in schools, others were held in churches. Some sites had marked deficiencies in sanitary facilities. All enrolled migrant children during a two to four month summer season. In three of these centers, health services were included in project plans. In the others, arrangements had to be made through Migrant Health for provision of nursing and physician services. One project employed a nurse directly. Another contracted for a visiting nurse. The administrative and financial problems that arose as a result of insufficient advance planning, in some instances, placed a strain on project personnel and available funds. The State Department of Health and local health units also provided consultation to the centers in relation to environmental sanitation, nutrition, and pediatric care. A total of 278 children received health services.

The public health nurse continued to provide the main link between the migrant family and the agencies of medical care. All seven principal counties having migrant workers had active field nursing services and clinics. All but one of these was locally administered. The extension of programs operated during the season increased the demand for nursing staff. More than 5,000 visits were recorded by field nurses who provided nearly 2,700 referrals for health services.

The program of medical social service used family counseling agencies in serving six counties, while two others employed caseworkers in the county health department. Over 500 cases were opened and more than 4,000 personal interviews were recorded

A medical student migrant worker project conceived at the New Jersey College of Medicine and planned in cooperation with the New Jersey State Department of Health, the Burlington County Memorial Hospital, and the Burlington County Health Department, involved many professionals. Designed to provide a useful experience for medical students, this project enlisted the services of many community agencies and provided valuable data on the

nature of the health problems in the migrant group. An adjunct educational activity involved the summer migrant schools and a local housing project.

Although legislative responsibility for the inspection of migrant camps in New Jersey remains in the Department of Labor and Industry, the role taken by the State Department of Health in camp sanitation became highly significant in 1967. Through representation on the Governor's Task Force, important health considerations formed the basis of substantial upgrading of migrant housing codes. Through project activities in obtaining local and county participation in the enforcement of health standards, qualified sanitarians in eight counties made sanitary surveys of water supplies. The deficiencies revealed led to action taken for correction of substandard conditions. In the course of surveying approximately 700 camps in the counties having the largest proportion of the migrant population, positive working relationships between health agencies and the Bureau of Migrant Labor have been stimulated. Data obtained by the project were useful in obtaining public interest and support for a stronger code which was finally passed by the legislature.

Tuberculosis Control Program

In 1967, 2,493 cases of tuberculosis were reported; of these, 1,455 were diagnosed and reported as cases of active tuberculosis. Records of tuberculosis mortality and morbidity for the past ten years are reflected in Table 1.

Table 1. Tuberculosis Cases and Deaths, Numbers and Rates per 100,000 Population, New Jersey, 1958-1967

Year	Estimated Population	Deaths		Total Cases		Active Cases	
		Number	Rate	Number	Rate	Number	Rate
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
1967	7,078,400	249	3.5	2,493	35.2	1,455	20.6

It is apparent that there has been a slight decline in numbers and rates per 100,000 of both total cases and new active cases in New Jersey in the past year.

The counties of metropolitan New Jersey, Bergen, Essex, Hudson, Passaic, and Union, continue to account for more than half of the cases of active tuberculosis reported in the state and the principal cities of Newark, Jersey City, Paterson, and Elizabeth are heavy contributors.

There were 249 deaths reported in New Jersey during 1967 due to tuberculosis. Of these, 48 deaths occurred among cases reported during 1967. Nineteen cases were reported at the time of death and 29 of the newly reported cases expired within the year. Many of these cases were over 65 years of age and were discovered to have tuberculosis while under medical care for some other illness. They came to attention during illnesses which required relatively short periods of hospitalization and care before death occurred.

Beginning in July, 1967, an effort was made to observe the effects of therapy upon cases of active tuberculosis. Cohorts of patients with active disease were established quarterly. A search of existing records in the case registers and tuberculosis hospitals was undertaken to discover patients whose diagnostic status had changed from active to inactive tuberculosis. Patients were classified according to the completeness of their medical appraisal.

In the Metropolitan District, which includes the counties of Bergen, Essex, Hudson, Passaic, and Union, records on 1,321 patients having active tuberculosis were evaluated: 1,120 had a complete medical appraisal during the six-month period ending December 31, 1967; 201 had an incomplete medical appraisal; 49 patients died during the period leaving 1,071 who could potentially become inactive. Of these, 178 or 16 percent changed from active to inactive tuberculosis.

In the Southern State Health District, which includes the counties of Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem, records on 343 patients having active tuberculosis were evaluated; 283 had a complete medical appraisal during the six-month period ending December 31, 1967; 52 patients had an incomplete medical appraisal; 27 patients died during the period, leaving 316 who could potentially become inactive. Of these, 63 or 21.8 percent changed from active to inactive tuberculosis.

On December 31, 1967, there were 21 county tuberculosis case registers working cooperatively with the state case register system. These registers maintain active surveillance over 13,678 patients compared to 14,188 patients for the same period in 1966.

Table 2 depicts the status of cases on the register on December 31, 1967 and compares them with four previous years.

Table 2. Tuberculosis Patients Under Registration
New Jersey 1963-1967

Status	*1963*	*1964*	*1965*	*1966*	*1967*
Total	15,640	15,432	14,474	14,188	13,678
Hospitalized	1,750	1,629	1,016	1,430	1,268
Non-hospitalized	13,890	13,803	12,143	12,758	12,410
Active	793	727	646	564	779
Probably Active	246	184	160	150	134
Probably Inactive	372	290	448	361	304
Inactive	11,781	11,876	10,889	10,368	9,879
Non-Pulmonary	698	726	815	888	788

It is worthy of note that the numbers of patients hospitalized was reduced to 1,268 from 1,430 in 1966. Further, the 779 patients at home with active tuberculosis represent an increase over the year 1966 when 564 patients were cared for at home.

Table 3. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Examination Status
New Jersey 1963-1967

Status	*1963*	*1964*	*1965*	*1966*	*1967*
Total	100.0	100.0	100.0	100.0	100.0
Not due for examination	61.7	59.2	64.2	69.1	60.8
Overdue up to 12 months	19.2	16.1	21.2	17.0	22.2
Overdue 12 months or more	5.5	2.9	3.2	1.6	1.9
No date assigned	13.6	21.8	11.4	12.2	15.0

Table 3, indicates that 60 percent of non-hospitalized cases of active tuberculosis had completed a current medical examination at the end of the quarter compared to 69.1 percent in December 1966. The bulk of the problem is centered in the Metropolitan State Health District and, more precisely, in the City of Newark. As that Health Department's program is modified and the recency of examination status is improved, it is anticipated that a level between 80-85 percent current in examination status will be achieved.

Table 4. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Sputum Status
New Jersey 1963-1967

Sputum Status	*1963*	*1964*	*1965*	*1966*	*1967*
Total	100.0	100.0	100.0	100.0	100.0
Studied within 6 months	64.3	75.5	76.7	81.1	80.5
Studied over 6 months	30.4	19.4	19.7	16.3	16.7
Not studied	5.3	5.1	3.6	2.6	2.8

Table 4 reveals the degree of success obtained in sputum studies on non-hospitalized patients with active tuberculosis. It is noteworthy that in the year ending December 1967, that 80 percent of non-hospitalized patients with active tuberculosis had been examined for sputum status within the preceding six months.

Table 5. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Drug Status New Jersey 1963-1967

Drug Status	*1963*	*1964*	*1965*	*1966*	*1967*
Total	100.0	100.0	100.0	100.0	100.0
Receiving drugs	66.0	63.0	73.2	77.1	72.5
Not on drugs	5.0	4.5	3.2	2.9	2.8
Status unknown	29.0	32.5	23.6	20.0	24.6

In Table 5, the drug status of non-hospitalized patients with active tuberculosis is compared for the years 1963 through 1967. In this period, the percentage of patients whose drug status was unknown has gradually diminished. However, in 1967 it is noted that there is an increase of patients within this category. The bulk of the problem is located in the Metropolitan District where a substantial portion is related to patients associated with the Newark City Health Department. A lesser problem exists in the Southern State Health District involving the six southern counties. Here the problem centers in Camden and Atlantic City.

The tuberculosis case register report for the quarter ending December 1967, indicates that there were 9,879 non-hospitalized cases of inactive tuberculosis. Of these, 1,081 or 10 percent were without medical examination in excess of three months; 2,839 of the non-hospitalized cases of inactive pulmonary tuberculosis had not had a sputum examination within six months; 2,820 were being maintained continually on medication and had received drugs within the quarter ending December 31, 1967; 4,307 of the patients

were considered by physicians to have completed their drug therapy. A substantial number, 2,752, were recorded in an unknown drug status, The major portion of these patients was located in the Metropolitan State Health District. In this area, two major counties contributed—Bergen and Essex.

Beginning in July 1967, the State Department of Health initiated an electronic data program for tuberculosis control in the Southern State Health District. The register records for nearly 2,000 patients were transcribed into the electronic data program. Forms were prepared for direct reporting of new cases of tuberculosis and for direct reporting of the results of clinical examinations by physicians or clinics.

Personnel in the division were trained to screen forms for accuracy, proper terminology, and coding in order that the newly reported data could be key punched, verified, and introduced into the computer to be stored on magnetic tape.

Throughout the last six months of the year, conferences were held with clinic and case register personnel, physicians, and health officers to develop a complete understanding of the requirements of the electronic data program, plus the benefits which could be derived. As of December 31, 1967, most of the technical difficulties related to this system had been overcome and two additional counties were chosen for inclusion in the first quarter of 1968.

Contact Register and Investigation

Contact investigation, which has proved to be the most effective way of discovering new cases of active tuberculosis, has moved forward with increasing momentum throughout the year 1967.

Table 6. Number of Contact Registers, and Cases of Active Tuberculosis Available for Contact Interview, New Jersey 1967

Quarter Ending	Number of Contact Registers	Number New Cases of Active Tuberculosis Available for Interview	Number Interviewed
Total	52	1,206	1,080
March	9	322	252
June	11	288	257
September	16	331	337
December	16	265	234

Seven county contact registers have been added leaving only five counties now uncovered. During the year, the need to concentrate on household contacts of cases of active tuberculosis became more apparent. Thus a shift in criteria for contacts modified the number under surveillance. The result

was that even with more registers, there were just about as many contacts under observation in 1967 as 1966.

Table 7. Patients Giving Contacts, Number of Contacts Given, Contact Index New Jersey 1967

Quarter Ending	Number Active and Reactivated Patients Giving Contacts	Number Contacts Given	Contact Index
Total	930	6,096	6.6
March	232	1,590	6.3
June	219	1,587	6.2
September	273	1,650	4.9
December	206	1,269	5.4

At the close of 1966, there were 7,557 contacts in the contact register on whom follow-up and examination had not been completed. In the year 1967, contact information was obtained from 930 new patients with active or reactivated tuberculosis. Investigation elicited 6,096 contacts. These, added to the contacts at hand in the beginning of the year, constituted a total of 13,653 contacts, potentially available for follow-up and examination during the year 1967. A total of 1,844 contacts were removed from the register system for reasons other than examination. They were:

Death	42
Change of Diagnosis	173
Moved Away	435
Other	1,194
Total	1,844

This number, subtracted from the total available for follow-up, left 12,469 contacts upon whom follow-up activity and examination could be conducted. Throughout the year, 11,137 examinations were completed with the results described in the following table.

Table 8. Results of Examination of Contacts by Quarters 1967

Quarter	Number Exams	New Tuberculosis Total	New Tuberculosis Active	Known TB	Rate/1000 Contact Exams
Total	11,137	134	87	117	7.8
March	2,821	48	31	35	10.9
June	3,402	31	21	31	6.1
September	2,471	33	16	35	6.4
December	2,443	22	19	16	7.7

The 11,137 examinations conducted in 1967 revealed 87 new cases of active tuberculosis, a case discovery rate of 7.8 new cases of active tuberculosis per 1,000 contacts examined. As of December 31, 1967, 7,964 contacts remained in the contact register system. At the end of December 1967, there were 4,680 contacts who were overdue for examination. One thousand two hundred sixty-four of these persons had not been observed for 12 months.

Table 9. CONTACTS OVERDUE FOR EXAMINATION BY DURATION OF DELINQUENCY 1967

Quarter	*Total*	*Within 3*	*3-6*	*6-12*	*12+*
March	4,062	1,715	957	823	567
June	3,624	1,354	778	766	726
September	4,198	1,476	783	1,107	832
December	4,680	1,257	895	1,264	1,264

Development of contact registers is anticipated in the counties of Mercer, Hunterdon, and Warren in the calendar year 1968.

Drug Distribution

During 1967, 69,319 bottles of isoniazid were dispensed to patients within the state. This is 9,319 more than dispensed in 1966. Also 7,335 bottles of para aminosalicylic acid were dispensed—2,385 less than in 1966. Small amounts of streptomycin, seromycin, and treacator were dispensed.

Surveillance of drug issues revealed that persons on preventive therapy failed to continue their medication beyond three to four months. Mercer County patients appear to be outstanding in regard to maintaining current use of preventive therapy.

School Tuberculin Testing Program

The public school tuberculin testing program included 462,596 persons in 1967. There were 14,000 reactors discovered among whom were 19 cases of active tuberculosis.

In the parochial school testing program, 47,000 persons were tested, resulting in the discovery of five cases of active tuberculosis.

Table 10. TUBERCULIN TESTING IN NEW JERSEY PAROCHIAL SCHOOLS SCHOOL YEARS—1965-66 AND 1966-67

	Number in Grade		Number Tested		Number Reactors		Percent Reactors		Number Followed		Number Active Found	
School Year	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67
TOTAL	55,599	59,830	47,001	47,714	1,192	1,114	2.5	2.3	1,034	1,004	3	5
Grade I	16,395	15,339	15,415	14,513	148	87	1.0	0.6	120	82	2	1
Grade V	14,450	14,419	13,859	14,062	231	197	1.7	1.4	193	182	0	1
Grade IX	7,096	6,651	6,594	6,815	238	177	3.6	2.6	228	174	0	0
Grade XII	5,050	5,050	4,753	5,188	163	118	3.4	2.3	155	84	0	0
Post Graduates	0	175	0	68	0	3	...	4.4	0	2	0	0
Unclassified	518	450	406	341	6	35	1.5	10.3	5	46	0	0
Other Grades	7,615	13,167	3,517	3,855	88	107	2.5	2.8	74	90	1	0
Teachers and Employees	4,475	4,579	2,457	2,872	318	390	12.9	13.6	259	344	0	3

Table 11. TUBERCULIN TESTING IN NEW JERSEY PUBLIC SCHOOLS SCHOOL YEARS—1965-66 AND 1966-67

	Number in Grade		Number Tested		Number Reactors		Percent Reactors		Number Followed		Number Active Found	
School Year	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67	65-66	66-67
TOTAL	611,256	545,837	446,585	462,596	12,999	12,886	2.9	2.8	12,282	11,776	23	14
Grade I	101,472	105,343	98,753	101,998	863	850	0.9	0.8	833	808	4	6
Grade V	91,252	95,839	89,054	93,238	1,433	1,486	1.6	1.6	1,384	1,392	3	1
Grade IX	94,213	98,655	88,314	92,081	2,886	2,944	3.3	3.2	2,764	2,821	2	1
Grade XII	74,760	76,463	69,739	71,288	2,450	2,343	3.5	3.3	2,207	2,212	3	5
Post Graduates	1,230	608	662	415	42	32	6.3	7.7	40	31	1	0
Unclassified	74,928	71,504	35,914	35,526	1,001	1,374	2.8	3.9	812	750	2	0
Teachers and Employees	93,629	96,203	35,489	36,700	3,036	2,824	8.6	7.7	2,839	2,729	1	0
Newark Public Schools	70,772	.....	28,660	31,158	1,288	1,031	4.5	3.3	1,313	913	7	1

During the past several years, the tuberculin testing program in the schools of Paterson have revealed an increasing concentration of tuberculin reactive children in specific schools. In the fall of 1967, it was decided that six schools would be selected for careful tuberculosis testing activity and the institution of preventive isoniazid therapy. All school children in grades 1, 5, 9, and 12 of the six selected schools were tuberculin tested. Those whose Tine tests measured less than 10 millimeters of induration were retested with intradermal purified protein of mycobacterium (PPDS) and mycobacterium battey (PPOB). All of those whose reactions to the PPDS plus all those with Tine tests revealed more than 10 millimeters of induration were examined for active tuberculosis. Those with evidence of primary active tuberculosis were treated either by clinics or by their private physicians. Those who did not evidence clinical disease were placed on preventive isoniazid treatment at school. The six selected schools that are involved have a substantial proportion of the tuberculin reactors in the school system in Paterson. Altogether 2,952 students participated in this program.

One case of active primary tuberculosis was discovered in this study. Three cases of inactive tuberculosis were discovered. The remaining 70 reactors had no evidence of clinical disease. Of the 74 students, 64 were introduced to the preventive therapy program. In this program, students are provided with necessary INH each day in the week during the time that they are in school. Participation in this program has been maintained at a level of 80 percent throughout the last months of the year.

A similar tuberculin testing program was also instituted in grades 1, 5, 9, and 12 of schools in the Title 1 area in Newark. In all, 47 schools were included—five high schools, four junior high schools, 29 elementary schools, and eight special schools. Tine tests were given to 12,397 students; 420 students had Tine reactions between 2-9 millimeters and were retested with PPDS and PPDB; 98 of the students remained positive on retest to tuberculosis. A total of 485 reactors was eligible for further medical examination. Included in this total are 75 first graders. Three hundred seventy-five of the students had been x-rayed at the end of the year. One case of active tuberculosis in a fifth grader was discovered. Seven previously treated cases were brought to medical examination again.

Child Health Conference Testing

Child health conferences, in general, serve those families who are unable to afford pediatric care. 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. The data that are presented is highly selective and represents only a small sample of New Jersey's children. This evidence cannot be applied generally.

Tuberculin tests were given to 9,284 children under 10 years of age in the child health conferences. Of these, 129 were discovered to be reactive. Among them were 10 cases of primary active tuberculosis, a yield of 1.04 per 1,000 tested.

Clinic Services

In the 21 counties of New Jersey, there are almost 50 clinics providing tuberculosis diagnostic and treatment services. During 1967, 36,786 persons were registered for the first time. These persons made a total of 105,586 visits to the clinics during the year. There were 16,300 sputum examinations and 26,225 tuberculin tests performed. A total of 699 sputum specimens was reported as positive and over 5,120 tuberculin reactors were discovered.

In association with the clinic activity, public health nursing services were provided to 3,776 persons with tuberculosis, and to 9,772 contacts and persons suspected of having tuberculosis.

Home visits to cases of tuberculosis numbered over 19,342 and visits to contacts and suspects totaled more than 18,332.

Laboratory services of the State Department of Health are available to all physicians, clinics, and hospitals throughout the state. The state laboratory processed 21,499 tuberculosis sputum specimens in calendar year 1967.

Public Health Nursing

Tuberculosis educational meetings were conducted for public health nurses in Middlesex, Princeton, Haddonfield, Collingswood, and Hackensack Visiting Nurse Associations; Jersey City Project; Beth Israel and Helene Fuld Hospitals; Cumberland and Salem Health Departments; Mercer County Public Health Nurses and School Nurses Institute; Camden County Public Health Nurses and School Nurses; and the Public Health Nursing Association of Burlington County (a series of 12 sessions were given); Atlantic and Passaic Counties; and the Newark Boards of Health and Education.

In addition, in-service meetings were provided for the Public Health Nursing Program to orient public health nurses and occpuational health nurses from the various agencies throughout the state.

Starting in July, 1967, data processing of tuberculosis cases was introduced in the counties encompassing the Southern State Health District. Public

health coordinators, public health nursing personnel, and state personnel working in this area were oriented to the system. After several months, another meeting was held to bring the group up-to-date on problems, accomplishments, use of business machine lists and recommended policies and procedures in relation to care and supervision of patients. Initial attempts were made to correlate data from the New Jersey State Sanatorium for those patients residing in the southern counties.

Many follow-up visits were made to clinics and public health nurses responsible for clinic management, case register clerks, and clinic physicians to promote, interpret, and assist in the completion and use of the data processing forms. Transferring information from the manual case registers to the new system constituted the major problem. Accuracy and preciseness in recording plus the addition of new information created many frustrations in preparation of the forms. Simultaneously, there is evidence that this system stimulates better services to patients. Some public health nurses have indicated that they now receive current and new information on patients which heretofore was omitted or lacking. Intelligent nursing supervision and teaching of patients and their families are based on the current or latest medical findings and recommendations. There is great hope for quality nursing supervision as a result of the data processing system.

Other consultation visits were made to nursing agencies and specialized public health nurses involved in tuberculosis control. Initiation and follow-up of contact investigation responsibilities and procedures were accomplished in Cape May, Camden, Sussex, Hudson, and Burlington Counties. Several consultation visits were made to assist the Executive Director of the Ocean County Tuberculosis and Health Association in the preparation of a manual for the control of tuberculosis in Ocean County, including clinic policies, and nursing responsibilities in the clinic and home. The program manual was later approved by the Ocean County Medical Society. It is anticipated this information and guideline will assist and implement a smooth transfer of tuberculosis services from a voluntary agency to an officially operated and supported agency. The Home Health Agency and the Passaic Board of Health received consultation services in the formulation of nursing policies and procedures. Also, administrative and supervisory assistance was provided to the Passaic County project.

Difficulties were encountered in continuity of services, the responsibilities of the health officers in reporting, case and contact control, use of local nursing agencies, clinic facilities and case management, parochial school tuberculin testing, and child health conference tuberculin testing programs.

Much of the difficulty stems from the withdrawal of local tuberculosis and health associations from clinic and nursing services in tuberculosis control. The withdrawal will be complete after December 31, 1968. Discussions are continuing with the public health coordinators, tuberculosis and health association employees, and local nursing agency personnel in regard to transfer of services and responsibilities in local tuberculosis control.

Tuberculin testing demonstration programs were conducted in Roselle Catholic Boys School, New Jersey Home for Girls, Camden County Parochial Schools, for migrant workers in Burlington County, the Newark public schools, and several industries in Passaic County.

Data were collected on approximately 1,000 tuberculosis patients who were hospitalized from 1952-1958 and received INH therapy. Further follow-up of these patients will be carried out in 1968.

Hudson County Project

In 1966, discussions were held with the officials in Union City concerning the installation of a chest clinic in the health department. These discussions resulted in the final development of an experimental clinic which opened in July 1967. Its patient load was limited to residents of Union City. During the past six months, smooth and efficient procedures have evolved so that the clinic now is in a position to expand its operations to encompass the North Hudson area.

In anticipation of this action, plans were undertaken for three symposia to be held in the month of January for the nursing agencies serving the area. The symposia will refresh the nurses in tuberculosis control methodology and orient them to the communication system which is used by the clinic, follow-up agencies, and the case register.

Negotiations for a clinic were opened with city officials of Hoboken, including the mayor and the health officer. A decision was made to undertake renovation of space within the existing health department building. A survey of the building was undertaken and a design of clinic facilities prepared. Since sections of this building had been constructed at different times, difficulties were encountered in the placement of soil lines, installation of plumbing fixtures, and installation of power lines. By the end of December, firm plans had been drawn and a considerable amount of construction undertaken. It is anticipated that this clinic will open during the spring of 1968.

Efforts to consolidate and improve tuberculosis follow-up in Hudson County were carried out throughout the year. During the second half of the

year, these efforts were intensified with local health officials in the county playing a key role in the effort.

In August, 1967, health officers of Jersey City, Bayonne, Harrison, and Kearny as well as representatives of the County Tuberculosis and Health Association and the New Jersey State Department of Health met and crystallized a unified program of tuberculosis control. At this meeting, it was recognized that the logical locus for unified expansion of the tuberculosis control was the B. S. Pollack Hospital and the Hudson County Tuberculosis Chest Clinic. This clinic provides medical care for the vast majority of tuberculosis patients.

The agreement, cooperation, participation, and leadership of the administration of the B. S. Pollack Hospital were sought.

A formal program was designed to synthesize the objectives of the group and outline methods by which improved tuberculosis control could be achieved. In December, final arrangements for discussions with the Pollack Hospital were completed.

Personnel working in the field of tuberculosis in Hudson County are firmly convinced that there is need for a concerted program of health education within the community. A tuberculosis educational program aimed at the underprivileged groups, which are often the victims of tuberculosis, is under development. It will involve local antipoverty groups. Some neighborhood groups have already indicated a willingness to participate and serve in such an undertaking.

Joint field activity carried out by the State Department of Health and the Jersey City Board of Health continues. Field representatives working for both agencies now conduct all of the follow-up work in Jersey City. In communities where there is need, such as in Bayonne, the bulk of the work is carried by the state personnel.

Approximately 3,000 persons were referred and followed by the field representatives throughout the year. These referrals represented special cases and contacts whose problems required the special skill and knowledge of the field representatives in effecting solutions.

Newark Project

Intensive efforts to modernize the chest clinic in Newark were carried out during the year in cooperation with the Newark Health Department. The Newark City project staff and the State Health Department were brought together to form a more unified chest clinic service under the auspices of the city health department.

The record system began to function efficiently. Data were recorded in appropriate places on the clinic chart. Records for a history interview and contact interview were developed. Efficiency increased in locating records. A program was initiated to bring a backlog of unworked contacts under immediate medical surveillance. The latest statistical assessment shows 290 contacts responded or 25 percent of 1,150 assigned; 860 contacts could not be located or refused to respond to the location effort.

The State Department of Health contracted to remodel the x ray department and to provide necessary equipment. Remodeling of this department began in late December and is scheduled for completion in February.

Passaic County Project

The Passaic County Project continued to render effective services in the communities of Wayne, Passaic, and Paterson. Efficiency in maintaining medical observation of patients was achieved in the care of both active and inactive tuberculosis cases. Throughout the year, the efficiency of contact investigation approached, but did not exceed, 50 percent. This is in part due to the fact that the necessary personnel were not available to carry on this program.

There was steady growth in the number of patients participating in the clinic service. This placed a stress upon personnel and the facilities in which services were rendered. The physical plans and use of space were studied in the Wayne and Passaic clinics. Patient interviews, consultations, and examinations could not be conducted in a professional, dignified and isolated manner. Patient flow was not expeditious due to a poor physical layout involving the x ray services in both clinics. The clinical facilities in the Wayne Board of Health building were reorganized and the Passaic General Hospital modified some of its out-patient space to meet the operational needs of the project.

Throughout the year, the needs for social service were urgently felt in activities relating to patients and families, the adjustment of the patient and his family to illness, the assessment of social and emotional factors involved in the illness, the education of the patient and his family, and participation in program planning and policy involving community activities related to patient care. Social aspects of tuberculosis control imply future involvement of the community, in both the organized agency sector and the neighborhood areas of the city and community.

Union County Project

Throughout 1967, the field representative in Union County maintained continuing surveillance over patients and working contacts, with health departments and voluntary agencies. Patient care improved in this period. However, there is need for improvement in the field of contact investigation.

Throughout the year, negotiations were continued with the Board of Chosen Freeholders in preparation for the withdrawal of the Union County Tuberculosis and Health Association from clinic services. This association merged with other tuberculosis and health associations to form the Tuberculosis and Repiratory Disease Association of Central New Jersey.

In October, a budget request was presented to the Board of Chosen Freeholders. Careful attention had been paid to the service needs of patients and contacts in various parts of the county. The first presentation of the budget request elicited interest on the part of the freeholders and the general public. The budget presentation had the support of health officers in Union County.

The final presentation of the budget request was made to the Board of Chosen Freeholders in late December. At this time, it became apparent that the Tuberculosis and Health Association was going to vacate a building then under lease to the Board of Freeholders. A recommendation was made that this building be used as a clinic site and authority was obtained to proceed with the development of plans and an estimate of expenditures necessary to remodel the interior space.

At year's end, it was anticipated that the Board of Chosen Freeholders would support the development of a clinic facility in Elizabeth, the maintenance of a tuberculosis control staff, and the development of a contract with the Muhlenberg Hospital for tuberculosis clinic services in Plainfield.

Vaccination Assistance Project

The emphasis of the Vaccination Assistance Project during the year was on more intensive surveillance of diseases which are of concern, and the use of this information to stimulate surveys of immunization status and to promote campaigns of immunization in areas where they were needed. The surveillance systems initiated during this project year provided for the prompt reporting of measles morbidity. This has been implemented by a relationship with school nurses, which has also been useful in obtaining data concerning mumps and rubella morbidity. This relationship with school nurses was the result of numerous contacts through departments of education, starting at

the state level and progressing downward through the county and municipal departments, so that all the levels of the educational establishment are being involved to varying degrees in the surveillance and control of communicable diseases. Most of the cases of measles are reported by the school systems. When cases of measles are reported, representatives of the Vaccination Assistance Project attempt to have surveys conducted to determine the level of measles immunization within such school systems. Those school systems showing significant lack of protection are urged to conduct immunization campaigns. Many such campaigns have been conducted during this year.

New Jersey began the current year with an estimated 300,000 children who were susceptible to measles out of a base population in the one to nine year age range of 1.2 million children. During the year, 129,555 doses of measles vaccine were distributed through the biological station network.

The staff was involved in the immunization of 22,836 children in special community programs and in child health clinics of the Maternal and Child Health Program. An additional 106,719 doses of measles vaccine were distributed to local public health departments and to private practitioners of medicine. An additional unknown amount of measles vaccine was, of course, purchased and used directly by private physicians. The impact of this effort is partially reflected by reported morbidity. There were 625 cases of measles reported this year as compared to 2,090 cases reported for the year 1966. This reduction occurred despite improved reporting of disease.

In July, Assembly Bill No. 480 was signed into law. This law enables the board of education of any school district to require all pupils to have received immunization against poliomyelitis or measles, or both, as a prerequisite to attendance at school. Project personnel have urged boards of education to institute this requirement.

The surveillance system initiated a year ago to encourage prompt reporting of measles morbidity has been implemented to provide close working relationships with school health personnel and has been expanded to include mumps morbidity in the current year.

Early in the year, a mass measles immunization program was conducted for epidemic control in the City of Camden. A saturation approach was made to reach and motivate persons in the poverty areas of the city. These included involvement of various community organizations, including the local Office of Economic Opportunity, and college students, all used in door-to-door canvassing. Two thousand seven hundred and sixteen susceptible lower elementary school children were immunized in the first phase of the program

and 2,126 pre-school children children were immunized in a Sunday community program.

Personnel of the Vaccination Assistance Project have been instrumental in the stimulation of many measles immunization programs throughout the state. These are listed below.

Table 1. Special Community Measles Campaigns
January 1, 1967 to December 31, 1967

Counties	Number Age 1 thru 5 Immunized	Number Age 6 thru 12 Immunized	Total Immunized 1 thru 12
Atlantic	103	94	197
Bergen	...	...	...
Burlington	146	613	759
Camden	356	2,814	3,170
Cape May	115	136	251
Cumberland	780	735	1,515
Essex	279	55	334
Gloucester	572	148	720
Hudson	...	...	...
Hunterdon	...	...	...
Mercer	348	1,152	1,500
Middlesex	561	1,050	1,611
Monmouth	379	369	748
Morris	319	528	847
Ocean	9	45	54
Passaic	65	255	320
Salem	249	101	350
Somerset	447	689	1,136
Sussex	26	44	70
Union	38	152	190
Warren	256	380	636

An initial Infant Immunization Maintenance Program pilot project was established in East Orange, New Jersey. Initial mailings were made on July 1 to the parents of children born since January 1, 1967. These children will receive an initial plastic immunization record card and will be followed periodically until they reach the age of 18 months at which time a permanent record will be issued on each child who has completed the basic immunization series. A central registry of information will be kept at the East Orange Board of Health.

During the project year, 369,240 doses of poliomyelitis vaccine were distributed through the department's biologics distributing system. Emphasis

was placed in the program on reaching children in the Head Start programs, particularly in Newark and southern New Jersey.

Using summer medical student trainees, a modest poliomyelitis susceptibility survey for children under five years of age was completed in Paterson. Working with Office of Economic Opportunity neighborhood counselors, a program was established to immunize children in this community during 1968.

Table 2. Poliomyelitis Immunization Survey of Children Under 5 Years of Age
Target Area: Low Socio Economic Population, Paterson, New Jersey

Sample	Number	IMMUNIZATION: None	Trivalent and/or Injections: 1	2	More	Not Sure	Source: MD	Health Services
Under 1	22	16	2	4	..	..	1	5
1-2	40	26	4	4	4	2	5	7
2-3	41	25	2	6	7	1	5	10
3-4	41	16	3	9	11	2	6	17
4-5	35	9	2	7	12	5	5	16
Total	179	92	13	30	34	10	22	55

Above information obtained August 17, 1967.

During the year, 429,375 doses of DPT vaccine was distributed to physicians, Child Health Conferences, and local health departments through the biologics program of the State Health Department.

Venereal Disease Control Program

I. *Morbidity*

A. *Syphilis*

For the fifth consecutive year, the reported incidence of infectious syphilis declined. During 1967, 600 cases of primary and secondary syphilis were reported from among the civilian population. This represents a decrease of 14.2 percent over the 704 cases reported during 1966.

The number of early latent syphilis cases reported also declined. During the year, 408 cases were reported, a decrease of 21.8 percent over the 522 cases reported during the previous year.

Of the 142 cases of congenital syphilis reported, 13 were less than one year old. The remaining 129 cases were at least 10 years

of age. By comparison, during 1966 there were 117 cases of congenital syphilis reported, six of which were less than one year of age.

The total number of syphilis cases reported increased 2.6 percent to 3,829 cases from 3,731 cases reported during the previous year.

In New Jersey, the reported syphilis morbidity from military installations declined during the year. A total of 14 cases was reported including 10 infectious cases, one early latent case, and three late latent cases. By comparison, during the previous year a total of 20 cases was reported, 17 infectious and three early latent.

B. *Gonorrhea*

The reported incidence of gonorrhea continued to rise during 1967, 6,173 cases being reported from among the civilian population. This total represents a 42.5 percent increase over the 4,327 cases reported during the previous year.

Military posts reported 904 cases of gonorrhea, an increase of 297 cases (47.3 percent) over the 627 cases reported for 1966.

C. *Trends*

The continued decline of early infectious syphilis represents a decrease of almost 50 percent over a five-year period (1,191 cases were reported in 1962, 600 in 1967). Concurrently, for the fourth time in the last six years and for the third consecutive year, the reported incidence of early latent syphilis (recently infectious syphilis) also declined. The 408 cases reported in 1967 is 47.3 percent of the 1962 total of 864 cases. The 408 cases of early latent syphilis is the lowest one-year total ever recorded in New Jersey.

The primary program emphasis continues to be upon the practical eradication of syphilis. Practical eradication implies that all cases occurring within the state will be traceable directly or indirectly to external sources. Essential prerequisites to achieving such an objective are the ability to sustain a favorable ratio of infectious syphilis over early latent syphilis and the ability to reduce the actual and reported incidence of early syphilis cases. In 1967, as has been the case in recent years, the program has effectively satisfied both criteria.

After four consecutive years of decline, the total reported syphilis morbidity increased by 98 cases, a gain of 2.6 percent. Since most of the increase is in the late latent and late syphilis categories (cases

of considerable duration) the rise is not considered a reflection upon current control efforts. Instead, the increase is attributable primarily to improved surveillance procedures which are bringing to medical attention a larger number of persons from the existing reservoir of syphilis within the state.

For the first time since 1947, the number of reported cases of gonorrhea exceeded 6,000 cases. During 1967, there were 6,173 cases reported, an increase of 1,846 cases (42.5 percent) over the 4,327 cases reported during the previous year. The onset of the current trend began in 1962 when 3,557 cases were reported. Since that time, there has been a steady rise in the number of reported cases climaxed by the dramatic increase in 1967. The cities of Newark and Elizabeth contributed to most of the increase. The former reported 3,423 cases, an increase of 1,089 over the 1966 total of 2,334 cases. The latter reported 307 cases versus 166 in 1966, for an increase of 85 percent. It must be mentioned that an improved and considerably more effective gonorrhea control program in Newark, which greatly increases gonorrhea reportings and case findings, is probably responsible for most of the apparent increased morbidity in that city.

II. *Program Activity*

A. *Primary and Secondary Syphilis Epidemiology*

A concerted effort was made to apply the most advanced epidemiologic techniques to each known case of infectious or recently infectious syphilis. These cases were divided into three groups and are listed in priority order as follows:

(1) Primary and secondary syphilis—600 cases, (2) early latent syphilis (less than one year's duration)—266 cases, and (3) early latent syphilis (between one and four year's duration)—142 cases. In addition to the above, military installations contributed 10 cases of primary and secondary syphilis and one case of early latent syphilis of less than one year's duration.

Epidemiologic investigation, as the term is commonly used in venereal disease control, refers to the elucidation of additional cases of venereal disease through case-finding methods applied to an index case. Such investigation is essential in the control of syphilis. Patients with syphilis are interviewed and identifying and locating information is obtained about contacts and suspects to the given infection. These persons are then contacted and are advised in a confidential manner

to seek competent medical attention. The primary purpose of this activity is to bring the source of the infection in question, and any spread cases that may have resulted, to treatment.

The following are indices of the quantity and quality of epidemiology performed:

1. Interviewing: In 1967, 610 cases of infectious syphilis were available for epidemiologic follow-up. A total of 589 (96.5 percent) of these cases was interviewed. Over 95 percent were interviewed two or more times. This interviewing activity yielded 1,438 contacts, 558 suspects, and 356 associates which were assigned for field follow-up.
2. Field investigation: Field follow-up was performed on 2,352 contacts, suspects and associates obtained during the interviewing process. Follow-up was also done on investigative reports referred to this department from out-of-state health jurisdictions. There were 1,708 suspects located and brought to medical attention, resulting in 222 cases of syphilis brought to treatment. Of this total, 137 were primary or secondary syphilis cases, and 75 were early latent syphilis cases of less than one year's duration.

B. *Early Latent Syphilis Epidemiology*

A total of 408 civilian cases of early latent syphilis was available for epidemiologic follow-up. Of this number, 266 cases were determined to be of a probable duration of less than one year. The remaining 142 cases were considered to be between one and four years' duration. Military installations contributed two cases of early latent syphilis of less than one year's duration.

Epidemiologic investigation of the 266 cases of early latent syphilis of less than one year's duration was as thorough as the higher priority primary and secondary syphilis cases. Two-hundred fifty-six, (95.5 percent), of the cases were interviewed and 95 percent were re-interviewed. There were 666 contacts and 311 suspects obtained. A total of 516 contacts and 237 suspects and associates was located and referred for medical examination. Seventy-three cases were brought to treatment, including 30 cases of primary and secondary syphilis and 42 cases of early latent syphilis.

The follow-up of the 142 cases of early latent syphilis of more than one year's duration was somewhat selective. One-hundred

twenty-one, (85 percent), of these cases were interviewed, and 93 percent were re-interviewed. The interviewing procedure yielded 258 contacts, and 52 suspects. One-hundred fifty contacts and 35 suspects were located and examined. The yield from this phase of activity was 77 cases, including five cases of primary and secondary syphilis and 10 cases of early latent syphilis.

It is program policy to encourage preventive treatment for all contacts to infectious syphilis who are negative on initial examination but who may be incubating the disease. Six hundred of such contacts to infectious syphilis met the criteria established for recommending prophylactic treatment, and 378 were treated. One hundred and eleven of 285 not infected contacts to early latent syphilis were also treated. It is conservatively estimated that 40 cases of syphilis were aborted as a result of this treatment.

C. *Congenital Syphilis Program*

During 1967, there was no significant change in the congenital syphilis picture. The incidence of new congenital syphilis was 13 cases as compared with the six cases reported a year earlier. However, the small number of cases involved minimized the significance of the increase because, with the exception of 1966, the number of reported cases of congenital syphilis less than one year of age has fluctuated between 10 and 20 cases.

The elimination of congenital syphilis is a valid, worthwhile, and attainable objective. This aspect of the program has been given the highest priority. The primary contributing cause of congenital syphilis is failure of the mother to seek and remain under competent prenatal care.

Congenital syphilis eradication embraces the responsibility to provide rapid and complete follow-up for all women in gestation known to be, or suspected of being, syphilitic, and babies and mothers known or suspected of being syphilitic. During 1967, 205 field investigations were concluded. Sixteen new cases were brought to treatment and two others were returned to treatment. In 38 instances, it was determined that the person being followed had been previously treated. One hundred and thirty-three were found to be not infected, and the remaining 16 investigations were closed because the case was referred to another health jurisdiction, or the family had moved and

left no forwarding address, or for other reasons. In each case, a diagnostic disposition could not be obtained.

A review of the reported incidence of congenital syphilis for 1967, those cases less than one year of age, suggests that lack of education continues to be the major deterrent to the elimination of congenital syphilis. In only one of the 13 cases of congenital syphilis less than one year of age did the mother receive prenatal care during the first three months of pregnancy. In this case, the mother was infected after the initial examination and the infection was not discovered until too late. In the other 12 cases, prenatal care, if any, was first received immediately prior to delivery. Adding to the tragedy was the fact that over 90 percent of the mothers had at least one prior pregnancy. Under the circumstances, surely the importance of early prenatal care must have been impressed upon each mother.

D. *Surveillance of Serologic Reactors*

1. Laboratory Visitation

During 1967, program personel made 327 visits to non public health laboratories. The purpose of these visits is to update data on the number of specimens tested, the reactor rate, and current venereal disease services offered by each laboratory.

1. Follow-up of Serologic Reactors.

During 1967, 11,656 reactive serologic test specimens were reported to this department for possible follow-up.

Voluntary dispositions were received on 682 reactive specimens, and 2,501 were closed after contact (by letter or by telephone) with the attending physician. Field investigation was necessary to obtain dispositions on 2,828 serologic reactors. The remaining reactors were closed for administrative reasons or after searching existing records. It should be mentioned that all reactive reports are first checked against existing records to minimize and if possible eliminate unnecessary follow-up activity.

The morbidity yield from serologic reactor follow-up continues to be good. The program brought to treatment 1,598 cases of syphilis through the reactor follow-up program. This represents 41.7 percent of the total statewide reported morbidity. Included in this total were 153 cases of primary and secondary syphilis, and 191 cases of early latent syphilis.

3. Physician Visitation

During 1967, 574 physicians were visited. During 1962-1965, a concerted effort was made to familiarize each physician in the state with the Venereal Disease Control Program objectives, the services offered by the department, and to enlist physician cooperation in the control effort. During 1967, routine visitation was limited almost exclusively to physicians newly licensed to practice in New Jersey. All other visits were made on an as indicated basis, usually to discuss a specific problem that had arisen, or to secure permission for epidemiologic follow-up.

E. *Information and Education*

Information and education activity continued to be an important part of the venereal disease control effort.

The venereal disease program has six films (a total of 64 prints) available for public use. The primary users of these films are schools, parent-teacher groups, and civic organizations. Altogether, there were 1,527 showings before a total audience of 78,464 persons. The three most popular of all health films in terms of number of showings and total audience viewing them were our films, "The Innocent Party," "A Quarter Million Teenagers," and "Dance Little Children."

Members of the staff participated in 229 venereal disease informational and educational programs. These presentations were made to groups of students, teachers, parents, student nurses, nurses, and physicians.

Two venereal disease workshops were held during the year. The purpose of these sessions was to provide teachers and school nurses with the information and confidence needed to handle the teaching of information about venereal disease in the classroom.

Approximately 12,000 pieces of venereal disease literature were distributed during the year. Information of this type was made available through booths at various functions, through pamphlet racks in public clinics, in a few physicians' offices, and in response to written requests to this department for information.

In the area of professional education, there was continued activity in the state's medical schools. In addition, articles were published in professional journals. Program physicians constantly provided consultation to individual physicians. The number of requests for con-

sultation has been increasing, and four calls per day are considered to be a conservative average at this time. As many as 15 calls have been received during one day.

III. *Training.*

All new field staff employees participated in an intensive four week orientation course. The first week was devoted to a general orientation at the program office and at the unit in which the employee would be working. Each employee attended a two-week course on venereal disease interviewing and contact investigation. The final week of orientation was devoted to on the job training.

All field staff personnel are required to be proficient in performing darkfield microscopic examinations. All new personnel and personnel not previously trained received training in this area. The course was conducted by personnel of State Health Department Laboratory assisted by Public Health Service, Communicable Disease Center staff personnel. The course was held at the State Health Department Laboratory in Trenton.

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.
Program Coordinator

Physical Therapy ..... SUSAN B. GLOCKE, B.A., P.T., M.A., M.P.H.
Program Coordinator

Public Health Nursing ..... JOHANNA E. KENNEDY, M.A.
Program Coordinator

Public Health Social Work ..... ADRIANE V. DUFFY, M.A.
Program Coordinator

Training ..... JOSEPH C. KALE
Training Officer

Division of Special Consultation Services

1967 was a year of continued change of direction and emphasis in public health—as we concentrated more money and time on comprehensive health care. Medicare, anticipation of the Medicaid program, comprehensive health planning, and health care for the urban poor have heavily involved the programs and personnel of this division.

The work accomplished in previous years has provided us with a solid base from which to move on today's issues of health care and health services. Details of these efforts are given in the program reports which follow.

Health Education Program

Trends and Developments

The most significant development has been the recognition of the needs for health information, attention to attitudes, and health behavior on a consumer basis. Action has been taken to meet some of these needs through the employment of health education personnel in five local health agencies in New Jersey.

At the end of 1964, only one qualified health educator was employed locally. Throughout 1967, five qualified health educators and one trainee were employed locally and three additional communities were actively recruiting for qualified personnel.

Significantly, the major employment of local health education personnel has been in the large population centers where the health needs of the people are basic, the problems manifest, and the solutions complex. Jersey City, Newark, East Orange, Camden, Paterson, Montclair, Trenton, and Bergen County are recruiting such personnel.

Funds for these positions were made available in 1967 through state health aid.

On a state level, personnel changes have also been significant. In 1964, in addition to the program coordinator, there were three consultants in the districts (one district position vacant) and three consultants in specific programs (Heart, Tuberculosis, and Migrant Health). At the end of 1967, there were four consultants in the districts (two of whom had been in specific program activity) and all of the specific program positions were vacant. An

additional position in the Cancer Program had been budgeted (1965), filed (1965), and vacated (1966).

It is important to note also that health education positions in voluntary health agencies had been vacated (although some are still budgeted) by the end of 1967.

The related significant development during the past three years has been the employment of a health educator in the State Department of Education and the increased employment of school health educators (bachelor's level positions) by local boards of education. In addition, a health education position was budgeted and filled in the Department of Institutions and Agencies.

Program

Consultation and guidance were provided in reviewing health education needs, activities and priorities with local and district health officers at "on site" conferences. Considerable time and effort were expended in recruiting and interviewing prospective qualified health educators for state and local positions.

In addition, a health education intern project has been designed to provide a meaningful and accredited work experience in local health departments in New Jersey for college students who may be interested in a health education career. This project will become operative in the spring of 1968.

There is increasing demand for professionally trained health education personnel but the supply is insufficient.

The state consultant in Community Health Organization as the tri-state representative to the Society of Public Health Educators recruitment committee worked with a regional committee as well as personnel in New Jersey in promoting health education careers.

The consultant worked with committees of the Society of Public Health Educators and of the American Public Health Association in conjunction with the National Commission on Accrediting to provide guidelines for colleges providing bachelor's and master's health education programs.

The demonstration project at the Presbyterian Unit, United Hospitals of Newark was seriously affected in November when the health educator resigned. A portion of the activities has been assumed by other hospital staff. There are plans for replacement of the educator and expansion of the program.

The Fourth Annual Health Education Workshop, held in the fall, related to comprehensive planning for health services. The efforts of the district consultant in the Metropolitan District were a major factor in the success of the workshop.

At the request of Hunterdon Medical Center School of Health, the state consultant organized a weekend conference in June for national leaders in medicine, health and education to plan focus of objectives and goals for the school. A report of the conference was prepared by the state consultant.

Education and Training

The state consultant participated in the regular courses for guidance counsellors at Seton Hall University by providing three sessions on community health resources throughout the year. In cooperation with the Central District consultant a State Health Department orientation for Rutgers University students was conducted.

A three-hour seminar on health education was provided for the sanitarians at the East Orange Field Training Unit, plus a health education session for members of the staff of Hackensack Hospital.

In cooperation with the New Jersey Society of School Physicians, the State Department of Education and the pediatric consultant of the Central District, assistance was provided in organizing and presenting a three-day program on school health at Rutgers—the State University. About 85 school physicians attended each of the three sessions.

In cooperation with the New Jersey Health Officers' Association and the Occupational Health Program, a one-day seminar on occupational health was organized and presented. This was held on June 14 at Johns-Manville Corporation, Manville. Eighty local health department personnel attended.

Assistance was provided within the department as follows:

Three sessions on communications for public health nursing in-service training.

Three sessions on communications for industrial nurse in-service training.

Two sessions on consultation skills for department staff.

One session on community health resources for dietetic interns.

One orientation session for new employees.

Educational Material

Consultation was provided in developing pamphlets for programs.

Numerous new materials from voluntary and official health agencies as well as commercial sources were reviewed and shared with appropriate program personnel. Recently released educational films were processed for previewing by program personnel.

Throughout the year, the state consultant worked with the Montclair State College Adult Resource Center, the pertinent programs, and the Department of Institutions and Agencies in the preparation of educational materials with health content for adults of low reading and writing abilities. Two pieces of material were prepared: 1) "Food for Your Family" (including a section on the Food Stamp Plan and a leader's guide); and 2) "Happiness is No More Measles."

In order to evaluate the first of these materials, a pilot project was initiated in three counties (Essex, Mercer, and Salem) in cooperation with the Rutgers University Extension Service, program and district personnel, and interested and representative county and local professional and indigenous groups.

This pamphlet was also distributed to all of the adult literary programs in the state as well as to all of the welfare personnel.

As a result of intensive work by the State Department of Education in cooperation with the State Departments of Health and Institutions and Agencies, the pamphlet "Drug Abuse—A Reference for Teachers" was made available and distributed in late spring.

New Jersey Health—Agricultural Library

The major activity of the library in 1967 was the cataloging of books and other library materials. Another highlight was the increased use of all library services, i.e., circulation, reference services, inter-library loan services, photocopying services. There was a noticeable decrease, however, in library acquisitions.

Acquisitions

During the year, 406 books were added to the collection: 274 by purchase, 132 by donation. Also received were 997 pamphlets and 38 new periodical titles. At the present rate of acquisitions, the library has enough stack space for three to five years.

The library's holdings now consist of more than 6,200 books, journals, and pamphlets. The following is a breakdown of the library's major holdings:

Books	3,120
Bound Periodicals	1,952
Pamphlets	1,140

Circulation

The circulation figures for 1967 were as follows: books, 488; periodicals, 1,866; pamphlets, 97; and indefinite loans, 45; total, 2,496.

Reference Service

A total of 264 reference questions was answered. The answers to these requests ranged in time span from a few minutes to several hours or longer.

Interlibrary Loan Service

There was a larger use of the interlibrary loan service in 1967 than in 1966. The items borrowed from other libraries rose from 163 in 1966 to 330 in 1967; the items loaned to other libraries rose from four in 1966 to 29 in 1967.

Photocopying Service

There was also a greater use of the photocopying service. The number of items photocopied increased from 50 in 1966 to 283 in 1967. Each article averaged six pages.

Cataloging

The library made excellent progress in the cataloging of library materials. A total of 2,405 items was cataloged: 961 pamphlets; 1,298 books; 146 serials. The employment of a cataloger for the summer helped to accelerate the work. During the months of July and August, a total of 525 books was cataloged.

The library also laid the ground work for the cataloging of books on indefinite loan by ordering Library of Congress printed catalog cards for each of the books in the office collections.

Statistical Comparison

The following is a statistical comparison of library services.

Table 1. LIBRARY SERVICES, 1967-1968

	1966	*1967*
Acquisitions		
Books	598	406
Pamphlets	1,113	997
New Subscriptions	35	38
Circulation		
Books	442	488
Pamphlets	80	97
Periodicals	2,738	1,866*
Indefinite Loans	181	45
Reference Service		
Reference Questions	313	264
Interlibrary loan Service		
Items borrowed from other libraries	163	330
Items loaned to other libraries	4	29
Photocopying Service		
Items photocopied	50	283
Cataloging		
Books	254	1,298
Pamphlets	179	961
Serials	40	146

* Prior to September 1966, new periodicals were charged out on an individual basis rather than by the present method of routing them to a list of names.

Personnel

The library staff consists of two full-time members. Two college students help the library on a part-time basis and a cataloger was employed for the summer of 1967.

Budget

The budget for the library was cut for the fiscal year 1968. Thus, it was necessary to drop a number of periodical titles and discontinue some standing orders for reference books. As a result, there was a decrease in the efficiency of the reference service.

Publications

During 1967, six issues of the *Selected List of Recent Acquisitions,* a subject listing of new books received, were published. These lists were distributed to the employees of the Health and Agriculture Departments and to the staff of the local libraries.

A periodical holdings list was prepared and circulated to a standard routing list. Designed as a quick reference aid for library users, the list indicated the range of holdings for journals and other serials currently received.

Library Cooperation

An exchange list of duplicate material was prepared and sent to the Medical Library Association for duplication and distribution to member libraries. Over 600 items were mailed to libraries in the United States and abroad.

The Health-Agriculture Library serves six hospital medical libraries in the Trenton area. As a specialized resource center, it provides them with books, articles, and documents which they request on interlibrary loan. The library also cooperated with these libraries in preparing a *Union List of Medical Journals in the Trenton, N. J., Area.*

Nutrition Program

While advances in nutrition have continued to help decrease nutritional deficiency diseases, there are many residents of New Jersey who are malnourished because of ignorance, poverty, poor food habits, disease, or a complex of such causes. Solutions to this type of malnutrition involve multiple approaches and many disciplines. Nutrition activities in 1967 were focused on the nutrition component of programs planned to meet the needs of the disadvantaged, consultation to extended care facilities for assistance in meeting the conditions of participation in Medicare, educational programs for professonal and sub-professional personnel, and implementing nutrition services under the State Health Aid Act.

State Health Aid

In keeping with the philosophy of coordination of nutrition services for most effective results, close working relationships have been established between the state and district nutrition program personnel and their counterparts employed in local and county health departments. Trenton and Jersey City Health Departments employed full-time public health nutritionists under the State Health Aid Act 1966. State Health Aid also led to part-time nutrition and diet counseling services in the Orange Health Department, and in Camden, Burlington, and Middlesex County Health Departments. Newark and

Camden expect to have full time services early in 1968. Nutrition program personnel provide assistance to health officers in recruitment and orientation of newly appointed nutrition personnel.

Medicare

The Medicare requirements of qualified dietary consultants to work in extended care facilities accentuated the need for recruiting and refresher training efforts for professional dietitians. In the Central District, there are 26 dietary consultants providing services to 36 extended care facilities.

Food Stamp Program

Food stamp programs have been set up in Mercer, Camden, Passaic, Ocean, Salem, Bergen, and Atlantic Counties. Nutrition program staff have worked with the representatives of the U. S. Department of Agriculture who direct the program throughout the state. Promoting the program through education of other agency personnel who have direct responsibility for persons who might be eligible for this program has been slow but is beginning to show results. A nutrition education committee was set up in Mercer County for the first food stamp program in New Jersey. The Central District nutrition consultant is the chairman of this committee which has wide representation from health, education and welfare agencies throughout the county. This committee has been investigating why people who would be eligible are not using the food stamps and has tried to overcome obstacles to participation. Education programs have also been sponsored by the committee for parents of children participating in Head Start programs and other community anti-poverty projects. In an effort to foster an understanding of the program, a food stamp poster contest was sponsored in cooperation with United Progress, Inc. (Trenton's Office of Economic Opportunity agency) and the Zonta Club of Trenton. Food stamp clubs with membership from the participants in food stamps have been initiated in Trenton and Camden in low-income areas. People not on welfare seem to stick with the program better than families eligible through welfare. A total of 30,000 persons participated in the eight county food stamp programs in November. This represented 7,300 to 7,400 households. The total value of the food stamps was $600,000 which represented a $200,000 increase in purchasing value for participating families.

Education Programs

The emphasis on improved health care and the increased availability of funds from federal and state sources has accentuated existing shortages of

dietary personnel at all levels. Nutrition Program personnel have been working with the Food Service Course Committee of the New Jersey Dietetic Association on problems relating to the training of sub-professional food service personnel. Twenty-five Mercer County residents representing nine health care institutions were the first graduates of a Food Service Supervisor Course held in the Vocational Division of Trenton Central High School. Plans were developed, also, for a two phase, on-the-job training experience for the students in local hospitals following their classroom instruction. The purpose of the course was to train supervisory food service personnel as well as provide a career ladder for non-professional food workers. The course was coordinated by the Central District consultant and had the endorsement of the Hospital Council of Mercer County, the New Jersey Dietetic Association, and the Trenton Board of Education. The state consultant served on the advisory committee.

A pilot correspondence course on food shopping for welfare case workers and public health nurses was offered in Camden, Mercer, Morris, and Union Counties. The course, consisting of six lessons, began in January and was completed in May 1967. It was offered by the food marketing specialist of the Extension Service, Rutgers—the State University, in cooperation with the Nutrition Program and Public Health Nursing Program. There were 181 individuals registered. The course was considered a success and explorations are under way for making the course available to additional groups. Modifications of the course for sub-professional groups and disadvantaged families (low reading levels) are being considered.

The Educational Director of the Dietetic Internship Program of the Bronx Veterans Administration Hospital requested an affiliation with the New Jersey State Department of Health for two weeks of field observation in community nutrition for 11 dietetic interns. The interns are graduates of colleges and universities throughout the United States. New Jersey is the first state to set up such an affiliation.

Two months of supervised field experience was provided a graduate student in public health nutrition from the University of North Carolina School of Public Health. Since graduation, she has returned to New Jersey and is now employed as the first full-time public health nutritionist with the Trenton City Health Department.

The state consultant was coordinator for the second four-day resident workshop on "The Role of Nutritionists and Dietitians in Medicare" offered by the Columbia University School of Public Health and Administration and sponsored by the New Jersey Dietetic Association, New Jersey Hospital

Association, and the New Jersey State Department of Health. The "share and compare" meetings for dietary consultants working in extended care facilities are a follow-up of these workshops.

The state consultant worked with the staff of the Adult Education Resource Center, Montclair State College, in developing a booklet "Food for Your Family—the Choice is Yours." This booklet has been prepared for use in adult literacy classes. Essex, Mercer, and Camden Counties have been selected as pilot areas in which the effectiveness of the booklet will be tested. A number of agencies working with disadvantaged adults will assist in evaluating the material.

Diet Counseling Services

Two in-service workshops on a state level were held for diet counselors offering diet counseling services. A contract for the 11th diet counseling service was completed in November. The new service is located at the Hunterdon Medical Center and will serve the entire county. In addition to direct services to private patients, many services have contracts with extended care facilities and home health agencies. In 1967, there were 1,993 individual patients served and 151 group sessions offered to a total of 1,999 patients. A total of 415 physicians used the services and 498 referrals came from local agencies. The diet orders most frequently prescribed by the physicians were sodium restriction, 36 percent; diabetic diets, 24 percent; and calorie restriction, blood, and ulcer diets, eight percent each. Fifty-six percent of the patients served were female. The Middlesex Diet Counseling service has a contract with the Middlesex Visiting Nurse Association and offers services to child health conferences in Piscataway, Madison Township, South Brunswick, Franklin Township, and Somerville.

Educational Materials Prepared

The revised edition of the *New Jersey State Diet Manual* was completed and copies are now available for the use of physicians, dietitians, nurses, and food service supervisors in hospitals, extended care facilities, and other institutions.

Four popular leaflets have been revised: "Food for Growing Up," "Food for School Agers," "Food for the Teenage Girl," and "Feeding Older Folks."

Materials and bibliographies have been prepared for diet counselors and dietitians working in extended care facilities.

The state consultant has served on the Executive Board of the New Jersey Public Health Association as chairman of the Nutrition Committee.

The state consultant was elected chairman of the nominating committee of the Food and Nutrition Section of the American Public Health Association at the annual meeting in Miami, Florida.

The Nutrition Consultant with the Division of Chronic Illness was installed as president of the New Jersey Dietetic Association.

Physical Therapy Program

In the past four years, there has been a continual increase in demand for consultative services from the department's Physical Therapy Program. With the implementation of Public Law 8997 (Medicare), community home health agencies have become increasingly aware of the value of including physical therapy as one of their agency disciplines.

Parallel with this has been an increased need to develop educational programs that will lead to better working relationships between physical therapists and other paramedical disciplines.

Major emphasis in the past year has been placed on providing consultation to local agencies and assisting in the development of educational seminars and institutes for physical therapists.

Following are the highlights of the Physical Therapy Program:

Consultation

In the past year, the state consultant has provided, upon request, consultation to the 47 home health agencies already offering physical therapy as an agency service and assisted six additional home health agencies in developing physical therapy policies and procedures in preparation for the inclusion of a physical therapy program as an additional agency service.

The consultant, at the request of the New Jersey Chapter of the American Physical Therapy Association, acted as liaison between their recruitment, education, and physical therapy aide committees. The consultant provided consultation to the recruitment committee relative to the development of Physical Therapy Recruitment Week in Trenton and the planning and staffing of a recruitment booth at the annual State Teachers Convention. The state consultant attended the educational committee meetings and assisted the committee in planning educational programs for physical therapists in New Jersey.

The state consultant has worked closely with the Physical Therapy Aide Advisory Committee and with the consultant from the Vocational Division of Education. It was the decision of the committee, in conjunction with con-

sultation from the Vocational Division of Education Consultant, that the present course of action for training of physical therapy aides would be best accomplished by potential aides being trained in a core course training health aides developed by the Division of Vocational Education. This would be followed by specific on-the-job training at the location where they will be employed.

The state consultant provided consultation relative to the planning for the rehabilitation facilities and training of rehabilitation personnel for the proposed Trenton Model City Health Center.

Educational Programs

With the growth of physical therapy services in the state, there has come an increased need for educational seminars, institutes, and inter-discipline in-service programs. The state consultant, in cooperation with the Public Health Nurse Consultant in Chronic Illness Control, assisted in the development of two workshops on arthritis for nurses, physical therapists, and occupational therapists and one workshop on chronic respiratory diseases for nurses and physical therapists. The workshops on arthritis were concerned with the general management of the arthritic and included diagnosis, drug management, nursing, and physical therapy techniques, as well as demonstration of devices that can be used in the care of the arthritic patient. The workshop on chronic respiratory diseases included background information on the care of the cystic fibrosis, asthmatic, and emphysema patients, with some instruction in the use of the inhalation positive pressure breathing machine.

The state consultant, in cooperation with the New Jersey Chapter of the American Physical Therapy Association and the Columbia University School of Public Health and Administrative Medicine, coordinated two weekend institutes on "The Role of the Physical Therapist and Medicare Services." The purpose of these two institutes was to educate physical therapists in their new role of consultation supervision, in order that they may meet the increasing demands for physical therapy services which have developed under Medicare. Sixty Medicare qualified physical therapists participated in these two institutes.

The state consultant has visited several schools in the state and has expressed interest in seeing a physical therapy school develop.

Nursing Program

Every resident of New Jersey now has nursing care services available in his home. Not only are these services available, but every effort has been made to assure good quality services at reasonable cost.

In addition to nursing services, the local official and voluntary agencies have rapidly expanded their programs to provide additional services such as homemaker-home health aide, physical therapy, and social work services through contracts with existing local resources. This has been a year of remarkable growth and strengthening of the whole range of home health services that are provided to meet the health needs of the homebound patients of this state.

The following achievements in developing and strengthening nursing services are noteworthy:

a. One new county-wide agency was started, under the county board of freeholders, with financial support and assistance from the department.

b. Six small agencies gave up their individual identities to become part of larger administrative units.

c. Three agencies negotiated contracts for the first time with adjacent agencies for purchasing qualified nursing direction and supervision.

d. The nursing services of three city health departments were added to the list of those now receiving the benefits of qualified nursing direction.

e. A county health department employed a nurse coordinator to improve the efficiency, productivity, and quality of services provided by more than 200 locally employed nurses in that county.

f. Ten agencies have contracts with the department for developing or expanding services. This is a considerable reduction in aid from previous years and is a result of the large sums of "new" money that became available to community nursing agencies through participation in Medicare and under state health aid.

Governor's Task Force on Nursing

The Governor's Task Force on Nursing, under the chairmanship of the State Commissioner of Health, with staff work done by personnel of the Nursing Program, reviewed a proposed master plan for nursing education

in New Jersey. This plan was subsequently submitted to a special committee for more study and for a report on recommendations for Task Force consideration. This report is anticipated by the end of January 1968.

The task force reports the following progress in nurse recruitment and education:

a. The refresher training program for inactive nurses, under the sponsorship of the New Jersey Hospital Association and conducted with Manpower Training Funds, was continued for the third year. The program retrained 239 inactive nurses in 1967, bringing the three year total over 800. This program has returned more than 500 nurses to the active labor force.

b. The two four-year baccalaureate programs for nurses at Trenton State College and Paterson State College, that were started in 1966, doubled their admissions in 1967. Two of the three community colleges that were started in 1966 increased their enrollments. In addition, the Atlantic County Community College initiated an associate degree program for nurses, with an enrollment of 28 students, including four men.

Inactive Health Personnel Project

The department negotiated a contract with the Division of Nursing, Bureau of Health Manpower, Department of Health, Education and Welfare, to employ a nurse coordinator whose major responsibility is to assist in the return of inactive health professionals to active employment. The initial emphasis is on the more than 11,000 inactive professional nurses in New Jersey. This project will continue to the end of June 1968.

Educational Programs

The need for continuation of the short-term training course for nurses employed in public health agencies became even more apparent during 1967 as agencies added staff to meet increased service demands. Eighty-six nurses employed by voluntary and official nursing agencies throughout the state attended four in-service training courses conducted by the department. These courses continue to be oversubscribed, and comments from the local agency directors indicate that nurses who have taken the course have demonstrated improved understanding of their responsibilities and improved patient service.

The first in-service training course for nurses employed in industry was started in April 1967. This also was most successful, resulting in a second course in the fall. A total of 42 occupational health nurses from 35 industries and from local and state government completed this course.

Ninety-two nurses attended the cancer education program sponsored by this department in cooperation with the United Hospitals of Newark, Presbyterian Hospital. Since the inception of this educational program 10 years ago, more than 1,000 nurses from hospitals, industry, and public health have had an opportunity to observe the latest diagnostic and therapeutic techniques in cancer and their nursing implications.

Fifty public health nurses attended educational programs conducted at Marlboro, Trenton, and Ancora state hospitals to acquaint them with policies and latest treatment methods, in an effort to assist in the follow-up care of discharged psychiatric patients. Each state hospital now has money in its budget to pay for public health nursing visits for discharged patients.

The second annual workshop for directors of home health agencies was held in Princeton, with an attendance of 55 persons from 35 New Jersey agencies, representatives of Public Health Service, National League for Nursing, and selected staff from the department. The proceedings of the workshop were published in the November 1967 issue of *Public Health News* and requests for additional copies have been received from all parts of the country.

With assistance from this department, the Rutgers University, School of Nursing conducted six four-week courses in coronary care for registered nurses. Sixty-four nurses completed this course. One and two-week coronary care courses were conducted in two hospitals in cooperation with this department; 150 nurses completed the course. Over 500 nurses in leadership positions attended the one-day course in external cardio-pulmonary resuscitation at Pollack Hospital, Jersey City.

The Nursing Program, in cooperation with a local agency, provided field training for a graduate student from the University of Pittsburgh and assisted this nurse in finding suitable employment in New Jersey.

In order to assist the new collegiate programs to meet their faculty needs, three members of the department's nursing staff have accepted faculty appointments for evening classes. Other members of the staff are being used as guest instructors on specific program areas in which they are specialists. Two members of the staff are serving on the advisory committee of two community colleges.

The nursing consultants provided in-service educational programs to nurses in hospitals, nursing homes and public health nursing agencies as follows:

	1965	1966	1967
Programs	152	135	245
Attendance	3,285	5,231	4,752

Speeches to professional and citizen groups:

	1965	1966	1967
Speeches	21	20	17
Attendance	1,310	1,907	2,278

Provision of Consultation Services

Nursing consultation visits showed an increase, due in part to filling the consultant vacancy in pediatrics and the addition of two consultants during the year for the Maternity Bed Utilization Project. During this same period, one consultant was on loan to the Public Health Service for six months and all consultants were involved in the increased educational programs.

Consultation Visits	1965	1966	1967
Official agencies	144	208	233
Voluntary agencies	258	203	255
District health offices	73	51	52
Hospitals	299	231	256
Nursing homes	21	7	12
Clinics	61	62	69
Industry	38	54	29
Universities and colleges	16	27	31
Schools (elementary and secondary)	...	15	25
Other	65	31	85
	875	889	1,047

Materials Developed and Revised

1. *A Selected Bibliography for Hospitals Supplement No. 3* was completed and printed.
2. The nursing section of the *Manual of Procedures—Crippled Children's Program* was revised.
3. The *Directory of Public Health Nursing Services in New Jersey* was revised and printed.

4. The flyer, *Nursing Consultation Services*, was revised and printed.
5. The proceedings of the workshop for directors of home health agencies were prepared and published.

The booklet prepared for the department under contract by the Rutgers Bureau of Economics, *A Guide for a Uniform Accounting System for Public Health Nursing Agencies*, has been in great demand throughout the state, the country, and Canada. It is presently undergoing minor revisions to conform to Medicare requirements.

Administrative Changes

Staff—Three nursing consultants were employed during the year:

1. Public Health Nurse Consultant, Pediatrics—to fill vacancy.
2. Public Health Nurse Consultants, Hospitals—newly created positions for Maternity Bed Utilization Project.

Title—The name of the Public Health Nursing Program was changed to Nursing Program.

Social Work Program

Medical Social Services in Hospitals

Four hospitals received grant-in-aid support during this year. These were Perth Amboy Hospital; Bridgeton Hospital; Jersey Shore Medical Center, Neptune; and Princeton Hospital. Of a total of six medical social workers employed in these hospitals, social services were provided to 2,360 new patients during 1967. A total of 6,804 interviews were held in the community, in patients' homes, with community health and welfare agencies, or with physicians. The number of professional social workers has shown a marked increase during 1967. Currently, 37 hospitals are employing qualified social work personnel.

Social Work Education

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.

A survey of seven years of experience in providing field work training indicates that 54 graduate students completing their two years of graduate

training provided 1,680 clock hours of case work service under supervision as part of their training.

In addition to the two full scholarships and three one-half scholarships provided through this department, students received scholarship stipends from the Veteran's Administration, Bureau of Children's Services, National institute of Mental Health, the Salvation Army, the Alcoholism Program of this department, the New York Foundling Hospital, and Los Angeles County Hospital, California.

Of the 54 students who received field work training while enrolled in the Graduate School of Social Work, 25 were employed following graduation in medical and psychiatric hospitals.

The Graduate School of Social Work, Rutgers—the State University has projected that by 1975, New Jersey with an estimated population of eight million people will require approximately 1,600 medical social workers to meet current needs.

A new type of field work experience was offered this year at Hunterdon Medical Center for two graduate students related to the public health setting.

Summer Experience in Social Work

This department has continued support of this project, in cooperation with 30 participating health and welfare agencies in this state. A total of 664 inquiries was received this year from undergraduate students, 66 of whom were men and 402 women, representing 134 colleges. The 30 participating agencies employed 112 students during the summer months in an effort to interest them in professional social work as a career.

During 1967, a follow-up study was undertaken by the board of this project. From 1963 to 1966, as a result of this practical introduction to a social work career, 32 undergraduate students had entered a graduate school of social work for advanced study. In addition, 62 were working full-time in the social welfare field, and four were employed part-time. Forty-four other undergraduates had indicated that the summer work experience had been instrumental in guiding their choice of career into the field of social work.

The state consultant served on the Board of the Summer Experience in Social Work during this year. In spite of its limited resources, this small part-time agency has provided valuable on-the-job training for young people who wish to select a career in community service. Unfortunately, a lack of funds has severely limited the number of employment opportunities in hospital and health-related facilities.

Volunteer Friendly Visitors

Over the past five years, the Volunteer Friendly Visitor Project has trained 1,125 volunteer friendly visitors in 36 training courses. Volunteers have given 15,650 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 in two training courses at Perth Amboy Hospital. The first training course for teenage volunteers was held in this community hospital.

Volunteer Friendly Visitors are now providing community services to the home-bound chronically ill, aging and socially isolated in county hospitals, nursing homes, public housing projects, affiliated meals on wheels programs, and in conjunction with homemaker-home health aide services.

Visiting Homemaker-Home Health Aide

In cooperation with the Division of Chronic Illness and the Visiting Homemaker Association, Inc., the state consultant has continued to participate in the program for training of homemaker-home health aides. Thirty-eight 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. There were 741 persons trained as homemaker-home health aides.

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. In addition, the state consultant has served as a member of the personnel committee of the association.

New Jersey Welfare Council Committee on "Guidelines to the Ability to Pay for Health and Social Services"

The state consultant has continued to serve as chairman of the New Jersey Welfare Council statewide committee for revision of the manual on *Guidelines to the Ability to Pay for Health and Social Services.* It is anticipated that this manual will be published during 1968.

Training Program

In all areas of our society, the emerging role of the health professional and his relationship to our environment is creating serious demands on the capacities and resources of all public health officials. The effectiveness with

which he reacts to these challenges is directly related to the skills he applies to each of these problems.

The purpose of the Training Program is to assist all employees in perfecting these skills, to obtain maximum efficiency in their present capacities, and to develop and stimulate their interest and participation in additional professional growth and development.

Significant Achievements

The Public Health Council adopted new qualifications for Sanitary Inspector, First Grade and Sanitary Inspector, Second Grade which became effective July 1, 1967. The minimum educational requirement was increased to two years of college with satisfactory completion of at least 60 credit hours, including credits in the biological and/or physical sciences. In addition, each First Grade applicant must successfully complete both the basic environmental sanitation course, at Rutgers—the State University and the field training course, as designated by the State Department of Health. The Second Grade applicants must successfully complete the basic environmental sanitation course.

Simultaneously, Rutgers University Extension Division relinquished responsibility to administer the basic environmental sanitation course and other short courses to the College of Agriculture and Environmental Science. The college appointed an associate professor to revise the basic environmental sanitation course and direct the upgrading of all general sanitation educational activities in New Jersey. His experience in the fields of sanitarian training and education is especially suited to this task. A four-year undergraduate curriculum in environmental health will be developed to educate professional sanitarians. To assist the college in this transition, a senior sanitarian has been assigned to coordinate the environmental sanitation training with the college.

A Field Training Course has been developed by this department in consultation with the College of Agriculture and Environmental Science and the assistance of the ad hoc "Planning Committee for Field Training Course." Several consultants from the U. S. Public Health Service met with a group of training specialists, educators, and representatives from the State Department of Health and local health departments to devolp this course. Twenty-one sanitary inspector trainees completed the basic environmental sanitation course and the supervised field training in six local health departments which had been designated as field training centers. The approved six-week course was generalized to include all the environmental sanitation programs specified

in "New Jersey Certified Health Services; Personnel and Program Standards" (revised June, 1967), LHS-D5, July, 1967.

The field training station at East Orange Health Department that provided in-service training to new and to experienced sanitary inspectors since 1962 was phased out at the conclusion of the last class.

Our addition of a senior sanitarian to coordinate environmental sanitation training has expanded the programs jointly sponsored by the department and the New Jersey Health Officers Association, New Jersey Association of Sanitarians, and the United States Public Health Service. During the past year, training conferences were conducted in the following areas:

1. Planning food service management training
2. Comprehensive state and area-wide health planning
3. Occupational health for health officers
4. How to breed rats, mice and roaches
5. State aid-certified health services
6. Food sanitation institute

Table 1. Professional Training Activities
January 1, 1967 - December 31, 1967

Number of applications processed	155
Number of applications disapproved or cancelled	10
Master's degrees received 1966-67	2

Table 2. Education and Training Activities
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Division of Administration		
Orientation Course for Departmental Seasonal Personal	July	47
Orientation Course for Departmental Personnel	March 2	67
Telephone Operators Course	June	41
Supervisory Principles and Techniques	April	11
Speed Reading	May	3
Safety Training for Departmental Personnel	March 6-9	43
Management In-Basket Techniques	November	1
Management Orientation Seminar	June	3
Civil Defense Survival Training	Monthly	156

Table 2. EDUCATION AND TRAINING ACTIVITIES—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Effective Listening	December 19	11
Labor Relations and Theory Practice	January	2
Division of Chronic Illness Control		
Workshop—Diabetes Detection and Education	February	20
Conference—Diabetes High Risk Screening—Morristown Memorial Hospital	February	14
Symposium—Oxford Massachusetts—Revisited "Diabetes Detection Over Past Two Decades"	May	7
Workshop—Salem City Diabetes Research Project	May	24
Seminar—Diabetes Training Sessions (2) Industrial Nurses	June	42
Conference—Diabetes Detection for Nurses	October	110
Workshop—Training In Diabetes Control	October	15
Symposium—"Basic and Clinical Concepts of Diabetic Neuropathy"	November	60
Conferences—(10) Salem, N. J. Research Project	November	100
Workshop—Arthritis, Kessler Instsitute, West Orange, Nurses and Physical Therapists	May 17	30
Conference—"Arthritis Treatment" at Monmouth Medical Center for Physical Therapists	October 25	45
Institute—"Effective Techniques for Helping Alcoholics and Their Families"	October 3	60
Workshop—(3) "Alcoholism Control Program" —Montclair, Jersey City, Glassboro	June 20 July 20 August 7	70
Seminar—"Acute and Chronic Care of the Alcoholic," Muhlenberg Hospital and Middlesex General	April 25 February 14	26 30
Workshop—Cytotechnician—Presbyterian Hospital	June	8
Conferences—(19) Black-Stevenson Clinical Observation Program for Nurses	January to December	92
Seminar—N. J. Society of Pathologists	December	200
Seminar—"Therapy of Lymphomas: Chemotherapy vs. Radiation"	January 19	80
Seminar—"Gastrointestinal Malignancy," St. Peters Hospital, New Brunswick	March 8	30
Seminar—"Gastrointestinal Malignancy," Somerset Hospital, Somerville, N. J.	May 18	75

Table 2. EDUCATION AND TRAINING ACTIVITIES—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Division of Constructive Health		
Seminar—"Medical Emergencies in a Dental Office"	January 11	51
Seminar—"Management of Emergencies in a Dental Practice"	February 8 and 15	65
Symposium—"The School Dentist"	March 1	132
Conferences—(3) "Pediatric Dentistry—New Concepts In Pulp Treatment"	April 12, 19 and 26	48
Symposium—"Care of Cleft Palate Patient"	May 3	120
Conference—"Coagulation Defects," St. Francis Hospital	January 18	*
Conference—"Mental Retardation," St. Francis Hospital	February 15	*
Conference—"Genetics," St. Francis Hospital	March 29	*
Conference—"Congenital Heart Disease," St. Francis Hospital	April 12	*
Conference—"Congenital Defects in Metabolism," St. Francis Hospital	May 31	*
Conference—"Jaundice of the Newborn"	October 25	*
Seminar—Postgraduate Course for School Physicians, Rutgers University	April 12 and 19	*
Seminar—"Public Health Nursing Responsibilities In Maternal and Child Health"	March 14 March 15	20 20
Seminar—"Public Health Nursing Responsibilities In Maternal and Newborn Care"	March 21	21
Seminar—"Public Health Nursing Responsibilities In Infant and Preschool Child"	March 22	23
Seminar—"Phenylketonuria"	February 6 March 8	5 11
Conference—"Accident Prevention"	September 11	30
Symposium—"Lead Poisoning," St. Joseph's Hospital, Paterson	October 5	70
Lecture—"Poisoning" Burlington County Homemakers	October 24	100
Conference—"Accident Prevention," Woodbridge, New Jersey Health Department	December 8	10
In-Service Training Course for Nurses on "Poisoning" at Jersey Shore Medical Center	December 15	100

* Figures not available

Table 2. Education and Training Activities—Continued
January 1 - December 31, 1967

Activity	Date	No. Participants
Office of the Director		
Field Training Station for Environmental Health Personnel	January to December	4
Annual Conference of State and Local Health Officials of New Jersey	March 30-31	401
Basic Environmental Sanitation Course, Rutgers, New Jersey	June 6	21
Plumbing Regulation and Inspection Course, Rutgers, New Jersey	September 9	32
Institute—Planning Food Service Management Training	May 28-30	100
Institute—Certified Health Services State Aid	May 16-17	75
Conference—Advanced Waste Treatment Operators Federal Water Pollution Control Board	December 5	8
Food Service Management Training Course, Bloomfield, Bellmawr and New Brunswick	November 28-30	100
Conference—"Role of Pharmacist in Disaster"	May	120
Conference—Role of the Nurse in Disaster,		
Rutgers School of Nursing	May	35
Seton Hall School of Nursing	February	35
Helene Fuld School of Nursing	July	60
Orange Memorial School of Nursing	October	35
St. Francis School of Nursing	May	50
Conference—Comprehensive Health Planning	July 10, 14 and 18	120
	July 21, 22, and 28	120
	July 28-29	80
	September 8, 15 and 22	120
Division of Special Consultation Services		
Application of Public Health Law	March 9 to May 23	40
Oral and Written Communication In The Health Department	March 7 to May 23	16
Institute—Comprehensive State and Area-Wide Health Planning	January 24-27	75
Institute—Occupational Health for Health Officers	January 14	65
Conference—Community Health Resources, Seton Hall University	January 3	70
	May 9	35
	May 11	40
Orientation—Hackensack Hospital, Professional Staff	February 16	45

Table 2. Education and Training Activities—Continued
January 1 - December 31, 1967

Activity	Date	No. Participants
In-Service Training in Consultation Skills, Public Health Nurses	October 3	10
Conference—Community Health Resources, Dietetic Interns	October 16	12
Orientation—University of California, Health Education Student	August 8	1
Conference—"Role of Physical Therapist in Medicare"	January 13-15	35
	February 3-5	35
	September 8-10	26
	September 22-24	26
Seminar—"Arthritis" for Nurses and Physical Therapists	May 17	35
	October 25	35
Workshop—Chronic Respiratory Diseases	November 13	38
In-Service Training for Public Health Nurses	February 28	20
	April 18	20
	September 6	24
	October 31	22
Orientation to Industrial and Community Nursing	April 27	20
	September 14	22
Seminar—Cancer Detection (19 Sessions) United Hospitals of Newark	January to December	92
Workshop—Nursing Directors of Home Health Agencies	March 13-15	55
External Cardio-Pulmonary Resuscitation Courses, Pollack Hospital (12 Sessions)	January to December	500
In-Service Training to Nurses in hospitals, nursing homes and nursing agencies	January to December	4,752
Seminar—School Health Programs, New Jersey Society of School Physicians	April 12, 19 and 26	80
Division of Environmental Health		
Symposium—"How to Breed Rats, Mice and Roaches"	December 7	210
Institute on "Food Sanitation"	October 3-4	280
"Current Trends in Housing Inspection," Rutgers University	April 19	30
Conference—N. J. Shellfish Control Program "Supervision and Control of the Shellfish Industry"	April 5-7	50
Conference—North Jersey Water Superintendents	January	35

Table 2. Education and Training Activities—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Seminars—"Standards of Water Quality"	February	70
"Legal Requirements"	April	70
"Pretreatment and Filtration"	May	70
Seminar—Water Pollution and Water Treatment —Newark College of Engineering	March	200
Orientation—New Jersey Water Treatment Installations for Personnel of Flyde Water Board, England	June	1
Conference—American Water Works Association—"New Legal Requirements Concerning Public Water Supplies in New Jersey"	October	200
Seminar—"Supermarket Management," Rutgers University	December 12	100
Conference—"Radiological Emergencies"	November 4	140
	November 11	163
	December 13	61
Conference—"Public Exposures to X-Ray"	December 5	16
Conference—Radiation Detection Equipment	December 21	150
Seminar—Atlantic City Cooks and Bakers School—Economic Opportunities Act	March 29	90
Seminar—"Procedures for the Standarization and Certification of Food"	September 24-25	12
Principles of Housing Inspection	November 22	29
Division of Laboratories		
Workshop—Quality VDRL Procedure, Medical Technologists	March 10	30
	March 17	15
Workshop—Darkfield Microsopy, V.D. Investigators	April 10-11	9
Workshop—Qualitative and Quantitative, VDRL Procedures	December 11	11
Conference—American Society of Microbiologists	May 2	9
Workshop—General Medical Bacteriology	December 11-15	20
In-Service Training Fluorescent Antibody Techniques	June 12-15	3
Conference—Society Tropical Medicine and Hygiene	November 1	5
Workshops—Basic Blood Banking, N. J. Antibody Club	December 6	50
Seminar—N. J. Society of Pathologists	December 2	*
Workshop—Water Bacteriology	May 6-7	3

* Figures not available

Table 2. Education and Training Activities—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Division of Local Health Services		
Central District		
Conference—Public Health Planning	January 24	200
Job Corp Health Fair—Camp Kilmer, N. J.	April 18	200
Seminar—Community Health Organization, Trenton State College	July 26-28	25
Conference—Supervisors of Field Students, Rutgers University	October 24	30
Instsitute—Food Service C.D.C.	November 28	100
Conference—Graduate Nursing Students, Public Health	December 27	40
Conference—T. B. Control, Wayne Township Health Department	June 21	28
Food Service Supervisors Course	January to June	25
Seminar—"Role of Nutritionists and Dietitians In Medical Care Services"	March 21-22	31
	March 28-29	31
Workshop—Nutritionists and Diet Counselors	April 7	30
Seminar—"Role of the Dietary Counsultant In Extended Care Facilities"	September 28	14
Orientation—Dietetic Interns of V.A. Hospital, Bronx, New York	October 16-27	2
In-Service Training for Visiting Homemaker Service in "Diabetic and Low Sodium Diets"	October 24	40
Conference—"Effective Communication In Dietary Consultation"	November 18	14
In-Service Training for Industrial Nurses on "Social Aspects of Mental Health"	May 18	20
	October 19	24
Seminar—"Interstate Food Protection," Rutgers University	January 19	30
Seminar—"Migrant Labor Problems"	June 15	30
Orientation of Fort Dix Public Health Nurses	August 16	7
Conference—"Environmental Health and the Individual"—Trenton State College	December 4	39
Orientation—Senior Student Nurses of Mercer County in "Diabetes"	February 6	31
	April 3	31
Conference—"Public Health Nursing In the Community"—Jersey Shore Medical Center	April 4	30

Table 2. EDUCATION AND TRAINING ACTIVITIES—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Workshop—Tuberculosis—Convenant Presbyterian Church	September 21	100
Orientation of District Personnel to the Central State Health District	January 6	1
	June 6	1
	August 6	7
	December 13	1
Conference—Public Health Nursing Records	March 7	20
	May 2	20
	November 8	20
Metropolitan District		
Workshop—"Food Fads and Fallacies" State Consumers League	March 14	75
Conference—Nutritionists in Nursing and Boarding Homes	March 21-22	40
	March 28-29	
Lecture—"Food Choices in Good Nutrition"	May 4	25
Conference—"Low Sodium Diets" for heart patients	September 30	36
In-Service Training courses in Basic Nutrition Principles, Food Habits, Budgeting and Buying Skills—Nurses in Newark, New Jersey	December 13-14	44
	December 20-21	44
Northern District		
Conference—Evaluation of Health of Pre-School Children	January 12	20
Conference—"Planned Parenthood"	February 17	15
Workshop—"Smoking and Health" Cancer, Heart and TB Associations of Sussex County	April 11	20
Seminar—"Narcotics", Role of the Clergy in Counselling and Prevention	April 20	150
Orientation—Role of the State Health Department	April	35
Speakers Service and Consultation on Venereal Disease—School Nurses, Sussex County	May 22	100
Workshop—"Smoking and Health," Sussex County School Nurses Association	September 25	35
Conference—State Aid for Local Health Services, Social Workers Morris County	October 18	30
Seminar—"Health Careers," High School Journalists	October 18	125

Table 2. EDUCATION AND TRAINING ACTIVITIES—Continued
January 1 - December 31, 1967

Activity	*Date*	*No. Participants*
Conference—"Narcotics Prevention In Morris County"	November 27	20
Workshop—Teacher Education on "Heart Physiology"	November 20	60
Conference—Smoking and Health, Newton Women's Club	December 12	35
Conference—Sex Education for Nurses and Teachers	December 19	5
Southern District		
Workshop—"New Concepts In T.B. and Respiratory Disease Control"	October 25	200
Conference—"Safety In the Home" for Homemaker Development Program of Camden County Welfare Department	October 6	17
Conference—Role of Communications In Interagency	February 21	6
Orientation—"Salem City Project," Diabetes Staff	July 24	14
Conference—Public Health Nurse in non-public health	November 13	17
Seminar—TB Detection Techniques for Public Health Nurses	December 8	25

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