EIGHTY-EIGHTH ANNUAL REPORT

OF THE

Department of Health

OF THE

STATE OF NEW JERSEY

1965

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DEPARTMENT OF HEALTH

TRENTON, NEW JERSEY

To His Excellency, Governor Richard J. Hughes:

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

This is the Annual Report of the Department of Health of the calendar year 1965.

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 1965-1966

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

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

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

NELSON S. BUTERA ..... Morristown

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

MICHAEL S. KACHORSKY ..... Manville

ANTHONY P. MILLER, JR. ..... Pleasantville

(Vacancy)

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

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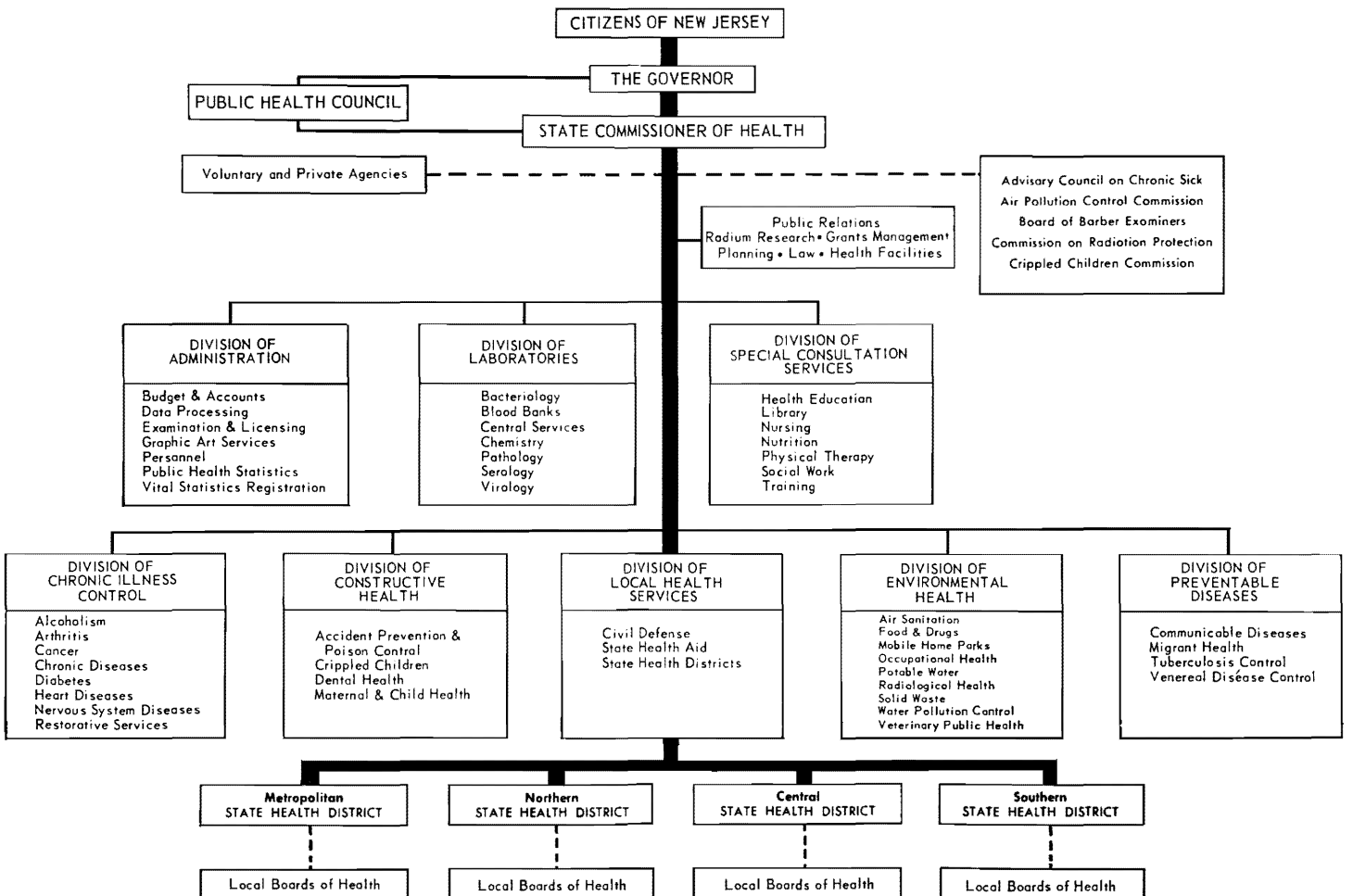
NEW JERSEY STATE DEPARTMENT OF HEALTH



Annual Meeting
Public Health Council

The annual meeting of the Public Health Council was held on July 12, 1965. The following officers were elected for the fiscal year beginning July 1, 1965 and ending June 30, 1966: Harry J. Robinson, M.D., chairman; Mrs. J. Duncan Pitney, vice-chairman; and John J. Cane, D.D.S., Secretary.

The membership of the Council was as follows:

	Address	*Term of Office Expiration Date*
Anthony P. Miller. Jr.	Pleasantville	June 30, 1966
John J. Cane, D.D.S.	Phillipsburg	June 30, 1968
Michael S. Kachorsky	Manville	June 30, 1968
Harry J. Robinson, M.D.	Short Hills	June 30, 1969
Nelson S. Butera	Morristown	June 30, 1970
Henry L. Drezner, M.D.	Trenton	June 30, 1971
Mrs. J. Duncan Pitney	Mendham	June 30, 1972

(Vacancy)

Division of Administration

JOHN B. VAN ELLIS, *Director*

Programs:

Budget and Accounts ..... GEORGE E. FORMAN
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 guidance and service to all operating units of the Department through the following program activities: Budget and Accounts, 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.

Details of the various services performed by this Division are presented in the following reports of program coordinators.

Budget and Accounts Program

The Budget and Accounts Program is responsible for the proper budgeting and accounting procedures of all funds received by this Department.

Two 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.

Treasury documents, including 1,140 detailed applications; 202 amended work programs; 50 detailed original budgets; 10,160 payment vouchers and many other miscellaneous forms in varying numbers were screened and processed by the Program. Fiscal documents for 364 Grant-in-Aid Contracts were prepared.

Formula grants from the Public Health Service and Children's Bureau were received, allocated, and disbursed in the following categories: Water Pollution, Tuberculosis Control, Heart Disease Control, Cancer Control, General Health, Radiological Health, Dental Health, Chronic Illness, Maternal and Child Health and Crippled Children.

Twelve project and research grants were continued. Seven new project and research grants were received.

A bookkeeping machine for crippled children record keeping was installed. Commitments and disbursements are recorded by diagnostic category and are further recorded by the participation of state, county, family and other funds.

One hundred and forty-two fiscal reports were prepared during the year.

Following is a consolidated financial statement of the Department, as of June 30, 1965.

STATE DEPARTMENT OF HEALTH

FINANCIAL STATEMENT

July 1, 1964 – June 30, 1965

Receipts

Received for Transfer to State Treasury:

Licenses and Permit Fees	$312,956.00
Penalties	6,650.00
Certified Certificates	56,557.59
Examination Fees	12,201.00
Miscellaneous	2,843.30
Net Total	$391,207.89

Received for Disbursements:

State Appropriations and Transfer	$4,803,516.94
United States Department of Health, Education, and Welfare—Public Health Service	1,042,022.00
Children's Bureau	1,372,698.24
Other Federal Funds	1,807,210.74
Milbank Research Grant (Private)	8,145.63
State of Delaware (Private)	3,000.00
Crippled Children Donations (Private)	16.00
Net Total	$9,036,609.55

DEPARTMENTAL ALLOCATIONS

July 1, 1964-June 30, 1965

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	$168,368.00	$73,269.00	.....	$86,084.80	$135,840.30	$8,145.63	$254,452.80	$209,109.30	$8,145.63	$471,707.73
Administration	392,771.00	94,604.00	.....	161,911.34	25,966.00	.....	554,682.34	120,570.00	.....	675,252.34
Environmental Health ...	822,777.00	258,463.00	.....	344,576.08	254,768.79	.....	1,167,353.08	513,231.79	.....	1,680,584.87
Preventable Diseases	206,216.00	374,206.00	.....	199,651.40	491,663.00	.....	405,867.40	865,869.00	.....	1,271,736.40
Chronic Illness	108,536.00	132,850.00	.....	346,705.50	555,690.93	.....	455,241.50	688,540.93	.....	1,143,782.43
Laboratories	413,694.00	196,230.00	$2,262.00	279,816.15	139,041.72	738.00	693,510.15	335,271.72	3,000.00	1,031,781.87
Constructive Health	96,273.00	121,691.00	.....	332,663.00	1,053,006.24	16.00	428,936.00	1,174,697.24	16.00	1,603,649.24
Special Consultation Services	128,208.00	54,122.00	.....	11,310.00	8,070.00	.....	139,518.00	62,192.00	.....	201,710.00
Local Health Services ...	550,649.06	197,973.00	.....	153,306.67	54,476.00	.....	703,955.67	252,449.00	.....	956,404.67
Total Allocations ..	$2,887,492.00	$1,503,408.00	$2,262.00	$1,916,024.94	$2,718,522.98	$8,899.63	$4,803,516.94	$4,221,930.98	$11,161.68	$9,036,609.55

DEPARTMENT EXPENDITURES

July 1, 1964-June 30, 1965

Office of the Commissioner	$167,722.67	$72,216.85	.....	$82,257.57	$85,947.44	$6,000.00	$249,980.24	$158,164.29	$6,000.00	$414,144.53
Administration	391,070.14	95,018.28	.....	137,604.50	26,586.98	.....	528,674.64	121,605.26	.....	650,279.90
Environmental Health ...	801,966.04	220,093.97	.....	336,829.10	144,763.53	.....	1,138,795.14	364,857.50	.....	1,503,652.64
Preventable Diseases	195,697.60	336,547.10	.....	190,714.23	376,169.71	.....	386,411.83	712,716.81	.....	1,099,128.64
Chronic Illness	88,251.53	126,457.29	.....	298,662.41	506,607.15	.....	386,913.94	633,064.44	.....	1,019,978.38
Laboratories	411,984.80	182,997.06	$1,525.27	274,189.35	115,056.35	470.77	686,174.15	298,053.41	1,996.04	986,223.60
Constructive Health	79,434.34	110,414.95	.....	265,887.17	664,631.57	16.00	345,321.51	775,046.52	16.00	1,120,384.03
Special Consultation Services	128,207.75	64,077.86	.....	10,633.04	7,516.62	.....	138,840.79	71,594.48	.....	210,435.27
Local Health Services ..	550,673.60	146,974.22	.....	140,971.75	32,043.76	.....	691,645.35	179,017.98	.....	870,663.33
Total Expenditures	$2,815,008.47	$1,354,797.58	$1,525.27	$1,737,749.12	$1,959,323.11	$6,486.77	$4,552,757.59	$3,314,120.69	$8,012.04	$7,874,890.32
Balances, June 30, 1965 .	$72,483.53	$148,610.42	$736.73	$178,275.82	$759,199.87	$2,412.86	$250,759.35	$907,810.29	$3,149.59	$1,161,719.23

Examination and Licensing Program

Services performed 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 local authorities to determine their needs, as well as with the Department of Civil Service. It also cooperates with universities, colleges and schools which offer courses preparing applicants for our licensing examinations, in order to assure that course contents encompass license requirements.

During the period covered by this report, 750 applications were processed for examinations. Seven days were spent in examining 530 persons, of whom 272 received licenses during 1965.

1,665 licenses were renewed covering water supply systems, water treatment plants and sewage treatment plants.

$13,931.50 was deposited to the credit of the general treasury. There was no increase in license fees during this period.

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

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

Records were established for 71 new water or sewage facilities and their managements notified of the law requiring their operation by licensed operators.

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

General Summary of Activities of the Board of Barber Examiners, 1965

Shops Inspected	11,442
Special Investigations	931
Shops Found with Sanitary Violations	837
Reinspections	837
Hearings Held	167
Persons Assessed Penalties by Board	98
Shop Licenses Suspended as a Result of Hearings	3
Court Cases	2
Convictions	2

Barbers Found Working with Expired Certificates	1
Persons Found Working without a Certificate	16
Unlicensed Apprentices	3
Shops Found Operating without a License	13
Shops Reported Out of Business	127
Complaints Received from Public and Investigated	53
Barbers Reported Deceased	91
Applicants Scheduled for Examination	476
Applicants Failed to Appear	38
Applicants Examined	438
Applicants Passed	368
Applicants Failed to Pass Examination	70
Examination Days	26
Examination Fees Forfeited	1

Graphic Art Services Program

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

In collaboration with the Health Education Program, three new exhibits were designed, constructed and installed. Subsequently, these exhibits became part of the Department's loan service which made 20 bookings throughout the state as requested by the Programs involved.

Professional films belonging to various Programs are stored, repaired, scheduled and shipped throughout the state by the central film library maintained by this Program, which made 417 bookings. As part of the Program's audio-visual function, 139 audio-visual equipment loans were processed. Audio-visual equipment assigned to the training and conference rooms on the main floor of the new building is maintained by the Program's film technician.

All of the Department's printing needs are handled by this Program. The graphic art section designed and produced printing mechanicals and completed requests for charts, transparencies, slide mechanicals, and signs.

Outside printing jobs required 163 detailed applications with follow-up to delivery during 1965.

This Department is a joint tenant with the Department of Agriculture in the new building. As an economy and efficiency measure, the Department of Agriculture's print shop was consolidated with this Program's in-plant activity when we moved in June, 1965. An estimate of the workload of the two Departments indicated that the total workload would be 80% Health and 20% Agriculture. Accordingly, one offset machine operator and one small offset press from the Department of Agriculture were placed in this Program's print shop to augment our staff and equipment. It has worked out that the workload is approximately 70 percent Health and 30 percent Agriculture, resulting in an additional one-half position being assigned to the

Department's print shop by the Department of Agriculture. The figures which follow include approximately five months' production for the Department of Agriculture.

The in-plant offset print shop produced 889 short-run jobs amounting to 4,297,000 impressions which were considered unsuitable for commercial printing. The new Rapid Duplicating section, a service of the print shop, processed 3,500 jobs totaling 1,756,000 impressions. The Rapid Duplicating section is a new service resulting from the elimination of mimeograph operations in seven locations after the move to the new building.

The addressograph section processed more than 396,000 pieces, totaling 287 mailing jobs in their function of handling the Department's bulk mailing requirements from 45 special lists maintained by this Program.

Personnel Program

The Personnel Program is responsible for the recruiting and screening of 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 a centralized, accurate, and current set of personnel records of all Departmental employees; providing orientation and other in-service training courses for new employees; coordinating and supplying data for salary accounting; and assisting in preparing salary detail for department budgets.

Personnel of this Program maintain a constant and effective working relationship among all Department Programs and other state and federal agencies. During the year, consultation services to Departmental supervisors and employees were provided concerning salary problems, pension inquiries, insurance coverage questions, Civil Service rules, Department policies, sick leave and vacation leave, performance ratings, examination problems, disciplinary problems, employee counseling, etc. A number of federal and state reports were completed.

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

Members of this office served on various committees including the State Personnel Council, Public Personnel Association, Service Awards Program, Department Safety Committee, miscellaneous fund-raising committees, and Savings Bond Drive.

The Personnel Office provided services to more than 918 Departmental employees during the repair, requiring the processing of approximately 47,000

records, forms, letters, relative to personnel actions, changes, payroll, and time reports. A number of job specifications were reviewed and 47 were revised. The Department issued 74 service awards to employees for length of service.

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

At the end of this period there were 200 classifications in the Department. Of the 721 employees on the payroll at the end of this period, 233 were at the minimum of their salary range, 467 at intervening steps, and 21 at their maximum or in no range positions. These positions were filled by 574 employees with permanent Civil Service status, and 147 employees with temporary or unclassified status. There were 391 female employees.

At the end of this period, 442 employees were paid from state funds and 279 were paid from federal or project funds.

During this reporting period, 197 employees were separated for various reasons and 272 employees were appointed. There were 43 true vacant positions which this Program is attempting to fill. Most of these positions require incumbents with specialized professional backgrounds for which recruiting is extremely difficult due to low state salaries and shortages which exist in these fields throughout the country.

Vital Statistics Registration Program

Historical Background

The State Registrar has custody of about 13,000,000 records of births, marriages, deaths, and fetal deaths. These date back to the year 1848. The records for the period 1848 to 1887 were collected originally by the Secretary of State and were transferred to the Bureau of Vital Statistics when it was created by an act of the Legislature during the session of 1887. All records of births from 1848 to 1903, marriages from 1848 through 1929, inclusive, and all death certificates from 1848 through 1954, have been microfilmed. These original records are stored several miles from the State House.

By law, the State Registrar has supervisory power over the 567 local registrars and must furnish the forms required for registering vital events. Some forms are used exclusively by the local registrar and others are distributed by him to physicians, clergymen, funeral directors or hospital administrators.

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

Workload and Accomplishments

During 1965, the Program received and processed 234,011 original reports of vital events, about 1,500 delayed reports of births and approximately 10,000 corrections to current and old records. New birth records were prepared for 2,873 persons who were adopted in 1965 or prior years. There were 3,269 office visits and 17,945 telephone calls by persons needing help in various registration matters.

More than 1,000 persons applied for searches of and transcripts from the 1905 and/or 1915 State Census Records. Most of the requests are associated with the claiming of Social Security and Medicare Benefits. Including the census requests, the Program received 74,176 applications for searches of the records of one or more years under one or more names. This is an increase of 11,214 (18 percent) over 1964.

By law, the Program continued to 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, more than 1,000 copies of death records were distributed to assist in the clearance of Cancer Registers of hospitals in and outside of New Jersey.

As of June 1, many amendments to registration laws became effective with the passage of Chapter 78, Laws of 1965. There were two major changes of economic importance. One doubled the fees and made their full retention possible even if the search failed to reveal the record requested. The other change eliminated two costly oprations previously performed by the Program. One of these required the State Registrar to keep monthly accounts of the money due local registrars from their municipalities for forwarding original records to the Program. The other required the State Registrar to certify annually to the treasurer of each municipality the amount so due to each registrar. The elimination of these requirements saves the Program about 1,200 hours annually.

The first state-wide Seminar on Vital Statistics for local registrars was held in the New Brunswick area. It was attended by 209 persons who acclaimed the value of the six-hour session.

Summaries of the volume of the major activities of the Program follow.

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

Certificate Type	*Calendar Year*		
	*1965**	*1964*	*1963*
Birth	121,442	128,420	128,460
Fetal Death	1,845	2,003	2,068
Marriage	45,865	45,705	44,419
Remarriage	1,486	1,484	1,237
Death	63,373	62,666	62,422
Total	234,011	240,278	238,606

* Provisional

Table 2. SEARCHES REQUESTED AND FEES RECEIVED

Item	*Fiscal Year*		
	1965	*1964*	*1963*
Searches made and/or copies issued for which fees were received	35,352	36,142	33,837
Searches made and/or copies issued for which no fees were received	31,977*	26,168	22,058
Total searches	67,329*	62,310	55,895
Fees received for searches and certified copies	$48,689.33	$44,773.05	$41,710.11

* Includes 737 searches (averaging one-half hour per search), on behalf of the Cancer Control Program, for records of possible deaths of persons on cancer registers but not heard from for many years.

Division of Chronic Illness Control

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

Programs:

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

Arthritis and Allied Disorders ..... LEON FRASER, M.D.
Acting 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 ..... CURTIS F. CULP, M.D.
Program Coordinator

Public Health Nurse Consultants:

(Assigned from Public Health Nursing Program, Division of Special Consultation Services) ..... CLEORA C. BROWN, R.N.
MILDRED L. ERVIN, R.N.
PATRICIA E. HANNA, R.N.
VIOLA B. MACK, R.N.
MILDRED G. MERKIN, R.N.

Note: Chronic Illness activities in dental health will be found in the Dental Health Program report in the Division of Constructive Health.

Division of Chronic Illness Control

Alcoholism Program

Plans for the addition of two new out-patient services were completed during this year. For the past seven years, this Program has been working with representatives from Monmouth County in an attempt to develop an out-patient treatment service for alcoholics. The plans finally became a reality when the Monmouth Medical Center agreed to open a part-time service beginning January 15, 1966. Plans for the second service in Salem County began in September of this year and will become a reality when the Salem County Guidance Center opens doors to the alcoholic during the first week of January, 1966. Both of these programs differ somewhat from the other services currently being supported by the Department.

The change in planning was necessitated by the shortage of trained staff to operate full-time services. It has become more and more difficult to find adequate staff to man the specialized alcoholism services on a full-time basis. The new programs using existing staff on a part-time basis have made it possible to open these services in areas heretofore unable to attract adequately trained staff.

During the first six months, both programs will be closely observed in an effort to determine whether or not such a program can adequately serve the needs of the alcoholic patient in a rural or suburban area. If this method proves effective, attempts will be made to develop similar programs in the northwestern part of the state as well as in other areas of southern New Jersey.

Services

3,022 individual patients were reached directly during the year by the services co-sponsored by the Alcoholic Program.

2,408 persons were seen in the eight out-patient treatment centers which are located in five community general hospitals, one municipal hospital, and two county hospitals.

1,115 persons attended the weekly group meeting conducted by the field representative of the Alcoholism Program in four tuberculosis hospitals, one county jail, and a county workhouse.

The alcoholism information, referral, and counseling centers, supported in part by the Program, provided services to 455 alcoholics, families of alco-

holics, clergymen, employers, etc., who requested help for themselves or someone with whom they are closely associated. These individuals made a total of 614 visits to the Centers. In addition, the two Centers handled 1,703 telephone inquiries with many resulting in the referral of the alcoholic to a treatment center, Alcoholics Anonymous, or the appropriate facility in the community.

Although it is difficult to determine objectively the effectiveness of treatment for the alcoholic because of the short time the treatment centers are in contact with him, and because many lack motivation at the time of contact, an attempt to appraise the subjective effect of treatment has been made. Criteria have been developed based on the drinking habits of the individual when treatment is started and again at the end of the year. Other criteria include his employment record, his physical health, and his adjustment in the family and the community. Using these criteria, the results were as follows for those patients seen in the eight out-patient treatment centers:

20.2 percent showed marked improvement
29.7 percent showed reasonable improvement
18.2 percent showed no change
4.8 percent showed deterioration
27.1 percent were unable to be evaluated or were lost to follow-up.

The shortage of trained personnel to staff the treatment centers continues. The use of well-trained clinical psychologists has proved to be an effective means for staffing the treatment centers. During the year, an additional psychologist was added to the Alcoholism Treatment Center at Bergen Pines County Hospital making it possible to increase greatly the services provided to the alcoholic. Although both psychologists are only working part-time, their combined time is equal to more than a full-time worker. The service is now in operation on a full-time basis; it functioned only a few hours a week during the previous year.

The use of part-time services and qualified clinical psychologists has added considerable versatility to the development of alcoholism treatment centers in the state; as funds become available, it is hoped that it will be possible to further develop services as indicated.

The provision of services for the chronically drunken offender continues to be a problem in New Jersey as well as other states. New Jersey is fortunate because the Flynn Christian Fellowship Houses, a non-profit voluntary group, operates two half-way houses in New Jersey. During the year, the Department contracted with a qualified social worker to study the operation of the Flynn Houses and to determine in what ways the services could be improved or increased. At the present time, the Houses offer room and board for a small weekly fee, Alcoholics Anonymous therapy, minimum medical care, and assistance with job placement. In return the men pay a maximum of $18.00

a week for room and board. The Board of Trustees recognizes the limited nature of these services and has requested the assistance of this Program to help them find ways to provide more comprehensive services for their clients. The results of the study indicate that greater cooperation with the social welfare agencies in the community is indicated; a professional counselor to fill this need is strongly indicated and sources of revenue, other than the weekly payments of the clients, are seen as essential to an attempt to improve the physical plant and to expand operations to other areas of the state.

Educational Activities

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

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

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

During the year, the films on alcohol and alcoholism continued to be popular with schools and other interested groups. There were 422 film showings with more than 23,000 persons in attendance.

119 lectures were given by members of the Speakers' Bureau to various professional and civic groups on the subject of alcohol and alcoholism.

The program coordinator participated as a speaker at an in-service training program for graduate nurses at Elizabeth General Hsopital.

"Alcoholism—A Treatment Digest for Physicians" has now completed its 14th 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 solely by this Department through the Digest.

New Jersey had the honor of playing host to the 16th annual meeting of the North American Association of Alcoholism Programs in Atlantic City,

September 19-23, 1965. More than 300 persons representing professional and voluntary agencies in the field of alcoholism from the United States and Canada attended the sessions.

The program coordinator of the Alcoholism Program was the Program Chairman and in charge of local arrangements.

Research

The Alcoholism Program was engaged in two studies designed to add knowledge regarding the kinds of alcoholics seeking help in New Jersey and the kind of help they receive.

Selected for study were two hospital-based, out-patient clinics sponsored by the Alcoholism Program, a private psychiatric hospital, and a tax-supported alcoholism rehabilitation unit. These data were compared with the information obtained from 10 Alcoholics Anonymous groups selected for a broad geographical and socio-economic sampling.

Data gathering for the facilities study was conducted by the Rutgers Center of Alcohol Studies through a grant from this Department and with the assistance of staff of the State Departments of Health and of Institutions and Agencies. The Alcoholics Anonymous survey was conducted by staff from the Alcoholism Program and the Rutgers Center.

There were 168 alcoholic patients and 200 members of Alcoholics Anonymous who participated in the studies. With regard to personal characteristics, the largest number of alcoholics, just over one-third, were in the 41 to 50 age group; and nearly one-half of the facilities group and more than one-half of the AA group were married and living with their families, demonstrating anew the inaccuracy of the skid-row stereotype. A 6- to 10-year problem drinking history was the most frequently reported, pointing to a need for effective intervention when these alcoholics are in their early thirties.

The treatment history data showed an average of nearly two and one-half hospitalizations per alcoholic, despite a known tendency to under-report such care. Such data suggest the dimensions of the cost of alcoholism to the community. The fact that a great preponderance of these admissions were to psychiatric institutions seems to be evidence of continued difficulty in obtaining admission to general hospitals, which most alcoholics are known to prefer.

The most apparent feature of the data on the use of community resources is the wide gap between the use made of the three most common sources of help—the physician, the alcoholism clinic, and Alcoholism Anonymous—and all other community resources. This raises the question of whether the application of more imagination and resourcefulness would not result in the development of additional resources for the alcoholic, particularly significant in light

of our limited ability to expand specialized services and the indicated size of the problem.

Support through a grant also was given to the New Jersey College of Medicine and Dentistry, which resulted in the following studies:

Factors Influencing Accumulation and Removal of Liver Fat

Morphologic and Enzymatic Hepatic Changes Induced by Ethanol

B-Complex Vitamins in Total Food Deprivation

Use of Dichromatic Ear Densitometry to Evaluate Kinetics of Indocyanine Green (ICG) Removal in Liver Disease

Mesenchymal Cell Proliferation in Persistent Viral Hepatitis.

Program Emphasis

A continuing effort to find ways of meeting the shortage of personnel to staff the Alcoholism Treatment Centers through the use of nonprofessional staff fully explored. At the present time, one of the treatment centers employs a recovered alcoholic with many years of sobriety. This person is closely supervised by other members of the professional staff. This program will be evaluated.

The use of mental health aides, which is gaining acceptance, will also be explored and hopefully will be applicable to the alcoholism treatment center.

Arthritis and Allied Disorders

Educational Activities

Seventy nutritionists, home economists, physical and occupational therapists and nurses attended a symposium on "Home Management for the Housewife with Arthritis" held on April 7, 1965 at Rutgers—the State University. The program was jointly sponsored by the New Jersey Chapter of the Arthritis Foundation and the State Department of Health. Dr. John Abruzzo, Assistant Professor of Medicine at the New Jersey College of Medicine and Dentistry, discussed the medical aspects of arthritis. Mrs. Julia Judson, M.S., discussed her experiences in evaluation of the housewife's daily tasks and integration of the medical program with these activities. Miss Dorothy Youland, Nutrition Consultant of Region II, U. S. Public Health Service introduced the new brochure on Diet and Arthritis with an accompanying slide series.

The Coordinator cooperated with the New Jersey Arthritis Foundation in planning the "Public Forum on Arthritis" in the Trenton area on November 17, 1965. This forum was very well attended.

Out-Patient Services

The Arthritis Program continues to support out-patient services to arthritics in the Division of Rheumatology of the New Jersey College of Medicine and Dentistry. A report of patients tested according to clinical categories during the year is as follows:

Rheumatoid Arthritis	1,200
Degenerative	300
Rheumatic Fever	156
Gout	216
Other	600
Total	2,472

In cooperation with the New Jersey Arthritis Foundation, support has been provided to the Arthritis Program of the Hospital Center at Orange. This assistance is provided specifically to make possible regional services beyond the normal service areas of the hospital. Clinic activities for the year 1965 including patients from 36 communities of eight counties were as follows:

	Patients	*Visits*
Arthritis Clinic	32	346
Occupational Therapy	8	18
Physical Therapy	70	203
Total	110	567

Cancer Program

Again this year, smoking was a major concern of the Cancer Program with the formation of the New Jersey Interagency Council on Smoking and Health. The Council organized informally with representation from interested voluntary and official agencies at the state level. Member agencies include the American Cancer Society, New Jersey Division, New Jersey Heart Association, New Jersey Tuberculosis and Health Association, New Jersey Health Officers Association, New Jersey Association of Osteopathic Physicians and Surgeons, New Jersey Congress of Parents and Teachers, New Jersey Department of State-Youth Division, New Jersey State Department of Education, New Jersey State Department of Health, and the Medical Society of New Jersey. New Jersey joins the ranks of 35 other states which have taken action on this important health problem since the release of the Surgeon General's Report in January, 1964. With the agreement of the Council, the State Health Department has been designated as its administrative agent. In response to this request, a full-time health educator was recruited and assigned

by the Cancer Program the duties of Coordinator of the Interagency Council as one of his major responsibilities.

The objectives of the Council are: 1) to stimulate local groups to organize into informal or formal interagency councils and to initiate and plan smoking and health programs in their community; 2) to provide staff consultation and current information about organization of local groups, programming and project proposal developments; 3) to gather and disseminate pertinent information about research findings and projects conducted in New Jesrey and at the national level; and, 4) to coordinate and conduct smoking and health planning and program activities at the State and community level.

In October, the first State-wide Workshop on Program Development in the area of smoking and health was held in Trenton to inform appropriate individuals in New Jersey about activities of the National and State Interagency Councils on Smoking and Health and to enlist their help in the development of plans to strengthen local action programs. More than 80 representatives of local health and welfare agencies from all 21 counties participated in this Workshop. The Coordinator, working with local groups, elicited interest in Camden, Essex, Bergen, Union, and Mercer counties in developing local interagency councils.

The State Interagency Council is developing a descriptive brochure of services to be offered as well as a Newsletter to be published periodically to inform interested community groups of current activities at the national and state level.

Anti-Smoking Program

In cooperation with the Camden County Tuberculosis and Health Association, Heart Association, and Cancer Society, two anti-smoking groups were active. The groups, conducted by two psychiatrists experienced in group therapy techniques, consisted of 12 weekly sessions for individuals who were referred by their private physicians because of some medical reason to give up smoking. Results of this experience indicate that more than regular group therapy is necessary; meetings should be more frequent than once weekly; perhaps some medication should be given concurrently; and the group should be open and allowing new participants to join the group at any time. Although several persons were able to abstain from smoking during the sessions and for a short time thereafter, a six-month follow-up indicated that all had returned to smoking, although some to a lesser degree. At the present time, plans are being developed to use this experience in seeking more effective ways to help those who want to give up smoking.

Teaching Reference Guide

The third revision of the Guide has been completed and now incorporates pertinent information from the Surgeon General's Report as well as new knowledge about heart disease and respiratory disorders. More than 11,500 copies of the second edition were distributed in New Jersey schools. In addition, single copies were made available to out-of-state secondary schools, colleges, and voluntary health agencies on request. This new edition will have a similar distribution.

Cyto-technician Training

In cooperation with the Presbyterian Hospital of the United Hospitals of Newark, the Department continues to provide training in cyto-technology for qualified technicians recommended by practicing pathologists in New Jersey. This year, six students completed the course, held one day each week for nine months, permitting the student to stay on his regular job while receiving this training. To date, more than 40 students have completed the course.

In addition, the Cancer Program, in conjunction with the New Jersey Division of the American Cancer Society, offers stipends to qualified students to attend accredited schools of cyto-technology in New York and Philadelphia. This year, two students did this.

Oral Cytology

In conjunction with the Dental Health Program, the Cancer Control Program sponsored courses in oral cytology. Five courses were held during the year and 231 dentists were trained. These dentists have submitted a total of 542 slides to the laboratory at Presbyterian Hospital in Newark. Of this number, 11 were positive and 11 suspicious.

Cytology

Cytology screening programs, which are promoted and supported by the Program in order to encourage wider use of this reliable diagnostic technique, screened 10,131 patients in 13 programs during the year. Forty-two positive cases were found and 114 suspicious cases were continued under surveillance.

During the year, the Public Health Service launched a nation-wide campaign to eliminate the deaths from cervical cancer. This campaign was stimulated by the DeBakey Report and has an appropriation of $5,000,000 which will be awarded on a grant basis to hospitals interested in developing or expanding cervical cytology screening projects. In addition, the Public Health Service also made funds available for clinical training in cancer. The

Cancer Program, in cooperation with the Public Health Service, Region II, provided consultation to a number of hospitals throughout New Jersey interested in applying for grants to develop these programs. Four hospitals have already submitted grant requests. It is anticipated that many community hospitals will avail themselves of this opportunity.

Cancer Registry

The demonstration of a county cancer registry at Bergen Pines County Hospital has completed its fourth year of operation. Seven community hospitals are participating in the registry. More than 2,000 cases were listed on the registry during this year. At the present time, more than 6,000 cases are on the registry.

Death Certificates

In cooperation with the Public Health Statistics Program, the Cancer Control Program continues to provide death certificates to local and out-of-state hospitals in an attempt to keep cancer registries effective. During the year, 1,460 requests were received and 969 copies of death certificates were furnished.

Cinefibergastroscopic Study

The Cancer Control Program has supported a cinefibergastroscopic study at Mountainside Hospital, Montclair. A new instrument, the fibergastroscope, which has become available in the past few years, was purchased by the Department for use by the hospital. This equipment enhances the endoscopic evaluation of gastric lesions by enabling moving pictures to be taken through the fibergastroscope (cinefibergastroscope). This feature adds to the diagnostic, teaching, and research value.

The use of fibergastroscopy and cinefibergastroscopy has been shown to be an excellent teaching device for interns, residents and physicians in practice and enables them to study at length benign and malignant lesions of the stomach and review them by studying the movies which are made. Nine interns and residents have participated in this program.

In the 50 patients studied during the year, fibergastroscopy helped to establish the diagnosis in 31 selected problem cases who were previously in doubt by xray. Through this demonstration project, physicians will be better equipped to differentiate benign from malignant gastric lesions and to realize the value of multiple diagnostic studies in determining malignancy. The permanently recorded films will be used as a teaching film to assist lecturers to medical groups.

Nursing Activities

The Clinical Observation Program for nurses at the Black-Stevenson Clinic and Presbyterian Hospital in Newark continues to be a valuable training program for nurses from community general hospitals and public health nursing agencies throughout the state. This year, 85 nurses from 37 public health nursing agencies and hospitals participated. The program provides an opportunity for nurses to observe the latest diagnostic tools and treatment methods for patients with cancer. To date, more than 775 New Jersey nurses have participated in the program since its inception in 1957.

During June and July 1965, the Cancer Control Program conducted a survey to determine whether hospital nurses were informed about hospital radiological facilities where present and, secondly, to determine on the basis of the responses, if there was a need for planned in-service education programs on radiological nursing. A questionnaire consisting of five questions was sent to 93 directors of nursing in general hospitals; 72 replies were received.

In answer to the question, "Would you attend an in-service meeting on radiation nursing?" 67 replied yes, three replied no, and two did not answer. In conjunction with this survey, questionnaires were sent to 38 schools of nursing to determine the extent of radiological nursing in the curriculum. Thirty-four replies were received indicating that all 34 include nursing care of the patient receiving isotopes and external radiation therapy as part of the curriculum, that this is taught by a nurse instructor in most cases, and is integrated with related subjects. Of the various teaching methods cited, lecture, clinical observation, and clinical experience were used most frequently. Twenty-two schools indicated interest in receiving consultation and assistance in developing their curriculum in this area. As a result, the nurse consultant has already met with directors of nursing education in a number of nursing schools to assist them in developing curriculum in radiological nursing.

Lymphoma-Leukemia Project

In cooperation with the Veterinary Public Health Program, the Cancer Program continues to support the Dog Lymphoma-Leukemia study in conjunction with Rutgers—the State University. During the year, histopathologic studies were completed on 115 specimens submitted to Rutgers Veterinary laboratory by practicing veterinarians. A preliminary report of the study was presented at the Symposium on Comparative Research in Leukemia, held in Stockholm, Sweden, in September. Complimentary remarks were made about this pioneer study of human-animal causal interrelationships in leukemia.

Education

In cooperation with the Academy of Medicine of New Jersey, this Department sponsored seven symposia as follows: "Advances in Gastroenterology,"

"Chemotherapy of Cancer" (2), "Cancer of the Breast," and "Gastrointestinal Cancer" (3). Approximately 665 physicians attended these courses throughout the state.

In conjunction with the New Jersey Society of Pathologists, the Department participated in the 16th Annual Slide Seminar. More than 150 pathologists attended this seminar on bone tumors. The moderator was Ernest Aegerter, M.D., Professor and Head of Pathology at Temple University School of Medicine, Philadelphia, who is a nationally recognized authority on the diagnosis of various bone diseases and has been published extensively on the subject.

The films which the Cancer program has placed in the film library of the State Museum continue to be used widely. During the year, there were 42 film showings attended by 2,435 persons.

Chronic Disease Program

A major activity of the Chronic Disease Program during 1965, as in preceding years, has been expanding and strengthening community health facilities and stimulating the development of new services to provide appropriate and comprehensive care to the chronically ill and aged when and where it is needed without unnecessary duplication of efforts and greater economical burden. To this end, 126 grants-in-aid were provided to 80 community hospitals and local health and welfare agencies in a total amount of more than half a million dollars, 60 percent of which were federal funds. These demonstration grants made possible community services such as diet counseling, physical therapy, public health nursing, homemaker-home health aide, social work, comprehensive home care, and volunteer friendly visitor; screening programs for the early detection of cancer, diabetes, glaucoma, 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; and professional education and training programs for specialized personnel.

Diet Counseling

Three new diet counseling services in Monmouth, Passaic and Union counties were established during the year, making a total of 11 such community services in the state. Individual therapeutic diets were provided to 1,934 patients as prescribed by their physicians in a total of 2,619 counseling sessions. Seventy-six percent of these patients were more than 40 years old, and 62 percent were females. Patient diagnoses were as follows:

Cancer	30
Allergic, Metabolic, Nutritional and Blood Diseases	778
Diseases of the Nervous System	28
Heart and Circulatory Disease	646
Diseases of the Digestive System	143
Pregnancy	79
Disease of Bones and Movement Organs	49
Miscellaneous	190
	1,934

In cooperation with Rutgers—the State University, a 10-session refresher course in biochemistry for nutrition workers was held in the spring. Participation was limited to 25 diet counselors, nutritionists, and dietitians.

Friendly Visitors

One hundred and fifty-three Volunteer Friendly Visitors were trained in the four courses held in 1965, making a total of 637 persons trained in 19 courses since the program started in August, 1962. A training course manual developed by the State Committee on Volunteer Friendly Visitors and staff of this Department has been printed and distributed upon request on a national basis. This project was designed to extend the range of services of existing health and welfare agencies through assistance in the recruitment and training of Friendly Visitors.

Homemaker-Home Health Aide Services

Two new agencies, the Visiting Homemaker Service of Salem County and the Visiting Homemaker Service of Sussex County, began operations during the past year. This extends the availability of homemaker services to 17 counties being served by 20 agencies. In 1965, these 20 Homemaker Services provided 726,759 hours of service to 5,892 patients. These data reflect a 16 percent increase in hours of service and an 11 percent increase in number of patients over the previous year. The breakdown of hours of service according to diagnoses is as follows:

Diagnosis	*Hours*	*Per Cent*
Heart and Circulatory Diseases	203,605	28.0
Diseases of Bones and Movement Organs	78,919	10.9
Senility and Conditions Related to Aging	68,239	9.4
Pregnancy	57,312	7.9
Cancer	52,880	7.3
Neuropsychiatric Disorders	51,660	7.1
Diseases of Nervous System and Sense Organs	44,657	6.1
Accidents	41,393	5.7

Diagnosis	*Hours*	*Per Cent*
Diseases of Digestive System	36,306	5.0
Diseases of Genito-Urinary System	23,332	3.2
Diseases of Respiratory System	13,874	1.9
Infectious Diseases	6,530	0.9
All other	48,052	6.6
	726,759	100.0

During the year, the availability of homemaker service made possible earlier hospital discharges for 900 persons and obviated institutionalization for another 1,101 persons. These services also prevented employment or school absenteeism in 2,207 instances.

The Visiting Homemaker-Home Health Aide Training Course, which must be completed by all homemakers employed by the 20 local Services, has been revised and upgraded. In 1965, 265 persons participated in 15 courses.

In January, 1965, the Visiting Homemaker Service of Greater Trenton, with assistance from this Division, embarked on a demonstration project using the services of carefully selected and specially trained homemakers to work with multi-problem families living in a "disadvantaged area." These homemakers are, in most instances, indigenous to the culture being served. They demonstrate, by precept, good housekeeping skills including house cleaning, laundry, proper garbage disposal, general hygiene, nutrition and best use and preparation of surplus foods. In addition, they reinforce information provided to families by professionals regarding existing community services such as clinics, public assistance, and legal aid. During the first year of the project, with a caseload of 104 families, the homemakers have proved to be extremely effective in communicating and working with families often described as "hard to reach."

At the request of the Office of Economic Opportunity, this Division made available to all communities of the state participating in Project Head Start, training sessions for Aides recruited from among the culturally disadvantaged population. A training course manual was developed and a three-day training session provided upon the request of the local Project Head Start to a community agency, usually the local Homemaker Service. Nine courses held in Trenton, Newark, East Orange, and Ringwood drew 257 aides.

Physical Therapy

There were 392 patients, with a total of 1,198 visits, who received services under the demonstration project in consultant physical therapy being carried out by five visiting nurse agencies of the state. In addition, grant-in-aid assistance was provided to the Presbyterian Hospital Unit of the United Hospitals of Newark for the establishment of a Department of Physical

Therapy. During the three-month period in which this facility functioned, 567 visits were made by 83 patients, 70 percent of whom were treated for diseases of bones and movement organs.

Social Work

The Summer Experience in Social Work Program, devised to aid in the recruitment of personnel by making it possible for undergraduate students interested in becoming social workers to spend the summer months working in social agencies, was provided assistance again this year by this Division. Of the 411 applications received, 83 students representing 49 colleges were placed in 29 participating agencies.

Nursing

Assistance to visiting nurse agencies was continued in order to strengthen and improve public health nursing services to the chronically ill and aged. The North Hudson Public Health Nursing Service which serves Guttenberg, North Bergen, Secaucus, Weehawken, and West New York, provided 3,157 visits. The Sussex County Public Health Nursing Service provided 1,961 visits to 1,439 patients, and 2,191 visits were made by the Collingswood Community Nursing Service which started in the spring of 1965.

Special Projects

Special studies in the treatment of the chronic renal disease patient using peritoneal dialysis or hemodialysis are being carried out at the New Jersey College of Medicine and Dentistry. During the past 10-month period, one patient has been maintained on hemodialysis and six on peritoneal dialysis, three of whom are dialyzed at home, returning to the unit monthly for evaluation. Six of these patients have been rehabilitated to the extent that they are capable of leading productive lives in business and at home. Training in techniques of dialysis for physicians, medical students, and nurses is also provided at this facility.

Two studies of the relationship of air pollution to chronic respiratory disease were undertaken in the metropolitan area of the state.

Diabetes, Endocrine, and Metabolic Disorders

Case-Finding Activities

The 13th Annual State-wide Diabetes Detection Week was observed November 14-20, 1965 under the joint sponsorship of the New Jersey Diabetes Association, the Medical Society of New Jersey, the New Jersey Association of Osteopathic Physicians and Surgeons, the New Jersey State Department of Health, and many local health departments.

A new method for securing blood specimens, Dextrostix, was introduced. Simply stated, a drop of blood taken from the fingertip was applied to a strip of treated paper for one minute. Readings of 130 mg percent and up were considered positive and the technician drew a venous blood specimen which was processed on the AutoAnalyzer. Those with negative findings on the Dextrostix were so notified immediately and given a "negative" form. All individuals with readings of 130 mg percent and up were notified after the venous specimens were processed by the AutoAnalyzer and where readings again read 130 mg percent or above, their physicians were also advised of the quantitative results.

The following tables of results are broken down by Diabetes Detection Week, year-round diabetes screening programs, and short-term diabetes screening projects. It should be noted that the yield of new diabetics is based on incomplete follow-up in all instances. Undoubtedly these figures will be higher when a greater percentage of follow-up has been completed.

Table 1. DIABETES DETECTION WEEK

Total Screened	*Dextrostix(R) Positive at 130 value block Initial Screening*	*Retest on AutoAnalyzer Negative Less than 130 mg%*	*(R) Venons Sample Positive 130 mg% or higher*
35,000	2,784	1,478	1,306

Table 2. YEAR-ROUND SCREENING PROGRAMS

Site	Number Tested	Positive	New	Potential	Known	Not* Diabetic	Follow-up Incomplete	** Yield
Cape May County Health Department				Not Reported				
East Orange Health Department	1,950	119	14	15	11	21	58	7.2
Edison Health Department	194	23	2	4	2	14	1	10.3
Morristown Memorial Hospital	5,715	411	43	5	59	242	62	7.5
Verona Health Department				Not Reported				
Long Branch Ph Nursing	136	14	2	3	4	5	. .	14.7
Woodbridge Township Board Health	1,028	93	16	4	9	33	31	15.5
Hoboken Ph Nursing	614	70	1	6	16	13	34	1.6
Newcomb Hospital	2,241	154	34	2	5	94	19	15.1
TOTALS	11,878	884	112	39	106	422	205	9.4

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

Table 3. SHORT-TERM DIABETES SCREENING PROJECTS

	Number Tested	Positive	New	Potential	Known	Not* Diabetic	Follow-up Incomplete	** Yield
Elizabeth General Hospital	98	16	.	Not Reported		. .	16	. . .
Cherry Hill Mall	867	54	8	5	5	5	31	9.2
Stokely Van Camp	26	3	1	.	. .	1	1	3.8
Trenton Times Newspaper	57	7	1	1	. .	5	. .	17.6
Baily Millworks (I)	19	. .	. .	. .	. .	. .	. .	. . . .
Baily Millworks (II)	13	. .	. .	. .	. .	. .	. .	. . . .
Bay Ridge Specialty Company	75	1	. .	.	1	. .	.	. . . .
Edgewood Hospital Health Fair	180	4	. .	1	1	1	1	. . . .
Educational Testing (I)	569	13	. .	5	1	2	5	. . . .
Educational Testing (II)	23	. .	. .	. .	. .	. .	. .	. . . .
Kearny Health Department	99	7	. .	Not Reported		. .	7	. . . .
(Union) Shering Corp.	379	10	.	Not Reported		. .	10	. . .
(Union) Shering Corp.	94	1	1	. .	. .	. .	. .	10.6
(Bloomfield) Shering Corp.	221	4	4	. .	. .	. .	. .	18.
Dextrostix(R) Training Sessions	400	2	. .	. .	. .	. .	2	. . . .
Dover Trade Fair	124	14	. .	Not Reported		. .	14	. . . .
TOTALS	3,244	136	15	12	8	14	87	4.6

Eighty detection centers were established during Diabetes Detection Week, 196,529 in hospitals, 35 in health departments, and 16 in community sites.

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

Listed below are the results of a questionnaire sent to all participating groups. About one-half of the questionnaires were returned.

Personnel utilized:	981
Physicians	203
Public Health Nurses	101
Private Nurses	58
Technicians	54
Volunteers	465
Others	100
	981

Training sessions were held in each district in the state. It is estimated that 750 individuals were trained in the new Dextrostix method and its application to mass screening.

Educational Activities

At the request of, and under a grant provided by, the Public Health Service, a national training course in diabetes and arthritis was planned and conducted by this Program and held in New Jersey. The trainees included physicians, nurses, public health advisors, field representatives and supervisors, health educators, and administrators from 13 states. Field trips, films, panel discussions, lectures, and question and answer sessions were included in this training.

Three symposia for physicians covered these subjects: "Programmed Instruction in Medical Education"; "Childhood Diabetes," and "Unusual Complications of Diabetes Mellitus."

The following papers written by staff members were published in 1965:

"The Diabetologist Looks at the Diabetic Foot"

Arthur Krosnick, M.D.
Journal of the American Podiatry Association, Sept., 1965

"Death Due to Migration of the Ball from an Aortic-Valve Prosthesis"

Arthur Krosnick, M.D.
Journal of the American Medical Association
March 29, 1965, Vol. 191, pp. 1083 and 1084

"Diabetes—A Bar to Nursing"
Elizabeth Harris, R.N., and Arthur Krosnick, M.D.
American Journal of Nursing, Sept., 1965

A New Jersey Diabetes Directory was developed and about 450 copies distributed to physicians, organizations, and hospitals in the state.

Diet Counseling

During 1965, the 11 established diet services in the State provided services to 487 diabetic patients. Forty-seven percent of these patients were 65 years of age or older; 40 percent were in the 40-64 years of age range; and, 13 percent were 39 or under.

Applied Research and Special Projects

The epidemiologic study of the participants in the East Orange Diabetes Detection and Education Program was completed. The results provided important data concerning high risk screening. It was published in the Journal *GP.*

A technological comparative study of all screening methods in use has been made. Essentially, this consists of a comparative evaluation of Dextrostix, Unipettes and venous blood samples processed on the AutoAnalyzer. These comparisons are being done at Morristown Memorial Hospital, Newcomb Hospital, and among state employees.

The Mercer County Medical Society's Prenatal Diabetes Detection and Education program continued surveying about 1,300 patients. The program is being phased out and the statistical evaluation of the project will be completed shortly.

The further evaluation of programmed instruction, using a teaching machine, sponsored by U. S. Public Health Service was completed and results were presented as a paper at the annual meeting of the American Public Health Association.

The Juvenile Diabetes study in conjunction with the Mercer County Child Guidance Center was completed. The hypotheses were largely verified. A complete report of this study has been sent to the National Institute of Health and is available. As a result of this study, a request for a grant for a new extended project in the same area has been submitted.

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

A grant-in-aid was provided to Morristown Memorial Hospital for a comparison study of Dextrostix and venous specimens.

Heart and Circulatory Disease Program

The primary objectives of the Heart and Circulatory Disease Program are to minimize the mortality and morbidity associated with heart disease and to further explore the area of prevention. Our efforts include programs to strengthen activities, through grant-in-aid contract, of private agencies, hospitals, and private physicians to promote the best services available and to develop new services. Much of the effort is directed at treatment and rehabilitation of cerebrovascular patients in the areas of Cape May County, Camden County, Newark, Bayonne, East Orange, Atlantic City, and Summit; a pilot project for comprehensive care to congestive heart failure patients at the St. Peter's Hospital, New Brunswick; assistance in the training of professional personnel in newer scientific knowledge of heart disease; and a research and demonstration project in the prevention of secondary effects of arteriosclerotic heart disease.

Stroke Projects

Eight of the stroke projects are hospital based, the other two are community based. All of the projects use the team approach including such services as physiatrist, social worker, health educator, physical therapist, speech therapist, occupational therapist, public health nursing and hospital rehabilitation nursing, nutrition counseling, and social service. Some have all of these services, others may have but one or two. During the year, a total of 500 patients were accepted in all 10 projects.

The projects are promoted through cooperation from the Cape May County Health Department; Cooper Hospital, Camden; Collingswood Visiting Nurse Association, Collingswood; Atlantic City General Hospital, Atlantic City; Atlantic City Visiting Nurse Association, Atlantic City; Presbyterian Hospital, Newark; East Orange General Hospital, East Orange; Bayonne Hospital, Bayonne; Overlook Hospital, Summit; and St. Michael's Hospital, Newark.

Projects provide valuable information regarding needs and characteristics of stroke patients as well as clinical data on the disease entity. Physicians and nurses in particular still are not wholly prepared to deliver the medical and nursing care needed by stroke patients based on modern knowledge and techniques. Training of personnel for this care needs to be started in medical schools and in basic nursing programs as well as aiming at those in practice.

Congestive Heart Failure

The Congestive Heart Failure program, known as the Special Heart Project, initiated in September, 1964 is located at St. Peter's Hospital, New Brunswick. The project initially studied 25 congestive heart failure patients

transferred from the cardiology clinic. Additional patients with congestive heart failure from either the out-patient department or hospital admissions increased the number to 50 patients. Control congestive heart failure patients were obtained from the out-patient department at Helene Fuld and Mercer Hospitals in Trenton and Cooper Hospital in Camden. In this manner, 50 control patients were obtained. After all the data were obtained, it was obvious that the control and study groups were not comparable with respect to age, sex, etiology, and severity of heart disease. It was possible to find only 29 matches in the control and study groups. These 29 patients are being studied in depth.

The objectives of this project are to provide comprehensive care to congestive heart failure patients with quality medical, nursing, dietary, health education, and social services; to coordinate these services in an educational approach to the patient and his family explaining the disease process, the reason for therapy, and the importance of its continuance; to evaluate the anticipated usefulness of a comprehensive multidiscipline team approach in halting or delaying progression of the failure syndrome by measuring the number of hospital readmissions and hospital days for congestive heart failure in the study group as compared to a control group; and to assess the effects of the total education program through measurement of knowledge of an adherence to a dietary and medical regimen.

Cardiopulmonary Resuscitation

This Program co-sponsors with the New Jersey College of Medicine and Dentistry training sessions in cardiopulmonary resuscitation for physicians, dentists, and nurses. This year, 10 training sessions have been held and a total of 267 persons have been trained; 143 physicians, 16 dentists, 16 osteopathic physicians, 87 nurses, and 5 technicians. This course includes techniques of mouth-to-mouth and mouth-to-nose artificial respiration, closed and open heart massage, and electrical defibrillation. In addition, there are discussions on the etiology and diagnosis of cardiac arrest, drugs used in the treatment of cardiac arrest, care of the patient after resuscitation, and hospital organization of a cardiopulmonary resuscitation team.

In addition, training sessions for dentists in the northern and southern parts of the state were organized. This two-part program was held at the Veterans Administration Hospital, East Orange, and in Camden. The first part of the symposium, "Medical Emergencies in the Dental Office, Cardiopulmonary Resuscitation," consisted of a series of lectures on the medical evaluation of patients in the dentist's office. The second part consisted of instruction in the techniques of cardiopulmonary resuscitation and the methods of taking the blood pressure and administering intravenous injections. About 250 dentists attended these sessions.

This Program, in conjunction with the Hudson County Heart Association and the New Jersey College of Medicine and Dentistry, sponsored a cardio-pulmonary resuscitation course for firemen, policemen, and rescue squad workers at Jersey City. The men were given lectures on cardiac arrest and a demonstration of mouth-to-mouth artificial respiration and closed chest cardiac massage. The film, "Pulse of Life" was shown. The men practiced for proficiency in the technique and were given an examination.

Nutrition Services

The New Jersey Diet Pads and the New Jersey Diet Manual continue to be popular with physicians, hospitals and dietitians in the state. During 1965, 440 copies of the diet pad were distributed on request and 28 of the Diet Manual.

The Atherosclerosis Research Project (Anti-Coronary Club)

The studies on diet failures on the 100 patients of the Anti-Coronary Club continues. The first five years of the study of the effects of a 30 percent fat diet, increased in polyunsaturated fatty acids, upon the morbidity and mortality rates of young coronary males have been completed. The data are being analyzed.

The first stage of an additional set of experiments on the relationship of stress to coronary artery disease is being completed. Ten normal volunteers have been present for five sessions. At each session, one stressful stimulus is applied and bloods are drawn before and at periodic intervals after the stimulus. The data are being analyzed by the statisticians. On first glance, it is apparent that in a significant number of cases, there have been rises in the free fatty acids within 15 to 30 minutes after the stressful stimulus is applied.

Doctor Bierenbaum presented a paper entitled "Modified Fat Dietary Management of the Young Coronary Male—A Five-Year Controlled Study" at the annual meeting of the American Heart Association, Arteriosclerosis Section, held in Miami, Florida. The report presents data on 100 men between the ages of 20-50 with electrocardiographically proven myocardial infarctions. The purpose of the study is to ascertain what relationship, if any, there is between blood cholesterol level and coronary heart disease morbidity and mortality.

Education

This Program cooperated with the Overlook Hospital in sponsoring a one-week course for nurses on "The Intensive Coronary Care Unit." Nurses from 15 hospitals attended.

Post-graduate courses of instruction in "Recent Advances in Clinical Cardiology," consisting of 10 two-hour sessions were co-sponsored by this Department and St. Michael's Hospital, Newark. This course, open to physicians, residents, and interns, was attended by 120.

In cooperation with the New Jersey Academy of Medicine, a series of four roving symposia on "Peripheral Vascular Disease," "Diagnosis and Treatment of Strokes," "Diagnosis and Treatment of Arteriosclerotic Heart Disease," and "Diagnosis and Treatment of Rheumatic Heart Disease," were held at hospitals in the less populated and outlying counties of the state. Attendance totaled 310 physicians.

In-service nursing education programs in nutrition for chronic illness were conducted by members of the Heart Program in each State Health District. Six lectures, covering nutrition in acute illnesses, aging, cardiovascular diseases, and diabetes, were given.

A 10-week course in "Stroke—Modern Management and Care" was co-sponsored by the Cape May County Heart Association and this Program. Each session was attended by more than 50 nurses from the Cape May County area employed in hospitals, nursing homes, and home health agencies.

Two exhibits were presented at the convention of the Medical Society of New Jersey in Atlantic City. One exhibit stressed the diagnosis, treatment, and rehabilitation of the stroke patient with emphasis on endarterectomy as a method of treatment. The second exhibit, on rheumatic fever, centered on the prevention of rheumatic fever through a system of conventional culturing which can be done easily in a physician's office.

A complete kit of activities of daily living aids has been organized and delivered to hospitals where stroke projects have been established. The kit contains approximately 85 items to assist stroke patients with independent living. It is used as a demonstration aid in the rehabilitation department of the hospital.

Personnel

The staff of the Heart Program consists of a physician as Program Coordinator, public health nurse consultant, nutritionist, and a public health physician, and a health educator on loan from the U. S. Public Health Service.

Neurological and Sensory Diseases

Expansion of Consultation Service

The Public Health Service grant for the year 1965-66 has enabled the continued expansion of the New Jersey Consultation Service for Neurological Diseases. This is the fourth year that funds have been made available for this

project. The Evaluation clinics have been expanded to six, with the recent addition of Monmouth Medical Center, Long Branch. The case load (see Table I) has shown an increase during the past year. Convulsive disorders continue to dominate the clinic sessions. However, there is a steady increase in the evaluation of other neurological diseases.

Professional Education

The seventh Electroencephalograph Symposium was held at St. Francis Hospital, Trenton, on April 7, 1965. Sixty technicians and physicians attended.

Seventy persons attended a Neurological Symposium on November 10, 1965 in Trenton. The program attracted physicians in varied specialties as well as general practitioners and a few nurses. The subject matter included discussion of the following topics: Arteriography and Pneumoencephalography in Neurological Diagnosis; Brain Scanning in Neurological Diagnosis; the EEG in General Practice; the Diagnosis and Treatment of Epilepsy; Muscular Diseases; and Demyelinating Diseases.

Community Services

An electroencephalograph instrument was purchased during the year for loan to East Orange General Hospital, making a total of 22 such instruments placed in community hospitals by this Program.

N. J. CONSULTATION SERVICE FOR NEUROLOGICAL DISEASES

CLINICAL ACTIVITIES

Table 1. PATIENTS AWAITING EVALUATION BY AREAS AS OF DECEMBER 31, 1965

CENTRAL AREA	27
NORTHERN AREA	18
SOUTHERN AREA	7
METROPOLITAN AREA	43
Total:	95

Table 2. COMMUNITY CLINICS—JANUARY 1, 1965 - DECEMBER 31, 1965

	Patients Seen	
	New	*Old* (Re-visit)
SOUTHERN (Total Seen—69)	43	26
NORTHERN (Total Seen—80)	66	14
METROPOLITAN (Total Seen—162)		
Paterson	63	14
Newark	74	11
CENTRAL (Total Seen—105)		
Burlington, Mercer, Middlesex	49	19
Monmouth, Ocean	31	6
TOTAL: (Grand Total Number Seen—416)	326 New	90 Old (Re-visit)

GRAND TOTAL OF IN-PATIENT ADMISSION—
JANUARY 1, 1965 - DECEMBER 31, 1965

41 In-Patients Admitted to New Jersey Neuro-Psychiatric Institute
(New Jersey Consultation Service for Neurological Diseases, 1965)

Table 3. REPORT OF EEG SERVICES IN 22 HOSPITALS

January 1, 1965 – December 31, 1965

Hospital	*Number of Patients Examined*	*Examinations*		
		Normal	*Abnormal*	*Total*
All Souls Hospital, Morristown	275	305	207	98
Atlantic City Hospital	466	466	321	145
Burlington County Memorial, Mount Holly	380	380	208	172
Clara Maass Memorial, Belleville	403	403	220	183
East Orange General	62	62	23	39
Elizabeth General	762	775	446	329
Englewood Hospital	286	286	202	84
Fitkin Memorial, Neptune	249	249	157	92
Hunterdon Medical Center, Flemington	162	162	108	54
Mercer Hospital, Trenton	668	668	437	231
Middlesex General, New Brunswick				
Monmouth Medical Center, Long Branch	1,225	1,225	760	465
Morristown Memorial	1,410	1,410	761	649

Table 3. REPORT OF EEG SERVICES IN 22 HOSPITALS—*Continued*

January 1, 1965 - December 31, 1965

Hospital	*Number of Patients Examined*	*Examinations*		
		Normal	*Abnormal*	*Total*
Mountainside Hospital, Montclair	311	311	168	143
Paterson General	1,191	1,206	514	692
Perth Amboy General	756	756	637	119
Presbyterian Unit, United Hospitals of Newark	480	480	238	242
Princeton Hospital	261	261	199	62
St. Elizabeth Hospital, Elizabeth	430	450	246	204
St. Francis Hospital, Trenton	464	480	292	188
St. Mary's Hospital, Hoboken	283	283	239	44
Salem County Memorial	52	52	15	37
Total	10,576	10,670	6,398	4,272

Restorative Services Program

The Restorative Services Program had five contracts with medical institutions for Coordinated Home Care Programs in 1965, one of which was for a period of six months, in the amount of $96,132.98. Through this Program, 318 patients were provided 10,075 days of service, 2,500 physician visits, 401 medical social service visits, 4,648 physical therapy treatments, 467 occupational therapy treatments, two speech therapy treatments, 1,987 visits by the visiting nurse association, 2,404¼ hours of homemaker services, and 184 nutrition consultation visits.

The Program also had contracts with two visiting nurse associations in the amount of $2,575, for the provision of in-service educational and training programs, which were afforded to St. Vincent's Hospital, Middlesex General Hospital, Little Nursing Home, and Edison Lodge with the 678 patients in these facilities receiving the benefit of this program.

Of the three public health project nurses in the Program, two had sabbatical leave and received their Master's of Science Degrees in Nursing; however, seven nursing homes, two medical institutions, and three hospitals received the in-service educational and training program. Approximately 280 personnel received training to the benefit of 1,514 patients in these institutions.

In addition to the above, a contract with the Institute of Physical Medicine and Rehabilitation afforded two nurses special training in a course on "Physical Rehabilitation Methods for Nurses."

Division of Constructive Health

CURTIS F. CULP, M.D., M.S., *Director*

Crippled Children's Program ..... WATSON E. NEIMAN, M.D.
Program Coordinator

Dental Health Program ..... DAVID R. WALLACE, D.D.S., M.P.H.
Program Coordinator

Maternal and Child Health Program ..... WATSON E. NEIMAN, M.D.
Program Coordinator

Division of Constructive Health

Introductory Statement

The Programs of the Division of Constructive Health in their objectives share the basic concepts of prevention, early diagnosis, and the provision of restorative services.

In attempting to fulfill this mission, it has been clearly demonstrated that the activities of the Program must not only be closely coordinated, but that there must be combined effort on the part of all governmental, private, philanthropic and professional groups throughout the state in attempting to meet the needs of those requiring such services.

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 25,880 children registered with the Program at the end of 1965 as compared with 23,742 children registered in 1964. There were 3,845 children added to the Program in 1965 compared with 2,926 in 1964. Much of this large increase was due to registration of children who were examined under the Rural Youth Corps Program; there were 650 children in this category. Of the total number of children registered with the Program, 11,282 received services in 1965 as compared with 9,198 in 1964.

Hospitalization and Convalescent Care

The Program assisted in underwriting 21,488 hospital bed days and 30,308 convalescent bed days for 698 children in 1965 as compared with

19,229 hospital bed days and 30,503 convalescent bed days for 827 children in 1964. In 1965, the total expenditure for these services amounted to $746,853.62.

During 1965, we participated in 61 New Jersey hospitals, eight New York hospitals and four Philadelphia hospitals. We cooperated with six convalescent centers in New Jersey and one in New York.

Prosthetic Devices, Bracing and Appliances

In 1965, the Program assisted in providing 2,827 braces and artificial limbs for 990 children as compared with 1,897 appliances to 968 children in 1964. The total cost of these devices was $217,334.28. We dealt with 40 vendors in New Jersey and with 16 out-of-state vendors.

Nursing Services

The Program helped pay for 9,962 nursing visits to 7,686 children in 1965. This is a slight drop from the 10,068 nursing visits provided to 6,742 children in 1964. Nursing agencies were paid $47,273.40 for their services. In addition, nursing consultation services were provided to all nursing agencies working with the Program.

Special Projects

A special project undertaken during the year was examination and referral for treatment of 650 persons in the Rural Youth Corps Program. As a part of this special project, dental services were provided for a limited number of Youth Corps personnel in those areas in which dentists could be found who were willing to provide services for these personnel.

The following table shows the number of evaluations completed in 1965 and children served, compared to similar categories in 1964.

Table 1. EVALUATIONS AND CHILDREN SERVED, 1964 AND 1965

	1965 Evaluations	*Children Served*	*1964 Evaluations*	*Children Served*
Asthma	18	18	11	11
Amputee	22	22	15	15
Cardiac	36	36	19	19
Cleft Palate	51	51	14	14
Cystic Fibrosis	21	21	15	15
Hearing and Speech Evaluations	250	250	240	240
Hearing and Speech Therapy	4,282	240	4,576	137
Orthodontia	32	32	26	26
Physical Therapy	1,620	100	1,505	71

Table 2. Case Number and Payment of Hospital, Convalescent Home and Appliance Services for Period 1/1/65—12/31/65

Hospital, Convalescent Care—Total Number of Children		698
Total Bed Days		51,796
Hospital		
Number of children receiving hospital services		514
Number of bed days		21,488
Convalescent Care		
Number of children receiving convalescent services		184
Number of bed days		30,308
Payment of Bed Days (Hospital and Convalescent care)		
Total		$746,853.62
State and Federal Funds	$453,188.02	
County Boards of Chosen Freeholders	288,048.20	
Others	5,617.40	
Appliances—Total Number of Children		990
Total Number Purchased		2,827
Total Payments		$217,334.28
State and Federal Funds	$119,187.66	
County Boards of Chosen Freeholders	84,176.88	
Others	13,969.74	

Table 3. Summary of Services

Period Covered—January 1, 1965—December 31, 1965

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	10,584	19,698 Visits
Hospital	514	13,726 Days
Convalescent	184	16,926 Days
Total Count of Children and Services	11,282	50,350 Units

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

Total Number of Children 11,282

County	*Number of Children*	*County*	*Number of Children*
Atlantic	104	Middlesex	826
Bergen	944	Monmouth	394
Burlington	382	Morris	630
Camden	526	Ocean	84
Cape May	40	Passaic	232
Cumberland	96	Salem	50
Essex	3,560	Somerset	312
Gloucester	270	Sussex	188
Hudson	926	Union	1,014
Hunterdon	122	Warren	94
Mercer	488	Military	0

The Program provided neonatal surgical services in one center in New Jersey during 1965; the center providing this service had 299 bed days of care during this period. These bed days are included in the total above.

During the year, the Crippled Children's Program offered to all counties an opportunity to reverse the Program—county participation ratio. In 1964 the county's share of the cost was 60 percent and the Program's share was 40 percent. At the end of 1965, there were 14 counties paying 40 percent of the share of the cost and seven counties still operating under the old ratio, wherein they paid 60 percent of the cost. As in the past, some counties have had difficulty in meeting their share and no county has been willing to add new diagnostic categories of crippled children because of the extra cost involved. At the end of the year, two counties had run out of money to pay their share of the cost and the Program thus had to be curtailed somewhat.

Dental Health Program

Introduction

With the introduction of federal grants for dental health programs, a notable expansion of all aspects of the Dental Program has been possible. This expansion has been most noticeable in education and training. This type of program has been in line with the trend of national programs to provide more services for more people in a more efficient manner and to increase the preventive aspects of dental health.

The training of dental public health residents has expanded from the training of one resident per year to training three residents per year. The

residents, in addition to their training, conduct a major project which will provide background information to the Program useful in future activities.

The Migrant Program was another aspect of our training program. Five dental students were trained in the techniques of dental health education. The dental students provided for the migrant laborers and their children programs of dental health education.

With the development of the Economic Opportunity Act and the various programs under the Act, it was essential to provide mechanisms for dental treatment. The Dental Health Program has provided the personnel to conduct the dental surveys and to plan programs for providing dental treatment for the participants.

Education, prevention, treatment, and research are the four areas of the Dental Health Program. All of these areas have been subject to expansion as will be described more in detail in the paragraphs that follow.

Dental Health Education and Prevention

As a result of continuing educational efforts, more communities have been added to the list of those adjusting the fluoride content of their water supplies. The promotion of fluoridation has been a joint effort of the Dental Health Program and the New Jersey State Dental Society.

As a part of its continuing educational effort for the dental profession, the Dental Health Program has sponsored five courses in the oral cytology technique of detecting oral cancer. Two hundred and sixty-one dentists attended. Six hundred smears of suspicious lesions have been taken in an attempt to detect oral cancer before it gets too far advanced. Five of these cases were confirmed by biopsy as being positive for malignancy.

Four courses have been sponsored on "Radiological Health" in an effort to reduce the radiological hazards to the dentists and their patients.

The Dental Health Program sponsored a course in "The Management of Dental Problems of Handicapped Children" at the New Jersey College of Medicine and Dentistry. This course provided training for 60 dentists in the techniques of providing dental care for handicapped children.

"Medical Emergencies in the Dental Office" was the subject of four courses in which the dentist was made aware of the emergencies that might arise in the treatment of patients with certain medical conditions. The dentist was taught how to avoid emergencies and how to care for them should they arise.

The Academy of Medicine of New Jersey and the Dental Health Program jointly sponsored a course, "Dental Care for the Junior Citizen." The content of this course was worked up cooperatively between the Dental Health Pro-

gram and the Dental Section of the Academy. Physicians and dentists participated in the course.

Dental health education programs were provided for migrant children, migrant workers, Neighborhood Youth Corps, student nurses, school children, P.-T. A.'s, and service clubs. Through these programs, the people were encouraged to practice good dental health habits and to promote and secure preventive procedures.

The continuity of the Pre-school Dental Inspection Program has stimulated interest in many counties. During the past year, inspections were conducted in seven counties. Instructions in good dental health practice were given to both the child and parent at the pre-school dental inspections. (See Table 3 and Table 4 for a five-year comparison.)

Dental Treatment

Dental treatment services for school children were conducted by the Dental Health Program in 18 counties, using the services of 104 dentists (private offices—69, dental clinics—23, trailers—10, and two in an educational program in Phillipsburg). (See Table 1, also Table 2 for a five-year comparison.)

The Dental Health Program and the Crippled Children's Program have continued to provide dental services for handicapped children at All Soul's Hospital, Cooper Hospital, Monmouth Medical Center, and Warren Hospital. This activity has included provision of orthodontic treatment, as well as all other necessary dental services for the crippled child.

In the Migrant Program, treatment was provided in Indian Mills in Burlington County, Cedarville and Rosenhayn in Cumberland County, Cranbury in Middlesex County, Freehold in Monmouth County, and Woodstown in Salem County. (See Tables 5 and 6.)

In cooperation with the Crippled Children's Program, treatment services were provided for members of the Neighborhood Youth Corps to the extent of the availability of patients. Many were provided with dental care so that they became employable.

Research

The Dental Health Resident who served his residency with the Dental Health Program studied the communications between physicians and dentists on their patients. The study was made in the Camden area and was based on the patients having heart disease.

One of the 1965-1966 residents studied a complete dental program for Trenton. Another resident studied the need, desires, and interests of the dentists in New Jersey for continuing education. The third resident made a quantitative assessment of the oral hygiene status of a mentally retarded population.

Studies were made to ascertain the costs of providing complete dental treatment for a population of out of school, out of work individuals whose dental condition was a deterrent to their employment.

Studies were made to determine the amount of dental care needed by Rural Youth Corps and Neighborhood Youth Corps members.

Cooperation with Other Agencies

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

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

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

The Dental Health Program cooperated with the Division of Chronic Illness and provided courses in oral cytology and courses on dental emergencies for the dental profession.

The Dental Health Program cooperated with the Radiological Health Program in presenting courses on dental radiological health for the dental profession.

The Dental Health Program cooperated with the Academy of Medicine of New Jersey in presenting a course for the medical and dental professions.

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

Statistical Data

(See Table 1, 2, 3, 4, 5, and 6.)

Table 1. **TREATMENT PROGRAM STATISTICAL DATA**

January 1, 1965 to December 31, 1965

Program by Counties and Communities	Program Initiated	Present Type of Program*	Dentists	School Districts	Total Operating Hours	Examinations	Visits	Total Operations	Children Treated	Cases Completed	Percentage of Completed Cases
Atlantic	1947	Tr.	3	5	464	254	528	2,222	151	83	55
Bergen	1943	P. O.	4	4	294	1,275	404	1,248	144	82	57
North Arlington	1940	Cl.	1	1	524	1,881	2,805	1,302	142	136	96
Rutherford	1945	Cl.	1	1	159	2,472	178	454	47	44	94
Burlington	1943	P. O.	4	6	183	1,780	382	988	257	103	40
Burlington City	1943	Cl.	2	1	99	209	419	1,233	165	55	33
Camden	1943	Tr.	1	10	613	4,544	828	2,485	594	404	68
Lawnside	1944	P. O.	1	1	43	27	81	234	22	16	73
Cape May	1958	P. O.	7	11	399	467	768	2,111	150	109	73
Cumberland	1955	Tr.	1	11	876	1,030	1,372	1,661	1,236	436	35
Essex—Bloomfield-Montclair	1964	Cl.	2	2	1,181	1,105	1,712	9,760	424	318	75
Orange—Parochial	1944	Cl.	2	1	670	343	1,319	4,443	176	142	81
Orange—Public	1964	Cl.	2	1	504	1,472	1,076	1,777	358	52	14
Gloucester	1947	Tr.	1	12	552	11,070	876	807	420	125	30
Hunterdon	1940	Cl.	1	25	558	965	1,421	1,141	469	316	67
Middlesex	1942	P.O.	4	5	473	211	755	2,384	134	98	73
Edison Township	1963	Cl.	1	1	79	40	181	385	55	0	0
Kiddie Keep-Well Camp	1942	Cl.	1	1	199	301	471	643	257	72	28
Monmouth	1941	P. O.	9	9	525	4,894	1,053	2,611	341	175	51
Matawan	1945	Cl.	3	3	291	3,426	511	937	214	130	61
Union Beach	1946	Cl.	1	1	114	55	224	312	96	32	33
Collier Foundation	1945	Cl.	1	1	54	40	83	145	39	11	28
Morris	1943	P. O.	19	32	1,186	603	2,204	5,065	669	375	56
Dover	1964	Cl.	3	1	195	86	233	549	58	16	27
Ocean	1944	P. O.	6	4	223	162	408	1,241	126	57	45
Trailer	1946	Tr.	2	10	640	336	1,302	4,507	385	258	67
Passaic	1962	P. O.	4	4	434	2,090	442	1,324	105	61	58
**Bloomingdale	1944	Cl.	1	1	88	16	176	389	61	22	36
Salem	1955	Cl.	1	1	120	155	192	639	138	0	0
Somerset	1942	Tr.	1	9	902	10,036	325	1,107	277	179	65
Sussex	1942	P. O.	11	13	700	339	1,265	3,204	252	230	91
Warren	1947	Tr.	1	11	901	360	1,677	3,614	326	209	64
Phillipsburg	1954	Ed.	2	1	417	....	.....	.....	....	....	..
TOTALS (18 Counties)			104	200	14,660	52,044	25,671	60,922	8,288	4,346	52

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

** Program only for six months.

Table 2. Dental Treatment Program

Year	Number of Dentists	School Districts	Number of Examinations	Number of Children Treated	Percentage of Completed Cases	Number Extractions of Permanent Teeth per 100 Children Treated	Number of Operations per 100 Children Treated
1960-61	91	194	39,990	7,341	62	23	706
1961-62* ...	91	199	74,944	10,130	56	..	..
1963	92	185	42,537	7,070	57	17	680
1964	95	194	49,968	8,563	50	14	592
1965	104	200	52,044	8,288	52	21	735

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

Table 3. Pre-School Dental Inspection Program

Counties	Number of School Districts	Number Examined	Number Requiring Treatment	Percent Requiring Treatment	Number of d e f Per Child	Number of Dentists
Bergen	2	382	166	43	3.2	2
Camden	11	884	380	43	2.7	1
Essex	4	2,522	1,523	60	2.5	7
Gloucester	14	1,186	478	40	2.1	13
Ocean	7	543	269	50	2.9	4
Passaic	10	3,614	1,139	32	1.9	17
Warren	22	1,067	632	59	3.4	11

Bergen, Camden, Ocean, Passaic, and Warren Counties conducted the above inspections during the spring and fall of 1965.

Gloucester County conducted the above inspections during the spring of 1965.

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
1961	4	47	3,041	1,673	55	3.1	31
1962	5	62	5,232	2,562	49	2.8	39
1963	5	56	4,944	2,386	48	2.7	34
1964	6	63	6,553	3,125	48	2.8	43
1965	7	70	10,198	4,587	45	2.7	55

Table 5. MIGRANT DENTAL TREATMENT PROGRAM FOR CHILDREN OF MIGRANT WORKERS
July 1, 1965 to August 31, 1965

	Burlington County Indian Mills	*Cumberland County Cedarville*	*Cumberland County Rosenhayn*	*Middlesex County Cranbury*	*Monmouth County Freehold*	*Salem County Woodstown*	*Totals*
Number of Dentists	1	1	(1)*	1	(1)*	1	4
Number of Examinations	44	110	87	107	49	109	506
Number of Visits	95	207	159	222	68	154	905
Number of Extractions—Permanent	..	3	6	3	..	1	13
—Deciduous	15	21	10	7	17	12	82
Number of Fillings—Amalgam	11	6	6	100	15	54	192
—Others	2	1	2	2	2	..	9
Number of Temporary Fillings	1	..	..	18	..	1	20
Number of Linings	..	46	69	43	1	19	178
Number of Prophylaxis	44	85	66	80	50	111	436
Number of Fluoride Treatments	45	85	66	94	49	70	409
Number of Children Treated	44	110	87	107	49	92	489
Number of Cases Completed	24	4	6	89	16	24	163
Percentage of Completed Cases	54.5	4.4	6.8	83.1	32.6	26.0	33.3

* Same dentist worked in two counties or communities.

Table 6. Migrant Dental Treatment and Educational Program for Children of Migrant Workers—1965

Four dentists and four dental assistants were utilized in the Migrant Dental Treatment Program in the following:

Schools	*Community*	*County*
Cranbury	Cranbury	Middlesex
Bible School	Freehold	Monmouth
Cedarville	Cedarville	Cumberland
Rosenhayn	Deerfield Township	Cumberland
Mary Shoemaker	Woodstown	Salem
Indian Mills	Indian Mills	Burlington

Five dental public health trainees were utilized in the dental educational program in the following:

Cranbury School
Bible School
Mary Shoemaker School
Cedarville School
Rosenhayn School
Indian Mills School

Maternal and Child Health Program

In conformity with the assigned responsibilities of the Maternal and Child Health Program and the ascribed objectives, namely, prevention, early detection, diagnostic evaluation with planned programming and case registration, the following activities and services have been afforded during 1965:

PKU Testing of Newborns

The Department has increased its PKU testing screening program from 42 hospitals in 1964 to 78 hospitals in 1965. These hospitals have 111,295 estimated births per year. It is estimated that during the year, there were 71,529 children screened for PKU. There are two clinics in the state to which all cases and suspected cases of PKU are referred. One of the clinics is located at Babies' Hospital, Newark and the second at the Bancroft School, Haddonfield. At the end of the year, there were 24 children under treatment and three new cases of PKU had been discovered as the result of the screening program. During 1965, there were 300 serum blood specimens taken and analyzed. The Division of Laboratories, New Jersey State Department of Health, performed all of the screening tests and the serum blood tests.

Complete Diagnostic Evaluations

The Maternal and Child Health Program had four clinics in operation to evaluate children for mental retardation and similar defects in 1965, as compared to one clinic in 1964. These clinics are located in Morristown Memorial Hospital, Morristown; Babies' Hospital, Newark; Hackensack Hospital, Hackensack; and Bancroft School in Haddonfield. There were 216 evaluations in 1965 as compared to 46 evaluations in 1964.

Hospitalization of Premature and Infant Exchange Transfusions

Seven infants were treated under this activity.

Child Health Conferences

There were 279 Child Health Conferences throughout the state, with the Program participating in 24. Through the District Pediatric Consultants, cooperation and consultation services are afforded all Child Health Conferences. All Child Health Conferences were provided free vaccines through the State Biological Distribution Stations. Reports of activities were afforded the Program from 67 such stations. Following is a breakdown of the children serviced in the Child Health Conferences:

Table 1. CHILDREN SERVED IN CHILD HEALTH CONFERENCES, 1965

	Visit or Service Category	*Infants Under 1 Yr.*	*Children 1 - 4 Yrs.*	*Children 5 Yrs. and Over*	*Total*
1.	New Cases	14,801	11,848	5,372	32,021
2.	First Visit This Calender Year of Previously Carried Case	3,343	14,596	4,194	22,133
3.	Re-Visits This Calendar Year	45,405	54,406	12,784	112,595
4.	Total Attendance	63,549	80,850	22,350	166,749
5.	Examined by Physician	49,645	57,258	13,344	120,247
6.	Seen by Nurse Only	12,343	20,324	7,334	40,001
7.	DPT First Injection	11,748	6,779	1,647	20,174
8.	DPT Second Injection	9,476	6,714	1,565	17,755
9.	DPT Third Injection	7,693	6,437	1,122	15,252
10.	DPT Booster	319	10,583	4,911	15,813
11.	Oral Polio Type I	2,609	2,399	845	5,853
12.	Oral Polio Type II	3,133	3,860	1,142	8,135
13.	Oral Polio Type III	2,260	2,440	901	5,601
14.	Oral Polio Trivalent First Dose	11,603	13,174	4,246	29,023
15.	Oral Polio Trivalent Second Dose	6,608	8,220	2,840	17,668
16.	Oral Polio Booster	2,085	4,493	1,444	8,022
17.	Measles Vaccine	650	9,429	1,247	11,326
18.	Smallpox Vaccine	4,473	8,439	2,267	15,179
19.	Tuberculin Test	2,891	8,193	925	12,009
20.	PKU Test	13,324	478	5	13,807
21.	Referral for Medical or Dental Care	1,851	1,149	120	3,120

Maternal Deaths

The Maternal and Child Health Program works cooperatively with the Special Committee on Maternal and Infant Welfare of the Medical Society of New Jersey in relation to maternal deaths. Fifty-seven such deaths were reported and 40 follow-up investigations were made of those reported.

Consultation Services

The Program has four nurse consultants and one physician consultant to give consultation service as it relates to the Maternal and Child Health Program. Our nurse consultant for pediatric services provided 37 hospital consultation visits and nine follow-up services. Our obstetrical nurse consultant provided 67 hospitals and five agencies consultation visits and the physician obstetrical consultant provided consultation services to 11 hospitals and eight other agencies. Our nurse consultant for Child Health Conferences provided 49 consultation visits and 10 consultation visits to Day Care and Migrant Day Care and School Program. Forty visits were made to the six hospitals participating in the program for mixed obstetrical and gynecological floors by the nurse consultant and five visits were made by this consultant to other agencies. A total of 241 consultation visits were made by the active staff.

Maternity Service Questionnaire

The Program cooperates in review of the maternity services provided in hospitals. Ninety-three questionnaires were sent to the hospitals during 1965, of which 81 replied.

Midwives

There are 66 licensed midwives registered to practice in New Jersey; however, in 1965 three active midwives delivered only three newborns.

Migrant Health

The Maternal and Child Health Program had agreements with nine hospitals in New Jersey to provide prenatal and obstetrical services for migrant workers in 1965. There were 60 mothers registered with the Program and 32 deliveries with a total of 121 bed days of care and 100 prenatal visits during the year.

The Program participated in five clinics conducted in conjunction with the schools for migrant children. In this Program, there were a total of 30 clinic sessions with 599 children examined and a total of 480 re-visits. Following is a breakdown of the Vaccination Program for these children.

Table 2. VACCINATION PROGRAM

Visit or Service Category	*Children 1 - 4 Yrs.*	*Children 5 Yrs. & Over*	*Total*
1. New to N. J. Migrant School	161	406	567
2. Returning to N. J. Migrant School	51	362	413
3. Non-Migrant	16	47	63
4. Total Attendance	250	829	1,079
5. Examined by Physician	101	337	438
6. DPT First Injection	52	15	67
7. DPT Second Injection	41	8	49
8. DPT Third Injection	14	1	15
9. DPT Booster	16	1	17
10. DT First Injection	...	53	53
11. DT Second Injection	...	61	61
12. DT Third Injection	...	21	21
13. DT Booster	...	99	99
14. Oral Polio Trivalent First Dose	58	112	170
15. Oral Polio Trivalent Second Dose	9	33	42
16. Oral Polio Trivalent Third Dose	9	60	69
17. Oral Polio Booster	24	52	76
18. Measles Vaccine	...	...	...
19. Smallpox Vaccine	54	51	105
20. Tuberculin Test	95	282	377
21. Referral: Medical	2	39	41
Public Health Nurse	3	6	9
Social Service	...	1	1
Dental	...	...	..

In conjunction with the Migrant Health Program, 506 dental examinations were done with 201 fillings and 95 extractions.

Poison Control and Accident Prevention Program

Accidental Poisoning

Of the 39 Poison Control Centers in New Jersey, 36 reported poisoning cases. There were a total of 3,600 cases of accidental poisonings treated or assisted by the Poison Control Centers. Home follow-up visits were made on 1,500 poisoning cases from 21 Poison Control Centers. Consultation services were provided in 20 visits to 10 Poison Control Centers and 10 follow-up agencies.

Poison control programs were presented to: four county nursing agencies, 15 hospitals (including 10 Poison Control Centers), two safety councils, five first aid districts, one National First Aid Convention, and to 13 other groups. Two radio programs were taped on poison control in Monmouth County.

Through aid given by this Program, six two-man teams were started in Burlington and Monmouth Counties whose function it is to give programs on accidental poisoning to any groups that request them. These teams consist of local first aid squad members, pharmacists, and nurses.

The Program's film "One Day's Poison" had 11 bookings during the year. The Program's representative used a copy of the film "One Day's Poison" at approximately 25 meetings.

Lead Poisoning

There was a total of 1,501 blood samples drawn on which blood lead analyses were done by arrangement with the Division of Laboratories. Of these, 579 cases had an abnormal blood lead level and 135 cases were confirmed by a physician's disease report. The majority of these cases were found in Newark (815 total cases; 375 with normal levels and 87 confirmed cases) and Jersey City (292 total cases; 97 with abnormal levels and 14 confirmed cases).

Due to increased Program efforts in five major cities—Camden, Trenton, Newark, Jersey City, and Paterson—as well as in the entire state, there were 598 more blood lead analyses done this year than in 1964; consequently, 76 more suspect cases were found.

Educational programs on lead poisoning were given to five health departments, eight hospitals, and two nursing agencies.

Rescue Breathing

The Program's two Resusci-Anne dolls are on loan to the Trenton and Newark Chapters of the American Red Cross. These two agencies used the Resusci-Annes a total of 430 times among a variety of groups and before a total audience of about 11,600. The Program's film "Rescue Breathing" had 11 bookings during the year.

General Safety Activities

Through work done by the Program's Field Representative with the editor and editorial cartoonist of one of the state's leading newspapers, one editorial cartoon a week is dedicated to the topic of safety. This work has been copied and used by groups both in and out of the state. Examples: National Safety Council, New Jersey Bell Telephone, Gold Cross Magazine, and East Orange Traffic Safety Education Committee.

Twenty-two films are made available through the State Museum on poisoning, accidents, and safety.

Division of Environmental Health

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

Programs:

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

- Food ..... JOSEPH PRINCE
  Program Coordinator
- Drug, Device and Cosmetic ..... RICHARD J. RUSSO, M.S.P.H.
  Program Coordinator
- Meat Inspection ..... ROBERT JOHNSON
  Program Coordinator
- Milk ..... HOWARD ABBOTT, M.P.H.
  Program Coordinator
- Shellfish ..... RICHARD E. BELLIS
  Program Coordinator

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

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

- Camp and Bathing ..... ANTHONY T. LEAHEY
  Program Coordinator
- Potable Water ..... JOHN WILFORD
  Program Coordinator
- Solid Waste ..... JOHN ZEMLANSKY, M.S.
  Program Coordinator
- Ragweed and Poison Ivy ..... JOHN ZEMLANSKY, M.S.
  Program Coordinator
- Housing ..... ALFRED H. FLETCHER
  Acting Program Coordinator

Air Sanitation ..... WILLIAM A. MUNROE
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

Division of Environmental Health

The Division of Environmental Health is concerned with problems which adversely affect the environment of man. Its programs deal with the health aspects of the natural resources of air, water, and the soil. They include controls over the disposal of liquid and solid wastes. They also deal with bathing in natural and artificial pools and lakes, with camping, housing, mobile home parks, and with the control of milk, meat, food, and shellfish.

Programs are carried out to protect persons from unnecessary sources of radiation and against unhealthy conditions in industry. Epidemiologic study and field research are carried out to uncover and determine the reservoirs of infection and mode of transmission of animal diseases to humans and develop practical methods of control. The Division fosters programs to control insect, plant, and animal pests.

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

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

Occupational Health

Air Sanitation

Radiological Health

Stream Pollution

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

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

Codes are drafted and when approved by the Department are recommended for adoption by local boards of health by reference. Existing codes are brought up-to-date from time to time by amending them. The following is a list of recommended codes pertaining to environmental health in existence to date:

Boarding Home for Children Code (1956)
Coin-operated Dry Cleaning Establishment Code (1962)
Food and Beverage Vending Machine Code (1961)
Housing Code (1962)
Individual Sewage Disposal Systems Code (1963)
Maintenance of Swine Code (1957)
Plumbing Code (1964)

Private Camp Grounds Code (1964)
Public Health Nuisance Code (1953)
Retail Food Establishment Code (1965)
Smoke Control Code (1953)
Solid Waste Code (1959)
Swimming Pool Code (1955)
Water Supply Code (1959)
Weed Control Code (1953)

The Division is represented on a Joint Drainage Committee that is drafting a proposed drainage policy for the state. Several meetings have been held to acquaint health officer and engineering groups with the proposal which is still in tentative form.

The Bureau of Government Research at Rutgers is drafting the report with guidance and direction furnished by the Joint Drainage Committee.

The report should be completed in 1966.

Air Sanitation Program

The Air Sanitation Program consolidated the first phases of a major expansion during 1965. Personnel resources were more than doubled, with the Program adding 22 new personnel to its previous strength of 19. Budgetary resources rose from approximately $146,000 to nearly $523,000, of which $250,000 was provided by the federal government to match increased state appropriations. Major emphasis was placed on improvements to enforcement activities, the research and development capabilities, and information and education aspects of the Program.

Air Pollution Control Commission

In keeping with advances in air pollution control technology, the Commission expanded the Air Pollution Control Code by adding more stringent restrictions on the emission of fly ash from newly-constructed installations. The new regulations became effective March 1, 1966.

After defining the New Jersey motor vehicle air pollution problem for the first time, the Commission drafted proposed legislation to provide for the control of vehicular emissions.

Enforcement

Three significant advances were made in air pollution enforcement activity during 1965. A field office was opened in Newark, the heart of a critical problem area. Activation of this facility promotes fuller use of available resources than would be possible from the Central Program Office in Trenton.

Significantly, the field office initiated an operation to concentrate its major efforts to suppress air pollution from a highly-industrialized segment of its jurisdiction, thereby inaugurating a unique approach to the problem of controlling pollution in large problem areas.

Such action is designed to accelerate abatement by permitting maximum resources to be brought to bear against individual segments of the larger area. Concurrently, a simple automated system was developed to consolidate work assignment, data collection, and statistical reporting of enforcement activities throughout all of the state.

Enforcement of Chapter VII of the Air Pollution Control Code, which became effective October 1964 and which regulates the emission of particulate matter, was undertaken. Technical assistance was provided especially to ferrous foundry and bituminous concrete operations regarding the new code requirement.

Special emphasis was placed on the strengthening of enforcement activities during the period. More than 3,800 air pollution investigations developed 232 first violations and 111 repeat violations. Approximately 173 were corrected, and work continued on those which were not satisfactorily resolved.

Tables 1 and 2, below, are detailed breakdowns of enforcement field and administrative activities.

Table 1. Enforcement Field Actions
(Excluding Chapter VI)

January-December 1965

Type Action	*Code Chapter* II *Open Burning*	IV *Smoke*	V *Fly Ash*	VII *Small Particles*
New Complaints Investigated	50	18	2	17
First Violations Recorded	161	67	0	1
Follow-up Investigations	2,153	261	0	23
Repeat Violations Recorded	88	23	na	na
Plant Evaluations	5	11	24	108
Effect Surveys	3	2	8	7
Violations Corrected	98	11	5	0

Table 2. Enforcement Administrative Actions
(Excluding Chapter VI)
January-December 1965

Type Action	*Code Chapter* II	IV	V	VII
Conferences	23	17	1	29
Orders Issued	203	72	1	1
Departmental Hearings	3	0	0	1
Notices of Prosecution	36	16	0	0
Penalties Collected	27	14	0	0
Court Hearings	4	0	0	0

Conferences with management are utilized to correct problems whenever possible. Recalcitrants are issued cease and desist orders, which can be followed successively by formal departmental hearings, notices of prosecution, and court action.

Over 50 percent of all enforcement man-hours were devoted to situations falling within the scope of Chapter VI, which covers all types of air pollution not regulated by emission standards elsewhere in the Code. Virtually all problems of this nature require considerable time to correct because of the extensive changes in equipment and operation which are usually needed.

The Enforcement Section, in response to complaints, was involved with 299 different companies encompassing a wide variety of activities. These are summarized in Table 3.

Table 3. Chapter VI Complaints

Nature of Business	*No. Complaints*
Industrial:	
Chemicals	58
Paving materials	21
Metallurgical	20
Rubber and plastics	12
Food processing	10
Fertilizers	5
Petroleum	4
Others	89
Total Industrial	219
Other:	
Commercial and Non-industrial	67
Institutions and Government	13
Total	299

Nearly all complaints included odors, soot and/or dusts with nuisance and discomfort accounting for two-thirds of all effects. Satisfactory correction was accomplished in 49 instances and partial correction or acceptable terms for future correction occurred in 154 cases. Investigation or negotiation is continuing with 40 companies, and reasonable proof of air pollution effects and justification of complaints could not be established in 56 cases.

It is significant that one out of every five investigations made under Chapter VI involved situations which are not truly air pollution problems. Of the legitimate complaints, 20 percent were eliminated and over 60 percent are undergoing positive corrective action.

Research and Development

Definite progress was made toward the establishment of a Mobile Comprehensive Air Monitoring and Analysis System to enable New Jersey, for the first time, to study exhaustively the parameters of its ambient air pollution problem. Designs were finalized and equipment was ordered for the three mobile laboratories which will comprise the system. Each laboratory will accomplish automated analysis of major pollutants in the ambient air.

A prototype laboratory, capable of monitoring some of these pollutants, was operated on an experimental basis in Newark. Data from this laboratory were experimentally telemetered to the Central Office in Trenton, and proved the feasibility of data telemetry to be used in an air pollution warning system.

Data reduction equipment to process the air quality information which the mobile laboratories will produce was procured and placed in operation. This equipment converts the data from the laboratory continuous analog strip charts to digital punch cards, which are fed into a computer. Operating personnel for this equipment were trained by processing data developed by the prototype laboratory.

A comprehensive study, entitled "Evaluation and Control of Contaminants from Motor Vehicles in New Jersey," was published in June, 1965. This study examines in detail the background of the problem, surveys current requirements and activities, and analyzes the problems and requirements which vehicle pollution control legislation would impose.

Similarly, a detailed study of "Evaluation of Odors in the Outdoor Atmosphere" was completed. This study analyzes various methods available to accomplish a most difficult determination of air pollutants, that of odors in the atmosphere. In conjunction with this study, several Program personnel underwent training in odor identification, tracing, recovery, and analysis.

Continuous monitoring of smoke levels was accomplished at 14 sites throughout the state. Data accumulated by these sites provide a baseline

against which changes in New Jersey air quality can be evaluated. Extensive support also was provided to the New Jersey sites of the National Air Sampling Network of the U. S. Public Health Service.

Modifications and improvements were developed for automatic smoke samplers. A manufacturer has undertaken production of the improved equipment, which is among that used by the New York-New Jersey Regional Air Pollution Warning System.

Scientific support also was provided to the Air Pollution Control Commission, especially in developing the new fly ash emission standards and in preliminary consideration of a proposed new Code Chapter to control the emission of sulfurs. Support similarly was provided several independently-operated research projects.

Information and Education

The expansion of information and education activities, initiated in 1964, moved forward in 1965. An officer was assigned full time to information and education responsibilities.

On January 20, 1965, the Program cooperated with the Medical Society of New Jersey in holding a Physicians' Conference on Air Pollution. This was the first attempt at such a meeting in New Jersey. Formal papers were prepared and delivered on subjects including motor vehicle air pollution, respiratory diseases, effects on vegetation, weather, and statements of the Program's objectives. The conference, attended by 120, served to bring into focus a growing interest in air pollution on the part of the medical profession. The papers presented were published in the November, 1965, issue of *Public Health News,* monthly publication of the Department.

To supplement the Program's enforcement activity, public information stressed violations of the Control Code, thereby fostering awareness on the part of the public and of management of the penalties which violations of the Code will bring.

Also, as a result of a special mailing to health officers, more than 5,500 notices of the Code's provisions on smoke were sent to over 100 municipalities for posting in boiler rooms. Publicity in the press and on radio and television was given to the opening of the Metropolitan Field Office in Newark, and supporting publicity was given to local efforts in ragweed and leaf-burning control.

There were provided information, literature and consultation services to the New Jersey Tuberculosis and Health Association, the New Jersey Jaycees, the Medical Society of New Jersey and numerous other groups to assist in the development of citizens' committees and other volunteer air pollution activities.

The Public Information Officer prepared 33 press releases; handled over 200 requests for information and literature; answered numerous complaints and referrals; implemented the showing of films (28); participated in over 55 speaking engagements; and handled arrangements for two radio and three TV appearances.

Training, other than the Physicians' Conference, also was provided for municipal health officials by the Program. These included a Smoke Observation School, conducted jointly with Rutgers University June 28-July 2 for 44 persons, and an Institute on Incineration conducted jointly with the New Jersey Health Officers Association on September 29. The smoke school qualified municipal officials to cite violators.

Formal training of Program personnel was intensified; a total of 22 staff members registered for one-week technical courses conducted by the Robert A. Taft Engineering Center of Cincinnati. Two attended other short courses, and five were full-time students in an air pollution control course conducted by Rutgers University. Four also attended a lecture series conducted by the American Society of Mechanical Engineers on the design of modern combustion equipment.

Interstate Cooperation

New Jersey's concern with the interstate aspects of air pollution continued to be shown during 1965.

Planning work continued on a cooperative warning network which will serve to monitor air pollution and provide warning of adverse levels in the New York-New Jersey Metropolitan Area. Experimental telemetry between Newark and Trenton has proved the feasibility of data coordination.

The state also offered fullest cooperation for a proposed thorough-going survey of the parameters of the air pollution problem in the New York-New Jersey Metropolitan Area. A study, with federal financial support, defined the technical and administrative parameters required for an exhaustive study of the air pollution problem in the area.

The contiguous areas of New Jersey, Delaware, and Pennsylvania are being accorded similar attention. Air pollution administrators of those areas, under the aegis of New Jersey, drafted an inter-area agreement to cope with the mutual problem of air pollution in the area. This agreement, which is undergoing review by the responsible authorities, is designed to establish coordination similar to that which has been effected by the authorities of New Jersey and New York.

New Jersey's concern with the interstate aspects of air pollution also was shown by its offer of full cooperation to the U. S. Public Health Service in that

agency's deliberations concerning interstate air pollution affecting areas of New Jersey and New York.

Similarly, the state has kept pace with nationwide efforts to control emissions from motor vehicles. Control measures recommended to the Legislature were revised in accordance with subsequent federal legislation. These measures will enable New Jersey to establish effective controls which will be compatible with standards promulgated by the federal government.

Summary

Although air pollution control is a new technology which is still evolving, New Jersey continued during 1965 to enhance its position as a pioneer in the field. It devoted maximum effort to developing its regulatory capability, its scientific capacity, and its educational resources.

Bureau of Food and Drugs

The fact that 25 percent of the consumer's dollar is spent for articles produced by industries regulated under our food, drug, and cosmetic laws and regulations indicates the scope of responsibilities borne by the Bureau of Food and Drugs. Based on an annual per capita consumption of 1,500 pounds of food, an estimated 10 billion pounds of food were consumed in New Jersey this year. In addition, New Jersey leads the nation in pharmaceutical production and research, producing over 800 million dollars of drug sales and spending over 70 million dollars on research.

Regulation of the mammoth facilities engaged in manufacture, processing, storage, distribution and sale of New Jersey's food, drug, cosmetic and devices supply is delegated to the following programs within the Bureau:

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

Each of the above Programs administers and enforces laws and regulations enacted to protect the consumer by preventing the distribution or sale of adulterated food, drugs, cosmetics, and devices. The principal functions consist of inspection of establishments engaged in the manufacture, production, storage and distribution of these commodities, licensing or registering specific industries, and collecting samples of products to determine compliance with statutory labeling requirements and established or self-proclaimed standards of quality, purity, and wholesomeness.

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

Table 1. LICENSES AND REVENUES

Establishments	*Licenses*	*Permits*	*Cert.*	*Regs.*	*Revenue*
Drug Manufacturers and Wholesalers	....	...	...	631	$57,305.00
Egg Breaking Establishments	45	...	...	...	no fee
Frozen Desserts Plants	1,332	...	...	...	23,225.00
Milk Plants	....	418	...	...	17,275.00
Narcotic Manufacturers and Wholesalers	94	...	...	...	1,010.00
Non-Alcoholic Beverage and Water Bottling Plants	154	...	...	...	no fee
Refrigerated Warehouses and Locker Plants	131	...	...	...	5,975.00
Shellfish Establishments	....	...	179	...	no fee
Slaughterhouses	273	...	...	...	no fee
Totals	2,029	418	179	631	$104,790.00

Penalties amounting to $3,500 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

An updated frozen desserts law became effective January 1, 1965. Subsequently new regulations reinforcing the statute were filed with the Secretary of State and became effective February 25, 1965.

Effective October 4, 1965, Regulations Concerning Construction, Operation and Maintenance of Meat Processing Establishments and Labeling of Meat Products Processed for Food were promulgated. The new requirements, patterned after the United States Department of Agriculture Meat Inspection Act, were put into effect to upgrade sanitation in meat processing establishments and to assure consumers of meat equal in quality to meats shipped in interstate commerce under the Federal Meat Inspection Act.

Drug, Device and Cosmetic Program

The Drug, Device, and Cosmetic Program operated with five field inspectors, two clerks, and one Program Coordinator during the period covered by this report. One field inspector was transferred to the Food Program, where his experience and background could be more effectively used, and one new employee was hired to fill the vacancy. This program now has four field inspectors who are registered pharmacists in New Jersey, and a fifth inspector who has had many years of experience in the pharmaceutical field. The staff,

strong in pharmaceutical knowledge, has directly improved the quality of work. New Jersey's Drug Control Program is slowly but progressively becoming recognized as a leader in state drug control activities through the nation.

At the end of the year, there were 612 drug establishments registered with the Department under the Drug Registration Law, N.J.S.A. 24:6B. These registrants had a total of 684 locations in the state, each of which should be inspected at least once a year. There were 320 of these locations registered as drug manufacturers and 364 registered as drug wholesalers. The variety of special investigations in which the Drug Control Program became involved only permitted 346 routine inspections of the total 684 drug manufacturing and drug wholesaling locations.

The number of narcotic drug licenses issued by the Department increased by 11 over last year. Ninety-eight licenses are now in effect and this represents approximately an 11 percent increase. During this year, 66 percent of all narcotic licensees were inspected prior to their renewal date. This percentage figure was comparable with last year's, and has remained relatively constant.

No drug legislation of major importance affecting this Program was passed during the year.

Major activities, accomplishments, and highlights of the Program during the year were as follows:

1. Program personnel certified the growth and destruction of 3,543 plants of wild marihuana. This destruction resulted in a loss to the illegal market of approximately three million marihuana cigarettes. This, converted into dollars, resulted in a total potential monetary loss to the illegal market in the neighborhood of three million dollars.
2. In the first court test of the registration provision of N.J.S.A. 24:6B, the Department received a favorable decision against a drug wholesaler who refused to register. The court "ordered" the wholesaler to register, or cease engaging in a wholesale drug business in this state.
3. Two drug firms were ordered closed by the Commissioner because of grossly unsanitary conditions. Enforcement of the sanitary provisions of the Drug Registration law requires that drug manufacturers and wholesalers operate and maintain their establishments in a clean and sanitary manner.
4. In an effort to enforce the regulations promulgated by the Commissioner governing the Standards of Compressed Air Used In (SCUBA) Self Contained Underwater Breathing Apparatus, 212 inspections were made of the 70 known "shops" manufacturing or distributing SCUBA compressed air. More than 157 air samples were collected and analyzed, resulting in two "shops" being ordered to stop selling contaminated air.

5. Program personnel participated in the Symposium on Scuba and Skin Diving Safety by presentation of a formal paper and demonstration of the field testing techniques used in the enforcement of our statutes.

6. Program representatives supervised the destruction of the drug contents of five pharmacies because the drugs were found to be adulterated or misbranded as a result of fire, heat and/or water damage. Investigations of this nature are probably the single most man-hour time consuming item in which this Program routinely becomes involved. It is not uncommon to have one or two men spend nine or ten full working days in handling this consumer protection activity.

7. Cooperating with the Division of Purchase and Property, and through membership on its "Drug Standardization Committee," the Drug Program has upgraded the quality of drugs that have been purchased by the state for use in state institutions. This has been accomplished by recommending additional quality control requirements for insertion into the bidding documents, and by sampling drugs received at state institutions for analysis. Numerous drugs sampled and analyzed by this Department have been found to be substandard. This has resulted in the state purchasing drugs from alternate suppliers who could produce an acceptable product.

8. The entire Program staff participated in a two-week training program at a major ethical pharmaceutical house in the state. This training program covered the entire manufacturing, quality control, and record keeping activities essential in the proper manufacture of all dosage forms of modern pharmaceuticals.

9. This Program cooperated with the Federal Food and Drug Administration in numerous joint inspections and investigations. Enforcement of drug laws without cooperation between complementary governmental agencies becomes an almost impossible task.

10. Late in the year, this Program, in cooperation with the Department's Division of Laboratories, collected and analyzed numerous samples of disposable hypodermic needles manufactured by a firm in Japan. The needles were found to be grossly contaminated with bacteria, and they were being offered for sale to hospitals and the medical profession throughout the country as "Sterile Disposable Needles." Through the combined efforts of the Division of Laboratories and this Program, several millions of these needles were removed from the market. The Department furthermore, forbade the national distributor of these needles to ship any additional needles manufactured by the same Japanese firm into New Jersey until the State Department of Health could be assured that the needles were sterile.

Several additional statistical items of importance include the following:

a. Through the issuance of drug registrations and narcotic licenses, a total of approximately 60,000 dollars was realized. This amount, pursuant to policy, was placed in the General Treasury of the state.

b. Approximately 45 embargoes were issued for adulteration and/or misbranding of drugs. Final disposition of the drugs has been made in all but a few instances.

c. Approximately 111 samples of various drug products were collected and analyzed for compliance with New Jersey drug laws.

d. The Drug Program cooperated with federal authorities, either directly or indirectly, in the recall of several drug items from the market.

e. This Program initiated several drug recalls of substandard drugs that had been manufactured in New Jersey. Because of the wide distribution, these recalls went beyond the boundaries of this state.

f. This Program participated in 10 investigations involving the destruction of narcotic drugs. Some of the investigations were the result of fires, bankruptcy sales, change of ownership sales, and similar proceedings.

In conclusion, the Drug, Device, and Cosmetic Program's four-year trend, since the inception of the expanded drug control activity in 1961, has been toward additional drug control coverage and improved statutory protection for the consumer. The Program personnel during this period of time increased twofold.

Food Program

The basic New Jersey Food, Drug and Cosmetic Act of 1938, patterned after the Federal Food, Drug and Cosmetic Act, was enacted by the Legislature with the objective of promoting honesty and fair dealings in the interest of the consumer. Except for piecemeal legislation in the fields of drugs, milk and frozen desserts, New Jersey's legal authority had not kept abreast of improvements in the federal act, despite more than 10 years of effort to modernize existing statutes. New products and new methods and techniques of production are continually being developed, requiring accurate adjustments as the older ways and means are abandoned.

Modern legislative tools and adequate field and laboratory facilities are needed to keep pace with technological improvements in the food processing and distribution industries and to assure a safe and wholesome supply of food to the consumer.

The following steps have been taken to stimulate and upgrade food establishment sanitation and food service practices:

Food Sanitation

A Recommended Retail Food Establishment Code of New Jersey was published which can be adopted by municipalities by reference. The code, patterned after the 1962 U. S. Public Health Service Food Service Sanitation Manual, was reproduced and its contents discussed at a two-day Institute on Development of a Retail Food Code, attended by 140 local health officials. Five thousand copies were distributed since publication.

In 1964, Program personnel prepared and published a pamphlet "Preventing Food Poisoning" intended for use by food service personnel in eating establishments, hospitals, nursing homes, institutions of other types, and other semi-public establishments as well as by the housewife. Approximately 7,000 copies have been requested by interested persons.

Potentially Hazardous Foods

Based on data collected and analyzed in previous years and interest expressed by local health officials in New Jersey and food control officials in other states and federal agencies, a pilot inspection and sampling program of manufacturers and distributors of foods such as macaroni and potato salads, cole slaw and similar preparations was initiated, using laboratory facilities furnished by the East Orange Department of Health. Since May, 1965, 45 inspections were made of manufacturers and wholesale distributors and 198 samples collected. Laboratory findings indicated that 33 percent of the samples showed bacteria counts of over 100,000 per gram and 28 percent showed coliform counts of more than 100 organisms per gram. The figures of 100,000 per gram and 100 per gram were established as guides in determining if the foods had been properly handled.

As part of our program, results of analyses were forwarded to 27 local boards of health which wanted to participate and to interested out-of-state agencies. Thirteen out-of-state manufacturers' products were sampled in the state during the program and during the planning stages of the program, meetings were held in New York City and Philadelphia. They were attended by state and local officials from an area bounded by Maryland and Connecticut and Rhode Island. In addition, the Chief of the Bureau of Food and Drugs presented details of the program at a meeting of the Connecticut Association of Dairy and Food Sanitarians. A program representative also presented a paper on the subject at a quarterly meeting of the New York Conference of Health Officers and Food and Drug Officials.

Bakery Code

The Bakery Code Advisory Committee established to develop a recommended code subject to adoption by reference by municipalities completed a final draft of a code during the year. The draft will be finally reviewed by industry, the New Jersey Health Officers' Association and the Department

legal advisor prior to recommending endorsement by the Commissioner. Promulgation of the uniform code had been requested by organized segments of the retail bakery industry in New Jersey in 1964.

Interstate Cooperation

At the request of food control officials in Connecticut, Pennsylvania, and Rhode Island, Program personnel have been conducting routine inspections of non-alcoholic beverage bottling plants and bakeries shipping into the respective states and reports of inspection have been transmitted to permit the receiving states to issue licenses. Ninety-three plant inspections were conducted on their behalf. Individual requests for reports on sanitary conditions in specific food establishments were also received from other state and local health agencies receiving food into their jurisdiction from New Jersey establishments.

Wholesale Food Plant Inspection Activities

With the transfer to full-time status of a principal sanitarian from the Drug, Device and Cosmetic Program and continued part-time use of personnel from other programs, it was possible to expand our inspection activities in establishments engaged in interstate commerce. The task of locating, inspecting, and listing such establishments was continued with a total of 629 inspections and reinspections conducted during the year, an increase of 100 over the preceding year. In addition, more than 600 visits were made to various food establishments in connection with locating unlisted and uninspected establishments, special surveys, special food sample collection projects, and similar activities.

Because of our increased investigations, 28 unlicensed refrigerated warehouses were located and placed under license for the first time.

The following table lists the numbers and types of establishments inspected by Food Program personnel:

Table 1. Establishments Inspected, 1965

Bakeries	72
Restaurants (Special Survey)	36
Confectionery Plants	20
Egg Breaking Establishments	50
Refrigerated Warehouses	67
Non-Alcoholic Beverage Bottling Plants	57
Wholesale Food Distributors	64
Other Food Establishments	263
Total	629

In connection with the above 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. Types of Food Destroyed

Alcoholic Beverages:	
Whiskey and Wines	1,024 gals.
Malt Beverages	599 gals.
Juices, Concentrates and Non-Alcoholic Beverages	3,291 gals.
Frozen Eggs	5,220 lbs.
Shell Eggs	60 dozen
Other Foods	13,061 lbs.
Meat and Meat Products	11,394 lbs.

In addition, more than 9,000 pounds of misbranded meat or meat illegally shipped in interstate commerce without federal inspection were embargoed and subsequently diverted to animal food or returned to the point of origin under supervision of the U. S. Department of Agriculture or the state or local meat control agency.

Program representatives also collected 637 samples of food during their inspections of various food establishments, special sampling surveys and investigations.

Egg Breaking

Regulations promulgated by the U. S. Department of Agriculture (USDA) require the pasteurization of all liquid eggs and liquid egg products in plants operating under USDA inspection after June 1, 1966. Also, the U. S. Food and Drug Administration has proposed amendments to its standards for liquid eggs and egg products which will require pasteurization of all such products shipped in interstate commerce. The effective date of the proposed standards has not been established as yet. The actions were deemed necessary because of the relationship between salmonella outbreaks and the consumption of unpasteurized eggs.

In addition, the U. S. Public Health Service is developing a Model Food Processing Ordinance Related to Eggs and Egg Products which can be promulgated by state food control agencies to regulate egg breaking establishments and heat treatment of raw liquid eggs or egg products to assure freedom from salmonella and other food-borne disease organisms. Because of uncertainty regarding safe temperatures and times necessary to produce a safe product, neither the Public Health Service nor the Food and Drug Administration has recommended specific temperatures or times in their proposals.

Because of the nationwide trend towards compulsory pasteurization of liquid and frozen broken eggs, Program personnel began studying the possible effects on the New Jersey broken egg industry. Most of the 45 licensed egg breaking establishments were not able to invest approximately $15,000 for pasteurization equipment, due to the small volume of eggs broken. According to industry representatives, compulsory pasteurization of all eggs broken in New Jersey would probably result in the closing of 75 percent of the licensed

establishments, imposing further hardship on the distressed poultry industry of the state.

In this connection, the Department has attempted through various channels to stimulate research to develop a small pasteurizing unit to permit small independent operators to operate in conformity with acceptable practices.

Upon receipt of universally acceptable heating temperatures and times, steps will be taken by the Department to regulate the handling of broken eggs in New Jersey consistent with sound public health practices.

Adulterated Meats

The Department's surveillance of retail meat markets and other establishments distributing hamburg, sausage, and other combinations of fresh ground meats was continued in the interest of consumer protection. Screening tests were conducted in the field by District and Program personnel to detect the addition of sodium sulphite to conceal inferiority in such products and to detect the substitution of excessive quantities of fat for meat. Six hundred fifty-eight tests of meat were made for sulphites with 27 suspicious samples collected for laboratory confirmation. Eight samples (1.2%) were confirmed by laboratory analyses. Four firms paid a total of $200 in penalties for violations of the section of the law (24:5-14) which prohibits the use of such substances in meat.

Three hundred seventy-six tests of ground meats for excess fat were also conducted in the field of which 31 were found suspicious by the screening method. Twenty-four of the suspicious samples were confirmed in the laboratory by chemical analyses. Eight first offense penalties of $50 each were collected in addition to six second offense penalties of $100 each and one third offense penalty of $200, totaling $1,200 during the year. This year's total of 8.25 percent unsatisfactory samples was a slight increase over 1964 results which showed 6.11 percent above the Department's permissible fat standard of 30 percent for all fresh ground meats except sausage which has a maximum fat standard of 55 percent.

Following receipt of information from an out-of-state health agency that processed pork roll manufactured in New Jersey had been found to be contaminated with salmonella, a survey was made of establishments manufacturing such products and 73 samples of raw materials and finished products were analyzed in our laboratory, which reported that 29 of the samples were positive for at least one type of salmonella organism. Eight of the positive samples were market ready products. Armed with this information, Program personnel revisited the meat processing establishments, reviewed the manufacturing processes, and temperatures with the operators and another series of 64 finished product samples was collected for analyses during the end of the year. Preliminary reports indicate that no salmonella organisms had been found in

this group of samples. The initial findings indicate the need for further study of manufacturing techniques and temperatures used on pork roll and similar precooked meat products.

Program representatives continued to cooperate with federal, state, and local agencies by making special or 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.

Meat Program

The purpose of the Program is to inspect all red meat and poultry slaughterhouses and wholesale meat processing establishments to determine if they are operated in compliance with our laws and regulations and in the case of slaughterhouses, to issue licenses. The Program operates under the provisions of Chapter XVI, Title 24, Revised Statutes of New Jersey, and "Regulations Concerning Construction, Operation, Maintenance and Licensing of Slaughterhouses and Inspection and Labeling of Animals Slaughtered for Food" to control slaughterhouses. The meat processing phase of the Program operates under "Regulations Concerning Construction, Operation and Maintenance of Meat Processing Establishments and Labeling of Meat Products Processed for Food."

In the continuing effort to stimulate, revitalize and up-grade sanitation in food establishments, the Commissioner filed new meat processing regulations with the Secretary of State effective October 4, 1965. Copies of the new regulations were forwarded to all local boards of health. It is the desire of the Program to directly supervise wholesale meat processors and to encourage local boards of health to take an active part in the supervision and control of retail meat processing establishments.

The regulations were promulgated to secure meat products for New Jersey consumers of equal quality to meat products processed in establishments operating under the United States Department of Agriculture Meat Inspection Program for establishments doing business in interstate commerce. It is also the intent of the Department to take necessary steps to determine that pork and pork products are subjected to processing procedures which will assure products free of trichina.

During the year, intensive investigations were conducted with United States Department of Agriculture agents in an effort to stop the illegal traffic of "disposal animal flesh and horse flesh" in this state. Seventy-one (71) joint investigations were made. Although no actual horse flesh or disposal animal flesh was found as such, numerous embargoes were placed on uninspected meats that had illegally entered the state. Through our cooperative

efforts, the State Department of Agriculture was able to secure prosecution of a disposal animal operator for failing to maintain records of disposal animal flesh sold.

Sanitation

By realigning areas, the Program was able to continue maintaining a high sanitation level in slaughterhouses while concentrating efforts in locating, inspecting, and reinspecting meat processing establishments.

During the year, 80 red meat and 193 poultry slaughterhouses were licensed by the Department.

Our personnel continued to secure water supply samples from establishments that operate private water supply systems. A total of 120 water samples was collected during the year. Of the total samples, 12, or 10 percent of the samples analyzed, failed to meet the Department standards for potable water. Follow-up investigations, instructions, and corrective actions taken by operators resulted in securing satisfactory water sample analyses from all slaughterhouse operators. At one operation, it was necessary to install a hypochlorinator in order to secure a safe water supply. The effectiveness of this phase of the Program is demonstrated by a comparison of results for 1963 when 109 samples were taken and 27 or 24.7 percent were unsatisfactory and 1964 when the results were 94 samples collected and eight or 8.51 percent of the samples failed to meet the requirements for potable water.

The following is a six-year comparison of sanitation ratings for poultry and red meat establishments:

Table 1. SANITATION RATINGS

*Poultry** Year	*Number of Establishments*	*Sanitation Rating*
1960-61	212	88.839
1961-62	236	91.199
1962-63	214	93.350
1963-64	198	92.671
1964-65	212	90.292
1965-66 (Feb. 1)	193	95.822
*Red Meat** Year	*Number of Establishments*	*Sanitation Rating*
1960-61	70	86.358
1961-62	76	90.855
1962-63	79	89.845
1963-64	79	89.450
1964-65	81	92.444
1965-66 (Feb. 1)	78	94.129

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

The Program considers an individual rating of 90.000 as a high level of sanitation.

Disposal of industrial wastes from large poultry plants not provided with public sewage is a problem of continuing concern to the Program. Huge volumes of water and the fatty nature of the waste material are the major factors of concern. The Program is working in close cooperation with the Districts and the local boards of health to keep the problem under control and eventually secure total compliance.

The number of red meat slaughterhouses continues at a fairly constant level. The decline in poultry slaughterhouses that began in the 1962-63 licensing year continues at approximately the same rate. Most of the decline continues to be in the "select kill" type of establishment. This is due to some changes in customs of the older generation and to price differentials between this type establishment and the larger processor. A similar effect is also felt in other phases of the poultry slaughterhouse industry due to unfavorable economic conditions and price differentials between areas.

The following is a breakdown of Program activities for the current year:

Table 2. Program Activities

Red Meat	
Number of applications received	80
Number of licenses issued	80
Number of applications pending	..
Number of establishments out of business	5
Poultry	
Number of applications received	193
Number of licenses issued	192
Number of applications pending	1
Number of establishments out of business	18
Inspection Data	
Number of sanitary inspections	538
Number of visits and investigations	302
Number of water samples collected	120
Number of water supply samples unsatisfactory	12
Number of water supplies corrected	12
Number of meat inspection evaluations	34
Number of conferences with local boards of health	332
Meat Processing Establishments	
Number located to date	280
Number of sanitary inspections	254
Number of visits and investigations	218

General sanitation continued at a satisfactory high level and most establishments are operating at a satisfactory level. Industry meat inspection programs were operated in substantial compliance with our laws and regulations.

Program personnel made excellent progress in locating meat processing establishments while carrying out the responsibilities of the red meat and poultry slaughterhouse inspection programs. To date, 280 establishments have

been located. It is estimated that approximately 80 percent of existing wholesale meat processing establishments have been located.

Plans to resume the meat inspection course previously offered by the Department through the Extension Division of Rutgers University to provide training for municipal and industrial personnel were completed for 1966. The purpose of the course is to provide training for municipal personnel and to pick up the backlog of requests for industry needs. Specialized training is also needed in this field for persons working in general sanitation and for Department personnel.

Meat Inspection

In 1965, 16,899,332 animals, including poultry, were slaughtered in slaughterhouses licensed by the New Jersey Department of Health. 193,995 of the above animal carcasses and 223,053 parts of the carcasses were condemned as unfit for human consumption. The above statistic is an indication of the impact meat inspection supervision has in the prevention of consumption of diseased meat.

The Program, since its onset in 1959, has computed comparisons of the percent of condemnations in federally supervised plants versus New Jersey supervised plants on an annual basis. This evaluation tool has again been used in the evaluation of the Program. The percent of calves condemned in New Jersey supervised plants was higher than those condemned in federally supervised plants located in New Jersey. This should be expected inasmuch as a younger, less mature dairy type calf is brought to local slaughterhouses whereas a more mature, beef type calf is slaughtered in the federally supervised plants where the economics of the trade of these plants places more emphasis on this type of calf. As in past years, a higher percent of cattle was condemned in New Jersey supervised plants. This should be true because the federally supervised plants slaughter a much higher percent of younger beef animals in comparison to New Jersey plants in which the local dairy animal that has outlived its economic usefulness is brought for slaughter. The percent of condemnations of swine and sheep in federal versus New Jersey supervised plants were quite close and no significant conclusions could be drawn.

In poultry establishments, the condemnation rate in federally supervised establishments is higher than establishments operating under the state inspection program. This has been true in every year that comparisons have been made and should be expected because older fowl raised primarily for egg production are slaughtered. The disease rate of such fowl is considerably higher than in young broilers slaughtered in state supervised establishments. An interesting statistic of some significance is that 0.9 percent of poultry slaughtered in plants exempt from meat inspection were voluntarily condemned. This self-inspection condemnation can be readily understood as the operator deals directly with the consumer and must handle a high quality product in order to compete with the larger concerns.

Table 3. 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	408,667	298	9	408,676	408,627	40	408,667	23,073
Calves	357,801	16	13	357,814	357,683	118	357,801	1,293
Swine	1,423,429	1,516	67	1,423,496	1,420,864	2,565	1,423,429	96,500
Sheep	1,114,555	3	15	1,114,570	1,114,269	286	1,114,555	67,771
Poultry	10,594,870	776	69,074	10,663,944	10,472,978	121,892	10,594,870	34,416
Total	13,899,322	2,609	69,178	13,968,500	13,774,421	124,901	13,899,332	223,053

Percent of Condemnation N. J. State Inspection		*Percent Condemnation Federal Inspection (all States)*		*Percent Condemnation N. J. Federal Plants*	
Cattle	.162	Cattle	.30	Cattle	.005
Calves	.067	Calves	.46	Calves	.020
Sheep	.089	Sheep	.020	Sheep	.026
Swine	.106	Swine	.18	Swine	.190
Poultry	1.454	Poultry	..	Poultry	1.963

Note: .9 percent poultry condemned in plants exempt from meat inspection.

Table 4. Ante and Post Mortem Inspection Results for Cattle
Major Conditions and Diseases Resulting in Condemnation of Carcasses and Parts

Cattle	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Ante mortem					
State	17,842	17,836	18	6	....
Federal	389,687	389,684	280	3	....
Exempt	1,147	1,147	....	....	....
	408,676	408,667	298	9	....
Cattle					
Post mortem					
State	17,836	17,813	....	23	389
Federal	389,684	389,667	....	17	22,684
Exempt	1,147	1,147	....	....	....
	408,667	408,627	....	40	23,073

Major conditions which cause condemnation of parts:
- Abscess (livers)
- Sawdust (livers)
- Abscess or pyemia (other parts)
- Actinomyces
- Miscellaneous infectious diseases

Major diseases resulting in carcass condemnation:
- Emaciation (anemia)
- Pericarditis
- Pneumonia
- Enteritis
- Miscellaneous Neoplasms

Table 5. Ante and Post Mortem Inspection Results for Calves
Major Conditions and Diseases Resulting in Condemnation of Carcasses and Parts

Calves	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Ante mortem					
State	101,458	101,450	16	8	....
Federal	256,110	256,105	....	5	....
Exempt	246	246	....	....	....
	357,814	357,801	16	13	....
Calves					
Post mortem					
State	101,450	101,390	....	60	236
Federal	256,105	256,047	....	58	1,055
Exempt	246	246	....	....	....
	357,801	357,683	....	118	1,293

Major conditions which cause condemnation of parts:

Abscess (livers)
Abscess, pyemia (other parts)
Miscellaneous general
Injuries
Parasites

Major diseases resulting in carcass condemnation:

Pleurisy, pneumonia
Enteritis
Septicemia, toxemia
Immaturity
Miscellaneous inflammatory diseases

Table 6. Ante and Post Mortem Inspection Results for Swine
Major Conditions and Diseases Resulting in Condemnation
of Carcasses and Parts

Swine	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Ante mortem					
State	128,180	128,126	10	54	....
Federal	1,293,692	1,293,679	1,506	13	...
Exempt	1,624	1,624	....	....	....
	1,423,496	1,423,429	1,516	67	....
Swine					
Post mortem					
State	128,126	128,042	....	84	7,707
Federal	1,293,679	1,291,198	....	2,481	88,793
Exempt	1,624	1,624	....	....	....
	1,423,429	1,420,864	....	2,565	96,500

Major conditions which cause condemnation of parts:

Abscess, pyemia (other parts)
Tuberculosis
Hepatitis
Abscess (livers)
Injuries

Major diseases resulting in carcass condemnation:

Septicemia, toxemia
Icterus
Abscess, pyemia
Pleurisy, pneumonia
Emaciation

Table 7. Ante and Post Mortem Inspection Results for Sheep
Major Conditions and Diseases Resulting in Condemnation of Carcasses and Parts

Sheep	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Ante mortem					
State	13,357	13,356	3	1	....
Federal	1,100,609	1,100,595	....	14	....
Exempt	604	604	....	....	....
	1,114,570	1,114,555	3	15	....
Sheep					
Post mortem					
State	13,356	13,345	....	11	159
Federal	1,100,595	1,100,320	....	275	67,612
Exempt	604	604	....	....	....
	1,114,555	1,114,269	....	286	67,771

Major conditions which cause condemnation of parts:
Miscellaneous general
Miscellaneous infectious diseases
Injuries
Parasites
Pleurisy, pneumonia

Major diseases resulting in carcass condemnation:
Icterus
Pleurisy, pneumonia
Septicemia, toxemia
Abscess, pyemia
Emaciation

Table 8. Ante and Post Mortem Inspection Results for Poultry
Major Conditions and Diseases Resulting in Condemnation of Carcasses and Parts

Poultry	*Total*	*Passed*	*Suspect*	*Condemned*	*Parts*
Ante mortem					
State	215,569	215,060	....	509	....
Federal	8,761,012	8,708,378	776	52,634	....
Exempt	1,678,363	1,671,432	....	15,931	....
	10,663,944	10,594,870	776	69,074	....
Poultry					
Post mortem					
State	215,060	212,534	....	2,526	2,378
Federal	8,708,378	8,589,012	....	119,366	32,038
Exempt	1,671,432	1,671,432	....	....	....
	10,594,870	10,472,978	....	121,892	34,416

Major conditions which cause condemnation of parts:

Miscellaneous infectious diseases
Miscellaneous septic conditions
Miscellaneous infectious diseases
Bruises

Major diseases resulting in carcass condemnation:

Septicemia
Leucosis
Tuberculosis
Bruises
Contamination
Injuries

Milk Control Program

The Program was responsible for seeing that 1,213 licensed frozen dessert plants and 391 milk plants, and their supplying dairy farms, were properly supervised as to compliance with standards and requirements.

Reductions in the numbers of milk plants and dairy farms within the state continued with the loss of 10 milk plants (eight percent) and 237 dairy farms (10 percent) during the year. Production per farm however increased eight percent so that our net loss on total in-state milk production was about three percent. This closely parallels the national trend of fewer but larger volume producing dairy farms and milk plants.

The combination of increased sales and lower production resulted in importation of more milk from sources outside New Jersey so that the ratio is now about three quarts imported for each two quarts produced in-state for fluid milk consumption. Almost all of the milk used in manufacturing milk products such as cream, ice cream, etc., is produced outside New Jersey.

With the increase in the number of cows per dairy farm, labor saving methods of handling animals and products became necessary. Greatest emphasis was placed on development of free-stall housing, where the animals are provided with individual protected areas for resting and still have free access to central hay and silage feeding points without need for an attendant to supply those materials. Free-stall housing also provides for removal of manure by mechanized equipment such as scrapers and front-end loaders rather than by manual labor. A natural extension of this system was the introduction of methods whereby the solid wastes are converted to a "liquid" slurry which is pumped into tank trucks for spreading on fields. Working with committees of the Northeast States Conference on Uniform Standards

and the New York State Association of Milk and Food Sanitarians, guidelines were developed for the installation and operation of free-stall housing and liquid manure handling systems for use by regulatory agencies in our milkshed.

There was a greatly increased number of requests from operators for rating their milk plants and supplies on their degree of compliance with the United States Public Health Service (U.S.P.H.S.) Milk Ordinance requirements. Satisfactory ratings are used as a basis for listing as Interstate Milk Shippers. The U.S.P.H.S. Milk Ordinance now establishes a need for evaluating industry personnel on their ability to interpret and apply the requirements in the Ordinance. Another of our sanitarians was approved by the U.S.P.H.S. as a Rating Officer in order to help eliminate a backlog which developed in this phase of the work program.

The reciprocal inspection and sampling programs with other official agencies showed some changes but continued to function satisfactorily. Two local boards of health withdrew from the sampling program and two from the inspection program due to lack of personnel. However, two local health agencies have stated their desire to enter into reciprocal inspection agreements and one of them will be ready to assume responsibilities in the program early in 1966. Participating agencies submitted 512 reports of inspections of milk plants and frozen desserts plants, and 2,668 reports of analyses of milk and milk products to the Department during the year. These reports, together with our own, are used as a basis for quarterly releases to all local boards of health on the status of milk supplies serving consumers in New Jersey.

Development of plastic materials acceptable to the Federal Food and Drug Administration for use in packaging foods has resulted in radical changes in marketing milk. Plastic coated paper containers, polyethylene bags in cardboard containers, and rigid plastic containers are rapidly taking over a major portion of the wholesale milk market. Discussions were held on proposed installations of plastic container fabricating plants in New Jersey and information regarding operation of those plants was exchanged with official agencies in other states where the containers are used.

Chapter 120, P. L. 1964, governing the manufacture, sale and distribution of frozen desserts and special frozen dietary foods, became effective on January 1, 1965. Regulations establishing standards of identity for frozen desserts in conformity with federal standards, and regulations setting sanitary standards were adopted to supplement those laws.

Table 1 shows the number of inspections made and samples collected by Program personnel during the year.

Table 1. INSPECTION, 1965
(Period January 1, 1965 through December 31, 1965)

Milk Plants Inspected	269
Dairy Farms Inspected	2,946
Frozen Desserts Plants Inspected	98
Samples Collected	1,812

Shellfish Control Program

Rules and Regulations Governing the Sanitation, Handling, Shipping and Shucking of Shellfish define shellfish as: "all edible species of clams, oysters and mussels either shucked or in the shell, fresh or frozen." Special attention is given to the supervision of the shellfish industry because these food items may be consumed raw or only partially cooked, because their consumption usually includes the alimentary tract, and because they directly reflect the quality of the waters from which they are harvested.

One major Program responsibility is to classify all the shellfish growing areas in New Jersey in order to determine where shellfish can safely be harvested. The year 1965 saw the completion of all the initial sanitary surveys necessary for well documented classification of shellfish growing waters.

The classification of waters is made after the growing area has undergone a comprehensive sanitary survey. The sanitary surveys were made with the cooperative efforts of the Stream Pollution Control Program and the Division of Laboratories supplementing our own personnel.

Even as the initial surveys were being completed, there was a continuing program of resurvey and reappraisal of these growing areas.

During 1965, sanitary surveys were made of the following growing areas:

1. Navesink River
2. Manahawkin Bay and Little Egg Harbor (Main Point to Long Point)
3. Little Egg Harbor (Long Point to Beach Haven Inlet)
4. Delaware Bay (Nantuxent Point to Egg Island Point)
5. Delaware Bay (Maurice River Cove Area)
6. Delaware Bay (East Point to King Crab Landing)
7. Delaware Bay (King Crab Landing to Cape May)

In addition to the regular surveys listed above, special surveys were conducted in Ship Channel (a part of Great Egg Harbor Bay) and Peck Bay. Based on those survey results, we were successful in reopening approximately 1,200 acres of shellfish growing area in those two bodies of water from November through April of each year.

Similar studies for the purpose of possible seasonal reopenings were begun in Absecon Bay and Great Egg Harbor River but have not been completed during this reporting period.

There were 9,634 samples of growing water collected and analyzed as a part of the sanitary survey work.

During 1965, approximately 512 acres of shellfish waters were condemned and approximately 1,200 acres were opened for a six-month period.

During 1964, approximately 3,206 acres were condemned and only 173 acres were opened.

The Program staff was expanded this year by the addition of a sanitarian position bringing the full-time complement to:

1 Principal Sanitarian
2 Sanitarians
3 Boat Captains
1 Senior Clerk Stenographer

Part-time personnel included seven men during the season when we experienced our heaviest workload.

Major field equipment of the Program includes:

1 30-foot cabin cruiser
1 25-foot cabin cruiser
4 14-foot utility boats
4 18 H.P. outboard motors
4 boat trailers
4 station wagons equipped with trailer hitches

The 25-foot cabin cruiser was purchased this year to replace an old 28-foot cabin cruiser. In addition, two outboard motors were replaced under the established two-year trade-in policy.

Another major responsibility of the Program is the prevention of shellfish harvest from those growing areas which are condemned for the harvest of shellfish. In order to make the public aware of the condemned areas, they are described in written form and shown on charts. That information was given wide distribution along with newspaper coverage of the changes made during the year. The condemned areas are posted with warning signs and a continuous program of reposting was carried out in order to keep the signs in place.

There is, in addition to the above preventive measures, an actual patrol of the condemned waters carried out by the Department of Conservation and Economic Development, Division of Shell Fisheries. That activity was supplemented by our own personnel who contributed 1,376 patrol hours, and by local police and health agencies as well as other Divisions of the Department of Conservation and Economic Development.

Figures obtained from the Division of Shell Fisheries indicated the following for 1965:

35 apprehensions were made
31 persons were found guilty
37 penalties were collected totaling $1,939.50.

A third major Program function is the sanitary control of harvesting, handling, shipping, shucking and packing of shellfish. As one of the control measures, 160 shellfish handling establishments were certified. This figure indicates a 19 percent increase over 1964. Of those certified, 80 were certified for interstate shipping and 80 were certified for shipping in New Jersey only. Statistics by category are shown below:

Shellstock Shipper	74
Reshipper	64
Shucker Packer	11
Repacker	6
Digger Retailer	5

During 1965, the Program staff made 667 sanitary inspections and related follow-up visits, an increase of 119 percent over 1964. There were also 172 potable water samples and 518 shellfish samples collected and analyzed as a part of the sanitary control measures. The level of sanitation in certified shellfish establishments continued to improve during 1965 as did all phases of the Program as shown in the U. S. Public Health Service Program Evaluation.

An improved service accomplished during 1965 was having the U. S. Public Health Service list of shellfish establishments certified for interstate shipping, sent to all certified dealers and all local boards of health in the state.

The New Jersey Shellfish Control Program was again certified by the U. S. Public Health Service to be a member of the Cooperative Interstate Program made up of the shellfish industry, the U. S. Public Health Service, and the various state regulatory agencies.

The Shellfish Control Program has continued to supervise the bay scallop industry in New Jersey. Program personnel performed the necessary sanitary inspections, and the list of 31 approved shuckers was distributed to regulatory officials in the market areas.

Continued cooperation was given Rutgers in its studies concerning depuration. The laboratory at the Monmouth Beach Coast Guard Station for that study was put into operation during 1965.

Studies were initiated in Barnegat Bay as a part of the overall research study to determine the effect of the Oyster Creek Nuclear Generating Station on the Barnegat Bay environment. The U. S. Public Health Service, the

New Jersey Radiological Health Program, the Division of Fish and Game, and Rutgers—the State University are all participating in the project.

Camp and Bathing Program

Lake Bathing

Sixty-four lake bathing places or areas were certified by this Department during the 1965 bathing season. The figure is significant because it represents a resumption of the upward trend which prevailed prior to the 1964 season.

Certification constitutes evidence that a lake bathing facility has complied with minimum Departmental requirements pertaining to safety, sanitation, and water quality. Additionally, each certificate holder was issued a large sign for posting on the premises alerting the public to the fact that his place had been found acceptable to the State Department of Health. A press release supplemented the certificate and sign.

A noteworthy feature of this activity is that participation is completely voluntary on the part of owners and operators of lake bathing facilities.

Camps

The number of camps known to this Department reached the all time high of 270 during the summer season. Of that number, 250 were visited and inspected. As a result, 218 camps were recommended for certification and were granted appropriate recognition.

Paralleling the bathing lake situation, participation in camp certification activities is completely voluntary on the part of owners and operators. A list of camps known to the Department during the 1965 season has been prepared and is available to those having an interest.

It is anticipated that participation in this program will remain at a high level and the upward trend will continue as new camps are developed and become known to this Department.

Trend

Figures for the four-year period prior to this report indicate an upward trend, with one exception, in the number of facilities participating in this program.

Table 1. Participating Camps and Lake Bathing Places, 1961 – 1964

	1961	*1962*	*1963*	*1964*	*1965*
Camps	237	249	258	265	270
Lake Bathing Places	53	65	71	62	64

Housing Program

The Housing Program has been without the services of a coordinator for several years. All activity has been in response to requests for consultation and support. Due to the recent interest of the Public Health Service and local health officers and other local officials, the Housing Program has participated in conferences, on committees, and in teaching and otherwise supporting courses for housing inspectors and discussions on housing.

The Program has worked with the supervisor of housing inspection in Trenton to develop a housing manual which can be used in teaching an advanced course for housing inspectors.

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

Increased activity in connection with plumbing was noted during the year. The consultant retained by this Department made visits to 18 municipalities interested in adopting the Plumbing Code of New Jersey or having questions concerning its implementation. As a result, some 12 additional municipalities adopted the code and others are considering it as a replacement for existing codes.

Consultations were also held with a number of plumbing inspectors and service was rendered to the State Department of Education in connection with a plumbing problem at a school under construction.

Our consultant served at the consulting session for municipal officials sponsored by the New Jersey League of Municipalities in Atlantic City.

Mobile Home Parks Program

During 1965, the Mobile Home Parks Program expanded its overall activities to include a total of 110 mobile home parks, involving for the first time all 13 mobile home parks in Salem County. This was done with the assistance of the Salem County Health Department. Also, the Cape May County Health Department began program activities in the 20 mobile home parks in that county. In short, 130 mobile home parks (of the known 350 parks) have been visited, inspected, reinspected and revisited by this program or the Cape May County Health Department during 1965.

Our activities involved 29 inspections, 103 reinspections, 192 surveillance visits, six special investigations, six court appearances, and five night meetings in addition to various conferences and pertinent meetings.

The Department has appointed an Advisory Committee to review the present Mobile Home Parks Code and to make recommendations.

Potable Water Program

The continued drought of 1965 posed many problems in relation to water supplies in New Jersey. Reservoirs which, under normal conditions, should have been filled during the winter were deficient in stored water, and the continued deficiency of rainfall throughout the year failed to replenish them to compensate for heavy summer demands. The Department worked closely with the Department of Conservation in alleviating water emergencies created by the drought, including arranging for emergency transfers between major water purveyors. In addition, acquiescence was given to the use of 26 temporary sources of water, subject to various conditions, including adequate water treatment.

As a possible solution to New Jersey's water problems, a test operation of a Reverse Osmosis desalination plant was undertaken, using the brackish waters of the Hackensack River and the treated sewage effluent of the Bergen County Sewer Authority. The test operation was jointly arranged by the Department of Conservation and Economic Development and this Department, with the former paying the direct costs involved and the latter providing analytical services and manpower. Results of this test were encouraging.

Revised rules and regulations were promulgated for the design of public water supply systems and water treatment plants. These depart from the criteria and approaches normally found in such documents and are believed to be as up-to-date as possible.

A complete revision of the statutes pertaining to public water supplies was prepared and submitted, through the Department's legal counsel, with a recommendation for legislative action.

As a result of the increasing pollution of the ground waters, caused by the growth of the population in New Jersey, the growing concentration of people in the urban and suburban areas of the state, and drought conditions, the Department issued new rules and regulations requiring mandatory chlorination of all public water supplies prior to July 1, 1966.

The Program has continued to promote fluoridation of public water supplies through the provision of cost estimates, addressing municipal officials, and participation in fluoridation seminars. Although progress in the field has been disappointing, some successes were achieved. Fluoridation was begun by the Princeton Water Company which serves 22,000 persons in Princeton Borough and Princeton Township, and by the Burlington Water Department which serves 15,000 persons in Burlington City and Burlington Township.

Lack of staff and the need to conduct special investigations as a result of problems or consumers' complaints have precluded achievement of a desirable inspection frequency of public water supplies, but despite this a significant amount of field work was accomplished. This is summarized in Table 1. Comparison with the 1964 statistics will show that approximately the same number of field inspections were conducted in both years, though the emphasis was on different functions.

Table 1. Summary of Field Work

Routine inspections of public water supplies	143
Special investigations and revisits	256
Routine inspections of "special" supplies (schools, institutions, etc.)	147
Inspections of water supplies for U.S.P.H.S. certification	6
Inspections of vessel, railroad and airline watering points	159
Inspections of new physical (cross) connections	34
New well tests (including schools)	99
Field meetings and conferences	163
Bacteriological samples taken and interpreted	5,093
"Complete" chemical samples taken and interpreted	337
"Partial" chemical samples taken and interpreted	714

Significant accomplishment has also been achieved in the administrative aspects of the Potable Water Program, the improved quality of the field inspections having reflected an increase in the number of projects submitted to the Department for formal approval. The engineering plans, specifications, and other data were examined for 630 combined projects, for which appropriate permits were issued, representing a total estimated construction cost of over $19 million. Seventeen formal orders were served requiring improvements to public water supply facilities, and 17 original permits were issued for the installation of physical (cross) connections. A summary of this administrative work is included in Table 2.

Table 2. Summary of Administrative Work

Number of combined Permits issued for the construction of new water supply facilities	130
Estimated total construction costs for projects approved	$19,345,700
New public water supply systems approved	9
New supplies approved for schools	20
New sources of supply approved	106
New water treatment plants approved	48
Approved additions and alterations to water treatment plants	15
New water storage facilities approved	42
New transmission and distribution systems approved	10
Approved major additions and alterations to water distribution systems	35
Formal orders served	17
Original physical (cross) connection permits issued	17
Renewal physical (cross) connection permits issued	255

Personnel of the Program have actively participated in the Water Emergency Task Group which is preparing procedures for emergency action to be taken following natural or war time disasters; and in the Rural Area Development Committee. Educational endeavors have continued, which has included lectures and talks by Program personnel at the convention of the New Jersey Section, American Water Works Association, the North Jersey Conference of Water Superintendents, the South Jersey Association of Water Superintendents, the convention of the New Jersey League of Municipalities, and courses for water treatment plant operators at Rutgers University, migrant labor camp inspectors, and for municipal sanitarians.

Ragweed and Poison Ivy Program

During the summer, a study of ragweed growth was made on Long Beach Island, Ocean County. This was possible because a high school teacher was employed for the summer months. Only 5,000 square feet of ragweed plant growth was found. Meetings were held with municipal officials. They decided that a ragweed control program will be conducted in 1966. If this is done, Long Beach Island will be ragweed free and poison ivy plant will also be eradicated.

An effort to obtain daily reports of ragweed pollen counts throughout the state was made without much success. Very few stations count pollen slides on a daily basis. The majority of pollen stations count on a weekly basis. One-third of pollen collection stations submit their slides to this Department for counting at the end of the pollen collection season. The ragweed pollen collection data for the 1965 growing season will appear in the Information Bulletin which is prepared each year.

The State Highway Department and the Highway Authorities conducted herbicide weed control programs along the highways' and the expressways' roadsides during the summer. The counties and local road departments in the central and northern sections of the state applied herbicides and used other conventional methods on the major portions of roadsides to control ragweed and other objectional plant growth. In the southern counties, the county and local roads are generally mowed.

The telephone companies and power and light utilities have a right-of-way herbicide spraying and control program.

The report of this summer's work was used as the basis for a report to the Northeastern Weed Control Conference. This report stimulated an interest in doing more to acquaint city officials and citizens generally with the value of controlling ragweed to reduce the exposure of sensitive persons to heavy concentrations of pollen.

Mr. Joseph Mellor, a member of the Air Pollution Commission, has interested officials of the New Jersey Junior Chamber of Commerce in promoting a ragweed control program.

Solid Waste Program

Extensive areas of underground burning were extinguished in the East Rutherford meadow area through the cooperation of the Governor's Office, the State Highway Department, the New Jersey State Highway Authority, and this Department, as well as with the cooperative efforts of the Borough of East Rutherford in supplying fire hose and a mobile water pump unit. The fires had been burning off and on for about six years and the areas of such underground burning had reached some 30 acres. It took eight months of frustrating, dirty, hard work on the part of a few workers to perform this feat.

A review of the 1965 inspection reports of the refuse disposal areas of this state shows the following:

1.	Municipalities not having refuse disposal areas	301
2.	Total number of municipal refuse disposal areas	226
3.	Total number of privately operated refuse disposal areas	157
4.	Total combined number of disposal areas	383
5.	Total number of municipal incinerators operating	10
6.	Total number of municipally operated Wilco burners	4
7.	Total number of privately operated Wilco burners	8
8.	New open pit (forced air over fire) duPont-Carney's Point	1
9.	Total number of inspections of refuse disposal areas	621
	Metropolitan District: 46 areas, 1 inspection	
	Northern District: 69 areas, 144 inspections	
	Central District: 151 areas, 395 inspections	
	Southern District: 117 areas, 81 inspections	
10.	Total number of refuse disposal areas closed since 1964	12
	Metropolitan District	2
	Northern District	1
	Central District	5
	Southern District	4
11.	Average number of inspections for each refuse disposal area in the state	1.6

During 1965, two new two and one-half cubic yard draglines were purchased by two private contractors for operations in the Hackensack meadows. One three and one-half cubic yard dragline was also purchased by a private contractor for use on a new operation in the Hackensack meadows. One three and one-half cubic yard dragline was purchased by a private contractor for use on an operation in Burlington County. This type of heavy equipment makes it possible to obtain adequate cover material to more efficiently operate a sanitary landfill.

A new type of dragline will be used in Parsippany-Troy Hills for operating a sanitary landfill. This is a walking type Page Engineering Company design. It is a 10-cubic yard variety. This 450-ton piece of equipment moves seven and one-half feet every time it takes a step. The Page will replace a four and one-half cubic yard Marion dragline. The size of the bucket measures nine feet wide, nine and one-half feet long and five feet high. This is real progress in improving landfill operations.

Occupational Health Program

The attached Statistical Summary for the 1965 Calendar Year shows an increased demand for the services of the Occupational Health Program, up six percent from the previous year. In addition to this increase in the number of industrial plants visited, the conditions found justified an increase of more than 25 percent in the number of field chemical determinations and a corresponding increase in the samples submitted to the Occupational Health Laboratory for analyses.

Not included in the Statistical Summary is the source of the requests for these visits. Self-initiated visits and visits requested by industrial plant management were each approximately 15 percent of the total 376. Most of the requests, 45 percent, were from local health officers. A large proportion of these visits was made on community occupational health surveys in industries in Union, Hanover Township, Palisades Park, and Clifton.

Self-initiated visits in the Beryllium Use Survey were scheduled so as to include local health personnel. Their interest was stimulated in the field of occupational health resulting in requests for assistance in conducting studies of other industrial plants located within their jurisdiction. Community occupational health surveys are continuing in Union, Paterson, Clifton, Camden, and Clark.

Assistance was given local health departments in the evaluation of 18 dry cleaning establishments. Seldom are these plants free from solvent exposure to some degree. Municipalities with noise performance codes requested 20 studies. Currently, 19 communities have adopted noise performance codes. Meetings and consultations on this subject were held with representatives from 23 other communities.

Assistance was given other departments of the state government in the evaluation of hazardous exposures in seven motor vehicle inspection stations, ammonia exposure in the blueprint room of the State Highway Department, a study of air-purifiers for ozone production requested by the State Architect, and environmental conditions existing in the Department of Labor and Industry building.

Personnel of this Program provided more than 200 hours of assistance to the U. S. Public Health Service in its studies of exposure to asbestos fibres in New Jersey industrial plants, part of a nation-wide survey. Independently, this Program conducted a study of the exposure to asbestos in the construction industry in cooperation with the union involved and a private medical clinic engaged by the union. Included in the studies were insulation workers, tile-setters, and roof workers.

Interest continued in research of new drugs and treatment leading to cures for diseases which result from occupational exposure. Cooperation was given in studies conducted by a leading university in which palpable tumors caused by asbestos dust were produced in hamsters. Administration of an experimental drug seemed to make the tumors disappear.

Office consultation services and inquiries increased significantly. Industrial workers, physicians, lawyers, and safety personnel requested information on specific substances or processes. In addition to the regular mailing list for Occupational Health Bulletins, requests were honored for 2,110 copies from every state of the union and 14 foreign countries. Two new subjects, Butyl Cellosolve and Manpower-Loss Absenteeism, were added in 1965, increasing the number of available bulletins to 56.

Statistical Summary of Occupational Health Activities
Calendar Year 1965

Field Activities

*Number of industrial establishments given service	302
*Number of employees in establishments visited	182,839
*Number of workers affected by services	67,301
*Number of other places and areas visited	74

Number of Field Visits Made:

Requested

a. Management	52	
b. Labor	29	
c. Plant M.D. or nurse	3	
d. Local Health	151	
e. District Health	15	
f. Citizen	33	
Other State departments including Public Health Service	39	
		322
Self-initiated		54
*Total		376

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

Plant Environmental Services	*No. of Visits*
Introductory visit	214
Industrial hygiene survey	208
Technical study of hazards	155
Noise and vibration	34
Consultation only (advisory)	10
Follow-up on recommendations	21
All other	...
*Total	642

Environmental Recommendations:	
Number made	1,083
Number complied with	...
Estimated cost	...
Field Determinations:	
Atmospheric contaminants	529
Physical conditions	2,664
Radiation monitoring	...
*Total	3,193
Other Technical Investigations:	
Air pollution	...
Radiation survey (non-industrial)	...
Non-occupational problem	...
*Total	...
Laboratory Analyses:	
Routine	474
Air pollution	...
Diagnostic	1,551
Research	1
*Total	2,026
Worker Health Services:	
Promotion of plant health programs	154
Consultation on medical aspects	6
Consultation on nursing aspects	54
Consultation with local health department on plant health services	1
Other	1
*Total	216
*Occupational diseases investigated	34
*Occupational diseases reported	385
Plans reviewed	...

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

Related Activities

Office consultation services and inquiries handled	1,226
Lectures given	19
Demonstrations	...
Attendance	1,364
Meetings attended	98
Publications	2

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

Radiological Health Program

Introduction

The activities of the Radiological Health Program are intended to reduce the exposure of residents of New Jersey to ionizing radiation through education, research, formulation of regulations, and surveillance.

Commission on Radiation Protection

Created by the Radiation Protection Act (Chapter 116, Public Laws of 1958), the Commission on Radiation Protection is empowered to formulate, adopt, and promulgate codes, rules, or regulations for protection against radiation exposure.

Commission Membership as of December 31, 1965

Frank G. Dunnington, Ph.D., Chairman
Benjamin P. Sonnenblick, Ph.D., Vice-Chairman
Philip D. Gilbert, M.D., Secretary
Roscoe P. Kandle, M.D.
Richard J. Sullivan, M.P.H.
Max M. Weiss, Ph.D.

The Department provides administrative support to the Commission.

Commission on Radiation Protection Activities

New Radiation Protection Code

A new Radiation Protection Code, adopted by the Commission October 30, 1964, became effective February 1, 1965. The new Code provides for licensing to possess and use all radioactive materials not subject to licensure by the U. S. Atomic Energy Commission. The radioactive materials licensed by New Jersey includes those that occur in nature and those artificially produced in particle accelerators.

Proposed Legislation

The Commission on Radiation Protection has developed proposed legislation to assure the skill of practicing x-ray technicians by requiring them to acquire "certification" by the New Jersey State Department of Health.

On November 10, 1965, the proposed bill was sent to the Attorney General and the Governor for appropriate action.

Other Activities

Among many other matters, the Commission considered at length the advisability of expanding its responsibilities to include the safe use of non-ionizing electromagnetic radiation. Included among such radiations are microwaves (such as super radar) and radiation emitted from Lasers and Masers. Further consideration by the Commission is anticipated early in 1966.

Departmental and Radiological Health Program Activities

Advisory Committee on Licensing

The Radiological Health Program early recognized the need for a body to advise the Department relative to problems involved in the newly developed Radioactive Materials Licensing Program. The State Commissioner of Health accordingly established the Advisory Committee. This Advisory Committee was organized and as of December 31, 1965, membership was as follows:

ADVISORY COMMITTEE ON LICENSING
FOR THE POSSESSION AND USE OF RADIOACTIVE MATERIALS
NEW JERSEY STATE DEPARTMENT OF HEALTH

Benjamin P. Sonnenblick, Ph.D., Chairman
James L. Breen, M.D.
Francis J. Haughey, Ph.D.
Samuel C. Ingraham, II, M.D.
George P. Koeck, M.D.
James D. Struthers
William H. Aaroe, Acting Secretary

Louis J. Levinson, M.D., who recently resigned, contributed largely to the initial efforts of this Advisory Committee. He has been replaced by Dr. Koeck.

Details of activities of the Advisory Committee are included under the radioactive materials licensing activities of the Radiological Health Program.

Reactor Safety 1965

In keeping with the request of Governor Hughes, the Board of Public Utility Commissioners held public hearings in Trenton to determine the im-

pact on public health and safety of the proposed Oyster Creek Nuclear Electric Generating Station. These hearings were presided over by William Hyland, President of the Board of Public Utility Commissioners of New Jersey. The New Jersey Department of Health participated vigorously in these hearings. This Department's activities were based on the state's police power to provide and maintain public health, and were aimed at the determination of the level and effects of radioactive discharges to the environment during normal operation.

Hearings were held on an irregular basis from February to December, 1965. Almost 1,000 pages of testimony were recorded and more than 30 exhibits submitted. The reactor was welcomed to the state as a means of reducing and controlling air pollution, and it was acknowledged the reactor could be safely sited provided certain conditions were met.

Jersey Central Power and Light Company, owner-operator of Oyster Creek, is expected to agree to the following conditions:

1. The State Department of Health would receive prior to submittal to the Atomic Energy Commission for its review, all data pertaining to environment-contaminating discharges.
2. Acceptance of the radioactive waste treatment facility design described in the testimony.
3. Provide a higher on-site micrometeorological tower than originally proposed by the utility.
4. Micrometeorological data would be reduced regularly and routinely.
5. On-site, micrometeorological tower instrumentation is to be calibrated periodically in a manner and frequency satisfactory to the State Health Department.
6. Definition of terms and calculation methods regarding wastes discharges are to be satisfactory to the Department.

During 1965, the following reactor safety activities were also undertaken:

1. A critical review was conducted of 27 Atomic Energy Commission proposed Reactor Siting Criteria. Comments pertinent to these criteria were prepared for submission by the Governor to the Atomic Energy Commission.
2. An up-dated port plan and State Police Operating Order 202 were developed to handle the arrival and departure of nuclear merchant ships, notably the N. S. Savannah. These documents were accepted by the Savannah's present operators, First Atomic Ship Transport, Inc.
3. A preliminary Emergency Procedure plan involving program personnel was drafted to be activated following a nuclear ship emergency.

4. Close rapport was maintained with the President's Northeast Desalting Team. Program efforts in this area bore strongly on the adequacy and acceptability of sites proposed for a dual-purpose desalting plant (combination Nuclear Electric Generating Station-Water Desalting Facility).

Radioactive Materials Licensing Program

The following statistical data cover radioactive materials licensing activities which became effective February 1, 1965.

Table 1. LICENSING—RADIOACTIVE MATERIALS DECEMBER, 1965

License application data sent out		734
Number responding		135
License application data sent to Registered Users		131
Temporary New Jersey licenses issued		82
Permanent New Jersey licenses issued		19
Radioactive materials suppliers contacted re New Jersey licensing		18
Suppliers indicating they will require a New Jersey license number prior to shipping		9
Applications received for a license to leak test sealed sources		24
New Jersey Licenses Issued:		
Hospitals	Temporary	49
	Permanent	10
Physicians	Temporary	14
	Permanent	4
Industrial	Temporary	18
	Permanent	5
Institutional	Temporary	1
	Permanent	0

Permanent licenses are issued only when proposed users are found to be in all respects in compliance with the New Jersey Radiation Protection Code.

The Advisory Committee on Licensing assisted with the development of a guide and modification of application forms to facilitate making application for a New Jersey Radioactive Materials License. The Committee also recommended that provision be made for courses of instruction in radiation safety to enable applicants so trained to qualify for a New Jersey license. The Department has taken the initial steps to assure the availability of such training.

The initial phases of Committee functions are complete. The Committee is now expected to serve the Department on a less frequent basis rendering advice regarding the desirability of granting licenses for unusual or novel uses of radioactive materials.

Radium Inspections

During a routine radioactive materials inspection, 12 radium needles were found to have removable contamination in excess of Code limits. The 12

needles were immediately returned to a supply house for repair or replacement.

A northern New Jersey hospital notified the Program of the loss of a 10-milligram radium needle. Program staff members assisted in locating and recovering the lost needle from the incinerator.

Pills containing radium and designed for human consumption were removed from the pharmacy of a central New Jersey hospital. The U. S. Public Health Service was alerted and through the efforts of Pennsylvania and New York health agencies, the manufacturers agreed to cease further production of these pills.

For the first time, staff members took possession of a radium source from a physician no longer desiring to possess and use such source. The physician voluntarily requested transfer of the radium plaque to the state; he intends to substitute therefor a strontium 90 plaque.

Department and Program staff attended the annual meeting of the Medical Society of New Jersey, in order to man the Department's exhibit on the hazards associated with the use of radium sources. Also present was a representative from the Division of Radiological Health, U. S. Public Health Service, Rockville, Maryland. The Public Health Service loaned the Department a number of transparencies depicting hazards associated with radium use. The Department augmented this display with one of its own consisting of a variety of radium applicators, sources, tongs, and associated equipment. The exhibit proved to be quite popular among physicians attending the annual meeting, and staff members were successful in clarifying license requirements for radium sources.

Registration of Radiation Producing Machines

There were 613 machines registered and 273 machine registrations cancelled in 1965 for a net gain of 340 machines registered. The increases for other years are: 728 in 1964; 258 in 1963 and 646 in 1962.

Table 2. X-RAY MACHINES REGISTERED BY TYPE OF REGISTRANT

Registrant	*Increases in Number of Machines Registered During 1965*	*Total Reg. Dec. 31, 1965*
Industries	134	928
Physicians	69	2,240
Dentists	86	4,461
Chiropractors	8	262
Chiropodists	0	270
Veterinarians	6	175
Institutions	37	1,186
	340	9,522

Field Inspections for Code Compliance of x-ray Machine Installations

There were 1,703 inspections of x-ray units in 1965 to determine compliance with the Radiation Protection Code. Table 3 gives the number of inspections by type of registrant.

Table 3. Inspection of x-ray Machines by Type of Registrant

Registrant	*Number of Inspections Made During 1965*	*Total Dec. 31, 1965*
Industry	300	417
Physicians	448	3,463
Dentists	582	5,821
Chiropractors	34	381
Podiatrists	29	466
Veterinarians	15	243
Institutions	295	1,890
	1,703	12,681

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

X-ray Machine Code Compliance Inspection Results

A total of 1,619 x-ray units were brought into compliance with the Radiation Protection Code during 1965. The number of x-ray units in compliance with the Code as of December 31, 1965 was 6,010 units or 63.3 percent of all units registered with the Program. Table 4 gives the number of units in compliance by type of registrant.

Table 4. X-ray Machines in Compliance With New Jersey Radiation Protection Code by Type of Registrant

Registrant	*Units Placed In Compliance in 1965*	*Total Dec. 31, 1965*	*Percent of Reg. Units*
Industry	164	229	24.7
Physicians	472	1,287	57.8
Dentists	567	3,392	76.1
Chiropractors	31	226	86.3
Podiatrists	38	195	72.8
Veterinarians	36	116	66.3
Institutions	311	565	47.8
	1,619	6,010	63.3

National Data System

The Radiological Health Program joined a national data system devised by the United States Public Health Service for recording data obtained during inspections of x-ray machine installations. Under this system, Radiological Health Program inspectors use Public Health Service survey forms in addition to the Department's own inspection forms. The completed Public Health Service forms are forwarded to Rockville, Maryland, where the coded data are processed along with data obtained from other states in order to get more complete information regarding the status of x-ray installations in various categories and more accurate information on population exposure to x-ray.

Radiological Health Laboratory

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

The number of leak test smears has increased from 62 in 1963 to 233 in 1965.

Table 5. Radiological Health Laboratory Samples Processed

Environmental Samples Collected and Determinations Made During 1965

Type of Sample	*Samples*	*Determinations*
Total	2,842	5,799
Air	370	370
Precipitation	54	54
Municipal—ground water	39	78
surface water	184	368
surface silt	48	96
State-wide—water	360	720
silt	296	592
Special—air	4	4
water	314	628
silt	150	300
soil	158	316
vegetation	254	1,016
milk	368	784
Leak tests and smears	233	453
Miscellaneous	10	20

Gamma-spectroscopy

Preliminary experiments were conducted with the 400 channel analyzer on environmental samples of soil, vegetation, sea water, oysters, milk and air.

In these experiments, the Marinelli beaker technique was applied for the first time in the laboratory. Full advantage of this analytical technique has not been taken because of unsatisfactory conditions in present Program facilities. Negotiations were conducted with the Northeastern Radiological Health Laboratory of the Public Health Service toward preparing for full exploitation of these techniques.

Educational Activities

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

Copies of the Public Health Service brochure, "What About Radiation?", were sent to all full-time licensed Health Officers.

The new Radiation Protection Code, effective, February 1, 1965 was mailed to persons having radiation producing machines or radioactive materials registered with the Department.

Three staff members completed the Civil Defense Course, "Radiological Monitoring for Instructors," conducted on two weekends by the Rutgers University Extension Division.

Four State Police Academy Recruit classes were instructed in the principles of radiation protection and the handling of radiation incidents and accidents. Other groups addressed include civil defense units and first aid squads.

The Radiological Health Program together with the Dental Health Program and with the assistance of the Division of Radiological Health, U. S. Public Health Service, conducted four one-day clinics on dental radiological health. Four hundred dentists attended the clinics held in Red Bank, Cherry Hill, Princeton, and East Orange.

The staff of the Program and staff of the Training Branch of the Division of Radiological Health, U. S. Public Health Service, conducted a one-week course in Trenton on the Management of Radiation accidents.

Program staff cooperated in delivering a lecture on Radiological Health at the Department of Health Field Training Station for public health sanitarians at East Orange.

Personnel

A staff member returned from a year of graduate study in radiological health at Colorado State University on a U. S. Public Health Service fellowship.

During 1965, a senior clerk-stenographer, a clerk-stenographer, a clerk-typist and an assistant industrial hygienist resigned to accept other employ-

ment. An engineering aid was employed for the summer to assist with field sample collection and laboratory work. An industrial hygienist also joined the staff to assist with the special projects.

A graduate nuclear engineer joined the staff and held major responsibility for evaluation of all nuclear facilities safety including providing the Department's participation in the public hearings conducted on the construction of the Oyster Creek reactor in Lacey Township.

Stream Pollution Control Program

After review, this Department issued permits for the construction and operation of 316 sewerage projects having a combined estimated cost of $58,400,000. Eighteen permits to locate factories or workshops on New Jersey watersheds were issued. Orders of Necessity were granted to eight municipalities permitting them to exceed their bonded debt limit in order that they might construct needed sanitary sewerage projects.

Seven formal orders were issued to municipalities and industries requiring the abatement of pollution of waters of the state.

There were 800 routine surveillance inspections of existing sewage and industrial wastewater treatment plants and some 570 special investigations, surveys, and studies of wastewater treatment facilities, streams and other waterways including ocean surf waters.

In accordance with the Federal Water Pollution Control Act, a three-day conference was called by the Secretary of the Department of Health, Education and Welfare concerning pollution of the interstate waters of the Hudson River and its tributaries. A number of conclusions and recommendations were agreed upon with the conferees representing New Jersey, New York, and the Interstate Sanitation Commission pointing out the importance of financing expensive sewage treatment facilities by means other than from local municipal sources.

The Department dispersed some $2,600,000 of federal construction grant monies for the construction of 13 stream pollution control projects.

Governor Hughes signed into law the State Public Sanitary Sewerage Facilities Act of 1965. This enables the Department to provide grants to municipal entities to cover the cost of preparing feasibility studies for water pollution control projects. The law also enables the Department to provide interest free loans for the preparation of preliminary and final engineering designs. The legislature appropriated $1,000,000 to carry out the aims and purposes of the law. The full amount was dispersed or committed after the money had become available.

New Rules and Regulations for the Preparation and Submission of Plans for Sewer Systems and Wastewater Treatment Plants were promulgated and filed with the Secretary of State. These Rules and Regulations reflect changes and new concepts of engineering design of sewerage facilities.

The first Regulations were promulgated for the Classification of all Surface Waters of the Raritan River Basin including the Raritan Bay. This action will provide the Department with still another administrative tool in its continuing efforts to prevent additional pollution and to restore our waterways for their best intended uses.

Veterinary Public Health Program

The Program on Veterinary Public Health is an administrative, coordinating unit within the Division of Environmental Health. The basic objectives of the Program are the prevention and control of animal diseases transmissible to man, collectively known as the zoonoses. These activities are accomplished through the cooperation of (a) personnel assigned to the Program, (b) District Public Health Veterinarians and Rabies Control Wardens, (c) other Health Department personnel having allied functions, and (d) close liaison with interdepartmental programs.

In addition to the aforementioned functions, the Program acts directly in a professional, advisory and training capacity to the Meat Program of the Bureau of Food and Drugs whenever such advice and assistance is required. The Veterinary Public Health Program was responsible for the Pesticide Project under a United States Public Health Service contract.

Rabies Control

New Jersey remains free of rabies in all animals except the bat. Bat specimens totaling 412 were submitted to the State Laboratory for examination for the presence of rabies virus. During 1965, rabies was laboratory-confirmed in 21 bats. Positive bats included four species from nine counties. This was an increase of three compared to the 1964 isolations. This marks the fifth consecutive year in which rabies virus was not isolated from any animal other than the bat. Although no human cases have resulted from their exposure to bats, humans are bitten, thus requiring persons to receive post-exposure rabies immunization. In addition, the bats are a problem in instances in which domestic pets, such as the dog and cat, have been exposed. Exposed animals are given an extended quarantine period not required when bitten by animal species other than the bat.

The number of dogs given rabies vaccine supplied by the Department continues to increase annually. 161,024 dogs were vaccinated in 495 municipalities. This compares with 145,488 dogs vaccinated under the sponsorship of local boards of health in 1964 and can be contrasted to the 51,763 dogs

vaccinated under the joint-sponsorship of the local boards of health and this Department in 1955.

Table 1. Cases of Rabies by Years and States

Calendar Year	*New York*	*Pennsylvania*	*Delaware*	*New Jersey*
1946	1,175	502	1	276 (2 humans)
1947	696	293	0	94 (1 human)
1948	568	147	1	112 (1 human)
1949	515	31	0	67 (1 human)
1950	1,022	102	0	5
1951	539	241	0	0
1952	337	300	7	0
1953	437	27	2	0
1954	472	38	0	0
1955	517	167	26	0
1956	306	99	46	1
1957	202	21	5	0
1958	261	55	0	0
1959	478	43	1	0
1960	455	18	0	1 (bat)
1961	90	14	0	8 (7 bats, 1 cat)
1962	111	58	0	10 (bats)
1963	90	29	1	16 (bats)
1964	119	9	0	18 (bats)
1965	242	16	0	21 (bats)

It should be noted that in New York and Pennsylvania, the confirmed cases of rabies were predominately in foxes, skunks, and dogs. This fact has an important bearing on New Jersey's Rabies Control Program, which stresses creation of an immune population of dogs so that if rabid animals come from these two neighboring states a bite will not create an epidemic.

The two principal objectives of a Rabies Control Program are to foster recognized dog control activities and to sponsor canine rabies vaccination. Program and District personnel stress dog control in their contacts with local boards of health.

Rabies Exhibit

In cooperation with the Division of Special Consultation Services and Graphic Art Services, a rabies exhibit was completed. The exhibit is adaptable for use at most public assemblies and will be on loan to the four State Health Districts. The exhibit was initially exhibited at the Morris County Health Fair by Veterinary Public Health personnel of the Northern State Health District who assisted in the original planning of the exhibit.

Viral Encephalitis Activities

The extensive Ecology of Encephalitis Study was continued through 1965, making five continuous years of its formal operation. The Project was financed by the State in 1961 and operated under funds allotted under a National Institutes of Health Grant the following years. Drs. Martin Goldfield and Oscar Sussman are the Principal Co-Investigators of this study. The Project is a cooperative one, jointly operated by the Division of Laboratories and the staff of the Bureau of Veterinary Public Health. In addition, interdepartmental agencies, namely, the Division of Fish and Game of the Department of Conservation and Economic Development and the Division of Animal Industry, Department of Agriculture actively cooperate. Drs. William C. Carter and Raymond E. Kerlin, Senior Public Health Veterinarians, Walter R. Gusciora, Entomologist, and David S. Adam, Senior Field Representative, are assigned to the Project along with six part-time Field Representatives. Mr. George Haws, Junior Wildlife Manager of Department of Conservation and Economic Development, Division of Fish and Game, has been permanently assigned to the Project during its five years of operation. Dr. Jeff Swinebroad, Chairman, Department of Biology, Douglass College, Rutgers—the State University, is employed as an Ornithological Consultant.

A brief description of the Study is outlined below:

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

The original emphasis in collecting specimens centered around the role of wild birds in the transmission of the viral encephalitis. In 1961 and 1962, the major emphasis was collection of wild bird blood specimens. The design of the Project was changed in 1964 when the emphasis was altered to include the trapping of mammals in addition to wild birds. Since 1964, wild birds have been netted two days a week throughout the year. In addition, mammals have been trapped, bled and tagged on an equal number of days. Wild birds are speciated; parasites are removed; the birds are banded, bled and released. All small mammals, such as mice and rats, are delivered alive to the virology laboratory. Sentinel flocks of chickens are maintained in or near each site and bled at two-week intervals. Mosquitoes are caught in light traps and resting boxes two days a week at each study site in all the months of the year in which they are available. All specimens (such as blood, nervous tissue, internal organs, and insects) are submitted to the Program on Virology, Division of Laboratories for serological tests and virus isolations. Eastern encephalitis virus was isolated from 29 wild birds, 15 non-avian vertebrates, 22 mosquito pools, two pheasant flocks, and nine equines. The mosquitoes represented six different species. Also, western encephalitis virus was isolated

from six non-avian vertebrates, one species of mosquitoes and one wild bird. The St. Louis strain was isolated from two pools of mosquitoes.

The personnel of the Veterinary Public Health Program, equipment and supplies employed in this Project, were used in surveillance work in Cape May County in which one resident was diagnosed as having eastern encephalitis. The surveillance consisted of trapping and bleeding wild mammals; netting, bleeding, speciating and banding wild birds; collection of mosquitoes by aspirating methods and by light traps and resting boxes. Mosquitoes were collected in Gloucester County as a result of possible St. Louis encephalitis in the area. The aforementioned work is a good example of rapid adaptation of ecological methods and tools in the surveillance of sporadic outbreaks of zoonoses.

Table 1. Breakdown of Birds, Mammals, Amphibians and Chickens—1965 and Totals for 1961-1965 Captured and Bled in Each Study Area

	1965	*1961-1965*
Mammals, Reptiles and Amphibians	3,233	6,275
Wild Birds	3,727	29,213
Chickens	729	3,515
Mosquitoes	93,000+	375,464
Other Arthropods	7,242	11,802

Pesticide Project

The Pesticide Project came into being during March, 1965, with Oscar Sussman, D.V.M., as Project Director, and John V. Scudi, Ph.D., as Principal Investigator. The contract was issued by the United States Public Health Service for a term of one year, to be renewed annually. The purpose of the Project is to determine the effects, if any, that long-term, low-level exposures to pesticides have on the general public.

Preliminary efforts were directed toward the collection of informational data on Monmouth County, the study area. Persons were contacted and met whose interests and backgrounds contributed to our knowledge of the people, businesses, and industries in Monmouth County and their uses of pesticides. The Agricultural Extension Service contributed greatly to our understanding of pesticide usage in agriculture. Municipal leaders offered information and advice on the county. Review of research literature was made on Monmouth County and the use of pesticides. The collected information was then compiled into a community profile which describes the people and the county, the pesticides which are used, and the persons engaged in their usage.

An epidemiological program also was established. Studies were proposed which were based on the degree of exposure of the people, and study groups for each exposure were selected. The low-level, long-term exposure group

which is thought to most closely represent the general population is to be studied by using an institutionalized group. Farmers and farm laborers are to be studied as the intermediate group. High exposure groups will most likely be found among persons working on the manufacture or formulation of pesticides. Finally, acute illnesses suspected of being caused by pesticide intoxication are being investigated and documented.

Insect and Rodent Control

Consultative services were given to local boards of health and to private sources on regulatory policies concerning pest control operators, on rodent control and identification of arthropods of public health significance, such as insects found in stored food products. Recommendations for control measures were issued routinely.

A number of ticks taken from a pet boa constrictor were submitted to this Program for identification. Further investigation disclosed that the tick was an exotic form and that it had become established on the premises of an animal supplier in Trenton who deals with an animal importer in Allentown, Pennsylvania, who imports snakes from Brazil.

Through the Animal Disease Eradication Service in Beltsville, Maryland, it was determined that the tick was not of public health significance as a disease vector.

Assistance was given to the Division of Laboratories on the identification of fruit-fly eggs and on a method of their separation from tomato products.

Trichinosis

An outbreak of trichinosis in 11 persons was investigated. The pork was traced to a meat purveyor who had made purchases from two New Jersey slaughterhouses: one slaughtering establishment purchased dressed pork carcasses originating from a Midwestern company; the second establishment purchased pigs regularly from local farms on which cooked garbage was the main diet for the pigs. The latter source was considered the probable source of the trichinae-infected pork. The Division of Animal Industry, State Department of Agriculture, has been conducting surveys to determine the effectiveness of cooked garbage in destroying the parasite Trichina spiralis. In their studies, diaphragm specimens were procured from pigs that were fed cooked garbage. Diaphragms from pigs from one of the farms involved were sampled. The final results of this work had not been completed at the end of 1965.

Food and Drugs

Consultation was given the Bureau of Food and Drugs concerning salmonella contamination in pork roll. An investigation was initiated following a report from the New York State Health Department that it had isolated four salmonella serotype samples from pork roll processed in an establishment located in Trenton. A detailed investigation, which consisted of a sanitary inspection of the physical layout of the plant, all processing methods, and sampling of the product throughout all stages of the processing, revealed salmonella contamination in the raw and the finished products. Salmonella serotypes were isolated from pork roll samples collected from six other Trenton establishments. Samples collected after the original sampling have been negative. The investigation is continuing.

Meat inspection examinations were given three times during the year. A total of five candidates for Meat Inspectors and Veterinary Meat Inspectors were examined. Three Meat Inspectors and one Veterinary Meat Inspector were licensed.

Division of Laboratories

MARTIN GOLDFIELD, M.D., *Director*

Programs:

Bacteriology ..... RUSSELL STEIN
Program Coordinator

Blood Bank ..... FEDERICO COLOSIMO
Program Coordinator

Chemistry ..... JOHN J. NELSON, M.S.
Program Coordinator

Pathology ..... MARTIN GOLDFIELD, M.D.
Program Coordinator

Serology ..... ELEANOR E. THOMAS
Program Coordinator

Virology ..... J. NORMAN WELSH, M.S.
Program Coordinator

Division of Laboratories

The Division of Laboratories has grown over the last couple of decades from rather humble beginnings to a large unit employing more than 130 persons who help to perform more than a million complex technical procedures on nearly one-half million specimens annually. Although a substantial number of laboratory procedures performed in the Division are not available in any other laboratory in the state, when prevailing charges by hospital and commercial laboratories are used to estimate the dollar value of the workload performed, the staggering figure of $10,000,000 annually emerges! Yet this Division handles such a workload with an annual budget of less than 10 percent of this figure. Such productivity reflects the admirable dedication of employees to their job.

Bacteriology Program

All commitments and assignments were successfully carried out by this Program as scheduled for 1965. In so doing, it handled the largest workload in its history—more than 150,000 specimens requiring over 400,000 examinations. In addition, it provided both new and improved services while conducting a number of continuing evaluation studies aimed at the improvement of still other services. Detailed breakdowns will be presented further along in this report.

Highlights

Contaminated Hypodermic Needles

A significant contribution to public health made by this Program was in finding bacterial contaminants among several lots of allegedly sterile hypodermic needles imported from Japan. Specimens submitted from a Belleville hospital for sterility testing were found to be grossly contaminated. Prompt and persistent follow up furnished the United States Food and Drug Administration with the data it needed to effect withdrawal of these needles from the open market. The number of lives saved may never be known, but the need for continued and expanded surveillance of such products is obvious.

Contaminated Water-Filled Plastic Coolers

In December, nation-wide attention was given to the testing, by public health laboratories in several states, of a variety of water-filled plastic novelties used for cooling drinks. Some were made in Hong Kong, others originated in Japan. This Program tested more than 400 of these coolers representing

27 different lots. The presence of intestinal bacteria in some of these lots was established. This concurred with similar findings reported by public health laboratories in at least 24 other states. These findings furnished state and federal health authorities with evidence enabling them to take appropriate action on the public's behalf.

Phenylketonuria (PKU)

Legislation providing for the testing of newborn children for purposes of early detection of PKU, triggered a spectacular increase in this laboratory activity. The number of voluntary participating hospitals soared from 42 to 72, an increase of 71 percent. They submitted more than 73,000 specimens, almost twice the 39,267 total of 1964, and more than five times the number received for testing in 1963. Performed examinations increased 88 percent over the 1964 total and 435 percent since 1963.

The quality of this laboratory service was significantly improved by extending paper chromatographic routines to include more low-level reactors than was previously possible. Also, the groundwork was laid for daily rather than weekly mailing of specimens from submitting hospitals, thus speeding the examination and reporting of all specimens.

Tuberculosis

Submitted specimens totaled 25,053, a 28 percent increase over the previous year, while performed examinations rose 55 percent. Expressed in terms of a biennial comparison, the 1965 specimen total exceeded the 1963 figure by 34 percent and the number of examinations was 62 percent greater.

To provide for more rapid detection of any changes in drug sensitivity patterns, the frequency of anti-tuberculosis drug sensitivity testing was increased from the check occasionally requested by the submitting physician, to an automatic once-a-month per patient routine.

As an additional diagnostic aid, *every* referred culture submitted for drug sensitivity only, was also routinely identified or classified and reported along with its requested sensitivity pattern.

One new procedure (nitrate reduction test) was added to the battery of cytochemical tests routinely used to differentiate and classify organisms similar to, but distinct from, M. tuberculosis. Also, controls and reagents for a second addition to this cytochemical test series have been checked and readied for routine use.

Enteric

A midwinter outbreak of gastroenteritis among hospitalized infants in the Newark area resulted in 28 deaths. This Program's enteric laboratory unit

played a major role in the epidemiologic investigation of that outbreak. An emergency work effort totaling 257 man-hours of evening and weekend overtime was required to speed the examination of over 850 specimens from which significant isolations of pathogenic strains of Escherichia coli were obtained.

It was during this episode that a new laboratory service became operational; namely, fluorescent antibody (FA) screening, as part of a continuing program of enteropathogenic E. coli surveillance. Under this program, rapid FA screening was routinely performed on all feces specimens received from babies up to age two, as well as on stools and rectal swabs submitted by hospitals throughout the state on any of their suspect cases. In addition, suspicious organisms isolated by any hospital laboratory were referred to this Program for confirmation and identification based on serologic grouping. Tabulated results of this surveillance follows:

Table 1. BREAKDOWN — ENTEROPATHOGENIC E. COLI SURVEILLANCE

Program	*Total Specimens*	*Positives*		
		No. of Specimens	*% of Specimens*	*No. of Cases*
Routine stools on infants up to age 2	1,021	59	5.3	53
Stools and rectal swabs from hospitalized cases	2,073	166	8.0	138
Referred cultures of suspect organisms	132	30	22.7	30
Totals	3,226	255	7.9	221

Salmonella isolation routines were also strengthened by the inclusion of additional enrichment and selective culture media. A detailed statistical breakdown of salmonella isolation data is presented in Table 2.

Rabies

As in the cases of the PKU, tuberculosis, and enteric laboratory units, a record-breaking number of specimens was received for examination. There were 1,785 animal heads submitted. This represents a 25 percent increase over last year and a 32 percent rise since 1963. The percentage increases in the number of performed tests is even more striking. More than 151,000 examinations were made in 1965 as compared with 97,340 in 1964 and 93,405 in 1963. This meant increases of 55 percent over 1964 and 62 percent since 1963.

In the area of improved services, the examination of brain specimens was extended to include portions of the brain stem as well as the usual cerebrum

and cerebellum material. The banking of brain tissues, initiated last year, became a fully operational routine during 1965. This procedure lends supportive action to the Virology Program's studies relating to other encephalitis viruses.

Finally, full diagnostic services were uninterruptedly provided on a round-the-clock basis during every holiday and weekend throughout the entire year.

Quality Control

This marked the first full year of operation for a split sampling program designed to evaluate and monitor the performance of dairy laboratory personnel. First in April, and again six months later, a separate series of reference check samples of milk products was mailed to voluntary participants for analysis and report. The performance of 42 analysts representing 21 laboratories was evaluated on the basis of their individual findings. Participants were advised by mailed critiques as to errors in calculation and obvious deviation from standard techniques. Wherever indicated, consultations and/or bench training and refresher instruction at the State Laboratory were recommended.

The following tabulation summarizes the outcome of these split sampling evaluations and indicates the degree of upgraded performance achieved in 1965:

Table 2. Results of Milk Split Sampling Program

	Spring Series			*Autumn Series*		
Participant	*No. of Labs.*	*No. of Analysts*	*% of Analysts Performing Acceptably**	*No. of Labs.***	*No. of Analysts****	*% of Analysts Performing Acceptably**
Interstate Milk Shipper (I.M.S.) Laboratories	11	20	45.0	14	30	80.0
Reciprocity Laboratories	8	12	33.3	7	12	50.0

* This means that the analyst's findings agreed within allowable limits in the case of at least 75% of samples tested.

** Includes one college laboratory.

*** Includes three college laboratory personnel.

Food Microbiology

Considerable upgrading of this Program area resulted from direct application of training which the Senior Bacteriologist received early in the year

at Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. New enrichment media were put into routine use for the analysis of suspect food-poisoning samples. Quantitation techniques were incorporated in the routines intended to detect and measure the presence of indicator (intestinal) organisms. All such specimens showing the presence of coliform bacteria were then routinely screened for enteropathogenic E. coli (E.E.C.) as part of the continuing E.E.C. surveillance program.

Branch Laboratories

Marked operational improvement was noted by the U. S. Public Health Service survey team during its annual evaluation of the Bivalve and Nacote Creek shellfish laboratories. The 1965 final rating was scored at an excellent grade of 95 compared with the 81.7 rating obtained in 1964. The improvement resulted from effective measures taken to correct previous deviations from recommended standard procedures for the examination of shellfish and shellfish-growing waters.

Operational reorganization of culture media preparation at Nacote Creek enabled this laboratory to satisfy the media of Bivalve as well as its own. This substantially reduced the frequency and cost of deliveries from the Central Laboratory.

Special Studies

It should be pointed out that not all of the endeavors pursued by this Program were measured in terms of workload statistics per se. The examination totals did not include a single one of thousands of additional tests performed as part of vital special studies which sought to provide better and speedier methodologies. For example, three continuing lines of investigation involved more than 6,000 additional examinations performed in the tuberculosis laboratory unit in the evaluation of sputum digestants, culture media, and techniques for the staining and microscopic examination of slide preparations.

Another continuing study relating to finished, packaged milk and milk products as possible vehicles for transmission of pathogenic E. coli entailed the performance of several hundred extra-routinal tests.

These continuing studies are a vital part of the Program. They have already shown promise of paying handsome dividends in terms of public health benefits as well as overall operational efficiency in the laboratory.

Trends and Workloads

As indicated in the opening paragraph of this report, the overall demands for Program services in 1965 far outnumbered those of any previous year.

There was a 35 percent jump in the number of submitted specimens, accompanied by an even greater 47 percent increase in the number of performed examinations during the past year. Moreover, in the short space of the last two years, these same categories showed even sharper increases of 61 percent (specimens) and 72 percent (examinations), respectively. The following tables vividly illustrate this trend of Program workloads and components during the past three years:

Table 3. Program Workloads

	Specimen			*Examinations*		
	1965	*1964*	*1963*	*1965*	*1964*	*1963*
Program Total	150,087	110,910	92,957	413,561	279,801	239,846
Central Lab.	139,481	100,316	79,003	397,346	263,910	218,915
Branch Lab.	10,606	10,394	13,954	16,215	15,891	20,931

Table 4. Relative Increases in Program Workloads

Workload	*Annual Comparisons*		Biennial Comparisons
	1965 vs. 1964	1964 vs. 1963	1965 vs. 1963
Specimens	35%	19%	61%
Examinations	47%	16%	72%

Table 5. Central Laboratory Workloads

	Specimens			*Examinations*		
	1965	*1964*	*1963*	*1965*	*1964*	*1963*
Diagnostic Bacteriology						
Phenylketonuria (PKU)	73,640	39,267	13,754	147,230	78,534	27,508
Tuberculosis	25,053	19,468	18,681	151,570	97,340	93,405
Enteric Infections	10,468	7,993	7,977	43,825	27,975	27,919
Respiratory Infections	8,139	11,027	12,605	16,278	22,054	25,210
Gonorrhea	4,331	4,269	4,111	4,331	4,269	4,111
Rabies	1,785	1,428	1,347	8,568	5,712	5,388
Miscellaneous*	1,606	3,583	8,068	3,748	7,678	17,042
Sanitary Bacteriology						
Waters	12,344	11,157	10,374	18,516	16,735	15,561
Dairy Products	2,115	2,124	2,086	4,230	4,248	4,172

* Includes: Food samples, bloods for febrile agglutination tests staphylococcus culture for phage typing, mycology specimens, wound cultures, specimens for sterility testing and miscellaneous cultures for identification.

Among the component activities which contributed most significantly to this year's sharp workload increases were those related to the detection of PKU, tuberculosis, enteric infections, and rabies. Relative workload increases for the past three years are tabulated as follows:

Table 6. Relative Increases in Program Component Workloads

Program Component	*Specimens*			*Examinations*		
	Annual Comparisons		*Biennial Comparisons*	*Annual Comparisons*		*Biennial Comparisons*
	1965 vs. 1964	1964 vs. 1963	1965 vs. 1963	1965 vs. 1964	1964 vs. 1963	1965 vs. 1963
PKU	87%	185%	435%	88%	185%	435%
Tuberculosis	28%	4.0%	34%	55%	4.0%	62%
Enteric	30%	0.2%	31%	56%	0.2%	56%
Rabies	25%	6.0%	32%	50%	6.0%	59%

Phenylketonuria (PKU) Detection

Table 7. Workload Breakdown

Total Specimens Submitted	*Acceptable Specimens*	*Unsatisfactory Specimens*	*Positive*
73,640	71,875	1,765	1

Phenylketonuria, commonly referred to as PKU, is an inherited defect thought to occur once in about every 10,000 live births. Babies with this disorder lack a liver enzyme which converts phenylalanine, an essential amino acid present in most protein foods, to tyrosine, another amino acid. The accumulation of unconverted phenylalanine in the infant damages the developing brain. If undetected, the condition leads to severe mental retardation that is irreversible and usually dooms the victim to lifetime confinement in an institution.

In view of the rarity of occurrence, the significance of a single positive finding is obvious. This is the second case of PKU detected during the past two years of this service. During that period, specimens from 109,130 babies yielded two positive findings for an incidence rate approximating one in 54,500 tested individuals.

Table 8. Workload Breakdown

Total No. Specimens	*Satisfactory*		*Unsatisfactory*	*Positive*	
	Completed	*In Process*		*Total*	*% of Comp.*
25,053	19,857	4,165	1,031	1,340	6.74

Table 9. Breakdown of Satisfactory Specimens

	Total	*Completed*	*In Process*	*Positives* Total	*Positives* % of Comp.
Sputum	22,920	18,947	3,973	1,164	6.14
Urine	538	427	111	9	2.10
Gastric	110	89	21	7	7.86
Bronchial	37	30	7	4	13.33
Pleural	56	49	7	2	4.08
Spinal	11	9	2	0	0.00
Others*	70	51	19	3	5.88
Referred cultures	280	255	25	151	59.21
	24,022	19,857	4,165	1,340	6.74

* Body fluids and tissues.

Enteric Diseases

Total number of Specimens—10,468

Table 10. Specimens for Diagnosis of Bacterial Infection

Specimen	*Total*
Feces	5,577*
Rectal Swabs	2,303
Cultures for Identification	880
Urine	352
Sewage	250
Throat Swabs**	118
Food Products	51
Toy Ducklings	19
Water	5
Total	9,555

* Includes 913 specimens from Levittown Community Study.

** Submitted in epidemiologic study of Newark outbreak of infant gastroenteritis associated with pathogenic strains of Escherichia coli.

Table 11. Specimens for Diagnosis of Parasitic Infection

Feces (fresh)	854
Feces (PVA***)	55
Parasites for Identification	4
Total	913

*** Polyvinyl alcohol preservative.

Table 12. Sources of 991 Salmonella Isolations

Serotype	Total	Isolated at Central Laboratory				Cultures Referred to Central Laboratory			
		Human	Animal	Food	Sewage	Human	Animal	Food	Avian Food
S. typhimurium	246	136	..	..	5	99	2	3	1
S. montevideo	103	82	..	..	12	9	..	..	..
S. infantis	97	72	4	1	7	9	..	4	..
S. Heidelberg	75	40	..	1	4	30	..	..	..
S. typhimurium var.	67	33	..	3	..	23	..	8	..
S. copenhagen	..	..	..	..	..	..	..	..	..
S. enteritidis	66	43	1	1	1	19	..	1	..
S. derby	36	16	..	11	4	5	..	..	..
S. oranienburg	34	12	..	..	5	9	..	4	4
S. saint-paul	34	20	..	5	4	5	..	..	..
S. typhi	31	19	..	..	..	12	..	..	..
S. thompson	22	9	..	..	..	6	5	2	..
S. chester	21	12	..	..	9	..	..	..	..
S. newport	19	11	..	..	2	6	..	..	..
S. tennessee	17	7	..	..	9	1	..	..	..
S. anatum	12	1	..	5	2	3	..	..	1
S. javiana	9	5	..	..	..	4	..	..	..
S. paratyphi B	9	8	..	..	..	1	..	..	..
S. blockley	8	5	..	..	..	3	..	..	..
S. tejas	8	..	..	..	8	..	..	..	..
S. indiana	7	..	..	6	..	1	..	..	..
S. jidburg	6	..	..	..	6	..	..	..	..
S. bredeney	5	4	..	..	..	1	..	..	..
S. meleagridis	5	5	..	..	..	..	..	..	..
S. panama	5	..	..	..	4	1	..	..	..
S. champaign	4	4	..	..	..	..	..	..	..
S. lille	4	..	..	..	4	..	..	..	..

Table 12. Sources of 991 Salmonella Isolations—*Continued*

Serotype	Total	Isolated at Central Laboratory				Cultures Referred to Central Laboratory			
		Human	Animal	Food	Sewage	Human	Animal	Food	Avian Food
S. muenchen	4	4	..	..	..	..	..	..	..
S. poona	4	..	..	..	2	2	..	..	..
S. bareilly	3	.	..	..	..	1	..	2	..
S. braenderup	3	..	..	..	..	2	..	1	..
S. manhatten	3	..	..	1	2	..	..	..	..
S. berta	2	..	..	..	1	1	..	..	..
S. give	2	..	..	2	..	..	..	..	..
S. java	2	2	..	..	..	..	..	..	..
S. newington	2	..	..	..	1	1	..	..	..
S. reading	2	..	..	..	2	..	..	..	..
S. schwarzengrund	2	..	..	..	1	1	..	..	..
S. urbana	2	1	..	..	..	1	..	..	..
S. binza	1	..	..	..	1	..	..	..	..
S. bradford	1	..	..	1	..	..	..	..	..
S. california	1	..	..	..	..	1	..	..	..
S. eppendorf	1	..	..	1	..	..	..	..	..
S. gaminara	1	1	..	..	..	..	..	..	..
S. kentucky	1	..	..	..	..	..	..	1	..
S. muenster	1	..	..	..	..	1	..	..	..
S. ohio	1	..	..	..	..	1	..	..	..
S. senftenberg	1	..	..	..	..	1	..	..	..
S. thomasville	1	..	..	..	..	1	..	..	..
Total	991	552	5	38	96	261	7	26	6

Table 13. Sources of 18 Shigella Isolations

	Total	*Isolated by Central Laboratory*	*Cultures Referred to Central Laboratory*
Sh. sonnei	12	3	9
Sh. flexneri			
2a (II:3.4)*	5	0	5
1a (II:3.4)*	1	0	1
Totals	18	3	15

* Definitive serotype determined by United States Public Health Service's Communicable Disease Center, Atlanta, Georgia, following serologic grouping performed by Central Laboratory.

Table 14. Sources of 271 Enteropathogenic E. coli Isolations

Sero-Group	*Total*	*Isolated by Central Laboratory*			*Cultures Referred to Central Laboratory*
		Rectal Swab	Stool	Urine	Stool
011:B4	156	118	16	0	22
026:B6	20	8	11	0	1
0124:B7	17	7	9	0	1
0128:B12	14	5	6	1	2
0125:B15	13	6	6	0	1
0126:B16	13	5	4	0	4
055:B5	13	11	2	0	0
0119:B14	11	3	3	0	5
0127:B8	10	4	4	0	2
086:B7	4	1	2	0	1
Totals	271	168	63	1	39

Table 15. Rabies

Total Specimens	*Acceptable*	*Unsatisfactory*	*Positive*	*Percent of Acceptable Found Positive*
1,785	1,735	50	22	1.26

Breakdown of 1,785 Submitted Specimens

Alligator	1	Ground Hogs	12
Bats	412	Skunks	8
Dogs	329	Monkeys	6
Hamsters	228	Opossums	4
Cats	196	Giant Moths *	3
Mice	152	Shrews	2
Squirrels	144	Gophers	1
Rabbits	98	Horses	1
Chipmunks	64	Parakeets	1
Rats	43	Pigs	1
Moles	21	Porcupines	1
Muskrats	15	Prairie Dogs	1
Raccoons	15	Sea Birds	1
Foxes	12	Vole	1
Guinea Pigs	12		

*(Mistakenly submitted as bats)

Of 22 positive findings, 21 occurred in bats:

Total Bats Submitted	*Unfit for Examination*	*Total Examined*	*Positive*	*Percent of Examined Bats Positive*
412	35	377	21	5.57

The only other positive finding occurred in a dog from Labrador, submitted for examination by the Base Veterinarian, McGuire Air Force Base. The dog was flown to that military installation after having bitten a member of the U. S. Air Force at the Goose Bay Air Force Base, Labrador.

Since the animal had never been in New Jersey, this positive finding cannot be regarded as significant to the public health of this state's citizenry and does not change the record of no positive laboratory findings of canine rabies by this Program since 1956.

RESPIRATORY BACTERIOLOGY

Table 16

	Nasopharyngeal Swabs				*Spreads*	
	Diphtheria				*Vincent's Angina*	
Total Specimens	*Total*	*Positive*	*Hem. Strep.*	*Misc.*	*Total*	*Positive*
8,139	1,143	0	6,981*	12	3	0

* Levittown Community Study Specimens.

Gonorrhea

The number of specimen slides submitted for staining and microscopic examination totaled 4,431. Laboratory findings were as follows:

Table 17

Total Specimens	Unsatisfactory for Examination	Satisfactory for Examination	Positives Total	Positives Percent of Examined
4,431	3	4,428	905	20.4

MISCELLANEOUS

Table 18

Staphyloccocus Phage Typing	408
Food	238
Cultures for Identification	171
Mycology	74
Blood for Febrile Agglutination tests*	42
Other	673
Total	1,606

* This activity transferred in June to Serology Program.

Sanitary Bacteriology

Dairy Bacteriology

A total of 2,115 samples of milk and other dairy products were tested in accordance with the techniques described in the 11th edition of the American Public Health Association's "Standard Methods for the Examination of Dairy Products." Of these samples, 2,011 were checked for coliform counts and total viable bacterial populations. Tabulations of the results follow:

Table 19

Type of Sample	Sample Total	Acceptable Total	Below Standard A	Below Standard B	Below Standard C	Below Standard D	Percent of Total Below Standard
Milk	954	844	45	54	11	110	11.5
Cream	425	325	43	34	23	100	23.5
Chocolate Milk	207	173	16	10	8	34	16.4
Skim Milk	169	143	13	7	6	26	15.4
Half and Half	137	116	11	6	4	21	15.3
Nonfat Milk	101	92	4	4	1	9	8.9
Frozen Eggs	9	3	0	6	0	6	66.6
Milk Drinks	4	4	0	0	0	0	0.0
Cottage Cheese	2	2	0	0	0	0	0.0
Ice Cream	2	0	2	0	0	2	100.0
Ice Cream Mix	1	1	0	0	0	0	0.0
Totals	2,011	1,703	134	121	53	308	15.3

Key: A=Samples reported as below standard because of coliform count.*
B=Samples reported as below standard because of total plate count.**
C=Samples reported as below standard because of both coliform and total plate count.
D=Total number of below standard samples (A + B + C).

* Samples having coliform counts higher than 10/ml. are considered below standard.

** Samples having plate counts higher than 20,000/ml. (milks), or 30,000/gms. (creams) or 50,000/gms. (ice cream) are considered below standard.

Other workload data:

Split samples	88
Baby Formula (Hospital Nursery)	16
Total	104
Overall Total	2,115

Supplemental Tests	*Total*	*Present*	*Absent*
Penicillin residuals (milk)	316	1	315

Water Bacteriology

A total of 12,344 water samples were tested at the Central Laboratory. All tests were performed in strict compliance with procedures detailed in the twelfth edition of "Standard Methods for the Examination of Water and Wastewater."

Table 20. Breakdown of 12,344 Tested Waters

Potable Waters:		Bathing Waters:	
Public	4,142	Swimming Areas	415
Private	2,307	Pools	92
Schools	728		507
Migrant Camps	684		
Recreational Camps	273		
Institutions	250		
Abattoirs	127		
State Parks	86	Effluents:	
Interstate Air Carriers	60	Sewage	1,941
Ice Cream Stands	32	Streams	1,061
Dairies	26	Trade Wastes	64
Bottled Water	24		3,066
Miscellaneous:			
Food Establishments	14		
Ice Cooler Novelties	18		
	8,771		

Table 21

	Specimens			*Examinations*		
Laboratory	*Waters*	*Shellfish*	*Total*	*Waters*	*Shellfish*	*Total*
Bivalve	5,762	373	6,135	8,643	746	9,389
Nacote Creek	4,232	239	4,471	6,348	478	6,826
	9,994	612	10,606	14,991	1,224	16,215

All analytical tests on the above specimens were performed in accordance with procedures detailed in the 12th edition of "Standard Methods for the Examination of Water and Wastewater" and the 3rd edition of "Recommended Procedures for the Bacteriological Examination of Sea Water and Shellfish."

Training

Educational and training activities conducted by or engaged in by members of the Bacteriology Program were as follows:

COURSES ATTENDED BY PROGRAM PERSONNEL

Course	*Sponsor*	*Attended*
Water Microbiology	U. S. Public Health Service	Program Coordinator 2 Senior Bacteriologists Bacteriologist
Mycobacteriology	"	Assistant Bacteriologist
Food Microbiology	"	Senior Bacteriologist
Fluorescent Antibody Techniques	"	Principal Bacteriologist
Anaerobic Bacteriology	"	Senior Bacteriologist
Hospital Environmental Sanitation	"	Program Coordinator
PKU Techniques	Massachusetts Department of Public Health	Principal Bacteriologist

Totals: Seven courses attended by ten Program personnel.

BENCH TRAINING PROVIDED BY PROGRAM PERSONNEL

Trainee	*Subject*	*Instructor*
Hospital Laboratory Technician	Enteric Bacteriology	Principal Bacteriologist
Dairy Lab. Tech.	Dairy Bacteriology	Bacteriologist
Hospital Lab. Technicians (4)	Fluorescent Antibody Techniques	2 Bacteriologists
Public Health Lab. Technician		Laboratory Technicians

Totals: Seven trainees received instruction from five Program personnel.

ORIENTATION OF DEPARTMENTAL PERSONNEL

Title	*Program*	*Instructor*
Public Health Service Trainees (4)	Migrant Health	Program Coordinator
Public Health Nurse (3)	Tuberculosis Control	Bacteriologist
Public Health Nurse Consultant	" "	
Field Representative	" "	
Health Educator	" "	

Totals: Ten Department personnel—Two Program personnel.

Central Services

This unit decontaminated, washed, and sterilized all glassware used by the Bacteriology, Chemistry, and Serology Programs. In addition, it as-

sembled, sterilized, and distributed mailable specimen collection kits for use by physicians and other public health officials throughout New Jersey. Finally, it supplied the Bacteriology Program with scores of different culture media for daily routine use. Workload totals break down as follows:

Total specimen collection kits	275,971
Total volume of culture media	7,043,180 ml.

Blood Bank Program

Under direction, our Principal Serologist (Blood Bank), Mr. Federico Colosimo, has been performing the duties of the program coordinator.

The major problems concerning the Blood Bank Program continue to be the inspection and approval for licensing of new blood banks, reinspection and approval for relicensing of existing blood banks, and more importantly the continuation and expansion of our performance evaluation program. Although the number of blood banks and laboratories participating in our program has not increased significantly, the growth of the Program is reflected in the increased number of specimens mailed for evaluation.

Table 1. Workload Data

	1964	*1965*
Number of Primary Inspections	129*	8
Number of Reinspections	120	111
Number of Inspections in Institutions that claim no Blood Banking	12	2
Number of Blood Banks Participating in the Evaluation Program, not including Commercial Bleeding Stations	122	122
Number of Participating Referre Laboratories	1	2
Number of Participating Commercial Reference Laboratories	0	4
Number of Clinical Laboratories Voluntarily Participating	43	42
Number of Unknown Specimens Mailed for Evaluation	1,253	1,797
Number of Specimens Vialed as Whole Blood	1,253	887
Number of Specimens Vialed as Plasma	0	910
Number of Specimens Vialed as Packed Cells	0	910
Total Number of Vialed Specimens Mailed	1,253	2,707
Number of Evaluation Reports Processed	1,047	1,647
Number of Evaluation Critiques Prepared	12	20
Number of Evaluation Critiques Mailed	1,163	1,706
Number of Letters Citing Sanitary Code Deviations and Suggested Recommendations to Blood Bank Directors	116	111
Annual Statistical Data of Blood Used in New Jersey:		
Number of Blood Bank Summaries Processed	103	123
Number of Annual Summary Reports Mailed	103	126

* A few of these inspections were performed in the fall of 1963.

Highlights

The Program Coordinator attended the Pennsylvania Association of Blood Banks Annual Workshop in April and the American Association of Blood Banks annual seminar and convention in September. He is also a member of the executive committee of the New Jersey Antibody Club and attends their monthly meetings.

NOTE: Distribution of Educational Series number one (Pathology Slides) was completed by the Program Coordinator this year.

Chemistry Program

This Program experienced a slight increase in the number of samples received and a significant increase in the number of determinations conducted during 1965 as compared to the previous calendar year. Excluding automated screening tests, there was a four percent increase in the number of samples processed and an 11 percent rise in the number of determinations performed.

Table 1. SUMMARIZED STATISTICS, JANUARY 1 – DECEMBER 31, 1965

Character of Samples	*Number of Samples*	*Number of Determinations*
Milk and Dairy Products	1,723	3,389
Other Foods	581	909
Drugs	109	348
Potable Waters	1,965	12,861
Sewages, Tradewastes and Streams	3,420	19,634
Clinical Chemistry Performance Evaluation	1,008	1,925
Miscellaneous*	295	1,078
Totals	9,001	40,144

* Includes methods development, collaborative studies and research.

Blood sugar screening tests were excluded from the above summary. The inclusion of these relatively simple, automated determinations, which vary by thousands from year to year, would only serve to distort the true work load picture. Some 8,300 blood sugar screening tests were conducted in 1965 as compared to twice that number in 1964. This reduction was due to the use of a field screening device during Diabetes Detection Week in November; only marginal and presumptive positive blood specimens were submitted to these laboratories for confirmatory testing.

A steady upward trend in workload is evidenced when percentage changes for 1964 and 1965 are composited: 8.5 percent more samples and 6.2 percent more determinations over the two-year period. This apparent

incongruity, a greater rise in samples received than in determinations conducted, is not the result of a typographical error, but reflects a continuing liaison with contributing program coordinators to assure that only necessary and meaningful analyses are requested. Without such adjustments, our burgeoning work load could not have been absorbed without corresponding increases in personnel.

Two major categories of our workload (i.e. performance evaluation and miscellaneous specimens) showed little change over 1964. Activity in the other five principal areas of the total workload, relative to last year, varied as noted below:

Table 2. Samples and Determinations

	Samples	*Determinations*
Milk and Dairy Products	+33%	+33%
Other Foods	— 8%	—24%
Drugs	—22%	+ 4%
Potable Waters	—14%	— 2%
Sewages, Tradewastes and Streams	+46%	+24%

Highlights

Membership in our Clinical Chemistry Evaluation and Quality Control Program increased by 10 laboratories during 1965 for a total current enrollment of 92. This program, now in its fourth year, issues unknown specimens on approximately a monthly basis to evaluate clinical chemistry procedures in independent bioanalytical laboratories. Studies undertaken this year included normal and abnormal levels of calcium, sodium, potassium, chloride, phosphorus, uric acid, total protein, albumin and A/G ratio, glucose, urea nitrogen, creatinine and cholesterol. This program is valuable in that it serves to define general areas of difficulty and special problems in specific laboratories which prevent a high level of performance in all clinical chemistry laboratories. Plans are underway to provide appropriate lectures, bench training, and consultations as necessary adjuncts to the present unknown specimen mailing program.

New Jersey's accelerating activity in the field of stream pollution control was already apparent in these laboratories in 1965. The 3,420 sewage, tradewaste, and stream samples processed in 1965 represented an increase of some 46 percent over 1964 but by holding the necessary number of determinations to about 20,000, an increase of only 24 percent, it was possible to absorb this sharp increase in work. This relative reduction in analyses was largely due to the decision that a single composite final sample on routine sewage treatment plant inspections, rather than the former two separate samples, would suffice. This is an excellent example of how contributing programs may minimize their requests for analyses to levels consistent with their real needs.

Training and Conferences

This program was represented at the following courses and conferences:

Market Milk Conference
Rutgers—The State University
New Brunswick, New Jersey

Dairy Products Improvement Institute
18th Annual Meeting
New York City, New York

Federation of American Societies of Experimental Biology
Atlantic City, New Jersey

Annual State Milk and Laboratory Rating Officers' Seminar
Region II, United States Public Health Service
New York City, New York

New Jersey Public Health Association (Summer Meeting)
"The Challenge of Salmonellosis"
Far Hills, New Jersey

Fourth Rudolfs' Research Conference
"Principles and Applications of Water Chemistry"
Department of Environmental Sciences
Rutgers—The State University
New Brunswick, New Jersey

Technicon Symposium
"Automation in Analytical Chemistry"
New York City, New York

Association of Official Analytical Chemists—79th Annual Meeting
Washington, D. C.

Training Program in Quality Control and
Clinical Chemistry Procedures
Warner Chilcott Instrument Division
Morris Plains, New Jersey

Seminar for State Chronic Disease and Laboratory Directors
Region II, United States Public Health Service
"Laboratory Aspects of Cardiovascular and
Other Chronic Diseases"
Atlanta, Georgia

Training Extended

An analyst from a chemical company desirous of monitoring its effluent was given training in procedures applicable to tradewastes (e.g. biochemical and chemical oxygen demand, phenol, and ether soluble matter).

Two technicians from a local health department laboratory were oriented in two procedures suitable for detecting the decomposition of frozen eggs; lactic and formic acid determinations.

A chemist from a food concern was instructed in the Biochemical Oxygen Demand Procedure, a test used to measure pollution.

A representative of a New Jersey sand and gravel company received instruction in filter sand analysis.

Collaborative Studies

Phosphatase determinations on split milk samples; two studies (Environmental Health Center, Department of Health, Education and Welfare).

Eighteen evaluation specimens for blood glucose and eight for electrolytes (Clinical Chemistry Evaluation Program, Laboratory Branch, Communicable Disease Center).

An evaluation of procedures for metals in water, including aluminum, copper, iron, manganese, zinc, silver, cadmium, chromium and lead (Analytical Reference Service, Environmental Health Center, Department of Health, Education and Welfare).

Pesticides in water and milk, including lindane, DDE, dieldrin and heptachlor expoxide (Analytical Reference Service, Environmental Health Center, Department of Health, Education and Welfare).

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY
January 1-December 31, 1965

	Above Standard	*Below Standard*	*Total*	*Determinations*
Milk—Chemical	682	21		
Milk—Chemical and Phosphatase	377	26		
Milk—Phosphatase	193			
Milk—Chemical, Phosphatase and Pesticides	48			
Milk—Chemical and Pesticides	27			
Milk—Phosphatase and Pesticides	2			
Milk—Pesticides	2			
Milk—Filth		2		
Milk—Acidity		1		
Cream—Phosphatase	253			
Chocolate Milk—Phosphatase	83			
Goat Milk—Chemical and Phosphatase	6			
Totals	1,673	50	1,723	3,389

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY—*Continued*

January 1-December 31, 1965

	Above Standard	*Below Standard*	*Total*	*Determinations*
Other Foods:				
Asparagus	15			
Baby Food	1			
Bread and Rolls	15			
Butter	14	2		
Cake	1			
Candy	1	1		
Carrots	31			
Cauliflower	13			
Cheese	1	1		
Chicken Croquettes	1			
Cider	4	1		
Coconut Drink	1			
Coffee	1			
Cookies	1			
Corn	2			
Cottage Cheese	50			
Cracker Meal		1		
Cranberries	13			
Doughnut	1			
Egg Noodles	4			
Egg Plant	1	2		
Eggs	5	4		
Fish	10	1		
Flour	2			
Fruit	4			
Fruit Juice	1			
Gelatin	1			
Ice	1	2		
Ice Cream	53	1		
Jelly Apple	2			
Karo Water	1			
Lentil Soup	2			
Lime Filling	1			
Lima Beans	2			
Meat	165	55		
Milk Shake	4			
Oleomargarine	1			
Olives	1			
Peaches	2	1		
Peas	2			
Peppers	5			
Pickles	1			
Potatoes	30	1		

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY—*Continued*

January 1-December 31, 1965

	Above Standard	*Below Standard*	*Total*	*Determinations*
Other Foods:				
Prune Roll	1			
Pudding	3	6		
Raspberry Preserve	1			
Seaweed	1			
Seltzer Water		2		
Soda	5	3		
Sour Cream	4			
Sugar	2			
Synthetic Milk	1			
Tea		1		
Tenderizer		1		
Tomato		1		
Tomato Juice		1		
Tomato Puree	2			
Turkey Stuffing	1			
Vinegar		1		
Wine	1			
YooHoo Drink	3			
Totals	492	89	581	909
Drugs:				
Aminophylline Injection	3			
Aminophylline Tablets	1			
Amobarbital	1			
Amphetamine Phosphate	12			
A. P. C. Tablets	1			
Ascorbic Acid	3			
Arnica Flowers	1			
Aspirin		3		
Caffeine	1			
Carbazone		7		
Chinifon	1			
Chloral Hydrate Capsules	1			
Dextrose	2			
Dextrose Injection	1			
Digoxin	2			
Diethylstilbesterol	2			
Distilled Water	2	2		
Drugs for Meprobamate	2			
Drugs for Vitamin C	3	3		
Ferrous Gluconate	1	1		
Ferrous Sulfate	1			
Glycine	2			

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY—*Continued*

January 1-December 31, 1965

	Above Standard	*Below Standard*	*Total*	*Determinations*
Drugs:				
Hematinic Tablets		1		
Hay Fever Capsules	1			
Hydrocortisone	2			
Inositol Hexanitrate	1			
Isoniazid	2			
Marihuana		14		
Meperidine	1			
Mercuric Chloride Tablets	1			
Meprobamate	2			
Nitroglycerine		1		
Norval Tablets		1		
P. A. S.	1			
Phenobarbital	4	3		
Rauwolfia Serpentina	2			
Reserpine	4			
Snuff	1			
Sodium Chloride Injection	1			
Sodium Butabarbital	1			
Sodium Salicylate	2			
Sulfadiazine	1			
Thyroid Tablets	1			
Vitamins	1	1		
Totals	72	37	109	348
Diabetes Detection:				
Blood Sugar	8,270			
Totals	8,270	8,270	8,270	8,270
Clinical Chemistry:				
Albumin	33			
Calcium	50			
Chlorides	52			
Cholesterol	153			
Creatinine	39			
Electrolyte Study (C. D. C.)	36			
Glucose	70			
Phenylalanine	250			
Phosphorus	17			
Potassium	37			

Table 3. NUMBER AND CHARACTER OF SPECIMENS EXAMINED IN THE FOOD AND DRUG LABORATORY—*Continued*

January 1-December 31, 1965

	Above Standard	*Below Standard*	*Total*	*Determinations*
Clinical Chemistry:				
Sodium—Serum	42			
Sodium—Urine	10			
Total Protein	59			
Urea Nitrogen	115			
Uric Acid	45			
Totals	1,008		1,008	1,925
Miscellaneous:				
Specimens for Arsenic	7	2		
State Police Urines	187			
Motor Vehicle Urines	42			
Urines	3			
Colloborative Pesticide Study	2			
Food Can	1			
Toy Ducks	1	23		
Sodium Formate	2			
Thermometers for Standardization	5			
Phosphatase Referee	8			
Phosphatase Evaluation	12			
Totals	270	25	295	1,078

Table 4. Number and Character of Samples Analyzed in the Water and Sewage Laboratory January 1 to December 31, 1965

	Public	Miscellaneous	Camp	State and County Institution	School	Bathing	Migrant Labor	State Park	Sewage	Stream	Waste	Sand	Total	Determinations
January	95	110	...	2	16	...	...	...	135	24	24	2	408	2,372
February	58	79	...	...	24	...	...	...	161	48	19	...	389	2,375
March	70	96	...	...	9	...	...	...	253	59	25	2	514	3,411
April	40	122	...	...	3	9	...	...	13	66	...	...	253	1,388
May	101	116	1	...	5	2	...	...	211	113	54	1	604	3,162
June	90	54	5	...	15	...	9	...	109	154	32	12	480	3,001
July	51	104	1	...	18	4	...	...	111	153	12	1	455	2,765
August	53	83	2	...	9	...	...	...	92	301	18	3	561	2,891
September	51	84	2	...	9	...	...	...	179	74	53	..	452	2,755
October	38	61	...	...	4	...	...	...	180	73	44	...	400	2,700
November	25	43	...	...	4	...	...	3	200	72	18	3	368	2,567
December	113	71	...	3	7	...	...	...	207	77	20	3	501	3,108
Total	785	1,023	11	5	123	15	9	3	1,851	1,214	319	27	5,385	32,495

Pathology Program

The statistics given below indicate a decline in some activities of this Program and a sharp rise in others, reflecting a gradual reorientation of basic functions. During recent years, this Program has played an increasingly effective and important role in the study of deaths believed related to infections of the brain. Organs from such cases are transported to the laboratory and pathologic slides are prepared for use by Departmental personnel concerned with surveillance of central nervous system disease as well as by hospital pathologists.

The Fifteenth Annual Slide Seminar sponsored jointly by the State Department of Health and the New Jersey Society of Pathologists was held December 11, 1965, at Essex House, Newark, New Jersey. The moderator was E. Aegerter, M.D., Professor of Pathology at Temple Medical School and Hospital of Philadelphia. The subject was "Problems of Bone Pathology." The attendance of pathologists, roentgenologists, and orthopedists numbered about 200. The full transactions, discussions, etc., are now being published for distribution. The Bureau of Pathology prepared over 200 sets of slides to support the seminar for distribution to members of the Pathology Society. Many physicians from neighboring states attended as guests.

A second educational series of slides, similar to last year's distribution, is in preparation.

Table 1. Workload Data

	1964	*1965*
No. Contributions to Tumor Registry	296	309
No. Consultation Cases	82	24
No. Slides Prepared	5,318	6,644
No. Slides Stained	7,586	6,569
No. Specimens Processed	780	1,186
No. Requests for Special Staining	27	36
No. Slides Distributed	7,353	4,637
No. Slides Stained with Special Stains	583	741

Serology Program

The Pan-American Health Organization held a seminar on venereal diseases in Washington at which it emphasized the gravity of the venereal disease problem. It was pointed out that venereal diseases constitute a substantial burden of sickness and disability everywhere; that this fact, along with the certain risk of their extension, justifies their being listed among health priorities. The following significant statements concernng syphilis

were made: 1) The incidence of syphilis in the United States is currently estimated at 120,000 cases per year; 2) Syphilis, year after year, ranks fourth of all notifiable diseases—the preponderance of venereal diseases is particularly striking in the 15-25 year age group; 3) In the United States, approximately one-half of all the cases occur among persons between the ages of 15 and 24; 4) The actual rate of biologic false positives (BFP) reactions in a normal population using cardiolipin antigens is very low—about 0.16 percent.

An upsurge in the workload of specimens and tests for routine serology has occurred—a 10,000 increase of specimens over 1964 and a 16,000 increase over the low period of 1960-61. This probably can be attributed to the increased efforts in case finding and to the repeat specimens on reactors at two- and six-week periods in cases where the clinical history and physical findings do not justify a tentative diagnosis of syphilis. The reference tests, the Kolmer Reiter Protein (KRP) and the Fluorescent Treponemal Antibody (FTA-200) were performed with discrimination (i.e. only when it was requested on a repeat specimen).

This year marked the availability of materials for the new procedure, FTA-absorbed. A staff member was sent to the Venereal Disease Research Laboratory in Georgia to receive training in the revisions. This newer procedure is claimed to have a level of 80 percent sensitivity in primary cases and a 10 percent greater sensitivity than the Treponema Pallidum Immobilization (TPI) test in late syphilis. If and when the data will confirm those claims, the FTA-200 will be supplanted by the FTA-ABS. In December, we entered FTAOABS results in the federal evaluation program to determine our proficiency in duplicating the results of the Venereal Disease Research Laboratory by this procedure.

Seven laboratories were approved for syphilis serology in 1965 bringing the number of approved laboratories to 149. These laboratories plus the blood bank laboratories that were not on the list of approved laboratories (179 laboratories) represented the participants in the serology evaluation program. Quality control and standardization of serologic testing are necessary to maintain uniformity in test results from one laboratory to another and there must be a continuous program. Our annual intrastate evaluation studies are designed to determine the proficiency of a laboratory in performing tests for syphilis. Ten serum samples plus a known specimen with the quantitative pattern given for each test were sent each month during a 10-month period to each of the participating laboratories. Results obtained by the state laboratory were distributed to the participants each month and an annual report was issued comparing the results of all participating laboratories with those of the control laboratory, which was the state laboratory. This year, 171 laboratories, or 95.5 percent, reported satisfactorily in one or more tests. The number of specimens mailed out in the evaluation program was 21,628—an increase of 3,500 specimens over last year.

The serology unit served as a training center for laboratories within the state. Eight laboratory technicians reviewed the V.D.R.L. procedure and received bench training on our premises on an individual basis; three laboratory personnel spent one to three days at our laboratory to receive additional training in the FTA technique. This is an effective means of training—individual training to technicans representing laboratories that require corrective measures as ascertained by their performance in the evaluation program. Serology personnel assisted in two educational activities initiated outside of the laboratory: 1) the Venereal Disease Program requested our cooperation and assistance for two two-day sessions in darkfield microscopy given for their VD investigators; 2) laboratory personnel assisted at a two-day workshop in syphilis serology at Rutgers University for 27 graduate students, who performed V.D.R.L. tests and observed demonstrations of the FTA test.

Workloads for tests other than syphilis serology remained fairly stable with the exception of heterophile tests for infectious mononucleosis which increased 25 percent. Febrile agglutination tests were transferred from the Bacteriology Program to the Serology Program June 1. The investigation of Q fever among dairy workers at one dairy appears to have been completed. It was begun in 1960 at the suggestion of the Veterinary Public Health Section to determine whether an outbreak of Q fever in cattle was of a strain transmissible to human beings.

Table 1. Comparison Statistics

	1963	*1964*	*1965*
Routine Specimens for Syphilis:			
Bloods	212,029	211,758	221,454
Spinal Fluids	1,558	1,890	1,922
	213,587	213,648	223,376
Routine Tests for Syphilis:			
Bloods	237,988	228,191	232,695
Spinal Fluids	1,558	1,890	2,375
	239,546	230,081	235,070
KRP	3,367	3,048	2,060
FTA	1,044	1,474	1,457
Total Protein	753	871	1,110
Field Evaluation Program	14,740	17,953	21,628
Miscellaneous Tests:			
Antistreptolysin Titer	305	357	351
Cold Agglutinins	83	87	99
Febrile Agglutinations	....	....	267

Table 1. COMPARISON STATISTICS—Continued

	1963	*1964*	*1965*
Miscellaneous Tests:			
Heterophiles	3,341	2,998	3,759
Leptospirosis	377	474	371
Q fever	142	129	5
Trichinosis	162	159	205
Viral C. F.	253	578	458
	4,663	4,782	5,515

Virology Program

Despite the phaseout of the Willingboro Community Study early in 1965 with an accompanying reduction of total specimens for this year, there was a marked increase in the total workload of the Virology Program. This was due to a large increase in the number of specimens and more involved procedures of the arbovirus surveillance program as well as an increase in routine diagnostic specimens.

During 1965, routine diagnostic specimens were received from 1,352 patients, a greater number than any previous year in the existence of the Virology laboratory. Also, a contractual arrangement was formed between our Department and the Board of Health of the State of Delaware for our laboratory to serve as the Virology laboratory for the State of Delaware.

Apart from the very large arbovirus research and surveillance studies being carried out by the Virology Program and the phaseout of the Willingboro Community Study, the Virology Program was involved in the investigation of some interesting outbreaks that came to our attention through our regular diagnostic procedures.

One of these outbreaks involved an investigation of herpes simplex infection of the skin of members of the wrestling teams at Princeton and Rutgers Universities. This interesting condition called "herpes gladiatorum" in the literature, had not been described in outbreak fashion before. The virus seems to have been passed from one student to another through personal contact while wrestling. While only specimens from students at Princeton and Rutgers were available to us to prove the virus etiology of this condition, we were informed that the condition was probably seen at many other colleges outside of New Jersey and was a real problem among wrestling teams.

Early in 1965, an extensive outbreak of A_2 (Asian) influenza occurred in New Jersey. Despite the fact that the Public Health Service had not predicted influenza for that season, a marked increase in febrile respiratory disease prompted an intensive effort to obtain specimens for virus isolation and serologic studies for influenza. The virus was successfully isolated, thus permitting a comparison of the antigenic characteristics with the strains of

previous years. The diagnosis of influenza was confirmed in 122 patients from 14 of the state's 21 counties. The Virology laboratory also cooperated with the personnel of the Communicable Disease Center in Atlanta in efficacy studies of influenza vaccine.

The phaseout of the Willingboro Community Study in 1965 did not mean an end to work on this study by personnel of the Virology Program. A massive amount of data collected from three years of this study remained to be tabulated. The personnel of the Virology Program were involved in the tabulation of approximately 87,000 school absence reports, 25,000 physicians' illness reports, 20,000 cultures of Group A streptococci, and about 2,500 viral cultures. This work will appear in several publications.

Work on the arbovirus studies continued with a far greater number of tests performed than in any previous year. The 8,000 bloods which were collected in the serum surveys for St. Louis Encephalitis at the end of 1964 were all tested in early 1965. All 8,000 bloods were subjected to two tests for St. Louis Encephalitis antibodies, a complement fixation test and a hemagglutination inhibition test. In addition, about a quarter of these bloods were also tested by mouse neutralization test, a very time-consuming and expensive procedure. However, the results obtained from this survey were well worth the effort and this survey may represent a classic study in inapparent infection by St. Louis Encephalitis virus. About two percent of the persons in the communities studied were shown to be infected with St. Louis Encephalitis virus, giving an inapparent infection to disease ratio of 46:1. Of particular interest was the observation that although the clinical cases of St. Louis Encephalitis tended to congregate in the older age groups, particularly older females, the infection rate was equal in all age groups and both sexes. Thus, the age and sex peculiarities in the cases were due to the clinical response to infection by the virus and not to differences in infection rates. No evidence of infection with St. Louis Encephalitis prior to 1964 was found in these communities.

During the year 1965, three cases of arbovirus encephalitis were recognized in New Jersey. Two of these patients, both from Burlington County, had St. Louis Encephalitis and the third patient, a resident of Cape May County, had Eastern Encephalitis. None of these cases was fatal. In addition, the Virology laboratory diagnosed Eastern Encephalitis in five horses from New Jersey and three horses from Delaware.

The Virology Program continued its studies for arboviruses on many of the specimens sent to the rabies laboratory, resulting in the isolation of Eastern Encephalitis virus from the brain of a fox, squirrel, and two dogs. In order to substantiate our findings for this and previous years that dogs and cats can be infected with the virus of Eastern, Western, and St. Louis En-

cephalitis viruses, experimental inoculation of these animals was performed to determine the development of antibody in these animals. It was shown that dogs and cats could be infected by all three of these viruses by various routes of inoculation.

1965 was an extremely active year in our epizootic arbovirus studies. Over two dozen isolations of arbovirus were made from various non-avian species obtained in the field, almost all of these isolations being Eastern Encephalitis with only an occasional Western Encephalitis isolated. Eastern Encephalitis was also isolated from wild birds and pheasant flocks. Of very great interest were the isolations of arbovirus from mosquitoes. About 30 pools of mosquitoes have already been found to be infected, the great majority by Eastern Encephalitis virus. Over half of the infected mosquitoes were *Culiseta melanura.* However, of particular significance to our studies were two isolations of Eastern Encephalitis virus from *Aedes sollicitans,* a salt marsh mosquito, which we hypothesized as being the epidemic vector of Eastern Encephalitis. In all the years of our studies, we have only isolated Eastern Encephalitis from *Aedes sollicitans* in 1959 and 1965. These are the same two years that human cases of Eastern Encephalitis occurred.

Also of very great interest were two isolations of St. Louis Encephalitis virus from mosquito pools obtained at the shore, far from the Burlington-Camden County epidemic area. This finding confirmed our suspicion of a year ago that the virus of St. Louis Encephalitis was disseminated in New Jersey far beyond the immediate area of the 1964 epidemic. All of those arbovirus findings, while fully in support of many of our hypotheses, have added to the need for the collection of even more data in this field in subsequent years.

Table 1. Workload Data

	1963	*1964*	*1965*
Specimens received	22,127	29,608	23,000
Tests performed	192,432	245,995	375,000
Type of tests			
Virus isolation	110,061	108,866	97,610
Serologic tests	82,371	137,129	277,216

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 ..... MIRIAM SACHS, M.D., M.P.H.
District State Health Officer

Northern ..... DONALD S. MYERS, M.D., M.P.H.
District State Health Officer

Southern ..... HUGH D. PALMER, M.D., M.P.H.
District State Health Officer

Division of Local Health Services

The Division of Local Health Services is charged with developing and maintaining adequate local health services to protect the health of all citizens and visitors to New Jersey. In 1960, the Public Health Council promulgated the "Recognized Public Health Activities and Minimum Standards of Performance" for local boards of health. A major activity of the Division has been to secure compliance with these standards through evaluation surveys and community education.

Since the reorganization of the New Jersey State Department of Health in 1947, this Division has maintained district state health offices for the convenience of the local boards of health, thereby providing within easy reach a staff of consultants representing all disciplines in public health. These District State Health Offices are under the direction of District State Health Officers who coordinate the activities of the various disciplines as they carry out the objectives of the Programs in the State Department of Health.

The year 1965 saw the culmination of several years' work for the progress of public health in New Jersey: the introduction of a bill in the legislature providing state aid to local boards of health. A primary deterrent to the development of public health activities at the local level has been the inadequacy of local funds.

Although this bill was not passed by the 1965 Legislature, the fact that it was introduced indicates that the administration as well as the legislators recognize the need to develop public health activities at the local level and a corresponding need to fund these activities.

District personnel have been active explaining the merits of the bill and have arranged county-wide meetings for the purpose of generating local support. Many voluntary and civic organizations have passed resolutions recommending enactment of this legislation as have county boards of chosen freeholders. The passage of such a bill would encourage municipalities to develop services to meet their health needs.

Following are a number of highlights in public health for 1965:

A reorganization of the Newark Department of Health enabled it to qualify for a grant from the U. S. Public Health Service for its Maternal and Child Health Program. This was promoted by the Division of Local Health Services through its Metropolitan District Office in cooperation with the Division of Constructive Health.

A County Health Coordinator position was established in Salem County, bringing the total number of such positions to four of six counties in the

Southern District. This illustrates recognition of the need for public health services by the boards of chosen freeholders. Officials at this level of government are recognizing the needs at the local level and the feasibility of meeting these needs through the development of county-wide public health services.

Burlington County in the Central State Health District has announced plans to establish in the coming year a public health coordinator's office. Sussex County in the Northern State Health District has indicated that it may do the same.

The Bergen County survey by the Johns Hopkins University was completed and its findings reported to the State Department of Health as well as to municipalities in Bergen County. This was a first step toward the development of adequate public health services throughout all of Bergen County. Because of its population and large number of municipalities, Bergen County has special problems. A number of its communities have reasonably adequate public health services. This is somewhat different from a county such as Gloucester in which no municipality has adequate public health services.

The Wayne Township Board of Health dedicated its new health center and Woodbridge Township initiated plans and applied for Hill-Burton funds for the building of a million dollar health center.

The Division Director developed a project to provide Medical Services for Disadvantaged Youth which was funded by a grant from the Office of Economic Opportunity. This project was assigned to the Division Director's Office and a Medical Director and a staff were recruited to carry out the first phases of the project. It is anticipated that the project will be completed within the succeeding year.

Grants-In-Aid

Fifteen grant-in-aid contracts were in effect during 1965. The total expenditures under these contracts amounted to $40,477.64.

Three county health departments which employed county public health coordinators received grants to assist them in payment of personnel. These were Cape May, Cumberland, and Salem counties. One other county, Sussex, received assistance for public health nursing. Another county, Somerset, was given a grant to enable it to contract with a qualified agency to make a study of health and related needs in the county to serve as a basis for planning a broad program of health services.

Four nursing associations received renewals of previous grants for nursing services. These were the Visiting Nurse Association of Morris County for a public health nurse supervisor, the Family Nursing Service of Hunterdon

County for a graduate nurse, the Collingswood Community Nursing Service for special clerical services, and the Visiting Nurse Association of Plainfield and North Plainfield for providing public health nurse training. Also in the nursing field was the renewal of a grant to the Town of Nutley for the services of a public health nurse supervisor.

The East Orange Health Department received a renewal of a grant for services of a public health educator. All renewal grants were made on an amortizing basis. A grant to the Hospital and Health Council of Newark and Vicinity for making a survey of community health services in the Greater Newark Area supplemented a grant made in 1964. This survey was conducted in cooperation with the National Commission on Community Health Services.

Table 1. GRANT-IN-AID PAYMENTS

CALENDAR YEAR 1965

Grantee	*Amount*
For County Health Services	
Cape May County	$4,067.66
Cumberland County	3,599.56
Salem County	13,248.10
Somerset County	4,000.00
Sussex County	1,500.00
	$26,415.32
For Public Health Nursing	
VNA of Morris County	$4,033.23
Family Nursing Service (Hunterdon)	244.50
Collingswood Community Nsg. Serv.	1,594.63
Nutley Town	2,799.96
	$8,672.32
For Public Health Education	
East Orange	$1,500.00
VNA of Plainfield & North Plainfield	140.00
	$1,640.00
For Survey of Health Services	
Hospital & Health Council, Newark & Vicinity	$3,750.00
Total	$40,477.64

Central State Health District

District personnel continued to direct their efforts toward the development of more comprehensive health services in local health departments which meet Departmental health standards. It was obvious that it would not be feasible or economical for many municipalities, particularly the smaller ones, to provide adequate public health services without the creation of larger health units, such as a county health department, a regional health commission, or through a contractual arrangement with a larger municipality employing a full-time health officer to provide services on a full-time basis. To encourage municipalities to meet their health needs adequately, a bill was introduced into the state legislature which would have provided state aid to local health agencies. The essential criteria for eligibility for such aid were that the health agency serve a population of at least 25,000 and that it be administered by a full-time licensed health officer carrying out a comprehensive public health program.

District personnel arranged for county-wide meetings to discuss various ways of qualifying for state aid if it were to become available. State legislators, local governing officials, members of boards of health, and members of interested professional, voluntary, and civic organizations were invited. Also, Department and District personnel met with Boards of Chosen Freeholders in Burlington, Mercer, Middlesex, and Ocean Counties to seek their support for the establishment of larger health units.

Economic Opportunity Cooperation

Members of the District staff cooperated with the New Jersey State Office of Economic Opportunity by providing technical assistance to local community action groups in planning health projects in the anti-poverty program. The District Pediatrician acted as consultant on medical standards for the Head Start Program.

The nutrition consultant gave direct consultation to Head Start and other Economic Opportunity Programs and assisted in the recruitment of qualified nutritionists and home economists for community programs. In addition, District personnel, in coordination with personnel of the Health Services to Disadvantaged Youth Project, arranged for contracts with hospitals to provide medical examination and correction of remedial defects found in these youths.

Standards of Compliance

Surveys of local health departments to determine their compliance with "Minimum Standards" were conducted in seven municipalities in the District. Also, one municipality, which was found to have "serious health service deficiencies" in its initial survey in 1961, was resurveyed. The resurvey failed to show substantial improvement in its health services.

Immunization Program

"Operation Booster," which was the popular term used to promote an increase in the immunization level of all age groups, required a great amount of community organization. Meetings were held with local health officers, local and county parent-teacher association groups, medical societies, and county superintendents of schools to secure their cooperation in this project. The success of this venture depended upon local groups stimulating individual and family interest in raising the immunization levels. Although no evaluation was made to determine the effectiveness of the approach used, community-wide immunization programs were initiated by a number of local health officers and there is indication that private physicians stressed the need for immunization to their patients.

Inspections of stack emissions were conducted by District personnel to determine if they were in compliance with Chapter IV of the New Jersey Air Pollution Control Code. Violations were recorded and referred to the Program for enforcement. In addition, open burning violations were sent to the same unit. Throughout the year, District personnel fostered greater participation in air pollution control by local boards of health and their licensed personnel.

Housing and Sanitary Surveys

A wide range of housing problems are commonplace in most municipalities. To enable the local officials to operate a workable program, District personnel have demonstrated the value of adopting and enforcing the Individual Sewage Disposal System Code, the Public Health Nuisance Code, and the State Housing Code. In addition, when requested, District sanitarians joined local officials in conducting housing inspections, and supported them in court when necessary.

Comprehensive sanitary surveys of individual subsurface sewage disposal systems were conducted in 10 municipalities. Subsequently, reports were forwarded to each advising of sewage disposal problems and recommending installation of sanitary sewers. Orders were issued on municipalities which failed to move toward mitigating these problems.

As a result of mutual arrangements with local health officers, 18 municipalities are now inspecting ice cream plants within their jurisdiction. The overall saving of man-hours of District sanitarians is considerable.

Under District supervision, adulterated foods or those suspected of adulteration were embargoed and/or destroyed. Included were the entire food contents of three stores destroyed by fire.

Many food samples were collected for laboratory analysis. In addition, District personnel inspected retail food establishments suspected of using pesticide bombs and other hazardous measures to control flies on their fruits and vegetables.

Consultation provided local health personnel and private individuals included discussions on stream pollution control, individual wells, sewage disposal units, retail food outlets, housing, air sanitation, camps, lake bathing places, drugs and cosmetics, radiological health, and communicable disease control.

At the request of the State Department of Institutions and Agencies, the individual water supplies and subsurface sewerage disposal systems serving 18 nursing homes were inspected and sampled. Reports on each were forwarded to that Department.

Approximately 671 inspections of refuse disposal sites were conducted during the year. Most of the operations were found to be in compliance with Chapter 8 of the New Jersey State Sanitary Code. Every effort was made to obtain cooperation. When this failed to bring about the desired results, the matter was referred to the Attorney General's office for appropriate action. One operator was fined $500 for his failure to maintain his landfill in compliance with state requirements. In general, landfill operations have improved.

Food Handling

The District Environmental Health staff assisted local health departments in conducting food handling training courses for owners and supervisors of retail food handling establishments. In addition, field experience and training were provided to local health personnel during inspection of food handling establishments conducted by District sanitarians.

The District actively supported the promotion of fluoridation of public water supplies. Feasibility studies, cost estimates, and other data were furnished, in cooperation with the Dental Health Program, to selected local boards of health.

The District Public Health Engineer inspected sites for proposed new schools, or additions, witnessed test borings and percolation tests, and reviewed the engineering plans. He recommended that school sewerage systems be constructed to conform with regional master sewerage plans.

Technical assistance and guidance were provided to local boards of health for realty subdivisions, including motels and garden apartment complexes, and senior citizens' housing which are increasingly being constructed in rural areas. The lack of community water and sewers presents definite problems. To resolve these problems, the development of regional water supply systems and the installation of sanitary sewers were encouraged.

Veterinary Services

During the year, the Veterinary Public Health staff continued to promote a better dog control program throughout the District by increasing municipal participation in annual anti-rabies vaccination clinics, and by improving the

dog licensing procedures. To this end, 49 conferences were held with local health and governing officials to establish better rapport with them and to discuss the responsibilities and enforcement of dog control.

In 1965, anti-rabies clinics were held by 146 municipalities, four of which had a clinic for the first time. A total of 46,767 or 38 percent of the licensed dogs were vaccinated. This represents an increase of 2,030 or 4.4 percent over 1964.

The Division of Laboratories examined 594 animals from the District for rabies. Of these, 179 were bats. Seven bats were found positive.

The Veterinary Public Health staff made 119 inspections of kennels, dog shelters, pet shops and pounds, and conducted 73 investigations of animal bites. In each instance, efforts were made to secure participation of local officials in these inspections and investigations.

Epidemiological Investigations

Epidemiological investigations completed included 160 cases of salmonellosis, 14 of shigellosis, and 187 of infectious hepatitis.

Of the 160 isolations of Salmonella in the District reported by the Division of Laboratories, the following five serotypes were the most frequent:

Serotype	*Number*	*Percent*
S. typhimurium and S. typhimurium var. copenhagen	51	31.8
S. infantis	16	10.0
S. heidelberg	14	8.7
S. chester	10	6.2
S. saint-paul	10	6.2
	101	62.9

Other food poisonings, trichinosis, suspected smallpox, typhoid fever, influenza, leptospirosis, and Rocky Mountain spotted fever were some of the communicable diseases for which epidemiological investigations also were conducted. In conjunction with this work, samples of blood, sputum, feces, various foods, milk and water were collected and submitted to the Division of Laboratories.

The Rabies Control Warden collected several hundred mosquitoes for viral studies conducted by the Division of Laboratories.

Child Health

The District Pediatrician visited and provided consultative services at 31 sessions of child health conferences during the year. In addition, he partic-

ipated in eight sessions of the Demonstration Child Health Conference at the Bodman Health Center, Asbury Park.

New child health conferences were established in Willingboro and Cinnaminson Townships, in Madison Township and in South River Borough. A new mobile unit was put into operation at four locations in Edison Township.

Vision screening was initiated in two child health conferences in the District during 1965.

As a member of the Advisory Committee on Day Care of the Department of Institutions and Agencies, the District Pediatrician participated in the development of standards for Family Day Care Homes.

The District Pediatrician and the Division of Vocational Education of the New Jersey State Department of Education developed guidelines for the use of eye protective devices in schools to help the schools conform to new legislation.

Menus and Nutrition

Frequent requests by the Field Representatives, Bureau of Community Institutions, New Jersey Department of Institutions and Agencies, to give consultation on menu planning and food service to boarding home operators has uncovered an area where educational programs are needed.

The Nutrition Consultant participated in the orientation of professional staff of the Migrant Health Program, and after study, based upon observation experience in migrant camps and schools, submitted recommendations for improvement of nutrition consultation services to the Program.

To strengthen the nutrition and home care aspects of Visiting Homemaker Services, consultation was given to all of the Visiting Homemaker Services in the District in 1965, and assistance was given in revising the curriculum used in the training program for visiting homemakers.

Public Health Nursing

There are 21 public health nursing agencies in the District having a generalized program which includes bedside nursing care. Of these, 12 agencies employ four or less public health nurses. In 1963, the Department established standards for public health nursing agencies. During that year, 14 agencies requested an evaluation, with the following results: five were approved, seven were given provisional approval, and two were not approved. Progress in meeting these standards has been made as the following figures indicate: At the end of 1965, eight were approved, two were given provisional approval, and two were not approved.

One of the methods which has brought about significant change is the practice of smaller agencies contracting for supervision and direction from larger agencies having qualified personnel.

Another means of up-grading public health nursing services has been through the employment of a qualified nurse director in a large local health department. As two other local health departments, employing more than three nurses, have asked the District for assistance in arranging for supervision, it is anticipated these two agencies will soon be able to meet state standards.

Closer cooperation has developed between the District public health nursing staff and hospital nursing staffs. This was accomplished by the District Public Health Nurse Supervisor's visits to hospitals to assist their staff members with the interpretation of statistical reports, requested by the Maternal and Child Health Program, of child health conferences and immunization clinics in hospitals. Also, the District Public Health Nurse Supervisor assisted members of the Division of Preventable Disease in epidemiological investigation of infant diarrhea in one of the hospitals in the District.

Cooperation is further noted by requests from hospitals for consultation in developing workable referral systems to improve the continuity of care to patients.

The public health nursing staff in the District has been actively participating in educational planning for nurses with varying educational levels. The trend toward establishment of community colleges has resulted in the District Public Health Nursing Consultant assisting in program planning in one college and becoming a member of the advisory committee in another. Both colleges have instituted an associate degree nursing program.

Two of the larger hospital schools of nursing in the District have planned public health nursing experience programs for their senior nursing students. One school has already implemented its plan.

The Public Health Nurse Supervisor has continued to provide orientation to newly employed local health department nurses working in public health. However, this practice is decreasing as other methods of orientation have been instituted, e.g., the establishment of an orientation program by the Department, and the availability of qualified supervision and direction at the local level.

Results of the follow-up of positive diabetes screenees in three of the counties in the District, used as a pilot area, were successful. The cooperation obtained of physicians and local public health nursing agencies has been outstanding. It is anticipated that follow-up on the screenees will have been completed within 90 days of screening dates (Diabetes Detection Week) rather than the usual period of eight months.

Narcotic Study

The District Social Work Consultant continued to serve on the Narcotic Addiction Study Committee of the New Jersey Welfare Council. Projects for the year included revision of the directory, "Treatment Resources for the Narcotic Addict," and sponsorship of two state-wide educational institutes. Both supported the goals of the recently established Narcotic Addiction Treatment Center at the New Jersey Neuropsychiatric Institute.

Initiation of family counseling services to agricultural migrants, through family service agencies in Mercer, Middlesex and Monmouth Counties, was a joint project of the District Social Work Consultant and her counterpart in the New Jersey Migrant Health Program. Reports from the agencies indicated an eager acceptance and appreciation of their efforts in behalf of seasonal workers and their families.

Burlington County

During the latter part of the year, the Burlington County Board of Chosen Freeholders initiated negotiation with the Department for financial aid in establishing a County Health Department. The continued support and offer of financial assistance by the Burlington County Medical Society have been significant factors in the Board's consideration of this public health program. At the close of the year, the establishment of a County Health Department was nearer.

Plans to provide child health supervision in Shamong, Woodland, and Tabernacle Townships were discussed by the District Pediatrician with the Public Health Nursing Association for Burlington County and the boards of health concerned.

The Nutrition Consultant assisted the Army health nurses, Health Center, Fort Dix, in improving the meals served to children at the Day Care Center operated on the Army base. Due to the initiative and excellent guidance given by the Army Nurses to the managers and board members of the Center, the meal service has progressed from soup and cracker meals to well balanced, attractive meals with a variety of foods appealing to children.

Mercer County

Fluoridation of the water supply serving Princeton Borough and Princeton Township was begun during 1965.

The Communicable Disease Center of the U. S. Public Health Service initiated a demonstration project in Trenton which is to continue for a two-year period.

The purpose of this project is: (1) the evaluation of environmental health conditions and communicable disease control activities in the city through field

investigations, statistical and other studies; (2) the application of measures to correct existing deficiencies, including health education and citizen participation; and (3) the development of local skills and resources to evaluate the community's health problems so that this knowledge and capability may be extended to other municipalities in the state which may desire to initiate similar programs.

Personnel of the District gave consultation and served in an advisory capacity to the Hopewell Valley League of Women Voters in a self-survey of the health services of the municipalities of Hopewell Township, Hopewell Borough and Pennington Borough. The survey findings, with recommendations, will be submitted to each governing body, and will be printed and made available to the citizens of these municipalities. It is hoped that the published report will stimulate the interest of the citizens in these municipalities with small populations to secure better health services through contractual arrangements or regionalization.

The District Pediatrician cooperated with the Accident Prevention Program in the development of a lead poisoning control program in Trenton. Conferences were held with the Health Officer and administrators of local hospitals to help implement the program which included screening tests, laboratory services, and epidemiological follow-up of cases of suspected lead poisoning of children.

A need was recognized for the training of food service personnel of health facilities, such as hospitals and nursing homes. As a result of an evaluation of food service operations and educational services in nutrition and diet therapy, the Nutrition Consultant participated in planning a course for food service supervisors, in cooperation with the Trenton Vocational School and the member agencies of the Hospital Council of Mercer County.

The District Social Work Consultant cooperated with the Director of the Mercer Street Friend's Center, Trenton, in developing a 15-hour training course for economically deprived women to serve as liaison between personnel at the schools and the children's families in the Head Start Program. Many of these "aides" were later absorbed by the local visiting homemaker service and by the schools.

The Social Service Council of Greater Trenton, the local Social Security office, and District staff planned an afternoon public meeting on "Medicare—What's It All About?" to help clarify the provisions of the 1965 Medicare amendments to the Social Security Act. This meeting was attended by more than 400 persons, 65 years and over, many of whom were assisted in completing applications for enrollment under Medicare.

Middlesex County

In 1961, a study of public health nursing services in Middlesex County was completed by the Raritan Valley Community Services Council. It was recommended then "that there be one community nursing service for the entire County of Middlesex in order to eliminate duplication of nursing service now existing." Although this recommendation was not widely acceptable to local municipalities, the following changes have since occurred: One of the largest townships has employed a well-qualified nurse director, and another local health department has asked for help in obtaining nursing supervision for its staff.

A professional social service department was established at Perth Amboy General Hospital. This was the result of several months of joint planning by the District Social Work Consultant with the hospital administrator and a qualified social worker who became director of the department. Total planning includes development of medical and psychiatric social services as well as an affiliation with Rutgers' School of Social Work for a student training unit.

Monmouth County

The Monmouth County Diet Counseling Service, sponsored by the Monmouth County Organization for Social Service, began operation in 1965. Assistance was given to the agency in recruiting and orienting the new diet counselor.

At the request of the District, the Department provided qualified supervision, two days a week for six months, to the Long Branch Public Health Nursing Association in order that an unqualified supervisor could return to school full-time. This nurse completed her education, then met the qualifications for supervisor, and returned to the agency in that capacity.

Ocean County

The Ocean County Health Department, with financial assistance from the Department, is contemplating expanding its public health nursing program to provide bedside nursing care for all residents of the county, and is moving toward meeting standards established by the Department.

Metropolitan State Health District

Senate Bill No. 150

Senate Bill No. 150, proposing a program of state aid to local health agencies and supplementing Title 26 of the Revised Statutes, was an incentive for State Health Department personnel, board members, legislators, voluntary agencies, and citizens during 1965. Small communities expressed interest in how they might consolidate to meet the required standards for state aid.

Official groups including freeholders, mayors, and councilmen showed interest in correcting inadequacies in the local community in which they shared responsibility for good health services. Voluntary agencies, both boards and staff, joined in projects to educate the people concerning the bill and to inform all legislators of the great need for additional state aid to support comprehensive local health services.

Programs to explain Senate Bill No. 150 were held in all counties.

Working Conference on Immunization

Approximately 150 persons attended the Working Conference on Immunization sponsored by the District and Vaccination Assistance Project staff. Included were physicians, health officers, nurses, and members of boards of health, boards of education, and parent-teacher councils.

The purpose was to assist communities and their boards of health in planning intensive vaccination programs for the protection of their citizens against poliomyelitis, diphtheria, pertussis, and tetanus.

Economic Opportunity Act

District staff members continued to participate in promoting programs concerned with health projects under the Economic Opportunity Act. Special consultations and data were provided in initiating the program Head Start in Newark and Paterson for the summer of 1965. Members of the District staff continued to maintain close working relationships with Newark under United Community Corporation and Jersey City "Can Do" projects.

Minimum Standards Surveys

Several boards of health requested evaluation of local health services. The requests are evidence of continued efforts to establish and meet Minimum Standards of Performance of Recognized Public Health Activities. The surveys have been done by the Survey Team in cooperation with District staff. As of the end of 1965, local health services have been surveyed in the following communities: Cranford, Demarest, Garwood, Lodi, Mahwah, Maywood, West New York, Springfield, and Saddle Brook.

Bergen County Health Services

A Bergen County Health Unit has been established. As recommended by the Study Committee in cooperation with the School of Hygiene and Public Health, Johns Hopkins University, it is responsible to the Board of Chosen Freeholders. The unit is attempting to develop a coordinated and integrated health program for those communities which do not meet Minimum Standards of Performance. Nine communities have contracted for services with the unit.

Voluntary and official agencies have expressed interest in continuing to implement recommendations made in the survey. The movement to make good community health services available to everyone in the county continues to be stimulated by the Freeholders, the Bergen County Public Health Association, and the Bergen County Health and Welfare Council.

Newark Area Community Health Services Survey

The Newark Area Community Health Services Study, conducted under the auspices of the National Commission on Community Health Services by the Community Health Service Study Committee, which started the latter part of 1964, was completed about midyear. The survey, endorsed by 24 health agencies, professional and community groups, included Essex County and those West Hudson municipalities east of the Passaic River, plus two others contiguous in Bergen County.

Priority and specific recommendations have been submitted. The *priority recommendations* include:

1. A planning and coordination agency for the entire Newark area covering both personal and environmental health facilities and services.
2. Securing medical school facilities in the area.
3. Creating a greater awareness of matters of health in the area.

Plans for implementing the survey are being studied by agencies which participated in the study.

Narcotic Addiction

The District provided leadership in organizing the Essex County Study Committee on Narcotic Addiction. The objective of the group was to coordinate such services as were available in the county for prevention and control of the problem.

Twenty-eight interested agencies, hospitals, religious and governmental groups participated in reviewing the problem in Essex County. These activities have culminated in the development of a comprehensive, community-based, integrated program of recognition, treatment and rehabilitation of addicted persons. It will test the efficacy of a family-centered approach to the problem of drug addiction and the capacity of a community to coordinate and sustain its health, social, educational, vocational, and volunteer services around the problem of drug addiction.

Agencies endorsing the project include: Chief, New Jersey Drug Addiction Program; Chief Probation Officer, Essex County Probation Department; Director, Rehabilitation Commission; Director, Hospital and Health Council

of Newark and Vicinity; Director, Youth Division, Department of State; Chairman, Narcotic Committee, Essex County Medical Society; Vice President, New Jersey Welfare Council; and Director, Program in Drug Dependence and Abuse, American Social Health Association.

Constructive Health Programs

Maternity and Infant Care Projects

The Metropolitan State Health District, with the highest population density in the state, shows perinatal, neonatal, and infant mortality rates above the state average in four major cities. These figures (1964) reflect inadequacies in prenatal and obstetrical care, with a resultant high incidence of prematurity and poor survival in the first year of life.

	Perinatal Mortality	*Neonatal Mortality*	*Infant Mortality*
State	32.3	18.2	23.7
Newark	52.2	30.9	40.1
Paterson	38.7	20.5	29.6
Elizabeth	42.9	22.1	27.5
Jersey City	34.6	19.7	27.1

Federal funds for improvement of Maternity and Infant Care Services became available in 1964, following passage of the 1963 Maternal and Child Health and Mental Retardation Planning Amendments to the Social Security Act.

Throughout 1965, major efforts of the Metropolitan District staff were directed toward completion of a Maternity and Infant Care Project request for Newark, and development of project applications for the other three cities named above.

Newark

Approval of the first Maternity and Infant Care grant application, submitted by the State Health Department for the City of Newark in 1964, was deferred pending the reorganization of Newark's official health services. On April 21, 1965, the Newark City Council approved such reorganization by passing an ordinance establishing the Division of Family Health Services as a new unit within the Department of Health and Welfare. One week later, Children's Bureau representatives from Washington and the Regional Office again reviewed the application and the Metropolitan District Office staff prepared specified additions. Announcement of Children's Bureau approval was received on June 14, retroactive to May 15. The approved budget totaled $753,982 in federal funds in the first year, and estimated amounts through five

years of operation. With the addition of 25 percent in state and local matching funds, the first year's budget was $1,084,409.

The Newark Project proposes to reduce the crowding at the city's clinics by absorbing 1,000 high-risk maternity patients and their infants in specified voluntary hospitals where the Project reimburses for their care.

The timetable of the Project's operation since approval has been geared to staff recruitment and negotiation of contracts with the City of Newark, the participating voluntary hospitals, and with agencies providing supporting services. It was planned to develop the operation in one hospital at a time, expanding to successive hospitals at approximately three-month intervals. Accordingly, by September, with a core staff of Project Coordinator, Consultant Obstetrician, Public Health Nurse Consultant in Maternal and Child Health, and Consultant Nutritionist, the service portion was under way at St. Michael's Hospital, where qualified social work was available. Starting with the goal of accepting 20 to 25 additional maternity patients each month through the prenatal clinic, by the end of the year, 60 patients were registered as high-risk pregnancies. Twenty had delivered; of the infants delivered, four were considered to be at high risk.

Arrangements have been completed with the administration, obstetrical staff, and clinic director for the extension of Project operation into Beth Israel Hospital, as the second phase in the development of the Project goals.

Nutrition Service

Newark Maternity and Infant Care Project

Nutrition service was planned as an integral part of the Newark Maternity and Infant Care Project to assure comprehensive maternal and infant care. Its main objectives were to provide: (1) dietary counseling to patients in the Project, (2) nutrition consultation to cooperating hospitals, and (3) nutrition education to public health nurses.

The nutritionist attended 23 clinic sessions at St. Michael's Hospital and gave 109 diet counseling services to 60 high-risk prenatals. The physicians prescribed 39 normal prenatal diets and 28 calorie and/or sodium restricted diets. Diets were analyzed and studied for information to share with other team members. In addition, the nutritionist also contacted three postpartum patients for follow-up in nutrition.

These direct contacts with the high-risk prenatals living on limited incomes pointed up the need for appropriate literature geared for their use. The nutritionist, with the assistance of the consultant in health education, prepared a simple leaflet, "Weight Watching, If You Are Pregnant." This is only one example of simple printed material prepared to meet a specific need.

The obstetrician consultant and the nutritionist participated in the medical staff conference regarding the nutrition problems of the low-income high-risk prenatals. As a follow-up, another session was devoted to case studies by the team members in the presence of hospital medical and nursing personnel.

This exchange of information should be recommended as an ongoing program if the Project personnel expect to render a really comprehensive care to the mothers and their infants.

The public health nurses recently assigned to the Maternity and Infant Care Project received orientation in nutritional needs and problems of the prenatals and their families. These nurses will need the continuing support of a nutritionist to give high quality service to the patients.

Paterson, Elizabeth, Jersey City
Maternity and Infant Care Projects

Three other cities in the Metropolitan District with high infant mortality rates have been considered for development of Maternity and Infant Care Projects. In cooperation with the health officer in Paterson, an intensive survey of the hospital and health agency facilities was organized and conducted by Metropolitan staff through January and February, and a preliminary draft for a Maternity and Infant Care Project for Paterson was submitted to the Maternal and Child Health Program in March. Further development was curtailed because there were insufficient local funds to use for 25 percent matching participation.

Exploration of the Jersey City and Elizabeth areas revealed need for closer tie-ins with the official health agencies to establish the necessary continuity of care throughout the prenatal and postpartum periods and during the infant's first year.

Maternal and Child Health Program

The 1965 Maternal and Child Health Program of the Metropolitan State Health District was carried out with the professional services of one full-time and two part-time pediatricians until May; thereafter by two part-time pediatricians. Additionally, this program received substantial assistance from two public health nursing consultants and other members of the District office.

The functions of the pediatricians and public health nursing consultants were to provide chiefly consulting services to local health departments in regard to conduct of their child health conferences and pre-school programs. Where the local facility provided only an immunization station, encouragement was given to provide more complete well care service to infants and children. Consulting services were offered to aid other community projects

such as Head Start and Preschool Council Health Programs; school health programs, assistance with vaccination programs against measles, and tuberculin testing as requested by individual communities. Several new child health conferences were instituted; a few of these were helped with grant-in-aid contracts to the community for reimbursement of physician time. Consulting services aided in the establishment of a second model child health conference in the District.

Services by Counties

Bergen County

Visits were made to 12 communities to evaluate facilities and services offered for well care of infants and young children. Recommendations were made to staff and local health officer.

Multiple visits were made to four communities. In one case, the location and facilities (in a barroom) were so poor, that a change was made. Franklin Lakes requested services to aid in the establishment of a new child health conference with a grant-in-aid contract on a three-year amortization basis.

A meeting was held with health officer and nurses with view of setting up of child health conference in Ridgefield.

Lodi immunization schedule reviewed and phenylketonuria testing advised and demonstrated. Heretofore no phenylketonuria testing was done.

Pediatricians rendered service for tuberculin testing of school children in a public school in which the school body had been exposed to contact with active case of tuberculosis.

Essex County

Surveys of all child health conferences were made in Bloomfield, Belleville, Nutley, Orange, East Orange, and Montclair. All child health conferences were observed and evaluated.

All child health conferences of Bloomfield were evaluated and recommendations made at a joint conference with health officer and nurses.

All East Orange child health conferences were surveyed. Very good services are offered.

The Orange child health conference was surveyed and recommendations made.

Recommendation of continuing phenylketonuria testing at all child health conferences, tuberculin testing opportunities on children were suggested at six months and one year. Many communities were lax in immunization scheduling.

Essex County Heart Association asked for aid in compiling booklet and charts on activities for the cardiac child. Numerous meetings were attended with other physicians, physical educators, teachers, and nurses.

Establishment of a Model Child Health Station in Newark was achieved with the help of Newark Bureau of Child Hygiene Medical Director and supervising nurse; Deputy to the Director of Health and Welfare; Business Administrator and City Clerk of Newark; Administrator of Newark Beth Israel Hospital and Chief of Pediatrics staff. Several sites were surveyed before present site at Newark Beth Israel was selected. A board certified pediatrician was selected to satisfy needs of a Model Child Health Station serving teaching functions to nursing and medical house staff as well as others from surrounding agencies who may be interested.

Hudson County

Maternal and Child Health consulting services were offered to five communities.

Ten communities were encouraged to have more use of vaccines (Sabin and measles) as well as good child health conference practices.

Phenylketonuria testing advised. Many child health conferences have the equipment but are lax in using it. Tuberculin testing, too, was emphasized.

Kearny and Harrison are notable in Hudson County for modern, comprehensive child health services.

Passaic County

Five communities were given consultation services.

An evaluation was made of the West Milford child health conference which has a grant-in-aid contract.

Child health conferences in Paterson were reviewed and recommendations made.

Passaic child health conferences were reviewed. Meetings were held with health officer and nurses and numerous recommendations were made.

Union County

Thirty-two visits were made to 16 Union County child health conferences and immunization stations. In three instances, multiple visits were required.

Film on "Maternal Attitudes" was shown to Overlook Hospital pediatric staff with active discussion resulting.

New vaccination and immunization schedule was reviewed with Union County Visiting Nurse Association.

Liaison efforts were involved in review of gastroenteritis cases in Elizabeth General Hospital. Review of cases was done with acting chief of pediatrics and hospital pathologist.

Federal Grants

Aid was given by the District consultant pediatrician to various community groups developing requests for federal grants.

Lead Poisoning Project

An application to the United States Public Health Service was drawn up under the aegis of the Hospital and Health Council (Newark) Subcommittee on Lead Poisoning to be submitted jointly with Babies Hospital and Newark Department of Health and Welfare as grantees. This project was reviewed by the Metropolitan District staff. Expansion of screening for lead toxicity in the Newark child health conferences was recommended.

Environmental Health Program

Air Pollution—Sewage Disposal—Solid Waste Disposal

It appears the public is most concerned about air pollution, sewage disposal, and solid waste disposal. This is understandable in light of the stress placed on these subjects by the various news media. More than 100 investigations of smoke problems were conducted by the District resulting in 33 violations being recorded. Follow-up investigations were made of 129 previously reported violations.

"Operation Hackensack Meadow"

"Operation Hackensack Meadow" was established and a District sanitarian was assigned to work and report solid waste disposal operations to a local health officer. This has developed into a more or less permanent arrangement due to underground fires and smoke problems related to dumps.

Critical Water Shortage

Drought conditions related to potable water supplies became exceedingly critical. As municipal supplies dwindled, citizens and industries alike sought additional sources. These included pumping from lakes, drilling wells, and tanking-in water. District personnel were continually consulted and their advice sought in coping with the problems of consumer use of unapproved supplies. A number of new schools, in addition to seeking approval for proposed subsurface sewage disposal systems, also were installing well water

supplies for which approval had to be obtained. Seventeen new school building projects were reviewed by the District staff.

Rabies Control

Four new rabies clinics were established in the District during the past year. The total number of dogs vaccinated for rabies totaled 63,233. By counties this included: Bergen, 18,906; Essex, 14,135; Hudson, 3,998; Passaic, 9,298 and Union, 16,896.

Table 1. VETERINARY PUBLIC HEALTH ACTIVITY, 1965

	Bergen	*Essex*	*Hudson*	*Passaic*	*Union*
Inspections of Pet Shops, Kennels and Pounds	183	47	24	36	68
Clinic Conferences, Vaccine pickup and delivery	26	98	54	184	130
Animal Bites Reported (in State)	47	19	12	153	20
Patroling Activities	21	9	2	15	8
Health Education	Seven rabies health education school programs				

Preventable Diseases Programs

Diarrhea in Newborn

District consultant pediatricians assisted the Division of Preventable Diseases in the epidemiologic studies of cases of diarrhea due to enteropathogenic E. coli strains occurring in newborn and infants under one year of age in several hospitals in the District and in the Shugard Shelter in Newark. Chiefs of pediatrics and the pathologists in these hospitals were asked to cooperate by obtaining serotyping of E. coli strains on all infants admitted with or developing diarrhea in the hospital, and were encouraged to submit swabs to the State Department of Health laboratory for quality checks on their own serotyping. Isolation techniques were searchingly reviewed with the physician and nursing staff in each hospital concerned.

Vaccination Assistance Program

Outstanding activities in the Vaccination Assistance Program have included:

1. Planned, organized and supervised Serfling type survey activities to determine the immunization status of the population against poliomyelitis, smallpox, diphtheria-pertussis-tetanus, and measles. Survey activity was completed in the following areas of the Metropolitan District: Newark, Jersey City, Elizabeth, Paterson, and Bergen County.

2. Assembled a Metropolitan District health profile which included population of each community by sex and age; immunization level of population in each survey area; list of all health facilities available to the public in each community; full-time health officers' names and addresses; biological stations addresses; and child health conferences in each community. Organized and executed a pharmaceutical survey in an attempt to determine the amount of measles vaccine being used by physicians throughout the Metropolitan District area.

Tuberculosis Control

Efforts continue with the goal of eliminating unnecessary exposure of children to obsolete x-ray equipment (photofluorogram) and irradiation doses exceeding those required to get good technical result with standard equipment.

Bloomfield College requested aid in tuberculin Tine testing of 800 to 900 students and teachers, which was done in November, 1965. Of these, 35 were positive and were scheduled for chest x-rays. Officials, however, were persuaded to allow these young adults to be otherwise tested first before exposing them to x-ray if not necessary.

Table 2. Percent of Persons Fully Immunized Against Selected Communicable Diseases by Survey Area and Age Group

	Type of Immunization					
	Poliomyelitis			Diphtheria Pertussis	Diphtheria Pertussis	
Survey Area	Oral	Inactivated	Smallpox	Tetanus	Tetanus (Booster)	Measles
Paterson (August 1964)						
1- 4	59.2	58.8	69.7	79.4		16.2
5-14	75.9	86.7	94.1		42.9	
15-39	44.1	41.1	95.5			
Newark (February 1965)						
1- 4	58.5	66.0	83.5	84.0		19.0
5-14	72.3	91.0	99.4		74.7	
15-39	51.8	46.6	98.4			
Elizabeth (October 1964)						
1- 4	76.0	67.4	78.3	92.2		38.0
5-14	91.0	83.8	98.2		64.9	
15-39	63.8	54.0	100.0			
Jersey City (January 1965)						
1- 4	58.0	80.4	70.3	86.2		23.2
5-14	65.3	93.2	99.3		55.8	
15-39	45.9	42.4	94.8			
Bergen County (July 1965)						
1- 4	62.7	70.0	86.2	95.0		54.6
5-14	85.6	94.9	99.6		92.8	
15-39	53.2	61.7	99.0			

A parochial school in the District objected to tuberculin testing. After several meetings, school officials decided to participate in a tuberculin testing program. Two hundred fifty Tine tests were done. Three teachers had positive reactions. Follow-up was done by private physicians.

Venereal Disease Control

The most dynamic event occurring in the Venereal Disease Program has been the implementation of "Operation Red Dog," an innovation that combines speed-zone epidemiology and the interviewing of all people involved with a core of infectious syphilis. The entire program revolves around an efficient clinic, which operates five evenings per week and all day Saturday, with a physician in attendance two hours during each clinic session. Each person referred to the clinic is given a complete examination and is treated as soon as diagnosed. People named as sex contacts to an infected person are also treated prophylactically even though they clinically do not exhibit symptoms of the disease. It is hoped that in this way practical eradication will be achieved in the City of Newark.

Another important aspect of the operation is the interviewing process. Health representatives interview every person coming through the Newark Health Department Clinic. In this way, many new names are obtained which would not have been obtained by interviewing only infected persons. The interviewing technique may be called the "cluster" approach.

The "Red Dog" method of operation has been so highly regarded by the United States Public Health Service that they have sent people from many parts of the country to observe and receive orientation in its mechanics. The modus operandi is now in the process of implementation in many metropolitan areas where venereal disease is a problem.

To demonstrate "Red Dog's" effectiveness, a comparison is illustrative. During 1962, 1963, and 1964 an average of 32 cases of infectious syphilis per month was reported from the City of Newark. The early months of 1965 also approached 30 cases per month. In a six-month period from July, 1965 to December, 1965, infectious syphilis had dropped from a high of 50 cases reported for the month of July to 20 cases being reported for December. The reason July's total reached 50 is the effectiveness of "Red Dog" epidemiology in treating people in the reservoir of syphilis. This method also controls syphilis in that people are brought to treatment with rapidity, thus reducing the possibility of new infections.

Nutrition

Requests for assistance in developing nutrition services and education continued to expand during the year. The main function of the staff in public

health nutrition has centered on providing leadership to those local boards of health, education, hospitals and agencies seeking to improve nutrition. Hospitals have indicated interest in presenting refresher lectures to staff nurses to bring the newer knowledge of nutrition to the nursing staff. Program needs in nutrition have been met through group conferences, lectures, and specially-prepared visual aids.

Public Health Nursing

Bergen County

A nursing survey of the North Arlington Health Department was conducted at the request of the Health officer.

A revision of school health policies for St. Mary's Parochial School in Rutherford was completed and accepted by the school officials and the board of health.

A survey of the nursing services of the Lodi Health Department was conducted at the request of the mayor.

Three voluntary nursing agencies were visited during the year for evaluation and classification according to the National League for Nursing Criteria.

Essex County

Essex County is well covered for nursing services. The communities that did not meet standards were Bloomfield and Nutley. The Public Health Nursing Service of Bloomfield and Glen Ridge is now an approved agency. At the end of the year, the Nutley Department of Health was providing all the nursing service in that community and was working toward meeting criteria.

Considerable assistance was given in interpreting State Health Department functions and responsibilities to students in schools of nursing and to nurses taking refresher courses under the Manpower Training Act.

Hudson County

The United States Public Health Service grant to North Hudson Public Health Service terminated May 31, 1965. Assistance was given the agency personnel in compiling the three-year report required by the federal government. This report was circulated to officials and interested citizens in the five communities serviced in the North Hudson area.

Five nursing agencies were visited to evaluate and classify the agency according to the State Department of Health's standards.

Passaic County

The activities of the nurse consultant centered chiefly around interpreting acceptable standards of nursing care and encouraging facilities for the provision of care. The provision of nursing service is specially important in view of the Medicare legislation.

The Paterson Board of Health has, through a grant-in-aid from the State Department of Health, employed a qualified director of nurses. The consultant spent considerable time in orienting the director to the many state and local health programs and resources available to her. The public health nurse supervisor of Metropolitan State Health District was assigned to the Board of Health to help implement administrative procedures to upgrade nursing service. This agency now meets the criteria for administration of a public health nursing agency.

The consultant also met with the nurses in groups to explain the program set up for the eradication of tuberculosis.

Group meetings were held to explain the provisions of Medicare and the needs of the various communities.

Frequent conferences were held with the nurse coordinator of the Tri-Hospital Home Care Program at Passaic Beth Israel Hospital regarding program planning and implementation of nursing needs.

The consultant participated in the planning for inservice education sponsored by the Passaic County Heart Association.

Over the past year, the groundwork was laid for providing countywide nursing service. A citizens group is being formed to consider the establishment of a nursing agency.

Union County

The Visiting Nurse Association of Cranford and the Visiting Nurse Association of Rahway and Clark were deleted from the nursing agencies approved by State Department of Health for contractual purposes as of July 1, 1965.

The four remaining agencies received visits for evaluation and classification.

Westfield District Nursing Association purchased nursing direction and supervision from the Eastern Union County Visiting Nurse Association as of July 1, 1965 for an 18-month period when renegotiation or a merger of the two agencies will be considered.

Consultation services were given to Union Township, Westfield, and Mountainside when communities renegotiated health department nursing contract with Eastern Union County Visiting Nurse Association.

Public Health Social Work

Two main areas of social work activity have been emphasized: (1) development of social work aspects of the Newark Maternity and Infant Care Project, and (2) consultation to community hospitals in the initiation of new social work departments and in the development of existing departments.

Social Work Aspects of Newark Maternity and Infant Care Project

The section of the Maternity and Infant Care Project relating to social work was written by the District social work consultant.

The social work ramifications of the Project are evident in a number of seemingly peripheral community problems. For instance, District consultations stemming from an epidemic of infant diarrhea originally centered around medical care and specific health protection of children in emergency shelters. Social study of the shelter population revealed that a large number of children in shelter care are young infants of high-risk mothers, who have not had social work service which might have prevented some of these crisis abandonments and emergency placements, or which would have shortened the duration of shelter care.

The District social work consultant is working with shelter staff and board members and with the Newark Council of Social Agencies Committees on Unmarried Mothers and on Shelter Care to consider some of the problems implicit in long-term care in emergency shelters, alternative methods of emergency care, standards of social care and emotional nurture in shelters and community responsibility on services to these babies and their families. Consultation regarding Project objectives and social needs of high-risk mothers and babies has also been given to an adolescent clinic, to a maternity home, and to several public and voluntary agencies serving high-risk mothers and babies.

Consultations

Regular and continuing consultations were given to two hospitals in establishing new social work departments and several others in expanding departments. The short supply of social workers is a pervasive obstacle to developing adequate services.

The District social work consultant is also participating in a new organization of Directors of Medical Social Work Departments from several counties. This group was organized to provide opportunity for directors to discuss mutual interests in administration of departments.

Service, Information and Referral

Social work consultation has been provided on request to other hospitals, two home care programs, a county Association for Retarded Children, Newark State College Division of Child Study, and to the Coordinator, Newark Community Health Study.

In addition to meeting the usual request for brief service, information and referral, the District social work consultant has provided continuing case-work to one patient—a teen-age girl with multiple interrelated health and social problems. Although at least 10 agencies have provided their specific services over a four-year period, none has maintained a continuing, co-ordinating relationship. The case has yielded valuable data on the cost to the community and the ineffectiveness of services when agencies fail to define the total problem and coordinate services for a long range goal.

Northern State Health District

The Northern State Health District encompasses Hunterdon, Morris, Somerset, Sussex and Warren counties. At the close of the year, the District staff consisted of 20 persons including the District State Health Officer; Pediatric Consultant; District Consultant, Public Health Nursing, and Public Health Nurse Supervisor; District Chief, Environmental Health; Principal Public Health Engineer; Principal Sanitarian; two Sanitarians; Public Health Nutritionist; District Consultant, Community Health Organization; Head Clerk, and five office personnel.

The District State Health Officer retired at the end of June, and the Senior Public Health Physician was appointed the District State Health Officer.

There was relatively little change in local board of health personnel during the year. There also was relatively little change in local programs except that three local boards of health and one hospital opened child health conferences during the year. One board initiated a dental health program and two other local boards initiated screening programs.

Community Health Services

Senate Bill No. 150

Emphasis was on explanation of Senate Bill No. 150 throughout the year. Many meetings were held with local groups.

In July and August, District staff met with all of the Senators and the Assemblymen in the District to advise them of health facilities and resources in their respective areas and to indicate how enactment of S-150 would help.

An exhibit on Senate 150 was shown at the Morris County Fair in September.

Hunterdon County

Early in 1965, District staff met with the Chairman of the Hunterdon County Freeholders Study Committee to assist in plans for re-activating the Committee. This was followed by the meeting with the Board of Freeholders in June. Needs for a county-wide service were discussed by both the Committee and the District staff. The Freeholders deferred action.

Somerset County

As a result of informal discussion with the Director of the Somerset County Board of Freeholders, monies were provided in the 1965 bulget for the position of County Health Coordinator.

During the Summer, plans were made by the Somerset Board of Freeholders for a study in depth of health and related services through a grant from the Department. The National Study Service was engaged by the County in September for the study to be carried out by a Yale study team.

District staff assisted the study team with briefings, orientation, and technical data. The study was completed at the end of the year.

Sussex County

The District staff met with the Sussex County Board of Freeholders in regard to establishment of the position of County Health Coordinator.

Warren County

Efforts were continued during the year to establish a comprehensive public health nursing agency in Warren County. A citizens' committee requested the Board of Chosen Freeholders to pass a resolution supporting such an agency.

Health Insurance for the Aged

In the fall, the District staff had a series of conferences with hospital administrators and staffs and voluntary agency directors to plan for systems in the District which would provide for the Health Insurance for the Aged Program. Such meetings were held with the Morristown Memorial Hospital staff, and directors of the Morris County and Somerset Hills Visiting Nurse Associations; the administrator and assistants of New Memorial Hospital; the medical director of Hunterdon Medical Center; and the Somerset Hospital administrator and staff.

Other

Two evaluation surveys were done during the year: Phillipsburg was evaluated by the Evaluation Team; Roxbury was evaluated by the District staff.

Environmental Health Programs

Joint inspections and projects with local sanitary inspectors involving surveys of food establishments, dye testing of individual sewage disposal systems, well contamination, nuisances, and other environmental health problems have been fruitful.

The tabulation section of this report reflects the reduction of routine inspections previously required of our District Environmental Health staff. This has permitted more time for staff to implement an expanded program of aid and consultation to personnel of local boards of health, and to personnel of other official and non-official agencies.

Air pollution has not been a major problem in the District to date.

The number of camps in the District has increased from 139 to 150 since the 1964 season. Twenty-one percent of these camps were inspected by local health officers and first-grade sanitary inspectors. Our staff has been encouraging local boards of health to assume greater responsibilities in these activities.

Stream pollution or water pollution, whether of surface streams and rivers or of underground water sources, is presenting more problems each year. When the Lake Bathing Certification Program was first started, and for the first five years of Program participation, contamination of the bathing waters was not a major concern. Today, it is a concern and many of our bathing places use chlorination, and, in some instances, use well or spring water dilution to keep the coliform counts down and to maintain water levels.

Hydrogen sulfide odors emanating from polluted streams, wells contaminated by detergents, septic systems, gasoline, fuel oil, and salt are some of the problems which received attention from the Environmental Health staff.

Through cooperation with the Delaware Township Board of Health, a municipal utility authority was set up to provide sewerage facilities for the Sergeantsville area.

Progress also was noted in Readington Township and Branchburg Township in providing sewerage facilities for selected areas.

The Somerset County Vocational School and local health officials were encouraged to reactivate the local team for food service courses.

The Program Chairman of the State Science Teachers was assisted in preparing for a program on water conservation and pollution at Rutgers

University on March 13, 1965. Materials for distribution to the participants were selected by District and Program staff.

District State Health Officer analyzed the environmental and other health aspects of the proposed Tock's Island Recreation Area and represented the Department at a meeting of the Interagency Committee.

Veterinary Public Health

Assistance was given Program personnel in regard to its viral encephalitis study in the Great Swamp Area and the relationship of mammals as a reservoir for the virus. Specimens were collected from dogs, deer, and other forms of wildlife.

A preliminary study to determine the efficacy of feeding antibiotics to infected homing pigeons was completed in Bernardsville. The known infected flock was fed antibiotics. Subsequently, the offspring generation were tested and found to be negative for the disease.

A total of 56 consultations and epidemiological investigations were conducted which involved nine types of zoonoses; such as tularemia, Rocky Mountain spotted fever, ringworm, bovine tuberculosis, toxoplasmosis, trichinosis, salmonellosis in poultry, anthrax, and psittacosis.

Upon request of Program personnel, District staff conducted four surveys related to the rabies control or Veterinary Public Health Program.

Assistance was given local health personnel in their investigation of insect and rodent problems emanating from farms and individual or public establishments.

Thirty-one families were advised of preventive measures to be taken when this Department learned that they were exposed to herds in which individual cows were found to be positive for tuberculosis. A number of the families were examined at the New Jersey Sanatorium for Chest Diseases at Glen Gardner. Three persons underwent further surveillance because the results of these examinations were questionable.

There is now 100 percent participation in the public anti-rabies inoculation clinics by the 134 municipalities in the District. Chatham Borough's initial clinic held during the fall of this year assisted in attaining this objective.

There were 188 clinics held at which time 31,854 animals were inoculated. This compares with 28,238 animals vaccinated in 1964, an increase of 3,610 animals.

As of November, 1965, there were 79,243 dogs licensed in the District as compared to 75,893 for the year 1964, an increase of 3,350. This increase

is attributable to efforts on the part of District personnel encouraging local officials to adopt measures for a comprehensive and more effective dog control program.

A total of 27 bats suspected of being rabid was submitted to the laboratory. Three proved positive.

Twenty-eight persons bitten by animals received preventive anti-rabies treatment because the biting animals either escaped or the bite was of such a nature that rabies could have been suspected.

There were 921 consultations, inspections, investigations, meetings and conferences held for the purpose of promoting the Dog Control Program in the District.

During this period the following pound construction projects were completed: Bernards Township and Bernardsville Borough, Somerset County; East Hanover Township, Morris County and Green Township and Hopatcong Borough, Sussex County.

District staff are cooperating with 28 additional municipalities planning pound construction projects. A private contracting commercial pound serving nine municipalities was completed in Wantage Township. District personnel are encouraging the owner to construct additional facilities for more effective operation.

Chronic Illness Control Program

Aging

District nursing staff participated in teaching one session of a Friendly Visitor course.

Cancer

The District Consultant in Community Health Organization met with Newton High School in the spring to discuss participation in the smoking project. The smoking habit and attitude study was undertaken by both students and faculty in May.

Throughout the spring and early summer, the District Consultant, Community Health Organization, worked with the sociologist at Rutgers University in revising the teachers' survey report and other reports in regard to project commitments.

The District Consultant in Community Health Organization participated as a panel member in a session on smoking and health at the American Public Health Association meeting in Chicago.

Diabetes

District and Diabetes Program staff met with representatives of Stanhope Borough Board of Health and the Sussex County Department of Social and Health Services to assist in the Diabetic Screening Program for that community. Assistance was given in planning, in providing visual aids for a community meeting in May, and in obtaining the cooperation and co-sponsorship of the medical profession.

District and Diabetes Program staff met with the Diabetes Screening staff at Morristown Memorial Hospital, as well as two Morris County health officers to plan for continuity of the screening program throughout Morris County.

Three demonstration sessions on the Dextrostix Screening Method were held in the District office. Program staff met with 28 public health nurses from Morris, Sussex, Warren, and Somerset counties. Following the orientation to the technique, each nurse re-demonstrated the procedure.

District staff provided a briefing on District operation, services, and resources for a trainee of the Diabetes Program.

The Diabetes film strips were made available to several high schools in Hunterdon County.

Heart and Circulatory Disease

District staff participated with the Morris County Heart Nursing Education Committee and Program personnel in setting up a course for teaching cardio-pulmonary resuscitation to Morris County nurses.

In the late fall, the Tri-County Dental Society indicated interest in training a core of their group in cardio-pulmonary resuscitation, and then in turn training the rest of the membership in the tri-county area. Arrangements were made through the Program for 15 of the dentists to attend the Jersey City course.

The District Consultant in Community Health Organization gave assistance to the Nurse Director and Supervisor of the Merry Heart Nursing Home in Succasunna in planning for in-service training for all of the staff in cardio-pulmonary resuscitation.

District staff assisted in the planning, and the District Consultant, Public Health Nursing, served as a panel participant in the Morris County Heart Association seminar for nurses on "Congenital Heart Abnormalities." District Consultant, Community Health Organization, participated in the Morris County Heart Association "Luncheon at the Dutton" broadcast re this seminar.

Assistance was given to the Warren County Heart Association in the presentation of an educational program for nurses on "Early Restoration Measures for the Stroke Patient." Program and District staff also attended.

Constructive Health Programs

Crippled Children

The District Consultant, Public Health Nursing, worked with the supervisory staff of the Visiting Nurse Association of Morris County regarding crippled children cases.

One hundred nurses and other health personnel attended the nursing in-service program on "Nutrition of the Handicapped Child." The conference at the Matheny School included a feeding demonstration of several of the children.

The District Consultant, Public Health Nursing, attended the Kessler Institute Amputee Clinic. The facilities and procedures for the care of congenital abnormalities was aptly described by staff from Babies Hospital.

Two cerebral palsy consultation clinics, sponsored by the Phillipsburg Elks Lodge at Warren Hospital, were held for Warren County children.

Seventy-three nurses attended an in-service education program on "Orthopedic Conditions of the School Age Child," presented by the Chief of Orthopedics of Warren Hospital. The program was co-sponsored by Warren Hospital, New Jersey State Nurses' Association, Division No. 3, and the Northern State Health District.

Maternal and Child Health

Eighty-five nurses and dietitians attended the District nursing education program on "Weight Control."

Somerset Hospital has extended the services of the poison control center by providing public health nursing epidemiological investigation of all treated cases. The follow-up is coordinated by the Somerset Valley Visiting Nurse Association. Sussex County remains the only county in the Northern State Health District without a public health nursing follow-up program in poison control. The epidemiological investigation of these cases by public health nurses has been pursued in Morris County, but several communities are not participating.

Throughout the year, the efforts of the District Pediatric Consultant and the District staff culminated in the opening of four new child health conferences in the following Morris County communities: Jefferson Township, Montville Township, Parsippany-Troy Hills Township, and Morristown Memorial Hospital. Three of the stations are administered by local boards

of health. Two are staffed by the Visiting Nurse Association, and one by the local board of health nurse. The Montville Board of Health received grant-in-aid assistance to start its child health conference. The fourth station is located in a general hospital and is staffed by hospital personnel. The children served in this station came from communities having no child health conference.

At the close of 1965, there were 23 child health conferences in the Northern State Health District. Grant-in-aid contracts were entered into with the following communities: Chester Township and Chester Borough, Lincoln Park Borough, Montville Township, Rockaway Township, and Rockaway Borough. Of these, the grant-in-aid contract with the Chester Township and Chester Borough terminated December 31, 1965.

Consultation services were given to 20 child health conferences by the District Pediatric Consultant.

Preventable Disease Programs

Accident Prevention

The District Consultant in Public Health Nursing served as District representative to the Morris County Safety Council. Assistance was given in developing a questionnaire to survey Morris County health departments regarding space heater ordinances.

Vaccination Assistance Project

District staff and members of the Vaccination Assistance Program gave assistance to the Boonton Board of Health nurses in planning for a tetanus immunization program for Boonton.

Early in the year, plans were made by District staff for an immunization conference for professional personnel on a District-wide basis. The conference was co-sponsored by the five medical societies, the five county superintendents of schools, the Archdiocesan superintendents of schools, and the local boards of health. Arrangements were made for the Senior Public Health Physician to participate in two radio broadcasts prior to the conference. The conference was held on May 19, 1965, at the Far Hills Inn, and 121 participants were in attendance. The afternoon panel of physicians, representing the medical societies of the District, made an outstanding contribution to the entire program.

This conference provided the basis for the organization of a Hunterdon County community committee which began in the summer to plan for a county-wide tetanus program in November. District and Program staff

worked with the committee in planning and in providing materials for distribution.

A health education aide was assigned to the District on September 17, 1965, under the supervision of the District Consultant, Community Health Organization.

Tuberculosis Control

The District Consultant, Public Health Nursing, served on the Nursing Committee of the Northwest Area Tuberculosis and Health Association, and participated in planning for a spring conference at St. Clare's Hospital. Sixty-five nurses and other health personnel attended the conference. Also, the District Consultant, Public Health Nursing, served on the Nursing Committee in planning for a spring conference for 1966. The District State Health Officer is serving on the Board of this agency.

A joint endeavor of the Northern State Health District and the Northwest Area Tuberculosis and Health Association is surveying the Morris and Sussex Counties parochial school tuberculosis testing of grades one and five revealed that five Morris County parochial schools were not tuberculosis testing. A simultaneous survey was also done by the Diocesan Superintendent. A testing program was eventually set up in all five communities.

District staff met with the Lambertville Board of Health and with the Executive Director of the Hunterdon County Tuberculosis and Health Association to plan for a tuberculosis testing program in a circumscribed area in this community, which appeared to have an epidemic outbreak. An educational program was pursued and then followed by Tine testing of 190 residents. Eight of these tested had subsequent Mantoux tests. Thirty-four patients were referred for x-ray. District staff assisted the board of health and the Hunterdon County Tuberculosis and Health Association in planning for the x-ray referrals. Complete results of the x-ray referrals are still pending.

Venereal Disease Control

District staff edited and subsequently had published the article, "Today's Climate and Venereal Disease," by Celia S. Deschin, Ph.D., in the July, 1965, issue of Public Health News, monthly publication of the State Department of Health. This paper was presented at a Warren County Venereal Disease Seminar in May, 1964.

Special Consultation Programs

Health Education

Practically all of the staff have been involved as planners or participants in in-service training opportunities during the year. Health education skills and techniques were an integral part of these activities.

All of the professional staff were alert to career opportunities and provided advice or consultation to prospective students. There were specific conferences wherein District State Health Officer and District Consultant, Community Health Organization, discussed with guidance directors and students specific interests in public health. Also, District Consultant, Community Health Organization, gave assistance to a college graduate who has since been accepted for a graduate program in social work and has been granted a fellowship for such study.

District Consultant, Community Health Organization, worked with the special education teacher of the Sussex County Superintendent's office in regard to proposed health education projects.

District Consultant, Community Health Organization, planned the annual conference with the District Parent-Teachers Association Health Chairmen.

District State Health Officer and District Consultant, Community Health Organization, continued to participate as members of the Morris County Committee for the Prevention of Narcotics Addiction throughout the year. The Committee worked with the County Parent-Teachers Association in co-sponsoring a public meeting in the fall. The District State Health Officer is a member of the Speakers Bureau of this organization and presented materials on drug addiction to the Lebanon Township Elementary School Parent-Teachers Association, the Green Pond Woman's Club, and the Morris Plains-Morris Township Kiwanis Club.

Nutrition

In the past year, there have been a startling number of non-medically supervised weight control group classes appearing in northern New Jersey. These classes have been presented by two incorporated money-making organizations. Although the diet recommended by these groups is not unsound, a great deal of misinformation about foods and nutrition is given. Aside from such organized groups, several extremely unbalanced diets have been circulated, some of which could be harmful.

As a means of combating these unapproved methods of weight reduction, an attempt has been made to provide authentic information. One in-service program for nurses in the Northern District was devoted to weight control. A New Jersey Dietetic Association meeting featured the psychological considerations of obesity. The diet counseling services in both Morris and Warren Counties have conducted group classes which were filled to capacity. The Morris County Heart Association presented an evening program for the public on various aspects of sensible weight control.

A series of nutrition in-service education programs was held for nurses throughout the state for which the Nutrition Consultants presented the bulk

of subject matter. The nursing groups were first surveyed for their particular areas of interest. Approximately five programs were presented in each District. To permit more comprehensive accumulation of information, each Nutrition Consultant concentrated on topics of her own particular interest for presentation in other Districts as well as her own.

This method also provided the audiences with a variety of speakers. The Nutrition Consultant in the Northern District presented the subjects, Maternal and Child Health, Feeding the Handicapped, and Fluid and Electrolyte Balance. Other subjects presented were Motivation in Food Management, Nutrition for the Aged, Weight Control, and Diet in Acute and Chronic Illness.

The Nutrition Consultant in the Northern District has a regular bi-weekly spot on station WMTR, Morristown. The program is taped, runs for three to four minutes, and includes a variety of food, nutrition, and marketing subjects. The information is presented in informal conversations with one of the announcers. Although no formal evaluation has been done, many favorable comments have been received from listeners in the county.

Demands for nutrition education materials for schools and youth groups continue to point toward the need in this area. School nurses are most frequently the contact points—their observations of the effects of poor nutrition habits and the need for attractive teaching materials at every grade level often motivate them to initiate nutrition education programs.

The Nutrition Consultant in the Northern District has received innumerable requests for materials and assistance in planning programs. The Nutrition Consultant has also worked with parent-teacher groups, 4-H, and Girl Scout groups to stimulate better nutrition practices.

Anti-poverty programs have initiated interest in providing nutrition education to low-income families. In Morris County, a cooperative program, sponsored by a town mayor's committee, provided information on nutrition, food purchasing, and food preparation. Welfare recipients were particularly invited; however, the program was open to the general public.

Although the mixed-income level of the audience was a deterrent to effective teaching of the welfare families, the program was a step in the right direction. Discussion with Extension Service Home Economists, public health nurses, and welfare workers indicates a feeling of inadequacy in effectively reaching the low-income family. There is a need for training in techniques of achieving and sustaining interest as well as for visual teaching aids to be used with adults at a low-education level.

The Department of Institutions and Agencies has frequently requested assistance from the Nutrition Consultants in evaluating food service in boarding homes and in providing consultation to the operators. Due to the lack of

food service training on the part of the operators, inadequate meals, and insanitary kitchen practices are frequently observed. A questionnaire distributed to home operators in the Northern and Central Districts indicated their interest in acquiring information on meal planning, purchasing and cost control, and sanitation.

As an effort to provide more specific guidelines for Department of Institutions and Agencies investigators, the Nutrition Consultants assisted in revision of that section of the Manual of Standards for Boarding Homes pertaining to food service.

The great need for nutrition consultation to community institutions is evident by the poor standards encountered on visits, the receptivity to assistance by the owners, and the significance of Health Insurance for the Aged with its accompanying requirements of standards of eligibility for extended care facilities.

Public Health Nursing

Public Health Nursing staff in the Northern State Health District consists of the District Consultant, Public Health Nursing, and a Public Health Nurse Supervisor.

Coordination of the 25 District child health conferences, the Warren County Crippled Children's Program, nursing referrals in Warren County, and orientation of new public health nurses have been the primary activities of the Public Health Nurse Supervisor.

The five public health nursing agencies, Family Nursing Service of Hunterdon County, Inc., Visiting Nurse Association of Morris County, Inc., Somerset Valley Visiting Nurse Association, Visiting Nurse Association of Somerset Hills, and the Sussex County Department of Social and Health Services, have continued to expand in staff and services.

Public health nursing has been the forerunner of other health services in many communities.

A criteria evaluation visit was made to the Visiting Nurse Association of Easton, Pennsylvania. This agency serves six communities in Warren County.

During the year, the District Consultant, Public Health Nursing, had many conferences with administrative staff of the public health nursing agencies in the Northern State Health District regarding contractual agreements with local municipalities, in-service education programs, staffing, records, exhibit materials, etc.

District staff met with the executive director of the Warren County Tuberculosis and Health Association to discuss public health nursing needs

in Warren County and to develop a plan for action. Unfortunately, the discussed plan did not materialize.

An orientation conference on nursing agency financing, staffing, and records, was given to several Cumberland County health officials by a Sussex County Freeholder, the Director of the Sussex County Department of Social and Health Services, and the District Consultant in Public Health Nursing.

The District Consultant in Public Health Nursing, as a member of the Executive Committee of the State Nursing Association Public Health Section, attended a special meeting of this committee with representatives of the Civil Service Commission. Qualifications of local official public health nurses were discussed and the necessity to maintain high standards was emphasized.

One hundred and forty-three participants attended the nursing in-service education program on "Nutrition in the Later Years" at the New Jersey State Hospital, Greystone Park.

Site visits to the Sussex County Department of Social and Health Services and the Visiting Nurse Association of Morris County to comply with the requirements set forth in the grant-in-aid contracts of these two agencies were made by the District Consultant, Public Health Nursing.

The District Consultant, Public Health Nursing, served as a guest speaker to the Warren County Woman's Medical Auxiliary at its luncheon meeting in Easton, Pennsylvania. The plan for a public health nursing program in Warren County was presented.

District State Health Officer represented the Commissioner, and the District Consultant, Public Health Nursing, served as a group leader at the New Jersey League of Nursing Program on "The Expanding Role of the Nurse in the Community."

Southern State Health District

Community Health Services

There was considerable activity by District staff members and the four County Public Health Coordinators in developing community support for S-150.

Local health officer coverage remained at approximately 50 percent of the District's population, which was close to one million. The health officers in the District continued the practice started in September, 1964, of meeting periodically for discussions of mutual problems and interests.

There was great interest in preparing for the advent of the Health Insurance for the Aged program under P. L. 89-97. The District State Health Officer and, in some cases, the Division Director, met with groups in every county to explain the new law and the importance of prompt action to get

agencies, whether official or voluntary, eligible for certification as Home Health Agencies. Where necessary and appropriate, partial subsidies were offered.

Atlantic County

The Atlantic County Department of Health began operations on October 1, 1963, with a full-time licensed Health Officer as County Public Health Coordinator. The staff soon included two sanitary inspectors, in addition to two or three public health nurses and a public health nurse supervisor (the last assigned by the Southern District office of the State Department of Health). There has been no other form of subsidy.

On February 16, 1965, a much older organization under the County Board of Chosen Freeholders, known as the Atlantic County Public Health Service, was abolished. Despite its title, it was only partly a public health nursing agency, devoting much of its activity to welfare. The successor agency was named the Child Welfare Division, and nine public health nurse positions were transferred to the County Department of Health. This change was the first important simplification in the organization of public health nursing services in two decades.

Camden County

The regional meetings of boards of health, begun in 1964, continued with the objective of deciding on the best way to organize so that they could achieve compliance with the Recognized Public Health Activities and Minimum Standards of Performance. The Executive Secretary of the Health and Welfare Council of Camden County and the District State Health Officer acted as consultants at several meetings. On February 10, the Bellmawr Board of Health passed a resolution expressing its desire to participate in the formation of a Regional Health Commission.

On February 24, the District State Health Officer and representatives of the Health and Welfare Council of Camden County met with the Board of Chosen Freeholders and explained the need for a health department serving a substantial population. On April 1, the Clerk of the Board sent a questionnaire to all 37 mayors in the County. The results showed that 12 municipalities, with a population in excess of 62,000, were in favor of having the Freeholders set up a county health department in the cost of which they would share.

In September, the Health Officer of Haddonfield retired, thus leaving only one municipality (Camden City) in the county served by a full-time Health Officer. Also in September, the Boards of Health of Bellmawr and Runnemede set up a Regional Health Commission and employed a part-time Sanitary Inspector. This unit was too small to afford any full-time staff.

Information was furnished to the Clerk and Director of the Board of Chosen Freeholders on the net cost to each of the 12 interested municipalities of participation in a county health department to be subsidized in part by the State Department of Health. Before year's end, the Freeholders had a specific recommendation and tentative budget which they could use when preparing the county budget for 1966.

Cape May County

On September 29, representatives of the county government and the County Department of Health participated in the general report meeting sponsored by the National Health Commission. The findings and recommendations of the Cape May County Community Health Study were presented. Cape May County was one of the first in the nation to be chosen (in March, 1963) to do such a study. The study, which involved over 120 laymen and professionals, was completed in 1964.

Cumberland County

As a result of repeated discussions about the need for improved county-wide bedside nursing services and preparation for the Health Insurance for the Aged program, a small voluntary nursing agency decided to ask the county to take over its functions as part of the activities of the public health nursing unit of the County Department of Health.

Gloucester County

Following the introduction of Senate Bill 150, the State Health Aid Act, on February 8, there was a renewal of interest in organizing a county health department. On the initiative of a former board of health member from the Borough of Wenonah, a meeting of representatives of several boards of health was held on April 1. The Salem County Public Health Coordinator spoke to the group about the organization and activities of his county health department.

At year's end, none of Gloucester County's 24 municipalities were served by a health officer.

Salem County

The Salem County Department of Health began functioning on July 1, 1964, with a full-time licensed health officer as County Public Health Coordinator, a sanitary inspector and a secretary. These positions were subsidized in part under a grant-in-aid contract with the State Department of Health. Initially, much attention was given to the solution of environmental health problems. Policy matters are decided by a three-man Committee of the Board of Chosen Freeholders. However, the need for wide community representa-

tion was felt, and on May 27, the Advisory Committee of the Salem County Department of Health held its first meeting. It has concerned itself with such important matters as the role of the Department in migrant health activities and the urgent need to develop a county-wide bedside nursing service which can qualify for participation in the Health Insurance for the Aged program.

On September 13, the Salem City Board of Health signed a contract with the County Board of Chosen Freeholders to obtain the services of the County Public Health Coordinator and his staff. This brought to 14 the number of municipalities served, only one remaining outside the county unit.

Division of Preventable Diseases

WILLIAM J. DOUGHERTY, M.D., M.P.H., *Director*

Programs:

Communicable Disease Control ..... WILLAM J. DOUGHERTY, M.D., M.P.H.

Migrant Health ..... THOMAS B. GILBERT
Coordinator

Tuberculosis Control ..... FAISSAL ARD, M.D.
Coordinator

Vaccination Assistance ..... MICHAEL WISHENGRAD, M.D.
Project Director

Venereal Disease Control ..... MICHAEL WISHENGRAD, M.D.
Coordinator

Division of Preventable Diseases

Communicable Disease Program

Amebiasis

Two hundred and twenty-seven cases of amebiasis were reported to the State Department of Health in 1965. Two hundred and eleven of these cases were from state institutions.

Two state institutions for the mentally retarded are participating in a stool survey program, with stools positive for amebiasis being confirmed by the State Department of Health Laboratories and the U. S. Communicable Disease Center.

Anthrax

Three cases of human anthrax were reported this year, and all were in industrial workers exposed to imported, contaminated animal products.

Two of the cases occurred in a plant which processes animal skins. The third patient was employed in a plant which processes bones imported from India. In this latter plant, the U. S. Communicable Disease Center cooperated in an extensive environmental sampling program. Spores of *B. anthracis* were identified in air, dust, and bones. Recommendations were made to the management concerning a comprehensive program for control of this disease within the factory.

Brucellosis

One case was reported in a 46-year-old white woman from Essex County. She was not an abattoir worker. The source of infection was not established.

Cholera

Sixty-five surveillance orders were carried out at the request of the Department of Foreign Quarantine, U. S. Public Health Service. No case of cholera developed.

Diarrhea of Infancy

An epidemic of gastroenteritis in the Newark area began in November, 1964, and continued through March, 1965. An investigation was conducted by a team composed of representatives from the U. S. Communicable Disease Center, the New Jersey State Department of Health, the Newark City Health Department, and members of the staffs of the involved hospitals.

The epidemic resulted in more than 400 reported cases with 28 reported deaths. The primary victims were infants under 18 months of age. More than 30 percent of the cases appeared to be hospital acquired, and three different area hospitals were involved. The age-corrected attack rate was 2,500 per 100,000, with a case fatality ratio of six percent. The causative agent of the epidemic was found to be an enteropathogenic E. coli of type 0111 :B4.

On March 1, 1965, Dr. Roscoe P. Kandle, State Commissioner of Health, sent a letter to all hospital administrators warning them of the increased incidence of gastroenteritis among pediatric patients in New Jersey hospitals. He emphasized the importance of control measures including: adequate isolation procedures, careful aseptic technique, adequate cultural studies on ill patients, increased surveillance and reporting of outbreaks of gastroenteritis.

To aid in prevention and early detection of such outbreaks in the future, the Newark City Hospital is cooperating with the New Jersey State Department of Health in a joint and continuing surveillance program of cases of infant diarrhea admitted to its pediatric wards.

The surveillance data for the last six months of 1965 at Newark City Hospital revealed that, of 504 admissions or transfers to the pediatric ward, 120 (24%) were for diarrhea. Eighteen (15%) of these 120 diarrheas were hospital-acquired.

Of the eighteen cases of hospital-acquired diarrhea, eight occurred among new-born infants. This represented an attack rate of only 0.3% among the 2,322 babies born between July 1 and December 31 at Newark City Hospital.

In 19 of the 120 diarrheal admissions, an enteropathogenic *E. coli* was cultured from the stool. Stools from four of the eight new-born diarrheal patients contained EPEC. Another of the new-born patients was found to be infected with *Salmonella typhimurium.*

Encephalitis and Aseptic Meningitis

In 1959, New Jersey experienced an epidemic of Eastern Encephalitis, and in 1964 there was an outbreak of St. Louis Encephalitis. Consequently, the Division of Preventable Diseases has been cooperating with the Division of Laboratories in an intensive encephalitis surveillance program.

During the summer of 1965, there was widespread Eastern Encephalitis epizootic activity among horses and birds in all the eastern seaboard states as far north as New Jersey. In addition, St. Louis Encephalitis virus was isolated from two pools of *A. sollicitans* mosquitoes in New Jersey by the Division of Laboratories. These findings alerted the State Department of

Health to the possibility of further cases of arthropod-borne encephalitis in the fall of 1965. Routine surveillance activities were redoubled. As in 1964, a large group of general hospitals throughout the southern part of the state was telephoned every other day to inquire about any admissions of patients with central nervous system illnesses. In addition, a personal survey was made by a physician from the Division of Preventable Diseases. Hospital admitting diagnosis, patient records and laboratory data were examined in six hospitals in the southern portion of the state, where arbovirus encephalitis had been endemic in the past.

Fortunately, no epidemic developed this year. One case of Eastern Encephalitis did occur in a 60-year-old female from Cape May County. This case was serologically confirmed. The patient survived, although with severe neurologic residua.

Two cases of St. Louis Encephalitis were serologically confirmed in Burlington County. The patients, one male and one female, both in their early 40's, made what appeared to be good recoveries.

In all, 133 cases of primary encephalitis were reported during 1965. This represents a marked decline from the total of 224 cases reported during the epidemic year 1964. Of these 133 cases, the etiology could be definitely confirmed in only 12 cases (9 percent). Camden County experienced the largest number of cases of primary encephalitis, 22.

Eighteen cases of post-infectious encephalitis were reported during the year. Twelve of these followed infections with mumps virus. Four cases were secondary to varicella and two cases to rubeola.

Fifty-six cases of aseptic meningitis were reported from 16 counties in New Jersey during 1965.

Food Poisoning

Forty episodes of food poisoning were reported during 1965. They ranged in size from large epidemics involving hundreds of individuals to small groups of disease localized to a few individuals in a single family. Each of the food poisoning episodes was investigated by personnel of the state or local health departments. Over 1,400 people were involved in these episodes. There was one known death. The etiologic agent remains unknown in the great majority of instances. Salmonella was shown to be the causative organism in three outbreaks. One of these three outbreaks emanated from meals served in another state but involved residents of New Jersey. *Staphylococcus aureus* was demonstrated in two instances. *Clostridium perfringens* organisms were found in suspect foods from two outbreaks. However, the evidence was not sufficient to implicate definitely this organism as the causative agent in either of these two outbreaks.

Between February 28 and March 5, 1965, more than 200 Rutgers University students developed symptoms of acute gastroenteritis. The patients were all male fraternity members, belonging to a number of different fraternities on campus. The only common food source which could be found was a local bakery which supplies all of the involved fraternities. Specimens of food from the bakery and stool specimens from a number of patients admitted to the campus infirmary failed to reveal the causative agent.

An epidemic of acute gastroenteritis involving 240 persons in Mt. Ephraim, New Jersey, was traced to a local banquet. Intensive investigation of this outbreak failed to reveal conclusively the food and organism involved. It was felt most likely that the implicated food was turkey and the likeliest organism either salmonella or *Clostridium perfringens*. The investigation revealed gross improprieties concerning the preparation and handling of the roast turkey. Steps were taken to assure that the caterer would in the future conform with accepted hygienic standards in preparation of foodstuffs.

In August, 1965, the State Department of Health investigated a widespread diarrheal epidemic at a northern New Jersey camp. One hundred and ninety-six persons were stricken over a two-week period. The water supply was found to be contaminated, and epidemiologic evidence pointed strongly to this as the source of the outbreak. Specific recommendations were made by the State Department of Health for improvement in the camp's water supply and distribution system.

Hepatitis, Infectious

There were 949 cases of infectious hepatitis reported in New Jersey in 1965. Thirty-three of these cases were felt, on epidemiologic grounds, to represent serum transmitted cases of infectious hepatitis; this group of cases will be further analyzed under the heading "Hepatitis, Serum Transmitted." The remaining 916 cases represent a decline in incidence from the totals of 1,255 cases for 1963 and 989 cases for 1964. This trend is in line with nationwide hepatitis incidence figures, which have shown a continuous long-term decline from the peak year of 1960-61.

Five hundred and forty-nine males were affected as compared to 367 females. Three hundred and ninety-three of the patients were under 20 years of age, 521 patients were over 20 years of age, and in two cases, the age was unknown. The ratio of adult to childhood cases was 1.3 to 1. This is considerably different from the national experience in which there is a predominance of cases under 20 years of age.

An analysis of the monthly incidence of cases of infectious hepatitis is given in Table 1.

Table 1. Infectious Hepatitis Cases
New Jersey, 1965 by Month of Onset

January	48
February	61
March	129
April	81
May	98
June	64
July	99
August	68
September	83
October	68
November	45
December	72
Total	916

The number of cases and the incidence rate for the state's 21 counties are noted in Table 2.

The incidence rate of 13.65 cases per 100,000 population is somewhat less than the national figure for the epidemiologic year 1964-1965, which is 17.9 cases per 100,000 population.

The high incidence rate for Sussex County is due at least in part to three common source epidemics occurring in that county during 1965, to which 36 of the reported cases are attributable.

In view of the widespread outbreak of infectious hepatitis in 1963 and 1964 in New Jersey and Pennsylvania, which was related to ingestion of raw clams, a history of raw shellfish ingestion is sought in every New Jersey case of hepatitis. During 1965, 77 cases gave a history of having eaten raw shellfish during the 60 days prior to the onset of illness. The majority of such cases occurred among adult males. It is, of course, uncertain that the shellfish consumption had any etiologic relationship to the development of hepatitis in such cases.

Table 2. Infectious Hepatitis Incidence by County
New Jersey, 1965

County	*Number of Cases*	*Estimated Population July, 1965*	*Rate per 100,000 Population*
Atlantic	5	176,000	2.84
Bergen	46	907,000	5.07
Burlington	18	271,000	6.50
Camden	36	440,000	8.18

Table 2. Infectious Hepatitis Incidence by County New Jersey, 1965—Continued

County	Number of Cases	Estimated Population July, 1965	Rate per 100,000 Population
Cape May	4	54,000	7.41
Cumberland	2	116,000	1.72
Essex	167	933,000	17.90
Gloucester	8	157,000	5.10
Hudson	27	591,000	4.57
Hunterdon	0	60,000	00
Mercer	59	286,000	20.63
Middlesex	60	523,000	11.47
Monmouth	40	392,000	10.20
Morris	145	313,000	46.33
Ocean	10	135,000	7.41
Passaic	97	443,000	21.90
Salem	0	64,000	00
Somerset	17	167,000	10.18
Sussex	70	57,000	122.81
Union	60	560,000	10.71
Warren	1	68,000	1.47
State Institutions	17	....	....
Military	27	.....	....
Total	916	6,713,000	13.65

There were 22 deaths due to infectious hepatitis. This represents a case fatality ratio of 2.4 percent. The age and residence breakdown among fatal cases is as follows:

Table 3. Mortality in New Jersey Residents from Infectious Hepatitis, 1965 by Age Groups

Under 1	1
2- 9	0
10-14	2
15-19	1
20-24	2
25-29	2
30-39	1
40-49	8
50-59	1
60 +	4
Total	22

Table 4. Mortality in New Jersey Residents from Infectious Hepatitis, 1965 by County

Bergen	4
Camden	2
Essex	5
Hudson	1
Middlesex	2
Monmouth	1
Morris	1
Ocean	1
Union	2
State Institutions	3
Total	22

Two common-source hepatitis epidemics in northern New Jersey were investigated with the assistance of the U. S. Communicable Disease Center.

Between February and May, 1965, 82 cases of infectious hepatitis occurred in 74 families in the area surrounding Dover. There were two peaks of occurrence approximately one month apart, with a continuation of the cases into May.

Epidemiologic evidence suggested that this was initially a common-source outbreak of infectious hepatitis following contamination of the delicatessen area of a local supermarket. The contamination because of a back-flow from an untrapped floor drain connected to a sewer. Thereafter, food handlers among the first two groups of cases may have been secondary sources for the contamination of cold cuts sold at the delicatessen, thereby contributing to the extension and prolongation of the outbreak.

Between July 10 and July 26, 1965, a common source outbreak of infectious hepatitis occurred in Sparta and involved a total of 19 reported cases. The epidemic investigation clearly implicated a local frozen custard stand. In addition, differential food histories strongly pointed to one batch of frozen strawberries. These strawberries were consumed within a one-week period, four weeks prior to the peak of the epidemic.

Extensive investigation was done by the U. S. Food and Drug Administration and the Communicable Disease Center into the distribution of the other cans of frozen strawberries in the same lot. However, no other outbreaks of hepatitis could be traced to this product, and it must be presumed that contamination was probably limited to one or a small number of cans in the shipment delivered to the implicated frozen custard stand.

Hepatitis, Serum Transmitted

One hundred thirty-four cases of serum transmitted hepatitis were reported during the year. Thirty-three of these cases were type A (incubation period under 60 days), 64 were type B, and 37 were indeterminate. Type A cases represented 34 percent of those cases for which the incubation period was known. The 37 cases with an indeterminate incubation period represent the number of cases occurring during the year in known narcotic addicts. Thus, 28 percent of the total number of cases of serum transmitted hepatitis occurred in narcotic addicts.

Single unit blood transfusions accounted for 15 (11 percent) of the cases; 13 of these 15 units originated from commercial blood banks. In only one case was a narcotic addict identified as a blood donor of a unit giving rise to serum transmitted hepatitis.

This Division has continued to identify known narcotic addicts, individuals who were single unit donors to cases of hepatitis, and individuals who were common donors to more than one case of hepatitis in a transfused individual. These persons, a total of 16 during 1965, are then excluded from donating blood for transfusion in New Jersey.

Fifteen deaths due to serum transmitted hepatitis were recorded. This represents a case fatality ratio of 11 percent as compared with that for infectious hepatitis of 2.4 percent. Three of the fatal cases were infectious, serum transmitted; 10 of the fatalities were serum hepatitis. Two deaths occurred among narcotic addicts, the incubation period of whose disease was unknown.

Table 5. New Jersey Hepatitis, 1961-1965 (Serum Transmitted)

	1961	*1962**	*1963*	*1964*	*1965*
Total cases	102	124	120	137	134
Information available	99	124	120	137	134
Incubation:					
Type A (under 60 days)	20	53	43	37	33
Type B	71	51	44	50	64
Indeterminate	11	20	33	50	37
Percent A of those with known incubation period	22%	51%	49%	42%	34%
Cases in addicts	9	24	32	43	37
Cases with addict donors	6	4	2	1	1
Total addict related cases (%)	15(15%)	28(23%)	34(28%)	44(32%)	38(28%)
Cases in single pint recipients	16	19	11	9	15
Cases from commercial pints	10(63%)	12(63%)	6(54%)	4(45%)	13(87%)
Mortality:					
Type A cases (%)	2(10%)	3(6%)	4(9%)	0(0%)	3(9%)
Type B cases (%)	10(14%)	7(14%)	3(7%)	5(10%)	10(16%)
Indeterminate (%)	.....	.....	.....	6(12%)	2(5%)
Total cases (%)	13(13%)	11(9%)	10(8%)	11(8%)	15(11%)

* Does not include cases discovered during special intensive study.

Hospital Infections

On November 17, 1965, the Division of Preventable Diseases sponsored a one-day conference on the "Principles of Surveillance of Infections in Hospitals." The total registration of 226 participants included physicians, hospital administrators, nursing personnel, executive housekeeping personnel. Representatives from 69 of the state's 122 medical and osteopathic hospitals were in attendance. Guest speakers included Dr. Alexander Langmuir, Chief, Epidemiology Branch, Communicable Disease Center; Dr. Philip Brachman, Chief, Investigations Section, Epidemiology Branch, CDC; and Dr. Jonas Shulman, Hospital Infections Unit, Epidemiology Branch, CDC. In addition, leading physicians and hospital administrators from throughout the state participated as discussants in a number of seminars.

Influenza

During the first quarter of 1965, New Jersey experienced a moderately widespread influenza epidemic. Virus isolations and serological confirmation of type A influenza were reported from every region of the state. Physician surveys on two occasions in January confirmed the scattered occurrence of acute febrile respiratory disease. In spite of geographically widespread illness, uniform involvement of the entire population in any given area did not occur. Deaths due to influenza and pneumonia during the major epidemic period (from the beginning of January to mid-February) increased by some 50 percent over the corresponding period in 1964. The epidemic appeared to focus in the central part of the state—Somerset, Middlesex, and Monmouth Counties.

Leptospirosis

Three cases of leptospirosis were reported. One occurred in a 41-year-old Somerset County man, who often cut his bare feet while fishing in a possibly contaminated river. Two others occurred in a father and son from Gloucester County. The two live and work on a family-owned pig farm. The father had only mild symptoms with severe headaches and stiffness of the neck and back. The son had a severe illness compatible with aseptic meningitis.

Serologic tests in the State Laboratory and the Communicable Disease Center substantiated the diagnosis of leptospirosis in all three cases.

Malaria

Of the four cases of malaria reported during 1965, two occurred in returning service men from Viet Nam who were hospitalized at Walson Army Hospital, Fort Dix. The third was imported from Brazil, and a fourth,

occurring in a six-year-old female, apparently was imported from Indonesia. One of the Viet Namese cases was *Plasmodium falciparum* which had relapsed several times on quinine therapy. The other three patients all had *Plasmodium vivax* infection.

Measles

A total of 4,160 cases of measles were reported for 1965. This compares with 12,691 cases for the preceding year. It is recognized that both of these figures are gross underestimates due to the incomplete nature of measles reporting.

Although total cases for 1965 were fewer than for the preceding year, a marked upswing in measles cases was noted late in the year. For example, in December, 1965, 921 cases were reported compared with only 84 cases for the corresponding month of the previous year. Measles incidence during the year by month and county was as follows:

Table 6. MEASLES CASES BY MONTH, NEW JERSEY, 1965

January	155
February	221
March	387
April	429
May	516
June	504
July	233
August	84
September	47
October	206
November	325
December	921
Month Unknown	132
Total	4,160

Table 7. MEASLES CASES BY COUNTY, NEW JERSEY, 1965

Atlantic	6
Bergen	278
Burlington	32
Camden	41
Cape May	15
Cumberland	4
Essex	2,132
Gloucester	0
Hudson	188
Hunterdon	0
Mercer	30

Table 7. Measles Cases by County, New Jersey, 1965—Continued

Middlesex	203
Monmouth	102
Morris	288
Ocean	2
Passaic	159
Salem	37
Somerset	179
Sussex	3
Union	312
Warren	1
State Institutions	7
Military	9
County Unknown	132
Total	4,160

The late 1965 returns, when analyzed by county, suggested the beginning of a measles epidemic in the northeast portion of the state. Responding to this situation and to scattered cases of measles reported from around the state, a number of municipalities held community-wide measles immunization campaigns. These campaigns were made available by the development within the last two years of a safe, effective measles vaccine requiring only one injection and without the necessity of administering gamma globulin concomitantly. This further-attenuated Schwartz strain vaccine was used in campaigns in Camden, Deptford, Gibbsboro, Morristown, Paterson, Runnemede, Winslow Township, and a number of other areas. The city-wide Newark campaign to immunize kindergarten and first graders in public and parochial schools was planned during the month of December to be carried out in January, 1966. In Trenton, representatives of the State Department of Health and City Health Department contacted all pediatricians, general practitioners, and osteopathic physicians to encourage prompt and complete measles reporting. The Mercer County Medical Society has approved a community-wide immunization campaign in the event that cases reach epidemic proportions in that community.

The State Department of Health made available Schwartz strain vaccine without charge to all children whose families were unable to afford its cost. The vaccine could be administered by private physicians or child health conferences.

Between November 24 and December 2, 1965, 119 cases of measles occurred in Dover, Morris County (population 13,034). Most of these cases occurred in one elementary school and in one area of town. An analysis of the case records revealed that most of the cases were among early school-aged children. The majority of the cases in pre-schoolers were secondary to contacts with their school-aged siblings or playmates. Thus it was felt that immunization of all younger school-aged children in the city might abort the

spread of the epidemic. On December 2, 1965, a measles immunization campaign was conducted in the kindergarten through third grade of the city's four public and parochial elementary schools. In all, 465 children were immunized in the school clinics, and this represented 80 percent of the susceptible children in grades kindergarten through three. The total percentage of susceptibles in the young school-aged group was reduced from 48 percent to approximately 10 percent. In addition, the attendant publicity stimulated immunizations in private physicians' offices, so that an estimated 500 additional immunizations were performed between November 29 and December 6, 1965. Follow-up data showed that 31 cases occurred in the 10 days following the immunization, during which time anti-body levels would be presumed insufficient to prevent the disease in most of the vaccines. In the subsequent month, however, only seven further cases of measles occurred in the town. It seemed clear that the immunization program had been successful in aborting the measles epidemic.

Mr. William Young, Dover Health Officer, the Dover Board of Health, and the Dover Medical Community received praise from Dr. Roscoe P. Kandle, the State Commissioner of Health, and from the Childhood Virus Diseases Unit, Communicable Disease Center, for their prompt and effective action in the face of an epidemic situation.

Rubella (German measles) is not a reportable disease in this state.

Meningococcal Meningitis

Eighty-five cases of meningococcal meningitis were reported. Sixteen of these occurred on military installations. The civilian cases were scattered throughout the state, and there were no reported meningococcal epidemics.

The United States Armed Forces Examining Station at Newark, conducted a throat culture survey in December. One hundred healthy recruits were cultured, and 30 positive meningococcal cultures were obtained. Types isolated were as follows: A-O, B-2, C-3, D-1, Mixed-1, Non-typable-23. Only two of the organisms isolated were resistant to sulfa.

Pertussis (Whooping Cough)

There were 106 cases of pertussis reported. The peak incidence by month of reporting occurred in June. Forty-four percent of the 1965 cases were reported from Essex County. Fifty-eight percent of the cases for which ages were recorded were in the 0 to 4 year age group, and no cases over 20 years of age were reported.

Poliomyelitis

Three cases of poliomyelitis were reported during 1965.

A four-year-old Morris County boy developed paralytic polio in July. He had had two Salk shots in 1962 and one dose of trivalent vaccine in May,

1965. Type III polio virus was isolated from the stool. No untoward effects were noted in other children receiving vaccine from the same pharmacy and given by the same physician. The patient experienced only mild residual disability.

An 11-year-old Union County boy developed paralytic polio in August. Serologic studies were compatible with type III infection, although cultures were negative. The patient had received three Salk vaccine injections five years ago but had never had Sabin vaccine. He was left with severe residual disability.

The third case occurred in a 46-year-old Bergen County man who acquired his disease in August while touring eastern Europe and Asia. He had had an undetermined number of Salk injections several years ago but had never had Sabin vaccine. He developed paralytic disease and has significant residual disability.

Psittacosis

There were no confirmed cases of psittacosis during the year 1965.

Rabies (See Veterinary Public Health Report)

No human cases of rabies were reported.

Rocky Mountain Spotted Fever

There were 17 cases of Rocky Mountain Spotted Fever reported in 1965, an incidence identical to that of 1964. Cases were reported from eight different counties, with Mercer County reporting six cases. Eleven of the 17 cases were reported during the months of May and June.

Seven of the cases were confirmed serologically in the State Laboratory. In five other cases, the laboratory evidence was suggestive, as was the clinical picture. The remaining cases were based on clinical diagnosis alone.

Seven males and 10 females were affected. Age breakdown on the cases by decade was as follows:

Table 8. Rocky Mountain Spotted Fever, New Jersey, 1965, by Age Groups

1-10	8
10-20	3
20-30	2
30-40	0
40-50	1
50-60	3

Salmonellosis (Excluding typhoid fever)

The 488 salmonella isolations recorded in 1965 compared closely with the figure for 1964.

Table 9. Salmonella Isolations in New Jersey, 1960 to 1965

1960	78
1961	70
1962	154
1963	562
1964	466
1965	488

Two hundred and fifty-three of the isolations were made from male subjects and 235 from females. Three hundred fifty-six of these isolations were associated with clinical salmonellosis, 31 were obtained from asymptomatic individuals, and for 101 isolations there was no clinical information available. Isolations in asymptomatic indivduals were generally from food handlers or contacts associated with clinical cases and thus were of epidemiologic significance.

Thirty-four serotypes were identified.

Table 10. Frequency of Serotypes Isolated from Humans, New Jersey, 1965

anatum	5
arizona	4
blockley	8
braenderup	2
bredeney	1
champaign	1
chester	11
derby	10
enteritidis	35
gaminara	1
heidelberg	37
indiana	1
infantis	28
java	1
javiana	5
meleagridis	5
montevideo	10
muenchen	2
muenster	1
newport	12
ohio	1
oranienburg	8
panama	5
paratyphi A	2
paratyphi B	9
poona	2
schwarzengrund	1
st. paul	13
schottmulleri	1
senftenberg	1
tennessee	6
thompson	8

Table 10. Frequency of Serotypes Isolated from Humans, New Jersey, 1965—Continued

typhimurium	185
urbana	2
Group B	22
C	3
C1	10
C2	1
D	2
E	1
F	1
Unknown	31
Total	495**

** In seven patients, two salmonellae were recovered from the stool.

S. typhi-murium is the most common organism isolated from humans not only in New Jersey but throughout the nation. The only striking difference between the serological pattern in New Jersey for 1964 and 1965 occurred in *S. derby* isolations. There were 103 derby isolations in 1964 and only 10 in the past year. The prevalence of derby isolations in 1964 probably reflected a multi-state outbreak of hospital acquired *S. derby* infections during 1963-64.

Table 11. Salmonella Isolations by Age Groups, New Jersey Residents, 1965

Under 1	60
1	33
2	39
3	31
4	22
5- 9	69
10-14	34
15-19	23
20-24	21
25-29	14
30-39	23
40-49	27
50-59	27
60+	32
Unknown	33
Total	488

The above distribution conforms in general to that observed throughout the United States for 1964. Thus in New Jersey for 1965, 12 percent of isolations were made in children under one year of age and 53 percent in children in the first decade of life. In the U. S. as a whole in 1964, 16 percent of isolations were made on children under one year of age and 50 percent in children during the first decade of life.

Table 12. SALMONELLA INCIDENCE BY COUNTY, NEW JERSEY RESIDENTS, 1965

County	*No. Cases*	*Mid-year Estimated Population 1965*	*Rate per 100,000 Population*
Atlantic	7	176,000	3.98
Bergen	79	907,000	0.87
Burlington	38	271,000	14.02
Camden	15	440,000	3.18
Cape May	3	54,000	5.56
Cumberland	13	116,000	11.21
Essex	48	933,000	5.14
Gloucester	4	157,000	2.55
Hudson	26	591,000	4.40
Hunterdon	7	60,000	11.67
Mercer	50	286,000	17.48
Middlesex	53	523,000	10.13
Monmouth	18	392,000	4.60
Morris	20	313,000	6.39
Ocean	1	135,000	0.74
Passaic	30	443,000	6.55
Salem	1	64,000	1.56
Somerset	17	167,000	10.18
Sussex	2	57,000	3.51
Union	55	560,000	9.82
Warren	1	68,000	1.47
Total	488	6,713,000	7.24

The incidence of reported salmonella infections was relatively constant throughout the year.

Table 13. SALMONELLA BY MONTH, NEW JERSEY RESIDENTS, 1965

January	43
February	32
March	56
April	50
May	56
June	56
July	33
August	34
September	35
October	33
November	25
December	35
Total	488

Salmonella organisms proved to be the etiologic agent in two food-borne outbreaks in 1965. It was a suspected agent in a number of other episodes.

At least 55 of 130 students and parents who attended a school banquet in Jersey City in May, 1965, developed acute gastroenteritis. Epidemiologic investigation pointed to roast beef as the probable vehicle of infection. Ten of 66 rectal swabs and stool samples obtained several days after the banquet were positive on culture for *Salmonella enteriditis*. One of four food handlers involved in preparation of foods for the banquet also was found to be harboring *Salmonella enteriditis* in her stool. Another of the food handlers had a recent history of diarrhea. Sanitary inspection of the catering establishment responsible for the banquet revealed many major deficiencies. Appropriate recommendations were made to the local health department concerning the catering establishment which was felt to represent a definite public health hazard.

In September, an epidemic of acute gastroenteritis occurred among 32 of 43 guests attending a catered party in northern New Jersey. Twenty-two persons required the care of a physician and 10 were hospitalized; most of these were residents of New York State.

The symptomatology and incubation period were compatible with salmonellosis. Nine patients hospitalized in two different New York hospitals grew out a Group B. Salmonella. Four of these were serotyped and were determined to be *Salmonella shottmuelleri*. Two cultures obtained on New Jersey patients by this Division grew out *Salmonella heidelberg*. (As *shottmuelleri* and *heidelberg* are closely related serologically, it is probable that all the patients involved had an infection with the same serotype.) A differential food consumption history taken from all guests at the party indicated roast turkey as the vehicle of infection. The turkey had been left unrefrigerated for six hours after cooking. One of three asymptomatic food handlers was found to have *S. heidelberg* in his stool. It was not clear whether the food handler acquired the salmonella from the turkey or vice-versa. Although no food residues were available for testing, a turkey from the same lot obtained from the wholesaler was examined by the Division of Laboratories and found to be free of salmonella organisms.

The infected food handler was prohibited from working until after he had successfully submitted three negative, authenticated stool specimens to the Division of Laboratories. Suggestions as to safer methods of food handling were made to the caterer and to the local health department.

Shigellosis

Fifty-five cases of bacillary dysentary were reported from 12 of the 21 counties. Nineteen of the cases occurred in Essex County and 10 in Hudson County. There were no major epidemics in New Jersey this year, although several household outbreaks were reported.

Streptococcal Sore Throat and Scarlet Fever

Twenty-eight hundred and forty-eight cases of streptococcal sore throat and scarlet fever were reported. Peak incidence occurred during March. Four hundred and two cases (14%) were reported from military installations.

Smallpox

A possible case of smallpox was reported in a recent returnee from an endemic area. This was rapidly investigated and found not to be smallpox. Sixty-eight surveillance requests were received from the Division of Foreign Quarantine, U. S. Public Health Service. These were followed up, but no cases of smallpox developed.

Tetanus

Two cases of tetanus occurred, both fatal. Tragically, a 43-year-old woman from Union County and a 30-year-old woman from Mercer County both died of this preventable disease. Neither of the patients had a definite history of immunization prior to the time of their injury.

Neither of the patients went farther than her own backyard in acquiring the fatal injuries. One patient was burned on the ankle while incinerating trash. The second sustained a cut by a rock while working in her garden.

Again this year, the State Department of Health issued warnings to the public encouraging tetanus immunization.

Trichinosis

During the past year, 16 cases of trichinosis were reported to the Division of Preventable Diseases. Eight occurred among residents of a single apartment house in Summit. Four were adults and four were children. They had two suspect meals in common with onset dates approximately three to four weeks later. Ham and sausage were both considered possible sources of infection. All patients recovered.

Two cases occurred after a wake held in one of the patient's homes. The remaining six cases were sporadic ones, scattered over a wide area of the state. Three of these could be traced to the patients' habit of eating raw meat.

Typhoid

Four cases of typhoid fever were reported. In three of the cases, the organism was isolated from stool and/or blood. The diagnosis in the fourth case was based on clinical and serologic findings.

There was one fatality in this group—a 70-year-old female inmate of a state mental institution. A survey of her contacts was done, and two asymp-

tomatic carriers were identified. One was a 55-year-old inmate who worked as a food handler preparing raw vegetable dishes for the typhoid patient's cottage. The second was a 65-year-old female who lived in the same cottage as the index case. Both have been declared typhoid carriers.

One patient contracted typhoid fever while on a tour of the Far East. She had a severe illness with high fever, prostration, jaundice and septicemia. However, she subsequently recovered. Stool samples were obtained on all 26 persons who accompanied her on the tour, and all of these were negative for *S. typhi.*

The remaining two cases occurred among teenagers. One of the patients is suspected of acquiring his infection while wading in a contaminated stream. In the second case, the source of infection could not be ascertained.

Migrant Health Program

New Jersey's 1965 agricultural season was characterized by intensive activity on the part of the workers in health, labor, social services, and education. At no time in the past, have so many people devoted their time, energy, thought, and creativity to the task of understanding the problems of migrant agricultural workers and testing the possible means by which these problems may be solved.

The Migrant Health Program had the benefit of several years' experience in providing organized care to the migrant agricultural population. Its administrative and professional staff was practically complete, lacking only a health educator of Puerto Rican origin. The contract agencies, experienced in planning for the migrant season, attacked their problems with skill and dispatch, requiring only minimal consultation and assistance from administrative and consultant personnel. The experienced nursing staff recruited for summer work in the southern counties assembled, organized, and moved into activity without delay at the beginning of July.

The inclusion of medical and dental public health trainees in the Migrant Health Program in 1965 was probably the most gratifying experience of the migrant season. The students participated in an extensive orientation program, accepted the great volume of material that was presented to them and in workman-like fashion reduced the material to a workable summary of the organization, structure, and function of the State Health Department and associated programs in other departments.

The multiplicity of experiences in the field gave the students a broad view of the many facets of public health medicine and dentistry, and stimulated their interest in problems associated with persons and families living in the lower income groups.

The Traineeship Program is certainly worthy of the attention of many other health departments who are involved in migrant health services. It promises a rich reward in terms of interest and future participation of young physicians and dentists in public health practice in the United States.

During 1965, the Migrant Health Program took several steps toward its goal of improving the health status of migrant workers. Several innovations to New Jersey were contributed during this period. In addition, the established health services were improved, refined and extended to reach a larger proportion of the workers.

The Family Health Clinic at the Salem County Memorial Hospital represented the first facility of its kind to be housed in a community hospital. Reactions to this arrangement were very favorable.

The initiation of Day Care Centers with the assistance of the Office of Economic Opportunity provided an opportunity to render both therapeutic and preventive medical care as well as nursing service to approximately one hundred infants and pre-school children.

The concept of providing Medical Social Services to migrant workers, using the facilities of community social service agencies under contract with the Department, has proven to be effective. It has led to deeper involvement of community agencies and brings to the program the strength of these locally oriented service groups, together with the prestige of their broad members.

The Migrant Life Education Program conducted jointly by the State Department of Health, under subcontract with the Office of Economic Opportunity has proven that once major administrative channels can be cleared and a method found for the rapid orientation of workers, a summer program can be founded. The persons selected as health aides responded well and it is anticipated that in any future summer, increased activity in this area can be achieved.

The increasing pace of public health nursing services rendered, amplified the need for a public health project nurse to maintain continuity of service and to provide for consultation to agencies faced with major public health nursing problems.

A deficiency in the follow-up of persons found to be tuberculin reactive in the Tuberculosis Screening Program was observed again this year. Attention must be given to this program to improve the level of follow-up, to detect the reasons for the deficiency and to take steps to improve this activity.

The survey of dental health needs in both children and adults revealed that we are only partially meeting the dental needs of the migrant worker and his children.

Statistical tabulations indicate the following increased health services. More than 2,740 people received direct services during the summer season;

955 persons were referred for services to major medical agencies, and 34 percent were able to complete their referral. Thirty-one percent of the migrant labor camps in the state were visited at least once.

Reports from the State Laboratory indicate that water supplies at 16 percent of the camps were sampled and 21 percent of the samples were found to carry coliform organisms. This points out the urgent need for improved sanitation of water supplies.

The discovery of 15 cases of primary secondary syphilis among 1,898 persons tested serologically indicates the existence of epidemic syphilis among the migrant workers. This point is made more cogent when direct darkfield examinations revealed five cases of sero-negative darkfield positive primary syphilis among a group of workers.

While it is true that effective screening of large populations and ready accessibility of therapeutic services at a clinic level may prevent a great deal of illness and thus reduce the need for in-patient care, nevertheless, every summer patients have been found who need hospitalization. New Jersey hospitals have for three years received from the State Department of Health less than 25 percent reimbursement on the unpaid bills of migrant workers. Eight of these 15 hospitals submitted unpaid bills for in-patient care during the period January 1, 1965 to June 30, 1965, in the amount of $10,107. Fifteen hospitals made reports of unpaid in-patient care incurred during the period July 1, 1965 to December 31, 1965; the total of such bills was $29,949. Two hospitals in one county submitted bills totaling $6,832 to the county government for payment. Adding together the charges for the entire period, the unpaid in-patient care incurred by migrant workers totals $46,888 for the period January 1, 1965 to December 31, 1965. The county reimbursed its hospitals, leaving a deficit of $40,056. There is $12,000 available from the State Department of Health with which to meet part of this deficit; thus, the hospitals will be reimbursed at a rate of 33 percent of unpaid bills in 1965. There is need to work out a more equitable plan for hospital services based on an accepted reimbursable cost.

The Maternal and Child Health Program agrees to reimburse each hospital a maximum of $250 per case, including pre-natal and post-partum visits. This amount was committed for each of the 56 cases registered. Until cases are completed and bills submitted, the funds for each case will remain committed. So far, 19 cases have been billed and paid. The following is a breakdown of the charges and payments:

Total Charges	*Amount Paid by Patient*	*Amount Paid by MCH*	*Balance Unpaid*
$3,729.50	$451.00	$3,000.95	$277.55

During the 1965 season, nine hospitals in seven counties either renewed or began participation in this program which is supported by a grant to Maternal and Child Health. In 1965, up to October 22, 57 new cases were registered, of which 28 were delivered and accumulated 80 in-patient hospital days. These 28 cases delivered and accumulated a total of 43 pre-natal visits or an average of 1.5 visits per case.

During 1965, important steps were taken toward achievement of the ultimate goal of providing migrants with necessary health services in the community. With the help of the Migrant Health Program, the Board of Freeholders of Cumberland County became the first in New Jersey to make a direct application to the United States Public Health Service for a grant of funds.

The change of focus is from state staff activity toward community-based services. A plan for the year 1966 will reflect this advanced concept.

Tuberculosis Control Program

In 1965, there were 2,614 cases of tuberculosis, in all stages, reported. Of these, 1,622 were diagnosed and reported as active cases. These figures represent a slight decline in numbers and rates for 100,000 in both total cases and new actives.

The last ten years of tuberculosis morbidity and mortality records are reflected in Table 1.

Table 1. TUBERCULOSIS CASES AND DEATHS NUMBERS AND RATES PER 100,000 POPULATION NEW JERSEY 1956 - 1965

Year	*Estimated Population*[1]	*Deaths*		*Total Cases*[2]		*Active Cases*[2]	
		Number	*Rate*[3]	*Number*	*Rate*[3]	*Number*	*Rate*[3]
1956	5,605,000	522	9.3	3,354	59.8	1,888	33.7
1957	5,728,000	519	9.1	3,543	61.9	1,806	31.5
1958	5,851,000	443	7.6	2,790	47.7	1,622	27.7
1959	5,974,000	443	7.2	2,909	48.7	1,619	27.1
1960	6,098,000	354	5.8	2,928	48.0	1,601	26.3
1961	6,221,000	389	6.3	3,120	50.2	1,570	25.2
1962	6,344,000	326	5.1	2,769	43.6	1,504	23.7
1963	6,467,000	364	5.6	2,867	44.3	1,634	25.3
1964	6,590,000	307	4.7	2,970	45.1	1,738	26.4
1965*	6,713,000	304	4.3	2,614	38.9	1,602	23.9

* Provisional figures.

As would be expected, the metropolitan area continues to account for more than half of the active and probably active tuberculosis reported in the state. This area consists of Essex, Hudson, Passaic, and Union counties.

In these counties, the major cities contribute the largest percentage of new active cases as follows: Newark with 418 has 77 percent of Essex County cases, Jersey City with 139 has 63 percent of Hudson County cases, Paterson with 79 has 64 percent of Passaic County cases, and Elizabeth with 47 has 38 percent of Union County cases.

Table 2 shows reported active tuberculosis cases and case rates per 100,000 population for 1965.

Table 2. Active Tuberculosis Cases and Case Rates per 100,000 Population New Jersey Counties and Major Cities, 1965*

Area	*Active Cases*	
	Number	*Rate*
Atlantic County	73	41.5
Atlantic City	60	103.4
Bergen County	64	7.1
Burlington County	31	11.4
Camden County	72	16.4
Camden City	42	37.2
Cape May County	7	13.0
Cumberland County	36	31.0
Essex County	418	44.8
Bloomfield	9	17.0
East Orange	26	34.2
Irvington	6	10.2
Newark	322	83.0
Gloucester County	28	17.8
Hudson County	227	38.4
Bayonne	9	12.3
Hoboken	25	53.2
Jersey City	139	52.7
Union City	8	16.0
Hunterdon County	17	28.3
Mercer County	112	39.2
Hamilton Township	18	23.1
Trenton	70	65.4
Middlesex County	81	15.5
Woodbridge Township	13	12.9
Monmouth County	60	15.3
Morris County	43	13.7
Ocean County	30	22.2
Passaic County	123	27.8
Clifton	13	14.3
Passaic City	23	44.2
Paterson	79	54.1

Table 2. Active Tuberculosis Cases and Case Rates per 100,000 Population New Jersey Counties and Major Cities, 1965*—Continued

Area	Active Cases	
	Number	Rate
Salem County	9	14.1
Somerset County	19	11.4
Sussex County	6	10.5
Union County	122	21.8
Elizabeth	47	44.8
Union Township	12	20.3
Warren County	13	19.1
State Institutions	10	....
Military Establishments	1	....
State Total	1,602	23.9

Note: Rates are not computed for Institutions and Military Posts because of lack of population base.

* Provisional.

Tuberculosis Case Register

On December 31, 1965, the State case register system, made up of 21 county registers, reflected a slight decrease in registrants from 15,432 in 1964 to 14,474 in 1965.

Table 3, below, depicts the status of these 14,474 cases and compares them with the four previous years.

Table 3. Tuberculosis Patients Under Registration New Jersey 1962, 1963, 1964, 1965

Status	1962	1963	1964	1965
Total	15,498	15,640	15,432	14,474
Hospitalized	1,852	1,750	1,629	1,016
Non-hospitalized	13,646	13,890	13,803	12,143
Active	1,092	793	727	646
Probably Active	268	246	184	160
Probably Inactive	340	372	290	448
Inactive	11,593	11,781	11,876	10,889
Non-Pulmonary	416	698	726	815

There is an obvious decline in the total cases reported which subsequently reflects a decline in all categories except Probably Active and Non-Pulmonary. Although efforts have been exerted to encourage physicians throughout the state to arrive at a definite diagnosis through use of bacteriologic examinations of sputa, etc., this area remains of concern.

There is a slight increase in the reporting of non-pulmonary tuberculosis which could possibly be related to closer scrutiny and follow-up of incomplete case reports and a more vigilant control of the registration systems at county levels.

Examination Status

The degree of success in obtaining medical examination on non-hospitalized cases of active tuberculosis *on time* is reflected in Table 4.

Table 4. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Examination Status
New Jersey 1961 – 1965

Status	*1961*	*1962*	*1963*	*1964*	*1965*
Total	100.0	100.0	100.0	100.0	100.0
Not Due for Examination	57.0	60.0	61.7	59.2	64.2
Overdue up to 12 months	17.0	15.0	19.2	16.1	21.2
Overdue 12 months or more	11.0	4.0	5.5	2.9	3.2
No Date Assigned	15.0	21.0	13.6	21.8	11.4

The greatest area of improvement, percentage wise, is the reduction of the No Date Assigned category to 11.4 percent. The ultimate is to increase the *Not Due* percentage to as near 100 percent as possible by reducing the overdues to the lowest number possible.

A further breakdown of the 136 patients overdue up to 12 months reveals 95 or approximately 70 percent are only overdue up to three months.

Sputum Status

It is becoming recognized that without adequate and modern bacteriologic examinations of sputum, inadequate care and management of tuberculosis are inevitable.

Table 5 reveals the degree of success in obtaining sputum studies on active, non-hospitalized tuberculosis patients.

Table 5. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Sputum Status
New Jersey 1961 – 1965

Sputum Status	*1961*	*1962*	*1963*	*1964*	*1965*
Total	100.0	100.0	100.0	100.0	100.0
Studied within 6 months	30.0	58.6	64.3	75.5	76.7
Studied over 6 months	50.0	27.5	30.4	19.4	19.7
Not studied	20.0	13.9	5.3	5.1	3.6

Of the 551 patients with active tuberculosis on whom sputum studies could be conducted (95 primary active not included) 423 or 76.7 percent were studied within the last six months of 1965. One hundred nine (109) of the 551 or 19.7 percent had sputum studies done six months ago or more. The percentage of "not studied" is reduced to a very favorable 3.6 percent.

Drug Status

The continuous consumption of anti-tuberculosis drugs by the non-hospitalized active tuberculosis patient remains of primary concern in proper out-patient care of the disease.

Table 6. Percentage of Non-Hospitalized Cases of Active Tuberculosis by Drug Status New Jersey 1962–1965

Drug Status	*1962*	*1963*	*1964*	*1965*
Total	100.0	100.0	100.0	100.0
Receiving drugs	63.1	66.0	63.0	73.2
Not on drugs	6.1	5.0	4.5	3.2
Status unknown	30.8	29.0	32.5	23.6

Four hundred seventy-three (473) of the 646 active (95 primary and 551 reinfections) cases or 73.2 percent were recorded as having received drugs during the last quarter of 1965.

Only 21 or 3.2 percent are registered as not on drugs. While the 23.6 percent of active registered as "status unknown" is an improvement, this remains deplorably high.

Drug Distribution

As the records show, the status of patients receiving anti-tuberculosis drugs has improved markedly. With this it is natural to expect an increase in the distribution of drugs through the 67 drug stations and out-patient clinics.

During 1965, 52,200 bottles of isoniazid were dispensed to patients in the state, 15,000 more than 1964. Likewise, 9,464 bottles of para-aminosalicylic acid were dispensed, 3,064 more than last year.

In addition to the above, 1,361 packages of streptomycin and approximately 450 bottles of seromycin, pyridoxine, and trecator were dispensed.

Contact Register and Investigation

At the close of 1964, there were 5,471 contacts in the register system on whom follow-up and examination had not been completed. This represented the registration activity in the counties of Hudson, Monmouth, and Passaic.

The following shows the results of contact interviewing and registration activity by quarter for 1965.

Table 7. PATIENTS GIVING CONTACT, NUMBER OF CONTACTS GIVEN, CONTACT INDEX AND NUMBER OF REGISTERS, 1965

Quarter Ending	*Number Active and Reactive Patients Giving Contacts*	*Number Contacts Given*	*Contacts Index*	*Number Contact Register*
Totals	686	4,749	6.9	8
March	133	886	6.6	3
June	173	1,489	8.0	6
September	160	928	5.9	7
December	220	1,446	6.9	8

The above represents contact registers in the counties of Bergen, Hudson, Middlesex, Monmouth, Ocean, Passaic, Sussex, and Union.

The carry over of 5,471 contacts from 1964 on whom examinations have not been completed, for 1965 gives a total of 10,220 potentially available for follow-up and examination during this year.

There were 1,051 contacts removed from the register system for reasons other than examinations. They were:

TOTAL	1,051
Death	29
Changed of diagnosis of index case	133
Moved away	240
Other	654

This number, subtracted from the total available for follow-up, leaves 9,170 on whom follow-up activity and examination could be conducted.

The following shows the results of contacts removed from the register as results of examination, during 1965.

Table 8. CONTACTS REMOVED FROM THE REGISTER AS RESULTS OF EXAMINATION BY QUARTER, 1965

Quarter Ending	*Number Examined*	*New Tuberculosis*	*Known Tuberculosis*	*Non-Household Negative Contacts*	*Contacts Complete Examination*
Totals	2,788	110	74	1,598	1,006
March	387	16	19	209	143
June	1,103	27	18	722	336
September	636	28	15	258	335
December	662	39	22	409	192

The examination of 2,788 contacts revealed the discovery of new cases (previously unreported) of tuberculosis at the rate of 39.45 per 1,000. As of December 31, 1965, 7,186 contacts remained in the register system.

Other registers are in developmental stages. The ultimate goal is to expand this system to as near as 100 percent of the state as possible.

Hospital Admission X-ray Screening Program

During 1965, seven hospitals were participating in the screening program. There is considerable contrast in results in 1965 compared to 1964.

Table 9. Hospital Admission X-Ray Screening Program
1964 – 1965

	1964	*1965*
Number of Hospitals	7	7
Screened (X-ray reported)	34,229	60,020
Suspects (abnormal findings)	1,049	792
Previously Reported Cases	346	258
Newly Reported Cases	152	61
Active Among the Newly Reported	32	7

Tuberculin Testing

Public Schools

The value of designing and maintaining an effective tuberculin testing reporting system is becoming apparent and in Table 10 below, we compare the last two school years' results.

It is noteworthy that in grades one and five, there was a significant increase in the number of children enrolled in school year 1964-65 and a larger percentage of those tested. There was a decrease in the percentage of reactors. Three new active cases were discovered among 2,154 reactors as compared to one during 1963-64 school year.

In grade nine, approximately the same number of children were tested each year but the percentage of reactors dropped considerably. Among these, two new active cases of tuberculosis were discovered as compared to one in 1963-64.

In grade 12, there were 8,176 more children tested during 1964-65 than in 1963-64, and this resulted in more reactors being followed. However, there was a decrease in the percent of reactors during 1964-65 and the same number of cases, two, discovered each year.

Table 10. TUBERCULIN TESTING IN NEW JERSEY PUBLIC SCHOOLS
SCHOOL YEARS—1963-64 and 1964-65

	Number in Grade		Number Tested		Number Reactors		Percent Reactors		Number Followed		Number Active Found	
School Year	63-64	64-65	63-64	64-65	63-64	64-65	63-64	64-65	63-64	64-65	63-64	64-65
TOTAL	497,257	574,166	395,198	441,734	11,393	14,800	2.90	3.40	10,253	13,694	10	15
Grade 1	97,915	100,205	94,342	97,767	983	868	1.04	0.90	796	807	0	1
Grade 5	82,738	88,548	80,326	87,254	1,468	1,420	1.82	1.60	1,350	1,347	1	2
Grade 9	87,529	87,208	82,354	82,079	2,565	2,409	3.11	2.90	2,428	2,375	1	2
Grade 12	66,972	74,889	62,140	70,316	1,879	1,983	3.02	2.80	1,636	1,903	2	2
Post Graduate	7,678	6,240	2,016	995	78	81	3.90	8.10	68	68	0	0
Unclassified	44,227	53,681	30,050	33,933	1,222	957	4.10	2.80	845	731	1	1
Teachers and Employees	83,651	85,810	21,773	34,812	2,130	5,070	9.80	14.60	2,062	4,806	2	0
Newark Public Schools	26,597	77,585	22,197	34,578	1,068	2,012	4.81	5.80	1,068	1,657	3	7

The number of post graduates was about equal for the two years. However, less than half the number were tested in 1964-65. The percentage of reactors increased from 3.90 in 1963-64 to 8.10 in 1964-65. The number followed remained constant and no cases were found among this group.

There was a marked increase in numbers of reactors found among teachers and employees in 1964-65 with the numbers of reactors followed doubling. Fortunately, no new cases were found among this group.

Newark Public Schools, with 2,012 reactors in 1964-65 (almost double that of 1963-64), represents a higher case finding success rate than any other group tested.

Parochial Schools

Because record keeping was not completely developed for school year 1963-64 in parochial schools, comparative figures are not available. However, the results of year 1964-65 are shown in Table 11. It is of interest that the percent reactors in both school systems are almost identical. The greatest difference is in the teacher and employees, with parochial schools having 19.7 percent reactors as compared to 14.6 in the public schools.

Tuberculin Testing Program—Lambertville, October, 1965

A Tuberculin Testing Program was conducted as a result of an outbreak of tuberculosis in two families living in a specific area in Lambertville.

There were 188 persons tested, three of which were not read. Of the 185 read, 34 or 19 percent were found to be positive reactors. This includes four that were found to be Mantoux positive, out of the eight retested.

The follow-up of tuberculosis reactors showed 34 received 14 x 17 x-rays, 32 were found to be negative, one was found to have minimal, inactive disease, and one was found to have a cardiovascular condition.

From this, one can conclude that contact investigation is more productive than community surveys, even though the latter are directed to high incidence areas.

Table 11. TUBERCULIN TESTING IN NEW JERSEY PAROCHIAL SCHOOLS SCHOOL YEAR 1964-65

	Number in Grade	Number Tested	Number Reactors	Percent Reactors	Number Followed	Number Active Cases Found
TOTAL	42,580	39,059	885	2.3	749	1
Grade 1	14,231	13,655	108	0.8	97	..
Grade 5	12,685	12,045	185	1.6	166	..
Grade 9	5,907	5,695	148	2.6	139	..
Grade 12	4,981	4,613	115	2.5	96	1
Post Graduates	44	44	1	2.3	1	..
Unclassified	1,754	1,584	49	3.1	36	..
Teachers and Employees	2,978	1,423	279	19.7	214	..

Diagnostic and Clinical Services

In the 21 counties there are approximately 40 clinics providing tuberculosis diagnostic and treatment services. During this year there were 33,792 persons reported registering in these clinics for the first time and a total of 94,700 visits made to these facilities.

Accounting for this large volume of clinic visits were: 1) 75,988 x-ray examinations, 2) 13,222 sputum samples taken for examination, and 3) 22,561 tuberculin tests (5,422 reactors) in the management and search for tuberculosis.

In association with the clinic activity, public health nursing services were provided to 3,474 persons with tuberculosis and 6,990 contacts and persons suspected of having tuberculosis.

Tuberculosis Nursing Services

Public Health Nurse Consultant

Nursing in the Federal Tuberculosis Project areas during 1965 has expanded in the clinic services of Passaic County and Newark City. Interviewing applicants and orienting new nurses to the Tuberculosis Control Program and State Laboratory facilities were part of the Public Health Nurse Consultant's responsibility.

Educational meetings in tuberculosis nursing for local public health nurses were conducted in Passaic, Camden, and Warren counties.

At the request of the Educational Director, Clara Maass Hospital, Belleville, the Consultant lectured to 28 senior student nurses. The Consultant participated in "Conference for Public Health Nurses in Special Projects" held in Philadelphia, lecturing on *Nursing Priorities in Working with Patients.* Four nurses from New Jersey attended this conference. A talk on tuberculosis was presented to students and faculty of Notre Dame High School, Mercer County.

The Consultant, representing the Tuberculosis Control Program, contributed to the implementation of a joint plan towards effective coordination of Tuberculosis Control Services in Camden County. Other activity included assisting in studying and correcting deficiencies in the case register, securing cooperation of local agencies, personnel, and trying to establish a system of communications among all agencies involved in the care of tuberculosis patients in Camden County. Long range planning will necessitate further consultation in establishing a record and report system at the Camden County Hospital for Chest Diseases, as well as, a system of patient referrals; in implementing standardized procedures for nursing supervision and follow-up in the Out-Patient Department and in the County; in developing a system for

patient referrals to social services and rehabilitation resources; and in developing in-service education programs for professional personnel.

A small rural community which experienced an epidemic of tuberculosis requested assistance from the Consultant in planning, organizing and implementing a program for mass tuberculin testing and casefinding.

Various agencies received consultation primarily in regard to patients discharged from New Jersey State Sanatorium who were in need of re-treatment, tuberculosis drugs, job placement and housing. Problems were solved locally through county welfare boards whenever possible, but many problems remain for medically indigent patients who are not eligible for welfare funds.

Consultation visits were made to agencies and hospitals in Passaic, Hudson, Union, Atlantic, Ocean, Essex, Camden, and Hunterdon to assist them in analyzing needs, record coordination and priority caseloads.

The Consultant worked with the Tuberculosis Health Education Consultant in developing a study to determine what patients who have active tuberculosis know about their disease.

Health Education Activity

Since joining the staff on March 1, 1965, the health education consultant has aimed to identify the educational needs of the Tuberculosis Control Program.

To obtain information on the educational needs of the Tuberculosis Control Program, clinic patients were asked a few simple questions, such as: (1) How does the tuberculosis germ get into your body? (2) What do the pills do for you? (3) What grade did you complete in school? (4) How many live in your house? (5) Do you understand your doctor when he tells you to do something? Answers to these few questions made it clear that further questioning and a more precise plan were needed.

In the three-month period, 55 patients were informally interviewed.

Time was spent with the clinic staff to define problems that might have educational implications. Problems in communicating with the patients were observed. It was clear that most patients did not know what "Mantoux" test meant and the use of *Skin Test* instead of *Mantoux* was recommended for use with patients.

After the tabulation of informal interview results, a questionnaire was designed to determine patients' knowledge and attitudes. It was planned to administer this questionnaire to a sample of non-hospitalized tuberculosis patients in the thickly populated metropolitan area of the state.

The questionnaire was prepared and pretested. The pretest indicated inadequacies which entailed complete revision. The second draft containing

37 questions was pretested and showed a few necessary changes. These changes have been made and 30 questions now make up the final questionnaire.

To provide a supply of visual aides, the Program has purchased: a model of the chest, lungs and heart with several movable parts for more effective teaching; a set of flat pictures depicting all phases of tuberculosis, its causes, prevention and treatment; films are being previewed for use in education programs; and literature is being secured and previewed.

The Program needs adequate orientation of new employees and periodic in-service training sessions. A committee is planning orientation and in-service training sessions. A comprehensive orientation and training manual is being prepared.

A graduate student in health education from the University of California was assigned to the Program. The student, a young lady from West Pakistan, spent five weeks in New Jersey in activities that included orientation, field visits, program planning, and evaluation. A report of her activities and an evaluation of her experience was forwarded to the University of California.

Health education activities in the Program have been primarily aimed at determining the educational need of the patient, the family, the community, and the professional staff, with priority directed at the patients' needs. The major portion of the Consultant's time has been spent in conducting a survey among non-hospitalized tuberculosis patients. A description of the survey follows:

Tuberculosis Out-Patient Survey

This project was initiated to strengthen patient education. The staff felt a study would help determine the shortcomings in patient services. These shortcomings could be used as a basis for improving patient understanding and attitudes about tuberculosis and healthful living.

The intent was to obtain direct responses from a representative sample of the non-hospitalized population which would provide suggestive answers to the following types of questions:

> What do non-hospitalized patients know about tuberculosis? What are the principal sources from which they have acquired their present information? What are the major gaps in their knowledge? What are some of their predominant attitudes toward the disease? What kinds of problems do these patients encounter and consider important? What changes should be made in health education and information services?

After reviewing the limited available studies in this area, we felt it necessary to conduct a survey designed to meet our specific needs.

Non-hospitalized patients with active tuberculosis were selected for the study from the counties of Hudson, Union, and Passaic and the City of Newark.

The patient interview program started in October, 1965, and is about 70 percent complete. The questionnaire is being hand-carried to the patient's home by the program health educator, who is conducting all the interviews.

Progress to date is shown in the following table.

Table 12. PROGRESS OF PATIENT SURVEY—TO DATE

	Number of Patients						
Areas in Survey	*Total*	*By Area*	*Partici-pating*	*Not Located*	*Refus-ing*	*Moved From State*	*Deceased*
Total	57	82	41	3	8	3	2
Newark City	20	20	17		2	1	
Passaic County*	10	18	8	1	1		
Union County*	3	16				1	2
Hudson County	24	28	16	2	5	1	

* Passaic and Union Counties are not completed at the writing of this report.

As the chart indicates, the survey is approximately 70 percent completed. Tabulation and analysis have not progressed to the point where we can draw definite conclusions but some general observations can be made. (1) The fact that people with tuberculosis are living longer is pointed out by the great number of persons over 60 appearing in the sample; only two or 4.8 percent of the first 41 contacted had died. (2) Of the patients initially chosen for this study, 57 or approximately 86 percent of the total were located for interview. This seems to refute the generally accepted theory that patients are uncooperative and difficult to locate.

Camden Project

Efforts were made to formulate a plan to provide for regionalization of tuberculosis control services in Camden County. Those who participated in the planning included the director of the hospital at Lakeland, the Camden County tuberculosis controller, the director of the Camden Visiting Nurse Association, the Health Officer and the Director of Health and Welfare for the City of Camden, and the New Jersey State Department of Health.

In-Service Education

An in-service education program was held for Camden City Visiting Nurse Association which included nurses from other county agencies.

A series of 10 lectures was offered.

1. The Director of the Division of Preventable Diseases, New Jersey State Department of Health.
2. The Director of New Jersey State Tuberculosis Sanatorium.
3. The Tuberculosis Controller Camden County.
4. Two Public Health Nurse Consultants from the New Jersey State Department of Health, one from Tuberculosis Control Program and one from the Mental Health Program.

Content included pathology and pathogenesis of tuberculosis, casefinding, contact investigation, caseholding, follow-up and nursing supervision of tuberculosis patients, contacts and suspects, chemotherapy and chemoprophylaxis.

The series culminated with a trip to Lakeland Hospital.

The Director of the Visiting Nurse Association said, the group had been motivated toward tuberculosis control in their area.

Additional Personnel, Expansion of Facilities and Equipment

A Public Health Nurse Supervisor from the State Department of Health was placed in charge of the case register in Camden County Hospital for Chest Diseases, Lakeland.

The public health nursing supervisor has been up-dating the case register cards, which has proved to be a complex task. In addition, daily interchange of information has been established between the case register and the follow-up agency in Camden City. The quarterly case register report for December 1965 depicts more pertinent data than prior reports.

It has been proposed that the Public Health Nursing Supervisor attend the Out-Patient Department clinic at Camden County Hospital for Chest Diseases to initiate and establish a system of communication for patient referrals, records, reports and methods for disposition of various referrals.

Visits will be made to other tuberculosis clinics in general hospitals in Camden City to aid in developing a system for routing to the register essential information about tuberculosis patients and contacts.

It is planned that the public health nursing supervisor will interview all newly admitted patients to Camden County Hospital for Chest Diseases for contacts.

There is a need for expanding out-patient department facilities and equipment at Camden County Hospital for Chest Diseases.

A total of 483 out-patient department visits was recorded in 1965, and there were 3,398 referrals for x-rays, originating from private physicians,

health departments, tuberculosis associations and nursing agencies in the county.

Remodeling of existing facilities has begun. Consultation has been given by the State Department of Health regarding remodeling, construction and additional equipment for the clinic facilities.

To increase bacteriologic sputum examinations culturing and sensitivity determinations, the State Department of Health entered into agreement with Camden County Hospital for Chest Diseases for the services and training of a technician and a nebulizatonn unit.

The nebulization unit consists of eight heads, eight mouthpieces, eight cups, two heating units, one compressor, a booth, a blower, filters, vent and duck work, manometer, outlet, benches and lights.

Newark Project

The activities of the Newark Project have changed dramatically during 1965. The greatest influence on this change has been additional staff to augment the activities being carried out in the Bureau of Chest Diseases.

Personnel

The staff has grown from three persons in late 1964 to 14 at the close of 1965. They are a project director, a public health advisor (PHS), three field representatives, three nurses, five clerks and a nebulizer technician. In addition, there are five physicians on contract for evening clinics.

Accomplishments

1. *Appointment System*

   An appointment system has been successfully developed for every clinic. Patients are given a specific time to return to clinic and to see the same doctor, if possible.

   In June, the Health Officer of Newark ordered a particular time and date for return visits for all tuberculosis cases in their first two years of treatment for tuberculosis. These patients are to be seen by a physician at least every two months.

2. *Sputum Cultures*

   The number of sputum cultures done by the Newark Health Department Chest Bureau has increased significantly during 1965. It is now routine to have new cases nebulized if they cannot raise sputum on their own or if the authenticity of their sputum specimen is in

question. Specimens are now sent to the State Laboratory where a smear and culture are done on every case. Six months ago, smears were done routinely and cultures were reserved only for questionable cases.

Positive smears on patients for whom it is specially requested will have direct sensitivities done by the State Laboratory on 7-H-10 media. This means that drug sensitivities on these patients are available within three to four weeks from time that specimen is submitted. Drug sensitivity tests are available not only to patients on first line drugs, but also to patients on treatment with second line drugs. A typical mycobacteria are identified by group through use of appropriate bacteriologic examination.

3. *Nebulizations*

Beginning in January, 1965, a nebulizer technician began full-time operation during all clinics conducted by the Newark Chest Bureau, and also during the afternoon and evening clinic sessions. The technician nebulized approximately 160 patients in June. These were new cases, suspects with x-rays suggestive of active disease, and patients who could not produce sputum spontaneously. The number of cultures done by the Newark Health Department Chest Bureau during morning clinic sessions went from 119 in January to 202 in June.

The nebulizer apparatus is housed in a booth the size of a telephone booth. The air from this booth is exhausted, passed through an air filter and out the window. The State Health Department Environmental Health Division measured the air flow through the booth to be 600 air changes per hour. This is eight times the figure of 75 air changes per hour recommended by Professor Riley in his monograph on air-borne transmission of tuberculosis. It is calculated that there is a complete turnover of air every six seconds within the nebulizer booth. Kodachrome slides of the booth were shown to colleagues at the Chicago National Tuberculosis Association meeting by the Project Director.

4. *Mantoux Testing Activities*

The Mantoux test has replaced the tine test as the tuberculin test used by the entire Newark Health Department Chest Bureau. Tests are no longer read after 72 hours. They are read in millimeters of induration, rather than graded on a 1-4 plus scale.

It has been the custom to place routinely on INH prophylaxis all children referred from the Board of Education as "Tine test positive."

During the school year, this means hundreds of children referred to the Newark Health Department Clinic every month. However, careful examination with the Mantoux test showed that the majority of these children are actually negative to 5 TU of intermediate strength PPD. Thus, the intensive, follow-up and chemoprophylaxis of a group of children with questionable tuberculin reactions has been discontinued.

Many more contacts have been initially examined with the Mantoux test. With contact follow-up occurring at two months, six months, 12 months, 18 months, and 24 months, converters have been picked upon occasion.

5. *Contacts*

Prior to January, 1965, contacts were followed for prolonged periods of time, especially if they were children. It was not unusual to find contacts being followed for four and five years, being given INH prophylaxis intermittently over much of this time, even when the index case had been discharged from supervision. Contacts to inactive pulmonary tuberculosis, and also to primary inactive tuberculosis, had been followed routinely. During this past six months, major changes have occurred in the above. The Health Officer has directed that only contacts to active pulmonary tuberculosis and active primary tuberculosis be followed. A careful definition of an index case has been forwarded from the State Health Department through the Health Officer to the Chest Bureau. All active pulmonary tuberculosis, active primary tuberculosis, active tuberculosis pleurisy, active tuberculous laryngitis, active extra-pulmonary tuberculosis in children under the age of 16, and probably active tuberculosis in the above categories will be considered as index sources for contact follow-up.

One major problem was noted in processing contact interviews. Even though some 260 index cases were reported in the first six months of 1965, only 135 contact interviews were done. Further investigation of completeness of contact follow-up will be done.

6. *Social Service*

Assistance was rendered to the Project by the consultant who was concerned with the problems of welfare, rehabilitation, and psychosocial problems. Even though she is no longer employed, much of her effort in discovery and solution of problems will carry over.

7. *Case Conferences*

In early May, case conferences were initiated for the entire Project physician staff. The cases represented several types: difficult cases,

unusual cases, new cases in which a question of treatment was present, and cases referred to the conference by the regular city health department physicians. These are being conducted now by the Project Director along with the Medical Director of the State Sanatorium.

Follow-up Activity

In the Newark Tuberculosis Control Program, the city employs 17-20 nurses who do specialized tuberculosis nursing.

Since July 1, 1965, the project has contributed 20 man months of follow-up services. The criterion for a case being assigned to the field representative has not been completely worked out. However, the services of the men have contributed to the successful close out of 342 problem cases. These represent patients who are lost to supervision for long periods of time: patients who have not had medical examinations, x-ray and sputum examinations for extended periods of time, and contacts of active cases with whom the nurses have not been successful.

Case Register Activity

As of December 31, 1965, the Newark Register system reflected 2,367 total cases of tuberculosis. Only 356 of these are hospitalized, leaving 2,011 to be cared for on an out-patient basis. Among the non-hospitalized, there are 1,829 pulmonary cases, of which 101 are in the community with active disease.

Among the active cases on whom sputum examinations could be conducted (re-infection cases), 62 had an examination within the past six months and 12 were examined more than six months ago. Among these, 22 had positive results.

The frequency of examination is improving in Newark with the following as evidence: five of the 101 are overdue six to 12 months, six are overdue three to six months and 17 are overdue within the past three months.

Fifty-six of the 101 are registered as being on drugs. This means the need for improving the drug status category is paramount.

Doctor Fred Bass left the Newark Project in the late summer.

In September, Dr. Donald Sickler became an employee of the Tuberculosis Control Program.

From September through December, Dr. Sickler operated the Newark Project.

Evaluation of the Operation

Objectively, there has been sizable progress in the total operation of the Project, within existing limitations. There remain, however, many incompletions.

The closing of the wide gap between this present-day technical knowledge and the operational application on the community level, offers exciting and promising responsibility to program planning.

Hudson County Project

During 1965, this Project continued its concern with improving the medical supervision of patients with active and inactive disease, assuring the examination of contacts of active cases of disease, providing more and better social services, and further developing relations with local government to enhance further the activities of modern out patient care of tuberculosis.

Pediatric Study

The study on the care of children with tuberculosis in Jersey City has been completed. Resulting from this study, several changes have taken place in the area. One very important discovery was the dual services available in the Jersey City Medical Center and the B. S. Pollack Hospital for Chest Diseases. An agreement was reached whereby children with tuberculosis would be assigned to the pediatric clinic in the B. S. Pollack Hospital for complete care and treatment.

Many detailed observations were made concerning the care of the pediatric tuberculosis patient, both on the wards and in the clinic.

Patient Services Coordinator Activity

During 1965, Miss Grace Miller continued to serve in Jersey City and Hudson County as patient services coordinator. The following is a partial numerical listing and some typical case histories as discovered by Miss Miller in her work.

Number of patients serviced		293
Sources of referral		
Case register	106	
State Hospital - Glen Gardner	80	
Epidemiologist	8	
Self or Family	68	
Follow-up agencies	11	
Hudson County Chest Clinic	14	
Other	6	
Total number of patients who required assistance		210

During this period, the problem of providing special medications continued with approximately 47 patients requiring second-line drugs. Most of these were in the older age group and lived on low, fixed incomes. Welfare recipients did not have a problem as their medication was provided without charge. However, the patient who was not on welfare had to pay for special medication and this proved to be a hardship. The State Department of Health began to provide these special drugs upon request and the medication was dispensed by the patient service coordinator. After a few months, this plan was discontinued. Arrangements were made for individual prescriptions to be forwarded to the Trenton office and the medication was sent to the patient. These medications are now being provided to the patient by the Hudson County Chest Clinic.

Social

Included under the general category of social services are frequent discussions with the patient and his family regarding their understanding of the diagnosis and the treatment of the patient's illness. Although this service is provided by the hospital staff, at Glen Gardner the patient can identify his community and outside problem with the patient services coordinator from Hudson County. Once the patient can acclimate himself to the hospital routine, his concerns turn to the outside world. Some of the areas of concern are: how is the family managing during the period of hospitalization; obtaining a pass to take care of a business matter; worry about disposition of his personal belongings; concern about his job; and location of friends or relatives.

Other Project Activities

During 1965, the project received national recognition by being featured in the Annual Report of the National Tuberculosis Association. How project personnel were able to help a couple, both suffering from tuberculosis, is the central theme of the report.

In December, 1965, the Patient Service Coordinator left the project to function at the state level as a consultant to all projects. In anticipation of this action, the Hudson County Tuberculosis and Health League employed a Program Assistant to act as Patient Service Coordinator to replace Miss Miller. This position is being supported by a grant from the New Jersey State Department of Health. Miss Frances Modzelewski joined the staff of the League on November 1, 1965 and after six weeks of orientation assumed the duties of Patient Service Coordinator. Policies, procedures, and reports concerning the coordinator's activities were formulated in December.

It is the responsibility of the Patient Service Coordinator to interview all newly reported active tuberculosis patients in Hudson County and/or their

families to determine need or eligibility for public assistance. The Coordinator will at this time also try to ascertain whether the patient or family has social problems that would interfere with the treatment of the patient's disease.

Case Register Activities

On December 31, 1965, the case register reflected 1,723 total cases of tuberculosis. There are 1,484 in the community, of which 1,328 are registered as having pulmonary disease. One hundred and twenty-six of these are active and re-infection cases.

Thirty-two of the 108 re-infection actives or 29.6 percent are overdue for sputum examination in excess of six months. Thirty-one of the 126 actives (primary and 108 re-infection cases) or 24.6 percent are overdue for medical examination in excess of three months. Thirty-four of the 126 actives or 26.9 percent are off drug therapy or drug therapy status is not known.

Follow-up Activity

In Hudson County, approximately 90 percent of the follow-up is conducted by the field representatives. This includes the interview of the index case for contacts and tuberculosis supervisory follow-up of patients with active disease, patients with inactive disease on whom medical supervision is continued, and on contacts and suspects.

An analysis of this follow-up shows 2,154 assignments completed. The five categories into which all closeouts fit are:

1. Services completed
2. Referred to other workers
3. Moved, died
4. Unable to locate
5. Other

The category, *Services completed,* accounts for 90 percent of the total closeouts, meaning that the need for which the assignment was made has been met.

The 2,154 closed assignments are broken down into cases (1,312) and contacts (842).

The cases were assigned because the case register reflected the patient in need of (1) medical examination, (2) x-ray, (3) sputum examination, or (4) for drugs.

The contacts were assigned because they had not had the necessary and proper examination to determine the presence or absence of tuberculosis.

The total project personnel was responsible for successfully closing an average of 179 assignments per month for 1965.

Passaic County Project

More than two years of intensified work in the City of Paterson preceded the present County-wide effort. The Paterson experience proved that most tuberculosis patients will participate in a program geared to their needs. It also provided a stimulus to the county as a whole, to deal more effectively with the tuberculosis problem in order that the goal of eradication might be achieved.

Goals

Passaic County, with its population of 406,618, had the fifth highest reported incidence of active tuberculosis in the state in 1964. It is a long way from the goal of eradication by 1970.

As for the intermediate goals, this is where Passaic County stands:

1. A new active case rate of not more than 10.2 per 100,000 population, Passaic County was 32.6 in 1964.
2. A community control of the spread of infection to the point where not more than one percent of the 14 year olds react to tuberculosis. 1964, public schools, 3.4 percent—Parochial School one percent.

Tuberculin testing in all the areas of the county was limited in 1965, and not all areas reported. Although some communities in the up-county area seem to have already achieved the intermediate goals for New Jersey, the county as a whole has a long way to go.

The Problem

Analysis of the case register indicates the following distribution of tuberculosis in the county. The figures in Table 13 and Table 14 indicate that 57 percent of cases are located in Paterson, 43 percent in the rest of the county. The second largest case load is in the lower county area, where approximately 30 percent of the cases reside. The less populated, but rapidly growing "up-county" areas account for the remaining 13 percent.

In addition to 1,045 cases in the current files, there are 2,844 old "inactives" diagnosed more than five years ago. This means that a total of 3,889 persons in Passaic County need to be reached with varying degrees of follow-up in order that necessary surveillance can be instituted and proper disposition made.

The Passaic County Tuberculosis Eradication Council

In early 1964, this council was formed. It is composed of professional representatives from all municipalities, the County Tuberculosis and Health

Association, county government, hospitals, schools, the County Medical Society, and the State Health Department.

General agreement by council members on the basic structure of co-ordinated county-wide out-patient clinic plan led to the development of county oriented clinics in three areas, serving all residents throughout the county.

The council has been a force in promoting cooperation, increasing information, trying fresh approaches, arranging for orientation and training of personnel, pooling manpower and other resources and stimulating the development of specific program priorities and responsibilities.

Three Area Clinics

1) Paterson with the largest case load has been receiving the largest share of assistance since early 1963. Federal project funds through the offices of the State Health Department, the county government, and the Tuberculosis Association have effectively supported this work. These agencies continue to assist the City of Paterson in terms of personnel, supplies and equipment, and complement available local services.

2) From July through August, in addition to supplies and equipment, project personnel included two nurses, two health investigators, 10 hours of doctor time, one x-ray technician, as well as consultative and supervisory personnel. One county nurse and physician also served 10 hours per week. From August through December, staff assistance continued through the Project—eight hours of nursing time per week, 10 hours doctor time, one full time health investigator, and a supervisor. One county nurse and physician continue to serve 10 hours per week.

Second Clinic Opened

Until early this year, the up-county areas depended upon the mobile unit and the Preakness Hospital facilities and staff to provide the necessary xray, diagnosis and treatment, and consultation services. With the discontinuation of the mobile unit, the need for services became increasingly important.

The Wayne Health Center, a modern facility, was offered as a location for the tuberculosis clinic and in September, 1965 work began in the up-county area. The climate was favorable, requests for service were increasing, and there was a tremendous amount of support in both professional and local government circles.

The county-oriented clinic in Wayne, offering complete services, has been in operation since September 21, 1965 with one regularly scheduled clinic

session a week, and additional sessions for tuberculin testing, conferences, xrays, etc.

The clinic is under the direction of the Director of Tuberculosis Services for Passaic County. The staff assigned to serve in this clinic includes two nurses, two field representatives, a clinician (three hours per week), an xray technician, and one clerk. (These same workers also serve in other areas of the county.)

Cooperation has been excellent with the Wayne Health Officer and a staff participating in clinic activities as necessary and possible.

Table 13. Up-County TB Clinic Activities September 21 – December 31

Number of Clinic Sessions	13
Number of Clinic Hours	39
Persons attending clinic sessions	69
Total visits to the clinic	718
Number of xrays taken	639
Home visits made by Project Staff	76
Tuberculin tests in clinic	191
Tuberculin tests in community	1,287
Appointments made by letter, phone, home visits, for future clinics	181
Persons moved, died, discharged	30
Bacteriologic tests	67

Of 771 persons who have been diagnosed as tuberculous in this area, 23 percent now have appointments to come to the clinic.

The Third County Oriented Clinic was scheduled to open in the Passaic General Hospital in February, with two clinics per week. As in Wayne, this clinic will be open to all county residents and will offer complete screening, diagnostic and treatment services for the tuberculous patient, including nebulization.

The staff will be assigned on a cooperative basis, with both project and local health department personnel participating, under the direction of the Director of Tuberculosis Services in Passaic County.

Since Passaic City has the second largest case load in the county, the project staff will be concentrating a great deal of effort here in cooperation with the health department nurses.

Records indicate there are 648 registered cases in the City of Passaic in 1965.

At present, nurses transport patients to Preakness Hospital for x-rays and other services. The new clinic, closer to home, should improve patient participation and surveillance, and preserve valuable nursing time for the professional services which nurses are prepared to give.

In summarizing the county situation, there has been satisfying participation in all areas of the county, from residents and professionals alike. The steps being taken to amplify and improve the out-patient services for the tuberculous are unquestionably needed. Most local health departments with limited personnel are overwhelmed by demands made upon them for long term surveillance and intensive care of tuberculosis.

If eradication of tuberculosis is to be achieved, assistance from federal, state and county sources must be continued.

Summary of Work Completed or Now in Progress

1) Standard operation procedures for Passaic County Clinics have been detailed by the Director of Tuberculosis Services for the guidance of professional personnel.
2) Basic procedures have been outlined.
3) Training and orientation of personnel continues on a regular basis.
4) Staff activities are being integrated gradually with programs of the local boards of health, as guidance and service are requested.
5) Available dates regarding registered patients in each area are being reviewed with each nurse.
6) Wayne clinic in operation. (Awaiting nebulizer.)
7) Passaic General to be opened in February, 1966.
8) Detection programs in schools proceeding.
9) Detection programs in communities being planned as requested for the spring.

On December 31, 1965, there were 1,045 cases of tuberculosis registered in Passaic County. Only 109 of these are hospitalized, leaving 936 to be cared for in the community. Eight hundred seventy are carried as pulmonary disease and there are 71 among these who are registered as having active disease.

Fifty-five of the actives have had sputum studies within the last six months.

According to the register, there are only nine patients who were overdue for medical examination in excess of three months.

The register further shows that of the 71 active cases, there are nine carried as drug therapy unknown.

The following shows the distribution of cases in Passaic County by municipalities.

Table 14. PASSAIC COUNTY TUBERCULOSIS CASE REGISTER — ADMINISTRATIVE ACTIVE FILE — 12/31/65

Town	Total	Hospitalized	Not Hospitalized		Not Hospitalized – Pulmonary				
			Nonpulmonary	Pulmonary	Active	Prob. Active	Quiescent	Prob. Inactive	Inactive
Bloomingdale	6	...	..	6	..	..	..	..	6
Clifton	95	4	9	82	7	..	1	3	71
Haledon	6	...	..	6	1	..	..	..	5
Hawthorne	27	1	..	26	1	..	..	..	25
Little Falls	16	1	2	13	..	..	..	1	12
North Haledon	7	...	..	7	..	..	..	..	7
Passaic	190	29	16	145	15	2	2	4	122
Paterson	598	63	35	500	41	3	5	7	444
Pompton Lakes	5	...	..	5	..	1	..	..	4
Prospect Park	4	1	..	3	..	..	..	..	3
Ringwood	9	...	..	9	1	..	..	2	6
Totowa	12	2	..	10	1	..	..	..	9
Wanaque	6	...	..	6	..	..	..	2	4
Hope Dell - Wayne	6	6	..	...	..	..	..	..	..
Wayne	32	2	3	27	2	..	..	..	25
West Milford	15	...	1	14	..	2	..	..	12
West Paterson	11	...	..	11	2	..	..	..	9
Total	1,045	109	66	870	71	8	8	19	764

Table 15. Tuberculosis Case Register

	Total	*Old File*	*Current File*
Total	3,889	2,844	1,045
Bloomingdale	33	27	6
Clifton	619	524	95
Haledon	59	53	6
Hawthorne	129	102	27
Little Falls	75	59	16
North Haledon	648	458	190
Paterson	1,851	1,253	598
Pompton Lakes	41	36	5
Prospect Park	29	25	4
Ringwood	30	21	9
Totowa	51	39	12
Wanaque	35	29	6
Wayne	132	100	32
West Milford	45	30	15
West Paterson	45	34	11
Hope Dell	11	5	6
Hospital Employees	22	22	0

Union County Project

During this year, numerous meetings and discussions were held in Union County relative to tuberculosis control.

One such meeting was held with the Patient Care Committee of the Board of Managers of the John E. Runnells Hospital in Berkeley Heights. Here it was pointed out that the hospitalization of the patients is very important but the major concern of the official agencies is the non-hospitalized active cases of tuberculosis in the community, and the patients who are on irregular discharge and potentially infecting their families and the communities.

This problem becomes of greater concern as plans move toward the closing of the John E. Runnells Hospital, which, as of December 31, 1965, accounted for the hospitalization of 70 percent of the county's patients requiring this service. With the closing of this hospital, patients must be placed in Glen Gardner which is a considerable distance from Union County and almost inaccessible by public transportation. These and other factors must be faced in terms of family and patient dissatisfaction with the far-off location and consequently increased irregular discharges can be expected.

It was pointed out that the general picture of the tuberculosis problem is changing. As a result of the modifications in drug therapy that have occurred since 1952, the death rate has been reduced markedly with 54 deaths reported in 1952 with fewer than 20 in 1965. This means that people are living longer

with their disease and the risk of having reinfection cases in the community must be faced and adequate long term follow-up provided.

It was recommended that a council be formed to meet on a regular basis to broaden interest in control of tuberculosis.

Case Register

The Union County Case Register, as of December 31, 1965, contained 952 cases. Only 112 of these are hospitalized, leaving 88 percent, or 840, to be cared for on an out-patient basis. There are 787 pulmonary cases outside the hospital with 48 listed as active.

In the probably active category, none of 12 cases are overdue three months or more for medical examinations. Of the 24 probably inactive patients, all but eight are overdue for examination in excess of three months. Approximately 50 percent of the inactive patients are being examined on time.

There is need to improve the frequency with which sputum samples are collected for study as 13 of the 48 actives or 29 percent have not had sputum studies in six months or more. With all the emphasis placed on periodic medical examination and evaluation, there remain on December 31, 1965, 14 of the 48 active or approximately 30 percent overdue for examination in excess of three months.

Among the 651 patients with inactive disease in Union, 562 are registered as having negative sputum. However, only 219 or 38 percent have had sputum examination within six months. Eighty-nine of the 651 have had no sputum studies. There remains a need to stress the complete medical evaluation and examination of patients with inactive disease, including sputum collection, preferably by nebulization.

Medical Social Service

The groundwork is being continued for the involvement of Miss Grace Miller, Patient Services Coordinator, in the Union County project. She will spend approximately 50 percent of her time in this area.

Preliminary evaluations show deficiencies in clinic hours, as well as services in the medical-social category.

Conclusions

From discussions and an analysis of the Union County Project, the following points are emphasized:

1. The problem of providing hospital service for acutely ill diagnosed tuberculosis patients has to be faced.

2. Care of tuberculosis is not only a hospital problem but a community problem and enough money is not being spent to maintain the community aspects.
3. Enough clinic service is not being rendered in enough parts of this county to keep abreast of the total problem.
4. Legislators should be made aware of the problems faced in the actual care of tuberculosis.
5. Freeholders should be advised that there is an obligation to provide clinic care.
6. A Council should be formed of representative citizens from communities in the county to develop continuing support for tuberculosis facilities.

Southern New Jersey

An area in southern New Jersey of concern is Atlantic City and Atlantic County.

For Atlantic City and Atlantic County, the provisional statistical report of new active cases of tuberculosis reported in 1965 reveals a case rate of 103.4 and 41.5 per 100,000 population respectively. These case rates, compared to the state's 23.9, are alarmingly high and represent a definite threat to the population of the area.

In this area during 1965, concentrated efforts were made to assign cases that the local nursing services had termed "difficult to work with" to a nurse supervisor for follow-up. There were nearly 300 such cases that she was able to locate and return to supervision or disposition in a satisfactory manner. This number sounds relatively small in terms of total case load. However, these were active and inactive cases virtually "lost" in the community and from which future spread could emanate.

Late in the year the State Department of Health employed and trained a field representative to work in Atlantic City and Atlantic County.

This service will be continued and further needs will be demonstrated as it is shown how patients become lost to supervision and consequently difficult to locate. A close look at this problem must be encouraged, as there is need for close supervision of newly diagnosed cases and recent discharges from hospitals.

Camden County and Camden City also make a sizable contribution to the state's total new active cases. The county had 72 such cases, with the City of Camden accounting for 42.

Vaccination Assistance Program

The Vaccination Assistance Program has as its basic premise the development of a program which will assure that all children will receive before they are one year old the vaccines that are now available, or may become available, followed by booster injections as needed during the course of their growth.

The year 1965 saw the completion of 1) extensive community immunization survey activity in New Jersey; 2) the addition of Schwarz strain measles vaccine to the list of biologicals available from the State Department of Health distributing stations and subsequent accelerated community programming utilizing this tool to attempt to lessen the impact of measles as a significant childhood disease and; 3) continued efforts to increase the levels of protection against tetanus and poliomyelitis. Trivalent oral polio vaccine was made available through the distributing stations in April, 1965, and to the medical practitioner for use with indigent patients in October, 1965.

The following are descriptions of specific activities:

Serfling Surveys

In June, 1965, survey activity in seven New Jersey cities and four selected counties, initiated during the previous 12-month period, was completed. The data were tabulated, analyzed and the results forwarded to appropriate local, state, and federal health agencies. The technique employed was of the type (Serfling) developed by the United States Public Health Service. It produces base line data on the level of protection against diphtheria, pertussis (whooping cough), tetanus, smallpox, poliomyelitis, and measles.

Such data were obtained in the following areas.

Cities	*Counties*
1) Atlantic City	1) Bergen
2) Camden	2) Cumberland
3) Elizabeth	3) Monmouth
4) Jersey City	4) Sussex
5) Newark	
6) Paterson	
7) Trenton	

The following table is representative of the type of information produced by the Serfling survey technique:

Table 1. Percent of Children Age 1–4 Immunized Against Poliomyelitis in Selected Areas in New Jersey

Locality	*Sample Percent Immunized*	
	Oral Vaccine	*Inactivated Vaccine*
Atlantic City	83.4	57.9
Camden	75.8	58.1
Elizabeth	76.0	67.4
Newark	58.5	66.0
Jersey City	58.0	80.4
Paterson	59.2	58.8
Trenton	61.7	58.5
Bergen County	62.7	70.0
Cumberland County	83.6	62.3
Monmouth County	72.0	67.6
Sussex County	87.8	67.3

Survey statistics are available for polio, smallpox, DPT, and measles. The data have been further broken down by socio-economic status and grouped by age (1-4; 5-14; 15-39 years).

Inasmuch as census tract information was used to select population samples, it is possible to pinpoint areas of low or inadequate levels of protection and to establish priorities for current immunization programming.

Along with the regular immunization data obtained in the Serfling immunization surveys, information was collected in Bergen County and Atlantic City on the tetanus immunization status of persons 15 years of age and over regardless of whether or not the family had a child.

This was a departure from the routine survey technique designed to furnish baseline information on the level of protection of New Jersey adults against tetanus.

Results revealed that the percent of adults ever immunized against tetanus declined with increasing age.

In each age group, there was a significantly smaller proportion of women immunized than men.

At the request of the Bureau of Children's Services, State Department of Institutions and Agencies, a random sample immunization record survey of a total population of 10,000 children was conducted by project personnel. The final report was written, printed in final form and distributed to the cooperating agency.

2. *Poliomyelitis*

Trivalent oral polio vaccine was provided to the Newark Board of Education for the immunization of 7,873 medically indigent children prior to the

close of the school year who were determined by surveys to be inadequately protected against poliomyelitis.

Using the same criteria, trivalent oral polio vaccine was provided to the "Operation Headstart" Program in Newark for the immunization of 286 children.

The Newark public and parochial schools' poliomyelitis program was extended during the fall school term to an additional 12,000 indigent children. Routine programming to assure the continuing protection of susceptible children in this school system is now established.

3. *Smallpox*

Some 5,610 doses of smallpox vaccine were provided to the City of Newark to immunize employees in high risk groups; i.e., hospitals, airlines, taxicab companies, bus terminals, fire, police, seaport personnel. Tabulations by Newark officials reveal that 95-99 percent of this material has been used in a program dating back to October 1964 and continuing into 1965.

The Department distributed 150,029 doses of smallpox vaccine during 1965. Of this total, 1,625 points were used by six hospitals for protection of hospital personnel.

4. *Tetanus*

Two local county medical societies (Passaic and Essex) sponsored tetanus immunization programs during the first half of the year. The focal point for this activity was the office of the private medical practitioner. Project personnel assisted with these programs. Passaic County officials estimate 8,000-10,000 persons participated in their program. Statistics for the Essex County program are not available.

Project staff assisted a committee of the Hunterdon County Medical Society in planning a county-wide tetanus immunization program in November, 1965. Vaccine was procured and administered locally in the offices of private practitioners. Materials were designed and furnished by the project to promote this program. Promotional aspects of this campaign were aimed at reaching 20,000 families in Hunterdon County.

Consultation was given by project and District office staff to the Morris County Regional Health Council which is planning a similar county-wide tetanus program for the spring of 1966.

5. *Measles*

In April, 1965, trivalent oral polio vaccine and measles (Schwarz strain) vaccine were made available through biological distributing stations to child

health conferences, pediatric clinics, and similar agencies serving groups of needy children.

In October, these vaccines were made available to New Jersey physicians for use of patients who could not afford to pay for it. This has led to a greatly expanded use of measles vaccine in New Jersey.

A mass community measles campaign was conducted (Dover, New Jersey) as a result of a cooperative epidemiological effort on the part of local and State Department of Health personnel. Approximately 80 percent of the susceptible children in this community were protected as a result of this campaign. Within a week following this campaign, use of measles vaccine rose fivefold in the health district in which this community was located. The resulting wave of publicity accompanying this initial effort led to a decision by several additional communities (Newark, Camden, Morristown, Runnemede, Deptford Township) to conduct similar measles campaigns. In all instances, Schwarz strain vaccine was used.

In the interim period, April through June, 1965, 9,000 doses of measles vaccine were distributed through the Departmental network of biological distributing stations. During the period July 1 through December 31, 1965, 37,270 doses of measles vaccine were distributed by the Department. More than 32,000 doses of this total were distributed during the last three months of the year.

These statistics gain added perspective when one considers the results of Serfling surveys conducted in the seven cities and four counties. In the age range 1-4 for example, the 11 surveys revealed that approximately 24.7 percent of the children in New Jersey had received protection against measles (rubeola) with the vaccine. The level of protection against measles ranged from one percent in selected census tracts in a lower socio-economic group in a southern New Jersey community to a high of 52 percent in certain high socio-economic groupings in a northern New Jersey geographical area.

Although the additional time span undoubtedly would result in higher levels of protection at this point in time, the need for increased awareness and use of this new biological has been demonstrated.

6. *Project Administration*

The current immunization project provides for a newborn immunization follow-up program. Funds are provided to demonstrate in at least one geographical area a new system featuring a central register located in a local health department and a permanent individual plastic credit card type immunization record for each child.

Newborn immunization maintenance programs are planned for a maximum of eight New Jersey communities on a priority basis following leads docu-

mented by project survey activity. Proposed sites would include Atlantic City, Camden, Trenton, Newark, Cumberland County, Sussex County, Paterson, and Jersey City.

Tetanus Immunization Status
Persons in Immunization Survey Sample, Age 15 and Over

Atlantic City and *Bergen County*

Along with the regular immunization data obtained in the Serfling-Sherman immunization surveys, information was collected in Bergen County and Atlantic City on the tetanus immunization status of persons 15 years of age and over. These additional data were collected from families with no children under five as well as from those with children under five.

For each person in this sample the question was asked if they had ever been vaccinated against tetanus and, if so, how long ago. The findings are summarized below.

Table 2. Percent Ever Immunized Against Tetanus

	Bergen County			*Atlantic City*		
Age Group	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*
Total	55.3	70.5	40.7	58.1	67.8	50.5
15-39	67.4	84.7	52.2	88.5	94.6	82.8
40-59	52.2	68.0	35.4	60.9	71.2	52.0
60 and over	24.8	34.2	16.0	25.4	30.2	22.4

In Bergen County as well as in Atlantic City, the percent ever immunized declined with increasing age.

In each age group, there was a significantly smaller proportion of women immunized than men. This is true of both Atlantic City and Bergen County.

Table 3. Percent With Last Tetanus Immunization Ten or More Years Ago

	Bergen County			*Atlantic City*		
Age Group	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*
Total	33.7	36.6	29.1	36.8	34.1	39.5
15-39	25.2	25.2	25.1	28.3	23.7	33.3
40-59	46.6	50.2	39.3	49.8	50.0	49.6
60 and over	42.5	55.6	15.4	44.8	44.9	44.7

Of the Bergen County respondents who had been immunized, about a third had their last shot 10 or more years ago. The percent in this category

was generally higher among the 40 and over than among those under 40. A variation from the general pattern occurred among women 60 and over of whom 15.4 percent were immunized more than 10 years earlier. However, this was based on a sample of only 13 women. Atlantic City, with its older population (Median age 40.8 in 1960) had a higher percent ever immunized and of those a higher percent immunized 10 or more years ago than Bergen County (Median age 33.2 in 1960).

Atlantic City was stratified into three socio-economic areas. The percent ever immunized by area and sex appears below.

Table 4. IMMUNIZATION BY SOCIO-ECONOMIC GROUPS, ATLANTIC CITY

	Atlantic City		
Socio-Economic Area	*Total*	*Male*	*Female*
Total	58.1	67.8	50.5
Upper	56.8	67.9	47.5
Middle	64.2	70.0	59.8
Lower	52.2	63.4	44.1

For males and females combined this shows the Middle socio-economic area to have a significantly greater percent immunized than either the upper or lower areas. This relationship was also true of the females; but for the males the differences were not significant.

Bergen County was stratified into three areas according to city size. The percent ever immunized by city size group and sex follows:

Table 5. IMMUNIZATION BY CITY SIZE, BERGEN COUNTY

	Bergen County		
City Size Group	*Total*	*Male*	*Female*
Total	55.3	70.5	40.7
Under 10,000 population	59.3	79.6	38.9
10,000 to 19,999 population	52.4	64.5	41.3
20,000 and over population	54.5	68.4	41.4

For males and females combined there is only a marginally significant difference in percentage immunized between the under 10,000 group and the 10,000 to 19,999 group. For males, however, the under 10,000 cities had a significantly higher percent immunized than either the 10,000 to 19,999 group or the 20,000 and over group.

There appears to be no significant association between socio-economic area and the proportion with a lapse of 10 or more years since last immunization among Atlantic City respondents. There was also no significant associa-

tion by city size group in Bergen County. The percentages are shown in the tables below.

Table 6. Percent With Last Immunization Ten or More Years Ago

	Atlantic City		
Socio-Economic Area	*Total*	*Male*	*Female*
Total	36.8	34.1	39.5
Upper	37.0	35.8	38.4
Middle	38.2	34.0	41.8
Lower	33.1	28.6	37.8

Table 7. Percent With Last Immunization Ten or More Years Ago

	Bergen County		
City Size Group	*Total*	*Male*	*Female*
Total	33.7	36.6	29.1
Under 10,000 population	33.3	33.8	32.4
10,000 to 19,999 population	37.7	37.4	38.1
20,000 and over	31.2	37.9	19.3

Note: [1] Significance is based on the .05 level.

[2] The Serfling-Sherman type survey is designed for the comparison of proportions between areas within health jurisdictions, not for estimation of average proportions for a jurisdiction as a whole. For a detailed description of the method see "Attribute Sampling Methods for Local Health Departments With Special Reference to Immunization Surveys" by Robert E. Serfling and Ida L. Sherman. U. S. Department of Health, Education and Welfare, Public Health Service, Communicable Disease Center, Atlanta, Georgia.

Venereal Disease Control Program

Morbidity Trends

Syphilis

The infectious syphilis curve in New Jersey continued to decline slightly in 1965. The 944 civilian cases of primary and secondary syphilis and 31 military cases of primary and secondary syphilis reported to the Department represented the lowest figure since 1961. However, the infectious syphilis rate in New Jersey is still recognized as an urgent problem. Four of our principal cities, Newark, Jersey City, Paterson, and Atlantic City, are recorded as outstanding problem areas in the country.

The total cases of early latent syphilis reported to the State Department of Health decreased from 930 civilian cases in 1964 to 798 civilian

cases in 1965. Nine military cases were also reported to the Department. For epidemiologic purposes, early latent syphilis was divided into two categories in 1965: early latent syphilis (less than one year's duration) and early latent syphilis (1-4 year's duration). There were 309 cases of less than one year's duration and 489 cases of 1-4 year's duration.

Total syphilis reported to the Department in 1965 was 4,927 civilian cases and 41 military cases.

Gonorrhea

There were 3,938 civilian gonorrhea cases reported to the Department in 1965 compared to 3,744 civilian gonorrhea cases in 1964. The military also reported 616 gonorrhea cases to the Department in 1965.

Program Activities

Syphilis Epidemiology—Newark "Speed Zone" Program

Project Red Dog is a "Speed Zone" type of syphilis casefinding demonstration, which began in Newark on April 26, 1965.

This project was initiated in an attempt to (1) find infectious cases of syphilis that were being missed, and (2) to bring infectious cases of syphilis to treatment as quickly as possible, so that the spread of syphilis might be controlled.

To reduce the time lapse of private doctor's cases from date of diagnosis to date of interview, and to reduce the time lapse from date interviewed to date contacts and suspects were brought to medical examination, and to effect an increase in infectious cases of syphilis being reported, the following techniques were employed: (1) Private physicians were visited to enlist their cooperation, (2) An increase in the venereal disease clinic sessions, (3) An increase in the number of venereal disease casefinding personnel, and (4) An increase in the epidemiologic activity.

During the first two weeks of Project Red Dog, 1,070 physicians in Essex County were visited by Venereal Disease Program Representatives. Physicians were made aware of the methods and objectives of Project Red Dog. Their cooperation was asked in looking for infectious syphilis, and in calling immediately an emergency answering service telephone number for epidemiologic and darkfield services, and in reporting by telephone such cases on the date of diagnosis.

Beginning May 3, 1965, the number of clinic hours increased from five daily (9 A.M.-11 P.M.) and two evening clinics (5:30 P.M.-7:30 P.M.) to five daily (9 A.M.-11 P.M.), five evening clinics (5:30 P.M.-7:30 P.M.) and a Saturday clinic from 1 P.M.-6 P.M. for a total increase of 11 clinic hours per week.

The Saturday and the three additional evening clinic sessions made it possible to refer contacts, suspects, and associates to medical examination, thus reducing the time infectious persons remain free to spread the disease. These additional clinic sessions also provide the necessary time to perform medical examinations, make diagnosis', administer epidemiologic treatment and to conduct interviews, in a clinic environment and atmosphere, on all persons admitted to the clinic. Prior to the initiation of Red Dog, cluster suspects and cluster associates were blood tested in the field. They were not given the benefit of a medical examination nor a cluster or educational type interview. Therefore, field blood testing has been eliminated.

Beginning May 3, 1965, venereal disease casefinding personnel were increased from six to 14. Personnel were organized into two teams, each team had a captain and five men. The two remaining personnel acted in the supervisory capacity, as District V.D. Coordinator and administrator, Newark "Red Dog" clinic coordinator, and "Red Dog" training advisor.

Each team captain was responsible for the daily epidemiologic intelligence of his team's cases and within the team, each man was responsible for the daily intelligence of cases assigned to him.

Additional personnel made it possible to (1) interview all primary, secondary, and early latent cases, (2) to perform a cluster interview on all not infected contacts, suspects, and associates, and recently treated cases admitted to the clinic, and (3) to refer contacts, suspects, and associates obtained through the interview process, to medical examination within 72 hours.

Newark's "Red Dog" intensified speed zone epidemiologic program was used as a showcase for senior representatives from large metropolitan cities throughout the United States. New Jersey personnel were requested by the Venereal Disease Branch of the United States Public Health Service to provide "Red Dog" concepts to these representatives through a week-long orientation program.

Syphilis Epidemiology—State of New Jersey

Interviewing: In 1965, 920 or 97.5 percent of the 944 primary and secondary syphilis cases reported to the State Department of Health were interviewed. These patients named 2,642 contacts. Twenty-four patients reported by private physicians could not be located for interview.

Re-Interviewing: Of the 920 cases interviewed, 896 of *97.4* percent were re-interviewed one or more times.

Change of Interviewers: 52.9 percent or 487 of the 896 patients re-interviewed were interviewed more than one time by different interviewers.

Contact Casefinding Success: 347 or *37.7* percent of the 920 cases interviewed produced at least one new case of syphilis as a result of contact interviewing.

Cluster Casefinding Success: 121 or *13.2* percent of the cases interviewed produced a new case of syphilis through the application of cluster interviewing.

Contact Investigations: During 1965, program Staff Personnel located 2,051 contacts and were instrumental in seeing that necessary medical services were arranged for them. Among these contacts, 320 primary and secondary and 53 early latent syphilis cases were brought-to-treatment for the first time.

Cluster Interviewing: This segment of the epidemiologic process produced 2,913 new people brought to medical examination as cluster suspects and associates, from which 74 primary and secondary and eight early latent syphilis cases were brought-to-treatment as suspects. The associates yield was 33 primary and secondary and 13 early latent syphilis cases.

Congenital Syphilis

During 1965, a total of 240 infants were studied for the diagnosis of congenital syphilis in New Jersey. These infants were brought to attention by case reports of congenital syphilis or reactive serological tests for syphilis reported by physicians or clinics in 43 of the 120 hospitals serving the state.

Investigations were completed on 172 infants. Seven cases of congenital syphilis were diagnosed. Another 36 infants received epidemiologic treatment and could not be followed to a complete diagnosis.

The prenatal care received by the mothers of all infants was studied. Three of the seven mothers giving birth to congenital syphilitic infants had no prenatal care. Three mothers had primary or secondary syphilis; all were treated after delivery. Two mothers with early latent syphilis received prenatal care in the third trimester of pregnancy. One received no treatment. The remaining two women received treatment for early latent or latent syphilis in the second trimester.

Thirty-six mothers of infants treated epidemiologically were studied. It was found that 12 were treated post-partum and that three escaped treatment.

Among the mothers of 129 non-infected infants there were three cases of primary secondary syphilis discovered in the second and third trimester

and treated when discovered. Fifty-eight of 79 cases of early latent and latent syphilis were treated before delivery.

Congenital syphilis is a point of great concern, since it is completely preventable. Adequate treatment of the mother during the first 18 weeks of gestation prevents infection of the baby; adequate treatment after the 18th week cures the baby in utero. Thus, the means and tools for prevention or cure of congenital syphilis are available, and yet in New Jersey in 1965 there were eight stillbirths due to syphilis, recorded on death certificates. Five of the mothers had no history of prenatal care.

Surveillance of Serologic Reactors

1. *Laboratory Visitation*

An intensive effort was put forth by Venereal Disease Field Personnel in 1965 in order to secure more and better information about New Jersey Laboratories. Six hundred thirty-four visits were made to all bio-analytical laboratories both approved and unapproved, public and private. Through visits, Field Personnel discovered information such as: the number of laboratories which process serologies; the different serologic tests for syphilis which the laboratories perform; the reporting habits of the laboratories; and the laboratories that are equipped to perform darkfield microscopic examinations. Field personnel stressed the importance of better and immediate reporting of reactive STS specimens and positive darkfield examinations and also requested complete information on the reactive report.

The Serology Report (SER 1) was revised in June, 1965, and this is expected to aid in finding early infectious syphilis.

2. *Follow-up of Reactors*

Field investigations of reactive specimens were reduced from 6,521 in 1964 to 4,757 in 1965, thus, allowing field personnel to devote more time and energy to a greater control of infectious syphilis cases. This was made possible by introducing more efficient screening techniques into the reactor program. Again in 1965, priority was given to those reactive serologies having a high-titer (1:8 dilutions and above); those reactive serologies in the younger age group and reactive prenatal serologies. These hi-titered serologies were relayed by telephone to field personnel and resulted in a total syphilis yield of 45 percent. Twenty percent of this total resulted in a case of primary or secondary syphilis brought to treatment.

3. *Follow-up of Reactive Serologies in Hospitals*

The City of Newark has had a high incidence of primary secondary syphilis for a number of years. Much of the reported disease is found among low income groups that seek hospital services at the Newark City Hospital.

Practically all patients admitted to this hospital receive a serological test for syphilis. For this reason, it was anticipated that careful follow-up of patients with reactive blood would result in the diagnosis and discovery of new cases of syphilis.

A total of 12,990 serological tests for syphilis was recorded at the Newark City Hospital in 1965. Six hundred seventy-three of the serological tests were reported as reactive. The reactive bloods were retested at the Newark City Health Department Laboratory.

As a result, 464 persons with confirmed reactive serological tests for syphilis were available for study.

Table 1. Results of Testing

Patients	*Number*	*Percent*
Total with reactive blood	464	100.0
Diagnosed as syphilis	39	8.3
Previously treated	232	50.0
Receiving penicillin at or above therapeutic level	10	2.2
No diagnosis or treatment	105	22.6
Not located	33	7.1
Moved	9	1.9
Biologic false positive	36	7.8

Thirty-nine patients were proved to have syphilis in one of its stages.

A history and evidence suggestive of syphilis with previous treatment was found in 232 patients.

One hundred five patients were not diagnosed or treated. Some of these patients were senile and others were too ill for an immediate diagnosis.

The age distribution of the newly discovered syphilis patients is given in the following table.

Table 2. REACTIVE SEROLOGY SCREENING PROGRAM AT MARTLAND MEDICAL CENTER NEWARK, NEW JERSEY

JANUARY 1, 1965 – DECEMBER 31, 1965

		Brought to Treatment				
Age	*Total*	*Primary Secondary*	*Early Latent 1 yr.*	*Early Latent 1-4 yrs.*	*Late Latent*	*Congenital*
Total	39	7	10	9	12	1
Under 15	1	..	..	..	..	1
15-19	4	3	1	..	..	..
20-24	7	1	4	2	..	..
25-29	3	1	2	..	..	..
30-34	5	..	3	2	..	..
35-39	5	2	..	2	1	..
40-44	1	..	..	..	1	..
45-49	4	..	..	2	2	..
50-64	4	..	..	1	3	..
65+	5	..	..	..	5	..
Unknown	..	..	..	..	..	..

Physician Visitation

The private physician visitation program as outlined by the Task Force Report of 1961 has been in effect for some three years. During this period, it is reasonable to expect that the majority of physicians have been alerted to the extent of the venereal disease problem and the public health program to combat it. For this reason, modifications have been made in the priorities accorded to physician visitation. Physicians not in practice or in a specialty practice where only a remote possibility exists that they may see cases of venereal disease are accorded a once only public relations visit. Physicians in practice who are more likely to see cases of venereal disease, but seem not to, are visited annually rather than twice annually. Physicians who probably see cases of venereal disease but whose cooperation has not been achieved are visited as often as necessary. Physicians who see cases of venereal disease and who are cooperative in the eradication program are visited only as a result of follow-up on positive serologies or reported cases.

New Jersey Venereal Disease personnel following the above recommendations of the United States Public Health Service visited 2,891 physicians in 1965, a decrease of 2,385 physician visits from 1964.

Two objectives of the physician visitation program are to enlist physicians' cooperation in requesting darkfield service, and cooperation

in reporting infectious cases of syphilis on the date of diagnosis so that the original interview can be done immediately.

During 1965, 56 percent of infectious cases reported by private physicians were reported on the date of diagnosis. Darkfield services were requested by physicians on 25 percent of the infectious cases they reported.

Training

1. An intensive four-week orientation program in the syphilis eradication program was conducted for new employees. This orientation consisted of two weeks in the classroom, learning theory and background of the eradication program and two weeks in the Newark area working with trained epidemiologists.
2. Two two-day workshops on darkfield microscopy were conducted at St. Francis Hospital, Trenton. The workshops were conducted by Public Health Service personnel, New Jersey Health Department Laboratory personnel, and the Coordinator of the New Jersey Venereal Disease Program. The workshops were held primarily for V.D. field personnel; however, laboratory technicians from other hospitals and institutions throughout the state also attended.
3. Bi-monthly meetings were held at which subjects in the realm of public health and medicine were presented to the entire staff of the Venereal Disease Program.

Venereal Disease Education

Twelve V.D. workshops for teachers were held at the six State Teachers Colleges to provide background and source material for the teachers who were to introduce the subject of V.D. education into the secondary school systems in New Jersey. The Division Director and V.D. Coordinator, as well as several V.D. Health Representatives, gave talks and demonstrations in order to contribute to the success of these workshops.

Throughout the year, the Division Director and V.D. Program Coordinator addressed about 35 parent-teacher groups. Appropriate V.D. films were shown at each meeting. At several of the programs, they served as panel members in which the entire V.D. problem was discussed.

On several occasions, the Division Director and V.D. Coordinator spoke before the state and county medical societies on various phases of the V.D. Program.

They also spoke before physicians and nurses at various state and general hospitals.

V.D. consultative services have grown appreciably during the year. Most of these consultative services are transacted via the telephone by the Program Coordinator.

Several interesting radio programs on the venereal disease question took place during the year. The Program Coordinator was invited to take the "open mike" at stations in the metropolitan area—Station WJRZ, Newark and WMTR, Morristown.

The "open mike" entailed a general discussion of the V.D. problem. During these discussions, listeners would phone in questions which were answered immediately over the air.

In October, 1965, a Public Health Service Information and Education (V.D.) specialist was trained and assigned to the New Jersey Venereal Disease Control Program.

The following are some of the V.D. Information and Educational activities performed by this person:

1. The presenting of V.D. programs to P.-T.A.'s, health officials, health groups and civic organizations throughout the state.
2. Several V.D. news releases were prepared. The newspapers publishing these releases had a daily circulation of 3.6 million people.
3. Development of an article published in the *Essex County Medical Bulletin*. This publication reaches approximately 2,000 physicians.
4. Obtained managerial support in requesting the medical department of selected Newark factories, in a high incidence area, to start routine blood testing of employees.
5. Assisted the V.D. Instructor (PHS) in the establishment of a program that allows medical students from the New Jersey College of Medicine to attend and observe the Newark V.D. evening clinic. Approximately six medical students attend each Tuesday evening clinic. This program requires three visits by each student. One of the visits consists of an orientation about the eradication concept and the other two visits consist of observing the clinic physician applyng the proper techniques in examining, diagnosing, and treating syphilis patients, contacts, suspects and associates.

Program Development

1. The modifications and controls, which were developed and implemented in 1964, in the organizational and administrative structure of the Venereal Disease Control Program remained status quo.
   The 1964 modifications proved to be successful and adequate in 1965.

2. During the year, the U. S. Public Health Service (V.D. Branch) assigned a physician (dermatologist - syphilologist) to New Jersey. This physician's primary mission is to teach and demonstrate the medical and epidemiological aspects of the venereal diseases to the medical students at the New Jersey College of Medicine.

3. Steps were taken to check the rise of primary and secondary syphilis in the Hudson County area by establishing a much needed Venereal Disease Clinic in the Jersey City Medical Center. This clinic is staffed by the Public Health Service physician, a nurse, and V.D. program field personnel.

Table 3. CIVILIAN CASES OF SYPHILIS BY STAGE AND GONORRHEA NUMBERS AND RATES PER 100,000 POPULATION

NEW JERSEY: 1946-1965

Year	Population Estimate	Syphilis						Gonorrhea	
		Total Cases		Primary and Secondary		Early Latent			
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
1946	4,304,261	9,881	229.6	2,010	46.7	3,453	80.2	6,468	150.3
1947	4,435,000	8,735	197.0	1,670	37.7	3,138	70.8	6,449	145.4
1948	4,729,000	8,352	176.6	1,182	25.0	2,978	63.0	4,069	86.0
1949	4,786,000	7,795	162.9	771	16.1	2,511	52.5	4,449	93.0
1950	4,832,000	5,838	120.8	360	7.5	1,768	36.6	3,933	81.4
1951	4,989,000	4,016	80.5	228	4.6	1,125	22.5	3,559	71.3
1952	5,112,000	3,846	75.2	180	3.5	1,029	20.1	3,596	70.3
1953	5,236,000	3,742	71.5	168	3.2	1,005	19.2	3,682	70.3
1954	5,359,000	5,285	98.6	184	3.4	1,175	21.9	3,761	70.2
1955	5,482,000	4,854	88.5	214	3.9	1,095	20.0	4,150	75.7
1956	5,605,000	4,263	76.1	92	1.6	578	10.3	3,828	68.3
1957	5,728,000	5,429	94.8	114	2.0	462	8.1	4,789	83.6
1958	5,851,000	6,055	103.5	170	2.9	638	10.9	5,493	93.9
1959	5,974,000	4,863	81.4	302	5.1	609	10.2	4,646	77.8
1960	6,098,000	5,265	86.3	665	10.9	752	12.3	4,778	78.4
1961	6,221,000	5,170	83.1	864	13.9	721	11.6	4,302	69.2
1962	6,344,000	6,291	99.2	1,191	18.8	864	13.6	3,557	56.1
1963	6,467,000	5,613	86.8	1,777	18.2	756	11.7	3,968	61.4
1964	6,590,000	4,958	75.2	1,140	17.3	930	14.1	3,744	56.8
1965	6,713,000	4,927	73.4	944	14.1	798	11.9	3,938	58.7

Note: Data for 1946 through 1956 include all New Jersey resident cases plus all nonresident cases diagnosed in New Jersey, but exclude military cases. Data for 1957 include New Jersey resident cases only.

Table 4. SYPHILIS AND GONORRHEA CASES BY COUNTIES AND MAJOR CITIES NUMBERS AND RATE PER 100,000 ESTIMATED POPULATION

NEW JERSEY: 1965

Area	Syphilis						Gonorrhea	
	All Stages		Primary and Secondary		Early Latent			
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
State Total	4,968	74.0	975	14.5	807	12.0	4,554	67.8
Atlantic County	347	197.2	69	39.2	22	12.5	17	9.7
Atlantic City	251	432.8	62	106.9	15	25.9	5	8.6
Bergen County	190	20.9	39	4.3	25	2.8	64	7.1
Burlington County	82	30.3	7	2.6	15	5.5	34	12.5
Camden County	256	58.2	32	7.3	31	7.0	108	24.5
Camden City	165	146.0	20	17.7	26	23.0	79	69.9
Cape May County	44	81.5	5	9.3	1	1.9	2	3.7
Cumberland County	210	181.0	39	33.6	28	24.1	17	14.7
Essex County	1,616	173.2	371	39.8	312	33.4	2,290	245.4
Bloomfield	17	32.1	....	....	3	5.7	2,	3.8
East Orange	106	139.5	20	26.3	22	28.9	41	53.9
Irvington	30	50.8	1	1.7	2	3.4	6	10.2
Newark	1,349	347.7	339	87.4	278	71.6	2,194	565.5
Gloucester County	67	42.7	9	5.7	6	3.8	4	2.5
Hudson County	400	67.7	102	17.3	78	13.2	202	34.2
Bayonne	28	38.4	2	2.7	2	2.7	9	12.3
Hoboken	21	44.7	4	8.5	5	10.6	4	8.5
Jersey City	282	106.8	90	34.1	62	23.5	181	68.6
Union City	16	32.0	....	....	2	4.0	2	4.0
Hunterdon County	33	55.0	1	1.7	2	3.3	4	6.7
Mercer County	327	114.3	33	11.5	63	22.0	394	137.8
Hamilton Twp.	3	3.8	1	1.3	1	1.3	3	3.8
Trenton	281	262.6	27	25.2	56	52.3	376	351.4
Middlesex County	259	49.5	16	3.1	38	7.3	121	23.1
Woodbridge Twp.	30	29.7	....	....	4	4.0	4	4.0
Monmouth County	203	51.8	34	8.7	41	10.5	69	17.6
Morris County	99	31.6	14	4.5	7	2.2	54	17.3
Ocean County	44	32.6	3	2.2	6	4.4	27	20.0
Passaic County	294	66.4	112	25.3	37	8.4	259	58.5
Clifton	13	14.3	....	....	3	3.3	6	6.6
Passaic City	46	88.5	5	9.6	6	11.5	20	38.5
Paterson	218	149.3	102	69.9	28	19.2	225	154.1
Salem County	66	103.1	7	10.9	9	14.1	16	25.0
Somerset County	45	26.9	2	1.2	5	3.0	12	7.2
Sussex County	11	19.3	....	....	....	....	7	12.3
Union County	265	47.3	49	8.8	53	9.5	225	40.2
Elizabeth	108	102.9	29	27.6	21	20.0	134	127.6
Union Twp.	19	32.2	....	....	4	6.8	8	13.6
Warren County	20	29.4	....	....	1	1.5	10	14.7
State Institutions	49	....	....	....	18	....	2	....
Military Posts	41	....	31	....	9	....	616	....

Note: Rates not computed for State Institutions and Military Posts due to lack of population base.

Table 5. VENEREAL DISEASE CASES (INCLUDING MILITARY) BY AGE GROUPS
NUMBERS AND RATES PER 100,000 POPULATION

NEW JERSEY: 1965

Age Group	Total		Syphilis		Gonorrhea		Other Venereal Diseases	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Ages	9,535	142.0	4,968	74.0	4,554	67.8	13	0.2
Under 1	16	11.3	12	8.5	4	2.8	....	....
1- 4	9	1.6	2	0.4	7	1.2	....	....
5- 9	13	2.0	....	....	13	2.0	....	....
10-14	54	9.4	16	2.8	38	6.6	....	....
15-19	965	221.3	273	62.6	692	158.7	....	....
20-24	2,399	673.9	583	163.8	1,813	509.3	3	0.8
25-44	3,758	197.8	1,951	102.7	1,799	94.7	8	0.4
45-64	1,532	104.6	1,434	98.0	97	6.6	1	0.1
65+	511	81.9	505	80.9	6	1.0	....	....
Unstated	278	....	192	....	85	....	1	....

Table 6. SYPHILIS CASES (INCLUDING MILITARY) BY AGE GROUPS
NUMBERS AND RATES PER 100,000 POPULATION

NEW JERSEY: 1965

Age Group	Total All Stages		Primary & Secondary		Early Latent		Late Latent		Late		Congenital	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
All Ages	4,968	74.0	975	14.5	807	12.0	2,838	42.3	166	2.5	182	2.7
Under 1	12	8.5	1	0.7	...	...	....	...	...	..	11	7.8
1- 4	2	0.4	...	...	...	...	....	...	...	..	2	0.4
5- 9	....	...	...	...	...	...	....	...	...	..	...	..
10-14	16	2.8	14	2.4	...	...	1	0.2	...	..	1	0.2
15-19	273	62.6	137	31.4	92	21.1	21	4.8	...	..	23	5.3
20-24	583	163.8	273	76.7	189	53.1	95	26.7	2	0.6	24	6.7
25-44	1,951	102.7	482	25.4	422	22.2	931	49.0	30	1.6	86	4.5
45-64	1,434	98.0	56	3.8	83	5.7	1,203	82.2	68	4.6	24	1.6
65+	505	80.9	5	0.8	5	0.8	435	69.7	57	9.1	3	0.5
Unstated	192	...	7	...	16	...	152	...	9	..	8	..

Division of Special Consultation Services

RALPH T. FISHER, M.P.H., *Director*

Programs:

Health Education ..... FLORENCE B. FIORI, M.A.
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.S.
Program Coordinator

Training ..... JOSEPH C. KALE, B.S.
Senior Training Advisor

Division of Special Consultation Services

The administration of public health requires a complex of so many skills and abilities that no single person can be master of all of them. This Division is made up of a group of specialized public health personnel who provide services to Program and District personnel of the Department, to local health departments, to local nursing agencies and other local health agencies, to citizens and civic groups, to professional organizations, and to interested and active citizens. The consultant services include community health organization and health education, physical therapy, public health nutrition, medical social rehabilitation and public health social work, public health nursing, and training. The grouping of these consultant services in a single functional Division permits a greater degree of integration of services and a broader base of approach to a given public health problem. The counterpart of personnel of the State Consultants are members of the public health team in each of the District offices so that the consultant team within this Division has a working team in each of the four Districts.

It is the job of these persons to transfer new knowledge and new concepts into practice. They are a standard setting and a quality control group who must exert effective leadership in their specialized fields throughout New Jersey. As new programs and activities are developed, they make use of professional services of this Division, thus reducing the costs of initiating such new activities. As full-time specialized personnel are employed for specific activities by other programs, they are made a part of the staff of the Division, affording professional and technical guidance to personnel in a number of programs.

The personnel of this Division must provide leadership for public health in New Jersey in developing and applying the latest knowledge, methods and techniques in the various fields for the solution of public health problems. They must plan for and provide training courses, institutes, conferences and other educational means for public health personnel. They must be alert to public health problems and activities in the state. They must see where they can help, see how they can help, and make their services available in such a way that they will be readily accepted as an additional resource.

A new service of this Division is the Health-Agriculture Professional Reference Library which was instituted when the new Health-Agriculture Building was opened. This service is now being developed to provide professional personnel with a reference library service of books, journals and other reference materials.

Health Education Program

Trends and Developments

In the course of the year, three new health education positions have been established and professionally trained health education personnel recruited. In the interest of exploring new areas for health education service, a new grant in support of the health education project at Presbyterian Unit, United Hospitals of Newark was negotiated with the United States Public Health Service. Intensive educational efforts related to Senate Bill 150 STATE HEALTH AID FOR LOCAL HEALTH AGENCIES were also made. Health education efforts have been increased through strengthened working relationships with a wide variety of voluntary and official health agencies, professional organizations, and civic groups. Major program activities have been developed in cooperation with the American Cancer Society, New Jersey Division; the New Jersey Heart Association; the New Jersey Tuberculosis and Health Association; the New Jersey Hospital Association; the New Jersey Congress of Parents and Teachers; and the New Jersey State Department of Education.

In addition to the workload situation, the following problems also interfere with effective program management and development:

1. The lack of available state funds or general federal monies for support of health education service. Health educators added to the staff during the past year are all attached to categorical program activities or special projects. Their services are required to be limited to the problem area for which the funds have been designated. This prevents the broadening and strengthening of health education services on a general basis or the use of existing manpower in the most effective manner.

2. Lack of professionally trained public health educational personnel to fill existing vacancies. It is anticipated that these manpower shortages will become more acute as a result of the rapid expansion of health programs. In view of this, efforts have been made to experiment with use of personnel at varying levels of training and responsibility. A series of job specifications starting with the position of Health Education Aide and culminating with administrative positions requiring professional preparation in public health education were prepared and submitted to the Personnel Program for necessary review and action.

3. Another obvious weakness has been the failure to make extensive use of research in the behavioral sciences as it applies to health problems

in general and to health education and communications in particular. Greater involvement of behavioral science personnel on a consultation basis has been achieved during the past year, but much remains to be done.

Program Activities—Cancer Control

The New Jersey Interagency Council on Smoking and Health consisting of representatives of state level voluntary and official health agencies including the Medical Society of New Jersey, American Cancer Society, New Jersey Division, the New Jersey Heart Association, New Jersey Tuberculosis and Health Association, the New Jersey State Department of Education, and the New Jersey Congress of Parents and Teachers was formally organized. A long range plan of work for the Council was also developed, funds for staffing obtained, and a qualified public health educator recruited and hired as Project Coordinator for the Council. A major activity of the Council was the organization and conduct of the Statewide Workshop on Smoking and Health held in October, 1965. Approximately 85 individuals representing local health agencies participated in the meeting. As a result many local anti-smoking projects have been initiated. In addition six county level Interagency Councils on Smoking and Health are in the process of organization and development. This coordinated approach to the solution of a major health problem has had many beneficial side effects in terms of establishing ground rules for the development of cooperative working relationships among health agencies.

Continuing efforts to stimulate more effective classroom teaching on the subject of smoking and health have been made in cooperation with the New Jersey State Department of Education. The teaching reference guide originally published in 1963 has been revised and will be distributed to elementary and secondary school teachers throughout the state. A research project developed by the Public Health Educator, Northern District in cooperation with Rutgers Department of Sociology was completed and the data disseminated to interested individuals and groups.

Diabetes Control

Efforts to promote use of new patient education material produced by the United States Public Health Service were made in cooperation with the Diabetes Control Program. The second annual workshop on Hospital Health Education held at Presbyterian Unit, United Hospitals of Newark was devoted to diabetes education. Follow-up contacts indicate increased interest and activity in this area of patient education. Members of the Health Education staff participated in the Diabetes Control Program In-Service Education Project of the United States Public Health Service.

Heart Program

The Health Educator attached to the Heart Disease Control Program has been involved in the planning, conduct, and evaluation of external cardiopulmonary resuscitation for professional personnel and volunteer members of first-aid squads. A series of symposia for dentists was developed.

Educational activities were designed and implemented as part of the Congestive Heart Failure Project at St. Peter's Hospital, New Brunswick. Plans for tabulation and analysis of data were completed.

Working relationships with the New Jersey Heart Association have been strengthened. Exhibit material on rheumatic fever control and external cardiopulmonary resuscitation was developed and presented at the annual meeting of the Medical Society of New Jersey.

Migrant Health

Intensive health education efforts were made as part of the migrant life education project jointly developed by this Department in cooperation with the New Jersey Office of Economic Opportunity. The Health Educator attached to the Migrant Health Program made major contributions. She was also responsible for the recruitment, orientation, and supervision of 50 field personnel. Summer field work students assigned by the United States Public Health Service functioned under her direction. A major activity was recruitment and training of health education aides selected from among the migrant workers. These aides served as a liaison between professional staff and other migrants in the camps. Use of indigenous leadership is a productive way to advance health education concepts.

Vaccination Assistance

A project designated OPERATION BOOSTER was carried out. It was to create public awareness of the need for booster doses of vaccines, particularly tetanus. Four field representatives—health education were assigned to the District offices of this Department. They conducted local educational programs to raise immunization levels in problem areas.

Venereal Disease Control

Distribution of the Teaching Reference Guide and a series of teacher workshops were completed. Guides were provided to all junior and senior high schools. More than 500 teachers participated in the workshop programs. Review and analysis of an evaluation questionnaire were completed by the State Department of Education and will be used in developing future venereal disease education activities for teachers.

A one-day workshop on venereal disease for county parent-teacher association health chairmen was conducted.

Special Projects—Health Careers

This Department through participation in the New Jersey Health Careers Service continued to focus attention upon manpower needs and stimulate local recruitment and training programs. Principal activities of the Health Careers Service have included the design of a project proposal, in cooperation with the Office of Economic Opportunity, to motivate disadvantaged youth to seek careers in the health occupations; a survey of training facilities in New Jersey for vocational and technical health occupations; distribution of newsletters for Guidance Counselors related to occupational titles of speech and hearing therapists, medical technologists, pharmacists, physicians and surgeons. A directory of individual health professionals who will assist counselors in development of health career promotional activities was sent to more than 3,000 Guidance Counselors in secondary schools and colleges.

A productive relationship was established with the New Jersey Association of Directors of Volunteers in Hospitals whose efforts combined with those of the New Jersey Association of Hospital Auxiliaries and the New Jersey Health Careers Service resulted in a one-day workshop at the May, 1965 Middle Atlantic States Hospital Assembly in Atlantic City. Organization of local health career projects was emphasized.

Information about the New Jersey Health Careers Service was presented at the First National Symposium on Health Careers held in Detroit in September, 1965.

Hospital Health Education

The United States Public Health Service renewed the demonstration project grant to Presbyterian Unit, United Hospitals of Newark for a three-year period. The new grant was negotiated on the basis of matching funds which the hospital will make available so that at the end of the three-year period, the project will be entirely supported by local funds.

A report of the initial two and one-half years of this project activity was sent to a selected group of public health educators for comment.

A second workshop on hospital health education was held in April, 1965. Content was related to improvement of communications between patients and professional personnel as well as communications between hospitals and community agencies. A report of the proceedings was published and distributed.

A paper describing the activities developed at the Presbyterian Unit Health Education Project was presented at the 1965 annual convention of the

American Hospital Association in San Francisco, California. Visits to the project have been made by representatives of United States Public Health Service, the American Hospital Association, and the Metropolitan Life Insurance Company.

Maternal and Infant Care Project

A Public Health Educator was recruited and placed on the staff of the Newark Maternal and Infant Care Project. Health education concepts are being integrated into the total operation of the project.

Office of Economic Opportunity

A plan for orientation of counselors attached to Neighborhood Youth Corps Centers was developed. This was to assist counselors to meet the health education needs of their Youth Corps members.

Preparation of Educational Material

The Graphic Arts Program prepared exhibits on Rabies Control, Venereal Disease Control, Smoking and Health, Rheumatic Fever, External Cardiopulmonary Massage, and State Aid for Local Health Departments. Related printed materials were also prepared for use with these exhibits. The exhibits on venereal disease control and smoking and health were seen at the New Jersey State Fair.

The department's health literature list for lay groups and film catalog were revised in cooperation with the Graphic Arts Program. New materials from many sources were reviewed.

Manpower Development and Training

Job specifications for a series of positions within the Department were prepared and submitted with the Program's annual budget request. Training opportunities for candidates for admission to schools of public health in the health education curriculum have been provided through cooperation with United States Public Health Service in its Commissioned Officers Student Training and Extern Program.

Four graduate public health educators were employed by the Department.

Graduate student field placements in the Department were continued. During the summer of 1965, two international students from the University of California School of Public Health were attached to Departmental programs.

Research and Studies

As chairman of the Research Committee, Conference of State and Territorial Directors of Health Education, the State Consultant on Community

Health Organization completed a survey of health education research activities and prepared a report.

There has been increased interest in research. Chief among these in the past year have been the Smoking and Health Project (Northern District) and surveys of attitudes of selected patient groups which have been conducted by the Heart Program, Tuberculosis Control Program, and the Presbyterian Unit Health Education Project.

New Jersey Health - Agriculture Library

A library for the Departments of Health and Agriculture was established in May, 1965 in the new Health-Agriculture building. In moving to the new building, both Departments turned over a large quantity of books, periodicals, and government publications. After discarding obsolete material, the books were arranged on the shelves alphabetically by author and cataloged and classified. There are 2,500 volumes in this collection, chiefly in public health, medicine, and agriculture. The Library has circulated books since June 1, 1965. The largest has been for books in public health, pest control, soil conservation, industrial sanitation, and air pollution.

Because of limited space, the Library cannot house all the material it receives. The Library will rely on larger local and regional libraries to supplement its collection.

The Library is now receiving more than 300 periodical titles, including subscriptions and gifts. A list has been compiled and distributed.

Recent issues of periodicals have been arranged on the shelves alphabetically by title, and back issues have been prepared for binding or exchange. From June to December, 1965 the Library circulated 703 periodicals.

The Library initiated an experimental routing system with a two-week examination period. This seems to be working satisfactorily.

The Library has 1,532 bound periodicals, but there is still a serious arrears in binding. The Library will need to bind approximately 200 volumes; and to fill the gaps in the back files, the Library will attempt to obtain missing volumes through purchases and exchanges. A total of 115 volumes was bound between June and December.

Proceedings and annual reports from other institutions were cataloged. The Library also set up files of state legislation, federal legislation, executive notices, reprints, and sample periodicals. An information file consisting of government publications and pamphlets was temporarily arranged under title entries until the publications could be assigned subject headings. There are approximately 4,000 documents in this collection.

During the year, the Library handled 70 interlibrary loan requests. Interlibrary loans are transactions in which material is lent by one library to another for the use of an individual borrower. This was one of our most important services by enabling us to obtain urgently needed materials from other libraries.

To meet the informational needs of the Departments, the Library has built up a basic reference collection through purchases and gifts. In this collection are more than 750 standard reference works in preventive medicine, public health, and agriculture. These books are arranged in a convenient location to enable users to find answers to their questions quickly and easily. One of the most useful tools purchased was the Cumulated Index Medicus (1960-1965) which helped the Library to meet many additional requests for information. Between June and December, 288 reference questions were handled. These dealt with a wide range of subjects and involved extensive use of the reference collection.

Nutrition Program

The Nutrition Program through the State Consultant in Public Health Nutrition, the Consultant in the Division of Chronic Illness Control, and the four District Consultants have continued to formulate plans to promote nutrition services in all appropriate programs in the Department.

Among the highlights for 1965 were the following:

1. Diet Counseling services were established in three additional counties making a total of 11 counties now offering these services in New Jersey.
2. A 10-session refresher course, "Biochemistry for Nutritionists," was held at Rutgers—the State University sponsored by the Department and the Nutrition Council of the College of Agriculture.
3. Nutrition Program personnel assisted with the revision of the Nutrition and Homemaking Section of the Training Course for the New Jersey Homemakers Association, Inc.
4. Nutrition Program personnel assisted the Bureau of Community Institutions, Department of Institutions and Agencies with the revision of the Food Section of the State Standards for Boarding Homes for the Sheltered Care of Adults.
5. State Consultant was on Planning Committee for the Regional Workshop on the Role of Dietary Services in Care at Home for Long-Term Patients. The workshop was co-sponsored by U. S. Public Health Service, the American Dietetic Association, and the Pennsylvania Department of Health.

6. A statewide committee, with representatives from the State Departments of Education and Health, the New Jersey State Dietetic Association, and the New Jersey Hospital Association, was set up to stimulate development of appropriate training courses for non-professional food service personnel in hospitals, nursing homes, and other community institutions.

Because of the President's War on Poverty and the Economic Opportunity Act of 1964, programs requiring the coordinated skills of home economists, dietitians, and nutritionists mushroomed in many areas. An Intra-agency Committee was formed to share information.

Maternal and Child Health and Crippled Children

The State Consultant helped plan nutrition services as part of the Newark Maternal and Infant Care Project. A nutritionist who was formerly with the Metropolitan State Health District was assigned to the Project. From September 1 until December 31, 1965, the Project Nutritionists attended 23 clinic sessions at St. Michael's Hospital, Newark, gave 109 diet counseling services to 67 high risk expectant mothers, and did follow-up on post-partum patients in nutrition.

All Districts were active in recruitment of qualified nutritionists and home economists for community programs and as consultants to Head Start Programs in many areas. Requests were received for assistance with the lunch aspects of these projects. Assistance was given on menu planning for adequacy, acceptability, and use of surplus commodity foods. Two District Nutritionists were asked to participate in classes for parents of children in Head Start Projects.

The State Consultant is a member of the sub-committee on Foster Day Care, Board of Public Welfare of the State Department of Institutions and Agencies. This committee has developed state standards including nutrition recommendations for foster day care services for children and youth.

The State Consultant has also been a member of the Nutrition Sub-Committee of the New Jersey Youth Committee, Department of State.

Chronic Illness Control

The Nutrition Program personnel have had numerous opportunities to cooperate in many projects and programs in the Division of Chronic Illness Control where nutrition contributes not only to prevention but to patients' care and rehabilitation.

Diet Counseling Services are available in 11 counties and served 1,934 patients in 1965. During this period, 76 percent of the patients counseled were over 40 and 61 percent were females. Diabetes and heart disease modified diets are the most frequent causes for referrals.

The Nutrition Consultant with the Heart Program presented a paper on "Diet Counseling—A New Community Service for Patients" before the Illinois Dietetic Association in Chicago. The Administrator of the Middlesex Diet Counseling Service presented a similar paper before the Ohio State Dietetic Association. Articles on the New Jersey Diet Counseling Services have been published in the journals of the American Hospital Association and the American Dietetic Association.

The Nutrition Consultant to the Heart Program participated in the Special Heart Project at St. Peter's Hospital, New Brunswick, the first congestive heart failure program organized in New Jersey. In-hospital nutrition services are provided by the therapeutic dietitian of St. Peter's Hospital and community follow-up by the Diet Counselor of the Middlesex Diet Counseling Services.

Overweight is a principal nutrition problem. There are certain health risks associated with overweight and obesity. When excess weight is present, a greater load is placed on the heart and circulatory system. The incidence of arterial hypertension may be relatively high. Obesity may have a direct effect on functional disability. In the aged, it may lead to decreased physical activity. The choice of a diet to reduce weight is a much discussed subject among researchers and dieters. The Nutrition Program prepared information on two popular fad diets and the Department issued a news release alerting the public to the dangers of following these diets. Several Diet Counseling Services have offered group classes to patients referred by their physicians. In Morris County, a buffet of low calorie foods prepared as a visual aid demonstration of the group classes received wide publicity.

Continued attention was given to strengthening the nutrition and home care aspects of the Visiting Homemaker Services throughout the state. Consultation was given to all of the services through the District Consultants in Nutrition. The State Consultant and Nutrition Program personnel helped revise the course content for the nutrition and homemaking section of the Training Course for the New Jersey Homemakers Association, Inc.

The State Consultant and the Consultant to the Heart Program actively participated in the Training Course in Diabetes and Arthritis conducted by the State Department of Health for the United States Public Health Service.

A refresher course in biochemistry for nutritionists was offered once a week for 10 weeks. Twenty-six nutritionists and dietitians attended. Members of Rutgers University faculty were instructors.

An Institute on Aiding the Disabled Homemaker was well attended by home economists, dietitians, and physical therapists.

Cooperation With Other State Departments—Department of Institutions and Agencies

Frequent requests by the Bureau of Community Institutions, State Department of Institutions and Agencies, to give consultation on food service and menu planning to boarding home operators uncovered a number of areas where educational programs are needed. An Institute on Health Problems in Institutions was planned for full-time health officers under the Continuation Education Division of Columbia University's School of Public Health. The Nutrition Program assisted the Department of Institutions and Agencies in preparing the Standards for Food Service which were included in the New State Standards for Boarding Homes for Sheltered Care. A questionnaire to determine the interest of boarding home operators in an educational program was sent to operators in the Northern and Central Districts. The response was favorable. Food service workshops for boarding home operators have been planned for these Districts for 1966.

Department of Education

The Director of the Home Economics Department of the State Department of Education has met with the Nutrition Program staff to discuss programs of mutual interest and proposed curriculum changes for the vocational high schools. The District Consultants have worked with hospitals and vocational schools to plan food service courses for hospital food service personnel.

Through the efforts of the Consultant in the Southern District, a nutrition committee of interested professional personnel in the southern area of the state has been formed.

New Trends

At the annual meeting of the American Dietetic Association in Chicago, the need for either registration or certification of dietitians was discussed. California, Michigan, New York, and New Jersey are states which have felt the need as a protection against the untrained, poorly qualified, and unscrupulous person using the title of dietitian or nutritionist. A recognized legal definition of dietitian and nutritionist is needed. The possibilities of state registration or certification of dietitians has been explored.

Physical Therapy Program

During its second year, the Physical Therapy Program placed more emphasis upon development of a high level of physical therapy practice throughout the state. To achieve this goal, the State Consultant in Physical Therapy planned a refresher course for inactive physical therapists, consulted with community agencies and hospitals, assisted in in-service education to nursing personnel, and initiated grant-in-aid proposals where physical therapy services were needed.

Following are the highlights of the Physical Therapy Program.

Refresher Course

Last year's survey of 300 physical therapists living in New Jersey indicated that 84, or one-fourth, were married women presently unemployed. To relieve the shortage of physical therapists, a five-day refresher course was planned by the Department of Health and the New Jersey Chapter of the American Physical Therapy Association. It was held at Kessler Institute for Rehabilitation on October 20, 27 and November 3, 10 and 17. The course included a review of the basic physical therapy procedures and practices and a day's field experience. Twenty-four inactive physical therapists interested in returning to active practice, and six therapists working part-time attended the course.

Grants-in-aid

Eight grants-in-aid by the Department have helped initiate and strengthen the available physical therapy services in seven community public health agencies and one hospital.

Public Health Nursing Program

The following three areas of responsibility received major emphasis during the year:

1. Evaluation and strengthening of existing community nursing services and establishment of new services meeting standards of quality.
2. Active participation in the work of the Governor's Task Force on Nursing.
3. Strengthening the skills of nurses in various fields of employment, particularly in public health nursing agencies.

Local Nursing Services

At year's end, more than 80 percent of the citizens of New Jersey had available the services of 41 local nursing agencies that met the standards established by the Department. Work was accelerated with local citizen groups and officials to establish quality programs for the remaining 20 percent of the population in time for implementation of the home health services' portion of the Health Insurance for the Aged legislation. The Department's approved list of nursing agencies was accepted by the State's Public Assistance officials and by the Veteran's Administration for reimbursement for services rendered their clients.

In a further effort to strengthen the administrative practices of local nursing agencies, the Department contracted with the Bureau of Economic Research of Rutgers—the State University to follow-up its original study on "Cost and Payment Patterns for Public Health Nursing Agencies in New Jersey" with a project to help establish uniformity in accounting terminology. A report, "Standard Accounting Terminology for Public Health Nursing Agencies" was completed and was subjected to testing in a local nursing agency. Workshop sessions to introduce and explain the report are planned for the spring of 1966.

Grants-in-aid by the Department helped strengthen 12 local public health nursing services.

Governor's Task Force on Nursing

New Jersey is faced with a nursing shortage. The Governor expressed his concern by directing the Commissioners of the Departments of Health, Education, and Institutions and Agencies to see what could be done to meet New Jersey's nursing needs. As a result of their deliberations, a Governor's Task Force on Nursing was organized, under the chairmanship of the State Commissioner of Health and working in cooperation with representatives of the other Departments. In addition, the Task Force consists of representatives of the New Jersey Board of Nursing, the State Nurses' Association, the New Jersey League for Nursing, leaders in nursing education, the Medical Society of New Jersey, and the New Jersey Hospital Association. The staff work has been done by the Public Health Nursing Program of the State Department of Health.

The Task Force endorsed the following:

1. The development of two additional baccalaureate programs in nursing, one at Trenton State College and the other at Paterson State College.

2. A plan of refresher training for inactive nurses, under the sponsorship of the New Jersey Hospital Association, using Manpower Training funds.

3. The inclusion of two-year nursing education programs in the establishment of community college programs.

4. The inclusion of diploma school students in the State Scholarship Program and the State Student Loan Program.

Accomplishments are noteworthy in each of the above areas. The Department of Education accepted the responsibility for development of the baccalaureate programs. The Trenton State College curriculum has already been set up and approved for admitting students in September, 1966.

The refresher training program, estimated at eventually bringing approximately 2,000 inactive nurses back into the labor force, is well underway and the first classes in northern and central New Jersey have been heavily oversubscribed. The State Department of Health nursing staff has made itself available to assist in every possible way, an offer which has been accepted by numerous instructors in the hospital-based refresher training program.

The State Department of Education is supporting the recommendation to include nursing education in the community college programs. Conferences toward this goal have already been held with the presidents of the Ocean and the Middlesex County Community College and plans are proceeding favorably.

Amendments to the State Scholarship Program and the State Student Loan Program were passed, so that diploma school students are now able to participate.

In addition to the foregoing activity, a report on Nursing Resources and Needs in New Jersey was submitted to the Task Force for study and appropriate action. This report was completed under the sponsorship of the State Nurses' Association through a special study committee that had been convened prior to the establishment of the Task Force. One of the major recommendations in the report was for the development of a master plan for nursing education in New Jersey. At the request of the Task Force, the New Jersey Board of Nursing has appointed a committee to produce the master plan.

Educational Programs

The Public Health Nurse Census data prepared in 1964 for the Public Health Service indicated that approximately 70 percent of the nurses employed by public health agencies in this state have had little or no formal preparation in public health nursing.

In order to improve the quality of service and to promote the most effective use of nursing personnel, the Department started a short-term training program on the principles, responsibilities, and functions of nurses in relation to public health. The first program was very successful and the class scheduled for the spring of 1966 was oversubscribed.

In-service educational programs provided by the nursing consultants in hospitals, nursing homes* and public health agencies increased as follows:

	1963	*1964*	*1965*
Programs	50	114	152
Attendance	1,199	3,355	3,285

Talks with other professional and citizen groups:

	1963	*1964*	*1965*
Talks	6	17	21
Attendance	250	1,616	1,310

Provision of Consultation Services

Nursing consultation visits showed the following increase:

Consultation Visits	*1963*	*1964*	*1965*
Official Agencies	108	144	144
Voluntary Agencies	193	184	258
District State Health Office	29	50	73
Hospitals	208	205	299
*Nursing Homes	4	3	21
Clinics	27	44	61
Industry	41	77	38
Universities and Colleges	32	14	16
Other	35	70	65
Total	677	791	875

Other branches of state government, especially the Bureau of Community Institutions, Department of Institutions and Agencies, continue to request increasing consultation services.

The State Demonstration Program of Selected Referrals between State Mental Hospitals and Public Health Nursing Agencies has been in operation four and one-half years. Slow, steady growth has been evident. During 1965, 403 interagency referrals were made to 38 public health nursing agencies in New Jersey. Marlboro State Hospital and Trenton State Hospital have continued to demonstrate leadership in this program. Forty nurses participated

* Exclusive of programs provided by nurses assigned to the Nursing Home Project, Restorative Services Program.

in the two-day orientation programs provided for public health nurses at Trenton, Ancora, and Marlboro. This completed the intensive education program needed to initiate the follow-up service and in the future, one session a year is planned at each of the four large state mental hospitals to accommodate those interested. As the orientation efforts decreased, the Public Health Nurse Consultant, Mental Health provided more consultation to local agencies regarding specific patients and to discuss problem areas.

A report of the Nurse Activity Study was printed and disseminated. This was a three-year cooperative project between the Department of Health, the Department of Institutions and Agencies, and the New Jersey Hospital Association, during which 23 New Jersey general hospitals voluntarily undertook a study of the utilization of nurses in specific service units of their institutions. As a result of this study, considerable nursing time has been freed from non-nursing functions and redirected to patient care. The State Health Department and the federal government supplied the financial support for this project.

Materials Developed

"Recommended Criteria for Mixed Obstetric and Gynecologic Floors"—Public Health Nurse Consultant, Maternal and Child Health (Special Projects). 15 Activities of Daily Living Bags completed, containing 80 articles and provided to District offices, nursing agencies and rehabilitation home care programs through Public Health Nurse Consultant, Heart.

Exhibit on Activities of Daily Living for the Governor's Conference on Aging—Public Health Nurse Consultant, Heart.

Articles Published

"School Health Services in Migrant Schools," co-authored by Public Health Nurse Consultant, Maternal and Child Health, February, 1965, issue of *Journal of School Health.*

"Community Nursing Revived" by Chief Public Health Nurse, July, 1965, issue of *Nursing Outlook.*

"Diabetes—A Bar to Nursing?" co-authored by retired Public Health Nurse Consultant, Diabetes (article written prior to retirement), September, 1965, issue *American Journal of Nursing.*

In-Service Education Received (in addition to one-day conferences at various meetings) Public Health Nurse Consultant, Maternal and Child Health (Special Projects):

The Nurse in Family Planning (Four weeks)
New York Graduate School of Nursing, New York City.

Epidemiology for Nurses (One week)
Department of Nursing Education, Rutgers—the State University in cooperation with Communicable Disease Center and State Health Department.

Public Health Nurse Consultant (Hospitals):
Surveillance of Infections in Hospitals, (two days) Communicable Disease Center, Atlanta.

Public Health Nurse Consultant, Diabetes
Rehabilitation Nursing, (four weeks) Boston University.
Joslin Clinic (one week) Boston.

Chief Public Health Nurse
Health Officers Workshop—*"Health Problems in Institutions"*—Atlantic City (four days).
National League for Nursing Convention, San Francisco (five days).

Public Health Nurse Consultant, Mental Health
Two—two-day regional conferences of Psychiatric and Mental Health Nurse Consultants, Hartford, Connecticut.

Public Health Nurse Consultant, Cancer
Bi-Regional Cervical Cancer Conference, (two days) New York City.
Physical Rehabilitation Methods, (four weeks) New York University Medical Center.

Public Health Nurse Consultant, Tuberculosis
Conference for Public Health Nurses in Special Projects, (five days) Philadelphia.

Public Health Nurse Consultant, Occupational Health
American Industrial Health Conference, (five days).

Administrative Changes

Resignations— 1 Public Health Nurse Consultant, Pediatrics, accepted position at Regional Nursing Consultant Children's Bureau, Department of Health, Education and Welfare.

New Positions—1 Public Health Nurse Consultant, Maternal and Child Health (Special Projects)
1 Public Health Nurse Consultant, Tuberculosis
1 Public Health Nurse Consultant, Disadvantaged Youth Project

Vacancies— 1 Public Health Nurse Consultant, Pediatrics
1 Public Health Nurse Consultant, Crippled Children
1 District Consultant, Southern State Health District (under Local Health Services administration)

Public Health Social Work

Medical Social Work Training

The Development Training Project in Medical Social Work was instituted by this Department in 1961, in cooperation with the Graduate School of Social Work, Rutgers—the State University because of mutual concern with the lack of professional social services in community hospitals and health related agencies, the limited educational training opportunities under professional supervision, and absence of class instruction related to changing patterns of medical care and the increasing problems of chronic illness and the aging.

Four years ago, only one student enrolled in the Graduate School of Social Work was interested in working in a medical setting. Establishment of a limited Departmental scholarship program for medical social work students resulted in increased field work training placements in community hospitals.

During the past three years, teaching concepts related to medical care have been included in the curriculum of 275 graduate students enrolled in the Graduate School of Social Work.

Three new sources for scholarship stipends are now available in New Jersey for graduate students interested in the medical and health related setting. Ten scholarships were available this year, ranging from $1,800 to $3,600.

This year, 15 students are interested in being trained in a medical or health related setting. As part of their internship, they will render almost 11,000 hours of unpaid social services under accredited supervision during the academic year.

A one-day seminar on "The Changing Role of Social Service in Comprehensive Medical Care" was held in Princeton at the New Jersey Hospital Association, jointly sponsored by the State Department of Health and the Graduate School of Social Work, Rutgers—the State University. One hundred twenty-five persons attended, representing medicine, hospital administration, social work, nursing and allied public health professions. Proceedings of the seminar were published in the January, 1966, issue of *Public Health News*. Requests for reprints of this seminar have been received from public and voluntary agencies throughout the country.

Social Work Recruitment Activities

Because of increased interest in entering social work as a profession, this Department has continued its support of the Summer Experience in Social Work Project in cooperation with 33 public and voluntary health and welfare agencies in New Jersey. This Project provides undergraduate students an opportunity for paid employment in selected agencies during the 10-week summer vacation.

This year, 411 undergraduate students applied to the Project for summer employment. Their ages ranged from 19 through 23 years of age. Eighty-three undergraduate students were employed approximately 29,000 hours, gaining practical experience in social work. Unfortunately, not all students who applied were employed because of lack of agency funds.

Volunteer Friendly Visitor Project

During the past three years, the Program Coordinator in Public Health Social Work has carried administrative responsibility as Project Director for the coordination and implementation of the Volunteer Friendly Visitor Project. During this period, a 14-hour Training Course Manual was developed and printed for use on a state-wide basis.

Twenty-two training courses have been held: three in Bergen County, five in Hudson, two in Passaic, three in Union, four in Essex, two in Somerset, one in Mercer, one in Middlesex, and one in Warren County. Six hundred and ninety-three persons completed the training course. Of these 656 were females and 37 males whose ages ranged from 21 through 79 years of age.

A one-day seminar on "Supervision of Volunteers" was held on the Rutgers University campus in June, in cooperation with the University Extension Division. Seventy persons attended, representing federal, state and local public and voluntary health and welfare agencies and churches. Proceedings of the seminar were published in the October, 1965, issue of *Public Health News* and have had wide national distribution.

At the invitation of the Committee of Social Workers in Public Health, the Project Director presented a paper on "The Volunteer Friendly Visitor Project in New Jersey" before an audience of 100 persons at the American Public Health Association in Chicago this year. The Public Health Service is planning to publish papers presented at this session.

The Association of Directors of Volunteers in Hospitals invited the State Chairman and Project Director to present the Project plan at a meeting of 55 members. As a result, interest in training selected volunteers as Friendly Visitors has developed. Currently, training courses are scheduled in three hospitals in Newark, two in Bergen County, and one in Ocean County.

Visiting Homemaker Service

At the invitation of the National Council on Homemaker Services, Inc., the Program Coordinator spent two days as an observer at the "Workshop on Standards for Homemaker Services" held at Princeton, New Jersey.

In cooperation with the Division of Chronic Illness and the Visiting Homemaker Association of New Jersey, the Program Coordinator audited class sessions in six training courses held for Homemaker-Home Health Aids in Cape May, Camden, Essex, Passaic, and Union counties.

Training Program

The Training Program provides consultation and assistance to other Programs of the Department in the planning and conduct of training courses and meetings. The continuing changes in public health administration and in health services require a continuing education program for health personnel. It is the purpose of the Training Program to provide the training support needed to maintain public health personnel at a competent level.

The Basic Environmental Sanitation Course conducted by Rutgers University provides an introductory program for the training of sanitary inspectors. This course opened with an enrollment of 51 and 23 satisfactorily completed the course. This provides a pool of persons for the entry level positions in environmental sanitation in local health departments in New Jersey.

Field Training Station at East Orange

Supervised field training was first provided in New Jersey in 1962. The Field Training Station at East Orange, operated by the East Orange Health Department under contract from this Department, provides training for selected sanitary inspectors. This is currently used for training of new sanitary inspectors and for in-service training of already employed sanitary inspectors. Four persons satisfactorily completed the field training course in 1965.

New Jersey Health Officers Association

The State Department of Health works with the Health Education and Training Committee of the New Jersey Health Officers Association in planning and conducting training workshops and seminars for health officers and sanitary inspectors. This in-service training program, limited to full-time employed personnel, deals with subjects of immediate interest and concern.

During 1965, training institutes and workshops were conducted in the following subject areas:

1. Salmonellosis
2. Safe Use of Pesticides
3. Retail Food Establishment Code Regulations

A new 36-hour course in housing inspection was developed and offered in Trenton for housing inspectors employed in the central and southern portions of New Jersey. The course, including supervised field experience and development of a typical court case, was completed by 47 persons. The course will be repeated in north Jersey in the following year.

Table 1. PROFESSIONAL TRAINING ACTIVITIES
JANUARY 1, 1965 – DECEMBER 31, 1965

Number of applications received and processed	74
Master's Degrees received 1965-66	7

Table 2. EDUCATION AND TRAINING ACTIVITIES—JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Division of Chronic Illness Control		
Symposium—Diabetes Mellitus, St. Barnabas Medical Center, Newark	May 26	60
Symposium—Diabetes Mellitus, St. Peters, New Brunswick	June 9	55
Symposium—Gastrointestinal Cancer, Memorial Hospital, Fair Lawn	April 8	50
Symposium—Gastrointestinal Cancer, Riverview Hospital, Red Bank	April 20	100
Symposium—Gastrointestinal Cancer, Newton Hospital, Newton	March 23	60
Symposium—Chemotherapy of Cancer, Hackensack Hospital, Hackensack	April 23	80
Symposium—Chemotherapy of Cancer, Atlantic City Hospital	May 18	90
Symposium—Advances in Gastro-enterology, Mountainside Hospital, Montclair	March 17	175
Symposium—"Stroke," Fairlawn Memorial Hospital	June 9	100
Symposium—"A Teaching Day in Cardiology," Jersey City Hospital	June 2	100
Training Course for Public Health Personnel in Diabetes and Arthritis	February 26	
Symposium—"Home Management for the Housewife with Arthritis"	April 7	

TABLE 2. EDUCATION AND TRAINING ACTIVITIES—*Continued*
JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Symposium—Electro-encephalography, St. Francis Hospital, Trenton	April 7	
Neurological Symposium—Health-Agriculture Bldg., Trenton	November 10	
Workshop—Leadership Training, American Cancer Society	November 5-7	200
Conference—Diabetes Training	April 10	30
Workshop—National Interagency Council on Smoking and Health	January 11	50
Workshop—Smoking and Health	October 7	75
Course—"Stroke - Modern Management and Care," Burdette Tomlin Memorial Hospital, Cape May Court House	October 6-December 15	50
Course—"The Intensive Coronary Care Unit," Overlook Hospital	November 15-19	25
Course—Cardiopulmonary Resuscitation, N. J. College of Medicine and Dentistry, Jersey City	Jan. 27, Feb. 24, March 10, April 7, May 19 & 26, June 9 & 30, Sept. 29, Oct. 27, Dec. 29	296
Symposium on "Programmed Instruction in Medical Education," Robert Treat Hotel, Newark	April 14	
Symposium on "Childhood Diabetes," Hunterdon Medical Center, Flemington	April 28	
Symposium on "Unusual Complications of Diabetes Mellitus," Prudential Life Insurance Bldg., Newark	December 8	
Course—Diabetes and Arthritis for Dr. Edward Preuss, Request of American Podiatry Association	July 12-August 20	
Course—Diabetes and Arthritis for Dr. Richard Fredrickson, Request of U. S. Public Health Service	July 6-16	
Division of Constructive Health		
Conference—"Congenital Amputee," Kessler Institute	April 3	300
Conference—"Congenital Amputee"	November 6	500
Oral Cytology—Detection and Management	December 1	500
Symposium—Skin and Scuba Diving Safety	April 24	185
Medical Emergencies in the Dental Office	September 15-22	400
Management of the Medical Patient	October 13-20	160
Management of Dental Problems of Handicapped Children	June 2-9	72
Dental Care for the Junior Citizen	April 14	150

TABLE 2. EDUCATION AND TRAINING ACTIVITIES—*Continued*
JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Conference—Accidental Poisoning, Presbyterian Hospital, Newark	February 23	100
In-Service Training Course—Accidental Poisoning, Bridgeton Hospital	February 1	50
International First-Aid Convention, Atlantic City, Accidental Poisoning	October 1	450
Seminar—Lead Poisoning, Paterson General Hospital	June 8	45
Division of Environmental Health		
Institute—Safe Use of Pesticides	October 7-8	165
Course in Housing Inspection Techniques	September 16	47
Institute—Development of a Retail Food Code	May 18-19	140
Conference—New Problems in Public Health	April 11-14	
Division of Laboratories		
Workshop—Darkfield Microscopy, St. Francis Hospital	January 25-26	27
Workshop—V.D.R.L. Test and demonstration of treponemal tests	March 1-2	29
"15th Annual Seminar on Bone Tumors," Essex House, Newark	December 11	
Division of Local Health Services		
Central District		
Seminar—Accident Prevention	February 19	10
Institute—Programmed Medical Education	April 14	200
Orientation—Health Careers for Students	April 2	100
Conference—Continuity of Care-Nurses, Helene Fuld Hospital, Trenton	May 18	14
Conference—Continuity of Care—Nursing, Middlesex General Hospital	May 24	65
Workshop—You and Your Health-Food Service Department—Princeton University	September 8	85
In-Service Training of Nurses—Paul Kimball Hospital, "Hospital Social Workers Role in Home Care Programs"	October 11	16
Workshop for Graduate Home Economists Returning to Professional Work	May 22	60
Seminar—Cardiac Patient, Marlboro State Hospital	November 17	50
In-Service Training of Nurses—"Juvenile Diabetes"	January 8	8
In-Service Training of Homemakers Service of Trenton	January 12	12
Conference—"Nutrition in Obesity," Clara Maass Hospital, Belleville	February 3	90

TABLE 2. EDUCATION AND TRAINING ACTIVITIES—*Continued*
JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Seminar—"Team Approach to Migrant Health Problems"	March 11	60
In-Service Training—Public Health Nurses of Northern District, College of St. Elizabeth, Convent Station	February 10	75
Conference—Students of Public Health in Trenton State College, "Food Fads and Fallacies"	February 26	65
"Methods in Nutrition Education"	March 8	85
In-Service Training of Public Health Nurses in Northern District, "Assisting Low Income Families"	April 14	35
Educational Program for Senior Citizens, Public Health Nursing Program at Long Branch	May 4	50
Job Opportunities for Potential Professionals, American Home Economics Association	June 22	100
Metropolitan District		
Conference on Immunization	February 10	150
In-Service Training—The Use of Dextrostix	September 29	128
Seminar—Transmission of Diseases From Animal to Man	January 6	23
Seminar—Counting Calories is Not Enough, Clara Maass Hospital	February 3	45
In-Service Training for Nurses—Maternal Attitudes, Clara Maass Hospital	March 17	151
Conference—Nutrition in Chronic Illness	May 5	118
Seminar—Motivation in Food Management	June 2	35
Northern District		
Seminar—Weight Control, St. Elizabeth's Hospital	February 10	85
Conference—New Trends in Maternal and Child Health	March 1	19
Seminar—Chemotherapy in Tuberculosis Control	March 19	65
Symposium—Nutrition of the Handicapped Child	March 24	100
Conference—Immunization	May 19	121
Seminar—Nutrition in the Later Years	June 9	143
In-Service Training—Dextrostix Screening Method	June 21	34
Conference—Restorative Measures for the Stroke Patient	June 23	27
In-Service Training—Closed Cardiac Resuscitation for Nurses	September 14	12
Symposium—Orthopaedic Conditions of the School Age Child	September 22	73
Seminar—Congenital Heart Abnormalities	November 4	100

TABLE 2. EDUCATION AND TRAINING ACTIVITIES—*Continued*
JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Office of the Director		
Field Training Station for Environmental Health Personnel	January 26	7
Annual Conference of State and Local Health Officials of New Jersey	April 1-2	400
Basic Environmental Sanitation Course, Rutgers University	June 2	55
Seminar on Salmonellosis, New Jersey Public Health Association	June 2	95
Sanitation Seminar	March 10-May 12	9
Introductory Sanitation	March 11-May 13	26
Plumbing Regulation and Inspection	September 14-December 7	31
Current Trends in Housing Inspection	September 16-October 28	39
Civil Defense		
Packaged Disaster Hospital Training for Hospital Administrators		250
Civil Defense Training for Nurse Administrators		125
Set-up and Operation of Civil Defense Hospitals		1,000
Food and Drug Aspects of Civil Defense		125
Disaster Nursing		360
Role of Medical Technologist in Civil Defense		100
Civil Defense Disaster Training for Dentists		200
Division of Preventable Diseases		
Conference—Venereal Disease Training for P.T.A. Health Chairmen	April 22	85
Orientation Conference—Migrant Life Education	June 23	30
Symposium—"Control of Infection in Institutions"	November 16	300
Seminar—Narcotics, New Jersey Welfare Council	March 23	125
Workshops (12) Venereal Disease Education at Six State Colleges		1,200
In-Service Training in Syphilis Eradication		8
Orientation in "Red Dog" Epidemiologic Program		22
Division of Special Consultation Services		
Short-Term Training—Planning in Health Education	February 15-19	50
Workshop—New Jersey Congress of Parents and Teachers Health Section	June 14	20
Conference—State-wide Partners in Health Careers	October 4	50
CDC Training Course—Preparation and Use of Audio-Visual Materials	November 16-19	75

TABLE 2. EDUCATION AND TRAINING ACTIVITIES—*Continued*
JANUARY 1 – DECEMBER 31, 1965

Activity	*Date(s)*	*No. Participants*
Orientation—New Jersey State Department of Health (2) Students from Pakistan—University of California	June 15-August 15	2
In-Service Training Program for Nurses in Public Health Agencies	November 4 through 24	12
Refresher Course for Inactive and Public Health Physical Therapists—Kessler Institute	October 20, 27 November 3, 10, 17	30
In-Service Educational Course on Physical Therapy and Rehabilitation Techniques—Burlington County V.N.A.	April 28, May 26	10
In-Service Educational Course on Care of the Arthritic Patient, Long Branch V.N.A.	April 19	5
Restorative Care In-service Education Program		
a. All Soul's Hospital, Morristown	May 5	15
b. St. Vincent's School for Practical Nurses, Montclair	April 20	15
In-Service Education Program on Physical Therapy Techniques to Three Monmouth County Organization for Social Service Health Centers:		
Manasquan Health Center	March 2	10
Freehold Health Center	March 11	10
Bodman Health Center	April 15	10
Training Course in Diabetes and Arthritis, New Jersey State Department of Health		
Seminar—"Supervising Volunteers"	June 3	65
Seminar—"Social Service in Medical Care"	September 23	140
Training Course—Volunteer Friendly Visitors	January 18, 19, 20, 25	48
Training Course—Volunteer Friendly Visitors	February 8, 9, 15, 16	40
Training Course—Volunteer Friendly Visitors	May 18, 20, 25, 27	25
Training Course—Volunteer Friendly Visitors	March 15, 18, 22, 25	40
Division of Administration		
Orientation Course for Departmental Personnel	November 12 and 29	50
Telephone Operators Course		48
	November 24	53
Supervisory Principles and Techniques	December 7	9
Speed Reading	October 13	1
Communications	September 27	2
Machine Dictation	September 22	8
Typing Course	September 16	16
Management Orientation Seminar	November 9	2
Institute for Registrars	September 15	210
Clinic for Registrars	April 2	40
Management Training Seminar	May 16	1

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