

# NINETY-SECOND ANNUAL REPORT

OF THE

# Department of Health

OF THE

# STATE OF NEW JERSEY

1969



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STATE OF NEW JERSEY

DEPARTMENT OF HEALTH

TRENTON, NEW JERSEY

*To His Excellency, Governor William T. Cahill:*

This is the Annual Report of the Department of Health for the calendar year 1969.

A report on Health Statistics is published separately.

Respectfully submitted,

JAMES R. COWAN, M.D.

*State Commissioner of Health.*

**NEW JERSEY STATE LIBRARY**

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

FISCAL YEAR 1969-1970

(July 1, 1969 — June 30, 1970)

JOHN J. CANE, D.D.S., *Chairman* ..... Phillipsburg  
MRS. J. DUNCAN PITNEY, *Vice-Chairman* ..... Mendham  
MICHAEL S. KACHORSKY, *Secretary* ..... Manville  
HENRY L. DREZNER, M.D. .... Trenton  
WILLIAM S. LITTLE ..... Ridgewood  
SYLVIA S. RISKIN, Ph.D. .... Passaic  
HARRY J. ROBINSON, M.D. .... Short Hills  
(Vacancy)

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



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## Office of the Commissioner

State Commissioner of Health ..... ROSCOE P. KANDLE, M.D.  
Assistant Commissioner for Operations ..... WILLIAM R. PEEBLES  
Assistant for Legal Affairs ..... EDWARD P. MINCHER  
Comprehensive State Health Planning Agency  
    Director ..... MIRIAM SACHS, M.D.\*  
Office of Program Planning and Education Director .... RALPH T. FISHER  
Public Relations Director ..... DONALD S. BENSON  
Secretary ..... MISS ANGELA PIONTEK

\* Resigned November 1969. Curtis F. Culp, M.D., assigned Acting Director.

## Office of the Commissioner

The Commissioner provided over-all direction to departmental programs and activities. He reported monthly and at other times as necessary to the Public Health Council and to the Governor on significant activities of the department. He sat as a member of the Radiation Protection Commission and of the Hospital Licensing Board. He served as Acting Director of the Division of Chronic Illness Control and, after the retirement of the Director of the Division of Environmental Health, in mid-year, he served as the acting director of that division.

Units of Office of the Commissioner were concerned with providing legal advice; with the development of comprehensive state health planning; with development and maintenance of effective community health services through grants-in-aid; with providing information to the public; and with program planning, education, and training programs.

The Assistant to the Commissioner for Legal Affairs held 72 conferences concerning legislation and followed up most of them with memoranda to the Counsel to the Governor. He conducted 56 hearings of which 10 lasted more than one day. The Public Health Council held public hearings on and subsequently adopted amendments to Chapters VI (Boarding Homes for Children) and Chapter X (Blood Banks) of the State Sanitary Code.

The Public Relations unit issued 136 press releases; handled a large volume of telephone calls from the press and public on diverse subjects; edited 12 issues of a 24-page journal, *Public Health News*; prepared two reports monthly to the Governor; wrote a year end summary annual report; and edited the more extensive departmental annual report.

The Office of Program Planning and Education in the Commissioner's Office had oversight over programs on Health Education, Program Planning, Training, and the Health-Agriculture Library.

The department was one of three in state government to be selected to develop a Program Planning and Budget System (PPB) which is expected to be operative in all departments of state government by 1975. The Program Planning Program of the department reviewed and evaluated all 54 programs.

The Program Planning Program in cooperation with the department's Grants Management Unit reviewed grant and contract applications of the more than 400 grant-in-aid and professional contracts between the department and local agencies.

## DEPARTMENT OF HEALTH

In comprehensive health planning, a study of health facilities was completed by the Health Facilities Planning Council for New Jersey, and a report was prepared recommending area-wide planning agency boundaries in the state. The same Council began a patient origin survey of health facilities, including documentation of long-term facilities, with emphasis on extended care facilities, and an exploration of patterns of utilization of emergency rooms and hospital ambulatory care services.

The Comprehensive State Health Planning Agency contracted for studies to evaluate information resources of the state relating to the Medicaid program and on the impact of Medicaid in 1970 and these reports were accepted by the State Health Planning Council. The Comprehensive State Health Planning Agency also entered into a contract for a study of medical care costs and health manpower.

## Division of Administration

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JOHN B. VAN ELLIS, *Director*

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*Programs:*

Budget and Accounts .....	GEORGE E. FORMAN <i>Program Coordinator</i>
Data Processing .....	ROBERT T. KING, B.S. <i>Program Coordinator</i>
Examination and Licensing .....	KENNETH J. CARHART <i>Program Coordinator</i>
Graphic Art Services .....	RAYMOND HARRISON <i>Program Coordinator</i>
Personnel .....	WILLIAM R. MONYER <i>Program Coordinator</i>
Public Health Statistics .....	ANNA P. HALKOVICH, B.A., M.B.A. <i>Program Coordinator</i>
Vital Statistics Registration .....	F. MERTON SAYBOLT, B.S., M.S.P.H. <i>State Registrar and Program Coordinator</i>

## **Division of Administration**

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

Major accomplishments were aid to Rodent and Insect Control Program in the design of forms for reporting and evaluation of the various municipal projects; assistance in formulating the proposed organizational structure and budget for the Narcotic and Drug Abuse Control unit; design of the input forms and output reports needed for a solid waste survey of truck dumping at sanitary landfills; design of a study of Emergency Room and Clinic activities at Perth Amboy General Hospital; and design of the inputs, outputs, and tabulating procedures on a Trenton Puerto Rican Health Attitude Survey.

### **Budget and Accounts Program**

The Budget and Accounts Program has the responsibility for the fiscal operations of the department. It is also responsible for the warehouse functions of receiving and distributing educational materials, office supplies, drugs and biologics; and the accountability for all departmental revenue and permanent property. It prepares state and federal budgets, fiscal reports, letters of credit, and other fiscal procedures as required. All purchase division procedures are cleared through the program.

Twenty-three project, formula, and research grants were received from federal departments.

There were 241 federal fiscal reports prepared; 12,011 vouchers were passed to payment, and 11,537 purchase requisitions were processed and forwarded to the Division of Purchase and Property.

## DEPARTMENT OF HEALTH

## STATE DEPARTMENT OF HEALTH

## FINANCIAL STATEMENT

July 1, 1968 — June 30, 1969

## Received for transfer to State Treasury:

Licenses and permit fees .....	\$486,659.75
Penalties .....	50,490.00
Certified certificates .....	92,024.94
Examination fees .....	35,700.00
Miscellaneous .....	68,880.45
Net total .....	<hr/> \$733,755.14

## Received for disbursements:

State appropriation and transfer .....	\$18,418,311.62
United States Department of Health, Education and Welfare—Public Health Service .....	7,132,831.72
Social and Rehabilitation Services .....	2,381,296.00
Other federal funds .....	307,104.00
Private grants .....	83,230.84
Crippled children donations (Private) .....	50.00
Net total .....	<hr/> \$28,322,824.18

# DEPARTMENTAL ALLOCATIONS

July 1, 1968-June 30, 1969

DIVISION	Salaries			Other Allocations			Total State	Total Federal	Total Private	A
	State	Federal	Private	State	Federal	Private				
Office of the Commissioner	\$307,416.00	\$88,744.00	.....	\$67,015.00	\$188,587.00	\$787.95	\$374,431.00	\$277,331.00	\$787.95	\$6
Administration .....	808,901.00	54,244.00	.....	206,378.91	49,970.34	.....	1,015,279.91	104,214.34	.....	1.1
Environmental Health .....	851,385.00	454,250.00	.....	4,905,712.89	2,190,478.60	.....	5,757,097.89	2,644,728.60	.....	8.4
Preventable Disease .....	389,869.00	600,164.00	.....	289,630.00	639,699.00	.....	679,499.00	1,248,863.00	.....	1.8
Chronic Illness .....	170,948.00	75,303.00	.....	918,059.90	348,589.24	.....	1,089,007.90	423,892.24	.....	1.5
Laboratories .....	741,111.00	156,061.00	\$6,000.00	167,425.00	119,224.28	4,450.00	908,536.00	275,285.28	10,450.00	1.1
Constructive Health .....	153,601.87	304,034.88	24,898.18	1,352,109.44	1,952,585.38	5,744.71	1,505,711.31	2,256,620.26	30,642.89	3.7
Special Consultation Services .....	86,127.00	190,190.00	.....	11,585.00	143,464.00	.....	97,712.00	333,654.00	.....	4
Clean Air and Water .....	1,171,613.00	379,541.00	26,398.00	489,758.67	1,280,791.00	15,002.00	1,661,371.67	1,660,332.00	41,400.00	3.3
Local Health Services .....	819,079.03	159,915.00	.....	4,510,585.91	436,396.00	.....	5,329,664.94	596,311.00	.....	5.9
Total Allocations.....	\$5,500,050.90	\$2,471,446.88	\$57,296.18	\$12,918,260.72	\$7,349,784.84	\$25,984.66	\$18,418,311.62	\$9,821,231.72	\$83,280.84	\$28.3

# DEPARTMENTAL EXPENDITURES

July 1, 1968-June 30, 1969

Office of the Commissioner	\$270,212.47	\$79,035.86	.....	\$56,021.36	\$169,784.64	\$787.95	\$326,233.83	\$248,820.50	\$787.95	\$5
Administration .....	760,832.27	54,382.55	.....	184,568.88	47,062.71	.....	945,401.15	101,445.26	.....	1.0
Environmental Health .....	786,054.36	361,798.31	.....	4,729,950.44	635,757.70	.....	5,516,004.80	997,556.01	.....	6.5
Preventable Disease .....	361,181.31	476,898.56	.....	288,941.48	490,223.28	.....	650,122.79	967,121.84	.....	1.0
Chronic Illness .....	148,374.95	71,545.78	.....	616,652.40	335,058.36	.....	765,027.35	406,604.14	.....	1.1
Laboratories .....	673,653.95	152,880.56	\$5,730.96	162,814.57	109,741.20	4,215.37	836,468.52	262,621.76	9,946.33	1.1
Constructive Health .....	142,838.50	298,998.94	24,898.18	1,350,950.04	1,899,966.51	5,744.71	1,493,788.54	2,198,965.45	30,642.89	3.7
Special Consultation Services .....	81,469.16	162,747.77	.....	7,066.88	118,635.16	.....	88,536.04	281,382.93	.....	3
Clean Air and Water .....	1,116,001.35	287,803.07	15,496.56	453,380.19	983,921.12	14,569.25	1,569,381.54	1,271,724.19	30,065.81	2.8
Local Health Services .....	787,798.86	160,697.19	.....	3,541,391.34	412,917.70	.....	4,329,190.20	573,614.89	.....	4.9
Total Expenditures .....	\$5,128,417.18	\$2,106,788.59	\$46,125.70	\$11,391,737.58	\$5,203,068.28	\$25,217.98	\$16,590,154.76	\$7,209,856.07	\$71,418.98	\$29.3



## DEPARTMENT OF HEALTH

### **Data Processing Program**

This program gave significant time to four special projects this year :

1. Special frequency distributions and diurnal averages of carbon monoxide were supplied to the Air Pollution Control Program to assist in the establishment of standards for carbon monoxide.
2. A study was conducted by the Inactive Personnel Project to determine the movement of nurses from inactive to active status. Data for 1966 and 1968 from the Board of Nursing were used.
3. Data Processing analyzed and summarized more than 13,000 visits to migrant workers and their families in 1969. The data supplied were used for both state and federal reports.
4. Data were collected from more than 8,400 trucks arriving at selected landfills in northern New Jersey. Data Processing analyzed and summarized these data and provided the Solid Waste Program with seven analytical reports.

### **Examination and Licensing Program**

This program licenses and certifies to government and other agencies, health officers, milk inspectors, meat inspectors, sanitary inspectors, plumbing inspectors, food and drug inspectors, veterinary meat inspectors, public health laboratory technicians, public water supply system operators, public water treatment plant operators, and public sewage treatment plant operators qualified to perform essential public health services.

Upon enactment of R. S. 45:25-1, which became effective December 6, 1968, regulation and certification of x-ray technicians was added to the list of health occupations requiring licensure or certification by this program.

The Bureau maintains a close working relationship with the Department of Civil Service and with local authorities to aid in meeting their needs. It has established liaison with universities, colleges, vocational schools, and hospital x-ray technology schools offering courses preparing applicants for our licensing examinations, to be assured that course contents encompass license responsibilities and that the questions asked are valid and reliable.

During the period covered by this report, 502 applications other than for x-ray certification were processed for examinations. A total of 59 examinations on six dates resulted in the issuance of 292 licenses in 1969. There were 2,006 licenses renewed covering water supply systems, water treatment plants, and sewage treatment plants.

## DIVISION OF ADMINISTRATION

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During this period, 3,594 x-ray technician certifications were issued, of which 895 were the result of the "grandfather's clause" (ending December 6, 1969) of Chapter 291, P. L. 1968, which allowed admission to certification examination based upon formal training and/or stipulated minimum years of work experience in the field of x-ray technology. During this period, the X-ray Technician Board of Examiners adopted a school curriculum and promoted a course in Dental X-ray Technology.

On the approval of the Division of Laboratories, six initial blood bank licenses were issued and 134 renewed.

Permits to operate more than one water or sewage facility were issued to 220 licensed operators, down from 245 permits issued in 1968 and 1967, and 320 in 1966.

Records were established for 37 new water or sewage facilities, as compared with 62 in 1968, 55 in 1967, and 70 in 1966. Their management was notified of the law requiring operation by licensed operators.

Examination, certification, and license fees as well as penalties, netted \$99,484.50 to the credit of the general treasury. More than 80 percent of the total was attributable to enactment of the x-ray certification law.

A revision of examination admittance requirements for water supply, water treatment, and sewage treatment plant superintendents or operators was filed with the Secretary of State in 1969. This Bureau has been designated a clearing house for course offerings for prospective operators in educational institutions in this state. At the end of this reporting period, there were eight schools offering instruction to water or sewage license candidates and license holders.

The program and department receive valuable assistance from the examination and licensing boards whose members serve without remuneration.

### Board of Barber Examiners

An agreement was reached with the Division on Civil Rights whereby barber inspectors will observe the display of the public accommodation poster when inspecting barber shops and supply same to an owner or operator of a barber shop who does not have a poster on display.

In addition, this Board forwards a list of new barber shops on a monthly basis so that the Division on Civil Rights may mail public accommodation posters to these establishments. This arrangement has worked well.

Discussions were held with representatives of federal and state authorities on the rehabilitation of federal and state offenders who wish to apply for barber apprenticeships.

An understanding was reached whereby the authorities agreed to judge an individual's suitability before training was undertaken, thus avoiding lost time in training. The Board was unanimous in its decision as to the offense categories which would be acceptable. With the exception of narcotics and sex offenses, any ex-offender would be considered on an individual basis, and much weight would be placed upon a letter of recommendation submitted by his supervising parole officer. Even selected sex offenders and former addicts, depending upon the degree of rehabilitation achieved, will be extended the opportunity to plead their cases.

On April 9, 1969, the Board adopted Barber School Rules and Regulations for the administration and conduct of barber schools in this state. These were filed with the Secretary of State on May 27, 1969 and became effective on July 1, 1969.

Since the Board had arranged for Puerto Ricans to take the barber examination in Spanish, it has also agreed to include Cuban immigrants.

Amendments to the State Barber Law became effective on December 24, 1969. The new amendments provided an increase in fees covering the renewal of barber certificates, barber shop licenses, new shop licenses, and removal fees, and provide for a demonstrator's permit.

It is estimated that this increase in fees will increase the revenue of this Board by approximately \$60,000 per year.

### **Graphic Art Services Program**

Centralized services are provided for the department in the design and production of exhibits and printing mechanicals for forms, booklets and brochures, printing, addressograph, and audio-visual materials.

The addressograph section processed more than 686,270 pieces, totaling 285 mailing jobs in its function of handling the department's bulk mailing requirements from over 88 special lists maintained by this program.

There were 7,840 bookings of the department's non-professional films, covering a wide variety of public health activities intended for viewing by lay groups. These are housed in the New Jersey State Museum Film Library. This program expedited the ordering of new prints and replacement footage as required.

## DIVISION OF ADMINISTRATION

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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 289 bookings. As part of the program's audio-visual function, 157 audio-visual equipment loans were processed. Audio-visual equipment assigned to the training and conference rooms on the main floor of the building is maintained by the program's audio-visual technician.

This program supervises the receptionist-training room operation on the main floor of the Health-Agriculture Building. In addition to aiding visitors and dispensing parking permits, approximately 1,040 bookings were made for the use of training rooms during 1969.

In addition to the graphic functions, this unit is responsible for coordinating all work relating to internal moves in the Health-Agriculture Building involving electrical work, telephone installations, equipment moves, and construction work involving moving and installation of new partitions.

### **Personnel Program**

The functions of the Personnel Program include the maintaining of centralized personnel, payroll, and affiliated services to all programs of the department. These responsibilities comprise recruiting, screening, interviewing, and placement of applicants, providing accurate centralized and current personnel records of all department employees, processing all regular and supplemental payrolls, maintaining personnel and payroll forms, assisting in orientation courses for new employees, maintaining an accurate classification of positions, providing related employee services, furnishing data for department budgets, and accounting for salary expenditures.

Employees paid from state funds as of the end of this period totaled 677 and 346 were being paid from federal or project funds.

### **Vital Statistics Registration Program**

#### *Historical Background*

The State Registrar has custody of about 12,280,000 records of births, marriages, deaths, and fetal deaths. These date back to June 1, 1878. All original records, indexes, and microfilm images of birth, marriage, and death reports for the period May, 1848 through May, 1878 were transferred in 1967 to the Bureau of Archives and History, State Department of Education. The records for the period 1848 to 1887 were collected originally by the Secretary of State and were turned over to the Bureau of Vital Statistics when it was

created by an act of the legislature in 1887. Records of births from 1848 through 1903, marriages from 1848 through 1935, and deaths from 1848 through 1965 have been microfilmed. These original records are stored several miles away from the film, and the film is used in place of the source documents.

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

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

### *Workload and Accomplishments*

In calendar year 1969 the program received, processed and filed 238,786 original reports of vital events, about 1,000 delayed reports of births, approximately 1,500 ordinary corrections to current records, an estimated 2,400 ordinary corrections to records of previous years, and 548 requests to adjust birth and/or marriage records of individuals whose names were legally changed by court action. To obtain missing or additional information for coding purposes, approximately 4,000 queries were prepared and mailed. New birth records were prepared for 3,622 persons who were adopted in 1969 or prior years and whose parents subsequently married. There were 4,317 office visits and 17,449 telephone calls by persons needing help in various registration matters.

About 1,000 persons applied for copies of entries in the State Census records of 1905 and/or 1915. Such copies are usually acceptable in lieu of birth certificates as proof of age for benefits under Social Security and Medicare. Including the census requests, the program processed 76,574 applications for searches of the vital records of one or more years under one or more names.

A large amount of the free work listed in Table 2 of this report is done to furnish verifications or certified copies of records for the administrative use of welfare boards of the counties and certain municipalities. By law, the program must furnish to County Supervisors of Veterans' Interment a photocopy of the death record of every veteran who died and was buried in New Jersey.

## DIVISION OF ADMINISTRATION

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On behalf of the Cancer Program, approximately 1,300 man-hours were spent searching for death records of former cancer patients who might possibly have died in New Jersey. The number of letters requesting such searches was 2,129 (a 44 percent increase over the 1,479 received in 1968) and many were lists of more than 25 names each. Each name required a search of an average of seven years of records. Copies of records found are sent for the clearance of cancer registers of hospitals and other agencies in and outside New Jersey. To maintain their accreditation, hospitals must do this follow-up.

A summary of the volume of the major activities of the program follows.

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

<i>Certificate Type</i>	<i>Calendar Year</i>	
	<i>1969</i>	<i>1968</i>
Birth .....	113,975	110,841
Fetal Death .....	1,514	1,584
Marriage .....	55,895	53,919
Remarriage .....	883	966
Death .....	66,519	67,096
Total .....	238,786	234,406

\* Provisional

Table 2. SEARCHES REQUESTED AND FEES RECEIVED

<i>Item</i>	<i>1969</i>	<i>1968</i>
Searches made and/or copies issued for which fees were received .....	37,522	36,195
Searches made and/or copies issued for which no fees were received .....	34,164	29,234
Total searches .....	71,686	65,429
Fees received for searches and certified copies ...	\$92,024.94	\$89,572.27

## Division of Chronic Illness Control

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

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*Programs:*

Alcoholism Control .....	WILLIAM J. HARRIS, M.P.H. <i>Program Coordinator</i>
Arthritis and Allied Disorders .....	LEON A. FRASER, M.D. <i>Program Coordinator</i>
Cancer Control .....	WILLIAM J. HARRIS, M.P.H. <i>Acting Program Coordinator</i>
Chronic Disease Control .....	ROSCOE P. KANDLE, M.D. <i>Acting Program Coordinator</i>
Chronic Renal Disease .....	WILLIAM J. HARRIS, M.P.H. <i>Acting Program Coordinator</i>
Diabetes, Endocrine and Metabolic Disorders .....	ARTHUR KROSINICK, M.D. <i>Program Coordinator</i>
Disorders of the Nervous System and Special Senses .....	LEON A. FRASER, M.D. <i>Program Coordinator</i>
Heart and Circulatory Diseases .....	ROSCOE P. KANDLE, M.D. <i>Acting Program Coordinator</i>

## Alcoholism Control

Alcoholism continues to be a major public health problem. Estimates are that more than 200,000 individuals are affected in New Jersey.

The broad program objectives are: to take care of those already disabled and ill; to work toward the prevention of alcoholism; to prevent the progression of the illness in those already involved; to develop a method of early detection; and to follow-up those who have been treated and evaluate the methods being used.

Last year, 3,691 alcoholics received treatment in the control programs sponsored by this department. At nine out-patient and rehabilitation centers located in community general hospitals, 1,768 patients received help. Visits to these nine centers numbered 15,013 during the year. This is an increase of more than 2,000 visits compared with the previous year. Information and referral centers in Essex and Monmouth Counties, partially supported by the department, were visited by 906 individuals seeking help for themselves, a member of the family, or an employee. In addition to the in-person visits, much of the centers' activities were handled by telephone; during the year, 3,175 calls for service were made.

Excessive use of alcohol results in institutionalization of a number of alcoholics. In an attempt to reach these persons, the Field Representative from the program conducted weekly group sessions at three tuberculosis hospitals, three penal institutions, and the in-patient unit for alcoholics at the Neuro-psychiatric Institute. During the year, 1,017 alcoholics participated in the group meetings.

Evaluating the success of treatment in out-patient treatment centers is difficult. Nevertheless, a subjective evaluation has been attempted of the individual's drinking habits, employment, adjustment in the family and community, and physical health. Patients were given a numerical rating at the time of admission and again at the end of a 12 month period. On this basis the results were as follows: 24 percent showed marked improvement; 21 percent reasonable improvement; 16 percent no change; four percent had deteriorated; and 35 percent could not be evaluated or were lost to follow-up.

*Alcoholism—A Treatment Digest for Physicians*, in its 18th year of publication, continues to be distributed quarterly to all practicing physicians in New Jersey. The publication contains articles of use to the practicing physician and a list of treatment resources and facilities.



*Program Emphasis*

After two years of planning, a comprehensive program for the treatment of alcoholics at the Martland Hospital Unit materialized. The program includes in-patient care and after-care, utilizing individual and group therapy. Specialties of the staff include medicine, social work, psychology, and the talents of the recovered alcoholics.

**Arthritis and Allied Disorders**

The Arthritis Program co-sponsored three educational programs during the year for physicians and allied health personnel.

The Rheumatology Unit of the New Jersey College of Medicine and Dentistry continued to receive assistance from the Arthritis Program through its support of a clinical and research nurse. This individual has significantly strengthened the efficiency of clinic care and follow-up for the arthritic patient. Clinics are being held at three locations in the Metropolitan District. The emphasis continues to be on juvenile arthritis.

A statistical report of the activities for this clinic during 1969 is as follows:

*Number of Patients Tested According to Clinical Categories*

Rheumatoid Arthritis .....	352
Degenerative Joint Disease .....	223
Rheumatic Fever .....	39
Gout .....	104
Other .....	68

*Types of Tests Performed*

Joint Fluid Analyses .....	145
Rheumatoid Arthritis Factor Test .....	504
Rheumatology Research Test .....	949

**Cancer Control Program**

During the year, 14,496 persons were screened for cervical cancer in 15 cancer detection programs supported by grants from this department. Of this number, 53 were found to be positive and were referred for appropriate treatment; 3,649 were suspicious and are being carried under surveillance.

## DIVISION OF CHRONIC ILLNESS CONTROL

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### *Death Certificates*

The program received requests for 2,129 death certificates and provided 845 to cancer registries both in and out of state, enabling them to keep the hospital tumor registries up to date.

### *Cytotechnician Training*

Seven students were trained in a program for cytotechnician screeners co-sponsored by Presbyterian Hospital and this department. The program is conducted one day each week for nine months and includes lectures, laboratory demonstration, and practical application of these techniques in the laboratory. Ninety-one technicians have been trained since the inception of the program.

### *Educational Activities*

Instruction in nursing care of cancer patients was given to about 150 nurses during the year and 50 social caseworkers received instruction on the psychological implications of cancer.

A grant to the Academy of Medicine of New Jersey from this Department enabled it to provide roving seminars on "Cancer of the Uterus and Cervix" for the medical staff at 12 community hospitals. The program was conducted at three hospitals and transmitted by telephone to hospitals in the surrounding area. This technique made it possible for a larger number of physicians to avail themselves of this program.

The 19th annual slide seminar of the New Jersey Society of Pathologists attracted 250 pathologists.

During the year, 7,450 persons from health and welfare groups as well as teachers in secondary schools through the state attended 164 film showings pertaining to cancer. These films are made available by the program through the film library of the State Museum.

## **Chronic Disease Program**

### *Chronic Respiratory Disease*

Approximately 250 nurses, physical therapists and inhalation therapists attended three one-day seminars on emphysema held in East Orange, Hackensack, and Trenton.

A special study on the relationship of chronic respiratory disease and air pollution conducted at St. Barnabas Medical Center, Livingston, with support from this department has been completed and a final report is in preparation.

### *Eye Disease*

This department cooperated again this year with the Medical Society of New Jersey in the annual state-wide eye screening program. There were 11,114 persons screened at the 83 participating centers; 5,175, or 46.5 percent showed some need for care; nine percent were suspected of having glaucoma.

### *Homemaker-Home Health Aide*

State-wide availability of homemaker-home health aide service was achieved this year with the establishment of the Visiting Homemaker Service of Cumberland County, Inc. as the 24th local agency. Financial assistance and consultation services are being provided by the Chronic Disease Program.

During the year, 467 new homemaker-home health aides were trained in 29 training courses, making a total of almost 2,600 homemaker-home health aides trained in the last five years.

During the past year, New Jersey Homemaker Agencies served 9,811 patients with a total of more than 1,400,000 hours of service. While services rendered to Medicare patients were 19 percent less than in 1968, an increase in service to non-Medicare patients maintained the total hours of service at the same level as the previous year. The availability of homemaker-home health aide services facilitated hospital discharge in 2,421 cases and made hospitalization unnecessary for an additional 2,480 patients.

The Visiting Homemaker Service of Greater Trenton and the Chr-III Service, Montclair, with assistance from this program, continued their special projects using specially trained homemakers to strengthen the family life of economically and culturally disadvantaged urban families. In 1969, 104 new families were admitted to these projects, making a total caseload of 147 families consisting of more than 400 individuals.

### *Neighborhood Health Centers*

The family health care project established late in 1968 at Queen of Angels Family Service, Newark, with support from this program continued to serve the disadvantaged population of the Baldwin and Springfield Avenues section of the city; 406 new patients made 963 visits to the center in 1969. More than two-thirds of the patients were females and 50 percent were under 19 years of age.

The family health project of the New Jersey College of Medicine and Dentistry served 135 families and a total of 324 patients who made 645 visits. More than 60 percent of these patients were under 19 years of age.

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*Nutrition*

During 1969, eight Diet Counseling services in Bergen, Burlington, Essex, Hunterdon, Middlesex, Monmouth, Morris, and Union Counties provided dietary counseling for 1,431 patients requiring 1,620 counseling sessions. In addition, five services conducted 70 group sessions during the year, reaching a total of 1,496 persons.

Referrals were received from 338 physicians during the year. Clinic referrals totaled 96. Fifty-seven percent of the patients were women and 75 percent of the patients were over 40 years of age.

Diets most frequently ordered were: diabetic diets, 33 percent; sodium restrictions, 17 percent; bland and ulcer diets, 12 percent; calorie restrictions, 10 percent; fat and cholesterol modifications, 10 percent; and other, 18 percent.

A committee of the American Dietetic Association was appointed with the Nutrition Consultant for the division as chairman, to prepare "Guidelines for Developing Dietary Counseling Services in the Community." These guidelines were published in the *Journal of the American Dietetic Association* in October, 1969, and are being distributed on a national basis.

*Social Work*

The Summer Experience in Social Work Program was continued this past summer. Of the 217 applications received, 46.5 percent, or 101 students, were accepted and placed in 25 participating agencies. Eleven voluntary agencies provided placement opportunities for 33 students and 14 public agencies accommodated 68 students.

*Volunteer Friendly Visitors*

Since the beginning of the training program in 1963, 1,317 Volunteer Friendly Visitors have been trained in 46 courses. During 1969, 107 Volunteer Friendly Visitors were trained in five courses.

**Chronic Renal Disease Program**

On June 4, 1969, Governor Hughes signed into law Senate Bill No. 769 which established a Chronic Renal Disease Program in the State Department of Health. The law called for the Commissioner of Health to appoint a Renal Disease Advisory Committee to assist in the development and administration of the program. The department was also charged with the development of standards for determining eligibility for care and treatment under the program; assisting in the development of programs for the prevention of chronic renal

disease; assisting in developing dialysis centers; and extending financial assistance to persons suffering from chronic renal disease.

Guidelines for center participation were developed as well as policies and procedures for hospital centers participating in the program.

On July 1, 1969, \$250,000 was appropriated to operate the program during the first fiscal year. To date, five Chronic Renal Disease Centers have been approved for participation in the program. These centers are located at: St. Barnabas Medical Center, Livingston; Holy Name Hospital, Teaneck; Newark Beth Israel Medical Center; Jersey Shore Medical Center, Neptune; and Our Lady of Lourdes Hospital, Camden. In addition, the department has approved Centers in Philadelphia at Hahnemann Medical College and Hospital; Thomas Jefferson University Hospital; and Albert Einstein Medical Center; and in New York City at Lenox Hill Hospital.

It has been estimated that there may be as many as 350 individuals in New Jersey requiring chronic hemodialysis services. As of December 31, the department reviewed 60 patient applications and authorized assistance for 31 patients who are being treated at the above centers. Some of these patients are currently covered by hospital and major medical insurance programs. When this coverage is exhausted, they will be eligible for assistance under the New Jersey program.

The aim of the program is to see that every patient in New Jersey requiring chronic hemodialysis has the service available to him regardless of his socioeconomic status.

## **Diabetes, Endocrine and Metabolic Disorders**

### *Professional Education*

The Program Coordinator prepared two brochures: "Screening and Diagnosis in Diabetes Mellitus for the Physician" and "Classification and Management of Diabetes Mellitus for the Physician." During the year, 53,485 of these brochures were distributed nationally.

As a supplement to two motion pictures for nurse education, the Program Coordinator wrote a brochure entitled: "The Nurse and Diabetes Control" which was published by this department. This material has attracted great interest both within New Jersey and throughout the country. Approximately 5,500 were distributed during the last four months of the year.

*Diabetes Case-Finding and Multiphasic Blood Screening*

Core activities in diabetes case-finding proceeded in a predictable fashion with a continued insistence on the principle of blood screening among high risk individuals. A major endeavor is the continued stimulation of local health departments to have an interest in developing on-going local case-finding programs.

*Employability of the Person with Diabetes*

A special study of the diabetic employee in New Jersey industry was completed by the Opinion Research Corporation of Princeton. This study confirmed a number of problems which were suspected, and confirmed thinking regarding areas of needed education or reorientation of medical studies in New Jersey. A direct result of this has been a renewed interest in possible modification of the State's Second Injury Fund as it applies to the individual with diabetes. Furthermore, the New Jersey State Rehabilitation Commission has gained greater interest in the counseling, habilitation, and rehabilitation of the diabetic. The study led to numerous local programs for industrial nurses and physicians, as well as a rather large conference which was held in Chicago in April, 1970 on the subject of diabetes in industry.

**Disorders of the Nervous System Program**

Electroencephalograph machines have been placed by the department in 22 community hospitals during past years. The electroencephalograph machine records brain wave patterns and provides an important diagnostic tool in brain injury and disease, especially epilepsy.

Sixteen of these institutions are still obligated to make quarterly reports on the use of the machine. A summary of these reports is as follows: 13,425 electroencephalograph examinations were done on 13,331 patients. Of these examinations, 8,416 were reported as normal and 5,009 were abnormal.

The "Directory of Epilepsy Services" originally published in 1962 was revised. The new title is "Directory of Neurological and Epilepsy Services in New Jersey." This publication was being printed as this report was prepared. Three educational programs for the health professions were sponsored during the year.

This program continued its close cooperation with the New Jersey Consultation Service for Neurological Diseases, a traveling unit with six clinics in the state. A summary of the activities of the unit is as follows: (A) There were 63 community clinics held at the six evaluation centers. Of the 501 patients referred by physicians, 476 were evaluated; 43 patients were admitted to the Neurology Unit of the Neuro-Psychiatric Institute.

## Heart and Circulatory Diseases Program

### *Atherosclerosis Research Project (Anti-Coronary Club)*

Activities of the Atherosclerosis Research Project at St. Vincent's Hospital, Montclair, included a study comparing water composition to the incidence of coronary heart disease; an industrial health survey; and a study of the effects of Vitamin D on blood lipids in human adults.

Studies comparing water composition to the incidence of coronary heart disease in 150 subjects in each of two cities (London, England for hard water and Glasgow, Scotland for soft water) indicated that coronary heart disease was inversely related to the hardness of water, particularly to the metallic content and less well correlated to dietary fat consumption or serum lipids.

From calcium studies in animals, Vitamin D was suspected of having an adverse effect on blood lipids in humans. Accordingly, after a two-month supplementation of 50,000 units of Vitamin D daily, lipids of 10 normal volunteers were sampled. Vitamin D was found to be significantly hypercholesterolemic and the effect of large doses was apparently cumulative.

The tenth year of the nutritional study on young coronary male patients, 100 in the study group and 100 in the control group, 20 to 50 years of age on admission to the study, has been completed. The data show a decrease in mortality rate among the study group, particularly in the younger subjects.

### *Stroke Projects*

Six hospital-based stroke projects were continued at Cooper Hospital, Camden; Presbyterian Hospital, Newark; East Orange General Hospital; Bayonne Hospital; Morristown Memorial Hospital; and Overlook Hospital, Summit. The project at Overlook Hospital was taken over by the hospital in June.

Comprehensive stroke services were provided to 772 stroke patients of whom 458 were new patients, 23 re-admissions, and 291 were carried over from the previous year. Services as indicated were rendered by a team consisting of a physiatrist, physical therapist, occupational therapist, speech pathologist, speech therapist, rehabilitation nurse, social worker, nutritionist, vocational counselor, psychiatrist or psychologist, and homemaker-home health aide. The cost to this department was \$127 per patient.

During the year, 529 patients were discharged from the six projects. Of this number, 122, or 23 percent, died; 73, or 14 percent, were lost to the projects; and, 334, or 63 percent completed the program as follows:



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120, or 36 percent, returned to pre-stroke activity ;

86, or 26 percent, were independent in all activities of daily living but were not self-supporting ;

69, or 21 percent, needed help with one or more activities of daily living ;

34, or 10 percent, needed complete nursing care ;

25, or 7 percent, returned to a job other than their pre-stroke position.

Secondary prevention and restoration continued to be the goals of these projects.

### *Education and Training*

Professional education programs were supported in cooperation with the Academy of Medicine of New Jersey ; the New Jersey College of Medicine and Dentistry ; the Veterans Administration Hospital, East Orange ; the New Jersey Dietetic Association ; and the New Jersey Heart Association.

Training programs in closed chest cardiopulmonary resuscitation were a major activity of this program. The New Jersey College of Medicine and Dentistry was given support for the organization and presentation of training courses in cardiopulmonary resuscitation designed mainly for physicians, dentists, and selected nurses. At the seven courses held this year, 213 physicians, 77 registered nurses, 39 medical students and six other paramedical personnel attended. Approximately 29 programs were organized for lay and professional personnel in cooperation with local heart association chapters and Red Cross chapters, hospitals, rescue squads, and schools. Educational materials were supplied by this department, i. e., the Resusci-Anne manikin ; the films "Pulse of Life" and "Prescription for Life," and the manual and examination forms on the training of cardiopulmonary resuscitation compiled by this department.

Educational materials were distributed upon request. The New Jersey Diet Manual (in the third printing) and diet pads (bland, low calorie, fat restricted 1800 and 2600) developed by this department mainly for hospitals, nursing homes, physicians, diet counselors, and school and college nutritionists and dietitians, continued to be in demand. Approximately 844 copies of the manual and 490 diet pads were distributed during the year.

### *Special Projects*

A demonstration project to improve emergency care of patients with acute or impending acute myocardial infarction, and to reduce the high mortality



rate of cardiac patients prior to arrival at a hospital, was established with support provided to the New Jersey College of Medicine and Dentistry. Ambulance equipment consisting of a battery-operated defibrillator-monitor, electrocardiograph machine and suction apparatus was in use approximately eight hours a day. In the first four months of operation, there were 188 calls answered, of which 28 were cardiac problems. Of the 28 cardiac cases, seven were discharged alive; four died in the unit; and 17 died in cardiac asystole or unsuccessful defibrillation.

In cooperation with the New Jersey College of Medicine and Dentistry, consultation services were made available to cardiac patients of the prenatal clinic of Martland Hospital Unit. Cardiac consultation services were also provided to clinic patients at the Bridgeton Hospital. During the 12 monthly sessions held last year, 195 patients were seen.

Equipment has been purchased for loan to the New Jersey College of Medicine and Dentistry to establish a cardiac care demonstration unit and for Helene Fuld Hospital, Trenton, to demonstrate newer methods for diagnosis and treatment of cardiac patients.

A heart sound (Phonocardioscan) screening program among school children was carried out in cooperation with the Morris County Heart Association. Of the 1,504 children screened to date, 266 were re-screened, 137 were examined by a pediatric cardiologist, and 40 were referred to private physicians.

## Division of Clean Air and Water

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RICHARD J. SULLIVAN, *Director*

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

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*Programs:*

Air Pollution Control .....	WILLIAM MUNROE <i>Program Coordinator</i>
Potable Water Program ... ..	JOHN WILFORD <i>Program Coordinator</i>
Solid Waste Disposal .....	ARTHUR PRICE <i>Program Coordinator</i>
Water Pollution Control .....	ERNEST SEGESSER <i>Program Coordinator</i>

## Air Pollution Control Program

For the New Jersey Air Pollution Control Program, 1969 was highly significant in many ways. Historically, September 16 marked the fifteenth anniversary of the signing of the state's basic Air Pollution Control Act, the first statewide air pollution control law in the country.

In February 1969, the New Jersey State Supreme Court handed down a landmark decision upholding the constitutionality of that act. This decision was rendered in a case started in 1966 by the Barrington plant of Owens-Corning Fiberglas Corporation.

The State Superior Court, Appellate Division, established that the act gave the State Department of Health the right to seek injunctive relief when a violation may not have been corrected, even though proof of irreparable and continuing harm has not been established. This decision was sustained in New Jersey State Department of Health versus Richlee Dyeing and Finishing Company, Paterson.

### *New Chapters of Air Pollution Control Code*

On August 25, Chapter 12 of the State Air Pollution Control Code was promulgated, with an effective date of October 24.

Chapter 12 established regulations for the prevention and control of air pollution emergencies, implementing the provisions of the Air Pollution Emergency Control Act passed by the State Legislature in 1967. The act contains provisions for extensive emergency powers for the governor to prevent and minimize disasters.

On October 23, Chapter 13 of the Code was promulgated, to become effective on December 22. Chapter 13 specifies standards for particulate matter (grit, grime and solid particles in the air) and sulfur dioxide, as required by the Federal Air Quality Act of 1967.

### *Technical Center Opened*

On November 30, certain segments of the Air Pollution Control Program occupied a new technical center located on U. S. Route 1, Lawrence Township. The new facility houses the laboratories of the Motor Vehicle Project, Technical Services, and Research Development. It also contains the office and equipment of the Technical Services Section, which carries on the Program's stack activities.

*Air Council Holds Public Hearing, Reports to Commissioner*

Sessions of the first annual hearing held, as required by law, by the New Jersey Clean Air Council were held February 5 and March 26, 27, and 28. The February session was concerned with testimony on the state program; the March sessions provided an opportunity for anyone interested in air pollution to convey information and opinions to the Council. All sessions were held in the Labor Education Center, Rutgers University.

On December 29 the Council presented its first annual report to the State Commissioner of Health. The report commended the Division of Clean Air and Water for progress in air pollution control and suggested additional procedures which might be followed in the future.

*Notable Enforcement Cases*

On August 12, seven airlines operating out of Newark Airport were charged with violating Chapter 4 of the State Air Pollution Control Code by polluting the air with smoke from planes. (This chapter **regulates smoke from** fuel-burning operations.) Individual suits were brought against Eastern, United, Northeast, Piedmont, National, TWA, and American Airlines. On November 19, the department added Braniff and Delta Airlines to those previously charged. Inasmuch as the nine airlines involved in this case are major airlines flying throughout the country, whatever they do to lessen the pollution they contribute to New Jersey's atmosphere will have an effect nationwide. Consequently, this case attracted widespread interest.

In one of the most severe air pollution control enforcement actions taken in New Jersey, Southbridge Plastics Company, Clifton, a division of W. R. Grace and Company, was shut down permanently on August 1 and fined \$5,000 for violation of Chapter 6 (Prohibition of Air Pollution) of the state's Air Pollution Control Code. Southbridge had sustained a \$13,000 penalty in 1968.

In March, the Appellate Division of the New Jersey Superior Court handed down a decision upholding the validity of Chapter 10-A (Permissible Levels of Sulfur in Coal) of the State Air Pollution Control Code. Chapter 10-A had been challenged by numerous coal and railroad companies in a ten-month-old suit.

In 1969, the State Department of Health received \$45,350 in penalties paid for violations of the Air Pollution Control Code. This amount includes \$11,200 collected by the Attorney General's Office. The department received directly \$34,150.

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**Potable Water Program**

The Potable Water Program continued its activities in supervising the numerous "public" water supplies in New Jersey to assure that consumers receive water which attains high public health quality and which is of adequate pressure and volume to meet their needs.

Special investigations of approximately 50 public water supply systems were conducted following adverse routine bacteriological sampling results and remedial action instituted when found to be necessary. In one case, the bacteriological contamination was found to result from the collapsed cover of an elevated tank which had permitted the ingress of birds and, in another instance, the problem was caused by an illegal plumbing cross-connection. In response to requests by the Division of Preventable Diseases, because of outbreaks of amoebic dysentery and gastro-intestinal upset respectively, the distribution systems of two major water purveyors were closely monitored. Close surveillance was maintained over the raw and delivered waters at two surface-derived systems following the spillage of a phenolic lubricating oil and a toxic cyanide into the respective watersheds, and remedial treatment instituted to maintain the public health acceptability of the delivered water. The backflow of boiler water containing a toxic hexavalent chromium solution into the potable water system of a school was investigated, and speedy remedial measures were instituted to protect the pupils and staff. Close cooperation has been maintained with the Division of Fish and Game in the surveillance of the treatment of surface waters with aquatic herbicides to assure that no injurious effect would occur to water supplies derived from such sources.

A seminar on cross connection control was conducted, which was well-attended and highly successful. Of the 325 registrants, 105 comprised water works personnel, 85 were from local and county health departments, 90 represented industrial and manufacturing concerns, and there were 45 miscellaneous representatives of consulting engineers, waterworks equipment sales personnel, etc.

Routine work included the inspection of over 200 public water supplies, and approximately 300 railroad, vessel, and airline watering points were inspected on behalf of the United States Public Health Service. Approximately 5,500 bacteriological, chemical, and biological water samples were taken and interpreted. Approximately 20 formal orders were issued in respect of deficiencies of public water supply or water treatment facilities.

## **Solid Waste Disposal Program**

### *Enforcement*

In the area of enforcement, field personnel of the Solid Waste Disposal Program performed a total of 1,220 inspections of sanitary landfill operations. These inspection results were used as the basis for determining referrals to the Attorney General's office for legal action. A total of seven cases were referred to the Attorney General's office for gross violation of Chapter VIII of the State Sanitary Code and an apparent nonwillingness to comply on the part of the operator. In every instance thus far, the state has been successful in obtaining injunctive relief through the courts.

### *Planning*

Concurrently while carrying out enforcement activities, the program has been active in the field of planning. We are committed under our present funding arrangement with the federal government to develop the State Plan by June 30, 1970. To accomplish this, it was necessary to do extensive surveying to accumulate specific data. Nine large sanitary landfill operations were surveyed during the summer of 1969 supplementing a similar undertaking during the summer of 1968. The program now has a data bank of very specific and accurate information for most of the metropolitan area of New Jersey. This information would include generation rates, tonnages of wastes generated by classification, origin, destination, information regarding solid waste, and the rate at which current landfills are being expended. All of this information will be used for making sound projections into the future.

A statewide survey of all 567 communities, undertaken and completed during 1966 and 1967, was updated during 1969. Five hundred sixty communities were revisited by program personnel to update the original survey. The intent of this endeavor was to correct errors and gather information that was unavailable originally. This information likewise becomes a vital segment of the state's solid waste data bank system.

Legislation is a necessary step in the planning process. In this area the personnel of the Solid Waste Disposal Program undertook a revision of Chapter VIII of the State Sanitary Code. The revision was presented to the Public Health Council during its meeting in December 1969. The governor's office and the legislature began focusing their attention on the problems of solid waste as evidenced by the number of bills introduced during 1969.

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**Water Pollution Control Program***Plan Review*

The program's engineering staff reviewed plans and specifications and issued permits for the construction and operation of 220 sewerage projects to reduce the pollution of New Jersey waters, enhance water quality and protect public health. The estimated cost of these projects was \$80,623,339.

*Financial Aid*

The following is a summary of Fund Management activities during Fiscal Year 1970.

*Feasibility Study Grants*

Applicant	Amount Approved
Hudson County Board of Chosen Freeholders .....	\$75,000.00
Hackensack-Meadowlands Development Commission ....	75,000.00
Total .....	<hr/> \$150,000.00

*Engineering Design Loans*

Applicant	Amount of Loan Requested
City of Pleasantville .....	\$8,900.00
Boroughs of Atlantic Highlands & Highlands .....	115,000.00
Bayshore Regional Sewerage Authority .....	304,000.00
Bergen County Sewer Authority (Northern Valley trunk)	735,000.00
Mt. Laurel Township Municipal Utilities Authority ....	154,000.00
Township of Mine Hill .....	18,500.00
Long Beach Township Sewerage Authority .....	67,500.00
Borough of Hamburg .....	20,000.00
Wanaque Valley Regional Sewerage Commission .....	457,000.00
Borough of Fairfield .....	200,000.00
Sussex County Board of Chosen Freeholders .....	381,000.00
(Wallkill Valley)	
Borough of Mountain Lakes .....	35,000.00
Egg Harbor Township Municipal Utilities Authority ....	58,000.00
Township of Mahwah .....	166,000.00
Township of Pemberton .....	346,700.00
Total .....	<hr/> \$3,066,600.00

## DEPARTMENT OF HEALTH

*State Construction Grants*

State construction grants for 19 sewerage projects amounting to 9.2 percent and 8.8 percent of the eligible construction costs were approved during fiscal year 1968 and 1969 respectively. Funds were made available from the Water Conservation Bond Act to increase these grants to the authorized level of 25 percent of eligible construction cost.

The following is a tabulation indicating the grant increases for the respective projects:

## FISCAL YEAR 1968 PROJECTS

<i>Appl. No.</i>	<i>Applicant</i>	<i>Eligible Cost</i>	<i>Initial Grant</i>	<i>Additional Grant</i>	<i>Total Grant 25% of Eligible Cost</i>
31	Borough of Allentown .....	\$240,800	\$31,200	\$29,000	\$60,200
32	Borough of Plainfield .....	586,400	53,948	92,652	146,600
34	Township of Warren .....	482,200	44,362	76,188	120,550
37	Town of Clinton .....	881,500	81,098	139,277	220,375
35	Middlesex County S. A. ....	5,458,400	502,172	862,428	1,364,600
38	Township of Hamilton .....	3,990,649	380,144	617,518	997,662
33	Borough of Fair Lawn .....	1,586,021	145,654	250,851	396,505
36	Borough of Caldwell .....	471,400	43,368	74,482	117,850
40	Northwest Bergen Co. S. A. .	12,660,000	1,130,000	2,034,964	3,165,000

## FISCAL YEAR 1969 PROJECTS

<i>Appl. No.</i>	<i>Applicant</i>	<i>Eligible Cost</i>	<i>Initial Grant</i>	<i>Additional Grant</i>	<i>Total Grant 25% of Eligible Cost</i>
7	Pompton Lakes MUA .....	\$435,000	\$38,454	\$70,296	\$108,750
8	Township of Roxbury .....	2,076,300	183,545	335,530	519,075
11	Madison-Chatham Jt. Mtg. .	2,840,000	251,056	458,944	710,000
19	Bridgewater Twp. S. A. ....	2,387,600	211,064	385,836	596,900
20	Northeast Mon. Co. Regional Sewerage Authority .....	17,331,000	1,532,982	2,799,768	4,332,750
28	Montville Twp. MUA .....	1,846,700	163,248	298,427	461,675
30	Bergen County S. A. ....	3,001,700	265,350	485,075	750,425
54	East Windsor Twp. MUA ..	535,200	47,312	86,488	133,800
69	Ewing-Lawrence S. A. ....	485,000	42,874	78,376	121,250
42	Bergen County S. A. ....	1,856,500	164,115	300,010	464,125

In addition to the above 19 construction grants previously approved and partially funded during the preceding two fiscal years an additional 18 projects



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are receiving 25 percent state construction grants with funds from the Water Conservation Bond Act during fiscal year 1970 and 30 percent federal construction grants.

The following is a tabulation indicating projects receiving state and federal construction grants during fiscal year 1970:

## FISCAL YEAR 1970 PROJECTS

<i>Appl. No.</i>	<i>Applicant</i>	<i>Est. Eligible Cost</i>	<i>25% State Grant</i>	<i>30% Federal Grant</i>
57	Twp. of Parsippany-Troy Hills..	\$1,100,000	\$275,000	\$330,000
45	Bridgewater Twp. S. A. ....	2,421,170	605,292	726,351
26	Hackettstown MUA .....	3,000,000	750,000	900,000
55	Somerset-Raritan Valley S. A. ..	3,600,000	900,000	1,080,000
59	Twp. of Montgomery .....	499,600	124,900	149,880
14	Raritan Twp. MUA .....	4,500,000	1,125,000	1,350,000
27	Middletown Twp. S. A. ....	12,059,287	3,014,821	3,617,786
56	Borough of Caldwell .....	222,940	55,735	66,882
13	City of Summit .....	238,400	59,600	71,520
16	Lower Twp. MUA .....	3,053,962	763,490	916,189
49	Borough of Allendale .....	350,000	87,500	105,000
47	Dover Sewerage Authority .....	17,283,000	4,320,750	5,184,900
25	City of Millville .....	3,260,000	815,000	978,000
44	Bergen Co. S. A. (Hasbrouck Heights trunk) .....	2,419,000	604,750	725,700
17	Borough of Fair Lawn .....	160,000	40,000	48,000
61	Bergen Co. S. A. (Sludge Dis- posal) .....	2,025,000	506,250	607,500
41	Bergen County S. A. (STP) ....	81,059	20,264	24,318
22	Rahway Valley S. A. ....	16,000,000	4,000,000	4,800,000
		\$72,003,418	\$18,068,352	\$22,294,266

*Orders*

A total of 67 orders were issued requiring the abatement of pollution of the waters of the state. The legal basis for the orders is R. S. 58:10-1 and R. S. 58:12-2, commonly referred to as the Potable Water Act and the State Sewerage Act, respectively.

Orders of Necessity were issued to eight municipalities permitting them to exceed their bonded indebtedness for the construction of needed pollution abatement facilities. These orders were issued pursuant to the provisions of N. J. S. A. 40A:2-7c.

*Referendum*

A referendum was held in November 1969 in conjunction with the general election, at which time the voters of the state approved the "Water Conservation Bond Act" authorizing a \$271,000,000 bond issue. Of that amount \$242,000,000 is earmarked to provide grants amounting to 25 percent of the eligible construction costs of sewerage projects. The remainder of the bond issue is to be used for planning and site acquisitions for future water supplies.

*Surveillance Activities*

The Water Pollution Control Program continued its activities in the area of surveillance of domestic and industrial wastewater facilities which exceed 700 in number.

Routine surveillance involved 2,828 inspections made by the program's field staff. During these inspections 11,803 effluent samples were obtained and submitted for laboratory examination with 38,029 analyses resulting. In addition, 1,178 water pollution investigations and detailed inspections of wastewater treatment plants were conducted by staff members.

Stream sampling stations numbering 199 were serviced on a regular basis; i. e., four times per year per station. Some 792 samples resulted which produced 3,168 analyses.

An additional 15,000 analyses were made on samples collected in connection with our cooperative program involving the Delaware River Basin Commission.

*Postscript**Reorganization Since 1969*

Under the provisions of Chapter 33, Laws of New Jersey 1970, approved April 22, 1970, the Division of Clean Air and Water of the State Department of Health, which included the Water Pollution Control Program, was transferred to the State Department of Environmental Protection and designated as the Division of Environmental Quality. The law provides that all functions, powers and duties heretofore exercised by the Department of Health, the commissioner thereof, and the Public Health Council relating to air pollution, water pollution, radiation protection, waters of this state, sewage, sewerage facilities, refuse disposal, and potable water supplies, including the licensing of water and sewage treatment plant operators are transferred to, and vested in the Division of Environmental Quality and the Commissioner of the Department of Environmental Protection.

## DIVISION OF CLEAN AIR AND WATER

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The law specifies that the Clean Water Council, together with all of its functions, powers and duties, is continued, transferred and constituted the Clean Water Council in the Department of Environmental Protection.

It further provides that the department shall formulate comprehensive policies for the conservation of the natural resources of the state, the promotion of environmental protection and the prevention of pollution of the environment of the state. Reference is made to specific delegated powers, which are in addition to the powers and duties vested in the act or by any other law.

In view of the foregoing, any reference hereafter to the State Department of Health and/or the Division of Clean Air and Water shall be construed as applying to the Department of Environmental Protection and/or the Division of Environmental Quality.

Chapter 33, Laws of New Jersey 1970, became effective on May 2, 1970.

## Division of Constructive Health

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WATSON E. NEIMAN, M.D., M.S.H.A.  
*Assistant Commissioner for Personal Health Services*

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Crippled Children's Program ..... WATSON E. NEIMAN, M.D., M.S.H.A.  
*Program Coordinator*

Dental Health Program ..... WILLIAM Z. ABRAMS, D.D.S., M.P.H.  
*Program Coordinator*

MICHAEL C. WOLF, D.D.S., M.P.H.  
*Assistant Coordinator*

SOLOMON GOLDBERG, D.D.S., M.P.H.  
*Assistant Coordinator*

Maternal and Child Health Program ..... BERNARD N. MILLNER, M.D., F.A.A.P.  
*Program Coordinator*

Accident Prevention and Poison Control  
Program ..... EDMOND D. DUFFY, JR., M.P.H.  
*Program Coordinator*

Emergency Health Services ..... MARIE A. SENA, M.D., M.P.H.  
*Program Coordinator*

## 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. Accomplishment is attained through cooperation with state, county, and municipal representatives of hospitals, rehabilitation facilities, and 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 30,192 children registered with the program at the end of 1969, as compared with 32,428 children registered in 1968, and 28,625 in 1967. There were 3,868 children added to the program in 1969, compared with 3,803 in 1968, and 3,442 in 1967. Of the total number of children registered with the program, 8,384 received services in 1969 as compared with 9,720 in 1968, and 9,370 in 1967.

### *Hospitalization and Convalescent Care*

The program assisted in underwriting 18,881 hospital bed days and 22,364 convalescent bed days for 781 children in 1969, as compared with 18,757 hospital bed days and 21,303 convalescent bed days for 859 children in 1968, and 20,013 hospital bed days and 30,930 convalescent bed days for 825 children in 1967.

During 1969, we participated with 83 New Jersey hospitals, and eight Philadelphia hospitals. We cooperated with five convalescent centers in New Jersey and one in New York. Effective November 20, 1967, the program withdrew its participation in New York hospitals when the same services were available in New Jersey, since costs in New Jersey are much lower.

### *Prosthetic Devices, Bracing, and Appliances*

In 1969, the program assisted in providing 2,485 braces and artificial limbs for 1,202 children, compared with 2,454 appliances to 1,141 children in 1968, and 2,421 appliances to 1,152 children in 1967.

*Nursing Services*

The program paid for 10,260 nursing visits to 4,774 children in 1969, compared with 11,630 nursing visits provided to 6,268 children in 1968. In 1967, 9,983 nursing visits were provided to 6,307 children. In addition, nursing consultation services were provided to all nursing agencies working with the program.

TABLE 1. CASE NUMBERS AND PAYMENT OF HOSPITAL  
AND CONVALESCENT HOME SERVICES

Hospital, Convalescent Care—Total Number of Children .....	781
Total Bed Days .....	41,245

*Hospital*

Number of children receiving hospital services .....	625
Number of bed days .....	18,881

**Dental Health Program**

A dental treatment program was started in the Model Cities area of Newark. It was an interim direct dental care program to demonstrate health benefits and economic values of good dental health and dental care to the age group 16-21.

The program was funded to the extent of \$90,000 by the State Department of Health and \$100,000 by the Community Development Agencies in Newark. The New Jersey College of Medicine and Dentistry was responsible as "Contractor for Care." Because public facilities were not available at the time, the dental treatment was conducted in private dental offices. There were quality and quantity controls.

The Central State Health District dental health supervisor became consultant to the Trenton Neighborhood Family Health Center and made recommendations relating to the physical plant, equipment, staffing, and supplies. The consultant was the resource person for the architects in the plans for the Center.

The Newark Maternal and Infant Care Project started a dental treatment program in 1969. A dental health education program was conducted along with prenatal care at the project headquarters, and dental treatment was delivered in private dental offices. The dental supervisor of the State Health District supervised the program and maintained quality and quantity controls.

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The Dental Health Program cooperated with the Division of Local Health Services in the establishment and evaluation of dental health programs supported by State Aid Funds.

The dental treatment and education program for children of migrant workers and for rural deprived children was improved. More of the treatment was done in hospitals and dental offices, thereby providing a more pleasant initial dental experience for the children and resulting in greater efficiency by the dentists. The program also included treatment for adults for the first time. Our available funds were reduced by 25 percent, but elimination of lost time and better cooperation with the school enabled us to do more work.

TABLE 1. DENTAL WORK FOR MIGRANT LABORERS

	1969	1968
Amalgam Restorations .....	1531	1299
Prophylaxes .....	960	861
No. of Schools .....	12	16

In addition, the quality of our auxiliary personnel was improved by the employment of dental hygienists and trained assistants.

Five of the dental students receiving Public Health Service traineeships served as health educators and were also exposed to urban problems by visits to neighborhood health centers.

Four of the trainees work with the New Jersey College of Medicine and Dentistry on a dental manpower project in the deprived areas of Newark and Elizabeth and also participated in the Migrant Health Program.

During 1969, a refresher course for graduate dental hygienists unlicensed in New Jersey was held at the Fairleigh Dickinson University School of Dental Hygiene. Twenty professionals were added to the work force with the help of this one-week course.

The Dental Health Program has discontinued the policy of automatic renewal of existing local dental programs. Following the evaluation of all existing and proposed programs, some were terminated and others were initiated. The community leaders involved in the establishment of all new programs are made aware of the period of time that the Dental Health Program will be committed. Alternative methods of funding become the local community's responsibility after this specified period of time. Thereafter, the local health departments are encouraged to apply for State Health Aid if they need financial help for dental programs. The Dental Health Program continues

to act as a consultant to local programs. Most local programs do not have the manpower or the knowledge to administer an updated dental program. We cannot justify merely restoring teeth for people without adequate evaluation. The ideal is to start an incremental care program in a community with the first graders. (The following year, maintain the mouths of the second graders and add the new group of first graders, etc.) The Dental Health Program was directly responsible for 102 dentists providing dental treatment in 172 communities.

With the assistance of the Maternal and Child Health Program, the Dental Health Program was able to underwrite a course at the New Jersey College of Medicine and Dentistry for 14 dentists who now are better able to treat the handicapped child.

### **Maternal and Child Health Program**

#### *Phenylketonuria (PKU) Programs*

The Program provided for the screening of 88,439 of the 112,000 children born in the state in 1969. This service was provided through 77 hospitals. Five other hospitals performed their own screening tests.

Thirteen new cases of phenylketonuria were discovered in 1969 as a result of this program, raising the total number discovered since the program started in 1964 to 44.

Financial support and professional supervision were provided for two centers where suspected cases were evaluated and children with the disease were examined and treated. Sixty-one children received care at these centers in 1969. The cost of their dietary and other treatment was paid for almost entirely by the program.

Screening blood tests for phenylketonuria and quantitative blood phenylalanine determinations were performed by the Division of Laboratories with the financial support of the Maternal and Child Health Program.

#### *Services for Pregnant Teenagers*

In 1969, staff members worked with the Board of Education and Health Department of Salem County to develop a "Family Life Center" to provide a day care facility for pregnant school children. The center provides academic and family life education, individual and group counseling, and prenatal and postpartum care. The Maternal and Child Health Program provides funds for the health services included in the program.



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*Family Planning*

A staff member has been given the responsibility of stimulating the development of family planning services throughout the state and of providing consultant services aimed to assure that high standards of care are used at such centers. During the last four months of the year, this service was provided to 31 official and non-official agencies.

A continuing effort has been made to include family planning counseling at all child health stations. A major accomplishment during 1969 was the institution of this service in child health stations in Newark.

*Child Health Conferences*

Over 220,000 visits were made by pre-school age children to the 295 child health conferences in New Jersey in 1969. The Maternal and Child Health Program provided consultation services, educational and administrative materials, and biologicals to all of them. In addition, 11 were given direct financial support.

*Child Evaluation Centers*

During the year, 467 children were thoroughly evaluated at the seven centers supported by the program. These centers provide pediatric, neurological, and psychological evaluations, laboratory studies, social work case study, and other services required by complex health problems. They are located at Babies Hospital Unit of United Hospitals of Newark; Bancroft School, Haddonfield; Barnert Memorial Hospital, Paterson; Hackensack Hospital; Hunterdon Medical Center, Flemington; Jersey Shore Medical Center, Neptune; and Morristown Memorial Hospital.

*Consultation Services*

All hospitals in the state were offered the consultation services of nurse and physician specialists in the fields of maternal and child care. These staff members surveyed maternity, newborn, and pediatric in-patient and out-patient services, and provided both face-to-face conferences with hospital representatives and written reports of the conditions found and suggestions of methods of improving the services concerned.

During 1969, 10 hospitals were visited by the program's obstetrical consultant, and 46 by the public health nurse consultant for obstetrics and nurseries. The public health nurse consultant for pediatrics visited 33 hospitals.

In addition, 23 child health conferences were visited by the staff public health nurse consultants, and 90 were visited by the program's pediatric consultants.

### *Combined Obstetrics-Gynecology Services*

Supervision of hospitals mixing obstetrical and gynecological patients was transferred from this department to the Department of Institutions and Agencies in 1969.

### *Maternity Service Annual Report*

Reports of hospital maternity services' activities in 1968 were received from 87 hospitals in 1969. The detailed reports were analyzed and summaries of the data were distributed widely throughout the state.

### *Maternal Deaths*

The program continued to oversee the investigation of deaths related to pregnancy. This activity is carried out jointly with the Maternal and Infant Welfare Committee of the Medical Society of New Jersey, which appoints the field physicians who carry out the investigation. In 1969, 36 deaths occurred, and 34 investigations were completed.

### *Unattended Births*

As a way of bringing needed health services to women not receiving them, the program, through the public health nurse consultants in the district state health offices, attempts to have public health nurses visit every mother who delivered a baby unattended by a professional person. The mother's medical and social situations are evaluated and ways are suggested to meet the needs of the mother and baby.

In 1969, 179 such mothers were visited.

### *Migrant Maternal Health Program*

Through agreements with 10 hospitals, the program provided for prenatal, delivery, and postpartum care of 46 migrant workers in 1969.

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**Accident Prevention and Poison Control Program**

Several changes at the national level have affected the State's Poison Control Program. Prior to 1968, the National Clearinghouse for Poison Control Centers filed the report forms alphabetically according to the category of substance involved. In order to obtain more specific, meaningful data, the Clearinghouse now identifies each report according to trade name or chemical involved.

A new format for summary tables, which provides a more inclusive breakdown of age groups involved in all reported cases, has also been initiated. Tabulations now include not only cases of poisoning accidents but also intentional self poisonings.

In addition to the preceding changes, the Clearinghouse modernized its reporting system. A new report form consisting of a data processing card with two paper copies was developed. The new form which became effective August 1, 1969 contains much of the information included on the previous form but eliminated the follow-up report data. This deletion necessitated the development of a new follow-up report form at the state level in addition to appropriate instructional guides. During the year, the program has continued its promotional efforts to expand the availability of follow-up services to all Poison Control Centers. As a result it is now possible for six additional centers to refer accidental poisoning cases for investigation. Follow-up referrals can now be made by 28 of the 36 Poison Control Centers. In-service training courses in follow-up procedures were conducted by the coordinator for the nursing agencies involved.

All 36 Poison Control Centers reported a total of 3943 poisoning cases for 1969, as compared with 4856 cases in 1968 and 4635 cases in 1967.

Deaths from accidental poisoning by solid and liquid substances and by gases and vapors decreased 28 percent, dropping from 159 deaths in 1967 to 115 deaths in 1968.

The Program's Home Poison Prevention Checklist was translated into Spanish to promote poison prevention among the state's Spanish speaking residents. Copies of the checklist were distributed by the Commonwealth of Puerto Rico and by local radio stations, local health departments, pharmacies, and Poison Control Centers in Spanish speaking neighborhoods.

### *Lead Poisoning*

Lead poisoning was the leading cause of accidental poisoning deaths in children under 15 years of age in 1966, 1967, and again in 1968. Comparative data are not yet available for 1969. Studies show that children who survive a case of lead poisoning frequently become mentally retarded or have behavior or learning problems in later life.

By arrangement with our department's Division of Environmental Health, a free blood-lead analysis service is offered to physicians and hospitals in the state. The lead-free collection equipment which must be used is provided as a service by the program in self-mailing kits.

Blood lead determinations were performed by the State Laboratory on 1308 suspected cases in 1969.

Increased emphasis on the lead poisoning problem in the Metropolitan District resulted from the report of four deaths in Newark. The program assisted the Newark Health Department in identifying the city's "lead belt" and provided consultations, radio spot announcements, posters, and other educational materials to assist its program efforts. Statistical information and consultation were provided to various newspaper editors in the preparation of articles on lead poisoning in the state.

### *Domestic Accident Prevention*

During the past year, the domestic accident prevention program was concentrated in the following areas:

#### *Rescue Breathing*

The Program's "Resusci-Anne" continues on loan to the Newark Chapter of the American Red Cross for the purpose of education and demonstration in the techniques of mouth-to-mouth rescue breathing. A total of 2,012 persons in Red Cross first aid, small craft and water safety courses, scouts, schools, private groups, clubs, police, and fire departments were trained by this chapter during the year. An additional 600 were trained by the coordinator, using a mannequin borrowed from the Heart Program.

#### *Migrant Safety*

Focus on the safety program of migrant farm workers resulted in the following accomplishments:

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1. A Farm Safety Program was developed. The program was used by instructors for the Adult Evening Education School which is conducted by Glassboro State College for migrant workers. Approximately 400 migrants received instruction in the prevention of farm accidents through this program.
2. A brochure, "Save Your Life," which illustrates ways to prevent accidents on the farm, was prepared and printed in both English and Spanish and widely distributed to migrant workers in time to coincide with National Farm Safety Week.
3. A slide set depicting farm hazards was also developed by the program. The slide presentation was used in migrant worker orientation programs by the Commonwealth of Puerto Rico and by nurses at migrant health clinics.

### *Fire Prevention*

The coordinator presented a program on flammable fabrics at two in-service training programs for nurses and other health department personnel and at a fire prevention seminar conducted by the Cinnaminson fire department.

A program and demonstration on fire prevention and escape techniques in the home were presented for the Camden County Fire Protection Association, which has representation from 50 fire departments in Camden County. This program was also conducted for two local fire departments and for representatives from various fire associations. As a result of these programs, many departments requested the fire demonstration kit guide for use by their organizations in teaching fire prevention.

The coordinator also arranged for the program's film "Why Daddy?" to be taped for television by WITV. The film was shown as a part of a fire prevention program series entitled "Signal 11," and was also viewed by over 10,000 children via the educational television set-up in their school system.

The coordinator provided consultation and programming assistance to several local health officers and fire departments during the observance of Fire Prevention Week.

### *Home Safety*

The coordinator presented a program on accident prevention and safety in the home at two courses on principles of housing inspection conducted by the Bureau of Government Research at Rutgers University.

The coordinator also assisted in the development of comprehensive safety education courses at Montclair State College and Jersey City College.

Home accident prevention programs were also conducted for the nursing staffs of four local health departments, four visiting nurse agencies, four visiting homemaker services, home health aides, and two babysitter training courses.

Consultation and educational materials were provided to four industrial off-the-job safety programs.

As a part of Senior Citizen's Month, a national action program on accident prevention and safety for older persons was initiated. The program includes a four-lesson course, "Handle Yourself With Care." In cooperation with the Division on Aging, the coordinator served as an instructor for two of the lessons: "An Introduction to Safe Living," and "How to Fall-Proof Your Home."

Educational materials on various aspects of home accident prevention were provided by the program for distribution by the Bergen County Pharmaceutical Association, the Mercer County Medical Society, and the Woodbridge Health Department at health fairs in their areas.

### *Highway Safety*

In the year's final quarter, the program, in cooperation with the United States Public Health Service, launched a statewide program to reduce night-time pedestrian and cyclist deaths and injuries through the use of retro-reflective materials. In this short time, the "Be Safe—Be Seen" program has been presented to many groups and organizations throughout the state. An exhibit was prepared and displayed at the State Convention of Parents and Teachers. More than 8,000 participants saw how retro-reflective materials can effectively be used to improve pedestrian visibility. The program was also presented by the coordinator at the New Jersey State Safety Council's Workshop for Police School Safety Officers. Through their cooperation, the program has already been presented to more than 10,000 school children.

### **Emergency Medical Services**

Highlights of the activities of Emergency Medical Services Program (developed in response to Federal Highway Safety Act 1966 and administrative assignment from the Governor's Office) include:

1. The development of an "Interim Statewide Coordinated Emergency Medical Services Plan" providing for voluntary criteria control of

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the training of ambulance personnel, the ambulance vehicle, and the ambulance first aid and communication equipment.

2. The development of "Criteria of Essentiality" for the categorization of local project proposals as a tool for this office and the Office of the State Health Commissioner in arriving at recommendations to the State Highway Liaison Office for approval and non-approval of such projects. Nine local project applications totalling more than \$250,000 were processed and referred for action to the State Highway Liaison Office.
3. Development of criteria for two-way radio communication between hospital emergency departments, ambulance vehicles, and ambulance headquarters.
4. Inventory of volunteer, municipal and commercial first aid and rescue ambulance squads. There are a total of 579 squads known to the department. Three hundred fifty-two squads or 60 percent of the total are volunteer squads belonging to the New Jersey State First Aid Council; 145 or 25 percent are other volunteer squads; 32 or six percent are municipally operated squads, of which five are hospital based; 50 or nine percent are commercially operated for profit, 24 of which do not qualify for Medicare.

### *Health Mobilization*

As of December 31, 1969, there were 19,650 persons who completed the 680 Medical Self-Help Training courses conducted this year.

Fifty of New Jersey's Civil Defense Nurse Administrators attended the first of a series of conferences on emergency health preparedness in the auditorium of the State Health-Agriculture Building on December 3, 1969. The program was sponsored jointly by the Health Mobilization Program, the New Jersey State Nurses' Association, and the State Civil Defense and Disaster Control.

Orientation programs to the State Emergency Health Plan and to the role of the specific professional personnel were held and will be continued at Rutgers School of Pharmacy, Rutgers University, Seton Hall University School of Nursing, and the schools of nursing of various hospitals. Three hundred student nurses and 165 pharmacy students attended and they are planning to continue this training program.

## Division of Environmental Health

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

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### *Programs:*

Food and Drugs .....	FRANCIS A. TIMKO <i>Chief</i>
Food .....	JOSEPH PRINCE <i>Program Coordinator</i>
Drug, Device and Cosmetic .....	DONALD J. FOLEY <i>Acting Program Coordinator</i>
Milk .....	HOWARD ABBOTT, M.P.H. <i>Program Coordinator</i>
Shellfish .....	RICHARD E. BELLIS <i>Program Coordinator</i>
General Sanitation .....	ALFRED H. FLETCHER, M.S.* <i>Acting Supervising Engineer</i>
Camp and Bathing .....	ANTHONY T. LEAHEY <i>Program Coordinator</i>
Mobile Home Parks .....	LLOYD S. HIGGS <i>Program Coordinator</i>
Ragweed and Poison Ivy .....	ARCHIE B. FREEMAN <i>Program Coordinator</i>
Housing .....	ARCHIE B. FREEMAN <i>Program Coordinator</i>
Occupational Health .....	E. LYNN SCHALL, M.P.H. <i>Program Coordinator</i>
Radiological Health .....	WILLIAM H. AAROE, M.P.H. <i>Program Coordinator</i>
Veterinary Public Health .....	OSCAR SUSSMAN, D.V.M., M.P.H. <i>Chief</i>

### *Project:*

Pesticide Project .....	NORMAN PLUMMER, M.D.** <i>Director</i>
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\*Retired July 31, 1969.

\*\* Resigned. Succeeded by William Kwalick, M.D.



## Bureau of Food and Drugs

To effectively and efficiently administer and enforce laws and regulations concerning food and drugs, the Bureau is divided into the following programs:

- Drugs, Devices and Cosmetics
- Food (other than Milk and Shellfish)
- Milk and Frozen Desserts
- Shellfish

Each program is designed to provide protection to the consuming public within its specific area. Program coordinators are responsible for developing work programs for enforcing laws and regulations to prevent the distribution or sale of foods, drugs, devices and cosmetics that are adulterated, misbranded or otherwise unfit for human consumption or use. Establishments engaged in the manufacture, production, processing, preparation, handling, storage, transportation and distribution of these commodities are routinely inspected.

Program personnel issue licenses, permits, accept registrations, certify and develop lists of specific industries, collect samples to determine compliance with standards, and review labels of products to determine that all required information is contained thereon and that the information is legible and true.

Program coordinators maintain constant liaison with federal agencies, other state departments, local boards of health, industry and industrial associations, and the academic community. Program coordinators are also responsible for reviewing new federal laws and policies, suggesting changes in state laws and regulations, and adjusting program activities to keep pace with changing conditions.

Table 1 indicates the number of licenses, permits, certificates and registrations issued in the calendar year covered by this report and the revenue derived therefrom.

Table 1. LICENSES, PERMITS, ETC., ISSUED 1969

<i>Establishments</i>	<i>Licenses</i>	<i>Permits</i>	<i>Cert.</i>	<i>Regs.</i>	<i>Revenue</i>
Drug Manufacturers and Wholesalers . . . . .	.....	.....	.....	677	\$61,025
Egg Breaking Establishments . . . . .	42	.....	.....	.....	No fee
Frozen Desserts Plants . . . . .	1,124	.....	.....	.....	20,500
Frozen Desserts Plants Inspection Fees..	.....	.....	.....	.....	1,975
Milk Plants . . . . .	.....	335	.....	.....	14,400
Narcotic Manufacturers and Wholesalers .	116	.....	.....	.....	1,255
Non-Alcoholic Beverage and Water					
Bottling Plants . . . . .	135	.....	.....	.....	No fee
Refrigerated Warehouses and Locker Plants	170	.....	.....	.....	7,200
Shellfish Establishments . . . . .	.....	.....	180	.....	No fee
	1,587	335	180	677	\$106,355

Penalties amounting to \$7,700 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 Program.

### *Legislation*

Assembly Bill No. 271 was signed into law by Governor Hughes on August 11, 1969 with an effective date July 1, 1969 (legal reference Chapter 152, P.L. 1969 cited Revised Statutes 26:2G-1 *et seq.*) known as the Narcotic and Drug Abuse Act of 1969. Its purpose and intent are to establish a single agency in the State Department of Health capable of unifying all efforts in a comprehensive program to control addictive drugs and to combat the effects of the disease of drug addiction.

On February 4, 1969 Governor Hughes signed into law Chapter 428, P.L. of 1968, an act concerning the packaging of certain fresh and frozen meat and meat products, and supplementing Chapter 15 of Title 24 of the Revised Statutes. The act provides that no prepackaged unprocessed or untreated fresh or frozen meat shall be sold at retail on the same premises where packaged, unless the package is colorless and transparent on at least one side of the largest exposed surface area. Labeling shall not occupy more than 10 percent of such side or five square inches, whichever is greater.

Assembly Bill No. 142 became Chapter 88, P.L. of 1969. An act governing the Manufacture, Sale and Distribution of Frozen Desserts, Amending Chapter 120, P.L. of 1964. Effective date was June 17, 1969 except where otherwise indicated. Revised Statute sections 24:10-73.6 and 24:10-73.14 became effective December 17, 1969.

Effective July 1, 1969 the department adopted regulations redefining areas where shellfish can legally be harvested. The regulations resulted in opening 640 acres, closing 15,467 acres, and establishing 20,426 acres in a Special Restricted category suitable for harvest only if the shellfish receive additional processing prior to marketing.

### **Food Program**

(Other than Milk and Shellfish)

During the past year, the Food Program gave high priority to upgrading sanitation in retail food-service establishments.

Under this activity, the program had five sanitarians certified as United States Public Health Certified Food-Service Sanitation Survey Officers who in turn train and certify other state employed sanitarians as State Certified

Food-Service Sanitation Survey Officers and local sanitarians as Local Food-Service Sanitation Officers. In addition, all state certified sanitarians conduct evaluation surveys of food programs in local boards of health.

During the year, five state employed sanitarians and 59 local sanitarians were certified and 1 additional food program evaluation survey was conducted in a local board of health. Eleven training courses were held in association with the certification of local sanitarians using approximately 194 man days work by program and district sanitarians.

Our program to conduct evaluation surveys in local boards of health lagged due to shortage of personnel and consequently we switched emphasis to the certification of local sanitarians.

### Potentially Hazardous Foods

The program continued emphasis in this important disease related phase of our food control activities. A total of 597 samples were collected and analyzed for total plate count and coliform determinations. Of this number, 163 or 27 percent of the samples analyzed contained over 100,000 bacteria per gram and 73 or 12 percent indicated coliform counts in excess of 100 per gram. The program continues to use a guideline standard of 100,000 bacteria per gram and 100 coliform organisms per gram which were established as guides by the Commissioner's Advisory Committee on Potentially Hazardous Foods when the program was initiated in 1963.

When high counts are encountered, it is the policy of the program to conduct reinspections and resample products after necessary corrections are made in processing techniques. Surrounding states and municipalities were notified when imported products failed to meet program standards.

Toward the end of the year, significant progress was made in developing the retail phase of the Potentially Hazardous Foods Program. The first was a departmental cash grant to the East Orange Health Department enabling 14 municipalities to deliver samples from the retail level to the East Orange Health Department Laboratory for analysis. This activity will enable the program to evaluate the quality of foods purchased by the consuming public. The department grant is for the first year's operation of the program, with the anticipation that the local boards of health will be able to budget the activity in the future.

The second important development was a cooperative effort on the part of our Division of Laboratories to certify local laboratories for processing

of food samples under recognized standard methods. The East Orange Laboratory was certified.

### Sampling Activities

Our selective sampling surveillance program for bacterial and chemical analysis of foods to determine compliance with departmental standards and labeling requirements continued at a somewhat lower level than in previous years. During the year, 223 samples of food and 26 private water supply samples were collected and analyzed.

Program and district field personnel continued effective enforcement efforts in the area of consumer health protection through surveillance of retail markets, wholesale processors and other establishments distributing hamburger, sausage and other combinations of fresh ground meats. Hobart fat tests to detect added fats and Malachite Green screening tests to detect the presence of sulphites used to conceal inferiority were utilized. Two hundred and eleven Malachite Green tests were conducted with nine suspicious samples collected for official laboratory confirmation. Four of the suspicious samples (1.89 percent) of the total samples taken were confirmed as positive for sulphites by laboratory analysis. This year's total of 1.89 percent unsatisfactory samples compares with 0.74 percent for 1968.

One hundred and eleven Hobart field screening tests were conducted on ground meats to detect the presence of excessive fat. Twenty-six suspicious samples were collected and submitted to the laboratory for official sample analysis. Twenty-one of the 26 suspicious samples (18.9 percent) of the total samples taken were confirmed in the laboratory as being below standard by chemical analysis. This year's total of 18.9 percent unsatisfactory samples compares with 4.5 percent for 1968.

Three first offense penalties of \$50, two \$100 second offense penalties, and six \$200 third offense penalties were collected for excessive fat. Two \$50 first offense penalties and one \$100 second offense penalty for added sulphites were also collected. A total of \$1,750 in penalties was collected.

Although the Meat Inspection Program is now under the Department of Agriculture, the Food Program will continue to sample meat products at the retail level. Increased sampling activity on the part of local boards of health is anticipated due to Certified Health Services and grant-in-aid funds.

### Reciprocity Programs

Our reciprocal inspection programs with official food control agencies in Pennsylvania, Connecticut and Rhode Island continued at the same level as in previous years.

State, federal and local enforcement agencies are working in very close liaison to develop a "single concept" inspection system for the purpose of avoiding wasteful, costly, unnecessary duplication of inspections and multiple enforcement policies. Although the program has not progressed beyond the commissioning of 24 United States Food and Drug Administration inspectors as "Special Agents" for the department, we anticipate complete development of the "single concept" system during the coming year.

Our cooperative policy extends to the use of the extensive laboratory facilities of the United States Food and Drug Administration upon request of the program for special samples. Also, our field representatives, upon request, will pick-up samples for the United States Food and Drug Administration.

To further strengthen our enforcement cooperation with the United States Food and Drug Administration, the department installed a teletypewriter exchange facility which permits the department to receive and transmit important messages, news releases, dangerous drug information, food and cosmetic recalls for various federal agencies, other state and municipal agencies, and the industry.

The proposed National Food Protection plan showed some signs of development through the appointment of federal, state and local representatives to a national committee to study the feasibility of such an approach to food control activities.

The Reciprocity Program for the Supervision and Control of Caterers continued at about the same level as last year. One hundred and eight establishments are listed in our Central Registry of Caterers maintained by the Program. Seventy-eight inspections were conducted by 29 local boards of health participating in the program. Individual reports of inspections are forwarded to local boards of health upon request and the entire list of establishments including inspection results are forwarded two times during the year.

### Inspection of Food Establishments

A major core activity of the Food Program is to locate and place under routine inspection all food establishments doing business in interstate com-

merce. During the year, 1220 inspections and reinspections were conducted at 554 food establishments doing business in interstate commerce. This represents an increase of 60 establishments over last year.

Our direct Reciprocity Program for Connecticut, Pennsylvania, Rhode Island, and Delaware resulted in 294 inspections at 106 bakeries and 91 inspections at 28 non-alcoholic beverage establishments and are included in the total figures given in the paragraph above. Program representatives made 1,145 visits and 112 investigations associated with locating unlisted uninspected establishments, special surveys, special food sampling projects and similar activities.

Increased inspection activities resulted in locating and licensing 12 new refrigerated warehouses.

Program representatives also investigated approximately 200 consumer complaints during the year.

The program collected one first offense penalty of \$200 and one second offense penalty of \$300 from establishments operating under insanitary conditions and one first offense penalty of \$50 from an establishment operating without a license. Total penalties collected amounted to \$550.

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

TABLE 1. ESTABLISHMENTS INSPECTED, 1969

Bakeries .....	305
Confectionery Plants .....	32
Egg Breaking Establishments .....	82
Non-Alcoholic Beverage Bottling Plants .....	126
Refrigerated Warehouses .....	109
Restaurants (Certification) .....	250
Other Food Establishments .....	631
Visits .....	1145
Investigations .....	112
Complaints .....	200
<hr/>	
Total .....	2992

Activities associated with our surveillance program of meat, meat products, poultry and poultry products at the retail level are reported under sampling and inspection sections of this report.

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During the past year, there were no special inspections of establishments to investigate new industries, processes and products other than a cooperative program with our Radiological Health Program to report the presence of microwave ovens in food establishments so that they could be tested for leakage by the Radiological Health Program.

All legitimate complaints were investigated and necessary samples were collected.

The Food Program Coordinator participated in five food program audits in local boards of health for the Central and Metropolitan State Health Districts associated with department's grant-in-aid funds and Certified health Services.

#### Embargo and Recall of Misbranded, Unwholesome, or Adulterated Foods

In connection with inspections, investigations, fires and visits, the table below lists the type and quantity of food destroyed for non-compliance with departmental laws and regulations.

TABLE 2. FOODS DESTROYED BECAUSE OF NON-COMPLIANCE, 1969

Eggs, Frozen .....	1,620 lbs.
Flour and Bakery Products .....	16,031 lbs.
Fruits and Vegetables .....	34,823 lbs.
Grocery Items, Assorted .....	30,106 lbs.
Misc. Food .....	96,631 lbs.
Meat .....	21,737 lbs.
	<hr/>
	200,948 lbs.

In addition to the food destroyed, 154,723 pounds of food were released from embargo after being cleared for removal by reconditioning, relabeling or found to be satisfactory by laboratory analysis or physical evaluation. Approximately 7,000 pounds of food remained under embargo at the end of the year.

Under our cooperative program with the New Jersey Turnpike Authority, program personnel responded to 18 calls due to accidents and fires involving food. A total of 82,654 pounds of damaged food was destroyed and 117,143 pounds of food were released for sale under this activity.

United States Food and Drug representatives under their capacity as "Special Agents" for the department placed nine embargoes on foods suspected of being adulterated under state law.

### *Food Training Courses*

The Food Program continued to cooperate with the Office of Program Planning and Education and Rutgers University in developing and evaluating the basic sanitation course and field training program offered by Rutgers and sponsored by this department. In addition, the program worked with the same agencies and public health associations in the development and presentation of a general sanitation course entitled "Current Concepts in Food Protection" offered during the year.

Program representatives also met with the representatives of the Food Science Department for the purpose of developing a course on the technology of food processing.

Eleven food-service sanitation courses were offered for local sanitarians in association with our certification program previously reported.

### Licenses Issued

All applications for licenses were processed and licenses issued to qualifying applicants. Details are included in general section of this report.

### General

The Advisory Council on Food Protection established by the Commissioner to act as an advisory body to the department in matters relative to all phases of food control met three times during the year. By the end of the year, the Council had nearly completed study of program organization, activities and laws and regulations.

The program continued activities to secure adoption of the Retail Food Establishment Code of New Jersey - 1965 and the Food and Beverage Vending Machine Code of New Jersey - 1961 by all local boards of health.

The program intensified inspection of egg breaking establishments and selective sampling of frozen broken eggs offered for sale in New Jersey. The extremely high price of market eggs made the prospect of high profit from unwholesome eggs a tempting venture to unscrupulous operators. During the year, 82 inspections were conducted at 42 establishments licensed by this department. Very little progress has been made in the voluntary installation of pasteurizing units in egg breaking establishments. The total number of units remains at eight. Program personnel placed five embargoes involving 7,560 pounds of broken eggs. One embargo was due to salmonella contamination. The salmonella contaminated eggs were pasteurized, resampled, found to be free of salmonella and released for sale.



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Foodborne disease organisms in raw and processed foods continues to be a problem to food control agencies throughout the country. Although the bulk of foodborne disease outbreaks are associated with food-service operations, sampling in recent years indicates similar problems in improperly processed foods.

During the period January to June 1969, the National Communicable Disease Center reported that foodborne disease outbreaks by causative organisms at the following frequency—Staphylococcus 24.3 percent, Clostridium Perfringens 22.2 percent, Salmonella 11.1 percent, Clostridium Botulinum 3.5 percent, other 6.3 percent, unknown 20.8 percent, chemical 6.9 percent, Parasitic 2.8 percent and viral 2.1 percent.

The program has designed its activities to directly or indirectly provide regular supervision of all types of food establishments in which transmission of the above foodborne diseases could occur. State and local sanitarians are being trained to look closely at processing operations to detect flaws which could result in foodborne disease outbreaks.

Good manufacturing practices for specific food industries are being developed by the United States Food and Drug Administration to establish guidelines which will be of assistance in the control of this problem.

The program cooperates closely with other departmental agencies, the districts, and local boards of health in food related disease outbreaks and assists the United States Food and Drug Administration in their recall activities.

### **Milk Control Program**

The basic activities of the program provide supervision of the 324 milk plants, 1,026 frozen desserts plants, and the dairy farms supplying milk to those plants which prepare milk and milk products for New Jersey consumers. The supervision included inspections of the above establishments and sampling of their products as prepared for distribution and sale.

Reports of inspections and analyses of samples, received from qualified official agencies having reciprocal agreements with the department, are correlated with information developed by our staff. This information provides a basis for quarterly releases to all local boards of health on the status of available milk supplies.

A separate activity of the program involves the rating of milk plants and frozen desserts plants for compliance with the U. S. Public Health Service Recommended Codes. The ratings are made by specially trained personnel for

use in determining the status of plants as supplies for interstate carriers and federal government installations, and for listing as interstate milk shippers. There are 30 such establishments under supervision in this phase of the program, which also includes evaluation of industry farm inspectors and laboratories performing analyses of milk and fluid milk products.

As an adjunct to the Public Health Service milk plant inspections, we inspect plants which manufacture single-service containers and closures for use in the dairy industry. Reports of these inspections are supplied to the Public Health Service for listing as sources of those materials. A special two day seminar in the requirements to be met by such plants was attended by our Public Health Service Certified Milk Survey Officers.

The laws governing the manufacture and sale of frozen desserts were amended to include recognition of frozen desserts made with vegetable fat instead of butterfat. The department plans to hold a public hearing on proposed definitions and standards for those products early in 1970. Final promulgation should provide standards uniform with those of our neighboring states.

Reviews of new processing equipment and procedures resulted in acceptance of equipment for:

1. Inspecting rewashed rigid plastic milk containers for volatile contaminants and solid objects;
2. Applying screw cap closures to rigid plastic milk containers; and
3. Packaging milk and fluid milk products in plastic pouches.

Penalties in the amount of \$5,200 were collected for the following violations: operating without a license (1); receiving milk from unapproved sources (5); operating under insanitary conditions (9); adulterated products (15); and misbranded products (22).

Table 1 below shows the number of reports received during 1969 for inspections made, samples collected, and analyses performed in the Program.

Table 1. Report of Inspections

	<i>By Food and Drug Personnel</i>	<i>By Reciprocal Agency Personnel</i>
Milk Plant Inspections .....	360	429
Dairy Farm Inspections .....	2,835	8,675
Frozen Dessert Plant Inspections (Interstate) .....	161	33
Samples Collected .....	1,328	3,254
Analyses Performed .....	4,277	11,132

### Shellfish Control Program

Shellfish are defined by New Jersey regulation as "All edible species of clams, oysters and mussels, either shucked or in the shell, fresh or frozen." Under this broad definition are the several species harvested in New Jersey commercially and for sport: hard clams, soft clams, surf clams, eastern oysters and mussels.

New Jersey ranks number one in the United States for total production of shellfish as defined.

Shellfish very closely reflect the quality of the water from which they are harvested because they are filter feeders. They pump great quantities of the water in which they live through their bodies filtering out food for themselves. During the feeding process, they concentrate whatever is in the water in their bodies.

Shellfish are traditionally eaten whole including the visceral mass where the concentrations of filtered material are normally found. Shellfish are traditionally eaten uncooked (on the half shell) or partially cooked (steamed).

It is therefore important to assure that shellfish are harvested only from clean water. To accomplish this, the department conducts comprehensive sanitary surveys and re-evaluations of shellfish growing and harvesting waters in order to classify those areas as to their acceptability for direct market harvesting of shellfish. With the assistance of the Stream Pollution Control Program and the Division of Laboratories, 12 of the 36 growing areas in the state were updated in 1969.

In the performance of sanitary surveys, analysis of water samples is required. The table below compares the 1969 quantity of water samples analyzed with previous years.

Table 1. GROWING WATER SAMPLES COLLECTED AND ANALYZED

1965	1966	1967	1968	1969
9,634	10,798	9,051	9,413	8,923

The following table shows the number of acres involved in reclassification over the four year span ending with 1968:

Table 2. ACRES RECLASSIFIED

	1965	1966	1967	1968	1969
Acres Opened .....	1,200	671	260	147	640
Acres Closed .....	512	5,372	432	764	15,467
Closed Acres changed to Special Restricted .....					20,426

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A new growing water classification called Special Restricted was introduced in 1969. The concept of this new category follows. The current trend is continued condemnation of additional productive shellfish growing waters because of pollution. Until that trend can be reversed, we are creating a surplus of shellfish in polluted waters and a shortage in approved waters. Thus there is a real incentive to illegally harvest from polluted waters, which poses a threat to the public health. The Special Restricted category delineates areas which are only moderately polluted and which are highly productive. Shellfish can be taken from these areas provided that a special permit is obtained from this Department and additional treatment is given to the shellfish before they are marketed. This allows industry to gain access to an otherwise lost resource and at the same time continues to protect the public health and reduce the incentive to harvest and market polluted shellfish.

The status of shellfish growing waters in New Jersey is compared below for the three year span ending with 1968.

Table 3. STATUS OF SHELLFISH HARVESTING WATERS SHOWN IN ACRES

	<i>Total</i>	<i>Approved</i>	<i>Seasonally Approved</i>	<i>Condemned</i>	<i>Special Restricted</i>
December 31, 1966 .....	392,852	313,760	1,871	77,221	.....
December 31, 1967 .....	392,852	313,068	2,131	77,653	.....
December 31, 1968 .....	392,852	312,937	2,131	77,784	.....
December 31, 1969 .....	392,852	298,110	4,350	69,966	20,426

When growing waters are classified as condemned, it is important that shellfish harvesters be made aware that they cannot harvest shellfish from these waters. In order to accomplish this, condemned area charts have been developed showing the status of shellfish waters in New Jersey. A record number of 15,000 such charts were distributed to harvesters throughout the state in 1969.

Another function of the program is certification of shellfish dealers for intrastate and interstate trade. The following table compares the numbers and categories of certified dealers over the five year span ending with 1969:

Table 4. CERTIFIED SHELLFISH DEALERS, 1965-1969

	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
Shellstock Shipper .....	74	82	95	92	90
Reshipper .....	64	63	55	56	58
Shucker Packer .....	11	13	18	16	16
Repacker .....	6	7	6	6	6
Digger Retailer .....	5	7	7	9	7
<i>Total</i> .....	160	172	181	179	177

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In addition to the certified dealers listed above which fall under the legal definition of shellfish dealers, the program supervises bay scallop shuckers and publishes a list of those who are approved. A five year comparison is shown

Table 5. APPROVED BAY SCALLOP SHUCKERS, 1965-1969

<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
31	35	36	27	16

In order to determine whether or not dealers meet the requirements for certification, the Shellfish Program conducts sanitary inspections and follow-up visits, collects samples of potable water in the certified establishments and collects samples of market shellfish. The statistics below reflect these activities over the five year period ending with 1969:

Table 6. INSPECTION AND SAMPLING RECORD, 1965-1969

	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
Sanitary inspections and follow-up visits.	667	744	437	1,004	938
Potable water samples .....	172	206	186	178	158
Shellfish samples .....	513	743	740	593	762

The federal government continued to endorse the New Jersey State Shellfish Control Program during 1969 thus allowing certified dealers in New Jersey to compete for interstate market for their products.

Rutgers, the State University under a federal grant continued research into the depuration (self purification) of hard clams. Findings at the end of 1969 indicated that hard clam depuration in New Jersey waters was not yet a dependable means of cleansing. Research is continuing.

The Shellfish Control Program began a demonstration project for transplanting shellfish from condemned waters to approved waters in conjunction with the new Special Restricted growing water classification. The Highlands Baymen's Association was the cooperating industry organization. At the end of 1969, the project had not been shown to be entirely successful, so that the demonstration will continue into 1970.

Program personnel are continuing to press for the establishment of a Marine Fisheries Control Program in New Jersey. A need for such a program exists. Plans for establishment of such a program have been made and now await funding.

A special investigation and report of certain phases of the surf clam processing industry in New Jersey were made. Recommendations from that report have been put into practice. Additional investigations were made later in the year pertaining to another phase of the industry. Recommendations from that report will be put into practice in 1970.

Plans were formulated for a special depletion project in the Brigantine Area. The concept of the plan is to allow direct harvesting and marketing of clams from a closed area under special permit in order to remove the resource. Plans were triggered because of a continuing problem of illegal harvest from the area under uncontrolled conditions. The plans call for harvest when conditions make these waters as clean as approved areas so that removal of the resource will be made before conditions return the area to a polluted condition.

### **General Sanitation Program**

#### *Housing*

A proposed revision of the New Jersey State Housing Code (1962) was developed in cooperation with the State Department of Community Affairs. The revised Code is intended to provide for a municipality to enforce minimum requirements for the maintenance of one and two family dwellings and rooming houses, which are not covered by the state law and regulations governing the construction and maintenance of hotels and multiple dwellings.

The Coordinator of the Housing Program served as course coordinator and instructor for two 10-day short courses conducted for housing inspectors at Madison and Trenton. Forty-three municipal housing inspectors satisfactorily completed these courses and were awarded certificates by the Bureau of Government Research, Rutgers—The State University. These courses are designed to provide basic training in the principles of housing inspection and housing code enforcement. The satisfactory completion of this course is now a requirement for personnel engaged in conducting a Certified Health Service Housing Program.

Field surveys and housing program reviews were conducted in the municipalities of Middletown Township, Jackson Township, Manchester Township, Hamilton Township, Commercial Township, City of Long Branch, City of Hoboken and City of Bayonne. Consultation services were also provided for a considerable number of local health departments and other municipal agencies. There were approximately 300 housing code complaints handled with local and state housing code enforcement officials during the year with about 500 copies of the recommended State Housing Code being distributed to requesting agencies and individuals.

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*Plumbing*

In view of the new state licensing law for master plumbers, there was a very heavy demand for copies of the Plumbing Code of New Jersey. The State Health Department provided copies to local health departments and to licensed plumbing inspectors with the State Department of Community Affairs selling some 10,000 copies to the plumbing and construction industries.

Several municipalities were assisted in reviewing plumbing installations for compliance with the state recommended plumbing code. The Plumbing Consultant also assisted several municipalities in adopting new or revised plumbing ordinances and with interpretation of the State Plumbing Code.

*Recreational Sanitation**Day and Resident Camps*

The program covering sanitary inspection and certification of day and resident summer camps was carried on through the four district offices in cooperation with local health departments. There were 71 day camps and 106 resident summer camps issued "Certificates of Approval," based on full compliance with the health and safety requirements of the New Jersey State Department of Health.

The annual list of camps operated throughout the state was prepared and distributed to all participating agencies and individuals upon request. This publication, which provides information on the type of camp, location, operator or operating organization and certification status continues to be of wide interest and demand by camping and recreational organizations and individual campers.

*Campgrounds*

Sixty-four campgrounds were inspected for compliance with Chapter XI of the State Sanitary Code, which became effective September 1, 1968. Fifty-four of the campgrounds were found to be in compliance with the sanitation requirements and were approved. Ten campgrounds were not approved and have been informed of the necessary sanitary improvements. A list of the campgrounds inspected during the year 1969 has been prepared for distribution to participating agencies and the public upon request.

*Lake Bathing Places*

Fifty-six lake bathing places complied with the voluntary sanitation and safety requirements of the State Department of Health and were issued

certificates of approval. Information concerning this program, including a list of the certified lake bathing places, was provided to the public by news releases.

### *Public and Private Swimming Pools*

There has been an increasing demand for copies of the "Swimming Pool Code of New Jersey" which is subject to adoption by reference by local boards of health and "Guidelines for the Municipal Control of Private Residential Pools."

### *Noxious Weed Control*

Active participation of state and local officials to control ragweed and poison ivy increased during 1969. The number of pollen collection stations increased from 21 in 1968 to 28 in 1969. These stations are located in 10 counties of New Jersey.

Fifty municipalities located in 14 counties of New Jersey requested a review and evaluation of their weed control programs. On the basis of field surveys and program evaluations, it was found that six municipalities conducted outstanding noxious weed control programs in 1969.

The second annual State Noxious Weed Control Conference was conducted with 70 municipal officials in attendance. Representatives of the Division of Environmental Health assisted in auditing local health department weed control programs utilizing State Health Aid.

### **Mobile Home Parks Program**

The program objective is to achieve healthful and safe living conditions in our mobile home parks. The activity is the promotion of the standards of Chapter IX of the State Sanitary Code. These standards, which have the force and effect of law throughout the state, are applied to the planning, design, and construction of the physical facilities of mobile home parks. They are also applicable to operation and maintenance.

The enforcement of Chapter IX has been improved by referral of cases to the Attorney General's Office for its action, and urging local boards of health to enforce the State Sanitary Code with respect to Chapter IX.

The following represents a summary of the Mobile Home Parks Program field activities in 1969:



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Mobile home lot inspections .....	6,775
Mobile home lot reinspections .....	1,607
Revisits .....	24
Complaint investigations .....	15
Conferences .....	128
Night meetings .....	4
Field surveys .....	20
Court hearings .....	4

**Occupational Health Program**

During the calendar year 1969 personnel of the Occupational Health Program visited 478 industries in which assistance was given in the evaluation of workers' exposure to poisonous fumes, gases, dusts and to the physical agents of heat, humidity, and noise. Workers covered by these services totalled 140,000. Where applicable, the occupational health nurse consultants followed cases of actual occupational diseases and assisted management in establishing medical programs.

In accomplishing the above, personnel worked closely with health officers in 97 communities and rendered service to other state agencies.

The Program also extended its services in the field of community noise and in the evaluation of noise in industry to the extent that it is the recognized advisory group in the state. Personnel have promoted this interest through meetings with municipal governments, boards of health, union groups, and industrially related societies. There are 50 municipalities that have adopted ordinances to control disturbing noise within their boundaries.

**Bureau of Veterinary Public Health****Rabies Control**

The Rabies Control Program has been in formal existence since 1942. Table 1. illustrates the success of the program in the prevention of rabies in humans and animals. The record is even more significant as rabies is endemic in domestic and sylvatic animals in the states contiguous to New Jersey. In 1969, the laboratory confirmed cases of rabies in animals in the states of New York and Pennsylvania were as shown.

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TABLE 1. RABIES IN NEW YORK AND PENNSYLVANIA

<i>New York</i>	<i>Pennsylvania</i>
11 dogs	1 dog
5 cats	1 cow
10 bats	7 bats
168 other animals	4 skunks
—	1 fox
245 Total	—
	14 Total

The program provides consultation to physicians, local health officials, and veterinarians when humans or other animals are bitten by animals. Most bites in humans which require anti-rabies treatment are bat bites. Current recommendations are that all persons bitten by bats receive anti-rabies prophylaxis regardless of whether there is laboratory confirmation of rabies.

The laboratory phase of the rabies program is financed from rabies funds. During 1969, 2,166 animal heads were examined. The majority of heads were from animals that had bitten persons. This service is operated on an emergency 24 hour basis.

More than half a million dogs were licensed in the state in 1969.

#### Arbovirus Surveillance Program

There were no laboratory confirmed cases of eastern encephalitis in humans in 1969.

There was laboratory confirmation in 11 horses, three pheasant flocks, and 11 pools of mosquitoes and numerous isolations in sylvatic avians and non-avian animals. The presence of eastern encephalitis in mosquitoes during a year in which no human cases occurred certainly indicates that the New Jersey Department of Health has a responsibility to the public to maintain surveillance and research in the field of the arbovirus, and in particular for the eastern strain. This surveillance has been beneficial in alerting physicians, veterinarians, local health officials, and county mosquito control commissions of the presence of eastern encephalitis in an area so that early control measures can be instituted. Early detection of the virus in animals and insects was not possible previous to the initiation of this research project.

The surveillance and research activities continued at two study sites, Woodbine-Belleplain in Cape May County and Oceanville in Atlantic County.

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The study sites are operated on a limited basis. Blood was collected from birds and small animals throughout the year. Table 1 summarizes this activity.

Almost 150,000 mosquitoes were collected and identified.

The bird blood was collected using mist nets. Blood from sentinel mammals comprised the majority of non bird blood specimens submitted for virus tests. The method of using sentinel mammals was started in 1968. This technique of holding susceptible mammals in cages and bleeding at two week intervals has been an efficient method of utilizing sylvatic mammals efficiently as sentinels in the early detection of the arboviruses.

TABLE 1. ARBOVIRUS SURVEILLANCE AND RESEARCH  
BLOOD SPECIMENS COLLECTED FROM ANIMALS BY KIND OF ANIMAL

1968-1969 Calendar Year	Birds Except Starlings	Starlings	Non-Avians	Total
January .....	...	...	...	...
February .....	...	...	...	...
March .....	...	...	...	...
April .....	43	2	41	86
May .....	33	9	71	113
June .....	132	197	74	403
July .....	60	44	40	144
August .....	66	195	26	287
September .....	73	252	51	376
October .....	96	82	28	206
November .....	19	273	27	319
December .....	3	30	20	53
Totals .....	525	1,084	378	1,987

#### Urban Rodent and Insect Control Project

An initial federal grant of \$2,816,505 was awarded to the State Department of Health, effective January 1, 1969. Thus was established the New Jersey Urban Rodent and Insect Control Project, administered by this department, with major assistance from the State Department of Community Affairs.

The State Urban Rodent and Insect Control Project, in turn, approved and funded programs in Trenton, effective June 1, 1969; Hoboken, effective

August 1, 1969; and Newark, effective September 1, 1969. Because Hoboken, Newark, and Trenton were the first cities in New Jersey to be approved in the "Model Cities" Program of the U. S. Department of Housing and Urban Development, they received priority.

These three projects, together costing \$1,956,976 for a one-year period, are federal-to-state-to-local partnership programs. These projects were supported by Health Services Development Project Grant No. 24009, awarded by the Office of Comprehensive Health Planning, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

The State Project contributed to the successful implementation of local project operations by reinforcing the "Model Cities" Program and other community programs. More specifically, the State Project provided close consultative and technical assistance and monitoring of local administrative, training, field, and fiscal operations.

Although only in its first year of operation, the State Project has:

1. Initiated effective rodent and insect control projects in high-risk, low socio-economic, urban areas.
2. Promoted the employment of disadvantaged residents to stimulate and educate the indigenous population to the environmental and household sanitary practices necessary to sustain a healthful environment.
3. Provided funds and technical assistance to municipalities to enable them to recognize and meet the need for an environmental approach to rodent and insect control on a continuing basis.

Community participation and involvement were developed in each project funded municipality through policy committees comprised of local residents. The development of these committees and their input into operating neighborhood improvement projects was a major Project accomplishment. State Project personnel attended many evening meetings with local residents to assist in the planning and development of local projects. The knowledge and skills developed by local residents involved in the Urban Rodent and Insect Control Project should enable them to participate meaningfully in other neighborhood improvement programs in the future.

Six other federally approved "Model Cities" in New Jersey were invited to prepare and submit applications for Urban Rodent and Insect Control Projects. Five of these cities requested state assistance, prepared initial applications, and were engaged in detailed planning by the end of the year.

The Veterinary Public Health Program worked with local health and housing officials in Dover in Morris County to develop a model block by block urban rodent and insect control program. Dover has a low income housing area in which there was a serious infestation of cockroaches and rodents.

### **Radiological Health Program**

#### *Commission on Radiation Protection*

The Commission on Radiation Protection was created in the Department of Health on July 8, 1958 by the enactment of Chapter 116, P.L. 1958. The Commission consists of the Commissioner of the Department of Health, and the Commissioner of the Department of Labor and Industry or their designated representatives and five members appointed by the Governor with the advice and consent of the Senate. These members have training in Medicine, Radiobiology, Radiation Physics, Atomic Energy Biology, or Engineering. The Commission is empowered to promulgate codes, rules, and regulations for the safe use of ionizing radiation, and the department enforces them.

Members of the Commission on December 31, 1969 were Max M. Weiss, Ph.D., Chairman; Benjamin P. Sonnenblick, Ph.D., Vice Chairman; Philip D. Gilbert, M.D., Secretary; Robert C. Axtmann, Ph.D.; Craig F. Haaren, P.E., R.A.; and Roscoe P. Kandle, M.D.

#### *X-ray Certification Act*

The enactment of the X-ray Technician Certification Act created an X-ray Technician Board of 10 examiners as an agency of the Commission on Radiation Protection. The board was formed and examinations of X-ray Technicians were conducted.

#### *Nuclear Medicine Guide*

A sixth draft of the Nuclear Medicine Radiation Protection Guide is under preparation by the Advisory Committee on Nuclear Medicine. Members of the Advisory Committee on Nuclear Medicine are: Benjamin P. Sonnenblick, Ph.D., Chairman; William H. Aaroe, Secretary; Francis J. Haughey, Ph.D.; Sidney Ketyer, M.D.; Paul Numerof, Sc.D.; Frank R. Schell, M.D.; and John J. Thompson, M.D.

#### *Nonionizing Radiation*

The Advisory Committee on Nonionizing Radiation rendered to the Commissioner a preliminary report recommending that New Jersey move ahead

with the development of expertise in this area and methods for getting reports of injuries. Members of the Advisory Committee on Nonionizing Radiation are: Samuel C. Ingraham, II, M.D., Chairman; William H. Aaroe, Secretary; Sanford A. Dreskin; Francis J. Haughey, Ph.D.; Donald S. Kwalick, M.D.; Jack Longfellow; Paul Brown, Jr.; E. Lynn Schall; William Schreibeis, P.E.; and Frank X. Worden.

A pilot project for ascertaining the location and equipment identification data for microwave cooking apparatus was continued with the aid of state food and drug compliance inspectors. A cooperative survey of microwave ovens in New Jersey was conducted with the cooperation of the United States Public Health Service in order to get baseline data on existing units.

### *Radiation Protection Code*

The Radiation Protection Code was amended effective March 1, 1969 and affected (1) Chapter I, general requirements; permissible dose rates, radiation levels and concentrations; records; radioactive contamination control; and disposal of radioactive materials. (2) Chapter II, special requirements; medical diagnostic x-ray installations; and dental radiographic installations. There is an entirely new section pertaining to major nuclear facilities, including nuclear reactors.

### *Registration of Radiation-Producing Machines*

There were 797 machines registered and 905 machine registrations cancelled in 1969 for net loss of 108 machines. The machines registered in other years were 751 machines in 1968 and 545 in 1967.

### *Inspections of Radiation Producing Machines*

The inspection of x-ray machines continued in 1969 with three full time inspectors. The total number of x-ray machines inspected and reinspected was 2934. The reinspected machines are reinspected at five-year intervals to determine if they are still in compliance with the Code. The number of machines reinspected and found not in compliance was 432. These machines were removed from the status of "in compliance" for such reasons as former units replaced, units altered by owners, units moved to a new location.

### *Units in Compliance with the Code*

The number of machines in compliance with the Code increased by 688 to a total of 9564. This was 97 percent of the number registered.

*Major Nuclear Facility Safety*

Jersey Central Power and Light Company received the operating license of the U. S. Atomic Energy Commission for Oyster Creek Nuclear Electric Generating Station No. 1 early in 1969. The reactor achieved full power after a planned intensive sequence of low power tests on December 7, 1969. The unit went into "commercial service," that is, was accepted by the utility from the vendor on December 23, 1969. The unit has operated continuously at full power since February 15. To date there is no evidence of radioiodine gas release from the facility, tritium levels in the primary loop water are below maximum permissible concentration (MPC); and the noble radiogas release rate is running at 0.99 percent of the specified level.

The Radiological Health Program has been collecting environmental samples at and in the vicinity of Oyster Creek since 1964. More than 1300 pieces of information have been gathered. Data was statistically analyzed, using the Department's RCA Spectra 70/45 Computer; a one tail T test at the 95 percent level was used. To date there is no discernible evidence that this reactor is contributing radioactivity to the environment. This environmental program is part of this program's overall state-wide program. It will be continued indefinitely.

Procedures for Implementing Protective Action Guides (PIPAG), a health department program built around State Police Operating Order No. 215 for handling all types of radiation emergencies (real or suspected), is being expanded as needed to include large nuclear facilities, such as reactors.

The Ramco Wood Irradiator was dedicated last July; it is located in Hanover Township. This unit will contain over one half million curies of Co-60 and is the first of three proposed for New Jersey. Emergency plans for this facility and the Mallinckrodt radiopharmaceutical plant in Carlstadt were developed.

Construction is proceeding at the Salem County site of the Public Service Electric and Gas Company's first nuclear power station in New Jersey. Operation of the first unit is anticipated between March and May 1971.

Public Service Electric and Gas has filed an application for an Atomic Energy Commission construction permit for a pair of General Electric Boiling Water Reactor (BWR) units to be located on Newbold Island (four and one-half miles south of Trenton opposite the Fairless Works of U. S. Steel and Pennsbury Manor). These units will be equipped with cooling towers.

Jersey Central Power and Light announced it will build a second nuclear unit at Oyster Creek to be known as Forked River No. 1.

*Radioactive Material Licensing and Regulatory Program*

During 1969, five permanent licenses were issued to owners and users of naturally occurring and accelerator-produced radioactive materials. This brings the number of permanent licenses issued to 123. One hundred fifty-one amended licenses were issued.

This program, through its educational and specialized assistance efforts, has been responsible for removing from use with ultimate disposal 3.476 grams of radium representing 357 individual sources. In 1969, there were 0.460 grams and 73 sources removed from use.

Surveillance is also maintained over 535 United States Atomic Energy Commission (U.S.A.E.C.) Licensees using or possessing radioactive materials under U.S.A.E.C. authorization.

*Radiological Health Laboratory*

Samples of surface water, stream sediment, vegetation, and soil collected throughout the state were analyzed for gross alpha and beta concentrations. (Emphasis is now being placed on environmental surveillance in the proximity of nuclear generating facilities. The processed data provided information concerning state-wide fallout, compliance of nuclear material registrants, and general radiation background levels.)

During the second half of 1969, the newly acquired RCA Spectra 70 Computer was extensively utilized for data reduction. Fortran IV computer programs were developed and employed for data analysis. Computer programs facilitated in the summarization and the statistical inferences of gross alpha and beta concentrations collected in the proximity of Oyster Creek Nuclear Generating Facility between 1965 and October, 1969.

Weekly collected milk samples were specifically analyzed for Strontium-89 and 90, Iodine-131, Barium-140, Cesium-137, and Potassium-40.

In cooperation with the federally-sponsored Radiation Alert Network (RAN), daily collected air samples and routinely collected precipitation samples were analyzed for gross beta activity. Periodically, through the use of gamma-ray spectroscopy, precipitation samples were investigated for specific radionuclides.

In conjunction with the New Jersey Water Pollution Control Program, the laboratory initiated the radioactive analysis of "Interstate Carrier Water Supplies."



Subsequent to the acquisition and calibration of the liquid scintillation counting system, water samples collected adjacent to nuclear facilities were analyzed for Tritium and Carbon-14.

### **Pesticide Project**

The New Jersey Community Study on Pesticides, better known as the Pesticide Project, has continued its study on whether pesticides cause any chronic effects in man.

The acute effects of pesticide poisonings are well known, but the effects of long-term, low-level exposure are unknown. To determine whether chronic effects do exist, the Project has selected for study individuals who are occupationally-exposed to high levels of pesticides. The rationale for this is that if these persons, who are getting much higher doses of various pesticides than the general population, do not demonstrate any effects from their prolonged exposure, then the general population should show no effects.

The 200 pesticide-exposed individuals are farmers, pest control applicators, aerial applicators and pesticide formulators. These persons are compared with a group of 50 minimally pesticide-exposed controls for differences in blood and urine biochemistry, pesticide residues and physical signs or symptoms.

Up to the present, no major abnormalities have been discovered, but statistically significant differences at the .05 level have been found in a preliminary analysis of 1969 data. "Exposed" individuals were matched with controls for age, sex, weight, physical activity and race. The differences noted were within the normal range and included the following parameters: serum CPK, SGOT, SGPT, LDH, BUN and uric acid and urinary paranitrophenol and alpha-naphthol. Investigation of acute intoxication in workers and the general population added 17 cases to our registry.

There were two major incidents of poisoning in 1969. One of two siblings in Newark died after ingestion of a mixture of parathion, chlordane and diazinon. Four children in a Trenton family were hospitalized due to misuse of parathion obtained from an itinerant salesman. Other Project activities included environmental sampling and monitoring pesticides residues in general population sera, adipose tissues and placentae.

Even though the total environmental effect of pesticides is of prime importance, the need still exists to document any long-term effects—good or bad—of pesticides on man.

## Division of Health Facilities

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CURTIS F. CULP, M.D., *Assistant Commissioner for Health Facilities*

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Office of Certification of Health Facilities ..... CURTIS F. CULP, M.D.  
*Director*

Office of Consultation Services ..... JOHANNA E. KENNEDY, M.A.  
*Chief*

*Programs:*

Nursing ..... JOHANNA E. KENNEDY, M.A.  
*Program Coordinator*

Nutrition ..... MARGARET P. ZEALAND, M.S.  
*Program Coordinator*

Physical Therapy ..... SUSAN B. GLOCKE, P.T., M.A., M.P.H.  
*Program Coordinator*

Social Work ..... ADRIANE DUFFY, M.S.  
*Program Coordinator*

## Office of Certification of Health Facilities

The Health Insurance for the Aged Program is in its fourth year of operation. Responsibilities of the program are:

- a. Evaluation of services provided by participating hospitals, extended care facilities, independent laboratories, home health agencies, and rehabilitation agencies ;
- b. Consultation to these providers as to methods and procedures for continually improving their services.

In the program, a team of professional surveyors, with the aid of consulting specialists, are actively engaged in assisting hospitals, extended care facilities, independent laboratories, home health agencies, and others to provide and maintain quality services. The Office of Certification of Health Facilities works closely with other appropriate agencies involved in the Medicare program, such as the Bureau of Community Institutions of the Department of Institutions and Agencies and the intermediaries, Prudential and Blue Cross, to assure coordinated constructive assistance to participating facilities and agencies.

The Office of Certification of Health Facilities, through the Social Security Administration, acts for approximately 700,000 Medicare beneficiaries in New Jersey. The following represents the workload for the year for each type of facility :

### *Extended Care Facilities*

Eighteen additional facilities were certified during this year, making a total of 105 certified extended care facilities. Two additional extended care facilities were approved to provide outpatient physical therapy services under Part B, making a total of seven extended care facilities providing this additional service.

Eighteen initial surveys and 69 resurveys and 43 special visits were made by the survey team this year.

### *Hospitals*

The total number of certified hospitals was decreased by one hospital which ceased operation during the latter part of this year. This now brings the total to 121 certified hospitals in the program.

The following is a breakdown of type of certification :

- 111 general hospitals
- 8 psychiatric hospitals
- 2 tuberculosis hospitals

Sixty-two hospitals were resurveyed, and four special visits were made.

#### *Home Health Agencies*

The total number of certified home health agencies was decreased by one, a voluntary termination. This now brings the total to 52 certified home health agencies in the program.

Of this number, 11 were resurveyed and eight special visits were made. In addition to skilled nursing services, 52 home health agencies provided physical therapy, seven provided occupational therapy, 27 provided speech therapy, 52 provided home health aides, 15 provided diet counselling, 12 provided medical social services, and 13 provided medical supplies.

#### *Independent Laboratories*

Seven additional independent laboratories were certified during this year, one was denied participation, and one independent laboratory voluntarily terminated its provided agreement, making a total of 131 certified independent laboratories.

Six initial surveys and 114 resurveys were made during the year.

#### *Outpatient Physical Therapy Facilities*

As of July 1, 1968, based upon 1967 Amendments to the Social Security Act, outpatient physical therapy services (Part B) permitted the inclusion of clinics, rehabilitation agencies, and public health agencies.

Of the seven applications received, three withdrew their applications, three are pending, and one rehabilitation agency was certified this year.

Four surveys, one resurvey, and two special visits were made.

#### *Medicaid (Title XIX)*

In addition to the above workload for the year, the Department of Health, through this office, cooperated with the Department of Institutions and Agencies in surveying nursing homes, homes for the aged, and public medical institutions for participation in the Medicaid program.

## DIVISION OF HEALTH FACILITIES

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Since the New Jersey Medicaid program was slated to begin on January 1, 1970, an intensified effort was made to survey all applying facilities by December 31, 1970.

Three teams, comprised of a nurse and nutritionist of the Department of Health and a nurse of the Department of Institutions and Agencies, surveyed 97 facilities and our administrative supervisor surveyed 19 non-distinct parts of extended care facilities; making a total of 116 facilities surveyed for the Medicaid program from October 1, 1969 through December 31, 1969.

Our building inspector also surveyed the physical environment of 93 facilities during this period.

### Nursing Program

The quantity, quality, and effective utilization of nurses in New Jersey were areas of major effort during 1969.

#### *Quantity*

The Governor's Task Force on Nursing, having fulfilled its primary purpose to a substantial degree, was dissolved at the beginning of the year. As an outgrowth of the recommendations made by the Task Force in its report, the Department of Higher Education has accepted nursing education as its responsibility. Throughout the year, the Chief Public Health Nurse has served in the Nursing Education Advisory Committee which was established by the Board of Higher Education. Projections regarding the number of nurses needed in New Jersey according to different kinds of preparation and the educational resources required to fulfill the needs have been made by the committee.

The federally funded Inactive Health Personnel Project was granted a third extension thus enabling the Project Coordinator to continue the work already begun in counselling and assisting many of the 11,000 inactive professional nurses of this state who had indicated through a survey questionnaire that they might be interested in returning to active employment. Upon request, 103 hospitals and other health facilities were supplied with names of inactive nurses for recruitment purposes; 22 hospitals were supplied with names of inactive nurses seeking refresher training. The past two years have shown an increase of 3,000 professional nurses employed in the state. The federally funded Inactive Health Personnel Project has made a sizeable contribution by bringing employers in touch with inactive nurses who expressed interest in active employment.

The mobility of professional nurses in New Jersey in a two-year period was correlated in the Data Processing Unit (from registration data supplied for 1966 and 1968 by the New Jersey Board of Nursing) as follows :

<i>Remained Active</i>	<i>Remained Inactive</i>	<i>Active to Inactive</i>	<i>Inactive to Active</i>	<i>Newly Licensed</i>
31,742	2,261	6,848	8,516	3,001

In addition to working with professional and licensed practical nurses, the project has also assisted the following groups in surveying their manpower resources and ascertaining what needs to be done to return inactive health professionals in these groups to the active labor force: nutritionists and dietitians, medical technologists, physical therapists, and occupational therapists.

Follow-up on major recommendation made in the final report is being done by the Nursing Program, with special emphasis on re-establishing refresher training programs for inactive nurses in selected parts of the state and for establishing a Substitute Nurse Project in the Essex-Union County area under the aegis of the Hospital and Health Council of Metropolitan New Jersey. As an outgrowth of the assistance given the medical technologists, a contract was granted the New Jersey Association by the United States Department of Labor for the purpose of recruiting inactive medical technologists for refresher training programs.

### *Quality*

The major thrust to improve quality was directed toward the active practitioners of nursing through in-service education programs.

The following schools of nursing were given assistance :

Trenton State College  
 Seton Hall University  
 Rutgers University - Extension Service  
 Bloomfield College  
 Gloucester County Community College  
 Mercer County Community College

Graduate students of nursing from the University of Pittsburgh and the University of Pennsylvania, as well as undergraduate students from the University of Pennsylvania, were given assistance in their field work programs.

## DIVISION OF HEALTH FACILITIES

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Assistance was given by program staff in State Aid audits in local jurisdictions.

*Utilization*

Home health agency directors throughout the state along with staff of this Department recognized that something needed to be done to enable the agencies to cope more efficiently with the avalanche of paperwork required of them. The problem had been building up through the years, but Medicare really pushed everyone to the point of desperation. Agencies asked for help, not only for establishing a system that would lend itself to mechanical tabulation, but also for a system that would yield qualitative along with quantitative data. One thing was paramount—nursing time in record keeping and paperwork must be reduced to a minimum.

After two years of planning and negotiation, a federal grant was awarded to the Department in May 1969 to undertake a "Study of Home Health Agencies in New Jersey to Develop a Design for the Most Effective Use of Nurse Manpower and Establish Critical Indices to Evaluate Services Performed." Three home health agencies have been studied in depth and six more have also participated, not only in providing information but also in reviewing findings and recommendations. The first stage of this study has been completed, with the development of suggested input data forms and guidelines. A number of agency directors have volunteered to participate in the next step—the pilot trials of the system.

**Public Health Social Work Program****Medical Social Services**

In 1969, grant-in-aid for direct social casework services was provided by this Department as part of total patient care in Bridgeton Hospital; Jersey Shore Medical Center, Neptune; Perth Amboy Hospital; and St. Peter's Hospital, New Brunswick. A total of 2800 persons were aided with social problems related to medical care. A total of 3,632 casework interviews were provided at these hospitals. Five-hundred ninety-one visits were made in the community.

**Social Work Education**

Resources for providing accredited supervision in a medical setting for graduate students enrolled in schools of social work enabled 26 graduate students to obtain this training at Lyons Hospital, Perth Amboy Hospital,

Roosevelt Hospital, and at Veteran's Hospitals in East Orange and Newark. Each student gave 360 hours of unpaid casework service, or a total of 16,380 hours of service for the group.

### Maternal and Infant Care Project

During six months of this year, the State Consultant provided administrative direction to the social service staff of this Project. Effort was directed toward evaluation of the scope and quality of social services provided to unmarried, pregnant, adolescents under 17 years of age who were considered a "high risk" mortality group.

A well-qualified Director of Social Service, a Senior Medical Social Worker, and one Assistant Medical Social Worker were recruited by the State Consultant to provide staff services on this Project.

### Volunteer Friendly Visitors Program

During this year, 107 Volunteer Friendly Visitors were trained in four training courses in Monmouth, Bergen, and Passaic Counties. These groups of Volunteers are now providing this community service in Long Branch Family and Children's Agency, affiliated with a Visiting Homemaker Service; in Bergen Pines County Hospital, a 900-bed facility; and in church groups of Passaic and Bergen Counties.

Since 1963, 1,317 Volunteer Friendly Visitors have been trained in this 14-hour training course.

### Nutrition Program

Interest in nutrition has steadily increased. The National Nutrition Survey was undertaken as the first comprehensive survey to assess the nutritional status of the population of the United States. The results are not representative of everyone in the 12 states studied, but the statistics reflect the nutritional status of people in this state's low-income areas. Approximately 80 percent of the families studied had incomes of less than \$5,000. Fifteen percent of all children studied evidenced growth retardation. Thirty-five percent of the children five and under showed growth arrestment. One third of the children had anemia, one third suffered from Vitamin A deficiency, four percent of the children up to six years of age showed evidence of rickets, and 38 percent under nine showed evidency of scurvy.

Nutritional status is affected by economic status, ethnic background, general health, educational programs, and the interest in nutrition showed by physi-



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cians, parents, teachers, welfare workers, and local authorities. The availability of food and the nature of food distribution programs also can contribute to nutritional status. Participation in action programs available in New Jersey has improved this past year, but unfortunately there are not enough programs available to those who could profit the most from them. New Jersey has moved from 49th to 47th rank in percentage of school children participating in the National School Lunch Program. Less than one-half of our schools have a school lunch program. There are now 36 breakfast programs in operation in the state. Sixty-three day care centers and six recreational programs serving needy children participated in the Special Food Service Program this past year. Food Stamps have been made available in all counties in the state. A new food stamp schedule was announced in December, 1969 and has been implemented. If all eligible families participate in this program, it is anticipated that 160,000 to 175,000 persons will earn a food bonus of approximately \$11,000,000. Many senior citizens on limited income will not use their life savings for increased food purchases even when failure to do so affects their health; therefore, many do not participate in the Food Stamps. This problem is under consideration at the state and federal levels.

On December 2, 3, 4, and 5, the State Nutrition Consultant attended the White House Conference on Food, Nutrition, and Health. This was a crash program to advise the President on how best to end hunger and malnutrition among the poor in the United States. Beyond this, the Conference also focused national attention on the nutritional needs and problems of all Americans. Practical goals and targets were discussed to lay the foundation for a national nutrition policy. There were over 2,600 invited participants. Of these, 1,500 were educators, scientists, medical and health professionals, representatives of agriculture and food industries and federal, state and local government officials. About 1,000 were consumers, representing civic, business, professional, women's, student, religious, and community action groups, including the poor. Participants came away with a new understanding of the need for immediate action, a commitment to share this action, and a deeper realization that the permanent solution of malnutrition will require all the professional talent we can give—and in new and demanding ways. The Conference was at times disturbing and frustrating, but it was also an exhilarating and renewing experience. New Jersey will benefit in many ways because of the White House Conference.

### **Physical Therapy Program**

The Physical Therapy Program during 1969 placed major emphasis in improving the quality of existing physical therapy services and promoting the development of educational opportunities for physical therapists and physical therapy assistants.

Working toward improving the quality of existing physical therapy services, the State Physical Therapy Consultant was involved in coordinating eight educational seminars. Seven of these seminars were directed toward the care of the chronically ill patient, while the eighth was concerned with improving the health discipline communication and consultation skills.

#### *Physical Therapy School*

Today in New Jersey there are an estimated 618,000 persons whose activities are limited because of chronic disease or a physical handicap who could benefit from some type of comprehensive health service. To meet the demands for the physical therapy portion of the service, it has been estimated that New Jersey needs 68 additional practical physical therapists annually. Since there are no educational training centers in New Jersey for physical therapists, the State Physical Therapy Consultant participated in the development of a position paper proposing the establishment of a College of Allied Health Professions. The position paper was prepared by the New Jersey Health Careers Service, Council for Health Manpower Development. A School of Physical Therapy is included as an educational program which should be given priority.

## Division of Laboratories

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MARTIN GOLDFIELD, M.D., *Director*

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JOHN J. NELSON, M.S., *Assistant Director*

Bacteriology .....	RUSSELL STEIN <i>Program Coordinator</i>
Central Services .....	JOHN WOREK <i>Program Coordinator</i>
Chemistry .....	PETER E. VENTURA <i>Program Coordinator</i>
Clinical Laboratory Improvement .....	PHILLIP V. ENGLER <i>Program Coordinator</i>
Pathology .....	MARTIN GOLDFIELD, M.D. <i>Program Coordinator</i>
Serology .....	ELEANOR E. THOMAS <i>Program Coordinator</i>
Virology .....	BERNARD TAYLOR <i>Program Coordinator</i>

## **Division of Laboratories**

The Division of Laboratories conducted 1,675,000 technical procedures on more than 502,000 specimens in 1969. This total workload, which represented increases of 24 percent and six percent in procedures and specimens, respectively, over the 1968 workload, required the processing of six million pieces of glassware; the preparation of 18.6 million milliliters of media; the procurement, caging, and feeding of some 171,000 animals; and the assembly and mailing of 256,000 specimen kits and 130,000 specimen forms.

In the area of laboratory approval and improvement, 49,000 test specimens were prepared and distributed to 300 public health, hospital, and independent clinical laboratories for the purpose of proficiency evaluation, an increase of 10 percent over the figures for last year. But of even greater significance to achieving meaningful and lasting improvement in the quality of performance of these many laboratories, training and consultative activities conducted by this division increased substantially in 1969. More than 550 laboratorians attended training sessions offered by the division in Trenton, an increase of 38 percent over 1968, and 204 laboratory visits were made by our staff to provide consultative services.

Successful laboratory management requires that not only the routine workloads be satisfactorily assimilated but also that there be a constant awareness and study of new procedures, media, stains, reagents, and equipment, followed by their use when warranted. In this area, some 30,000 additional tests were conducted, which are not included in the total workload statistics. Examples of these experimental studies are included in the following individual program reports.

### **Bacteriology Program**

The workload effort in the Bacteriology Program eclipsed that of any previous year, as more than 430,000 tests were performed on a record-breaking total of 155,847 specimens. In addition, more than 28,000 other tests were carried out in a series of continuing studies designed to evaluate new techniques, culture media, stains, and various reagents that might be used to improve laboratory routines. One such study resulted in the adoption of a staining procedure that proved to be markedly superior to the method formerly used to screen tuberculosis specimens for the presence of suspect bacilli.

Activities supporting the Laboratory Improvement Program continued to expand. Bench training and workshops were provided to numerous public health laboratorians, and a record number of in-service traineeships were made available to program personnel.

### Highlights

#### *Phenylketonuria (PKU)*

The 92,594 specimens received during the year represent the largest workload since the inception of the PKU screening program. The examination effort required to process this record-breaking total exceeded that of last year by more than 6,600 tests.

There were 11 detections of PKU among the 88,304 newborns tested, for a ratio of approximately 1:8,000 live births, as compared with an overall ratio approximating 1:10,500 compiled since the start of the screening program in 1964.

A total of 75 program-participating hospitals routinely submitted heel blood samples from their newborns, while five other hospitals continued to perform their own screening tests. The proficiency of the latter group was monitored by a series of mailed check specimens prepared and distributed by the central laboratory.

#### *Tuberculosis*

In addition to a new record high of 157,464 routine determinations, some 6,500 specimen slides were examined during the concluding phase of a comparative study that resulted in a much improved procedure for the direct microscopic screening of clinical specimens. The study showed that as a result of the use of fluorochrome stain, twice the number of detected specimens harbored acid-fast bacilli as were found with the conventional Ziehl-Neelsen stain; consequently, fluorochrome staining has become standard operational procedure in the tuberculosis laboratory.

#### *Enteric Infections*

More than 26,000 examinations were performed to detect the presence of enteric pathogens, including intestinal worms and protozoa, in a variety of clinical specimens and food samples.

Extensive laboratory support was provided for the epidemiologic investigation of three major episodes of enteric illness affecting more than 160 persons. In each instance, the causative organism was successfully isolated and identified.

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Similar support was also provided for nine outbreaks of food-associated illnesses involving over 300 victims.

In addition to the above workloads, some 20,000 determinations were carried out as part of a series of special studies aimed at the improvement of enteric laboratory services through the investigation and evaluation of varying combinations of enrichment broth and plating media.

*Gonorrhoea*

A three-day multistate workshop, related to the identification of the gonococcus by culture and fluorescent antibody techniques, was presented at the central laboratory in cooperation with the National Communicable Disease Center. Laboratorians from four neighboring states (New York, Delaware, Maryland, Pennsylvania) were among 15 enrollees.

Two continuing series of clinic-laboratory studies were activated in cooperation with the Venereal Disease Control Program. Culture service was provided to the Trenton venereal disease clinic as part of one study designed to determine the effect of transit delays on specimens transported from the clinic to the central laboratory for culture. A second ongoing study, using specimens from the Newark venereal disease clinic, was designed to determine the efficacy of transport media as a means of providing direct culture service via mail. The extra workload generated by these studies amounted to some 1500 tests performed on 500 specimens.

*Rabies*

A total of 2,166 animal specimens, representing 28 different species, were received for examination. Evidence of rabies was detected in only one species: the bat. Of 425 tested bats, 16 or 3.8 percent were found to harbor rabies virus. This is consistent with the average positive rate for bats examined during the past few years.

For the 13th consecutive year, no evidence of rabies was found in any examined canine specimens, and it was the eighth consecutive year for rabies-free feline specimens.

Every specimen was completely processed within 24 hours of its receipt, and findings were routinely telephoned to all bite victims or their attending physicians. Service was provided around the clock, seven days a week, by laboratory personnel who were "on call" throughout each weekend and holiday.

*Laboratory Improvement.*

Support for the Laboratory Improvement Program continued to expand. A total of 1,332 bacterial cultures were prepared and mailed to 180 hospital

and clinical laboratories participating in proficiency testing exercises. In addition, 525 test "unknowns" were prepared and distributed to five hospital laboratories for evaluation of their PKU screening routines, and 533 milk samples were prepared and distributed to 21 dairy laboratories participating in the interstate milk shippers split-sampling evaluation series. Also, approval surveys were conducted at 11 such dairy laboratories and at the laboratories of 14 public supplies of potable water.

### Workloads and Trends

Table 1. THREE-YEAR COMPARISON OF PROGRAM WORKLOADS

<i>Laboratory</i>	<i>Specimens</i>			<i>Examinations</i>		
	<i>1969</i>	<i>1968</i>	<i>1967</i>	<i>1969</i>	<i>1968</i>	<i>1967</i>
Central .....	145,267	144,118	143,029	413,687 <sup>1</sup>	410,369	396,196
Branch <sup>2</sup> .....	10,580	10,282	10,108	16,376	15,763	15,570
Program Total .....	155,847	154,400	153,137	430,063	426,132	411,766

<sup>1</sup> Does not include some 28,000 special study tests.

<sup>2</sup> Two shellfish laboratories located at Bivalve and Nacote Creek Research Stations.

Table 2. BREAKDOWN OF CENTRAL LABORATORY WORKLOAD

	<i>Specimens</i>			<i>Examinations</i>		
	<i>1969</i>	<i>1968</i>	<i>1967</i>	<i>1969</i>	<i>1968</i>	<i>1967</i>
Diagnostic Bacteriology						
PKU .....	92,594	89,425	89,457	186,113	179,744	179,809
TB .....	21,870	21,949	22,711	157,464	153,343	145,534
Enteric .....	6,561	7,453	7,285	26,169	31,682	30,163
Gonorrhea .....	3,115	2,505	4,192	4,243	2,505	4,192
Rabies .....	2,166	2,230	2,204	6,931	7,136	7,053
Miscellaneous <sup>1</sup> .....	1,338	1,068	1,293	3,345	2,670	3,052
Sanitary Bacteriology						
Waters .....	14,760	16,455	13,435	22,140	24,683	20,153
Dairy Products .....	2,369	2,398	2,118	4,738	4,796	4,236
Other Foods .....	494	635	334	2,544	3,810	2,004

<sup>1</sup> Includes throat swabs, malaria slides, mycology specimens, bacterial isolates referred for identification, food poisoning samples, biologicals, and other items for sterility determination.

### Central Services Program

This program provides all glassware, reagents, media, specimen kits, care of animals, and other appropriate ancillary services to all programs in the

## DIVISION OF LABORATORIES

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Division of Laboratories. It is also responsible for the processing of all mail, both incoming and outgoing, related to specimen collection.

The Central Services Program is comprised of four basic functional units:

1. Specimen Kit Preparation
2. Glassware Preparation
3. Media Preparation
4. Animal Care

Work load statistics for calendar year 1969 pertinent to these four units and to other ancillary supportive services are cited below, with similar figures for the previous year for comparative purposes.

*Specimen Kit Preparation:*

<i>Type of Specimen Container</i>	<i>1968</i>	<i>1969</i>
Syphilis Serology . . . . .	203,285	210,190
Spinal Fluid . . . . .	294	176
Tuberculosis . . . . .	23,194	25,633
Feces and Urine . . . . .	6,344	5,512
Poly Vinyl Alcohol (PVA) . . . . .	81	127
Gonorrhea . . . . .	2,215	2,289
Throat Swabs . . . . .	49	218
Viral Blood . . . . .	1,735	3,374
Viral Stool . . . . .	1,815	1,244
Viral Throat . . . . .	564	204
Water Samples . . . . .	3,627	2,733
Hepatitis Containers . . . . .	....	5,658
	<hr/> 243,203	<hr/> 257,358

The total number of specimen kits mailed during 1969 represents a 5 percent increase over that of the previous year.

*Glassware Preparation:*

The glassware preparation unit processed a total of 3,320,700 pieces of glassware during calendar year 1969, as compared with 2,926,200 pieces in the previous year, an increase of 13.5 percent. An additional 2,700,000 pieces of glassware were processed by Central Services Program personnel assigned to the Virology Program.



*Media Preparation:*

The media unit prepared and dispensed a total of 18,607,290 milliliters of media in 1969, an increase of 14.2 percent over the 16,290,980 mls. processed in 1968.

*Animal Care:*

Some 170,803 animals were procured, caged, and fed during calendar year 1969.

*Incoming Specimen Kits:*

Over 266,500 specimens were received, sorted, and distributed to the respective programs, as follows:

<i>Type</i>	<i>1968</i>	<i>1969</i>
Syphilis Serology .....	223,549	229,630
Spinal Fluid .....	608	633
Tuberculosis .....	21,949	21,870
Feces and Urine .....	7,542	6,561
Parasitology .....	69	105
Gonorrhea .....	2,505	2,551
Throat Swabs .....	77	79
Viral Bloods .....	1,851	2,329
Viral Stools .....	1,409	903
Viral Throat .....	167	74
Water Samples .....	2,353	1,804
	<hr/>	<hr/>
	262,079	266,539

*Outgoing Specimen-Related Mail:*

In addition to mailing the 257,358 specimen kits mentioned above under Specimen Kit Preparation, the following forms were also posted:

<i>Form</i>	<i>1968</i>	<i>1969</i>
Pre-Marital Certificate .....	65,050	64,025
Serology - 1 .....	35,415	47,275
Serology - 2 .....	3,750	6,050
Virology - 1 .....	1,735	4,100
Laboratory - 25 .....	1,225	6,790
Bacteriology - 45 .....	419	1,977

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**Chemistry Program**TABLE 1. SUMMARIZED WORKLOAD STATISTICS,  
JANUARY 1—DECEMBER 31, 1969

Character of Samples	Number of Specimens	Number of Determinations
Milk and Dairy Products .....	1,692	3,547
Other Foods .....	609	806
Drugs .....	141	447
Potable Water .....	1,517	9,984
Sewage, Streams and Tradewastes ....	8,160	63,447
Clinical Chemistry* .....	5,434	6,109
Miscellaneous** .....	348	1,211
Totals: .....	17,901	85,551

\* Includes clinical specimens for phenylketonuria detection, diabetes detection, and proficiency testing related to laboratory improvement activities.

\*\* Includes collaborative studies, State Police candidate urines, and drug addict urine monitoring.

Workload trends are shown in Table 2. The 1969 data represent increases of 25.6 percent and 8.2 percent for the number of samples analyzed and the number of determinations completed, respectively, over calendar year 1968.

TABLE 2. FIVE-YEAR WORKLOAD COMPARISONS  
Samples Analyzed

Character of Samples	1965	1966	1967	1968	1969
Milk and Dairy Products .....	1,723	1,751	1,682	1,564	1,692
Other Foods .....	581	610	434	271	609
Drugs .....	109	119	141	62	141
Potable Water .....	1,965	1,818	1,493	1,639	1,517
Sewage, Streams and Tradewastes ....	3,420	4,496	6,584	8,538	8,160
Clinical Chemistry .....	1,008	573	1,984	1,788	5,434
Miscellaneous .....	295	190	162	391	348
Totals .....	9,101	9,557	12,480	14,253	17,901

## DEPARTMENT OF HEALTH

## Determinations Conducted

<i>Character of Samples</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
Milk and Dairy Products .....	3,389	3,690	3,334	3,551	3,547
Other Foods .....	909	1,433	1,086	801	806
Drugs .....	348	727	794	400	447
Potable Water .....	12,861	10,753	9,604	10,187	9,984
Sewage, Streams and Tradewastes ...	19,634	25,598	43,673	59,364	63,447
Clinical Chemistry .....	1,925	1,226	2,854	2,997	6,109
Miscellaneous .....	1,078	456	977	1,338	1,211
Totals .....	40,144	43,883	62,322	78,638	85,551

**Laboratory Improvement Program**

During 1969, the Laboratory Improvement Program more than doubled the scope of its in-house training activities. A total of 529 laboratorians attended workshops and/or seminars during the year. This training program, however, even in its expanded form, is not sufficient to meet the ever increasing demands for more comprehensive laboratory training.

The past year saw an intensive effort in the area of field work. With the more complete staffing, we were able to make some 179 in-depth visits to both hospital and private laboratories.

The number of participating laboratories, particularly hospitals, increased dramatically during 1969. In microbiology alone, the number of hospitals has increased from five to 87. This increase, coupled with an increase of some 25 percent in the other disciplines, has placed an overpowering stress on the Central Services Program personnel who must prepare all the vials, package the specimens, and prepare them for mailing. The number of check samples prepared for distribution to participants during 1969 was 20,970. In addition, some 9,000 blood film slides for future cytohematology surveys have been prepared.

**Pathology Program**

This program affords the people of New Jersey the means of detecting threats to the public health which are not immediately apparent; threats which might be completely missed and remain uncorrected if these histologic services were not available. This program has also played an important part in improving the recognition and identification of tumors by New Jersey's pathologists.

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The full energy of this program was initially directed in channels calculated to contribute to improved performance by hospital pathologists in the recognition and identification of tumors. Its activities included providing consultation services, wherein pathologists submitted problem cases and a panel of experts gave opinions, the preparation of teaching collections, and the holding of an annual slide seminar.

Over the years, the very marked increase in proficiency by New Jersey's pathologists is reflected in the gradual but definite increase in their ability to make the proper diagnoses in the series of unknowns sent to each of them prior to each annual seminar. Thus, this objective has largely been accomplished and, by the techniques employed, little further benefit is to be derived. The New Jersey Society of Clinical Pathologists has assumed the responsibility for the maintenance of a consulting service and, with the development of two medical schools in New Jersey, the need for State Health Department activity in the preparation of teaching collections has become less acute.

In the case of a child residing in a shore community, the availability of pathologic services made possible the rapid study of the child's fatal illness. Death was suspected to be due to encephalitis, but our studies revealed that death was the result of fulminant hepatitis. Subsequent field investigations unearthed a cluster of more than two dozen cases of infectious hepatitis related to a faulty well. The public health was truly served when this dangerous water supply was detected. The potential for other such episodes occurring can be seen from the incidence of infectious hepatitis in New Jersey: 1,618 cases in 1969.

Similarly, an outbreak of suspected encephalitis leading to the death of more than a half-dozen children in an urban ghetto resulted in hysteria of near riot proportions. Rapid pathologic studies ruled out viral encephalitis and contributed to the prompt recognition of a cluster of deaths due to lead poisoning. Measures were then taken to forestall further such tragedies among other children in that environment.

Another example of this Program's aid is seen in the discovery of a large series of deaths, largely in children, due to encephalopathy and their possible association with the prior administration of a group of drugs.

Pathologic studies of tissues from animals suspected of rabies and found to yield arboviruses has helped to define previously unrecognized diseases of animal pets. Beginning in January, 1968, bizarre behavior and subsequent death of large numbers of raccoons and foxes in Northern Bergen County created considerable anxiety in local residents. Investigations, of which pathologic studies performed by this program were an essential component,

revealed that the epizootic was due to distemper rather than to rabies or some arbovirus that might be a threat to human health.

There are over 200 deaths annually in New Jersey where a diagnosis of encephalitis is suspected. Study of these cases continues to reveal previously unsuspected causes, whose recognition is a distinct contribution to the public health. New Jersey pathologists are asked to telephone us whenever such a death occurs and appropriate tissues including the whole brain, are promptly brought to the laboratory under refrigeration by courier. This cooperative activity would be impossible if we were not in a position to prepare sections of the tissues and to forward a set of slides to the pathologists.

#### WORKLOAD DATA

	1967	1968	1969
No. Contributions to Tumor Registry . . . .	330	56	25
No. Slides Prepared . . . . .	7,729	6,485	1,861
No. Slides Stained . . . . .	5,485	4,499	1,363
No. Specimens Processed . . . . .	1,437	1,166	446
No. Requests for Special Staining . . . . .	6	9	19
No. Slides Distributed . . . . .	1,713	784	931
No. Slides Stained with Special Stains . . .	560	81	164
No. Pollen Slides Counted . . . . .	225	405	146
No. Dog Lymphomas . . . . .	143	5	...
No. Miscellaneous . . . . .	82	120	84

#### Serology Program

The Serology Program extended its services in February 1969 by routinely confirming all reactive and weakly reactive Venereal Disease Research Laboratory (V.D.R.L.) Tests with the Fluorescent Treponemal Antibody-Absorbed (FTA-ABS) test, thereby giving more rapid assistance to the medical profession in diagnosing syphilis and the Venereal Disease Program in pursuing the case by interview for possible contacts. The FTA-ABS test is the most sensitive and specific serologic test that is presently available. There are about 250 laboratories in New Jersey that perform tests for syphilis and to them we also offered routine FTA-ABS testing services for all V.D.R.L. reacting specimens detected in their laboratories. This gave the added advantage of comparing the V.D.R.L. results from the hospital and independent laboratories with those of the state laboratory and "troubleshooting" when differences occurred. These same laboratories participated in the syphilis serology evaluation-assistance program, receiving a minimum of 50 unknown specimens, mailed on a bi-monthly schedule of 10 unknowns plus a control for which the

## DIVISION OF LABORATORIES

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pattern was given. The state laboratory served as the control laboratory with the Venereal Disease Research Laboratory as a co-referee. Results were compared for each mailing and the participants were notified of the findings of the control laboratories. Unsatisfactory reports were followed immediately with a telephone call and a repeat set of specimens. Upon our recommendation, 18 medical technologists received individual basic training at the state laboratory. In one instance, a training session was held in a hospital laboratory because so many deviations had been introduced that a review was indicated for all of the laboratory personnel. The following chart shows the performance level in the syphilis serology evaluation of 1969:

SATISFACTORY PERFORMANCE IN SYPHILIS SEROLOGY 1969

No. Labs.	Qualitative		Quantitative	
	Satisfactory Agreement	Satisfactory Reproducibility	Satisfactory Agreement	Satisfactory Reproducibility
251	98.4%	76.5%	95.6%	87.3%

Such excellent rapport was manifested between the hospital and independent laboratories and the state laboratory that any problem was immediately aired and every possible means was sought to correct a given deficiency.

Syphilis serology, in the area of the Fluorescent Treponemal Antibody, has become a target for automation and we now appear to be on the threshold of an Automated Fluorescent Treponemal Antibody (AFTA) test. New Jersey participated in an evaluation of the AFTA test along with the Venereal Disease Research Laboratory and two other state laboratories. Further refinements to this automated technique should make this instrument a most valuable adjunct to handling the terrific workload increases in this area.

The Indirect Fluorescent Antibody (IFA) test for toxoplasmosis became available as a direct service in March. Requests for this test were increasing at such a rate that it became imperative that it become a part of our testing service since tests for toxoplasmosis, heretofore, were only available at the National Communicable Disease Center, through the state.

The Serology Program played a vital part in the hepatitis project of the Virology Program. Because of our experience in handling great numbers of blood specimens, the Serology Program prepared the specimens for hepatitis testing and set up the Ouchterlony gel-diffusion plates for reading.

The table below shows how much the workload has grown through the increased services that were introduced in 1969.

## SEROLOGY COMPARISON STATISTICS

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	<i>Specimens</i>			<i>Tests</i>		
	1967	1968	1969	1967	1968	1969
Tests for Syphilis:						
VDRL .....	220,465	224,157	235,575	229,569	247,859	263,546
FTA-ABS .....	3,533	4,235	13,377	52,995	64,875	200,655
KRP .....	5,130	5,659	701	51,300	56,590	7,010
Total Protein .....	782	367	523	1,564	734	1,046
RPR .....	.....	1,463	950	.....	1,463	950
Miscellaneous Tests:						
Antistreptolysin Titer .....	304	316	208	3,040	3,160	2,080
Cold Agglutinins .....	98	69	72	196	138	144
Febrile Agglutinins .....	241	122	174	482	244	348
Heterophile Antibodies .....	2,711	2,337	2,129	21,688	18,696	17,032
Leptospirosis .....	249	293	402	498	293	402
Q Fever .....	.....	17	3	.....	17	3
Trichinosis .....	136	177	199	272	354	398
Toxoplasmosis .....	.....	140	467	.....	2,100	7,005
Total Specimens and Tests .....	233,649	239,442	254,780	361,604	396,523	500,619
Evaluation specimens mailed for evaluation program:						
Syphilis .....	19,976	20,764	16,096			
Antistreptolysin Titer .....	.....	1,503	666			
Infectious Mononucleosis .....	.....	732	.....			
Preparation of hepatitis specimens and Ouchterlony gel-diffusion plating .....	.....	.....	47,200			

### Virology Program

The year 1969 opened with the Virology Program still operating in the wake of an epidemic of the new A2/Hong Kong/68 strain of influenza virus and the year similarly closed with our laboratory isolating and confirming the detection of A2/Hong Kong/68 strain of influenza virus. To date only one small outbreak of influenza of the Hong Kong variety has been documented in our laboratory. Although the occurrence of Hong Kong flu was widespread in Europe this winter, the United States Public Health Service had forecast little activity in the United States. This is the ninth consecutive year that evidence of influenza has been detected in New Jersey.

In late summer, we had some disquieting days following the detection of eastern encephalitis (EE) virus in horses. Fortunately, it was too late in the season for a full blown outbreak to occur. There were 11 laboratory confirmed cases of EE in horses. Although there was no evidence of EE in humans, we did detect an EE epizootic in bats via specimens submitted for rabies diagnosis. The significance of this exciting observation is the possibility of the bat being a reservoir host for EE virus. As a follow-up to this highly suggestive and intriguing finding, an EE survey in bats was begun.

The current principal activity of our program is a new study: "An Epidemiology Study of Transfusion-Associated Hepatitis." We plan to test more than 150,000 sera during the year. These sera will be collected from blood banks throughout the state and will be examined serologically, using the complement-fixation test and the micro Ouchterlony test, for the presence of specific antibody and/or antigen to this agent (Australia antigen) and its possible relationship to transfusion-associated hepatitis. Follow-up serological testings will be conducted on all positive sera detected. A contract of \$206,000 has been awarded by the National Institutes of Health to pursue this study.

To date, the sera of more than 300 hemophiliacs have been tested as a possible source of Australia (Au) antibody to be used in this study. A hepatitis survey, in the hospitals throughout the state, has been conducted. Similarly, a blood bank survey has been completed.

Further, a German measles (rubella) vaccine study was conducted during the year. School children were pre-bled and given the rubella vaccine. They were re-bled three times thereafter. These sera were tested using the complement fixation test and the hemagglutination-inhibition test. The results will be reported elsewhere. Additionally, the testing of sera from pregnant women or those showing overt rubella disease continues as a service in our



program. Finally, the field work and pathology of encephalopathy study has been completed.

Again, our program was involved in many interesting and diversified activities. An analysis of the 1969 workload, when contrasted with our 1968 output, indicates that specimens received for testing were up more than 100 percent and the tests performed were increased by about 40 percent. A cursory inspection of the workload data, given below, will summarize the tremendously active year our program had.

#### WORK LOAD DATA

	<i>1967</i>	<i>1968</i>	<i>1969</i>
Specimens Received . . . . .	29,226	35,009	73,900
Tests Performed . . . . .	476,507	474,905	658,546
Types of Tests:			
Virus Isolation . . . . .	185,798	195,353	149,994
Serologic Tests . . . . .	290,709	279,552	508,552

## Division of Local Health Services

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WILLIAM J. DOUGHERTY, M.D., M.P.H.  
*Assistant Commissioner for Local Health Services*

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### STATE HEALTH DISTRICTS

Central State Health District .....	ISIDOR MARKOWITZ, M.D., M.P.H. <i>District State Health Officer</i>
Metropolitan State Health District .....	ADELE SHEPARD, M.D., M.P.H. <i>District State Health Officer</i>
Northern State Health District .....	DONALD S. MYERS, M.D., M.P.H. <i>District State Health Officer</i>
Southern State Health District .....	HUGH D. PALMER, M.D., M.P.H. <i>District State Health Officer</i>
Migrant Health Program .....	THOMAS B. GILBERT <i>Coordinator</i>
State Health Aid Program .....	JOHN H. HARRISON, D.V.M <i>Coordinator</i>

### Central State Health District

The following chart shows the full-time health officer coverage in the Central District by the end of 1969. The total number of municipalities covered is 80, compared with 72 in 1968. Thus, in 1969, 73 percent of the people in the district were protected, compared with 66.6 percent in 1968.

Table 1. HEALTH OFFICER COVERAGE IN CENTRAL STATE HEALTH DISTRICT  
AS OF DECEMBER 31, 1969

County	Population Estimated 7/1/69	No. of Mu- nicipalities in County	Municipalities with Full-time Health Officers			Municipalities without Full-time Health Officers		
			No.	Pop.	Per- cent	No.	Pop.	Per- cent
Burlington ..	332,550	40	40	332,550	100	0	0	0
Mercer .....	304,460	13	7	272,250	89.5	6	32,210	10.5
Middlesex ..	588,050	25	19	522,950	89.0	6	65,100	11.0
Monmouth ..	456,490	53	14	214,830	47.1	39	241,660	52.9
Ocean .....	173,600	33	0	0	0	33	173,600	100
Totals .....	1,855,150	164	80	1,352,580	73.0	84	502,570	27.0

The district has participated in the establishment of a comprehensive area-wide health planning agency in the southern part of the state. The Burlington County Health Department is supporting this agency with the use of State Health Aid funds. As this report was written, an application was being developed by the South Jersey Comprehensive Health Planning Committee for a proposed seven-county area under P. L. 89-749, Sec. 314b, for a pre-planning organizational grant. The purpose of the planning agency is to determine health problems and needs in the area of health services, facilities, and manpower.

The district provided consultation and assistance to the health panel of the Trenton Model Cities Program in gathering health data, and defining health problems and needs so that strategy can be formulated for the development of health programs particularly geared to the protection of low-income families. The Trenton Neighborhood Health Center was federally funded during the year, and employed a well-qualified project director and is now in operation. By the close of the year, prenatal, postpartum, and family planning services were provided to the residents of the Model Cities' neighborhoods. Plans for the establishment of child health conference services, and total family care, including dental services, are being formulated. There is active community

participation and support of the Health Center's objectives. The State Department of Health has provided \$100,000 to this agency in support of its ambulatory medical care services.

A nurse supervisor was employed in the fall by the Perth Amboy City Health Department. Her presence has added impetus in programs associated with prenatal and postpartum care and planned parenthood. The City of Perth Amboy agreed to code birth and death certificates so as to indicate residence, race, color, and ethnic backgrounds. The data will be submitted to our department, totaled, and returned to the officials of Perth Amboy at the end of 1970. This information will be studied and evaluated by the health committee and professional Model Cities staff, and programs will be determined on a priority basis.

State Aid supported an increase in dental services to the medically indigent of Perth Amboy.

The State Department of Health, through its Central State Health District office, assisted in the development of a health transportation service for low-income families residing in the western part of Monmouth County. Since public transportation service for all practical purposes was unavailable, residents in this section of the county had great difficulty in meeting scheduled clinic appointments at the two major hospitals serving this area—Jersey Shore Medical Center and Monmouth Medical Center. The state negotiated a contract with the Monmouth Community Action Program, Inc., an Office of Economic Opportunity agency, to administer the transportation service. A grant of \$13,556 was made to this agency for the first year's operation. The service was initiated on July 21, 1969. By the end of the year 438 patients were transported. The service has been of value. Favorable comments have been received from both the patients receiving the service and from the hospitals concerned.

The number of local public health nurses working without supervision and direction showed a slight decrease in all counties in the district with the exception of Middlesex County, which had a slight increase. Of the 276 nurses employed in public health work in the Central State Health District, 47 are without the benefit of nursing direction and supervision.

The number of licensed practical nurses employed in public health programs has continued to increase. Community health workers have been employed in several of the nursing programs.

All home health agencies in the district initially certified for Medicare by the Office of Health Facilities Certification received re-certification for 1969. All of the home health agencies continue to provide homemaker-home health

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aide and physical therapy services in addition to public health nursing services. Several agencies have included speech therapy.

One of the most serious problems facing the home health agencies has been the lack of financial assistance for patients not accepted for Medicare because they are considered by the fiscal intermediary as custodial and not eligible for service. This has had a definite influence on the decrease in the number of nursing visits to Medicare patients.

A district-wide meeting was held for employers of nursing personnel and inactive nurses in an attempt to return inactive nurses to active employment.

An eating program for the aged has been started by the Salvation Army in Trenton with a grant from the State Division on Aging. A hot lunch is served daily to elderly people from the Model Cities area. Sixty to 80 persons participate each day. A bus is provided by the Model Cities Program and two friendly visitors from Mercer Street Friends Center accompany the elderly to assist them on and off the bus. A planned activity program follows the lunch each day. The nutritionist from the Trenton Health Department provides consultation to this program and also provides diet counseling services to diabetic patients attending clinics at local hospitals.

The diet counseling service in Middlesex County has contracted for services with the Visiting Nurse Association in Middlesex County. Services include nutrition education, consultation at child health conferences, nutrition instruction at prenatal classes, in-service instruction to agency staff, and home visits to patients for diet counseling. Services have also been given to the Middlesex County Head Start Program.

The diet counselor in Monmouth County has been providing diet counseling services to the medically indigent and individuals in families through Certified Health Services. She has provided group classes and individual counseling for patients at the prenatal clinic in Middletown Township. She has given consultation to nursing homes and boarding homes in the area on request.

Significant gains were made during the year toward achieving uniform inspection procedures of retail food-service establishments throughout the district. Four health officers and 22 sanitarians were certified as Local Food Service Sanitation Officers.

The majority of the 320 food establishments licensed by this department were inspected by local personnel after training of local inspectors by district personnel. Where no licensed personnel were available, district sanitarians assumed inspection responsibilities.

District sanitarians helped embargo and supervise the destruction of approximately \$18,000 worth of foods which were found to be adulterated or misbranded.

There were 62 camps and 10 lake bathing places inspected. Certificates of compliance were issued to those found to be in compliance with departmental requirements, while those found not to be in compliance were advised of the deficiencies needing correction.

Sanitarians conducted inspections and sampled individual water supplies serving 255 migrant labor camps within the district.

During the year, 153 municipalities in the district participated in state sponsored anti-rabies vaccination clinics. A total of 64,949 animals were vaccinated. This represents an increase of 8,678 dogs or 15.4 percent over the 1968 figure, and 20.1 percent over that of 1967.

One hundred twenty animal bites were investigated, 18 of which involved residents who were out-of-state at the time of the bite. Seventeen (17) persons received post-exposure rabies treatment, compared with 22 in 1968.

The Division of Laboratories examined 812 animals for rabies; 252 of these were bats, of which seven were positive.

The district veterinary public health staff conducted 93 inspections of kennels, pet shops, shelters and pounds.

Efforts are continuing to secure compliance with the state law requiring an annual census of unlicensed dogs in each municipality. Of the 165 municipalities in the district, 141 conducted a census, compared with 132 in the previous year. Follow-up of the annual census of unlicensed dogs has resulted in an increase in the number of dogs licensed and a decrease in bites by stray dogs.

A total of 646 surveillance reports were completed on selected reported cases of communicable diseases; 468 were viral hepatitis cases and 178 were salmonellosis and shigellosis cases. Other epidemiological investigations included rocky mountain spotted fever, brucellosis, trichinosis, malaria, and typhoid fever.

### **Metropolitan State Health District**

#### *District Staff Conducts Surveys of Health Needs in Essex, Union and Hudson Counties*

Members of the staff of the Metropolitan State Health District conducted surveys of public health needs in Roseland, Fairfield Boro, North Caldwell and West Caldwell in Essex County, in Clark, Cranford, Garwood, and

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Kenilworth in Union County and in Guttenberg, Secaucus, and Weehawken in Hudson County. The surveys were concerned with problems and needs related to environmental health, maternal and child health, communicable disease control, chronic disease control and general administration. Specific recommendations to local health officials emphasize the need for an organized system, including appropriately trained and licensed health personnel, through which health services can be provided to the citizens of these communities.

*Family Planning Counseling Services in Newark Child Health Conferences*

Through the cooperative efforts of the New Jersey State Department of Health, Planned Parenthood Services of Newark, the Department of Obstetrics and Gynecology of the New Jersey College of Medicine and Dentistry, and the Newark Division of Health, a family planning counseling service has been inaugurated in the Newark Child Health Conference setting.

*Project Day Care 100 in East Orange*

Many hours were devoted to assisting Project Day Care 100 in East Orange to improve the quality of its food service program. As a result of continuous consultation with center staff and the catering service, the children are now receiving breakfast, lunch and two snacks, all of which are appetizing, culturally stimulating, and nutritionally adequate in quality, as well as quantity.

Metro Wardens have demonstrated tranquilizing guns to various people. The Town of Irvington purchased a complete tranquilizer gun outfit with the help of State Aid Funds and they also hired a warden and purchased a truck. This has enabled them to have a better animal control program in the town.

The Essex County Park Police also purchased a complete tranquilizer gun outfit. Considerable time was spent in aiding them in the Weequahic Park area and adjacent cemeteries. Dogs were running between the cemeteries and the park bothering people who were attending the grave sites and other persons in the park. The dogs lived in the meadowland and caused injury to a 16-year-old boy. The gun has been used in capturing various wild animals that have escaped from the zoo in West Orange, and for dogs causing problems in other parks in Essex County.

New pound facilities were opened in the Towns of Union in Union County and West Milford in Passaic County.

**Northern State Health District**

The major emphasis in the Northern District during 1969 was placed on the improvement of health services at the local level. Hunterdon and Sussex Counties had previously established county coordinator systems which were

functioning reasonably well. During the year, the Warren County Board of Chosen Freeholders established a county health department, employed a full time health officer, and consolidated all public health nursing within the county. By the end of the year, all but two of the 23 municipalities in the county had joined the new department.

The boards of Chosen Freeholders of Morris and Somerset Counties both felt that there was not enough citizen demand for county health departments in their respective counties for them to take such a step. Much time was spent by Northern District staff, in discussing state aid and the formation of regional health commissions with various local boards of health and municipal officials. These efforts failed in two groups of municipalities in both Morris and Somerset Counties. A third group in Somerset County, however, formed the Middle-Brook Regional Health Commission. It consists of the municipalities of Middlesex Borough in Middlesex County and South Bound Brook and Bound Brook Boroughs and Green Brook Township in Somerset County. At the end of the year, the Commission was interviewing applicants for the position of health officer.

Because of its increasing importance in the district, a considerable effort was expended by the District State Health Officer on drug abuse. As an active member and chairman of the Morris County Committee on Drug Abuse, a voluntary citizens group, he assisted three groups of interested citizens in forming local anti-drug abuse action committees. A 10-session weekly course on drug abuse was organized and presented at the Madison-Chatham Adult Education School. Through efforts of the Committee, the Morris County Board of Chosen Freeholders established an official Morris County Drug Abuse Council, which at the end of the year was interviewing applicants for the position of full time executive director.

One of the accomplishments of the environmental health staff has been the training and certification of 16 local sanitary inspectors in the district as Local Food Service Sanitation Officers. This program is a cooperative venture with the United States Public Health Service in standardizing the inspection procedures and ratings of food establishments in each state. We will continue this program until all of our full time first grade local sanitary inspectors have been trained and certified.

The district staff spearheaded a one day workshop on Family Planning which was co-sponsored by 18 health and welfare agencies. The session, which was conducted by the Planned Parenthood Center, Morris Area, was attended by 142 professional and non-professional agency representatives.



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**Southern State Health District**

By mid-year the population of the District had grown to 1,090,680 (14.97 percent of the state's population). Full time Health Officer Coverage rose from 90.28 percent of the population at the end of 1968 to 91.85 percent early in 1969.

By February 1, coverage by the Gloucester County Department of Health had increased from 20 to 22 municipalities under contract. Coverage by county was then as follows:

TABLE 1. HEALTH OFFICER COVERAGE

	No. Municipalities	Percent of Population Covered	No. of Population not Covered	No. Muni- cipalities not Covered
District .....	129	91.85	88,910	7
Atlantic .....	23	100	.....	..
Camden .....	37	100	.....	..
Cape May .....	16	68.3	17,570	3
Cumberland .....	14	62.8	48,280	1
Gloucester .....	24	94.6	9,090	2
Salem .....	15	79.3	13,970	1

**Comprehensive Health Planning**

A practicing physician representing the Camden County Medical Society continued as chairman of the seven-county steering committee for the Comprehensive Health Planning Committee of Southern New Jersey. The New Jersey Regional Medical Program assigned a staff member in May to assist in the preparation and writing of an application for an organizational or pre-planning grant under Section 314 (b) of Public Law 89-749, as amended. The N. J. Regional Medical Program also allocated \$500 for expenses, the Greater Delaware Valley Regional Medical Program granted \$1000, and the district supplied office space. In July, the Health Facilities Planning Council for New Jersey assigned a field representative one day a week to assist in the project.

These forms of assistance were arranged by or through the Health and Welfare Council of Camden County, Inc., which was the only agency in Southern New Jersey eligible to apply for a Section 314 (b) grant.

In February, the Camden County Board of Freeholders released its committee's report on "A Medical-Dental School in South Jersey." The report made a strong recommendation for the establishment of a third medical school, in Southern New Jersey, which would serve as a regional medical center and involve training for allied health professions. The report also noted the relationship of the proposal to Public Law 89-749.

Provision was made for ongoing liaison with the 314 (b) agency (funded as of April 1, 1969 for organization) covering five counties of southeastern Pennsylvania.

### Community Health Services

The six county health departments were responsible, by contract with the individual municipal boards of health, for over 820,000 persons, living in 120 municipalities. Adding the Camden City and Cherry Hill health departments, the total served was 1,001,770 according to official population estimates. Each of these eight local health departments was eligible for and needs State Health Aid to provide Certified Health Services selected by the health officer.

The district staff was given primary responsibility for the conduct of program audits of the activities carried on with State Health Aid. This was done in cooperation with the State Health Aid unit and other program personnel. Audits were completed for Gloucester County, Cherry Hill Township, and Camden City. An audit of the Camden County Department of Health was begun in December. Upon completion of each program audit, specific findings and recommendations were sent to the health officer and arrangements were made for follow-up by district staff.

State Health Aid funds were also used, with county money, to remodel an unused school in Woodbury, and in June the building was opened as the new quarters of the Gloucester County Department of Health.

In October a community health center was opened in Bridgeton following remodeling of school premises by the city Board of Health and with the use of State Health Aid funds. The new facilities are operated by the Cumberland County Department of Health.

In February, the newly formed Homemaker Service of Cumberland County employed an executive director. Services to Medicare beneficiaries and other clients began in the spring.

Activities in support of the Sanitarian Trainee program continued and resulted in the provision of some useful full time field work for the Gloucester County Department of Health, which functioned without full time sanitarians of its own.

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By the end of the year, well over a dozen locally employed sanitarians had been certified as Food-Service Sanitation Survey Officers in six of the eight health departments served by full time health officers. This certification provided the basis for better quality work in maintaining effective surveillance of retail food establishments within the framework of the Certified Health Services and the State Health Aid program.

### State Health Aid

#### *Program Audits*

Twenty-three local health agencies participating in State Health Aid were audited for compliance with standards within the Certified Health Services selected.

#### *Larger Health Units*

Four larger health units came into existence; in two instances, established larger units expanded, one by three members, the other by one member.

#### *Training*

Thirty-one traineeships for Sanitary Inspectors were funded through the Special Project and Development Fund. All trainees were licensed as Sanitary Inspectors, First Grade.

#### *Coverage*

As of December 31, 1969, 313 municipalities were participating in State Health Aid as compared with 277 on December 31, 1968.

State Health Aid dollars distributed to local health agencies reached a new peak of \$3,258,238 in 1969.

### Migrant Health Program

With the assistance of the Migrant Health Program, a second county health department applied for and obtained approval for a direct federal grant for migrant health services. An extended health program in Salem County in 1969 featured evening clinics which offered a pre-employment physical examination for workers, a family clinic, and a dental clinic. More than 400 patients were served in Salem's three clinics. Cumberland County has been providing comprehensive health services for migrants under a direct federal grant since

1966. Six other counties, under contract with the State Project, provided direct health services through voluntary or official agencies.

The 1969 Migrant Health Program demonstrated interdepartmental cooperation in an eye examination project developed and operated jointly by the State Commission for the Blind, the New Jersey Department of Education, and the State Department of Health. Sixteen Migrant Summer Schools, two county health departments, and three nursing agencies coordinated efforts to bring 277 children and adults to a Mobile Eye Examination Unit for ophthalmological evaluation. More than 140 patients required refractive correction and many received glasses or other treatment. At season's end, more than 30 patients, mostly school children, were continuing to receive follow-up eye care.

For several years the Migrant Health Program has assumed an aggressive role in improving health standards of migrant camps. First, the inspection and sampling of wells by licensed sanitarians have assured safe water supplies for migrant workers in the 1560 migrant camps throughout the state. Second, the "Seasonal Farm Labor Rules and Regulations" effective January 1, 1970, state: "Toilet drainage shall be carried through a covered drain into a covered septic tank that conforms to standards established by the New Jersey State Department of Health." A planned program to achieve compliance of all camp operators with this provision, was carefully worked out in a coordinated effort with the New Jersey Department of Labor and Industry. A statewide program of educational and technical services was launched in county and local health departments through which camp operators were assisted in the installation of modern sanitary sewage disposal systems. These new facilities will benefit migrant workers and their families living in the migrant camps in 20 of the 21 counties of the state.

Some exceptional efforts were employed in attempting to advance the program and to extend coverage of health services to a larger percentage of the workers. In Mercer and Middlesex Counties, four transportation operations were employed to bring migrant patients to sources of medical care. These transportation services were obtained from one county hospital, a migrant ministry project, a local health department, as well as through a family counseling agency and community volunteers. In Camden County an intensive survey of migrant farms was employed to seek out migrants in need of health services. In Atlantic County, the County Health Department participated in providing nursing care in migrant camps. In Salem and Cumberland Counties, a home economics teacher worked on a pilot project which provided practical assistance in food preparation, food buying, and home management for migrant women and teenage girls.

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The program has placed steadily increasing emphasis on high quality health care since the first hospital-based migrant family clinic replaced field clinics in 1965. Six evening sessions were held that year at the Salem County Memorial Hospital; in 1969, 77 clinic sessions were provided in five counties, serving 1454 patients at hospitals and at health centers. A total of 4564 patients received medical services, and nearly 13,000 visits were recorded. This was accomplished in spite of a reduction in the migrant labor force of 25 percent since 1965. Statistics based upon Social Security Number identification, and tabulated by Data Processing, show that medical services provided by the program reached 38 percent of all migrant workers in New Jersey at the peak of the 1969 season. Excluding male contract workers covered by health insurance, the Migrant Health Program, concentrating on individual families and children, reached 72 percent of New Jersey's migrants who were most in need of health care.

Tabulation of hospital in-patient services for 1969 revealed that after partial reimbursement of costs from all presently available sources, the hospitals of New Jersey were left with more than \$50,000 in unpaid charges incurred by migrant workers.

## Division of Preventable Diseases

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RONALD ALTMAN, M.D., *Director*

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***Programs:***

Communicable Disease Control .....	RONALD ALTMAN, M.D. <i>Acting Program Coordinator</i>
Tuberculosis Control .....	EDWARD J. DEHNE, M.D. <i>Program Coordinator</i>
Vaccination Assistance .....	RONALD ALTMAN, M.D. <i>Project Director</i>
Venereal Disease Control .....	OWEN A. SHTEIR, M.D. <i>Program Coordinator</i>

## Communicable Disease Control Program

### *Acute Central Nervous System Diseases (Aseptic Meningitis and Encephalitis)*

Two hundred eighty-two cases of acute central nervous system disease of presumed viral etiology were reported to the Division of Preventable Diseases throughout 1969. This represents a decline in morbidity of 138 cases or 33 percent, as compared to 420 cases reported to the program in 1968.

#### 1. *Aseptic Meningitis*

Aseptic meningitis accounted for 241 cases, 86 percent, of viral central nervous system disease. This figure represents a 33 percent reduction in morbidity from the 361 cases of aseptic meningitis reported during 1968.

As expected, the peak incidence of illness was observed during the summer months, with 55 percent of the year's cases occurring during July, August, and September.

The 5-9 year age group was most frequently involved, and accounted for 23.5 percent of all cases of aseptic meningitis. Males were more frequently affected than females, comprising 65 percent of the year's total. Within the 5-9 year age group, 75 percent of the cases reported were males.

All counties except Warren and Sussex reported cases of aseptic meningitis. Essex, Camden, Monmouth, and Bergen Counties had the largest numbers of cases, and collectively accounted for 43.9 percent of the year's total. The overall attack rate for the state was 3.3 per 100,000 people. Within the heavily involved counties enumerated above, the attack rate was 4.2 cases per 100,000 residents.

Specific viral agents were identified in 37 instances. The agents were identified by serologic and viral isolation studies performed on blood, stool, and cerebrospinal fluid by the Division of Laboratories. The most frequently implicated agents were mumps, coxsackie B4, echo 14, and echo 6.

#### 2. *Encephalitis*

Morbidity from encephalitis was reduced from 59 cases in 1968 to 41 cases during 1969. No cases of mosquito-borne arbovirus encephalitis were confirmed during 1969, whereas 12 cases of eastern encephalitis had been documented in humans during the late summer and autumn of 1968. A

diagnosis of eastern encephalitis was established in 11 horses during 1969, seven of which died, which contrasts with the 134 horse cases reported in 1968.

Specific viral agents were identified in 6 of the 41 cases of encephalitis. These included one case each of herpes simplex, polio type 1, measles, varicella (post-infectious), coxsackie B4, and echo 14. The polio virus was isolated from the stool of an infant who had received trivalent oral polio vaccine shortly before the onset of his illness, and does not represent "wild virus" polio. The illness was mild, and he recovered without neurological sequelae. A specific etiology was not established in the remaining 35 cases, which are grouped in the generic category of "primary encephalitis."

#### *Food Poisoning (Other than Salmonellosis)*

During 1969, 42 suspected food poisoning incidents were brought to the attention of the Communicable Disease Control Program. Several were investigated by local public health officials. At least three incidents were investigated in cooperation with the Food Program, when suspected food items were believed to have been contaminated during commercial processing or packaging operations. Numerous incidents involving illness in the home were reported, reminding us that all incidents associated with improper food handling practices are not necessarily found in public places. At least 20 of these reports were investigated in detail.

The reported incidents usually involved severely ill persons, particularly when a large group, organization or institution is involved. Deaths associated with food poisoning are invariably brought to our attention. Minor gastrointestinal disturbances are often ignored and accepted by the general public without being reported.

*Clostridium perfringens* was often found to be the etiologic agent in food poisoning incidents. These usually involve gravy-associated foods such as turkey, roast beef and ground meats. This pathogen prefers a liquid or semi-liquid protein substance, such as gravy, in which to grow. The item may be reused, or prepared and held for an extended period before serving, or it may be allowed to simmer, thereby driving off the oxygen and killing competing organisms, leaving spore-formers such as *Clostridium* in a desirable environment in which to grow. The temperature of a large container of gravy which undergoes gradual temperature changes will stratify so that certain areas will be suitable for vegetative growth.

Food poisoning which is caused by *Clostridium perfringens* usually depends upon epidemiologic procedures for identification. There are no readily available laboratory procedures which may be used to confirm this pathogen as responsible for a food poisoning incident.



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The clinical picture of illnesses caused by *Clostridium perfringens* is usually that of severe abdominal cramps and diarrhea. There may be vomiting, nausea or headache, but fever is uncommon. Symptoms usually commence 10 to 12 hours after eating, with a maximum range of 6 to 18 hours. Illnesses vary in duration from several hours to several days, but usually last about 24 to 30 hours. The organism may be found in the food and in stool specimens, although the organism is ubiquitous and its mere presence is not diagnostic. Total bacterial counts are also done as an adjunct to identifying the organism but are not a reliable indicator.

A homecoming party in Atco was disrupted by a food poisoning incident due to *Clostridium perfringens* at which 23 of the 70 participants became ill, with roast beef and gravy as the food vehicle. Roast beef and gravy at a girl scout dinner in Sussex County, were considered to cause an estimated 72 out of 100 people becoming ill. Turkey, stuffing and gravy had significant attack rates for a July wedding in Middlesex County with at least 18 out of 160 guests becoming ill. A christening dinner was held in a Jersey City restaurant with 26 out of 51 people ill. There were several suspect foods served smorgasbord style, none of which were available for testing. All the suspect foods involved in these incidents were handled for prolonged periods, permitting growth of the pathogen.

Coagulase positive, toxin-producing *Staphylococcus aureus* was identified as the etiologic agent in several food poisoning incidents. Persons who become ill usually suffer from frequent violent vomiting, diarrhea, and moderate to severe prostration. Nausea and headache are usually present. Fever does not usually occur as a symptom. Onsets may occur after one and one-half hours of eating but usually occur in 3 to 6 hours. Illnesses rarely last more than 24 hours and frequently only last 2 to 8 hours. The organism is ubiquitous and may be introduced with discharges from draining sores or the upper respiratory tract. An incubation period of 4 hours or longer is required for the organism to produce sufficient toxin to cause illness. The organism may be cultured from food, vomitus, sores, stool, and the upper respiratory tract.

A household food poisoning incident due to a staphylococcal intoxication occurred in Edison, with 6 out of 10 family members becoming ill after consuming infected potato salad. Turkey stuffing incubated staphylococci, causing 40 out of 65 American Legionnaires to become ill in Warren County. Contaminated birthday cake, improperly refrigerated, caused illness in 11 persons in Elwood. Turkey salad containing enterotoxin disrupted a church luncheon in Freehold, with 19 known ill, including two who were hospitalized. All these incidents were confirmed by the laboratory.

*Hepatitis*

There were 2439 cases of viral hepatitis reported in New Jersey in 1969. This represents an increase of 34 percent over the number of cases reported in 1968. The number of cases reported in 1969 is far above that of any previous year. The upswing in reported cases has continued since 1965 to the present year and has topped the peak year of cases reported in 1961 when there was a large clam-associated outbreak. There is little doubt that viral hepatitis is on the increase, but the intensified surveillance for cases associated with blood transfusions and narcotics use has also contributed to the marked rise in the number of reported cases.

Of the 2439 cases reported this year, 1618 cases were classified as infectious hepatitis. This represents 66.34 percent of the total cases. Twenty-two percent of the total, or 535 cases, were classified as narcotics—or suspected narcotics-related cases, with most infections probably due to sharing contaminated needles. Two-hundred and forty-two cases, or 9.9 percent, were associated with blood transfusions, and the remaining 44 cases, or 1.8 percent, occurred among those cases who had histories of repeated injections or tattoos.

There were 62 deaths in New Jersey listing hepatitis as either a primary or contributory cause of death. This represents a mortality of 2.5 percent of the total cases reported. On a state-wide basis, one person out of every 117,500 residents died of viral hepatitis. Deaths related to viral hepatitis were highest among cases associated with blood transfusions. About one person in 100 receiving three or more pints of blood developed hepatitis, with a 9 percent mortality rate. The mortality of all transfusion related hepatitis cases was 6.6 percent. There were 38 deaths among the 1618 infectious hepatitis cases reported in 1969.

Of the 1618 cases of infectious hepatitis, males accounted for 1034 cases and 584 were females. Six hundred and thirty-five infectious cases were reported in persons under 20 years of age and 983 were reported in persons over 20 years of age. The greater incidence of hepatitis occurs in the age groups where the highest number of addict-related hepatitis is found, namely 15 to 24 years of age. Of significance in 1969 is that 535 cases of hepatitis that occurred among addicts and suspected addicts represents an increase of 188 percent over the number of addict-related cases that occurred last year. This trend of increase in addict-related hepatitis has continued since 1961.

There were 215 clam-associated hepatitis cases in 1969. The greatest incidence was in late summer and early fall, which is also the time when the greatest amount of raw shellfish is consumed. A slight rise was also noted during the winter holiday period.

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Clam-associated cases were also evaluated according to county of residence. Attack rates are based on estimated populations. It was noted that the attack rate for Mercer County was at least twice that for any other county. There may have been an outbreak which remained undetected due to the small numbers involved.

During 1968, there were 356 cases of parenterally transmitted hepatitis cases reported. In 1969 there were 821 cases reported, representing an increase of 131 percent. Narcotic-related cases accounted for 65 percent of the total number of the parenterally-transmitted cases reported this year.

Unlike previous years, there were no outbreaks of major significance in 1969. Seven minor outbreaks occurred. Six were narcotics related and one was an institutional outbreak occurring at Greystone Park State Hospital in Morris County.

On July 9, 1969, four cases of hepatitis were reported from Woodbridge Township. All of the cases gave a history of having received tattoos in Camden City. The tattoo parlor was subsequently closed. It was later found that the original four cases were part of a group of 19 addicts and their acquaintances. There was evidence that at least 15 of this group were involved in the illicit use of hard narcotics and had at one time or other shared contaminated needles with others in the same group.

On October 21, 1969 an investigation was initiated in Passaic. At the close of the investigation, 18 cases were interviewed. Thirteen of the 18 cases were found to be narcotics-related, and the source of spread was believed to be due to dirty needles.

On December 1, 1969 an investigation was initiated in Atlantic City where 14 cases had occurred since September 1969. It was found that the girl friend of an addict was a baby sitter for a large family. This resulted in three infections within the family. Three other acquaintances of the girl friend were also infected. Two cases had brothers who were addicts. Another was under police guard at the Atlantic City Hospital and four others were located in a nearby gift shop.

Kearny had an unusually high incidence of hepatitis in November and December, with 29 cases reported. At least 16 out of the 20 cases investigated were narcotics-associated. Infection was probably due to transfer of contaminated needles.

Seventeen out of 23 hepatitis cases occurring in October through December in Morristown were also determined to be narcotics-associated. These cases were 17 to 24 years of age, mostly male.

### *Influenza*

Influenza activity during 1969 encompassed portions of two influenza seasons. A widespread epidemic of influenza A2/Hong Kong/68 reached its peak in 1968, and persisted into January 1969. Although influenza A2/Hong Kong/68 was confirmed by either serology or virus isolation in 10 counties during January 1969, no further outbreaks were reported. Thereafter, no influenza activity occurred until early December, when confirmations of influenza A2/Hong Kong/68 were obtained from two sporadic cases. One was a serologic confirmation in a Rutgers University student, and the other was a viral isolate from a post-mortem specimen of lung tissue. The latter specimen was obtained from an elderly man in Freehold who had died during the second week of December from complications of bronchopneumonia. Clusters of cases were reported after the end of the year.

### *Malaria*

Malaria cases increased during 1969, with 151 cases reported. Prior to the war in Vietnam, less than 10 cases were reported annually. In 1967, 122 cases were reported and in 1968 there were 85. Military personnel accounted for the increase, and totaled 129 cases. Seventeen others were veterans and 5 were civilians. Two of the civilians were in the Peace Corps, and the others were a seaman, a student and a vacationer. All had received their exposure overseas.

All cases were males between the ages of 19 and 27 years. Fifty of the reported cases were recurrences and at least 19 of these had their second reoccurrence. At least 85 percent had *Plasmodium vivax* and the remainder of identified cases were *Plasmodium falciparum*. One soldier had both types. No seasonal incidence of exposure was evident from the onset dates.

### *Measles (Rubeola)*

There were 1334 cases of measles reported in 1969. Of these, 1247 were investigated to determine the accuracy of diagnosis. Of the investigated cases, 1121, nearly 90 percent were determined to be measles by using the following criteria: significant fever of several days duration; a prodromal period with an upper respiratory infection; conjunctivitis; a rash of 5 to 10 days duration. Each case or cluster of cases was investigated with regard to history of illness, diagnostic confirmation by a physician, and history of contacts. In this way, many more cases were discovered and several major outbreaks were interrupted by the implementation of immunization programs at the earliest possible time. Municipal school-based programs of measles immunization were

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effective in reaching the greatest number of susceptible children in a community.

The 1121 confirmed cases of measles represents a 50 percent increase over the cases known to have occurred in 1968. This increase may be due to an intensification of the measles surveillance system, with improved reporting and case finding. The greatest amount of morbidity occurred in the one to 15 year age group with a total of 50 percent occurring within the 5 to 9 year old age group. These figures closely parallel the age distribution reported in 1968.

The intensive surveillance system conducted by this Department has shown that the most valuable source of morbidity is the school system and, more specifically, the individual school nurse. As a direct result of surveillance and in cooperation with the Vaccination Assistance Program, 17 immunization programs were conducted within the school systems. A total of 15,652 children were vaccinated with further attenuated live virus measles vaccine in 1969.

An examination of the 1121 cases of measles by month of onset shows that the majority of the cases occurred during the spring months and accounted for 47.4 percent of all the cases.

The description of measles by county indicates a geographic concentration in the more heavily populated counties. Bergen, Camden, Essex, Hudson, and Passaic accounted for 68.1 percent of all cases in the state.

The following examples are typical of the problems encountered and how the program was applied in response to reported morbidity.

On November 24, a measles program was held in a Manalapan Township school during which time over 300 doses were administered. Manalapan Township, however, continued to have measles cases after the vaccination program. A new survey showed that 40 percent of the pre-teen children were still susceptible. The attack rate among the susceptible group was over 10 percent while the vaccinated group incidence of acute infections was just over 1 percent. This persistently high susceptibility rate appears to be due to the failure of many parents to have their children immunized.

An outbreak of measles was confirmed in Atlantic City. A survey of measles susceptibility was done in four large elementary schools based upon review of students' health records, and yielded an overall susceptibility rate of 61 percent among 2,861 students. A city-wide measles vaccination program was conducted November 24-26 through the public and parochial school systems, grades kindergarten through eight. The program included "Head

Start" youngsters and pre-school children. An estimated 1400 doses of measles vaccine were given.

During first quarter of 1969, there were 162 cases of measles; 78 were reported from one public school in Jersey City. Programs were conducted throughout the school system and at regular sessions of the existing clinics at Jersey City Medical Center. A total of 4135 children were immunized from January through March. Since the completion of the programs, reported morbidity from this area has declined at a dramatic rate, with no cases reported during the last two months of the year.

The Union City Division of Health received records of measles morbidity from January through March 31. A total of 113 cases of measles involved 11 schools. On investigation, 80 cases or 73 percent were definitely established to be measles. A program was held in the schools and 1100 susceptible children were immunized.

In response to increased morbidity in five municipalities in Camden County during the first quarter of 1969, separate township programs were conducted. A total of 1113 children were immunized, and morbidity from this area declined during the second and third quarters of 1969.

The results of immunization programs in the lessening of morbidity can be seen most dramatically in the rural areas of the state. The cities, unfortunately, with their highly mobile populations and accompanying problems, particularly in the poverty areas, continue to have a highly susceptible population despite repeated immunization programs. Paterson in Passaic County and Newark in Essex County are examples of this. Despite existing efforts of local health agencies, a large portion of this population is not being reached. Efforts to initiate additional programs will continue during the coming year.

### *Meningococcal Infections*

A total of 191 meningococcal infections were reported throughout 1969. New Jersey residents accounted for 104 infections, while military personnel and military dependents treated in armed forces medical facilities accounted for 87. Among the 191 meningococcal infections were 133 cases of meningitis and 58 cases of meningococcemia. The overall figure represents a decline of 83 cases, 30 percent, from the 274 cases reported in 1968. This reduction occurred in the military population which was responsible for 198 meningococcal infections in 1968. Among the civilian population, however, there was an increase of 28 meningococcal infections in 1969 compared with 1968.

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Nineteen of the 21 counties reported meningococcal infections. No cases were reported from state institutions. Although Essex and Camden counties reported the largest numbers of cases, 18 and 13 respectively, the highest attack rates were observed in Warren and Ocean Counties.

In the civilian population, the largest number of cases and highest attack rates occurred among children under 5 years of age. After a secondary peak among the 15-19 year age group, the attack rate decreased with increasing age. In the military population, virtually all cases occurred in the 15-24 year age groups.

Seventy percent of the meningococcal infections occurred from January through May. This distribution during winter and spring months was similar to the seasonal incidence observed during 1967 and 1968. The peak was observed in February for both the civilian and military populations, and accounted for 18.8 percent of the total cases. This is similar to the peak activity recorded in March, 1968.

The 133 military and civilian cases of meningitis represented a decline of 27 cases from 1968, but an increase of 9 compared to the 1967 figure. Thirty-four cases, or 25 percent of the total, were reported from military installations, whereas this group accounted for 55 percent of cases in 1968. Fifty-eight cases of meningococcemia were reported during 1969, of which 53 were among military personnel.

Ninety-five meningococcal isolates were tested for sulfadiazine sensitivity during 1969. Among these, 89.5 percent were resistant to concentrations of 1.0mg% and above. There were 81 group C isolates, seventy-four of which were resistant to sulfadiazine.

Thirteen deaths occurred among the 191 meningococcal infections, a case fatality rate of 6.8 percent. Significantly, no clusters of cases were reported during 1969.

*Rubella (German Measles)*

A new vaccine for rubella became commercially available in July 1969. At that time, rubella also became a reportable disease. Although this disease is seldom serious in children, it may cause death and defects in babies born to mothers who became infected during pregnancy, particularly during the first trimester.

The initial supplies of vaccine were expensive and limited. First priority was given to vaccinating children in kindergarten through fourth grades who are the usual disseminators of the disease. The first program was held in



Hoboken, where 3497 children were immunized. Programs were later conducted in Jersey City, Trenton, Newark, Camden and Paterson where a total of 69,726 children were immunized. Thirty-seven additional communities were also involved, bringing the total number of children vaccinated in clinics to 115,500. Approximately 200,000 doses were also administered privately. The estimated susceptible population is at 1.5 million in New Jersey.

In November, an infant was born with a suspected congenital syndrome. Specimens were submitted for viral and serologic studies to the laboratory. His mother had rubella in April. Physical findings include bilateral cataracts, purpura, hepatomegaly, splenomegaly, systolic heart murmur with cardiomegaly. At least 12 cases were reported during 1969 as possible syndrome cases, with one confirmation.

*Salmonella (except typhoid fever)*

There were 560 confirmed salmonella infections in New Jersey residents during 1969. Confirmation was made on cultures of blood, urine, feces or a suppurative discharge. Ten persons were positive at the time of death. Six of these infections were associated with chronic illnesses and one with a congenital anomaly, but the remaining three people died as a direct result of a salmonella infection. One of these three deaths was an adult female with a septicemia and the other two were infants with gastroenteritis.

There were over 350 sporadic cases, at least 114 cases associated with family clusters, and the remainder were associated with food poisoning incidents. At least 44 families were involved in incidents where more than one person became ill, and in 14 instances, three or more persons were involved. Five families had 4 ill, two families had 5 ill and one family had 6 members ill with a common salmonella infection.

The 560 reported cases are comparable with the average for the previous five-year period of 582. Only 14.3 percent remain unserotyped, a considerable improvement over the 36.8 percent which were not identified in 1966 and the 20.5 percent which were not completed in 1967. There were 568 serotype isolations, with 6 persons having two or more different serotypes. Distribution was about equal for both sexes. Over 54 percent of the cases were in children under 10 years of age. Nearly 25 percent were one year old or younger. The lowest incidence was in persons from 50 to 59 years old, although the incidence at 25 years and older was fairly constant. These findings are comparable to those of previous years.

Only two cases of salmonellosis were reported by state institutions and two were reported in military dependents. Attack rates of infection per



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100,000 population varied considerably on a county basis and when compared with 1968 figures. This fluctuation is probably due to the relatively small number of reported cases since the total annual cases for the state are consistent from year to year.

A total of 43 different serotypes were isolated from New Jersey residents during 1969. Seven serotypes were isolated for the first time in New Jersey, accounting for 10 cases, but most of these were known to have been acquired out-of-state. *Salmonella typhimurium* was the most common isolation, accounting for 28 percent of the confirmed serotype isolations. Eight serotypes accounted for over 80 percent of all isolations. These findings are similar to those of previous years.

The most common serotypes found this year were also seen last year, with some minor variations. *Salmonella derby* was sixth on last year's list as a result of an outbreak at Rutgers University but did not appear on the list for 1969. Only the 8 most common serotypes were listed this year because of the small number of cases reported for the remainder of serotypes.

The incidence of salmonellosis is usually higher during the warmer months of the year, with a low in the winter. During 1969, this trend was apparent, peaking in August and September and remaining low in February and November. When tabulated on a quarter-annual basis, the trend is more apparent, with 118 cases during the first quarter, 134 cases during the second quarter, 196 cases in the third quarter, dropping to 112 cases in the final quarter.

### *Shigellosis*

The incidence of shigellosis increased significantly in 1969. During 1968, 194 cases were reported and 192 cases were reported for 1967. The number of institutional cases during these last two years was negligible. This year there were 236 cases in the general population, a 24 percent increase over 1968 figures, plus 140 institutional cases, all but one of which were associated with two large outbreaks. Including 2 military cases, the total for 1969 was 378 reported cases, an overall annual increase of 94.8 percent.

There were 190 sporadic cases which were identified, including two institutional and two military cases. This is an increase of 52 percent over 1968. Twenty-one family outbreaks of two or more persons were also recorded, including 6 outbreaks of 3 persons and one outbreak in which 4 family members became infected. *Shigella flexneri* was identified in a 74 year old male who had been suffering from an acute gastroenteric disorder and expired.

Martland Hospital has intensified its surveillance efforts of gastroenteric disorders, which probably contributes to the significantly higher reported incidence in Essex County. Ninety-four cases were reported from Essex County which is 40 percent of all cases reported among the general population. The attack rate for Essex County is 9.7 cases per 100,000 population, more than three times the overall average for New Jersey and nearly twice that of any other county. Ghetto conditions, with substandard sanitation, contribute to the spread of the disease. This factor should not be ignored when appraising the areas of higher incidence.

The incidence of serotype distribution is consistent with the usual findings in this area of the United States. Most of the cases, 88.1 percent, were *Shigella sonnei*. By excluding the cases associated with the two institutional outbreaks, this figure becomes 79.8 percent, which is similar to last year's findings. The majority of the remaining cases were *Shigella flexneri*, which is also consistent with previous years' results. Other serotypes accounted for 7 cases.

Children of 4 years of age or younger accounted for 45.7 percent of all reported cases. In addition, most of the cases for which the age is unknown, 8.8 percent, are nursery children associated with an institutional outbreak. The usual finding is that 50 percent of all reported cases are in young children. Nearly two-thirds of all cases were in children under 10 years old.

The average monthly incidence of shigellosis was 20 cases during 1969. This does not include 140 cases among institutional residents, which occurred during two outbreaks, from September through November. The rise in May and June was concurrent with three outbreaks, one associated with a hospital, one with a school group, and the last with a restaurant, for which 33 cases were confirmed. Although the available figures are relatively small, it is apparent that there is a continuous increase in the incidence of cases from mid-winter into late summer, with peaking in October. This is consistent with the anticipated seasonal fluctuation of this disease.

On April 10, an investigation was started after a report of gastroenteric illness among pediatric personnel at a Newark hospital was received. One hundred sixteen employees completed questionnaires and 70 submitted stool specimens. A total of 19 pediatric staff members were ill. Twelve cases were confirmed as *Shigella sonnei*. There were two pediatric patients with shigellosis prior to the outbreak, with the same antibiotic sensitivity pattern. The distribution of onsets and associations among the staff members suggested person-to-person transmission. Improved personal hygiene practices appear to have halted the outbreak.

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On May 21, a food borne outbreak of gastroenteritis was investigated in Jersey City. The ill persons had attended four of six separate parties catered by the same restaurant on May 10. Arrangements were made to survey bacteriologically and by questionnaire persons who had attended the different parties. Sixty-one persons of 117 completing the questionnaire admitted to gastroenteritis, resulting in an attack rate of 52 percent. The onset of illness was between five hours and eight days after eating the catered food. The average incubation period was 47 hours. The late cases, occurring five or more days after the parties, were thought to be due to secondary person-to-person transmission. The most frequent symptoms were diarrhea, abdominal pain and nausea. No one was hospitalized. The range of duration of symptoms was between 6 hours and 10 days, with an average duration of 5 days. Two food items showed a significant difference in the attack rate of illness between persons eating and not eating them: the potato salad and the macaroni and shrimp salad. Forty-three persons who had been ill submitted either rectal swab or stool cultures. Eight were positive for *Shigella sonnei*. The two salads as well as the other food specimens left over from one of the catered affairs were negative for enteric pathogens.

*Miscellaneous Reportable Diseases*

Fifty-two cases of amebiasis were reported during 1969, including two associated deaths. Four institutions reported 20 cases, 11 of which were reported by Woodbine State Colony. Seventeen migrant workers were also reported to have the infection. The remainder, 15 cases, were among the general population. Bergen and Essex Counties accounted for 9 of the cases. There was no significant distribution pattern by age, sex, or season, probably because of the small number of cases.

One case of anthrax was reported in March in a 45 year old itinerant worker. He was employed by a gelatin manufacturer in Camden who imported bone chips from South America and India, where anthrax is endemic. The man was bruised above the left eye by a bone chip which resulted in a focal lesion. Cultures confirmed the diagnosis of *B. anthracis*. The patient was treated with antibiotics and made an uneventful recovery. The last anthrax case in New Jersey, reported in 1965, was also associated with this factory.

One case of brucellosis was reported in a 30 year old male resident of Middlesex County. On May 23, he developed a high, intermittent fever, malaise, headache and anorexis. The diagnosis was confirmed during hospitalization by febrile agglutination tests. The only possible exposure in the patient's history was while castrating hogs at a local farm. Blood tests on the hogs, however, were negative for brucella antibodies.

One case of leprosy was reported during 1969 compared to two cases reported for 1968. The patient is a 37 year old U. S. Navy veteran from Vineland. He has a history of travel to Hawaii in 1952 and the Philippine Islands in 1953 while in the service. The first lesion developed in 1967, and a diagnosis of tuberculoid leprosy was established by biopsy in 1969. The patient was referred to the U. S. Public Health Service Hospital, Staten Island, N. Y. for therapy.

Although not a reportable disease, 14 cases of pertussis were reported during 1969. Twelve of these were reported by a physician from Atlantic City during August. None of the cases in the Atlantic City group were confirmed bacteriologically, although cultures had been performed on 6 of the patients and 2 contacts with symptoms of rhinitis. The immunization status among this group of children was incomplete, and the parents were urged to have their children's immunizations completed at the Child Health Conference Clinic.

Sixteen cases of Rocky Mountain spotted fever were confirmed and reported during 1969 which is within the expected annual incidence for New Jersey. Three cases were residents in Monmouth County, two each from Essex, Gloucester and Ocean Counties, and one each from Burlington, Camden, Cape May, Cumberland, Hudson, Hunterdon, and Somerset Counties. Eleven cases (nearly 70 percent) were in children between 4 and 11 years of age, another was a teenager and the remainder were over 40 years old. Males accounted for 75 percent of the illnesses. The onsets occurred from late May through August. All cases recovered.

Two cases of tetanus were reported during this year. One was a 22 year old male who probably became infected while taking drugs with a contaminated needle. He had been immunized with toxoid and received boosters, the last being 1966. He was treated with antitoxin and antibiotics and subsequently recovered. The second case was a 53 year old male who injured himself with a rusty nail in the right thigh. No history of immunization was noted. He succumbed to his infection after 9 days of illness.

Ten cases of trichinosis were confirmed and reported during 1969. The majority of cases were foreign born, over 35 years of age and living in the northeast metropolitan area of the state. There was nothing unusual about the sex or distribution of the time of onset. All but one knowingly had eaten raw or partially cooked pork or pork products. Sausage was the suspect item in at least 6 instances. Four patients were given the Bentonite Flocculation Test and were positive. All 10 showed a rise in eosinophiles with only two not exceeding 35 percent. Periorbital edema was seen in 7 patients. Muscle

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biopsies were performed on 6 patients with 3 having myositis and a fourth showing larvae. All 10 patients eventually recovered from the illness.

Typhoid fever was reported in 4 persons. One case was a 31 year old female who became infected while eating inadequately cooked mussels in Italy during the summer. Another case was a 61 year old female resident at Marlboro State Hospital who became acutely ill but had no history of possible exposure. Cultures were done on contacts among residents and employees but were unproductive. The third case was a female, age 1, who received her infection from her grandmother, an unknown typhoid carrier. The last case was an adult male who probably became infected while visiting Tunisia on a holiday.

There were no reported cases of the following diseases: Poliomyelitis, psittacosis, rabies, leptospirosis, or smallpox.

*Hospital Infections Control Program*

This program has been in effect since 1965. Twenty-one hospitals have participated using the surveillance system recommended by the National Communicable Disease Center. Sixteen hospitals are currently active and five additional hospitals are in the process of gaining entrance into the program. Five hospitals which were participants are now operating independently.

Program personnel assist hospitals in establishing a surveillance system and reporting procedures. Cooperation is also given in the event an outbreak or other problem is uncovered so that it is resolved expeditiously. Educational seminars are frequently held to broaden the scope of surveillance personnel. During the spring of 1969, several such meetings were held in cooperation with the New Jersey State Nurses' Association.

Hospital outbreaks were frequently detected during 1969. Perhaps the most significant was the occurrence of Ritter's Disease in a newborn nursery of a metropolitan hospital. During May, 78 infants were affected with clinical symptoms ranging from simple pyoderma to acute epidermal necrolysis. Denuded areas were erythematous and moist. A hemolytic staphylococcal organism caused the dermatitis, probably through the production of an erythrogenic toxin. Twenty-seven infants had laboratory confirmation of this etiology. An additional 14 infants were positive when cultured during the investigation although they remained asymptomatic. A cohort system was established and infected infants were treated systemically and locally with antibiotics. Hexachlorophene baths were also given routinely. Surveillance activities included infants who had been discharged prior to the investigation,

and continued as a follow-up on infants who had been discharged after the outbreak was under control. The outbreak was terminated in 9 days without any deaths.

Another metropolitan hospital had 19 members of its pediatric staff, including medical students ill with gastroenteritis due to *Shigella sonnei*. There were no illnesses among the patients. Questionnaires were given to 116 persons and stools were collected to confirm the etiology. The distribution of cases and the history suggested person-to-person spread within the hospital. Sanitary practices were reviewed and recommended changes were adopted which appear to have terminated the outbreak.

Another problem which was investigated evolved around 29 newborn infants with diarrhea. It involved three nurseries and seven enteropathogenic *E. coli* serotypes. It was noted that enemas were not being ordered routinely prior to delivery, thereby subjecting the infants to increased fecal contamination. This procedure was reintroduced. Nursing techniques and sanitary practices were also reviewed and revised accordingly. The result was a sharp decrease in the incidence of diarrheal illnesses in newborns.

### *Biologics Unit*

A considerable increase was noted in request for free state biologics and tuberculosis drugs from physicians, local health agencies, as well as Migrant and Head Start programs during 1969.

It is interesting to note that 351,310 doses of polio vaccine were distributed compared with 316,700 doses the previous year. Of more significance is the fact that 1969 was the fourth consecutive year in which not one case of polio was reported in the entire state.

The program to "Stamp Out" measles continued at a high rate of activity with 133,010 doses of measles vaccine being made available compared with 93,749 doses in 1968.

Also, 18,590 doses of rubella vaccine were purchased late in the year, inaugurating a departmental plan to have every child from 1 to 10 years of age immunized by the end of December 1970.

Influenza vaccine was furnished to nursing homes and Senior Citizen groups.

Other biologics which were used in greater amounts in 1969 were Diphtheria-Pertussis-Tetanus and Diphtheria-Tetanus, Adult and Pediatric. There was a slight decrease in Smallpox vaccinations.

Distribution of tuberculosis drugs, PAS and INH, ran about 20 percent higher than in 1968.

Sixty-six biological distributing stations located throughout the 21 counties of our state, handle the free state biologicals without remuneration.

### **Tuberculosis Control Program**

Early indications are that the downward trend in tuberculosis morbidity and mortality in progress for recent years continued through 1969 for the state as a whole, with New Jersey ranking near the mid-range for states in the United States. This favorable appearance does not hold true in cities. Six New Jersey cities placed among the upper 15 in the United States in recent years. The rates are higher in the cities because disease is concentrated in the blighted locations of the cities having low socioeconomic conditions, crowded living conditions, and poor hygiene. Newark, Jersey City, Trenton, Paterson, Camden, and Elizabeth have high incidence rates.

In 1968, 1,297 new active cases of tuberculosis were reported in New Jersey. The annual incidence has been decreasing slightly over the past five years. Provisional data for 1969 indicate that 1,231 new active tuberculosis cases were reported.

The major thrust of the tuberculosis program has been focused on the target areas of the cities and urban communities to promote:

1. Early casefinding to detect all cases and foci of tuberculosis.
2. Complete treatment of all tuberculosis cases and surveillance to prevent recurrence.
3. Preventive therapy, examinations, and surveillance of family and household contacts.
4. Surveys to identify candidates for preventive therapy with INH.
5. Tuberculin testing of school children and other population groups.
6. Examination and evaluation of household and family contacts and associates of tuberculin reactors and converters in the school tuberculosis survey program.

With the development and extensive use of more effective drugs for the treatment as well as prevention of tuberculosis, the program emphasis was shifted from inpatient services to ambulatory outpatient treatment programs. Previously, treatment of tuberculosis required a long period of hospitalization and graduated ambulation until the patient essentially reached an inactive



status. Today's trend toward shorter and shorter hospitalization of the tuberculosis patient, with the patient rapidly becoming noninfectious soon after the initiation of drug therapy, demands dynamic extension of outpatient services to carry treatment to completion.

The clinical facilities for examination of high risk groups are being augmented in locations accessible to the groups under study through cooperative efforts between the state health department, the department of education and local health services in the communities and the schools.

The Department of Health has established a more standard method for identifying persons with precursors of tuberculosis as well as those with inactive and active tuberculosis to:

1. make earlier treatment possible
2. induce more rapid prevention or healing
3. interrupt sources of infection and protect the remainder of the population from these sources of infection.

The entire tuberculosis register system for all New Jersey's 21 counties has been transferred from the old hand operated card system located in these counties in 1969. New Jersey is among the first if not *the* first state, to place all of the tuberculosis cases in the state on a central computerized tuberculosis register which is located in the State Health Department in Trenton. The central tuberculosis register system contained 12,000 case records, some of which will be terminated. The register system is currently monitoring the clinical and hospital care of 9790 of these cases. It provides statistical appraisal of the punctuality and service to patients in the state. It reports on the attendance of patients at clinics for x ray, bacteriology, medication and medical evaluation.

These 9790 tuberculosis cases are being maintained under surveillance by the local health departments throughout New Jersey utilizing the quarterly summary reports distributed by the central register to the local tuberculosis services. Eight thousand five hundred thirty-four of these tuberculosis patients are living at home on "home care." Eight hundred eighty-five of these have active tuberculosis. These people in the "home care" program are able to live at home and receive their treatment at local clinics because the State of New Jersey provides anti-tuberculosis drugs to all persons on preventive therapy.

Modern drugs have revolutionized the management of tuberculosis from the standpoint of hospital treatment, home care, preventive therapy and public health. The need for hospital care has been reduced and in many instances, eliminated by effective therapeutic regimens that produce more rapid cures and



interrupt the communicability of the patient's disease even though organisms still may be excreted. The general hospital can now safely and effectively treat tuberculosis patients who need hospitalization, utilizing anti-tuberculosis drugs and modern infection control methods. The greatest hospital and community risk is the unrecognized case. Drugs have made it possible to cure the disease. Patients become noninfectious soon after drug therapy begins. They do not need to be confined for isolation.

New anti-tuberculosis drugs have been added to outpatient services in New Jersey. The provision of adequate, acceptable, effective therapy is fundamental to a successful tuberculosis program. In October, Ethambutol was added to the stock of standard first-line drugs to be available and distributed through state channels of tuberculosis drug supply.

The State Tuberculosis Program has been closely coordinated with the State Department of Education and local agencies in revising the rules and recommendations for the school tuberculosis surveys and testing. The new document emphasizes that all pupils positive by these retesting procedures *should receive an x ray, be exempt from further tuberculin testing and be considered for prophylactic treatment.* This is proving to be a major step in promoting preventive therapy for students found to have an initial tuberculosis infection. The tuberculosis program has also revised the school survey reporting procedures. The new reports will provide information on each individual reactor, such as x-ray results and preventive therapy for reactors. The entire report is designed to enter the electronic data processing system. The new rules specify a tuberculin test for all pupils of the 1st, 5th, 9th and 12th grades and other categories, new admissions and all full and part-time employees.

In the school survey, the tuberculin test identifies persons with initial tuberculosis infections for evaluation for disease treatment and preventive therapy. It also serves another very important purpose in that it identifies family and household sources of infection. The reactor has been exposed to a possible source of tuberculosis and this source is often in the family or household. In this regard, examination of family, household, and close associates of reactors uncovers many potential sources of infection. The local health authorities are to survey the family and household associates of these reactors.

#### *Tuberculosis Statistics :*

Review of data of the last 10 years reveals a continual slight annual reduction in new cases reported with mortality declining by over fifty percent and morbidity by over 30 percent (Table 1).

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Table 1. TUBERCULOSIS CASES AND DEATHS  
NUMBERS AND RATES PER 100,000 POPULATION  
NEW JERSEY, 1960-1969

<i>Year</i>	<i>Estimated</i>	<i>Deaths</i>		<i>All Cases</i>		<i>Active Cases</i>	
	<i>Population</i>	<i>Number</i>	<i>Rate</i>	<i>Number</i>	<i>Rate</i>	<i>Number</i>	<i>Rate</i>
1960	6,098,000	354	5.8	2,928	48.0	1,601	26.3
1961	6,221,000	389	6.3	3,120	50.2	1,570	25.2
1962	6,344,000	326	5.1	2,769	43.6	1,504	23.7
1963	6,467,000	364	5.6	2,867	44.3	1,634	25.3
1964	6,590,000	307	4.7	2,970	45.1	1,738	26.4
1965	6,713,000	304	4.3	2,614	38.9	1,602	23.9
1966	6,951,336	291	4.2	2,567	36.9	1,592	22.9
1967	7,078,400	249	3.5	2,493	35.2	1,455	20.6
1968	7,203,510	245	3.4	2,271	31.5	1,297	18.0
1969	7,283,440	203	2.8	2,041	28.0	1,231	16.9

The more densely populated five county Metropolitan District of New Jersey, which is composed of Bergen, Essex, Hudson, Passaic, and Union Counties, accounts for over half the cases of active tuberculosis reported in the state. The cities of Newark, Jersey City, Paterson, and Trenton have the highest incidence.

The data in Table 2 show active tuberculosis cases and case rates per 100,000 population for the counties and cities of the state in 1969. (Provisional.)

The status of all tuberculosis cases on the register for each year from 1965 to 1969 is shown in Table 3. The decrease from 7462 to 6320 in the number of "inactive" cases carried under surveillance between 1968 and 1969 is attributed to more accurate accounting with the advent of the electronic data processing system.

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Table 2. TUBERCULOSIS CASES, DEATHS, NUMBERS, AND RATES PER 100,000 ESTIMATED POPULATION BY COUNTIES AND MAJOR CITIES, NEW JERSEY: 1969

\* Provisional

<i>Area</i>	<i>All Cases</i>		<i>Active Cases</i>		<i>Deaths</i>	
	<i>Number</i>	<i>Rate</i>	<i>Number</i>	<i>Rate</i>	<i>Number</i>	<i>Rate</i>
State Total .....	2,041	28.0	1,231	16.9	203	2.8
Atlantic County .....	62	32.8	41	21.7	7	3.7
Atlantic City .....	42	66.4	32	50.6	5	7.9
Bergen County .....	175	18.9	47	5.1	15	1.6
Burlington County .....	58	17.4	30	9.0	1	0.3
Camden County .....	97	20.2	68	14.2	12	2.5
Camden City .....	62	52.3	48	40.5	6	5.1
Cape May County .....	34	61.5	15	27.1	2	3.6
Cape May City .....	4	83.3	0	...	...	...
Cumberland County .....	34	26.2	26	20.0	6	4.6
Bridgeton .....	7	29.3	5	20.9	1	4.2
Essex County .....	496	51.0	336	34.6	40	4.1
East Orange .....	47	59.2	32	40.3	3	3.8
Newark .....	376	93.6	278	69.2	31	7.7
Orange .....	14	39.8	12	34.1	0	..
Gloucester County .....	35	20.6	25	14.7	1	0.6
Hudson County .....	304	49.9	152	24.9	30	4.9
Hoboken .....	32	69.3	10	21.7	1	2.2
Jersey City .....	156	57.6	102	37.7	21	7.8
Hunterdon County .....	11	16.3	7	10.3	4	5.9
Mercer County .....	91	29.9	60	19.7	9	3.0
Trenton .....	48	47.1	34	33.4	6	5.9
Middlesex County .....	80	13.6	44	7.5	11	1.9
New Brunswick .....	16	34.5	8	17.2	3	6.5
Perth Amboy .....	8	19.5	6	14.7	2	4.9
Monmouth County .....	104	22.8	76	16.6	13	2.8
Morris County .....	44	11.9	26	7.0	7	1.9
Ocean County .....	42	24.2	26	15.0	12	6.9
Passaic County .....	162	34.6	110	23.5	13	2.8
Passaic City .....	25	43.1	11	19.0	4	6.9
Paterson .....	90	60.0	77	51.2	9	6.0
Salem County .....	10	14.8	8	11.8	2	3.0
Somerset County .....	20	9.9	16	7.9	2	1.0
Sussex County .....	5	7.2	3	4.3	2	2.9
Union County .....	161	27.8	104	17.9	12	2.1
Elizabeth .....	68	57.1	39	32.7	3	2.5
Plainfield .....	21	41.5	12	23.7	1	2.0
Warren County .....	2	2.6	2	2.6	1	1.3
State Institutions .....	5	...	5	...	1	...
Military Posts .....	9	...	4	...	0	...
Aliens .....	0	...	0	...	0	...

\* Tuberculosis cases and death rates are provisional and subject to revision when final tabulations are completed.

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Table 3. TUBERCULOSIS PATIENTS UNDER REGISTRATION  
NEW JERSEY, 1965-1969

<i>Status</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
TOTAL .....	14,474	14,188	13,678	11,102	9,790
Hospitalized .....	1,016	1,430	1,268	1,303	1,256
Non-hospitalized .....	12,143	12,758	12,410	9,799	8,534
Active .....	646	564	779	806	885
Probably Active .....	160	150	134	128	114
Probably Inactive .....	448	361	304	278	281
Inactive .....	10,889	10,368	9,879	7,462	6,320
Non-pulmonary .....	815	888	788	610	439

*Contact Register and Investigation*

The development of tuberculosis contact investigation, which has proved to be the most effective method for discovering new cases of active tuberculosis, has moved forward with increasing momentum throughout the year 1969.

The examination of 11,872 contacts in 1969 uncovered 60 new cases of active tuberculosis, a case discovery rate of 5.0 new cases of active tuberculosis per 1,000 contacts examined. At the end of 1969, there remained 6,948 contacts in the contact register system and there were 3,461 contacts who were overdue for examination. There were 866 of these contacts who had not been observed in over 12 months.

*Drug Distribution*

The State Health Department distributed 60,000 bottles of Isoniazid in 1969 to patients, 3,000 less than in 1968; 7,000 bottles of Para-Aminosalicylic Acid, 2,000 more than 1968; and 440 bottles of Myambutol, Streptomycin, Seromycin, and Trecator.

*School Tuberculin Testing Program*

The public school tuberculin testing program tested 536,010 persons in 1969 with 7,721 positive reactors and the discovery of 3 cases of active tuberculosis.

The parochial school testing program tested 36,175 persons resulting in the discovery of 3 cases of inactive tuberculosis.

*Child Health Conference Testing*

Child health conferences are arranged to serve families who are unable to afford pediatric care. The presence of a reactive tuberculin test in a child attending a child health conference is indicative of exposure to tuberculosis and the presence of active tuberculosis in the family or close environment of the child. The data presented are highly selective and represent only a small sample of New Jersey's children; therefore they cannot be applied generally. A total of 9,852 children under 10 years of age were tuberculin tested in the child health conference with 23 showing positive reactions and no new cases diagnosed in these reactors.

*Clinic Services**Essex County Tuberculosis Task Force:*

The Essex County Board of Chosen Freeholders established a tuberculosis task force in May 1969 which studied the urgent tuberculosis problem confronting Essex County. It made recommendations for improving the tuberculosis health services in the county. In Newark as in other New Jersey cities, tuberculosis received special attention at state, county and municipal levels because of the greater incidence in the poverty areas of the cities and urban communities.

The most concentrated reservoir of tuberculosis in Essex County and in the state existed in Newark where tuberculosis morbidity (76.1) and mortality rates (10.8 in 1968) had not changed significantly since 1962 with Newark's case rate the highest in the United States in 1966 and second highest in 1967. The tuberculosis task force undertook the following:

- A. Review the tuberculosis incidence distribution, health services and facilities.
- B. Define ways of applying modern principles for control and eradication of tuberculosis in Newark and Essex County.
- C. Recommend ways of developing a tuberculosis health service delivery system to increase preventive therapy, early treatment and ambulatory care for patients on "home care."
- D. Develop a plan for an accelerated tuberculosis program that would fit into plans for comprehensive health groups, regional medical programs and the medical college.

The task force reported that tuberculosis was a serious threat and burden to Essex County. At least 200,000 were infected with tuberculosis germs in Essex County. Unless prevented, close to 400 of these individuals would

develop active disease each year. A large number, 2,437 in 1968, were under care for tuberculosis. Approximately 2.2 million dollars per year was spent on tuberculosis sanatorium care alone. The tuberculosis problem had its greatest impact in the poverty areas. These conditions prevailed despite the existence of nearly perfect diagnostic, therapeutic, and preventive tools including tuberculosis survey programs in all school children in the 1st, 5th, 9th, and 12th grades annually.

The task force recommended that tuberculosis control measures be immediately strengthened in Essex County by carrying out six recommendations:

1. Establish and organize a county agency to coordinate and strengthen the administrative, fiscal, and organizational aspects of the county's tuberculosis program.
2. Appoint a board to advise on the administration of county tuberculosis functions as a sentinel body to monitor the future program and to aid in bringing the objectives to fruition.
3. Develop and provide on a continuing basis high quality treatment to tuberculosis patients in neighborhood and community clinics emphasizing preventive services and ambulatory care and utilizing hospitalization only when essential.
4. Expand preventive activities and preventive therapy among persons at high risk of acquiring infection and disease.
5. Bring the management of tuberculosis into the mainstream of community medicine by stimulating cooperation of the medical school, voluntary hospitals, and related agencies.
6. Develop and formalize community participation in the planning and delivery of tuberculosis control services in relation to planning by model cities, regional medical programs and the medical college.

The Board of Freeholders accepted the report and voted funds to implement the task force report by establishing tuberculosis outpatient services in four general hospitals to extend health services to the communities in prevention, detection and treatment.

#### *Other Counties*

There are 56 clinics providing tuberculosis diagnostic and treatment services in the 21 counties of New Jersey. During 1969, 31,827 persons were registered in these clinics for the first time. These persons made a total of 90,556 visits to the clinics during the year; 12,452 sputum examinations and

30,145 tuberculin tests were performed, resulting in 506 positive sputum specimens and over 3,453 positive tuberculin reactors.

In association with the clinic activity, public health nursing services were provided to 1,744 persons with tuberculosis and to 5,155 contacts and persons suspected of tuberculosis.

The New Jersey State Laboratory processed 19,764 tuberculosis sputum specimens in 1969 in providing services to physicians, clinics, and hospitals throughout the state.

In Paterson, 2,952 school children in grades 1, 5, 9 and 12 of six schools were tuberculin tested. Those whose Tine test measured less than 10 millimeters of induration were differentially tested with intradermal purified protein of *Mycobacterium tuberculosis* (PPD-S) and *Mycobacterium Battey* (PPD-B). Those whose reactions indicated initial tuberculosis infection were examined for tuberculosis and those with clinical tuberculosis were treated. The 64 reactors with no evidence of clinical disease were placed on preventive Isoniazid therapy at school.

Camden City completed a similar differential skin testing program; over 7,000 individuals were tested or about 25 percent of the school population. Approximately 800 reactors were confirmed by the intradermal PPD-B and PPD-S Mantoux procedure, resulting in about 220 confirmed reactors. These have been clinically evaluated and recommended for preventive therapy.

The public health nursing consultation services functioned to interpret and promote the goals, standards and policies of the tuberculosis program to nursing and other professional personnel.

The public health nurse consultant participated in a three week Tuberculin Testing program scheduled in four state institutions: Vineland, Woodbine, New Lisbon, and the New Jersey Training School for Boys. The program was conducted in the Southern District to accomplish a two-fold purpose:

1. To examine the patients and employees of these institutions for disease and tuberculin infection and furnish tuberculosis health services equivalent to those in public and parochial schools.
2. To provide training sessions for school and other nurses in the testing and reading of the Mantoux-type tuberculin test.

The nursing implications for carrying out the new "Rules and Recommendations for Tuberculosis Surveys in New Jersey Schools" necessitated special educational efforts in interpreting and demonstrating the role of the school and public health nurse. The public health nurse consultant spoke and

demonstrated tuberculin testing at schools nurses' meetings in Camden, Cumberland, Gloucester, Cape May, Burlington, Hudson, and Essex Counties. Many other individual conferences and meetings were held to clarify the new school rules and recommendations.

Inservice educational services were provided for three groups of public health nurses from various nursing agencies in New Jersey. About 75 nurses were oriented in the new concepts of casefinding and treatment.

Consultation and assistance were given to the clinic nurses in Monmouth, Middlesex, and Mercer County tuberculosis clinics in the use and care of the nebulization unit in collecting sputum specimens for bacteriological examination.

Preventive therapy has been recommended by the tuberculosis program for all school children with a 10 millimeter or more tuberculin reading. This size reaction has been considered a compelling indicator for preventive therapy. Household and family contacts of active tuberculosis cases are to receive preventive therapy without regard to tuberculin reaction. If the prevention program is sincerely accepted by all concerned—the family, private physicians, school personnel, local health departments and public health personnel—their duty is to see that the well-child remains on chemoprophylaxis every day for one year. This in itself requires diligent and meaningful association with these individual reactors to assure that they understand the reason for uninterrupted preventive therapy and followup.

Public health nursing consultation services in the tuberculosis program for 1969 included a total of 109 visits to official and voluntary nursing agencies, tuberculosis clinics, hospitals, schools, and health departments.

## **Venereal Disease Control Program**

### *I. Introduction*

The goal of the Venereal Disease Control Program is the practical eradication of syphilis and the control of gonorrhea and the minor venereal diseases. The program is based on the philosophy that the earlier infectious cases are detected and treated, the greater is the likelihood that treatment will prevent spread to others.

Though progress has been made in all areas of venereal disease control, these diseases remain a major health problem in New Jersey. From 1962 through 1968, reported cases of infectious syphilis declined. However, during 1969, there was a reversal of this trend.



As might be expected, the age of incidence of venereal disease mirrors the age of greatest sexual activity. Over 50 percent of all reported cases occur in persons less than 25 years of age. Whether the increasing incidence of venereal disease in young persons, particularly teen-agers, is related to promiscuity, the pill, or other social upheavals, is debatable. However, it should be emphasized that the increasing incidence of venereal disease is not confined to the younger group but affects all age groups.

Although the program has the necessary expertise to cope with the increased incidence of syphilis, there are not enough resources available to launch a state-wide attack on the increasing gonorrhea problem. Research, application of new techniques, and a much greater use of present methodology will be needed to reverse the rising incidence of this disease.

## II. *Morbidity Trends*

### A. *Syphilis*

The trend of reported cases of primary and secondary syphilis, the infectious stages of the disease, has changed direction during the past decade. Primary and secondary syphilis increased from 114 cases in 1957 to a peak of 1,202 cases in 1962. Following this high, the reported incidence of syphilis declined to 457 cases reported in 1968; a decline of 61.98 percent. However, during 1969, there were 622 cases of infectious syphilis reported; representing a 36.1 percent increase over 1968 and the greatest number of cases reported in any year since 1966. Of these 622 cases, 414 (66.56 percent) were reported by the large urban areas of Newark, Paterson, Jersey City, Trenton, Camden, Atlantic City. Newark reported 286 infectious cases or 45.98 percent of the state total.

For 1969, cases of early latent syphilis also increased, with 445 reported cases. This represents an increase of 52.92 percent over the 291 reported cases during 1968.

The majority of congenital syphilis being reported is among adults who were born with the disease years ago. However, congenital syphilis of less than one year's duration, increased in 1969 to 11 reported cases. This represents an increase of 37.50 percent over the eight cases reported in 1968.

The total number of reported cases of syphilis during 1969 ended the general decline that began in 1962. There were 4,115 cases reported during 1969 representing an increase of 40.20 percent over the 2,935 cases reported during 1968.

An increased awareness on the part of the medical community to the rising incidence of syphilis was expressed during 1969, by increased serologic screening of New Jersey residents, and by increased requests for diagnostic consultations, case management, and darkfield services.

#### B. *Gonorrhea*

Gonorrhea, the most frequently reported communicable disease, continued to increase in reported incidence during 1969. However, the 8,410 reported cases represent an increase of only 3.85 percent over the 8,098 cases reported during 1968.

Public sources accounted for 6,135 (72.95 percent) of the reported cases, while private physicians accounted for 2,275 cases (27.05 percent). It is estimated that private physicians reported only one case of every 11 cases they diagnosed.

Of the 1969 reported cases, 59.48 percent occurred in persons less than 25 years old. Therefore, for gonorrhea, as for syphilis, the age of incidence mirrors the age of greatest sexual activity.

Males accounted for 7,050 (83.83 percent) of the reported cases: more than six times the number of reported female cases. It is felt that the difference in frequency of reported cases between the sexes is due primarily to the difficulty of diagnosing gonorrhea in females and the lack of a concentrated control program directed at finding asymptomatic females.

### III. *Program Activities*

Venereal disease cases come to medical attention in three basic ways:

1) People who volunteer for diagnosis of their own volition; 2) Cases found by screening devices; or 3) Cases found through the application of epidemiology to known early cases.

#### A. *Epidemiology of Early Syphilis*

Epidemiology (intensive case finding), when applied to syphilis cases, becomes meaningful and practical if its application finds and brings to examination existing infections and incubating disease earlier, thus limiting the possibility of spread within the community.

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1. *Infectious Syphilis*

The following are indices of the quality and quantity of epidemiology performed:

- a. Interviewing: Of the 633 (civilian and military) cases of infectious syphilis reported, 620 (97.94 percent) were interviewed.
- b. Reinterviewing: Of the cases interviewed, 552 (89.03 percent) were reinterviewed one or more times.
- c. Investigation: Follow-up of the 1,791 suspects obtained yielded 93 cases of primary and secondary syphilis, 100 cases of early latent syphilis, and three cases of syphilis in other stages.

2. *Early Latent Syphilis*

Early latent syphilis, for epidemiologic purposes, is divided into two categories; early latent of less than one year's duration and early latent of one to four years' duration.

Because the yield from applied epidemiology to early latent cases of one to four years' duration is low in terms of case detection or prevention, the application of epidemiology varies and is dependent upon the availability of personnel and on an evaluation of the potential yield from the individual case.

Epidemiology performed on early latent cases of less than one year's duration is similar to that applied to infectious syphilis cases and is summarized as follows:

- a. Interviewing: Of the 448 (civilian and military) early latent cases reported, 350 were determined to be of less than one year's duration. Of these cases, 345 (98.57 percent) were interviewed.
- b. Reinterviewing: Of the cases interviewed, 304 (88.12 percent) were reinterviewed one or more times.
- c. Investigation: Follow-up of the 1,058 suspects obtained yielded 30 cases of primary and secondary syphilis, 38 cases of early latent syphilis, and three cases of syphilis in other stages.

3. *Epidemiologic (Preventive) Treatment*

When possible, contacts to early syphilis who are clinically and serologically negative upon initial examination, but who may

be incubating syphilis, are given preventive treatment. During 1969, there were 539 contacts to infectious syphilis who were negative upon initial examination. Of these contacts, 379 (70.36 percent) received preventive treatment. It is estimated that this control technique prevented 37 cases of syphilis from developing.

### B. *Epidemiology of Gonorrhea*

Epidemiology performed on male gonorrhea cases is similar to that applied to early syphilis cases and is summarized as follows:

1. Interviewing: Of the 5,052 male cases of gonorrhea reported by public health clinics, 1159 (22.94 percent) were interviewed.
2. Investigation: Follow-up of the 1,294 contacts obtained yielded 353 cases of gonorrhea.

### C. *Reactor Program*

#### 1. *Laboratory Visitation*

The purpose of laboratory visits is to gather base line and trend data on the number of specimens tested, the number found reactive, the test being performed, the availability of darkfield microscopic services, and other related information needed to evaluate the level of screening for syphilis in New Jersey. Laboratories throughout the state are visited during the year to accomplish these objectives.

#### 2. *Reactor Follow-Up*

The purpose of this program activity is to ensure that persons known to have a reactive test for syphilis and in high priority groups for follow-up, are followed to obtain a final disposition.

During 1969, a total of 18,693 reactive specimens were reported to the Venereal Disease Control Program. Field follow-up of these reactors was responsible for bringing to treatment 214 cases of primary and secondary syphilis, 187 cases of early latent syphilis and 463 cases of syphilis in other stages.

### D. *Physician Visitation*

The purpose of this activity is to build understanding of and positive attitudes toward venereal disease control, to provide report forms and the latest information on venereal disease trends, diagnostic

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tools and treatment schedules, and to establish for the physician a liaison with venereal disease control personnel, local and state health departments, and other health agencies.

Each visit emphasized the need for an increased index of suspicion for venereal disease, prompt reporting of all diagnosed cases, participation in the epidemiologic process, and the administering of preventive treatment to clinically and serologically negative contacts.

During 1969, field personnel visited 619 physicians. These visits were made to physicians newly establishing practice in New Jersey, in response to requests from other physicians, to follow reactor reports, and to confirm reported diagnoses.

In 1969, physicians participated in the control effort by diagnosing and reporting 264 cases of primary and secondary syphilis (42.44 percent of the reported cases), 167 cases of early latent syphilis (37.53 percent of the reported cases) and 2,275 cases of gonorrhea (27.05 percent of the reported cases). Physicians also requested 262 dark-field examinations for their patients of which 25 (9.54 percent) were positive for *Treponema pallidum*.

#### IV. *Summary*

Though progress has been made in all areas of venereal disease control, these diseases remain a major health problem in New Jersey.

As might be expected, the age of incidence of venereal disease mirrors the age of greatest sexual activity. Over 50 percent of all reported cases occur in persons less than 25 years of age.

During calendar year 1969, there were 622 cases of infectious syphilis reported, representing a 36.1 percent increase over 1968 and the greatest number of cases reported in any year since 1966. Of these 622 cases, 414 (66.56 percent) were reported by the large urban areas of Newark, Paterson, Jersey City, Trenton, Camden, and Atlantic City.

For 1969, cases of early latent syphilis also increased, with 445 reported cases. This represents an increase of 52.92 percent over the 291 reported cases during calendar year 1968.

Gonorrhea, the most frequently reported communicable disease, continued to increase in reported incidence during calendar year 1969. However, the 8,410 reported cases represent an increase of only 3.85 percent over the 8,098 cases reported during 1968.

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During 1969, interviewing and investigating activities were responsible for bringing to treatment 123 cases of primary and secondary syphilis, 138 cases of early latent syphilis and six cases of syphilis in other stages.

Table 1. SYPHILIS AND GONORRHEA CASES BY COUNTIES

NUMBERS AND RATES PER 100,000 ESTIMATED POPULATION  
NEW JERSEY—1969

County	<i>Syphilis</i>							
	<i>All Stages</i>		<i>Primary and</i>		<i>Early Latent</i>		<i>Gonorrhea</i>	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Atlantic .....	235	124.5	16	8.5	13	6.9	56	29.7
Bergen .....	206	22.3	18	1.9	18	1.9	75	8.1
Burlington .....	68	20.4	6	1.8	4	1.2	55	16.5
Camden .....	190	39.6	15	3.1	12	2.5	114	23.8
Cape May .....	28	50.6	1	1.8	1	1.8	9	16.3
Cumberland .....	110	84.8	10	7.7	15	11.6	25	19.3
Essex .....	1,393	143.3	328	33.7	181	18.6	5,495	565.2
Gloucester .....	64	37.7	4	2.4	2	1.2	13	7.7
Hudson .....	364	59.7	58	9.5	53	8.7	455	74.7
Hunterdon .....	11	16.3	..	..	..	..	16	23.6
Mercer .....	229	75.2	27	8.9	24	7.9	743	244.0
Middlesex .....	197	33.5	24	4.1	8	1.4	201	34.2
Monmouth .....	177	38.8	16	3.5	17	3.7	70	15.3
Morris .....	70	18.9	8	2.2	5	1.4	83	22.4
Ocean .....	58	33.4	9	5.2	9	5.2	27	15.6
Passaic .....	286	61.1	58	12.4	45	9.6	265	56.6
Salem .....	46	68.1	..	..	1	1.5	14	20.7
Somerset .....	45	22.3	4	2.0	1	0.5	20	9.9
Sussex .....	18	25.8	1	1.4	..	..	10	14.3
Union .....	235	40.6	17	2.9	26	4.5	642	110.8
Warren .....	24	27.8	..	..	..	..	4	5.3
State Institutions .....	57	..	1	..	9	..	17	..
Military Posts .....	18	..	11	..	4	..	1,039	..
Job Corps .....	3	..	1	..	..	..	..	..
State Totals .....	4,129	56.7	633	8.7	448	6.1	9,448	129.7

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