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DISTRIBUTION OF HEALTH SERVICES IN THE STRUCTURE OF STATE GOVERNMENT *

CHAPTER IX. CENTRAL STATE SERVICES AFFECTING ALL BRANCHES OF PUBLIC HEALTH WORK

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Each of the previous articles of this series* describing State health services as organized and administered during the year 1940 has been focused upon the combined efforts of all agencies of State government in specific service categories or toward the correction of a particular health problem. In addition to administering health programs for special purposes, a number of governmental units perform central services of a generalized nature which contribute to all branches of public health work.

Consideration of these miscellaneous central services forms the topic of the present discussion, which is the ninth chapter of the third edition of Public Health Bulletin No. 184. In this, as in all earlier

* From the States Relations Division. This is the ninth chapter of the third edition of Public Health Bulletin No. 184. Previous chapters are:

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter I. The composite pattern of State health services. Pub. Health Rep., 56: 1673 (August 22, 1941). Reprint No. 2306.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter II. Communicable disease control by State agencies. Pub. Health Rep., 56: 2233 (November 21, 1941). Reprint No. 2334.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter III. Tuberculosis control by State agencies. Pub. Health Rep., 57: 65 (January 16, 1942). Reprint No. 2348.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter IV. Venereal disease control by State agencies. Pub. Health Rep., 57: 553 (April 17, 1942). Reprint No. 2369.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter V. Sanitation by State agencies. Pub. Health Rep., 57: 885 (June 12, 1942) and 57: 917 (June 19, 1942). Reprint No. 2386.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter VI. Medical and dental care by State agencies. Pub. Health Rep., 57: 1195 (August 14, 1942) and 57: 1235 (August 21, 1942). Reprint No. 2395.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter VII. Maternity-child health activities by State agencies. Pub. Health Rep., 57: 1791 (November 27, 1942). Reprint No. 2425.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter VIII. Industrial health services by State agencies. Pub. Health Rep., 56: 88 (January 8, 1943). Reprint No. 2439.

The concluding chapter will be published in a subsequent issue of the Public Health Reports.

chapters of the current version of the bulletin, the methods by which all State departments, boards, and commissions function with respect to the service in question are depicted. Thus, the third edition is broader in scope than the former issue,¹ which treated the activities of health departments only. Neither the activities of local official agencies nor of voluntary health organizations are included in the present revision unless they contribute to budgets of official State agencies.

General services which are provided by the States² and which affect all branches of public health work are: Vital statistics, laboratory services, health education, and licensure of professions and facilities which afford health services. From table 1 may be identified the particular agency of State government which is responsible for certain activities outlined in connection with each service.

TABLE 1.—*Department of State government* responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands***

Activity	State or Territory							
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia
VITAL STATISTICS:								
Receives the following reports:								
Births.....	1	1	1	1	1	1	1	1
Deaths.....	1	1	1	1	1	1	1	1
Marriages.....	1		1	1		1	1	
Divorces.....	1					1	1	
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).								
Analyzes the reports received.....	1	1	1	1	1	1	1	1
Allocates births and deaths to place of residence.....	1		1		1	1	1	1
Furnishes other agencies and divisions with copies of reports or results of analyses:								
Routinely.....		1	1	1	1			1
Upon request.....	1	1	1	1	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.....			1					
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....	1	1		1	1	1	1	
LABORATORY SERVICES:								
Examines the following types of specimens:								
Veneral disease.....	1	7	^d 1	1	1	1	1	1
Other communicable disease.....	1	7	1	1	1	1	1	1
Noncommunicable disease.....	^d 6	7	1, 6		^d 6		1	1
Water samples.....	1	7	1	1	1	1	1	1
Milk samples.....	1	7				1	1	1
Food and drug samples.....	3	7		1	7	14	1	1
Substances affecting industrial health.....	1			1	1	1		
Engages in research activities.....	1	6, 7		1	1			
Manufactures biologicals distributed at State expense.....	1	7	1	1				1
Operates branch laboratories.....	1	7					1	1

See footnotes at end of table.

¹ Ferrell, John A., Smillie, Wilson G., Covington, Platt W., and Mead, Pauline A.; International Division of the Rockefeller Foundation for the Conference of State and Provincial Health Authorities of North America: *Health Departments of States and Provinces of the United States and Canada*. Public Health Bulletin No. 194 (Revised). United States Government Printing Office, Washington, 1932.

² The term "State" as used in the discussion which follows includes the States, the Territories, the District of Columbia, and the Virgin Islands.

TABLE 1:—Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory						
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware
LABORATORY SERVICES—Continued.							
Distributes grants-in-aid to local laboratories				1	1	1	
Maintains general supervision over private laboratories				1		1	
Approves private laboratories for selected types of work only					1		1
HEALTH EDUCATION:							
Provides in-service training for public health personnel:							
Physicians	1		1	1	1		1
Nurses	1	1	1	1	1	1	1
Sanitation personnel	1	1	1	1, 6	1	1	1, 14
Dentists and/or dental hygienists	1			1			1
Laboratory personnel	1		1				1
Others	1	1	1				
Provides academic training for public health personnel:							
Physicians	1	1	1	1	1	1	1
Nurses	1	1	1	1	1	1	1
Sanitation personnel	1	1	1	1	1	1	1
Dentists and/or dental hygienists			1	1			1
Laboratory personnel	1			1		1	
Others				1		1	
Engages in postgraduate educational activities for private practitioners:							
Physicians	1	1	1	1	1	1	1
Nurses						1	
Dentists	1			1			
Others							
Engages in health education activities for lay persons through:							
Group instruction	1	1	1	1, 3, 4, 6	1	1	1
Radio	1	1	1	1, 3, 4, 6	1	1	1
Bulletins and pamphlets	1	1	1	1, 3, 4, 6	1	1	1
Exhibits	1	1	1	1, 3, 4, 6	1	1	1
Press releases	1	1		1	1	1	1
Motion pictures	1	1	1	1	1	1	
Employs special personnel for the editing and release of educational material	1	1				1	1
LICENSES:							
Licenses members of the healing arts:							
Physicians	9	9, 13	9	9	9	1	9
Osteopaths	9	9, 13	13	13	9	1, 13	8
Chiropractors	9	9, 13	13	13	13	1, 13	8
Optometrists	9	13	13	13	13	1, 13	13
Nurses	10	10	10	10	10	1, 10	10
Dentists	11	11	11	11	11	11	11
Dental hygienists			11	11	11	11	11
Pharmacists	12	12	12	12	12	12	12
Others	9	9, 13	13	9		1, 13	8
Licenses embalmers and/or funeral directors	13	13	13	13	13	13	1
Licenses midwives (covered in chapter VII of this series).							
Licenses sanitation personnel: Plumbers, swimming-pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).							
Licenses barbers and beauticians (covered in chapter V of this series).							
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).							

See footnotes at end of table.

TABLE 1.—Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Florida	Georgia	Idaho *	Illinois	Indiana	Iowa	Kansas	Kentucky
VITAL STATISTICS:								
Receives the following reports:								
Births.....	1	1	1	1	1	1	1	1
Deaths.....	1	1	1	1	1	1	1	1
Marriages.....	1		1			1	1	
Divorces.....	1					1		
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).								
Analyzes the reports received.....	1	1	1	1	1	1	1	1
Allocates births and deaths to place of residence.....	1	1		1		1	1	1
Furnishes other agencies and divisions with copies of reports or results of analyses:								
Routinely.....	1	1	1	1		1	1	1
Upon request.....	1	1	1	1	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.....	1							
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....		1	1	1		1	1	1
LABORATORY SERVICES:								
Examines the following types of specimens:								
Veneral disease.....	1	1	1	1	1	1,6	4,1	1
Other communicable disease.....	1	1	1	1	1	1,6	1	1
Noncommunicable disease.....	1	1	1	1	1,6	1	4,1	1
Water samples.....	1	1	1	1	1	1,6	1,6	1
Milk samples.....	1	3	1	3	1	1,3,6	1	1
Food and drug samples.....	3	3	1	3	1	3	1,6	1
Substances affecting industrial health.....			1	1,6	1	1	1	
Engages in research activities.....	1	1,3		1,6	1,6	1,6	1	
Manufactures biologicals distributed at State expense.....		1		1		1,6	1	1
Operates branch laboratories.....	1	1	1	1			1	1
Distributes grants-in-aid to local laboratories.....		1					1	1
Maintains general supervision over private laboratories.....				1				
Approves private laboratories for selected types of work only.....		1			1	1,1,6	1	1
HEALTH EDUCATION:								
Provides in-service training for public health personnel:								
Physicians.....	1	1	1	1	1,2,6	1	1	1
Nurses.....	1	1	1	1	1,2	1	1	1
Sanitation personnel.....	1	1	1	1,6	1	1,6	1	1
Dentists and/or dental hygienists.....	3,14	3,6		1	1,6		1	1
Laboratory personnel.....	1		1	1	1,6	1,6	1	1
Others.....				1	1		2	
Provides academic training for public health personnel:								
Physicians.....	1	1	1	1	1,2,6	1	1	1
Nurses.....	1	1	1,2	1	1	1	1	1
Sanitation personnel.....	1	1	1	1	1	1	1	1
Dentists and/or dental hygienists.....				1	1,6		1	1
Laboratory personnel.....	1	1	1			1	1	
Others.....						1		1
Engages in postgraduate educational activities for private practitioners:								
Physicians.....	1	1	1	1	1,6	1,6	1	1
Nurses.....				1	1,6	1		
Dentists.....	1	1				1,6	1	
Others.....								
Engages in health education activities for lay persons through:								
Group instruction.....	1	1	1	1	1	1	1	1
Radio.....	1	1	1	1	1	1	1	1
Bulletins.....	1	1	1	1	1	1	1	1
Exhibits.....	1	1	1	1	1	1	1	1
Press releases.....	1	1	1	1	1	1	1	1
Motion pictures.....	1	1	1	1	1	1	1	1
Employs special personnel for the editing and release of educational material.....	1	1		1	1	1	1	1

See footnotes at end of table.

TABLE 1.—Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky
LICENSURE:								
Licenses members of the healing arts:								
Physicians.....	9	9	8	8	9	1, 9	9	1
Osteopaths.....	13	13	8	8	9	1, 13	13	1
Chiropractors.....	13	13	8	8	9	1, 13	13	13
Optometrists.....	13	13	8	8	13	1, 13	13	1
Nurses.....	10	10	8	8	10	10	10	10
Dentists.....	11	11	8	8	11	1, 11	11	11
Dental hygienists.....						1, 11		
Pharmacists.....	12	12	8	8	12	12	12	12
Others.....	13			8	9	1, 13	13	
Licenses embalmers and/or funeral directors.....	13	13	8	8	13	1, 13	13	13
Licenses midwives (covered in chapter VII of this series).								
Licenses sanitation personnel: Plumbers, swimming pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).								
Licenses barbers and beauticians (covered in chapter V of this series).								
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).								
VITAL STATISTICS:								
Receives the following reports:								
Births.....	1	1	1	14	1	1	1	1
Deaths.....	1	1	1	14	1	1	1	1
Marriages.....	1	1	1	14	1		1	
Divorces.....	1		1	14	1		1	
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).								
Analyzes the reports received.....	1	1	1	14	1	1	1	1
Allocates births and deaths to place of residence.....	1	1	1	14			1	
Furnishes other agencies and divisions with copies of reports or results of analyses:								
Routinely.....	1			14	1	1	1	
Upon request.....	1	1	1	14	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.								
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....	1	1	1	14	1	1	1	1
LABORATORY SERVICES:								
Examines the following types of specimens:								
Venereal disease.....	1	1	1	1	1	1	1	1
Other communicable disease.....	1	1	1	1	1	1	1	1
Noncommunicable disease.....	1, 14	1	1	1	1, 6	4, 6	1	1, 4, 14
Water samples.....	1	1	1	1	1	1	1, 7	1
Milk samples.....	1	1, 14	1	1	1	1, 3	1	1
Food and drug samples.....	1	1, 14	1	1	1, 3	3	7	1
Substances affecting industrial health.....				6	1	1		1
Engages in research activities.....	1		1	1	1	1, 6	1	14
Manufactures biologicals distributed at State expense.....	1			1	1	1	1	
Operates branch laboratories.....	1	1	1	1	1	1		
Distributes grants-in-aid to local laboratories.....					1		1	
Maintains general supervision over private laboratories.....				1	1			
Approves private laboratories for selected types of work only.....	1		1	1		1		

See footnotes at end of table.

TABLE 1.—*Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
HEALTH EDUCATION:								
Provides in-service training for public health personnel:								
Physicians.....	1	1	1	1	1	1	1	1
Nurses.....	1	1	1	1	1	1	1	1
Sanitation personnel.....	1, 6	1	1	1	1	1, 3, 6	1	1
Dentists and/or dental hygienists.....			1	1	1	1	1	1
Laboratory personnel.....	1		1	1	1	1	1	
Others.....						6	1	
Provides academic training for public health personnel:								
Physicians.....	1	1	1	1	1, 6	1	1	1
Nurses.....	1	1	1	1	1, 6	1	1	1
Sanitation personnel.....	1	1		1	1, 6	1	1	1
Dentists and/or dental hygienists.....		1		1	1, 6		1	
Laboratory personnel.....				1	1, 6	1	1	1
Others.....	4	1		1	1, 6		1	1
Engages in postgraduate educational activities for private practitioners:								
Physicians.....	1, 6	1	1	1	1, 6	1, 6	1	1
Nurses.....				1			1	
Dentists.....		1	1	1	1, 6	1	1	1
Others.....								
Engages in health education activities for lay persons through:								
Group instruction.....	1	1	1	1	1	1	1	1
Radio.....	1	1	1	1	1	1	1	1
Bulletins.....	1	1	1	1	1	1	1	1
Exhibits.....	1	1	1	1	1	1	1	1
Press releases.....	1		1	1	1	1	1	1
Motion pictures.....	1	1	1	1, 4	1	1	1	1
Employs special personnel for the editing and release of educational material.....			1		1	1	1	1
LICENSES:								
Licenses members of the healing arts:								
Physicians.....	9	9	9	8, 9	9	9	1	1
Osteopaths.....	13	13	13	8, 13	13	13	1	13
Chiropractors.....		13	13		13	13		13
Optometrists.....	13	13	13	8, 13	13	13	13	13
Nurses.....	10	10	10	8, 10	10	10	10	10
Dentists.....	11	11	11	8, 11	11	11	11	11
Dental hygienists.....		11		8, 11	11	11	11	
Pharmacists.....	12	12	12	8, 12	12	12	12	12
Others.....	13			8, 13		9, 13	1	1
Licenses embalmers and/or funeral directors.....	13	13	13	8, 13	13	1	13	13
Licenses midwives (covered in chapter VII of this series).								
Licenses sanitation personnel: Plumbers, swimming pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).								
Licenses barbers and beauticians (covered in chapter V of this series).								
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).								

See footnotes at end of table.

TABLE 1.—*Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory						
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York North Carolina
VITAL STATISTICS:							
Receives the following reports:							
Births.....	1	1	1	1	1	1	1
Deaths.....	1	1	1	1	1	1	1
Marriages.....		1	1	1	1		1
Divorces.....		1		1	14		
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).							
Analyzes the reports received.....	1	1	1	1	1	1	1
Allocates births and deaths to place of residence.....	1			d 1	1	1	1
Furnishes other agencies and divisions with copies of reports or results of analyses:							
Routinely.....	1	1			1	1	1
Upon request.....	1	1	1	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.....			1				
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....	1	1		1	1	1	1
LABORATORY SERVICES:							
Examines the following types of specimens:							
Venereal disease.....	1	1	1	1	1	1	1
Other communicable disease.....	1	1	1	1	1	1	1
Noncommunicable disease.....	1		1	1, 14		d 1	1
Water samples.....		1	1, 6	1	1	1	1
Milk samples.....	14	3	1, 6	1	1	1	
Food and drug samples.....	1	3	6	1	1	1	3
Substances affecting industrial health.....	1			1			5
Engages in research activities.....	1, 14				d 1		1.5
Manufactures biologicals distributed at State expense.....							1
Operates branch laboratories.....				1			1
Distributes grants-in-aid to local laboratories.....	1				1		1
Maintains general supervision over private laboratories.....	1						1
Approves private laboratories for selected types of work only.....					1		1
HEALTH EDUCATION:							
Provides in-service training for public health personnel:							
Physicians.....		1			1	1	1
Nurses.....	1, 2	1	1	1	1	1	1
Sanitation personnel.....	1, 3, 14	3	1	1		1	1
Dentists and/or dental hygienists.....							1
Laboratory personnel.....	1	1			1		
Others.....	1					1	
Provides academic training for public health personnel:							
Physicians.....		1	1	1	1	1	1
Nurses.....	1	1	1	1		1	1
Sanitation personnel.....	1	1		1	1		1
Dentists and/or dental hygienists.....			1	1	1		1
Laboratory personnel.....	1			1	1		
Others.....			1	1	7		
Engages in postgraduate educational activities for private practitioners:							
Physicians.....	1	1	1	1	1	1	1
Nurses.....	1						1
Dentists.....	1	1	1				1
Others.....							
Engages in health education activities for lay persons through:							
Group instruction.....	1	1	1	1	1	1	1
Radio.....	1	1	1	1	1	1	1
Bulletins.....	1	1	1	1	1	1	1
Exhibits.....	1	1	1	1	1	1	1
Press releases.....	1			1	1	1	1
Motion pictures.....	1	1	1	1	1	1	1
Employs special personnel for the editing and release of educational material.....							1

TABLE 1.—Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina
LICENSURE:								
Licenses members of the healing arts:								
Physicians.....	9	1	9	9	9	9	4	9
Osteopaths.....	13	1	13	9	9	13	4	13
Chiropractors.....	13	1	13	13	9	13	4	13
Optometrists.....	13	1	13	13	13	13	4	13
Nurses.....	10	4, 10	10	4	10	10	4	10
Dentists.....	11	1	11	11	11	11	4	11
Dental hygienists.....	11	1	11	11	11	11	4	11
Pharmacists.....	12	1	12	12	12	12	4	12
Others.....	13	1	13	13	9	13	4	13
Licenses embalmers and/or funeral directors.....	13	1	13	13	13	13	1	13
Licenses midwives (covered in chapter VII of this series).								
Licenses sanitation personnel: Plumbers, swimming pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).								
Licenses barbers and beauticians (covered in chapter V of this series).								
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).								

Activity	State or Territory							
	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota
VITAL STATISTICS:								
Receives the following reports:								
Births.....	1	1	1	1	1	1	1	1
Deaths.....	1	1	1	1	1	1	1	1
Marriages.....	1	1	1	1	1	1	1	1
Divorces.....	1	1	1	1	1	1	1	1
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).								
Analyzes the reports received.....	1	1	1	1	1	1	1	1
Allocates births and deaths to place of residence.....	1	1	1	1	1	1	1	1
Furnishes other agencies and divisions with copies of reports or results of analyses:								
Routinely.....	1	1	1	1	1	1	1	1
Upon request.....	1	1	1	1	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.....			1					
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....	1	1	1	1	1	1	1	1
LABORATORY SERVICES:								
Examines the following types of specimens:								
Veneral disease.....	1	1	1	4	1	1	1	1, 6
Other communicable disease.....	1	1	1	1	1	1	1	1, 6
Noncommunicable disease.....	1	4	1	6	1	1	1	1, 6
Water samples.....	1, 7	1	1	1, 6	1	1	1	1, 6
Milk samples.....	1, 7	1	1	1, 3	1	1, 3	1	1, 3, 6
Food and drug samples.....	7	1, 3	1	3	1, 3, 12	1	1	6
Substances affecting industrial health.....	1	1	1	1, 5	1, 5	1	1	1
Engages in research activities.....	1	1	4	1, 6	1, 6	1	1	1
Manufactures biologicals distributed at State expense.....	1	1	1	1	1	1	1	1

See footnotes at end of table.

TABLE 1.—*Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota
LABORATORY SERVICES—Continued.								
Operates branch laboratories.....	1		1		1	1		1, 6
Distributes grants-in-aid to local laboratories.....		1		1				
Maintains general supervision over private laboratories.....		1	1					
Approves private laboratories for selected types of work only.....				1	1, 6	1		1
HEALTH EDUCATION:								
Provides in-service training for public health personnel:								
Physicians.....			1	1	1	1	1	1
Nurses.....	1	1	1	1	1	1	1	1
Sanitation personnel.....	1	1, 3		1, 3	1	1	1	1
Dentists and/or dental hygienists.....	1		1		1		1	
Laboratory personnel.....	1		1			1	1	1
Others.....		1	1		1			
Provides academic training for public health personnel:								
Physicians.....	1	1	1	1	1, 6		1	1
Nurses.....	1	1	1	1	1, 6		1	1
Sanitation personnel.....	1	1	1		1, 6		1	1
Dentists and/or dental hygienists.....			1	1			1	
Laboratory personnel.....	1					1		
Others.....	1			1	1, 6			
Engages in postgraduate educational activities for private practitioners:								
Physicians.....	1		1		1	1	1	1
Nurses.....		1		1				
Dentists.....	1	1	1	1	1		1	
Others.....								
Engages in health education activities for lay persons through:								
Group instruction.....	1	1	1	1, 4	1	1	1	1
Radio.....	1		1	1, 4	1	1	1	1
Bulletins.....	1	1	1	1, 4	1	1	1	1
Exhibits.....	1	1	1	1, 4	1	1	1	1
Press releases.....	1		1		1	1	1	1
Motion pictures.....	1	1	1	1, 4	1	1	1	
Employs special personnel for the editing and release of educational material.....			1	1, 4	1			
LICENSES:								
Licenses members of the healing arts:								
Physicians.....	9	9	9	9	4, 9	1	9	1
Osteopaths.....	13	9	13	13	4, 13	1	13	13
Chiropractors.....	13	9	13	13	4, 9	1	13	13
Optometrists.....	13	13	13	13	4, 13	1	13	13
Nurses.....	10	9	10	10	4, 10	1	10	10
Dentists.....	11	11	11	11	4, 11	1	11	11
Dental hygienists.....		11	11		4, 11	1		11
Pharmacists.....	12	12	12	12	4, 12	1	12	12
Others.....	13	9	13	13	4, 9	1	13	13
Licenses embalmers and/or funeral directors.....	1	13	13	13	1, 4, 13	1	13	13
Licenses midwives (covered in chapter VII of this series).								
Licenses sanitation personnel: Plumbers, swimming pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).								
Licenses barbers and beauticians (covered in chapter V of this series).								
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).								

See footnotes at end of table.

TABLE 1.—*Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin
VITAL STATISTICS:								
Receives the following reports:								
Births.....	1	1	1	1	1	1	1	1
Deaths.....	1	1	1	1	1	1	1	1
Marriages.....				1	1		1	1
Divorces.....				1	1			1
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).								
Analyzes the reports received.....	1	1	1	1	1	1	1	1
Allocates births and deaths to place of residence.....	1		1		1	1	1	1
Furnishes other agencies and divisions with copies of reports or results of analyses:								
Routinely.....		1	1		1	1	1	1
Upon request.....	1	1	1	1	1	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars.....								
Certifies for payment by local authorities vital statistics reports submitted by local registrars.....	1	1	1	1	1	1	1	1
LABORATORY SERVICES:								
Examines the following types of specimens:								
Venereal disease.....	1	1	1	1	1, 6	1	1	1, 7
Other communicable disease.....	1	1	1	1	1	1	1	1, 6
Noncommunicable disease.....	1	1	1	6, 14	4		1	1, 6
Water samples.....	1	1	1	1	1	1	1	1, 6
Milk samples.....	1	1	7	1, 3	1, 3	1, 7	1	1, 3, 6
Food and drug samples.....	3	1	7	1	1, 3	7	1	3
Substances affecting industrial health.....		1	1	1	1	5	1	1
Engages in research activities.....		1			1		1	1, 6
Manufactures biologicals distributed at State expense.....	1	1	1				1	1, 6
Operates branch laboratories.....	1		1		1			1
Distributes grants-in-aid to local laboratories.....		1				1		1
Maintains general supervision over private laboratories.....								
Approves private laboratories for selected types of work only.....					1	1	1	1, 6
HEALTH EDUCATION:								
Provides in-service training for public health personnel:								
Physicians.....	1	1	1	1	1	1	1	
Nurses.....	1	1	1	1	1	1	1, 2	1
Sanitation personnel.....	1, 3, 6	1	1	1		1	1	1, 3
Dentists and/or dental hygienists.....	1	1			1			
Laboratory personnel.....	1	1	1		1			1, 6
Others.....	1	1				1		
Provides academic training for public health personnel:								
Physicians.....	1	1	1	1	1	1	1	1
Nurses.....	1	1	1	1	1	1	1	1
Sanitation personnel.....	1	1	1	1	1	1	1	1
Dentists and/or dental hygienists.....	1	1		1				
Laboratory personnel.....	1	1	1		1			
Others.....	1, 6	1	1					1
Engages in postgraduate educational activities for private practitioners:								
Physicians.....	1, 6	1	1	1	1, 6	1	1	1
Nurses.....								
Dentists.....	1		1	1				1
Others.....								
Engages in health education activities for lay persons through:								
Group instruction.....	1, 4, 6	1	1	1	1, 4	1	1	1
Radio.....	1	1	1	1	1	1	1	1
Bulletins.....	1	1	1	1	1, 4	1	1	1
Exhibits.....	1, 6	1	1	1	1	1	1	1
Press releases.....	1	1	1	1	1	1	1	1
Motion pictures.....	1	1	1	1	1	1	1	1
Employs special personnel for the editing and release of educational material.....	1, 4, 6	1			1		1	
LICENSES:								
Licenses members of the healing arts:								
Physicians.....	9	9	8	9	9	8	1	9
Osteopaths.....	13	9	8	13		8	13	9

See footnotes at end of table.

TABLE 1.—Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin
LICENSEURE—Continued.								
Licenses members of the healing arts—Con.								
Chiropractors	13		8	13		8	13	13
Optometrists	13	13	8	13	13	8	13	13
Nurses	10	10	8	10	10	8	10	1, 10
Dentists	11	11	8	11	11	8	11	11
Dental hygienists	11			11		8	11	11
Pharmacists	12	12	8	12	12	12	12	12
Others	13	13	8			8		
Licenses embalmers and/or funeral directors	13	13	8	13	13	8	13	1, 13
Licenses midwives (covered in chapter VII of this series).								
Licenses sanitation personnel: Plumbers, swimming pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).								
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).								

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
VITAL STATISTICS:					
Receives the following reports:					
Births	1	14	1	1	1
Deaths	1	14	1	1	1
Marriages		14	1	1	
Divorces				1	
Morbidity reports (covered in chapters II, III, IV, VI, and VIII of this series).					
Analyzes the reports received	1	14	1	1	1
Allocates births and deaths to place of residence	1		1	1	
Furnishes other agencies and divisions with copies of reports or results of analyses:					
Routinely	1	14	1		1
Upon request	1	14	1	1	1
Makes payments from State funds for vital statistics reports submitted by local registrars				1	
Certifies for payment by local authorities vital statistics reports submitted by local registrars	1	14			
LABORATORY SERVICES:					
Examines the following types of specimens:					
Venereal disease	1	1	1	1	1
Other communicable disease	1	1	1	1	1
Noncommunicable disease		1	1	1	1
Water samples	1	1	1	1	1
Milk samples	1, 7	1	1	1	
Food and drug samples			1	1	
Substances affecting industrial health			1		
Engages in research activities				1	
Manufactures biologicals distributed at State expense	1				
Operates branch laboratories			1	1	
Distributes grants-in-aid to local laboratories					
Maintains general supervision over private laboratories					
Approves private laboratories for selected types of work only					
HEALTH EDUCATION:					
Provides in-service training for public health personnel:					
Physicians	1			1	
Nurses	1	1	1	1	1
Sanitation personnel	1			1	1
Dentists and/or dental hygienists	1				
Laboratory personnel				1	1
Others					

See footnotes at end of table.

TABLE 1.—*Department of State government responsible for miscellaneous services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
HEALTH EDUCATION—Continued.					
Provides academic training for public health personnel:					
Physicians.....	1	1	1	1	d 1
Nurses.....	1	1	1	1	-----
Sanitation personnel.....	1	-----	1	1	-----
Dentists and/or dental hygienists.....	1	-----	-----	-----	-----
Laboratory personnel.....	-----	1	1	1	-----
Others.....	-----	-----	1	-----	-----
Engages in postgraduate educational activities for private practitioners:					
Physicians.....	1	1	1	1	-----
Nurses.....	-----	-----	-----	-----	-----
Dentists.....	-----	-----	-----	-----	-----
Others.....	-----	-----	-----	-----	-----
Engages in health education activities for lay persons through:					
Group instruction.....	1, 4	1	1, 4	1	1
Radio.....	-----	1	1, 4	1	-----
Bulletins.....	1, 4	1	1, 4	1	1
Exhibits.....	1, 4	1	1, 4	1	1
Press releases.....	-----	-----	1	1	1
Motion pictures.....	1	1	1	1	-----
Employs special personnel for the editing and release of educational material.....	1, 4	-----	1, 4	1	-----
LICENSURE:					
Licenses members of the healing arts:					
Physicians.....	9	9	9	9	9
Osteopaths.....	9	14	13	9	-----
Chiropractors.....	13	13	13	-----	-----
Optometrists.....	13	13	13	-----	-----
Nurses.....	10	-----	10	9	10
Dentists.....	11	11	11	11	9
Dental hygienists.....	-----	-----	11	-----	-----
Pharmacists.....	12	12	12	12	9
Others.....	-----	-----	1, 13	-----	-----
Licenses embalmers and/or funeral directors.....	13	14	1	1	-----
Licenses midwives (covered in chapter VII of this series).	-----	-----	-----	-----	-----
Licenses sanitation personnel: Plumbers, swimming-pool operators, operators of water and sewage treatment plants (covered in chapter V of this series).	-----	-----	-----	-----	-----
Licenses barbers and beauticians (covered in chapter V of this series).	-----	-----	-----	-----	-----
Licenses hospitals and/or other health facilities (covered in chapters III, VI, and VII of this series).	-----	-----	-----	-----	-----

* Code:

1. Health department
2. Department of welfare
3. Department of agriculture
4. Department of education
5. Department of labor
6. State university or college
7. Independent State laboratory, State laboratory department, State chemist, State toxicologist
8. Department of civil service and registration, department of registration and education, department of law enforcement, commission on licensure
9. Board of medical examiners
10. Board of nursing examiners
11. Board of dental examiners
12. Board of pharmacy
13. Other independent licensing or examining boards established specifically for control of the professional group indicated
14. Other departments of State government

**Any differences between information presented in this table and corresponding entries in previous chapters of this series are the result of combining several activities originally shown separately or of further refinement of the data since publication of the earlier articles.

• The department of health is really a division (Idaho) and bureau (Maine) of public health, subordinate to the department of public welfare (Idaho) and the department of health and welfare (Maine).

• Within the State only.

• Within the State only for births; both within and without the State for deaths.

• To a limited extent or under certain conditions only—for selected areas, selected cases, etc.

• Two agencies of this classification function in this manner.

† Service provided, but on a fee basis.

‡ Has authority, but little is done.

• On a voluntary basis.

VITAL STATISTICS

Improvement in the collection and preservation of vital statistics (records of births and deaths and—in some instances—of marriages and divorces) has been stimulated by the United States Bureau of the Census over a period of years. As early as 1880 a registration area for deaths was established, with two States and the District of Columbia qualifying for membership. The registration area for births was initiated in 1915. Requirements for admission to these areas were based upon satisfactory State vital statistics laws and 90 percent completeness of reporting, as shown by special applied tests. In 1940, all 48 States, the District of Columbia, Hawaii, and the Virgin Islands had been admitted to both the death and birth registration areas. Puerto Rico belonged to the death registration area only, and Alaska had not qualified for admission to either.

In addition to supplying valuable information concerning population trends, complete files of vital statistics records constitute a valuable reservoir of information which may be drawn upon to supply the answers to numerous related questions, many of which are significant in the field of health. Then too, from such files may be made transcripts of birth and death certificates which are constantly in demand for verification of age or of citizenship or for collection of death benefits.

All but two of the 53 jurisdictions delegate collection and processing of vital statistics to the State health department, and most of them specifically designate by statute that the State health officer shall be registrar of vital statistics for the State. Massachusetts and Alaska are the two exceptions; the secretary of State and the Territorial auditor, respectively, are the governmental units responsible. In view of such striking agreement among the States as to the agency officially in charge of assembling and interpreting vital statistics data, it might be expected that a uniform procedure would be followed in the items recorded and in the State set-up for collecting vital statistics, that a common type of analysis would be made by the several vital statistics units, and that consistent arrangements for supplying copies of birth and death certificates would be agreed upon. On the contrary, marked individuality characterizes State plans for administering vital statistics services.

While reports of births and deaths are received by all States, marriages are reported to the State agency in but 32 jurisdictions, and divorces in only 20. In all States, the collection of vital statistics records is accomplished through local registrars functioning in local registration districts. These local registrars receive reports of births and deaths directly from attending physicians, midwives, undertakers,

or other informants. The basis upon which local registration districts are formed and the method by which local registrars are appointed are prescribed by State law. For the most part, political subdivisions of a county constitute the basis for establishing local vital statistics registration districts. Cities, villages, towns, townships, election districts, magisterial districts, or similar minor civil divisions form the local registration areas in 42 States. In the remaining States, geographic rather than political characteristics are the factors which determine the boundaries of local registration districts. Convenience of communication, transportation facilities, and mail service are items usually considered under this plan. There is even greater variation with respect to the method of appointing local registrars. In over two-fifths of the States, either the State board of health, the State health officer, or the director of the bureau of vital statistics makes the appointments; in a dozen more, they are appointed locally by the board of county commissioners, the local health officer, the board of town trustees, the mayor, or board of aldermen; in 10 States the duties of city or town clerk or of local health officer automatically include the collection of vital statistics; while in the remaining half dozen States, the office is elective—by popular vote of the community.

Another administrative item regarding which there is diversity of policy is the promptness with which vital statistics reports must be filed with local registrars and forwarded by them to the State. The period allowed physicians and midwives for reporting births to the local registrar ranges from 3 to 15 days, with 10 days being the time most frequently given. For deaths, anywhere from 24 hours to 10 days is set as the limit, but 72 hours, or "before burial," represents the most usual requirement. With but few exceptions, birth and death certificates are forwarded to the State office at monthly intervals. In several States they must be in by the fourth day of the succeeding month; in others, 15 or 20 days are allowed. Generally, however, the tenth day marks the limit.

Finally, the means and amount of reimbursement for local registrars is a subject of disagreement. In general, where vital statistics registrars hold their positions by an *ex officio* arrangement, the salary which they draw by virtue of their major office also covers their efforts as vital statistics collectors. Persons who function solely as local registrars are usually recompensed on a fee rather than a salary basis. The size of fee ranges from 10 cents to over \$1 for each birth and death certificate submitted to the State, with 25 cents the figure most commonly reported. In a few jurisdictions only half-price is paid for delayed certificates, while in others a flat monthly bonus is paid for prompt reporting; in still others, the rate for birth certificates is double that for certificates of death. Occasionally, payments for this service are made by the State agency from State

funds. The more customary procedure is that whereby the State agency certifies the amount to which each local registrar is entitled, and payment is made by the respective counties or cities.

States differ to a lesser extent in the use which they make of the vital statistics data collected. Each bureau or division of vital statistics functions primarily as a service unit, the foremost concern of which is to file and preserve the original records entrusted thereto and to supply certified copies of birth and death records to individuals requesting such information. More recently, proof of age and place of birth has been required for an increasing number of purposes. Outstanding among these are verification of age for a child to enter school; for the right to vote, to marry, or to inherit; for work permits in connection with enforcement of laws against employing minors in certain occupations; for government employment under the civil service system or in war industries; for induction into the military service; and for securing Federal benefits such as social security grants. Requests for copies of death and marriage records are made less frequently, but the State agency supplies them as called for. Hundreds and, in some cases, even thousands of copies of vital statistics records are issued each year by State bureaus or divisions of vital statistics. Charges for such service vary from 25 cents to \$1 per copy. Another routine performance of all State vital statistics units is the furnishing of transcripts of all birth, death, and stillbirth certificates to the United States Bureau of the Census each month and the monthly and annual compiling of certain tabulations for the United States Public Health Service.

Beyond these common services, all States make certain types of analyses of the gross body of vital statistics data which they have gathered. The detail of such analyses depends, to a large extent, upon the size of staff and mechanical equipment available for study purposes.

By measuring death rates from different causes, the progress of health programs directed toward reduction of particular diseases or conditions can be evaluated. Likewise, situations requiring intensified control are disclosed. All States routinely tabulate deaths by cause, and nearly all of them make age, race, sex, and locality classifications. Three-fourths of the States in determining death rates by locality correct the place of death to actual place of residence. In addition to making ordinary tabulations, which are furnished to an established list of recipients by almost 75 percent of the jurisdictions, most States are prepared to supply—upon request—special statistical reports to official and nonofficial agencies having particular health interests. Routine referral of limited information upon receipt thereof is made by about a third of the State bureaus of vital statistics to

interested official and voluntary agencies. For example, in some States it is routine practice to furnish the division of tuberculosis with descriptive information (age, sex, race, etc.) of persons dying of tuberculosis; in others, reports of maternity and infant deaths are referred automatically to the division of maternity and child health; still others regularly notify the division of epidemiology of deaths from the various communicable diseases. A number of crippled children's divisions, likewise, periodically receive reports of births with congenital deformities, while the State department of motor vehicles and the National Safety Council are frequent recipients of information concerning accidental deaths.

Unfortunately, according to statements made by some State personnel engaged in vital statistics work, the material available from their files is not always utilized fully by division directors responsible for program planning. Furthermore, the increased demand for copies of birth records has necessitated curtailment of analytical procedures. As a result of these combined circumstances, few States go beyond their primary duty of collecting and preserving records and preparing more or less standard tabulations.

LABORATORY SERVICES

Public health laboratories are maintained by the State for three major purposes. First, they make available to physicians, hospitals, and public health personnel diagnostic facilities which would otherwise be unavailable. Second, certain biologicals to be distributed for preventive or therapeutic purposes are prepared therein. Third, the personnel of such laboratories act in a supervisory capacity with regard to practices and procedures of private laboratories. Availability of State laboratory service for specific purposes has already received some consideration in previous articles of this series.³ At the same time, these scattered references give no complete or coherent picture of State organization for making all types of laboratory tests that may be required for the administration of a balanced health program.

To a varying extent, and under divergent circumstances, provision of laboratory service for the diagnosis of communicable and—in some instances—noncommunicable diseases, for the analysis of drinking water, milk, foods, and drugs, and for determination of the presence and concentration of toxic substances in industrial establishments is recognized as a responsibility of State government. Although all branches of laboratory service listed have public health significance, there is conspicuous difference in identity of the State agency responsible for the provision of each.

³ See text footnote *.

Except in Arizona, where the entire State laboratory is administered as an independent agency, and in Wisconsin, where tests for venereal diseases are made by the Psychiatric Institute, the State health department—either independently, or cooperatively with the State university—maintains facilities for diagnosis of all communicable illnesses, including tuberculosis and the venereal diseases. No effort was made in this study to elicit information as to the individual procedures followed in arriving at positive or negative findings or of the verification measures employed. Of particular interest was the disclosure that, for the country as a whole, serologic tests for syphilis represent approximately two-thirds of the entire diagnostic laboratory work of State health departments for all communicable diseases. In only 7 States did this proportion fall below 50 percent of the total work done for transmissible illnesses. Recently enacted premarital examination laws and laws requiring serological tests for expectant mothers are believed to be partially responsible for this concentration of activity in State health department laboratories. Further explanation, no doubt, lies in the fact that many of the simpler diagnostic tests may be performed locally, while fewer of the local units are equipped to do serology.

Aid in the diagnosis of noncommunicable illnesses, when given by the State, is also a function of the health department laboratory, though a number of State hospitals administered by universities, cancer commissions, and independent boards of trustees are likewise active in this field—particularly with respect to tissue examinations for diagnosis of cancer. Even so, laboratory service for diagnosis of noncommunicable conditions is provided by the State far less commonly than is diagnostic service for transmissible diseases. As a matter of fact, only 20 health departments routinely make blood counts, 28 do urinalyses as part of their regularly scheduled work, and 14 reported tissue examinations—which in some instances are limited to cancer. All specimens for diagnosis of human illness must be submitted to the State laboratory by physicians, hospitals, or public health personnel. In about half of the States where laboratories other than those of the health department operate, service is available only to patients of the respective hospitals.

Another important function of State health department laboratories is the bacteriological and chemical analysis of samples of drinking water. The water laboratory may be a part of the diagnostic laboratory or it may be operated separately by the division of sanitary engineering. Water samples are collected periodically from public supplies, but samples from private supplies are usually tested only upon request of a local physician, public health worker, or private citizen. It is more customary for the State agency to charge a fee for water analysis than for any other type of laboratory service.

In addition to health department activity, several State universities—either independently, or cooperatively with the health department—also make analyses of drinking water.

State facilities for bacteriological and chemical analysis of milk, foods, and drugs are scattered among more different agencies of State government than are facilities for diagnosis of disease and determination of the safety of drinking water. This observation is supported by the fact that 3 departments of agriculture are exclusively responsible for milk testing, and 12 for food and drug analyses, whereas 8 and 4 more, respectively, share such duties with State health departments. Besides the departments of agriculture referred to, independent State laboratories or laboratory departments, State chemists, agricultural experiment stations, livestock sanitary boards, public service divisions of State universities, or boards of pharmacy—totaling nearly a dozen in all—likewise analyze milk, foods, and drugs from standpoints which are significant to public health. It is worthy of mention, perhaps, that in 5 jurisdictions no State agency makes either bacteriological or chemical analysis of milk, and in an equal number analysis of foods and drugs is not considered a State responsibility.

Laboratory service for determination of the presence and concentration of dusts, gases, fumes, and other toxic substances injurious to the health of industrial workers is afforded by 30 of the jurisdictions covered by this study. In 25 States, the health department performs all of the tests related to industrial hygiene; in 3, the department of labor functions in this capacity; and in the remaining 2, the departments of health and labor share responsibility for laboratory procedures significant to industrial health.

In addition to performing the routine laboratory services described, public health laboratories of over three-fifths of the States carry on some form of bacteriological and/or chemical research which is related to specific health problems. As a rule, the research activities are conducted on a parallel plane with the regular services rather than set up as separate projects operated by personnel assigned especially for that purpose. Upon occasion, however, certain funds are designated for particular types of research and selected personnel devote their entire time to this purpose. Foremost consideration is given to improvement of the methods used and to comparison of advocated new methods with present techniques. Outstanding among such research, from the point of view of emphasis, is the improvement of diagnostic tests for syphilis. Extensive work is done also in the fields of influenza, typhoid fever, rabies, pneumonia, diphtheria, poliomyelitis, tularemia, food poisoning, and water and milk sanitation.

About half of the State health department laboratories manufacture at least some portion of the biologicals or other materials which are distributed for preventive or therapeutic purposes. Typhoid fever

vaccine and silver nitrate are the materials most often prepared in the laboratories of State health departments, although the manufacture of rabies vaccine and of diphtheria toxoid and toxin for Schick tests was reported by more than a half dozen States each. Smallpox vaccine, whooping cough serum, scarlet fever antitoxin, dilutions of tuberculin, pneumonia serum, antimeningitis serum, tetanus antitoxin, and convalescent serum for poliomyelitis are other types of biologicals occasionally manufactured by State-operated laboratories.

In order that accessibility of the State laboratory facilities and services described might be assured to a maximum proportion of the State's inhabitants, more than half of the State health departments have established branches of their main laboratories at various strategic points. Some States have discontinued operation of branch laboratories and emphasize development of local public health laboratories. Seventeen States, either through employment of personnel or purchase of equipment, subsidize public health laboratories operated by local health departments. Payment of fees by State agencies to local laboratories is not a customary procedure for service of any type. Wherever local health units maintain laboratories of their own, the demand upon State facilities is considerably reduced, of course.

State control of techniques employed by private laboratories has been intensified with the increase in serologic work occasioned by recently enacted legislation requiring blood tests before marriage and during pregnancy. In 16 States it is mandatory that the performance of private laboratories engaged in making serologic tests be checked and approved by the director of the State laboratory or his representative. Nine jurisdictions extend State supervision over private laboratories to include all types of diagnostic tests having public health significance. In several States, although no regulatory duties are imposed upon personnel of the official health laboratory, State approval is sought as a mark of recognition. As a general rule, the director and his staff are available for consultation and advice to private laboratories upon request.

HEALTH EDUCATION

The two major objectives in the field of health education may be classified as extension of training for professional personnel and dissemination of health information for the general public. All States recognize the importance of having well-trained professional staff members. Unfortunately, however, it is sometimes necessary for both State and local health departments to employ personnel who have not had adequate specialized training. When such personnel are basically satisfactory in other respects, most State health departments arrange to give them a leave of absence and to bear a considerable portion of the expense of providing additional training for them

in accredited schools. To a large extent, State health departments finance the formal postgraduate training of public health personnel through funds made available by Federal grants-in-aid. Consequently, certain stipulations of the Federal agencies which make the grants must be satisfied in the selection of persons for training and in the length of courses offered. Within these limitations, the number and duration of special training courses vary in accordance with the needs of the employee and the interest and attitudes of the several States. Training funds may be devoted to tuition, stipends, and/or travel expenses of the selected personnel attached to both State and local health department staffs.

During 1940, nearly every State provided intramural training for one or more public health nurses and physicians, the latter group including health officers, division directors, and other medical personnel. In all except 7 States, sanitation personnel—engineers, sanitarians, food and milk inspectors, and the like—received some sort of academic training at State expense, but the number of sanitation personnel who were trained was relatively low. Special courses were arranged for laboratory workers by scarcely more than half of the States. Even less frequently were staff dentists given postgraduate training, since but 35 percent of the States listed members of this profession among their 1940 trainees.

• Explanations of the differences in size and composition of trainee groups are determined by several circumstances. Since a full year of postgraduate work is the maximum training period allowed for a single individual, departments having a high turn-over among their staff members naturally find it necessary to train more employees than do those where there is greater stabilization of employment. Moreover, according to Seger and Dance,⁴ who have analyzed records of individuals trained with Federal funds over a period of several years, "The high proportion of physician trainees in relation to the proportion of physicians employed in health departments probably reflects the desire of State health officers to emphasize the training of employees in major administrative and clinical positions. The relatively high proportion of applications from nurses may perhaps be attributed to the rapid turn-over in nursing positions as well as to the importance attached to postgraduate training by professional nursing associations. The proportion of applications from sanitation personnel, on the other hand, is relatively low. This may be due in part to lack of appreciation by public health administrators of the advantages of training this class of personnel. Undoubtedly an additional factor, however, is the fact

⁴ Seger, Gordon H., and Dance, Darrell A.: A study of the professional training program for public health personnel under title VI of the Social Security Act and the Federal Venereal Disease Control Act for the fiscal years 1936 to 1940 inclusive. Unpublished data.

that many sanitarians, exclusive of engineers, do not possess the educational qualifications required for matriculation in a graduate school of public health; hence their training was of the informal type." Additional education provided for sanitation personnel, therefore, is more apt to be given through in-service than through academic training. The fewness of laboratory technicians given postgraduate training may be ascribed to the fact that their basic instruction involves a higher degree of specialization than does the broader fundamental training of nurses and physicians. Personnel classified as "Other" in this section of table 1 include, for the most part, health educators and statisticians.

Continuation of training for public health workers is not confined to the relatively small number of employees who temporarily are relieved from duty to receive formal instruction. Programs of in-service training such as institutes, regional conferences, home study courses, or field demonstrations are conducted by all State health departments, a few departments of welfare and agriculture, and nearly a dozen State universities. By such devices active public health personnel are kept informed of newly developed techniques and administrative procedures and an opportunity is afforded for the various workers to present individual problems for group discussions and suggestions. Nurses, physicians, and sanitation personnel appear to be the most common recipients of informal, as well as formal, staff education.

Private practitioners in the fields of medicine, dentistry, and nursing are not overlooked in the plans of most States for postgraduate education of professional groups. Educational measures for private practitioners usually take the form of periodic lectures, seminars, refresher courses, conferences, or short continuation courses at selected universities. Distribution of literature pertaining to specific health problems is also followed quite extensively. Activities of an educational nature have been focused more sharply upon private physicians than upon either dentists or nurses engaged in private practice, and refresher courses for private dentists outnumber those for nurses. Even among the physicians there has been marked selectivity. Those engaged in obstetrics, pediatrics, and in the diagnosis and treatment of venereal diseases, tuberculosis, pneumonia, and cancer receive particular attention in these programs. For the most part, educational pursuits for private practitioners are carried on in conjunction with the various programs dealing with specific health activities of health departments and not as an undertaking for general purposes.

Under this same administrative set-up a certain amount of information for popular consumption is disseminated also. Earlier chapters of this series ⁵ have demonstrated the fact that educational

⁵ See text footnote*.

activities form an integral part of practically every public health program, for it is recognized quite generally that only through public understanding of proven prophylactic and therapeutic measures can their adoption be assured.

In addition to the separate educational undertakings of specialists in the several branches of public health endeavor, about half of the States operate a central system of releasing instructive health material. These general measures are aimed at promoting interest in and knowledge of the breadth of the complete health scene. Through their offices the mutual relationship of the several specialties is clarified and the numerous objectives and methods are presented as essential parts of a unified whole. In other words, the unit of health education serves as the publicity department for the entire health agency.

For the most part, States employing personnel who devote their efforts exclusively to health education maintain a systematic calendar for presenting certain phases of health work at designated times. Such schedules are sufficiently flexible to allow the filling of special requests to take precedence of routine presentations. In addition to preparing original educational materials such as regular or sporadic newspaper releases, magazine articles, bulletins and pamphlets, radio scripts, exhibits, department periodicals, and speeches, the health educator assembles and distributes materials available from other sources. Not only are these materials used by various staff members of the State agency, but they are also loaned, upon request, to local health departments or to lay groups interested in particular health problems. For example, a number of departments maintain film libraries and circulate their motion pictures throughout the State for showing by local groups.

It is not to be construed that use of the aforementioned educational methods is restricted to health departments employing full-time health educators, for in States without divisions of health education, directors of the various health specialties utilize similar devices. However, in the States having health educators, physicians and nurses are relieved of many publicity duties which they otherwise have to perform. While it appears that the position of health educator is becoming increasingly prominent on the health department staff, no agreement has been reached among the States as to the kind of training a person serving in this capacity should have. In one State, selection is made on the basis of the candidate's qualifications as a teacher; in another, writing ability and experience are the prime requisites; in a third, maintenance of satisfactory contacts with legislative groups is considered most essential; while in still another, a professional lecturer is chosen for the position. Disagreement obtains also with respect to the amount of independence permitted a health educator in the preparation of educational materials dealing with medical and

nursing subjects. The practice most frequently followed is that whereby technical statements are edited by the specialists in the health field concerned before an article is released, whereas the health educator has full responsibility for editorial considerations and for effective methods of presenting the material.

LICENSURE

No survey of the responsibility assumed by State government for the health of its citizenry would be complete without considering the steps it takes to supervise the admission of candidates to professions which participate in the treatment of human illnesses. State control over members of the various professions known as the healing arts is exercised through systems of licensure which require that every candidate to practice within a given State shall satisfy the responsible examining officials as to his training and character. For the most part, each professional group has its own licensing and examining board. For instance, physicians are licensed by a board of medical examiners, osteopaths by a board of osteopathy, chiropractors by a board of chiropractic examiners, dentists by a board of dentistry, and nurses by a nurses' examining board. In other words, representatives of each practicing body serve as judges regarding the eligibility of new aspirants to their particular profession. A few States require that a candidate shall satisfactorily pass a preliminary examination by a basic science board before his application for examination by the board representing his specialty is accepted. It is a more common procedure, however, to merge examination concerning the basic sciences with testing pertaining to his special field. There are, of course, several variations from this general plan of operation.

Five States have a central department of registration and licensing—variously listed as department of civil service and registration, department of registration and education, and department of law enforcement—which functions as the licensing agency for all branches of the healing arts. In a sixth State, physicians, osteopaths, and chiropractors are licensed by a single commission on licensure, but optometrists, nurses, dentists, and pharmacists are each regulated by separate boards. State health departments participate in the licensure of physicians in 9 States, of osteopaths in 6, and optometrists in 5; in 4 States all of the aforementioned professional groups plus chiropractors are under health department surveillance, but in 2 States of this latter listing the actual examining of candidates is done by the respective individual boards. A similar arrangement also exists in one of the States mentioned above, where a central department of registration operates. The general authority of medical examining boards is sufficiently broad

to cover, in at least a supervisory way, osteopaths in 11 States, chiropractors in 5, nurses in 2, and optometrists, dentists, and pharmacists in 1 each.

Chiropodists constitute the professional group most frequently referred to under the designation "Other," while naturopaths are next in order. Eight States do not recognize chiropractors, and osteopaths are not permitted to practice in 3.

Another group whose methods of operation are subject to regulation because of their health significance are embalmers and funeral directors. Such persons are under the full jurisdiction of their own licensing and examining board in two-thirds of the States; in 11 jurisdictions the health department, either singly or in conjunction with the board of embalmers and funeral directors, is the control agency; in the remaining States, a variety of practices is followed.

EXPENDITURES FOR CENTRAL OFFICE SERVICES AFFECTING ALL BRANCHES OF PUBLIC HEALTH WORK

It has been emphasized throughout this entire series of discussions⁶ that portrayal of the presence or absence of specific health services and establishment of the identity of State agencies responsible for designated functions have been the primary purposes of the survey. Consideration of the adequacy or volume of the several services afforded has been more or less incidental. At the same time, a more thorough understanding of the over-all situation is possible when some device is employed to measure the relative emphasis placed upon the different services by the various States. Financial expenditures have been selected as the most satisfactory gauge for measurement of this emphasis.

For the country as a whole, more than 10¼ million dollars, 8 cents per capita, are expended annually by official State agencies for the central services discussed in this chapter. Within individual States, the range extends from 20 thousand dollars in Delaware to nearly 1½ million dollars in New York. (See table 2.) On a per capita basis, however, these two States do not occupy the extreme positions from the standpoint of funds disbursed for central services affecting all branches of public health work. Instead, Ohio and Alaska—expending, respectively, \$0.038 and \$0.296 per person for these purposes—stand at the opposite ends of the scale. Per capita expenditures of the middle 50 percent of the States for central health services (including vital statistics, laboratory diagnosis, health education, and licensure of certain professional groups—particularly those identified with the healing arts) are defined by the limits of \$0.063 and \$0.114. The median per capita expenditure is \$0.082.

⁶ See text footnote *.

TABLE 2.—Approximate total and per capita annual expenditures* by all official State agencies for central office services affecting all branches of public health work in each State and Territory, the District of Columbia, and the Virgin Islands, and percentage distribution according to type of central service

State or Territory	Approximate annual expenditure* for central office services affecting all branches of public health work		Percent of reported total expenditure for central office services affecting all branches of public health work which was devoted to the particular service indicated			
	Total	Per capita	Vital statistics	Laboratory services	Health education (including professional training)	Licensure
Total.....	\$10,781,800	\$0.080	13.7	38.8	13.8	33.7
Alabama.....	228,400	.081	18.5	56.5	21.6	3.4
Arizona.....	65,000	.130	(*)	18.2	33.7	48.1
Arkansas.....	114,100	.059	28.0	22.1	15.1	34.8
California.....	614,400	.089	6.3	10.8	7.6	75.3
Colorado.....	122,300	.109	9.1	17.2	9.4	64.3
Connecticut.....	198,000	.116	10.2	51.3	4.5	34.0
Delaware.....	20,800	.078	10.6	59.6	8.2	21.6
District of Columbia.....	82,800	.125	14.0	56.8	(*)	29.2
Florida.....	261,500	.138	24.4	23.7	6.6	45.3
Georgia.....	204,900	.066	16.1	50.9	33.0	(*)
Idaho.....	58,100	.111	14.5	48.9	10.8	26.8
Illinois.....	631,200	.080	11.5	18.6	8.4	61.5
Indiana.....	194,700	.057	7.1	16.8	25.0	51.1
Iowa.....	180,000	.071	8.7	33.7	11.5	46.1
Kansas.....	131,500	.073	16.7	25.0	10.4	47.9
Kentucky.....	160,700	.056	9.7	16.3	23.8	50.2
Louisiana.....	152,900	.065	29.0	28.1	9.7	33.2
Maine.....	42,800	.051	14.5	38.8	19.6	27.1
Maryland.....	164,300	.090	12.8	41.9	10.7	34.6
Massachusetts.....	443,700	.103	9.4	39.4	8.9	42.3
Michigan.....	716,500	.136	6.2	57.1	16.3	20.4
Minnesota.....	224,400	.080	16.0	(*)	34.9	36.6
Mississippi.....	137,200	.063	18.0	34.9	38.1	9.0
Missouri.....	193,900	.051	23.5	25.1	11.7	39.7
Montana.....	63,800	.114	9.1	28.5	10.7	51.7
Nebraska.....	136,700	.104	5.1	14.3	6.0	74.6
Nevada.....	29,900	.271	7.0	36.1	20.1	36.8
New Hampshire.....	59,100	.120	11.5	48.6	8.3	31.6
New Jersey.....	370,300	.089	10.3	37.3	3.7	48.7
New Mexico.....	83,800	.158	16.7	28.8	18.0	36.5
New York.....	1,416,400	.105	8.1	83.5	8.4	(*)
North Carolina.....	270,500	.076	10.8	43.2	19.6	26.4
North Dakota.....	65,700	.102	11.0	36.2	9.7	43.1
Ohio.....	261,700	.038	8.8	26.0	3.4	61.8
Oklahoma.....	179,300	.077	22.0	21.2	14.0	42.8
Oregon.....	135,700	.125	2.9	31.2	13.0	52.9
Pennsylvania.....	579,900	.059	25.5	23.6	9.5	41.4
Rhode Island.....	80,500	.113	11.1	72.9	4.2	11.8
South Carolina.....	105,800	.056	18.5	25.7	27.4	28.4
South Dakota.....	81,200	.126	10.5	37.7	16.5	35.3
Tennessee.....	239,700	.082	12.8	31.9	43.4	11.9
Texas.....	320,600	.050	11.3	24.1	15.0	49.6
Utah.....	55,200	.100	13.8	29.3	23.9	33.0
Vermont.....	28,600	.080	(*)	40.2	7.3	52.5
Virginia.....	143,200	.053	32.0	28.9	23.8	15.3
Washington.....	98,300	.057	15.1	36.5	17.9	30.5
West Virginia.....	116,700	.081	17.5	39.9	27.8	14.8
Wisconsin.....	181,400	.058	10.0	52.6	23.3	14.1
Wyoming.....	30,000	.120	19.0	39.4	4.3	37.3
Alaska.....	21,600	.296	37.0	56.0	7.0	(*)
Hawaii.....	33,000	.078	56.4	(*)	42.7	0.9
Puerto Rico.....	249,100	.133	50.1	42.5	7.4	(*)
Virgin Islands.....	(*)	(*)	(*)	(*)	(*)	(*)

* Expenditures for the services considered represent index rather than absolute amounts. Because of variations in fiscal periods, figures cover the most recent year for which information was available at the date of interview. In some instances, because of overlapping and interweaving of activities, estimates were accepted in the absence of precise expenditure records. All funds disbursed by official State agencies for vital statistics, laboratory services, health education—including professional training, and professional licensure—are included, irrespective of their source. State-appropriated moneys constitute 64 percent of the total; Federal grants-in-aid, 20 percent; and contributions by voluntary agencies, and licensing fees, 16 percent. Approximately 5 percent of the total sum expended for central services has already been reported in chapters IV and VII of this series, since this amount was made available for activities pertinent to venereal disease control and maternity and child health services.

* Expenditures for this service as a separate activity were not procurable, and therefore are not a part of the amount listed in the column, "Total."

Wealth of the States, as measured by per capita spendable money income,⁷ appears to have small effect upon expenditures by State agencies for central health services. It is true, of course, that the per capita expenditure of the median State in the wealthiest quarter is higher than the corresponding figure for either of the other quarters. Likewise, each of the four medians roughly reflects the position of that particular group of States in the wealth gradation. Nevertheless, the actual difference between them—\$0.103 for the wealthiest quarter, \$0.085 for the second, \$0.086 for the third, and \$0.071 for the poorest—is not marked.

Geographic position might be said to exert a slightly greater influence upon a State's per capita expenditure for central health services than does its wealth. This conclusion is based on the fact that the divergence between broad geographic areas⁸ is somewhat greater than between the several economic levels. States of the western region stand highest in this respect, with a median outlay of \$0.114 per capita, while those of the southern area are lowest, spending \$0.064. The northeastern and central portions of the country hold intermediate positions, \$0.086 and \$0.076 representing their corresponding expenditures, in the order named. The fact must not be obscured that these figures represent expenditures for State activities only and do not include local services. It is quite possible, therefore, that one explanation for the differences cited lies in the larger proportion of work performed by local health units in the Southern States.

One-third of the 10½ million dollars expended by official State agencies of the entire country for central health services is devoted to licensing activities, 39 percent to laboratory service, and 14 percent each to vital statistics and to health education (including the training of professional personnel). The degree of uniformity or of diversity which exists among the individual States in this apportioning is disclosed by establishing percentage intervals for each of the four types of service under consideration and determining the concentration of States within these intervals. By this procedure it was shown that, although for the country as a whole nearly equal amounts were expended for vital statistics and health education, the behavior of discrete States was less regular with respect to the proportion assigned

⁷ Martin, John L., National Income Division, Department of Commerce: *Income Payments to Individuals by States, 1929-39. Survey of Current Business*, October 1940.

⁸ The established geographic areas, with the States contained therein, are as follows: Northeastern: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia.

Southern: Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Central: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Western: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

to health education than with regard to the percentage charged to vital statistics. Half of the States allotted between 10 and 20 percent of the total sum expended for central services to vital statistics, and one-fourth of them allocated less than 10 percent to this service. Only 10 States expended more than 20 percent of the full amount for vital statistics, and expenditures of 4 of these were influenced, no doubt, by their policy of paying local registrars from State funds instead of merely certifying the registrars' reports for payment by local authorities, as is more customary. Insofar as health education is concerned, the greatest degree of concentration occurred below the 10-percent limit. Twenty States were grouped in this interval, 16 in the one immediately higher (10 to 20 percent), and the remainder above 20 percent.

Considerable variation was noted between the distribution for laboratory service and for licensure, likewise. While few States accredited less than 20 percent to either of these services, laboratory activities received from 20 to 40 percent in half of the States, and more than 40 percent in only 16. The reverse situation occurred with respect to licensure. This service accounted for more than 40 percent of the funds in 21 States—the highest number falling in any one interval, while 19 devoted between 20 and 40 percent to professional licensure.

Appropriations by State legislative bodies make up nearly two-thirds of the 10¼ million dollars expended for central health services, while Federal grants-in-aid constitute one-fifth of the amount, and contributions by voluntary agencies plus fees for licensure account for the additional 16 percent. The major portion of Federal money (15 percent of the total) was made available under title VI of the Social Security Act. The remaining Federal money—4 percent from venereal disease control funds and 1 percent from title V allotments—has also been included in the cost figures reported in chapters IV and VII of this series,⁹ which covered complete Federal participation in State activities associated with venereal disease control and improvement of maternity and child health, respectively. This was done because laboratory services and the training of public health personnel are sufficiently significant to these specific problems to warrant utilization of a fraction of the earmarked funds for the general purposes referred to. However, the full cost of maintaining and operating public health laboratories and of training public health personnel cannot be pictured without including all funds allotted thereto. Consequently, this small amount of duplication appears to be essential.

Break-down of expenditures by source of funds does not present a constant picture for the four types of service classified as "Central,

⁹ See text footnote *.

affecting all branches of public health work." Vital statistics and laboratory services are supported primarily by State appropriations, with 15 and 20 percent, respectively, contributed by the Federal Government and only small amounts derived from miscellaneous sources. Conversely, health education activities—including professional training of public health personnel as well as popular education—are carried on chiefly by means of Federal financial participation. More than three-fourths of the cost is borne by such grants-in-aid, as compared with 16 percent by State funds and 7 percent by voluntary agencies. About three-fifths of the expenses associated with professional licensure are charged to State taxes, and license fees account for the other two-fifths.

DISCUSSION

Specialized health programs are partially dependent upon availability of certain central health services which are operated for the State as a whole and which affect all branches of public health work. Such central services include the recording, analysis, and preservation of vital statistics; maintenance of public health laboratories; education of the public and training of professional personnel in approved principles and practices of public health; and licensure of professions significant to health—particularly those constituting the healing arts. For the most part, these services operate as direct State contributions available from the central office and, with the exception of licensing activities, find greatest development in the health department proper. That is, there is less dispersion among the various agencies of State government with respect to assignment of responsibility for providing the central services discussed in this report than for operation of more specialized health programs covered in earlier chapters.

In support of this statement, it will be recalled that the collection and processing of vital statistics is almost exclusively a health department responsibility, Massachusetts and Alaska being the only jurisdictions where some other agency of State government is officially responsible for this service. Health educational activities, likewise, predominantly are functions of the health department, though in a few States there is collaboration between the health department and the State university or the department of education in the carrying on of certain aspects of the program. Insofar as operation of laboratory facilities is concerned, the health department is almost exclusively responsible for diagnosis of disease and analysis of drinking water, but it is not uncommon for other State agencies—particularly public service divisions of State universities, departments of agriculture, and independent State laboratories or laboratory departments—to be charged with bacteriological and chemical analysis of milk, food, and drug samples. Licensure of professional groups is affected largely by

individual examining and licensing boards representing the various professions. At the same time, in a few States this function is included in the regulatory authority of the State health department.

A considerable degree of variation characterizes the development of the central State services affecting all branches of public health work. States differ with respect to both the amount of analytical study that is made of vital statistics records and the extent to which the information obtained is utilized. They also follow diverse practices from the standpoints of items recorded, methods of collecting and submitting records, and administrative relationships between the State agency and local registrars. Inequalities of emphasis mark the development of the major branches of service of State-owned public health laboratories also. While all States operate laboratory facilities for diagnosis of communicable diseases and analysis of water samples, aid in the diagnosis of noncommunicable illnesses is provided by the State far less commonly. In five jurisdictions, no State agency makes either bacteriological or chemical analyses of milk, and in an equal number analysis of foods and drugs is not considered a State function. About half of the laboratories of State health departments engage in the manufacture of biologicals for preventive or therapeutic purposes. Typhoid fever vaccine and silver nitrate are the materials most commonly prepared. Usually, where the State supervises diagnostic procedures of private laboratories such supervision covers serological tests only; however, some 9 States extend this supervision to cover all types of tests having public health significance. Differences in organization of health education programs are illustrated by the fact that about half of the State health departments maintain special units or employ full-time personnel for the sole purpose of disseminating health educational material among the public at large or special groups thereof. In the remaining States, all educational work is done by the separate division chiefs or their representatives. Finally, variation is inherent also in the development of State licensure of professions and facilities rendering health service. Certain branches of the healing arts are not permitted to practice in some States; in other jurisdictions, State licensure of sanitation personnel, of barbers and beauticians, and/or of hospitals is not required.

Annual expenditures for the aforementioned central health services, which affect all branches of public health work, total more than 10% million dollars. Of this amount, nearly two-thirds is State-appropriated, one-fifth represents Federal grants, and the remainder either is contributed by voluntary agencies or paid as examining fees by professional licensees. Neither State wealth nor geographic position appears to exert an appreciable weight upon the amount expended by an individual State for central health services. Of the two char-

acteristics, however, geographic position seems to be the more influential.

From the standpoint of each separate service included in this chapter, about one-third of the total amount was charged to professional licensure, slightly more to laboratory services, and the remainder was evenly divided between vital statistics and health education.

PROVISIONAL MORTALITY RATES FOR THE FIRST 9 MONTHS OF 1942

The mortality rates in this report are based upon preliminary data for 35 States, the District of Columbia, and Hawaii for the first 9 months of 1942. Comparative data by quarters for 1940 and 1941 are presented for 26 States and the District of Columbia.

This report is made possible through arrangement with the respective States which voluntarily furnish provisional monthly tabulations of current birth and death statistics to the United States Public Health Service, which analyzes and publishes the data. Because of lack of uniformity in the method of classifying deaths according to cause as well as some delay in filing certificates, these data are preliminary and may differ in some instances from the final figures subsequently published by the Bureau of the Census.

In the past these preliminary reports have accurately reflected the trend in mortality rates for the country as a whole. Some deviation from the final figures for individual States, especially for figures of specific causes of death, may be expected because of the provisional nature of the information. Nevertheless, it is believed that the trend in mortality within each State is correctly represented. Comparisons of specific causes of death for different States may be subject to some error because of variations in tabulation procedure and promptness of filing the original certificates.

During the first 9 months of 1942 the provisional death rate was 10.2 per 1,000 population compared with 10.5 and 10.8 for the first 9 months of 1941 and 1940. The death rate for the calendar year 1941 was the lowest in the history of death registration in this country. Since the rate for the first 9 months of 1942 is about 3 percent less than the rate for the corresponding period of 1941, it is possible that, unless there was a sharp increase in mortality rates during the last quarter of 1942, the death rate for the calendar year 1942 may be even less than the record low for 1941. The decrease in the death rate from all causes has been widespread; 25 of the 33 States from which data are available reported a lower rate in 1942 than in 1941.

A lower death rate also was reported for each of the important causes except cancer and cerebral hemorrhage. The rate for each of

these two causes was about 1 percent higher than the corresponding rate for 1941. Although the death rate from accidental causes dropped 7 percent compared with the previous year, the decrease resulted from a marked drop in the relative number of fatal automobile accidents—24 percent compared with 1941. The death rate from accidental causes exclusive of automobile accidents actually increased about 4 percent, very likely due to an increase in deaths from industrial injuries.

Among the minor causes of death, only cerebrospinal meningitis caused relatively more deaths in 1942; the rate for this decrease increased from 0.5 per 100,000 population in 1941 to 0.6 per 100,000 population in 1942.

One of the principal reasons for the low death rate during the first 9 months of 1942 was the unusually small number of deaths from the respiratory diseases. The death rate from influenza, which is usually above 20 per 100,000 population, was only 7 per 100,000 during the first 9 months of 1942. The rate for the entire year probably will be somewhat above 7, but even so the record will be definitely better than that of previous years. Pneumonia and tuberculosis also took fewer deaths than in the previous year.

In spite of a sharp rise in the birth rate—nearly 8 percent over 1941—both the infant and maternal mortality rates continued to decline. Unless an unexpected increase occurred during the last 3 months of the year, the rate for each of these will be a new low. Of the 29 States from which reports are available only 4 reported a higher infant mortality rate and 6 a higher maternal mortality rate than in 1941.

State and period	Rate per 1,000 live births		Death rate per 100,000 population (annual basis)																						
	All causes, rate per 1,000 population (annual basis)	Births (exclusive of stillbirths) per 1,000 population (annual basis)	Total infant mortality	Maternal mortality	Typhoid and paratyphoid fever (1-2)	Dysentery (27)	Diarrhea and enteritis under 2 years (119)	Scarlet fever (8)	Diphtheria (10)	Whooping cough (9)	Measles (35)	Cerebrospinal (meningococcus) meningitis (6)	Acute poliomyelitis and acute infectious encephalitis (lethargic) (37)	Tuberculosis, all forms (13-22)	Syphilis (30)	Influenza (grippe) (33)	Pneumonia, all forms (107-109)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Cerebral hemorrhage, embolism, and thrombosis (83 a, b)	Diseases of the heart (90-95)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (169-195)	Automobile accidents (170 a, b, c)	
27 States¹																									
January-September:																									
1942	10.2	19.5	40	2.5	0.4	0.9	5.7	0.3	0.4	1.7	1.0	0.6	0.3	0.4	41.5	11.3	7.4	44	123	26.1	89	294	71	67	20.2
1941	10.5	18.1	44	3.0	0.6	(3)	6.7	0.5	0.5	2.6	1.9	.5	.5	.8	43.9	(3)	16.4	47	122	27.1	88	298	75	73	26.6
1940	10.8	17.1	44	3.7	.8	(3)	5.4	.8	.8	1.7	.3	.5	.6	.6	44.9	(3)	14.5	53	121	27.9	91	303	81	69	22.6
January-March:																									
1942	11.1	18.6	46	2.6	.3	.4	4.2	.5	.7	1.9	1.5	.6	.2	.4	43.2	12.1	13.9	66	124	29.7	98	333	79	66	23.0
1941	11.8	17.1	50	2.9	.4	(3)	3.2	.6	.7	1.5	1.6	.6	.2	.5	45.7	(3)	30.1	73	121	31.9	97	347	86	68	23.9
1940	12.1	16.1	51	3.9	.4	(3)	3.2	.9	1.2	1.7	1.4	.7	.2	.5	45.9	(3)	31.2	86	123	32.7	103	348	91	66	20.0
April-June:																									
1942	10.0	18.7	39	2.4	.4	.7	3.1	.3	.3	1.7	1.2	.8	1	.4	43.7	11.2	6.1	39	122	25.7	87	290	71	66	18.7
1941	10.3	17.5	43	3.2	.5	(3)	4.3	.4	2.6	3.7	.5	.2	.2	.5	46.1	(3)	7.9	40	123	26.8	88	296	75	70	25.0
1940	10.5	16.8	43	3.8	.6	(3)	4.1	.6	.5	1.7	.4	.5	1	.6	47.0	(3)	9.8	47	120	26.8	90	302	81	65	21.8
July-September:																									
1942	9.5	21.1	37	2.6	.5	1.7	9.7	.2	.3	1.6	.2	.4	.6	.4	37.6	10.5	2.3	26	123	23.0	81	261	63	68	19.2
1941	9.5	19.7	39	2.8	1.0	(3)	12.5	.1	.5	2.4	.7	.3	1.1	1.3	39.9	(3)	2.5	25	121	22.6	79	254	65	70	30.5
1940	9.7	18.3	39	3.3	1.3	(3)	9.0	.3	.5	1.8	.2	.3	1.5	.6	42.0	(3)	3.1	28	121	24.3	82	259	70	76	26.1
Industrial policyholders: ²																									
1942	7.4	—	—	—	.3	—	4.2	.4	.5	1.0	.6	—	—	—	42.1	10.7	4.3	30	104	27.8	60	1,156	50	51	17.2
1941	7.6	—	—	—	.4	—	4.4	.5	.6	1.3	1.0	—	—	—	43.8	11.4	9.1	33	104	29.3	61	1,157	51	51	20.2
1940	7.7	—	—	—	.6	—	4.3	.6	.8	1.2	.4	—	—	—	45.1	11.6</									

Connecticut:	9.2	17.2	30	2.2	1	2.6	()	2	4	3	5	()	1	33.9	6.6	1.8	25	124	28.2	81	300	60	56	12.9
1942	9.2	17.2	32	2.7	2	1.9	()	2	5	1	2	()	2	32.4	5.5	5.5	28	130	31.6	78	311	62	54	12.4
1941	9.5	18.5	33	3.2	3	2.1	()	1	3	2	4	()	1	32.8	5.1	5.1	43	142	22.2	106	304	57	54	16.6
1940																								
Delaware:	11.8	19.5	38	1.5	()	9.8	2.0	()	5	()	()	()	1.0	52.8	12.7	5.9	50	127	31.3	106	377	131	75	24.4
1942	11.9	18.4	44	1.9	()	8.9	1.0	()	2.5	2.0	()	1.0	()	54.9	13.8	13.8	53	121	28.2	94	355	132	82	34.1
1941	12.4	16.9	51	4.4	1.0	4.0	1.5	()	2.5	()	1.0	1.5	()	49.5	12.5	12.5	59	141	31.5	106	366	139	73	33.2
1940																								
District of Columbia:	10.5	24.0	45	2.5	3	17.0	2	3	2.7	()	1.9	2	()	89.5	20.0	2.4	58	130	26.5	69	299	88	14	14.9
1942	11.7	24.2	41	2.7	()	18.0	()	1	4	1.8	7	1.3	2	59.7	4.9	4.9	70	145	25.1	83	303	101	71	21.3
1941	12.8	21.9	46	3.0	1.0	9.7	2	4	1.8	()	8	4	1.8	65.9	7.7	7.7	80	147	33.7	91	334	116	70	20.1
1940																								
Florida:	11.0	18.2	62	4.8	1.8	8.2	1	1	2.4	3.3	7	2	1	42.7	19.0	14.2	49	95	19.0	108	257	76	98	26.8
1942	12.0	18.2	64	6.7	1.6	9.0	1	1	3.2	2.4	5	1	1	38.2	13.7	15.0	50	63	10.9	85	157	96	60	19.6
1941	12.1	16.4	56	7.0	1.2	7.1	1	1	1.8	4	4	3	3	51.8	()	31.9	58	96	19.2	112	263	113	39	6
1940																								
Georgia:	8.6	21.0	62	4.0	8	8.7	1	1	4.7	6.1	5	1	1	42.3	13.7	38.1	53	64	11.8	94	180	103	65	26.3
1942	9.8	20.7	60	4.5	1.7	15.4	3	1	3.2	2.4	5	1	1	48.5	()	33.8	67	61	10.9	93	192	103	60	20.7
1941	10.0	19.8	59	5.3	2.0	13.3	5	1	2.9	9	3	2	()	58.8	13.2	3.1	47	66	16.8	47	135	60	94	19.0
1940																								
Hawaii:	7.5	23.5	40	2.7	1.8	6.1	()	3	4.0	3	6	()	()	57.5	()	3.1	39	76	19.3	52	127	51	69	20.2
1942	7.0	22.7	42	2.5	1.6	9.9	()	6	2.2	1.6	6	3	3	61.8	()	5.0	47	68	14.5	43	121	61	57	12.6
1941	7.2	22.5	45	2.1	2.5	6.0	()	1.9	2.5	5.0	6	1.6	()	12.5	2.7	8.9	49	77	13.8	81	231	51	86	20.9
1940																								
Idaho:	8.4	20.9	34	2.2	1.2	5	()	7	7	7	2	()	2	10.4	12.2	12.2	32	86	19.5	72	209	55	90	33.0
1942	8.4	22.7	34	2.3	1.0	1.5	5	()	4.7	2	2	2	1.0	18.0	()	13.2	31	88	17.5	57	232	55	103	36.2
1941	9.0	22.5	36	3.4	1.8	5.8	8	3	1.8	1.3	1.0	8	1.0	41.0	10.6	4.4	39	147	30.6	84	354	81	65	21.3
1940																								
Illinois:	11.0	17.8	35	2.0	3	2.8	3	7	1.3	6	2	3	3	45.0	9.7	9.0	48	142	33.5	83	343	93	73	27.3
1942	10.7	16.4	35	2.6	4	3.2	5	6	1.1	1.4	2	3	4	47.1	()	7.2	41	144	29.0	70	340	87	74	26.5
1941	11.1	15.2	36	3.0	5	2.5	1	1	7	2	2	4	4	35.5	9.7	15.7	47	120	12.9	131	244	76	76	27.7
1940																								
Indiana:	10.5	18.8	38	2.8	2	6.4	5	3	2.0	4	1	6	3	35.5	9.7	23.0	49	121	15.1	138	272	66	91	39.7
1942	11.1	17.4	38	3.0	6	5.8	7	3	1.6	2.1	5	3	5	38.9	()	24.7	59	122	15.4	144	311	79	80	26.8
1941	11.5	16.6	42	3.0	8	3.3	1	2	2.6	1	2	2	2	15.3	6.0	8.2	35	138	23.7	105	274	58	63	16.1
1940																								
Iowa:	9.4	18.2	34	2.2	()	2.3	3	3	1.7	7	1	1	3	15.3	6.0	15.0	42	130	25.0	99	277	59	65	22.2
1942	9.6	17.5	38	2.8	2	1.6	4	3	1.7	6	4	2	8	13.8	()	18.9	49	130	26.2	107	287	66	63	18.7
1941	10.0	16.3	38	3.7	4	1.9	7	6	9	5	6	2	1	25.0	10.7	14.6	31	124	26.3	110	283	84	76	20.6
1940																								
Kansas:	10.1	17.9	37	2.6	2	4.0	4	1	1.0	1.6	3	7	1	24.4	()	25.9	37	123	24.3	106	280	90	50	26.3
1942	10.5	16.9	39	2.2	3	2.5	3	5	1.4	2	6	3	1.6	25.0	()	21.4	36	125	25.9	101	275	101	77	25.3
1941	10.4	16.7	38	4.1	6	4.1	1	6	1.6	1	6	2	1	62.4	9.0	15.6	55	82	14.3	87	217	77	67	17.6
1940																								
Kentucky:	9.3	()	()	()	1.4	13.4	9	1	3.9	1.0	9	9	2	69.9	()	44.3	69	83	15.7	84	222	77	76	27.3
1942	10.5	20.9	60	4.6	2	20.4	1	1	9	8	1	1	1	67.2	()	30.2	52	84	13.9	106	216	73	76	23.3
1941	10.3	20.8	52	4.0	2	12.0	8	1	4.6	6.8	1.1	1	1	67.2	()	30.2	52	84	13.9	106	216	73	76	23.3
1940																								

See footnotes at end of table.

Provisional mortality from certain causes in the first 9 months of 1942, with comparative provisional data for the corresponding period in preceding years—Continued

State and period	Death rate per 100,000 population (annual basis)																				Rate per 1,000 live births					
	All causes, rate per 1,000 population (annual basis)		Births (exclusive of stillbirths) per 1,000 population (annual basis)		Total infant mortality		Maternal mortality		Dysentery (27)												Typhoid and paratyphoid fever (1-2)					
	Diarrhea and enteritis under 2 years (119)	Scarlet fever (8)	Diphtheria (10)	Whooping cough (9)	Measles (35)	Cerebrospinal (meningococcus) meningitis (6)	Acute poliomyelitis and acute poliomyelitis (36)	Acute infectious encephalitis (lethargic) (37)	Tuberculosis, all forms (13-22)	Syphilis (30)	Influenza (grippe) (33)	Pneumonia, all forms (107-109)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Cerebral hemorrhage, embolism, and thrombosis (83 a, b)	Diseases of the heart (90-95)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (169-195)	Automobile accidents (170 a, b, c)							
Louisiana:																										
1942.....	9.5	21.4	53	3.6	1.9	1.7	8.4	0.1	1.3	2.6	1.5	0.8	0.5	0.2	51.0	23.9	12.7	52	87	16.4	68	227	70	60	50	18.5
1941.....	10.1	21.1	62	4.7	3.0	(2)	10.2	.2	1.1	2.0	.1	.7	.3	.1	58.3	(2)	30.8	60	85	15.8	64	250	86	72	27.2	18.4
1940.....	11.1	20.6	64	5.8	3.9	(2)	14.0	.1	1.4	7.2	.7	.6	.7	.2	60.5	(2)	34.0	78	87	19.0	70	252	87	69	31.4	18.4
Maine:																										
1942.....	12.1	20.2	43	2.0	.3	.2	7.5	.9	.3	2.2	1.7	2.5	.3	.6	31.8	5.9	10.3	51	147	28.7	124	353	79	80	18.4	18.4
1941.....	12.5	18.4	48	2.7	.5	(2)	6.1	.2	.3	2.0	1.3	1.3	.3	.5	31.3	(2)	23.2	56	151	31.9	122	373	91	74	23.2	18.4
1940.....	12.0	17.5	53	4.1	.8	(2)	5.0	.9	.8	2.0	1.4	1.3	.3	.5	28.2	(2)	12.3	51	147	29.7	124	357	88	71	20.9	18.4
Maryland:																										
1942.....	11.7	20.7	46	1.9	.4	1.0	11.7	.1	1.1	1.5	.9	2.5	(2)	.5	74.1	18.9	5.1	57	135	29.2	92	340	110	81	23.3	23.3
1941.....	12.0	18.8	53	1.9	.8	(2)	10.9	.1	(2)	4.3	.9	1.2	.2	.6	77.7	(2)	11.4	61	142	31.0	92	343	117	78	26.0	26.0
1940.....	12.3	16.6	49	2.7	.5	(2)	5.3	.4	.3	3.4	1.1	.4	.3	.4	82.9	(2)	9.7	67	139	31.7	96	352	131	76	24.2	24.2
Massachusetts:																										
1942.....	11.5	(2)	(2)	(2)	1.1	.1	2.3	.3	.2	.8	.5	.8	(2)	.3	39.0	5.7	2.3	54	174	36.2	108	410	60	61	12.3	12.3
1941.....	11.9	(2)	(2)	(2)	(2)	(2)	4.6	.3	1.1	1.1	1.1	.7	(2)	.3	38.5	(2)	8.3	64	176	36.4	111	434	65	62	15.5	15.5
1940.....	11.7	(2)	(2)	(2)	(2)	(2)	2.3	.2	.2	.3	.3	.2	(2)	.3	38.9	(2)	3.4	60	171	36.3	104	414	72	61	13.3	13.3
Michigan:																										
1942.....	9.4	21.7	37	2.1	1.1	.6	4.1	.5	.3	1.2	.2	.3	.2	.3	34.3	9.9	3.3	41	116	25.5	85	284	49	68	25.5	25.5
1941.....	9.8	19.4	39	2.9	.2	(2)	4.4	.6	.3	1.8	1.6	1.1	.3	.3	32.6	(2)	9.6	43	116	25.8	87	290	59	81	26.9	26.9
1940.....	9.8	18.5	41	3.3	.2	(2)	3.5	.9	.4	1.0	.4	.2	1.3	.3	34.8	(2)	5.0	45	117	27.0	91	293	55	73	26.9	26.9
Minnesota: *																										
1942.....	9.3	19.1	33	1.5	1.1	.2	2.5	.3	.3	.6	.7	.2	.3	.5	24.9	8.1	7.6	51	135	25.1	93	273	43	61	17.9	17.9
1941.....	9.7	18.7	36	2.4	(2)	(2)	2.6	.2	.4	1.2	1.1	.4	.2	.4	30.2	(2)	14.7	55	142	25.7	82	270	41	65	16.1	16.1
1940.....	9.8	18.5	35	2.4	.2	(2)	2.4	.6	.2	1.1	.2	.2	.7	.6	27.4	(2)	9.5	58	133	26.4	89	272	39	67	20.6	20.6
Montana:																										
1942.....	9.4	20.1	37	2.1	(2)	.2	3.1	.7	.9	2.1	(2)	1.2	(2)	.9	35.0	10.9	5.9	43	113	12.8	91	251	55	82	19.4	19.4
1941.....	10.2	20.6	38	1.7	(2)	(2)	4.2	1.7	2.0	1.1	1.2	1.0	1.0	3.3	38.0	(2)	20.2	47	110	14.0	95	245	57	100	23.3	23.3
1940.....	10.0	20.4	43	3.3	.7	(2)	3.4	2.1	1.0	1.7	1.2	1.0	1.0	2.1	41.3	(2)	12.6	48	111	10.5	98	230	57	90	24.1	24.1

Nebraska:	9.1	17.5	32	1.8	-1	-2	1.8	4	-4	1.1	-7	3	1.4	-3	13.0	7.6	10.5	32	131	25.6	89	259	63	64	15.9
1942	9.5	16.8	35	2.7	-2	(1)	1.3	1	-1	2.8	-4	-6	1.0	1.5	15.5	(1)	27.9	36	125	24.9	104	285	66	63	18.9
1941	9.7	16.7	35	3.1	4	(1)	2.6	0	-6	4	-4	-3	.8	.5	18.3	(1)	20.8	47	128	28.9	106	289	65	66	17.4
Nevada:	14.7	21.7	59	-5	2.3	7.0	12.8	1.2	(1)	8.2	2.3	2.3	1.2	2.3	64.1	14.0	7.0	66	124	15.2	104	372	65	244	87.4
1942	11.6	18.4	44	3.9	3.6	(1)	4.7	(1)	1.2	1.2	(1)	(1)	(1)	1.2	55.8	(1)	8.3	44	112	16.4	71	311	55	251	104.4
1941	12.0	19.0	47	5.1	(1)	(1)	3.6	1.2	(1)	3.6	(1)	1.2	1.2	(1)	68.8	(1)	7.2	65	111	20.5	66	304	55	160	70.0
1940	9.3	25.2	94	3.9	1.0	8.6	30.7	(1)	1.4	7.2	7.4	7	1.7	1.0	55.2	9.8	14.2	63	50	6.5	38	118	45	78	26.2
New Mexico:	10.5	27.2	97	3.5	2.2	(1)	47.5	-2	2.0	11.3	11.3	-5	.5	.5	60.6	(1)	18.5	52	115	11.5	43	116	50	97	40.7
1942	10.6	31.0	88	4.7	2.2	(1)	42.7	-2	1.5	10.2	1.0	-2	.5	(1)	74.7	(1)	12.1	55	111	10.2	42	116	50	97	40.7
1941	10.7	17.1	32	2.2	2	(1)	3.0	2	1	1.0	1	-8	.2	.8	42.8	13.4	1.7	37	162	38.0	71	380	54	58	15.0
1940	10.9	15.7	37	3.1	2	(1)	2.7	2	1	1.7	4	-5	.4	.9	46.6	(1)	4.7	45	156	40.2	71	385	59	61	17.8
1940	11.2	14.7	32	3.1	2	(1)	1.1	3	3	1.1	1	-4	.1	.9	47.7	(1)	3.3	47	157	40.6	72	385	66	61	16.5
New York:	8.0	23.3	51	3.8	-5	1.7	13.0	4	-9	3.1	2.0	-5	.3	.1	44.8	7.5	8.3	47	59	12.2	83	199	79	64	22.9
1942	9.0	23.6	61	4.5	1.1	(1)	19.4	3	1.4	6.0	3.3	-4	.3	.4	50.1	(1)	25.9	58	60	12.6	80	161	85	69	33.0
1941	9.1	22.5	58	5.8	1.1	(1)	12.9	3	2.5	2.1	4	-3	.4	.5	50.5	(1)	26.9	61	58	14.0	85	163	98	62	33.4
1940	7.1	19.6	38	2.8	-2	4	6.1	4	-2	2.1	1.9	-2	.2	1.9	21.2	2.7	4.0	33	91	19.1	74	173	37	39	13.6
Ohio:	8.3	21.9	39	1.9	(1)	(1)	7.0	3	3	2.7	2.1	(1)	.2	.7	42.4	(1)	13.2	39	96	21.2	75	205	48	63	15.9
1942	7.9	21.1	39	1.5	-6	(1)	5.4	1.0	1.7	1.9	2	(1)	.2	1.7	19.6	(1)	10.2	37	98	23.3	71	207	41	54	17.1
1941	10.9	19.2	39	2.0	-2	3	6.0	4	-2	2.1	5	-1	.3	.2	41.1	11.7	9.0	46	135	30.8	105	314	76	81	27.1
1940	11.1	17.2	41	2.6	3	(1)	4.3	7	7	2.7	2.1	-2	.7	.7	42.4	(1)	16.5	44	137	23.0	104	309	73	87	32.5
Oklahoma:	11.4	16.5	38	3.6	.8	(1)	4.2	7	4	1.7	4	-4	.6	.5	40.6	(1)	15.0	55	136	30.9	113	316	78	87	27.0
1942	9.1	20.9	41	3.7	1.5	3.0	4.4	-2	1.4	2.4	5.7	4	-6	.5	46.9	6.9	12.9	48	91	16.0	87	194	55	71	17.3
1941	8.8	19.7	51	2.6	1.6	(1)	4.4	3	2.3	6.4	1.1	-3	-6	.4	46.4	(1)	23.1	53	83	15.2	78	196	56	61	21.3
1940	8.7	18.7	47	3.6	2.4	(1)	10.0	3	2.2	2.1	2	-2	1.1	1.5	47.4	(1)	23.6	56	82	14.2	81	162	63	56	18.8
Pennsylvania:	10.6	20.0	36	1.4	-3	-2	3.6	4	-1	1.3	-5	-7	.2	.2	38.6	10.5	5.9	40	125	32.4	85	333	83	51	15.0
1942	10.8	18.2	38	2.4	-5	(1)	4.3	3	3	1.6	1.3	-3	.7	.7	39.7	(1)	12.8	45	124	34.8	84	337	97	57	15.3
1941	11.0	16.3	43	2.7	-6	(1)	3.7	5	4	1.2	1	-7	.3	.6	40.5	(1)	12.2	51	124	35.6	85	337	97	57	15.3
1940	10.7	18.4	40	2.2	-2	(1)	9.7	-2	5	1.1	7	-4	-2	.4	38.2	9.5	2.4	49	143	36.0	96	359	81	56	10.8
Rhode Island:	11.0	16.1	37	2.3	(1)	(1)	2.6	4	(1)	2.2	2	-2	.4	.6	44.3	(1)	6.8	46	149	38.8	83	382	104	50	10.9
1942	11.2	15.2	38	2.5	1.3	(1)	1.9	(1)	4	4	6	-9	.0	.2	32.9	(1)	4.3	55	160	38.7	100	369	96	49	10.9
1941	8.6	18.6	41	2.2	-6	(1)	2.2	3	3	7.2	(1)	1.3	(1)	(1)	26.4	6.3	7.2	51	99	17.3	85	211	53	46	16.0
1940	9.0	18.6	42	1.9	-3	(1)	1.9	3	1.6	3.8	-3	-3	(1)	.6	30.2	(1)	22.3	53	101	28.9	85	214	54	62	15.4
Tennessee:	9.2	18.5	42	4.6	(1)	(1)	4.1	1.3	9	(1)	9	-9	(1)	.3	45.3	(1)	21.3	45	99	24.4	84	228	53	54	10.3
1942	8.9	19.8	51	3.4	-6	2.7	8.2	-5	-8	2.1	1.5	-6	1.0	.5	70.0	12.5	17.3	54	77	12.4	82	176	60	59	16.5
1941	9.8	19.1	58	3.9	1.5	(1)	12.8	3	1.0	6.6	5.5	1.1	1.1	-6	80.3	(1)	39.0	65	58	12.4	79	173	65	61	20.3
1940	10.2	17.8	56	5.4	2.1	(1)	10.6	-5	1.1	3.6	-8	-6	.1	.6	74.9	(1)	33.8	75	72	14.2	86	190	62	63	16.2
Texas:	8.7	(1)	(1)	(1)	1.4	(1)	18.1	3	1.6	2.3	2.0	-6	-4	.2	54.5	(1)	14.0	41	70	13.2	62	187	59	73	22.1
1942	9.3	(1)	(1)	(1)	2.1	(1)	16.7	-1	1.9	3.9	1.5	-5	.8	-4	56.2	(1)	34.7	47	79	13.1	60	190	63	75	23.8
1941	9.5	(1)	(1)	(1)	3.5	(1)	34.5	-2	2.0	4.3	4.1	-4	.6	.5	58.2	(1)	28.2	55	75	14.1	62	179	57	86	24.4

See footnotes at end of table.

Provisional mortality from certain causes in the first 9 months of 1942, with comparative provisional data for the corresponding period in preceding years—Continued

State and period	Death rate per 100,000 population (annual basis)															
	Rate per 1,000 live births		Births (exclusive of stillbirths) per 1,000 population (annual basis)		Typhoid and paratyphoid fever (1-2)		Dysentery (27)		Diarrhea and enteritis under 2 years (119)		Scarlet fever (8)		Diphtheria (10)		Whooping cough (9)	
	Total infant mortality	Maternal mortality														
Utah:																
1942.....	33	2.0	8.7	27.8	0.5	0.5	0.5	2.9	0.7	(1)	1.7	0.7	(1)	11.7	5.0	8.3
1941.....	29	1.3	8.1	24.5	.7	(1)	2.9	2.9	(1)	(1)	1.9	1.9	(1)	11.1	(1)	10.6
1940.....	37	2.8	8.5	24.5	.5	(1)	3.4	3.4	1.5	(1)	1.0	2.4	(1)	15.0	(1)	12.8
Vermont:																
1942.....	47	1.8	10.8	18.3	.4	.4	3.3	4.4	.4	(1)	.7	3.7	(1)	30.9	4.5	7.1
1941.....	47	2.0	11.6	18.4	.7	(1)	4.5	4.4	(1)	1.1	(1)	2.2	(1)	37.9	(1)	17.9
1940.....	45	3.9	11.1	18.3	1.1	(1)	5.9	(1)	(1)	1.7	(1)	2.2	(1)	36.4	(1)	12.3
Virginia:																
1942.....	57	3.3	10.4	22.0	.9	4.0	12.9	4.4	.9	1.7	7.7	3.7	4.9	58.5	16.1	12.6
1941.....	69	4.1	11.4	21.0	.9	(1)	15.5	3.1	1.5	1.5	7.8	7.9	3.2	61.7	(1)	34.2
1940.....	59	4.7	11.1	19.8	.9	(1)	8.6	3.3	1.7	1.3	1.0	4.0	(1)	60.4	(1)	29.3
Wyoming:																
1942.....	49	3.6	8.6	19.4	(1)	(1)	8.1	1.6	.8	8.8	2.4	2.4	(1)	16.5	8.6	16.5
1941.....	40	2.5	8.3	18.7	(1)	(1)	2.8	1.8	(1)	3.2	1.6	1.6	(1)	11.1	(1)	34.9
1940.....	44	4.7	8.2	18.7	(1)	(1)	.8	.8	(1)	3.2	3.2	.8	(1)	15.2	(1)	7.2

The District of Columbia is included as a State. Estimated population July 1, 1942, 78,989,330. Includes all of the States listed below except Kentucky, Louisiana, Massachusetts, Nebraska, Rhode Island, and Texas, with data for the 9-month period of 1942, 1941, and 1940.

Data not available.
These data are taken from the October 1942 Statistical Bulletin published by the Metropolitan Life Insurance Co. The rates for 1942 are subject to correction as they are based on provisional estimates of lives exposed to risk. Data do not include all diseases reported to the Public Health Service.

Classified as diarrhea and enteritis, age not specified.

International List (1940) titles 92, 93 c, d, e, and 95 only.

Chronic nephritis only.

No deaths reported.

Less than 1/10 of 1 per 100,000 inhabitants.

January-June only.

DEATHS DURING WEEK ENDED JANUARY 30, 1943

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Jan. 30, 1943	Correspond- ing week, 1942
Data from 90 large cities of the United States:		
Total deaths.....	10, 181	9, 016
Average for 3 prior years.....	9, 810	
Total deaths, first 4 weeks of year.....	41, 264	38, 052
Deaths under 1 year of age.....	735	548
Average for 3 prior years.....	570	
Deaths under 1 year of age, first 4 weeks of year.....	2, 987	2, 304
Data from industrial insurance companies:		
Policies in force.....	65, 305, 721	64, 892, 393
Number of death claims.....	13, 805	13, 017
Death claims per 1,000 policies in force, annual rate.....	11. 0	10. 5
Death claims per 1,000 policies, first 4 weeks of year, annual rate.....	11. 2	10. 4

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED FEBRUARY 6, 1943

Summary

Morbidity reports for the week ended February 6 show that of the nine common communicable diseases included in the following tables the incidence of only meningococcus meningitis and poliomyelitis is above the respective 5-year (1938-42) medians. Slight increases over the figures for the preceding week are shown for smallpox, typhoid fever, and whooping cough, and moderate increases for measles and scarlet fever.

There were 330 cases of meningococcus meningitis reported for the week, more than reported for any single week of any prior year since the week ended March 28, 1936. For the preceding week a total of 339 cases was reported. Of the current week's total, 71 cases were reported in the South Atlantic States (18 in Virginia and 14 in Maryland), 67 in the Middle Atlantic States (39 in New York and 16 in Pennsylvania), 46 in the Pacific States (24 in California), and 42 in the New England States (23 in Rhode Island). Missouri and Texas each reported 13 cases.

The number of cases of measles increased from 10,887 to 13,444, which is less, however, than was reported for the corresponding week of any of the past 5 years except 1939 and 1940. The largest numbers were reported in Pennsylvania (2,846), New York (1,205), and Washington (915).

The number of reported influenza cases declined from 4,852 to 4,327, of which 2,908 cases, or 69 percent, were reported in Texas (1,589), Virginia (660), and South Carolina (659).

The number of poliomyelitis cases reported for the week decreased from 31 to 28. The corresponding median is 21. Cases reported for the week were scattered in 16 States, no State reporting more than 3 cases.

Other reports include 1 case of anthrax (in Pennsylvania), 180 cases of dysentery, 13 cases of encephalitis, 20 cases of tularemia, and 55 cases of endemic typhus fever.

The number of deaths for the current week in 89 large cities of the United States aggregated 10,016, as compared with 10,163 for the preceding week. The accumulated figure for the first 5 weeks of 1943 is 51,216, as compared with 46,890 for the corresponding period of 1942.

Telegraphic morbidity reports from State health officers for the week ended February 6, 1943, and comparison with corresponding week of 1942 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median, 1938-42	Week ended—		Median, 1938-42	Week ended—		Median, 1938-42	Week ended—		Median, 1938-42
	Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942	
NEW ENG.												
Maine.....	1	0	0	-----	2	4	12	269	104	* 11	0	0
New Hampshire.....	0	0	0	-----	-----	-----	23	0	16	1	0	0
Vermont.....	0	0	0	-----	-----	-----	308	3	12	0	0	0
Massachusetts.....	5	4	4	-----	-----	-----	572	462	438	6	4	1
Rhode Island.....	5	3	0	-----	1	-----	20	100	19	23	0	0
Connecticut.....	1	3	1	17	-----	8	506	170	143	1	1	1
MID. ATL.												
New York.....	7	16	26	12	10	19	1,205	555	706	39	9	7
New Jersey.....	1	5	10	18	23	42	726	165	165	12	3	2
Pennsylvania.....	10	11	43	2	-----	-----	2,846	1,553	1,553	16	5	5
E. NO. CEN.												
Ohio.....	13	17	18	14	14	14	136	180	180	11	2	2
Indiana.....	7	10	18	8	40	40	321	78	78	6	0	1
Illinois.....	10	17	29	14	29	54	371	171	171	8	1	1
Michigan.....	8	1	10	35	21	14	166	110	420	5	1	0
Wisconsin.....	6	0	0	84	35	51	641	241	554	8	1	0
W. NO. CEN.												
Minnesota.....	5	3	2	2	2	5	21	461	380	4	0	0
Iowa.....	1	4	4	-----	7	11	75	103	103	1	0	0
Missouri.....	8	4	7	3	8	24	147	189	31	13	1	1
North Dakota.....	0	5	3	28	35	27	7	190	19	1	0	0
South Dakota.....	0	2	2	2	-----	1	136	0	31	2	0	0
Nebraska.....	4	0	1	38	-----	-----	95	25	25	2	2	0
Kansas.....	6	4	5	11	14	14	348	278	278	4	0	0
SO. ATL.												
Delaware.....	0	0	0	-----	-----	-----	3	24	24	0	0	0
Maryland.....	4	13	8	17	40	61	19	340	25	14	5	0
Dist. of Col.....	2	1	3	2	1	5	30	18	14	2	1	0
Virginia.....	12	14	14	660	369	1,100	201	140	140	18	3	1
West Virginia.....	5	8	8	23	27	42	5	584	125	2	3	3
North Carolina.....	14	12	17	35	80	80	56	1,003	570	10	1	1
South Carolina.....	4	14	6	659	871	871	23	205	114	10	0	2
Georgia.....	1	7	7	133	117	131	40	406	97	6	0	1
Florida.....	6	5	7	3	14	14	17	114	61	9	0	0
E. SO. CEN.												
Kentucky.....	4	7	7	7	10	91	608	47	63	1	1	3
Tennessee.....	11	6	8	71	127	172	204	112	74	4	1	2
Alabama.....	13	14	12	215	700	700	13	94	90	4	1	3
Mississippi.....	4	3	5	-----	-----	-----	-----	-----	-----	7	4	1
W. SO. CEN.												
Arkansas.....	5	10	10	203	426	426	201	289	120	1	3	1
Louisiana.....	2	14	9	13	24	24	35	47	3	2	2	2
Oklahoma.....	6	5	9	82	231	231	20	252	48	0	0	1
Texas.....	50	42	42	1,589	1,693	1,693	199	1,909	218	13	2	2
MOUNTAIN												
Montana.....	4	7	1	1	31	25	163	168	63	0	0	0
Idaho.....	1	0	0	1	-----	2	278	6	14	0	0	0
Wyoming.....	0	0	0	54	119	4	38	39	7	2	1	1
Colorado.....	15	6	6	93	85	35	366	223	89	0	0	0
New Mexico.....	0	2	2	2	8	9	7	82	37	1	0	0
Arizona.....	0	5	5	56	232	232	12	220	8	0	1	1
Utah.....	1	0	2	-----	6	20	271	28	38	2	0	0
Nevada.....	0	0	-----	3	1	-----	51	7	-----	2	0	-----
PACIFIC												
Washington.....	3	1	1	1	11	11	915	70	81	11	0	0
Oregon.....	0	1	2	32	28	59	562	120	120	11	0	1
California.....	20	17	24	84	175	175	425	2,501	428	24	1	1
Total.....	285	323	421	4,327	5,667	5,667	13,444	14,351	14,031	330	60	60
5 weeks.....	1,680	1,804	2,250	21,748	22,592	22,592	49,545	50,679	50,679	* 1,612	290	275

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended February 6, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Medi-an 1938-42	Week ended—		Medi-an 1938-42	Week ended—		Medi-an 1938-42	Week ended—		Medi-an 1938-42
	Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942		Feb. 6, 1943	Feb. 7, 1942	
NEW ENG.												
Maine.....	0	0	0	19	15	18	0	0	0	1	0	0
New Hampshire.....	0	0	0	14	6	6	0	0	0	0	0	0
Vermont.....	0	0	0	12	6	6	0	0	0	0	0	0
Massachusetts.....	0	1	0	438	337	205	0	0	0	0	5	2
Rhode Island.....	0	0	0	41	13	10	0	0	0	0	0	0
Connecticut.....	0	1	0	85	54	77	0	0	0	0	2	2
MID. ATL.												
New York.....	3	1	1	463	445	490	0	0	0	3	6	6
New Jersey.....	0	2	2	100	130	175	0	0	0	3	0	1
Pennsylvania.....	2	2	0	309	298	468	0	0	0	5	4	8
E. NO. CEN.												
Ohio.....	0	0	0	391	376	376	3	0	1	0	2	1
Indiana.....	0	1	0	161	116	206	10	0	4	2	0	1
Illinois.....	0	2	2	216	260	579	1	2	2	2	2	3
Michigan ¹	1	1	1	111	224	298	0	0	3	2	6	1
Wisconsin.....	0	0	0	254	180	180	0	0	2	0	3	0
W. NO. CEN.												
Minnesota.....	1	0	0	76	97	136	0	0	16	0	1	0
Iowa.....	0	0	0	57	63	75	0	1	5	3	1	3
Missouri.....	1	1	0	109	131	114	0	0	2	1	1	1
North Dakota.....	0	1	0	1	30	30	0	0	0	0	0	0
South Dakota.....	0	0	0	20	54	25	1	0	6	0	0	0
Nebraska.....	2	0	0	30	34	34	1	1	1	0	0	0
Kansas.....	3	0	0	81	90	121	3	0	2	0	0	0
SO. ATL.												
Delaware.....	0	0	0	9	56	9	0	0	0	0	0	0
Maryland ¹	0	0	0	83	90	56	0	0	0	2	0	1
Dist. of Col.....	0	0	0	21	11	19	0	0	0	0	1	0
Virginia.....	0	0	0	38	48	40	0	0	0	2	3	2
West Virginia.....	1	0	1	34	60	50	0	0	0	0	0	0
North Carolina.....	0	1	0	63	68	53	0	0	0	1	0	0
South Carolina.....	0	2	2	8	9	9	0	1	0	3	0	1
Georgia.....	0	1	1	28	17	19	0	1	0	2	25	2
Florida.....	3	0	0	13	11	13	0	0	0	0	3	2
E. SO. CEN.												
Kentucky.....	1	0	1	46	84	84	1	4	3	0	0	0
Tennessee.....	1	4	0	40	84	67	0	0	0	1	3	1
Alabama.....	0	0	0	25	11	14	1	2	0	0	1	2
Mississippi ¹	1	0	1	12	7	10	0	2	1	0	3	3
W. SO. CEN.												
Arkansas.....	0	1	0	5	10	10	0	0	1	1	2	3
Louisiana.....	0	0	0	16	6	15	0	0	0	2	3	7
Oklahoma.....	0	0	0	14	25	31	1	1	1	0	1	1
Texas.....	3	3	0	90	49	80	4	2	5	3	3	10
MOUNTAIN												
Montana.....	0	0	0	14	38	35	0	0	0	0	1	0
Idaho.....	0	0	0	18	4	8	2	0	1	0	2	0
Wyoming ¹	0	2	0	70	20	8	0	0	0	0	0	0
Colorado.....	1	0	0	52	37	37	0	0	6	0	1	1
New Mexico.....	0	0	0	4	5	6	0	0	0	0	0	0
Arizona.....	1	1	0	10	9	9	0	0	1	0	0	1
Utah ¹	0	0	0	100	39	38	0	0	0	0	0	0
Nevada.....	0	0	---	3	4	---	0	0	---	1	0	---
PACIFIC												
Washington.....	0	0	1	28	25	54	0	0	0	1	0	1
Oregon.....	0	0	1	16	6	34	0	0	0	3	0	0
California.....	3	1	1	189	133	197	0	0	6	4	0	5
Total.....	28	29	21	4,037	3,925	4,868	28	17	71	48	85	85
5 weeks.....	164	138	138	18,187	18,045	21,356	155	84	390	249	400	403

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended February 6, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended Feb. 6, 1943								
	Week ended—		Median 1938-42	An- thrax	Dysentery			En- ceph- alitis, infec- tious	Lep- rosy	Rocky Mt. spot- ted fever	Tula- remia	Ty- phus fever
	Feb. 6, 1943	Feb. 7, 1942			Ame- bic	Bacil- lary	Un- spec- ified					
NEW ENG.												
Maine.....	114	22	29	0	0	0	0	0	0	0	0	0
New Hampshire.....	14	4	4	0	0	0	0	0	0	0	0	0
Vermont.....	19	29	23	0	0	0	0	0	0	0	0	0
Massachusetts.....	207	236	186	0	0	0	0	1	0	0	0	0
Rhode Island.....	27	74	34	0	0	0	0	0	0	0	0	0
Connecticut.....	59	122	74	0	1	5	0	0	0	0	0	0
MID. ATL.												
New York.....	361	594	439	0	3	15	0	2	0	0	0	1
New Jersey.....	143	232	144	0	0	0	0	1	0	0	0	0
Pennsylvania.....	347	243	372	1	1	0	0	1	0	0	0	0
E. NO. CEN.												
Ohio.....	248	268	205	0	0	0	0	2	0	0	0	0
Indiana.....	61	39	23	0	0	0	0	0	0	0	1	0
Illinois.....	161	183	125	0	2	2	0	0	0	0	2	0
Michigan ¹	216	294	232	0	0	0	0	0	0	0	0	0
Wisconsin.....	241	327	175	0	0	0	0	1	0	0	0	0
W. NO. CEN.												
Minnesota.....	74	56	56	0	0	8	0	0	0	0	0	0
Iowa.....	30	42	31	0	0	0	0	0	0	0	0	0
Missouri.....	15	38	38	0	0	0	1	0	0	0	0	0
North Dakota.....	9	8	26	0	0	0	0	0	0	0	0	0
South Dakota.....	15	8	8	0	0	0	0	0	0	0	0	0
Nebraska.....	7	1	6	0	0	0	0	0	0	0	0	0
Kansas.....	41	41	41	0	0	0	0	0	0	0	2	0
SO. ATL.												
Delaware.....	5	2	3	0	0	0	0	0	0	0	0	0
Maryland ¹	47	61	64	0	1	0	0	0	0	0	0	0
Dist. of Col.....	24	11	9	0	0	0	0	0	0	0	0	0
Virginia.....	105	65	65	0	0	0	19	0	0	0	2	0
West Virginia.....	67	55	55	0	0	0	0	0	0	0	0	0
North Carolina.....	177	224	231	0	1	1	0	0	0	0	1	3
South Carolina.....	70	71	71	0	1	0	0	0	0	0	0	2
Georgia.....	24	33	26	0	0	0	0	0	0	0	5	10
Florida.....	12	39	36	0	0	0	0	0	0	0	0	4
E. SO. CEN.												
Kentucky.....	26	122	71	0	0	0	0	0	0	0	1	0
Tennessee.....	76	41	46	0	0	0	0	0	0	0	1	1
Alabama.....	26	9	14	0	0	0	0	0	0	0	1	2
Mississippi ¹				0	0	0	0	0	0	0	1	1
W. SO. CEN.												
Arkansas.....	19	11	24	0	0	0	0	0	0	0	0	0
Louisiana.....	3	0	5	0	0	1	0	0	0	0	2	0
Oklahoma.....	14	8	8	0	0	0	0	0	0	0	0	0
Texas.....	357	119	119	0	2	99	0	5	0	0	1	31
MOUNTAIN												
Montana.....	32	25	21	0	0	0	0	0	0	0	0	0
Idaho.....	8	9	9	0	0	0	0	0	0	0	0	0
Wyoming ¹	2	1	2	0	1	0	0	0	0	0	0	0
Colorado.....	19	24	44	0	1	0	0	0	0	0	0	0
New Mexico.....	19	29	29	0	0	0	0	0	0	0	0	0
Arizona.....	1	72	26	0	0	0	6	0	0	0	0	0
Utah ¹	25	15	57	0	0	0	0	0	0	0	0	0
Nevada.....	12	7		0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	20	114	113	0	0	0	0	0	0	0	0	0
Oregon.....	12	34	29	0	0	0	0	0	0	0	0	0
California.....	250	265	261	0	3	6	0	0	0	0	0	0
Total.....	3,856	4,327	4,246	1	17	137	26	13	0	0	20	55
5 weeks.....	19,739	21,701	21,336									

¹ New York City only.

² Period ended earlier than Saturday.

³ Delayed report from Maine for week ended Jan. 23, 1943, shows 10 cases of meningococcus meningitis, instead of 8.

WEEKLY REPORTS FROM CITIES

City reports for week ended January 23, 1943

This table lists the reports from 89 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Atlanta, Ga.	0	0	---	1	1	1	7	0	9	0	0	2
Baltimore, Md.	3	0	3	1	7	12	31	0	23	0	0	67
Barre, Vt.	0	0	---	0	0	0	0	0	0	0	0	0
Billings, Mont.	0	0	---	0	0	0	0	0	0	0	0	0
Birmingham, Ala.	0	0	6	0	0	0	5	0	5	0	0	0
Boise, Idaho.	0	0	---	0	0	0	0	0	0	0	0	0
Boston, Mass.	0	0	---	0	140	0	19	0	106	0	0	41
Bridgeport, Conn.	0	0	1	1	0	0	4	0	2	0	0	1
Brunswick, Ga.	0	0	---	0	0	0	3	0	0	0	0	3
Buffalo, N. Y.	1	0	1	1	97	0	14	0	9	0	0	47
Camden, N. J.	5	0	---	0	40	0	3	0	3	0	0	2
Charleston, S. C.	0	0	30	0	0	0	2	0	1	0	1	0
Charleston, W. Va.	0	0	---	0	0	0	0	0	1	0	0	0
Chicago, Ill.	3	0	2	1	97	5	35	0	79	0	0	69
Cincinnati, Ohio.	0	0	1	2	29	0	3	0	31	0	0	4
Cleveland, Ohio.	1	0	6	3	3	3	14	0	41	0	0	87
Columbus, Ohio.	1	0	2	2	2	0	5	0	18	0	0	3
Concord, N. H.	0	0	---	0	0	0	1	0	1	0	0	0
Cumberland, Md.	0	0	---	0	0	0	0	0	0	0	0	0
Dallas, Tex.	2	0	1	1	0	1	6	0	4	0	0	17
Denver, Colo.	5	1	45	0	99	0	7	0	9	0	0	4
Detroit, Mich.	1	0	1	3	15	5	22	0	34	0	0	151
Duluth, Minn.	0	0	---	0	0	0	1	0	3	0	0	4
Fall River, Mass.	0	0	---	0	4	0	4	0	6	0	0	18
Fargo, N. Dak.	0	0	---	0	2	1	0	0	0	0	0	0
Flint, Mich.	2	0	---	0	3	0	2	0	5	0	0	1
Fort Wayne, Ind.	0	0	---	1	0	0	2	0	0	0	0	0
Frederick, Md.	0	0	---	0	0	0	0	0	0	0	0	0
Galveston, Tex.	0	0	---	0	0	0	1	0	1	0	0	0
Grand Rapids, Mich.	0	0	---	0	1	0	2	0	2	0	0	3
Hartford, Conn.	0	0	---	0	10	1	5	0	0	0	1	0
Helena, Mont.	0	0	---	0	2	0	0	0	2	0	0	5
Houston, Tex.	3	0	2	0	0	0	4	0	4	0	0	5
Indianapolis, Ind.	1	0	---	0	157	2	12	0	40	0	1	9
Kansas City, Mo.	1	0	1	2	4	2	14	0	35	0	0	3
Kenosha, Wis.	0	0	1	0	2	0	0	0	2	0	0	5
Little Rock, Ark.	0	0	2	0	0	0	7	0	0	0	0	0
Los Angeles, Calif.	0	0	21	4	0	1	8	0	32	0	1	41
Lynchburg, Va.	2	0	---	0	0	0	0	0	1	0	0	1
Memphis, Tenn.	0	0	6	2	9	1	6	0	8	0	0	18
Milwaukee, Wis.	0	0	2	2	105	0	4	0	113	0	0	41
Minneapolis, Minn.	0	0	---	1	3	2	1	0	10	0	0	4
Missoula, Mont.	0	0	---	0	0	0	0	0	0	0	0	0
Mobile, Ala.	0	0	4	0	0	0	7	0	0	0	0	0
Nashville, Tenn.	0	0	---	1	16	0	0	0	2	0	0	2
Newark, N. J.	0	0	2	0	19	1	9	0	9	0	0	12
New Haven, Conn.	0	0	---	0	4	0	4	0	2	0	0	7
New Orleans, La.	1	0	4	4	2	2	13	0	4	0	2	1
New York, N. Y.	22	0	24	2	65	28	88	0	229	0	2	74
Omaha, Nebr.	0	0	---	0	0	0	1	0	3	0	0	1
Philadelphia, Pa.	0	0	4	2	1,189	5	44	0	78	1	0	75
Pittsburgh, Pa.	1	0	1	3	0	1	17	0	9	0	1	22
Portland, Maine.	0	0	1	0	6	8	8	0	2	0	0	24
Providence, R. I.	0	1	1	0	8	11	7	0	7	0	0	16
Pueblo, Colo.	0	0	---	0	3	0	2	0	1	0	0	0
Racine, Wis.	0	0	---	0	10	0	0	0	16	0	0	0
Raleigh, N. C.	0	0	---	0	0	1	3	0	0	0	0	3
Reading, Pa.	0	0	---	1	68	0	1	0	0	0	0	11
Richmond, Va.	0	0	4	1	4	0	4	0	2	0	0	3

City reports for week ended January 23, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
Roanoke, Va.-----	0	0	-----	0	0	0	0	0	1	0	0	1
Rochester, N. Y.-----	1	0	-----	0	10	2	7	0	5	0	0	3
Sacramento, Calif.-----	1	0	-----	0	3	4	5	0	9	0	0	11
Saint Joseph, Mo.-----	0	0	-----	0	0	0	6	0	0	0	0	0
Saint Louis, Mo.-----	0	0	6	1	5	2	14	0	19	0	0	6
Saint Paul, Minn.-----	0	0	-----	1	3	0	7	0	3	0	0	38
Salt Lake City, Utah.-----	1	0	-----	0	92	1	0	0	25	0	0	13
San Antonio, Tex.-----	4	0	1	2	0	0	11	1	1	0	0	2
San Francisco, Calif.-----	0	0	4	0	14	3	11	0	18	0	0	31
Savannah, Ga.-----	0	0	10	2	0	0	4	0	0	0	0	1
Seattle, Wash.-----	2	0	-----	0	30	0	9	0	4	0	0	4
Shreveport, La.-----	1	0	-----	0	0	0	9	0	0	0	0	0
South Bend, Ind.-----	0	0	-----	0	1	0	4	0	4	0	0	1
Spokane, Wash.-----	0	0	-----	0	154	1	1	0	2	0	0	0
Springfield, Ill.-----	0	0	-----	0	3	0	3	0	2	0	0	68
Springfield, Mass.-----	0	0	-----	0	10	0	0	0	74	0	0	0
Superior, Wis.-----	0	0	-----	0	0	0	1	0	1	0	0	4
Syracuse, N. Y.-----	0	0	-----	0	4	0	3	0	15	0	0	14
Tacoma, Wash.-----	2	0	-----	2	31	0	0	0	0	0	0	0
Tampa, Fla.-----	0	0	4	0	1	1	2	0	2	0	0	3
Terre Haute, Ind.-----	0	0	-----	0	0	0	2	0	1	0	0	0
Topeka, Kans.-----	0	0	-----	1	12	0	4	0	4	0	0	1
Trenton, N. J.-----	1	0	2	0	5	0	2	0	3	0	0	2
Washington, D. C.-----	0	0	6	1	17	2	21	0	28	0	4	20
Wheeling, W. Va.-----	0	0	-----	0	1	0	1	0	1	0	0	3
Wichita, Kans.-----	0	0	-----	0	6	0	9	0	2	0	0	3
Wilmington, Del.-----	0	0	-----	0	2	0	4	0	1	0	0	3
Wilmington, N. C.-----	0	0	-----	1	5	0	2	0	4	0	0	10
Winston-Salem, N. C.-----	1	0	-----	0	0	0	1	0	1	0	0	6
Worcester, Mass.-----	0	0	-----	0	0	0	16	0	6	0	0	6
Total-----	69	2	212	53	2,635	110	621	1	1,240	1	13	1,202
Corresponding week 1942-----	87	2	293	42	1,730	18	466	4	1,218	0	16	1,350
Average, 1938-42-----	119	-----	1,908	196	23,078	-----	1,615	-----	1,290	15	20	1,130

Anthrax.—Cases: New Orleans, 1; Philadelphia, 1.

Dysentery, amebic.—Cases: Los Angeles, 2; New York, 5; Philadelphia, 1.

Dysentery, bacillary.—Cases: Buffalo, 1; Detroit, 3; New York, 8.

Dysentery, unspecified.—Cases: Baltimore, 1; San Antonio, 5.

Tularemia.—Cases: Chicago, 1.

Typhus fever.—Cases: Brunswick, 1; Charleston, S. C., 3; Galveston, 1; Little Rock, 1; Los Angeles, 1; New Orleans, 1; Savannah, 1.

¹ 3-year average, 1940-42.

² 5-year median.

PLAGUE INFECTION IN CALIFORNIA AND WASHINGTON

Plague infection has been reported proved in California and Washington as follows:

CALIFORNIA

Siskiyou County.—In a pool of 104 fleas from 7 ground squirrels, *C. douglasii*, taken on June 10, 1942, 6 miles east of Grenada.

WASHINGTON

Tacoma.—In a pool of tissue from 3 rats, *R. norvegicus*, taken January 13 and 14, 1943, in Tacoma, Pierce County, Wash.

FOREIGN REPORTS

ARGENTINA

Poliomyelitis.—According to information dated January 25, 1943, 317 cases of poliomyelitis were reported in Buenos Aires, Argentina, and 300 cases in the Province of Buenos Aires, for the period October 1 to December 15, 1942. The remainder of the country reported 74 cases of poliomyelitis for the year 1942.

CANADA

Provinces—Communicable diseases—Weeks ended January 2 and 9, 1943.—During the weeks ended January 2 and 9, 1943, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Week ended January 2, 1943

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox	24	55	1	59	435	—	53	8	32	667
Diphtheria	—	11	5	17	4	—	2	1	1	41
Encephalitis, infectious	—	—	—	—	—	—	2	—	—	2
German measles	—	—	—	2	15	—	7	—	12	36
Influenza	—	23	—	1	1	—	—	—	40	64
Measles	—	16	1	20	119	—	26	1	42	225
Meningitis, meningococcus	1	1	—	—	3	—	—	—	2	7
Mumps	—	135	2	7	656	—	60	52	165	1,077
Poliomyelitis	—	—	—	1	—	—	—	—	—	1
Scarlet fever	—	5	5	50	111	—	20	15	24	230
Tuberculosis (all forms)	1	8	3	59	117	—	10	32	10	231
Typhoid and paratyphoid fever	—	—	—	3	4	—	—	2	—	9
Whooping cough	—	31	—	29	68	—	1	23	10	162

NOTE.—No figures are available for Manitoba for the above period.

Week ended January 9, 1943

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox	—	24	—	191	423	69	41	16	58	822
Diphtheria	—	34	1	32	3	4	—	1	—	75
Dysentery (bacillary)	—	—	—	2	—	—	—	—	2	4
German measles	—	2	—	—	16	—	1	—	6	25
Influenza	—	2	2	—	8	4	—	—	21	37
Measles	—	1	3	163	70	13	46	1	10	307
Meningitis, meningococcus	—	—	1	—	5	—	—	—	2	8
Mumps	—	131	—	57	1,026	86	68	48	185	1,601
Poliomyelitis	—	—	—	1	—	—	—	—	—	1
Scarlet fever	—	8	6	137	130	6	9	33	19	348
Tuberculosis (all forms)	—	20	13	85	46	15	1	6	27	215
Typhoid and paratyphoid fever	—	—	—	8	1	1	1	—	1	12
Undulant fever	—	—	—	2	—	—	—	—	—	2
Whooping cough	—	14	—	162	89	24	1	14	24	328

CUBA

Habana—Communicable diseases—4 weeks ended January 9, 1943.—During the 4 weeks ended January 9, 1943, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria.....	15	-----	Poliomyelitis.....	1	-----
Leprosy.....	22	-----	Scarlet fever.....	3	-----
Malaria.....	12	-----	Tetanus.....	1	1
Measles.....	3	-----	Tuberculosis.....	10	2
Paratyphoid fever.....	1	-----	Typhoid fever.....	15	-----

Provinces—Notifiable diseases—4 weeks ended January 2, 1943.—During the 4 weeks ended January 2, 1943, cases of certain notifiable diseases were reported in the Provinces of Cuba, as follows:

Disease	Pinar del Rio	Habana ¹	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer.....	-----	1	3	12	-----	5	21
Chickenpox.....	-----	1	-----	-----	-----	3	4
Diphtheria.....	1	23	2	5	1	4	36
Malaria.....	148	18	1	50	10	773	1,000
Measles.....	-----	1	4	-----	-----	5	10
Poliomyelitis.....	-----	2	4	13	1	2	22
Scarlet fever.....	-----	1	-----	-----	-----	-----	1
Tuberculosis.....	6	19	11	43	11	50	140
Typhoid fever.....	2	19	5	33	7	21	87
Whooping cough.....	-----	-----	-----	-----	-----	2	2

¹ Includes the city of Habana.

JAMAICA

Communicable diseases—4 weeks ended January 16, 1943.—During the 4 weeks ended January 16, 1943, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox.....	1	3	Scarlet fever.....	-----	1
Diphtheria.....	2	2	Tuberculosis.....	22	56
Dysentery.....	1	4	Typhoid fever.....	5	25
Erysipelas.....	3	-----	Typhus fever.....	-----	2
Leprosy.....	-----	1	-----	-----	-----

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-named diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday of each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Plague

Belgian Congo—Costermansville Province.—During the week ended October 24, 1942, one case of plague with one death was reported in Costermansville Province, Belgian Congo.

Smallpox

Turkey.—During the week ended January 16, 1943, 252 cases of smallpox were reported in Turkey.

Typhus Fever

Hungary.—During the week ended January 16, 1943, 13 cases of typhus fever were reported in Hungary.

Slovakia.—During the week ended January 9, 1943, 15 cases of typhus fever were reported in Slovakia.

Turkey.—During the week ended January 16, 1943, 53 cases of typhus fever were reported in Turkey.

Yellow Fever

Belgian Congo—Stanleyville Province—Bondo.—On December 13, 1942, one death from yellow fever was reported in Bondo, Stanleyville Province, Belgian Congo.

Colombia—Intendencia of Meta.—On November 29, 1942, one death from yellow fever was reported in Intendencia of Meta, Colombia.

Nigeria—Port Harcourt.—On December 9, 1942, one suspected case of yellow fever was reported in Port Harcourt, Nigeria.

COURT DECISION ON PUBLIC HEALTH

Milk—inspection—city ordinance provision held invalid.—(California District Court of Appeal, 3rd District; *Meridian, Ltd., et al. v. Sippy, District Health Officer*, 128 P.2d 884; decided August 29, 1942.) An ordinance of the city of Stockton designated as the city health officer the district health officer of the San Joaquin health district, the boundaries of which district were identical with those of San Joaquin County. By the ordinance every person engaged in the production, processing, or distribution of milk for retail redistribution was required to obtain a permit from the health officer before selling, distributing, or offering for sale any milk in the city. The ordinance also provided: "In no case shall a permit be issued to any person, firm, association or corporation to sell or expose for sale or exchange, deliver or distribute any milk in the city of Stockton unless the dairy, source of supply or place of origin is regularly inspected by the health officer or his authorized representatives." The health officer of San Joaquin health district did not inspect dairies beyond the boundaries of his district and, as a result of the ordinance, no dairy, although approved by the State director of agriculture, could bring any market milk from outside the boundaries of San Joaquin County and sell it in the city of Stockton. The appellant corporation owned and operated a dairy in Stanislaus County. This dairy complied with all requirements of the State department of agriculture and the ordinances of San Joaquin County, and the appellant had been granted permits under the agricultural code by the milk inspection services of the cities of Oakland and Los Angeles and the city and county of San Francisco. This appellant desired to deliver milk from its dairy to a plant in Stockton for pasteurization and thereafter for resale through said plant and other authorized distributors in said city holding valid permits. On application therefor a permit was refused by the health officer of the San Joaquin health district because the said dairy was not regularly inspected by him. In an action the trial court upheld the validity of the ordinance, but the California District Court of Appeal held invalid that portion of the ordinance quoted above.

Section 491(b) of the State agricultural code provided that, whenever a milk producer or distributor sold or delivered within the jurisdiction of two or more cities or counties, the director of agriculture, after an investigation and consultation with the health officer of each city and county involved, should designate a county or city to conduct dairy and milk plant inspection. The said section further provided: "All market milk and dairy products so inspected may be sold and delivered within the jurisdiction of any county and city; provided, that applicable local ordinances of such county or city are not thereby

violated. The county or city designated by the director to render such inspection shall enforce all applicable local ordinances of each county and city into which such market milk and dairy products are sold or delivered." In compliance with this the director of agriculture had investigated and consulted with the health officers of certain cities, including Stockton, and had designated the health officer of Oakland to conduct the inspection of the appellant corporation's dairy. The quoted ordinance provision was held by the court to conflict with the above statutory declaration that "milk and dairy products so inspected may be sold and delivered within the jurisdiction of any county and city."

Another point passed on by the appellate court arose in connection with the authority conferred on municipalities by section 451 of the agricultural code to provide higher standards for grades of market milk than those provided by State law. The ordinance of Stockton did require higher standards than those required by the agricultural code, but the court, after reviewing the above-quoted portion of section 491(b), pointed out that a State permittee, if he sold milk in a city having an ordinance fixing higher standards, had to comply with those standards and that the State inspector was directed to enforce them. "Therefore, the State law provides a method which permits the free flow of whole milk into the market without unnecessary duplication of inspection without depriving the cities having higher standards of their full protection. This inspection by the designated health officer is State inspection. [Cases cited.] It must be presumed this officer will do his duty." Regarding the enforcement of local ordinances, mentioned in section 491(b), the court said that "to enforce" a law usually meant to cause the arrest and to coerce by "actual force and punishment" but that it did not necessarily imply this. It might mean "to give effect to, to cause to have force." "Section 491(b)," said the court, "deals with permits and it must mean that in issuing those permits the State 'will give force to' local ordinances or 'give effect to them'; therefore, that no permit will issue to sell milk in Stockton unless the municipal standard of requirements be so maintained. The coercion and force to be applied to violators still lies with the city."

The judgment of the lower court was reversed, the quoted portion of the ordinance of Stockton was held invalid, and the appellants were declared to have a right to carry on their respective businesses in Stockton upon compliance with the terms of the agricultural code and the higher standards required by said ordinance.