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PRINCIPAL PROVISIONS OF SMALLPOX VACCINATION LAWS AND REGULATIONS IN THE UNITED STATES

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There is here presented a comparative analysis of the principal provisions of the existing State laws and health department regulations pertaining to the requirement of vaccination against smallpox. Also included in the study are the laws and regulations of the District of Columbia, Alaska, Hawaii, Puerto Rico, and the United States.¹ Certain provisions, however, contained in the vaccination laws and regulations have not been dealt with herein. These provisions relate to such matters as free vaccination, vaccinating officers or physicians, records and reports of vaccination, vaccination certificates, vaccination history in reporting smallpox cases, vaccination of exposed persons, and the preparation, procuring, distribution, sale, storage, use, etc., of vaccine. The list of citations to the statutes, however, includes all statutory provisions found which expressly relate in any way to vaccination regardless of whether used in this analysis or not. In six States—Arkansas, Florida, Missouri, Nebraska, Nevada, and Oklahoma—no statutes were found which made express or specific reference in any manner to vaccination.

The data are set forth in nine tables, the headings of which are as follows: Vaccination of general population or of particular groups thereof; vaccination as prerequisite to school attendance (regardless of presence or absence of smallpox); exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox; vaccination of employees; vaccination of inmates of institutions; statutory prohibitions relative to vaccination; miscellaneous provisions regarding vaccination; definitions of vaccination; and methods of vaccination. These tables are preceded by a summary table in which are listed the States that have any provisions under any particular table.

¹ The search for the laws has included all of the regular and special sessions for 1939 and the following 1940 sessions: Regular sessions in Kentucky, Louisiana, Mississippi, New Jersey (to July 2), New York, Rhode Island, South Carolina, and Virginia; special sessions in Louisiana, Nebraska, Pennsylvania, and Vermont.

VACCINATION OF GENERAL POPULATION OR OF PARTICULAR GROUPS
THEREOF

In this table there are set forth the various provisions relative to the requirement of, or the authority to require, general vaccination. The vaccination of children is required in Hawaii, Kentucky, Maryland, and Puerto Rico. Also, Kentucky has a provision requiring that unvaccinated persons coming into the State to abide or become citizens procure vaccination. Puerto Rico and South Carolina have requirements governing the compulsory vaccination and revaccination of persons generally, but the South Carolina provisions pertain only to persons not residing within an incorporated city or town.

Authority to take action, under varying conditions, relative to general vaccination is conferred in 12 States (Alabama, Connecticut, Georgia, Kentucky, Massachusetts, Mississippi, North Carolina, Pennsylvania, South Carolina, Tennessee, Virginia, and Wyoming). The Pennsylvania provisions pertain to second- and third-class cities. In all of these States except Wyoming local authorities are given the power. In South Carolina, in addition to the local authorities, the State board of health is also given authority, while in Wyoming such authority is conferred solely on the State board of health. The language used in Colorado, Michigan, and North Carolina permits, and in New Mexico requires, the making of provision for the vaccination of inhabitants, and miscellaneous provisions having reference to general vaccination are also found in Kansas and South Carolina.

In Connecticut, Hawaii, Maryland, Massachusetts, South Carolina, and Tennessee there are provisions regarding exemption from, or postponement of, vaccination.

VACCINATION AS PREREQUISITE TO SCHOOL ATTENDANCE (REGARDLESS
OF PRESENCE OR ABSENCE OF SMALLPOX)

This table deals with those statutes and regulations which require, or authorize the requirement of, vaccination for school attendance. Those requirements or authorizations which are effective only when smallpox is present or threatened have not been included in this table but will be found in the table "Exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox." The language used in the statutes and regulations does not always in terms require, or authorize the requirement of, vaccination, but in classifying the provisions regard has, of course, been had to their effect. For example, in New Jersey the language is "A board of education *may exclude*" a pupil or teacher not successfully vaccinated. For the exact phraseology in any particular jurisdiction recourse must be had to the laws or regulations themselves.

Vaccination is required as a prerequisite to school attendance, regardless of the presence or absence of smallpox, in 12 States (Arkansas, Kentucky, Maryland, Massachusetts, New Hampshire, New Mexico, New York, Pennsylvania, Rhode Island, South Carolina, Virginia, and West Virginia) and in Alaska, the District of Columbia, and Puerto Rico. In Alaska there is the qualification that vaccination is required if, in the judgment of the Territorial health officer, it is necessary for the community's welfare, while in Virginia the operation of the law may be suspended. Pupils² are referred to in Alaska, the District of Columbia, Maryland, Massachusetts, New Hampshire, New Mexico, Pennsylvania, Rhode Island, South Carolina, and West Virginia; pupils and teachers in Kentucky and Virginia; pupils, teachers, and employees in Arkansas; pupils, teachers, employees, and caretakers in Puerto Rico; and pupils and persons in New York. With respect to the schools covered, public schools are mentioned in the District of Columbia, Maryland, Massachusetts, New Mexico, Virginia, and West Virginia; public and private schools in Arkansas, Kentucky, New Hampshire, Puerto Rico, and Rhode Island; public, private, parochial, and other schools in Pennsylvania; any school in the State in South Carolina; schools in cities having 50,000 or more inhabitants in New York; and schools in incorporated municipalities and school districts outside incorporated cities in Alaska.

Five States (Connecticut, Georgia, Maine, New Jersey, and Oregon) have statutes empowering school authorities to make vaccination a condition precedent to school attendance. Pupils are referred to in Connecticut, Georgia, and Oregon; pupils and teachers in New Jersey; and persons in Maine. In Connecticut public schools are named, while in Georgia and Oregon the schools are those coming under the particular school board. An Ohio statute authorizes regulations by district boards of education to secure the vaccination of pupils, and, while this statute does not in terms authorize the requirement of vaccination, a regulation under it requiring vaccination has been upheld. South Carolina has a law empowering city or town school authorities to require vaccination, but there are also mandatory vaccination requirements for school attendance in this State.

There are provisions regarding exemption from vaccination in 11 States (Arkansas, Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New Mexico, Pennsylvania, Rhode Island, Virginia, and West Virginia) and Alaska. The grounds for exemption are physical disability or physical condition in Arkansas, Connecticut, Massachusetts, New Mexico, Pennsylvania, and Virginia; unfit subject for vaccination in New Hampshire, New Jersey, and Rhode Island; religious principles in Alaska; opposition to vaccination by the

² The term "pupils" has been used generally throughout the analysis even though the statutes or regulations may employ the terms "child" or "children."

parent or guardian in Maine; and impossibility or impropriety of successful vaccination or sufficient reason why vaccination should not be done in West Virginia.

EXCLUSION FROM SCHOOL OF UNVACCINATED PERSONS DURING PREVALENCE OR THREATENED PREVALENCE OF SMALLPOX

As the heading indicates, this table treats of those provisions of the statutes and regulations whose effect is to require, or authorize, the exclusion of unvaccinated persons from school when smallpox is present or threatened. Such matters as the conditions which must exist before the exclusionary requirement or power is called into action and the areas involved vary considerably in the different States and will be found set forth in the table. As to the States concerned, six (Arizona, Kansas, Louisiana, Nebraska, New York, and Wisconsin) require exclusion, while five (Iowa, Minnesota, Montana, North Carolina, and South Carolina) have provisions authorizing exclusion. With respect to New York and South Carolina it may be stated that they also have provisions requiring vaccination as a prerequisite to school attendance, the New York requirement, however, being applicable only in cities of 50,000 or more. Regarding the persons to be excluded, pupils are referred to in Arizona, Iowa, Louisiana, Minnesota, and North Carolina; pupils and teachers in Kansas and Nebraska; pupils and persons in New York; pupils, teachers, and attendants in South Carolina; pupils, teachers, and persons frequenting schoolhouse in Montana; and inhabitants of municipality and nonresidents in Wisconsin.

New Jersey has a statute relative to exclusion, but again it should be noted that this State also authorizes the requirement of vaccination as a condition precedent to school attendance. In Oregon power is given to a board of school directors to decide how far revaccination shall be required if a smallpox case has occurred in the city or district. There is also a statutory provision in Texas bearing on exclusion.

As to exemption from vaccination, a Minnesota statute states that no rule shall require the vaccination of a child whose physician certifies that by reason of his physical condition vaccination would be dangerous.

VACCINATION OF EMPLOYEES

Varying provisions pertaining to the vaccination of specified employees are found in nine States (Colorado, Connecticut, Kentucky, Maine, Massachusetts, Minnesota, New Jersey, Pennsylvania, and Virginia) and Puerto Rico and the United States. Some of these provisions require vaccination (Colorado, Kentucky, Maine, Minnesota, New Jersey, Puerto Rico, and the United States), some authorize

the requirement of vaccination (Massachusetts and Virginia), while others do neither but, nevertheless, relate to the vaccination of employees (Connecticut and Pennsylvania). The employees referred to differ considerably, probationer nurses being mentioned in Colorado; paper-mill employees in Connecticut and Maine; minors and employees generally in Kentucky; various employees in Massachusetts, Pennsylvania, and Puerto Rico; officers and employees in State institutions in Minnesota; certain dairy employees in New Jersey; certain laborers in Virginia; and quarantine station personnel in the United States. In Massachusetts there is a provision regarding the exemption of children because of physical condition.

VACCINATION OF INMATES OF INSTITUTIONS

This table shows eight States (Kentucky, Massachusetts, Mississippi, Montana, New York, North Carolina, Pennsylvania, and South Carolina) as having statutes or regulations relative to the vaccination of inmates of institutions. Of these, six (Kentucky, Mississippi, Montana, New York, North Carolina, and South Carolina) may be classified as requiring that the inmates of the institutions specified be vaccinated, but in North Carolina the statute applies when smallpox appears. In Massachusetts vaccination may be required, and in Pennsylvania the provision relates to the regulations of health departments of first-class cities covering the vaccination of certain inmates. There are considerable differences in the various provisions with respect to the institutions specified, but, since the institutions are listed in the table, they will not be repeated here. Massachusetts has a provision for exemption from vaccination based on the physical condition of a child, and in New York the requirement of vaccination may be waived in an emergency.

STATUTORY PROHIBITIONS RELATIVE TO VACCINATION

MISCELLANEOUS PROVISIONS REGARDING VACCINATION

DEFINITIONS OF VACCINATION

METHODS OF VACCINATION

These tables classify the remaining data according to the respective headings and do not require further analysis or discussion.

CITATIONS TO SMALLPOX VACCINATION LAWS

State	Citations
Alabama.....	Michie's Code of 1928, secs. 2032, 2047; 1936 Cumulative Supplement to Michie's Code of 1928, secs. 1058, 1093.
Alaska.....	Compiled Laws, 1933, secs. 1663, 1677 (as amended by c. 30, act Mar. 10, 1937), 1678, 1682, 1684.
Arizona.....	Revised Code, 1928, sec. 2693.
California.....	Deering's School Code, Mar. 30, 1937, sec. 3.60; Laws 1939, c. 60, secs. 204, 1600—1621.
Colorado.....	1935 Statutes Annotated, c. 78, secs. 67, 69.
Connecticut.....	General Statutes, Revision of 1930, secs. 2392, 2430, 5202; 1935 Cumulative Supplement to General Statutes, sec. 261c.
Delaware.....	Revised Code, 1935, secs. 746, 774.
District of Columbia.....	Code, 1929 edition, title 7, sec. 242.
Georgia.....	Code Annotated, secs. 32—911, 88—416, 88—417, 88—9911; Laws 1937, Act 462, Mar. 30, 1937, sec. 1.
Hawaii.....	Revised Laws, 1935, secs. 1115—1124.
Idaho.....	Code, 1932, secs. 38—104, 38—1001—38—1003.
Illinois.....	Jones Statutes Annotated, secs. 33.168, 126.184.
Indiana.....	Burns' Statutes Annotated, 1933, sec. 35—712.
Iowa.....	Code, 1939, secs. 2191, 2220, 6846.
Kansas.....	General Statutes, 1935, sec. 65—119.
Kentucky.....	Baldwin's 1936 Revision of Carroll's Statutes, secs. 2052, 2054a—12, 2862, 4608—4614.
Louisiana.....	Dart's General Statutes, 1939, sec. 3361.
Maine.....	Revised Statutes, 1930, c. 19, sec. 44; Laws 1933, c. 1, secs. 115 (as amended by Laws 1935, c. 84, sec. 9), 163—169; Laws 1935, c. 84, sec. 12.
Maryland.....	Flack's Annotated Code, 1939, art. 43, secs. 35, 67—75, 80; art. 77, sec. 114.
Massachusetts.....	Annotated Laws, c. 76, sec. 15; c. 111, secs. 5, 181—183.
Michigan.....	Statutes Annotated, secs. 14.41—14.43, 14.106, 14.141, 14.301.
Minnesota.....	Mason's Statutes, 1927, sec. 5345.
Mississippi.....	Code of 1930, secs. 4865, 4878; 1938 Supplement to Code of 1930, sec. 1951.
Montana.....	Revised Codes, 1935, sec. 2481.
New Hampshire.....	Public Laws, 1926, c. 123, sec. 1 (as amended by Laws 1929, c. 139); c. 133, secs. 1, 3.
New Jersey.....	Statutes Annotated, Permanent edition, secs. 18: 14—52, 18: 14—53, 26: 4—6—26:4—8, 26: 4—98, 26: 4—99, 26: 4—118.
New Mexico.....	1938 Supplement to Statutes Annotated, 1929 Compilation, sec. 110—348 (7)—(10).
New York.....	Baldwin's Consolidated Laws, Lifetime edition, 1938, Public health law, secs. 25, 310, 311.
North Carolina.....	Michie's Code of 1939, secs. 2796, 7162—7164.
North Dakota.....	1913—1925 Supplement to 1913 Compiled Laws, secs. 425a1, 425a2.
Ohio.....	Page's General Code Annotated, secs. 4449, 7686.
Oregon.....	Compiled Laws Annotated, secs. 99—311, 111—3012.
Pennsylvania.....	Purdon's Statutes Annotated—Permanent edition, title 53, secs. 2181, 3800—12, 9062, 9069, 12198—2309; title 71, sec. 536.
Puerto Rico.....	Laws 1912, Act 81, secs. 23, 29.
Rhode Island.....	General Laws, 1938, c. 198, sec. 8; c. 256, secs. 28—31.
South Carolina.....	Code of Laws, 1932, secs. 1503, 5009—5013, 5016, 5023, 5028, 5043, 5051, 5066, 5075, 7360—7364.
South Dakota.....	Code of 1939, secs. 27.0104, 27.2201, 27.2202, 27.9938.
Tennessee.....	Michie's Code of 1938, secs. 325(1) 5798, 5799.
Texas.....	Vernon's Annotated Revised Civil Statutes, art. 4477, rules 19, 28.

CITATIONS TO SMALLPOX VACCINATION LAWS—continued

State	Citations
Utah.....	Revised Statutes, 1933, sec. 35-3-10.
Vermont.....	Public Laws, 1933, sec. 5299.
Virginia.....	Michie's Code of 1936, secs. 690, 691, 1505, 1531; 1940 Cumulative Supplement to Michie's Code of 1936, sec. 1493.
Washington.....	Remington's Revised Statutes Annotated, secs. 4805, 6093, 6094.
West Virginia.....	Michie's Code of 1937, secs. 1285, 1286.
Wisconsin.....	Statutes, 1939, secs. 97.63, 143.13.
Wyoming.....	Revised Statutes, 1931, sec. 103-212.
United States.....	Code, 1934 edition, title 42, secs. 141-148.

Summary table

State	Vaccination of general population or of particular groups thereof	Vaccination as prerequisite to school attendance (regardance of presence or absence of smallpox)	Exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox	Vaccination of employees	Vaccination of inmates of institutions	Statutory prohibitions relative to vaccination	Miscellaneous provisions regarding vaccination	Definitions of vaccination	Methods of vaccination
Alabama.....	X								
Alaska.....		X							
Arizona.....		X	X			X		X	
Arkansas.....		X				X	X		
California.....									
Colorado.....	X			X					
Connecticut.....	X	X		X					
Delaware.....							X		
District of Columbia.....		X							
Georgia.....	X	X					X		X
Hawaii.....	X								X
Iowa.....			X				X		
Kansas.....	X		X						
Kentucky.....	X	X		X	X				
Louisiana.....			X						
Maine.....		X		X					
Maryland.....	X	X							
Massachusetts.....	X	X		X	X				
Michigan.....	X								
Minnesota.....			X	X		X	X		
Mississippi.....	X				X				
Montana.....			X		X				
Nebraska.....			X					X	
Nevada.....								X	
New Hampshire.....		X							
New Jersey.....		X	X	X					
New Mexico.....	X	X							
New York.....		X	X			X	X		X
North Carolina.....	X		X		X				
North Dakota.....						X			
Ohio.....		X						X	
Oregon.....		X	X						
Pennsylvania.....	X			X	X		X		
Puerto Rico.....	X	X		X			X	X	X
Rhode Island.....		X							
South Carolina.....	X	X	X		X		X		
South Dakota.....						X	X		
Tennessee.....	X								
Texas.....			X						
Utah.....						X			
Virginia.....	X	X		X		X			
Washington.....						X			
West Virginia.....		X							
Wisconsin.....			X						
Wyoming.....	X								
United States.....				X			X		

Vaccination of general population or of particular groups thereof

State	Required		May be required		Miscellaneous provisions			
	S or R.1	Applicable to—	Scope of requirement	S or R.1	Authority vested in—	Scope of authority	S or R.1	Scope of provision
Alabama				S	City and town councils.	May provide for system of compulsory vaccination and enforcement of same.	S	Town, city, or county boards of health may make suitable provisions for inoculation of inhabitants with cowpox under direction of local board of health or health officer.
Colorado				S				
Connecticut				S	Town, city, and borough health officers and boards of health.	May adopt such measures for general vaccination of inhabitants as they deem reasonable and necessary to prevent introduction or arrest progress of smallpox. Fines for refusing to be vaccinated or for preventing person under one's care and control from being vaccinated, on application by health officer or board of health or by physician employed by health officer or board, unless, in another physician's opinion, it would not be prudent on account of sickness. Empowered to enact ordinances or regulations to authorize proper officials of counties or municipalities to require, under penalty, all persons at time located therein to submit to vaccination, in event health officers or proper authorities think it advisable, to prevent spread of smallpox or any other contagious or infectious disease.		
Georgia				S	County and municipal authorities.			

Iowa	S	Children	Every child to be taken for vaccination to appointed vaccinating officer or to physician within 6 months after birth or at earliest opportunity thereafter. Officer may postpone vaccination should he deem child to be in unfit state.	S		
Kansas						
Kentucky	S	Children	Parents, guardians, and others having care, custody, or control of children shall have them vaccinated and shall have children born hereafter vaccinated within 12 months after birth or after coming under their care, custody, or control.			
R		do	Every child shall be vaccinated before becoming 1 year of age.			
S		Unvaccinated persons coming into State to abide or become citizens and unvaccinated children under their care or control.	Such persons entering State shall procure vaccination of themselves and said children within 6 months after coming into State.			
Maryland	S	Children	It is duty of parent and guardian to have his child vaccinated within 12 months after birth, if in proper condition, or as soon thereafter as practicable.	S	City councils and town boards of trustees.	Empowered to make such ordinances and regulations, with fines and penalties attached, as will secure vaccination of all inhabitants of cities and towns.

Statute or regulation.

Should smallpox show a tendency to become epidemic, a general and thorough vaccination should be recommended and insured upon by a municipal or county board of health or health officer.

Vaccination of general population or of particular groups thereof—Continued

State	Required		May be required		Miscellaneous provisions		
	S or R	Applicable to—	Scope of requirement	Authority vested in—	Scope of authority	S or R	Scope of provision
Maryland— (Continued).	S	Unvaccinated persons, other than infants, under parent's or guardian's control or care.	Parent or guardian shall cause person to be vaccinated before November 1 of each year.				
Massachusetts				S Town boards of health.	Shall require and enforce vaccination and revaccination of all inhabitants of their towns, if in their opinion it is necessary for public health or safety.	S	Following persons not subject to foregoing: (1) Person over 21 presenting certificate of a probate court register that person is under guardianship; and (2) child presenting certificate of registered physician, designated by parent or guardian, that he has at time of giving certificate personally examined child and is of opinion that child's physical condition is such that his health will be endangered by vaccination—while such condition continues.
Michigan						S	Townships may make suitable provision for inoculation of inhabitants with cowpox under direction of township board of health or health officer.
Mississippi				S County boards of supervisors.	Empowered, in counties where smallpox exists to pass ordinances for providing for compulsory vaccination, and to enforce same as provided.		
New Mexico						S	State department of public health shall make suitable provision for inoculation of inhabitants of State with cowpox vaccines under directions of district health officers.

Board of health of any city, town, or county may make such regulations and provisions for vaccination of inhabitants as it may deem necessary to protect public health.

North Carolina			S City, town, or incorporated village governing body.	S May cause all persons in city, town, or village limits to be vaccinated.	Board of health of any city, town, or county may make such regulations and provisions for vaccination of inhabitants as it may deem necessary to protect public health.
Pennsylvania			S Department of public health in second-class cities.	S May take such measures as it may deem necessary to prevent spread of smallpox by issuing order requiring all persons in city or any part thereof to be vaccinated within such time as it shall prescribe.	
Puerto Rico	S All inhabitants of island.	Inoculation of vaccine virus is made obligatory and binding during such period and under such form and interval of time as is determined by director of sanitation.	S Board of health of third-class cities.	S May take measures for general and gratuitous vaccination as in its opinion protection of public health may require.	
	R Children	Vaccination required during age period 3 months to 1 year; if unsuccessful it shall be repeated at end of a month and, if second operation is unsuccessful, shall be repeated at end of the year; children who have had smallpox during this period need not be revaccinated. Revaccination required at age 7 years; if unsuccessful it shall be repeated at end of a month and, if still unsuccessful, shall be done from ninth to tenth year.			
	R Successfully vaccinated persons under 20 years.	Revaccination required 8 years after last vaccination and, if unsuccessful, again at end of a month.			
	R Persons over 25 years	Revaccination required only on outbreak of smallpox in island which appears to threaten epidemic.			

Vaccination of general population or of particular groups thereof—Continued

State	Required		May be required		Miscellaneous provisions		
	S or R	Applicable to—	Scope of requirement	Authority vested in—		Scope of authority	
Puerto Rico— Continued.	R	Persons residing in house or locality where smallpox cases exist.	Vaccination or revaccination required unless it can be proved to entire satisfaction of sanitary authorities that said persons have been successfully vaccinated or re-vaccinated within 3 years before outbreak.	S or R		S or R	
South Carolina..	R	Persons not residing within incorporated city or town, except persons obtaining reputable physician's certificate that vaccination would be dangerous to health [rule 1].	Vaccination and revaccination by duly appointed agents of State board of health required during first, sixth, and fifteenth year of age; vaccination forthwith required of all persons who have never been vaccinated, or shall be exposed, or are likely to become exposed [rule 1].	S	Council of incorporated city or town [Code, sec. 5009].	S	State board of health has general direction and supervision of vaccination and revaccination in all cities and towns and, in case of threatened smallpox epidemic in any community with insufficient ordinances, shall request passage of new city or town ordinance framed in accordance with sec. 5009 of code.
				S	State board of health, within which vaccination and revaccination shall be required; shall provide for vaccination and revaccination of indigent at city's or town's expense; and shall establish penalties by quarantine and otherwise of persons convicted of neglect or refusal to obey ordinances [Code, sec. 5009].	S	If council of any incorporated city or town neglects or refuses to pass ordinances in accordance with sec. 5009 of code it is duty of State board of health to promulgate regulations for vaccination of citizens and residents of city or town.
				S	State board of health and its duly appointed representatives	S	State board of health has control in matters of vaccination and revaccination of all persons not residing within any incorporated city or town and shall promulgate regulations for vaccination and revaccination of such persons containing provisions similar to those of sec. 5009 of code; applying to ordinances, but requirements may be modified.

fed in case of sparsely settled communities so as only to apply during apprehended danger of smallpox epidemics. It is duty of parent, guardian, or other person charged with care of any child to see that child is vaccinated, so often as directed by ordinances of incorporated city or town, State board of health regulations if not resident of city or town.

It is duty of parent, guardian, or other person charged with care of any child not a resident of an incorporated city or town to see that child is vaccinated as often as required by rule 1.³

S	R
	<p>May adopt such measures for general or local vaccination of inhabitants as they deem proper and necessary and, whenever necessary, vaccinate such inhabitants to prevent introduction or arrest progress of smallpox without being authorized or ordered by State department of public health. Fine for refusing to be vaccinated or for preventing person under one's care and control from being vaccinated, on application by health officer or board of health or by physician employed by health officer or board, unless, in another physician's written opinion, it would not be prudent on account of sickness. Fine for physician fraudulently giving certificate of sickness or of vaccination to prevent vaccination.</p>
S	<p>Municipal and county health officers or boards or departments of health.</p>

Tennessee.

³ South Carolina. For sec. 5009 see this table under subhead "May be required."
⁴ South Carolina. For rule 1 see this table under subhead "Required."

Vaccination of general population or of particular groups thereof—Continued

State	Required		May be required		Miscellaneous provisions	
	S or R	Scope of requirement	S or R	Authority vested in— Scope of authority		
Virginia.....		-----	S	Local boards of health. May provide for compulsory vaccination if, in their opinion, it be necessary to prevent epidemic. May adopt such measures for general vaccination of inhabitants of any city, town, or county as it deems proper and necessary to prevent introduction or arrest progress of smallpox. Unlawful to refuse to be vaccinated, or to prevent person under one's care and control from being vaccinated, or to fail to present oneself to county health officer or practicing physician, acting under board's or county health officer's direction, for vaccination if physician believes vaccination necessary.	S or R	Scope of provision
Wyoming.....		-----	S	State board of health.		

Vaccination as prerequisite to school attendance (regardless of presence or absence of smallpox)

State	Required				May be required			Exemption from vaccination		Other provisions			
	S or R ¹	How evidenced	Applicable to—		S or R ¹	By whom	Of whom	In what schools	S or R ¹	Ground for—	Showing required	S or R ¹	Scope of provision
			What persons	What schools									
Alaska	S		Pupils ²	In incorporated municipalities and school districts outside incorporated cities. ³					S	Religious principles ⁴	Written objection by child's parents or guardians. ⁵		
Arkansas	R	Certificate of successful vaccination from physician of State, certificate of recent vaccination done in proper manner by competent physician, or certificate showing immunity from having had smallpox.	Pupils, teachers, and employees.	Public and private.					R	Physical disability which may contraindicate vaccination in discretion of health authority having jurisdiction.	Certificate of health officer having jurisdiction stating contraindication.		
Connecticut					S	Local board of education.	Pupils	Public	S	Physical condition	Certificate from physician, approved by town, city, or borough health officer, practicing in or near town where child resides, that, in physician's opinion, vaccination would not be prudent on account of child's physical condition.		
District of Columbia, Georgia	S		Pupils ⁴	Public	S	Boards of education of each county and local system.	Pupils	Schools of respective boards.				S	Boards of education of each county and local system may make such regulations as in their judgment seem requisite to insure vaccination of pupils in their respective schools.
Kentucky	R	Reputable physician's certificate of successful vaccination within 7 years.	Pupils and teachers.	Public and private—within State board of health's jurisdiction.								R	Persons not permitted to remain as pupils or teachers in such schools unless revaccinated at least once each 7 years.
Maine					S	Superintending school committees.	Unvaccinated persons		S	Opposition to vaccination by parent or guardian.	Presentation by parent or guardian of signed statement that he is opposed to vaccination.	S	If parent or guardian presents signed statement that he is opposed to vaccination, unvaccinated person may only be excluded in event of smallpox epidemic.
Maryland	S	Certificate of successful vaccination from regular practicing physician of county or city, as case may be.	Pupils	Public								S	It is duty of teachers in public schools within 10 days after beginning of fall term, and thereafter as new pupils enter, to ascertain and enroll on school's vaccine register names of pupils producing certificate of successful vaccination from regular practicing physician of county or city, and also names of pupils enrolled at any previous term in any school of county or Baltimore City as successfully vaccinated when pupil presents certificate of such enrollment.
Massachusetts	S	Certificate from regular physician that child has been properly vaccinated.	do	do					S	Physical condition	Certificate of registered physician, designated by parent or guardian, that he has at time of giving certificate personally examined child and is of opinion that child's physical condition is such that his health will be endangered by vaccination.		
New Hampshire	S		do ⁵	Public and private					S	Unfit subject for vaccination.	Certificate of local board of health, issued on advice of registered physician of State practicing in town where child resides, that child is unfit subject for vaccination.		
New Jersey					S	A board of education	Pupils and teachers not successfully vaccinated or revaccinated.		S	do	Certificate of medical inspector appointed by board of education that pupil or teacher is unfit subject for vaccination.		
New Mexico	S	Successful vaccination where teacher has caused child to be vaccinated or proper certificate that child has been successfully vaccinated.	Pupils	Public					S	Physical condition	Certificate of duly licensed and practicing physician that minor child's physical condition is, at the time, such that vaccination would seriously endanger child's life or health.	S	It is duty of county school superintendent to see that all children of school age in his county are vaccinated, and to that end each teacher of a public school shall see that children under his control have been successfully vaccinated. Teacher shall report number of children whom he has caused to be vaccinated and those who have presented proper certificates that they have been vaccinated to county school superintendent at beginning of school year and as often thereafter as he may deem necessary, together with report of names of parents who refuse to allow their children to be vaccinated.
New York	S		Pupils and persons	Schools in cities having 50,000 or more inhabitants.	(6)	(6)	(6)	(6)					
Ohio					(6)	(6)	(6)	(6)				S	Each district board of education may make and enforce such regulations to secure vaccination of, and to prevent spread of smallpox among, pupils attending or eligible to attend schools of district as, in its opinion, safety and interest of public require.
Oregon					S	A board of school directors.	Unvaccinated pupils who have not had smallpox.	Schools under board's control.					
Pennsylvania	S	Physician's certificate that child has been vaccinated and that subsequent examination reveals resulting cicatrix indicating successful vaccination, or that vaccination has been performed according to regulations promulgated by State secretary of health with sanction and advice of advisory board of State health department, or that child has previously had smallpox.	Pupils	Public, private, parochial, and other.					R	Physical condition contraindicating vaccination.	In first- and second-class school districts—temporary certificate of disability issued by official city bureau of health physician if upon examination he finds a marked physical condition contraindicating vaccination; in third- and fourth-class school districts—temporary certificate of disability issued by county medical director of State health department if his examination or school medical inspector's report discloses a marked physical condition contraindicating vaccination.	S	All certificates of vaccination shall be issued in accordance with regulations promulgated by State secretary of health with sanction and advice of advisory board of State health department.
Puerto Rico	R	Vaccination or revaccination certificate dated not previous to 5 years on taking charge of work.	Teachers, employees, and caretakers.	Public and private									
Rhode Island	R	Vaccination or revaccination certificate.	Pupils	do									
Rhode Island	S	Licensed physician's certificate that pupil has been successfully vaccinated.	do	do					S	Unfit subject for vaccination.	Licensed physician's certificate, granted for cause stated therein, that pupil is not a fit subject for vaccination.	S	Administrative head of public or private school shall keep on file all certificates of successful vaccination and of unfitness for vaccination.
South Carolina	S	Satisfactory evidence of having been vaccinated so often as directed by ordinance of city or town where school is located or by State board of health regulations if not located within city or town.	do	Any school in State	S	Any board of education, school trustees, or other body having control of any of schools in any city or town.	Unvaccinated persons who have not had smallpox.	Any school in city or town.					
South Carolina	R	Successful vaccination within 10 years.	do	do									
South Carolina	R	Satisfactory evidence of having been vaccinated as often as required in rule I. ⁷	do	Any school in State not located within an incorporated city or town.									
Virginia	S	Reputable physician's certificate, furnished within 10 days after entering school, that person has been successfully vaccinated [code, sec. 690].	Pupils and teachers [code, sec. 690].	Public [code, sec. 690]					S	Peculiar physical condition [code, sec. 690].	Reputable physician's certificate, furnished within 10 days after entering school, that person is entitled to exemption by reason of peculiar physical condition [code, sec. 690].	S	Nothing in sec. 690, code, ⁸ precludes school board from requiring immediate vaccination in case of smallpox epidemic or annual revaccination of those who have not furnished certificates of proper vaccination. Where pupil has not been vaccinated, board shall, after notifying parent, guardian, or other person having custody or control of child to do so, proceed to have child vaccinated where parent, etc., fails to do so within time specified. Operation of so much of sec. 690 as concerns vaccination may be wholly or partly suspended by any county or city school board with approval of State superintendent of public instruction and State health commissioner [code, sec. 690].
West Virginia	S	Within first month of attendance, giving satisfactory proof of previous successful vaccination or reputable physician's certificate showing successful vaccination has been done.	Pupils entering school for first time in State.	Public					S	Impossibility or impropriety of successful vaccination or sufficient reason why vaccination should not be done.	Reputable physician's certificate showing that successful vaccination is impossible or improper or sufficient reason why vaccination should not be done.		

¹ Statute or regulation.
² Alaska. Vaccination required if, in Territorial health officer's judgment, necessary for community's welfare.
³ Alaska. No exemption "from physical examination and vaccination" when, in judgment of school authorities or physician, "child shows symptoms of physical defects or shows symptoms of or has been exposed to any contagious, infectious, obnoxious, or communicable disease."
⁴ District of Columbia. Child required to have been "duly vaccinated or otherwise protected" against smallpox.

⁵ New Hampshire. Attendance prohibited unless child "has been vaccinated; or has had the smallpox; or has submitted not less than 3 times to the process of vaccination; or holds a certificate" of unfitness.
⁶ Ohio. See this table under "Other provisions."
⁷ South Carolina. For rule I see table "Vaccination of general population or of particular groups thereof" under subhead "Required."
⁸ Virginia. For other provisions of sec. 690 see this table under subheads "Required" and "Exemption from vaccination."

Exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox

State	S or R ¹	Exclusion required	Exclusion authorized	Persons excluded	Time of exclusion	Schools to which applicable	Other provisions
Arizona	S	X		Unvaccinated pupils	Period in which smallpox epidemic may be prevalent in school district.	Public schools in any school district.	
Iowa	S		By board of health in city under special charter, with council's consent, by notice served upon teachers or persons in charge of schools.	Pupils	When smallpox is prevalent in city or its vicinity, until pupils have proved to satisfaction of board, or persons selected by it, that they have been vaccinated within 5 years or within such time as board may designate.	Public and private	
Kansas	R	Local board of health or health officer of any city or county where smallpox is present in any school district or part thereof, included in such city or county, shall, with advice and consent of State board of health (or its executive officer), prohibit attendance. ²		Pupils and teachers who have not been successfully vaccinated.	Period of 26 days after smallpox appears. ³	In any school district or part thereof previously referred to.	
Louisiana	R	X		Pupils not presenting reputable physician's certificate of successful vaccination within 5 years or of 2 unsuccessful attempts to vaccinate within 1 year.	When smallpox prevails in any parish or municipality and majority of parish or municipal board of health has recommended vaccination of pupils.	Public—in any parish or municipality previously referred to.	

¹ Statute or regulation.

² Kansas. Should new cases continue to develop in district or part thereof after expiration of 26 days, the local board of health or health officer shall, upon advice and consent of State board of health (or its executive officer) renew order for another period of 26 days or so many days thereof as State board (or executive officer) may deem necessary.

Exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox—Continued

State	S or R ¹	Exclusion required	Exclusion authorized	Persons excluded	Time of exclusion	Schools to which applicable	Other provisions
Louisiana—Con.	R	X		Pupils not furnishing certificate of registered Louisiana physician stating date of last vaccination and stating either that pupil has been successfully vaccinated within 5 years or has been twice vaccinated unsuccessfully within 1 year.	When smallpox has been declared prevalent in any parish by State or parish board of health and vaccination of pupils recommended by majority of parish board of health.	Public—in any parish previously referred to.	
Minnesota	S		No rule of State board of health or of any public board or officer shall exclude, except during smallpox epidemics and when approved by local board of education, a child from public schools because unvaccinated. By State board of health.	Pupils frequenting schoolhouse who do not comply with requirement of vaccination or presentation of evidence of successful vaccination with cowpox.	During smallpox epidemics.	Public.	Person thus required to be vaccinated may select any licensed physician and no rule shall require vaccination of child whose physician certifies that by reason of his physical condition vaccination would be dangerous.
Montana	S			All persons frequenting schoolhouse who do not comply with requirement of vaccination or presentation of evidence of successful vaccination with cowpox.	When smallpox exists or is threatened.	Any schoolhouse in infected or threatened district.	
	R		When smallpox exists or is threatened in any school district or part thereof, State board of health, (or, in interim of meetings, its executive officer) may direct local or county health officer to prohibit attendance.	Pupils and teachers who have not been successfully vaccinated.	Period of 3 months after appearance of smallpox.	School in any school district or part thereof previously referred to.	

Nebraska.....	R	Duty of school board to make order.			"School" only is specified.	Anybody having control of public schools may, on account of prevalence of or to prevent spread of communicable disease, prohibit attendance of any unvaccinated child who has not had smallpox, and decide whether revaccination shall be required if a smallpox case occurs in city or district.
New Jersey.....	S					
New York.....	S	Duty of school authorities in charge of school to exclude.	Pupils and persons not furnishing duly licensed physician's certificate that he has successfully vaccinated such child or person with vaccine virus in usual manner or that such child or person shows evidence by scar of successful previous vaccination.	When smallpox exists in any other city than one having 50,000 or more inhabitants or school district or in vicinity thereof, and State health commissioner certifies in writing to school authorities in charge of any school or schools in such city or district.	Schools in city or school district previously referred to.	
North Carolina.....	S		Pupils not presenting certificate of immunity from smallpox either through recent vaccination or previous attack of disease.	On appearance of smallpox case in any neighborhood, town, or city.	Public.	
Oregon.....	S		By any town, city, or county board of health.			Any board of school directors has power to decide how far revaccination shall be required if smallpox case has occurred in city or district.

¹Montana. Should new cases continue to develop in district or part thereof after expiration of 3 months, order may be renewed for another period of 3 months or so many days thereof as State board of health (or its executive officer) may deem necessary.

Exclusion from school of unvaccinated persons during prevalence or threatened prevalence of smallpox—Continued

State	S or R ¹	Exclusion required	Exclusion authorized	Persons excluded	Time of exclusion	Schools to which applicable	Other provisions
South Carolina	S		By school trustees or other body having control of any schools in any city or town.	Pupils, teachers, and attendants.	When smallpox case has occurred in city or town.	Any school in city or town.	
Texas	S						School wherein child suffering from smallpox has been present may, if board of trustees has passed regulation requiring successful vaccination of all teachers and pupils, be reopened immediately after disinfection and cleaning under local health authority's supervision, and all successfully vaccinated teachers and pupils may return.
Wisconsin	S	Local board of health shall prohibit attendance. ⁴		Inhabitants of municipality and nonresidents not successfully vaccinated or showing doctor's certificate of recent vaccination.	Period of 14 days upon appearance of smallpox. ⁴	"School" only is specified.	

⁴ Wisconsin. Should new cases continue to develop in municipality, local board of health shall renew order for so many days as State board of health may deem necessary.

Vaccination of employees

State	S or R?	Required	May be required	Persons to whom applicable—	Other provisions
Colorado.....	R	Immediately upon entrance upon duties, if not successfully vaccinated within 5 years.		Probationer nurses in any hospital or sanatorium.	Any person who employs in manufacture of paper any person who has not had smallpox or been vaccinated shall pay to any town all expenses caused it by sickness of such person with smallpox contracted while so employed.
Connecticut.....	S				
Kentucky.....	S	Persons who may have minors in their employ shall have them vaccinated.		Minor employees.....	Anyone employing person in violation of rule is guilty of separate offense for each day that such employee is sick with smallpox and liable for cost of his maintenance.
	R	Employers shall require each employee to be vaccinated previous to employment unless proof is furnished of successful vaccination within 5 years or that employee has had smallpox.		Each employee for any kind of service.	
Maine.....	S	Successful vaccination or revaccination within 2 years or to local health officer's satisfaction required for employment in paper mills using rags in manufacture.		Persons hired or admitted to work in or about said paper mills.	Said paper mills required annually in February and September to make out and deliver to local health officer a list containing names, ages, kind of work, and places of residence of all employees; annually in March and October said employees shall be examined by local health officer as to whether they are successfully and sufficiently protected by vaccination and said officer is judge of sufficiency of such protection.
Massachusetts.....	S		Board of health of town where any incorporated manufacturing company, infirmary, training or industrial school, hospital or other establishment where poor or sick are received, prison, jail or house of correction, or any institution supported or aided by State, is situated may, if it decides it is necessary for health of employees or inmates or for public safety, require authorities of said establishment or institution, at expense thereof, to cause all said employees or inmates to be vaccinated.	Employees of incorporated manufacturing companies and probably those of the institutions specified.	Child presenting certificate of registered physician, designated by parent or guardian, that he has at time of giving certificate personally examined child and is of opinion that child's physical condition is such that his health will be endangered by vaccination is not, while such condition continues, subject to provisions.

Statute or regulation.

Vaccination of employees—Continued

State	S or R	Required	May be required	Persons to whom applicable—	Other provisions
Minnesota.....	R	Successful vaccination required when brought into contact in any way with wards of institution.	-----	Officers and employees in State institutions.	
New Jersey.....	R	Employment prohibited when not vaccinated within 5 years, as confirmed by filing of proper certificate of vaccination, unless revaccinated at time of employment.	-----	Employees on dairies producing certified milk.	
Pennsylvania.....	S	-----	-----	-----	Regulations of health departments of first-class cities shall cover and include the compulsory vaccination and revaccination of persons employed as physicians, teachers, nurses, or in any other capacity in public or private schools, hospitals, and asylums, or any other public or private educational or charitable institutions.
Puerto Rico.....	R	Specified employees required to have vaccination or revaccination certificate.	-----	Employees of railroads, tramways, and vehicles at public's service; stewards of steam and sailing vessels; proprietors and clerks of hotels, restaurants, and other commercial establishments; managers and operatives of workshops and factories; members of police force, inspectors, internal revenue appraisers, and other employees whose occupation brings them in contact with public improvement. ²	
Virginia.....	S	-----	In examining officer's discretion, laborers shall be vaccinated. ¹	Laborers constructing works of public improvement. ²	
United States.....	R	Quarantine station personnel shall be vaccinated.	-----	Personnel at all U. S. Public Health Service quarantine stations.	

¹ Puerto Rico. See table "Vaccination of general population or of particular groups thereof" for provisions concerning vaccination and revaccination by age groups.
² Virginia. The statutory section involved commences by requiring any person, firm, or corporation employing large bodies of laborers constructing works of public improvement, unless having own physician for purpose, to have a regular inspection by board of health of the counties where said laborers are employed at such times as board may determine.

Vaccination of inmates of institutions

State	S or R ¹	Institutions specified	Requirement as to vaccination	Exemption from vaccination
Kentucky	S	Charitable Institutions of State Penitentiary	Superintendents shall have all convicts in same vaccinated.	
Massachusetts	S	Any infirmary, training or industrial school, hospital or other establishment where poor or sick are received, prison, jail or house of correction, or any institution supported or aided by State.	Board of health of town where situated may, if it decides it is necessary for health of inmates or for public safety, require authorities of said establishment or institution, at expense thereof, to cause all said inmates to be vaccinated.	Child presenting certificate of registered physician, designated by parent or guardian, that he has at time of giving certificate personally examined child and is of opinion that child's physical condition is such that his health will be endangered by vaccination—while such condition continues.
Mississippi	S	Sunflower Farm	Prison physician at said farm shall cause all convicts to be vaccinated.	
Montana	R	State Vocational School at Helena, State Industrial School at Miles City, State School for Feeble-minded and School for Deaf and Blind at Boulder, and State Orphans' Home at Twin Bridges.	On admission to said institutions all children must show evidence of successful vaccination or be immediately vaccinated.	
New York	R	State Reconstruction Home at West Haverstraw	A patient shall not be considered eligible for admission unless successfully vaccinated within 3 years.	Superintendent authorized to waive requirement when in his judgment emergency exists requiring immediate admission of patient.
North Carolina	S	A public institution, jail, or county home	On appearance of smallpox case in any neighborhood the county physician or health officer shall vaccinate every person admitted as soon as practicable, unless satisfied upon examination that person is already successfully vaccinated.	
Pennsylvania	S	Public or private schools, hospitals and asylums, or any other public or private educational or charitable institutions.	Regulations of health departments of first-class cities shall cover and include the compulsory vaccination and revaccination of inmates.	
South Carolina	R	Any jail or other penal institution	Prisoners not successfully vaccinated within 10 years shall be vaccinated upon admission.	

¹ Statute or regulation.

Statutory prohibitions relative to vaccination

State	Action prohibited or made unlawful
Arizona.....	Subjecting minor child to compulsory vaccination without parent's or guardian's consent.
California.....	Adoption by school or local health authorities of any rule or regulation on the subject of vaccination.
Minnesota.....	Rule of State board of health or of any public board or officer compelling vaccination of child or excluding, except during smallpox epidemics and when approved by local board of education, child from public schools because unvaccinated.
North Dakota....	Making any form of vaccination or inoculation a condition precedent for admission to any public or private school or college of any person, or for exercise of any right, performance of any duty, or enjoyment of any privilege by any person.
South Dakota....	For any board, physician, or person to compel another, by use of physical force, to submit to operation of vaccination with smallpox or other virus.
Utah.....	For any board of health, board of education, or any other public board to compel by resolution, order, or proceedings of any kind the vaccination of any person of any age; or to make vaccination a condition precedent to attendance at any public or private school, either as pupil or teacher.
Washington.....	Requiring children to submit to vaccination against parents' or guardian's will. ¹

¹ Washington. This provision is contained in a proviso in par. No. 13 of sec. 4805, Remington's Revised Statutes Annotated, which section enumerates various powers of the board of directors of a first-class school district.

Miscellaneous provisions regarding vaccination

State	S or R ¹	Scope of provision
California.....	S	Control of smallpox shall be under direction of State board of health.
Delaware.....	S	State board of health authorized to make such regulations and adopt such measures, including vaccination, as it deems best efficient to eradicate all infectious diseases.
Georgia.....	S	Boards of health of counties having 200,000 or more inhabitants authorized to make rules relative to vaccination.
Iowa.....	S	When smallpox is prevalent in city under special charter or its vicinity the city board of health, with council's consent, may prevent admission of persons not furnishing satisfactory proof of vaccination into churches, theaters, or other buildings by notifying persons in charge thereof not to admit such persons.
Minnesota.....	S	By regulation State board of health may control assembling, during smallpox epidemics, with other persons not vaccinated.
New York.....	S	No person shall perform vaccination who is not a regularly licensed physician under laws of State.
Pennsylvania....	S	Regulations of health departments of first-class cities shall cover and include the compulsory vaccination and revaccination of persons attending public or private schools, hospitals and asylums, or any other public or private educational or charitable institutions.
Puerto Rico.....	R	Vaccination shall be practiced only by physicians, "practicantes" and nurses, or by persons outside medical profession obtaining vaccinator's license from director of sanitation.
South Carolina...	S	Board of health of incorporated city, town, or village has power and it is its duty to enforce vaccination.
	S	Boards of health of unincorporated towns and villages of not less than 100 population have power and it is their duty to enforce vaccination.
	R	Every midwife shall be successfully vaccinated.
South Dakota....	S	No person shall prevent child of school age who furnishes physician's certificate of successful vaccination with smallpox virus, within 5 years, from attending public school.
United States....	R	Persons from localities in Canada and Mexico where smallpox is prevailing shall not be allowed entry into United States without vaccination, unless protected by previous attack of disease or recent successful vaccination.

¹ Statute or regulation.

*Definitions of vaccination*¹

State	Definition
Arkansas.....	Introduction of vaccine virus into the skin.
Nebraska.....	Scarification or puncture of the skin and introduction therein of active principles of cowpox followed by characteristic lesion or scar.
Nevada.....	Introduction, through an abrasion of the skin, of bovine vaccine virus.
Ohio.....	Inoculation by incision, puncture, scarification, or injection beneath epidermis of a vaccine which produces, with some constitutional disturbance, the typical vaccine vesicle and which leaves, after pox has healed, a characteristic scar.
Puerto Rico.....	Transference to human being of virus from irruption on skin of susceptible animal suffering from vacuna or cowpox.

¹ These definitions are all contained in regulations.

Methods of vaccination

State	S or R ¹	Scope of provision
Georgia.....	S	Misdemeanor to use any inoculation other than that called vaccination, unless by special commission or authority from court of ordinary of county where smallpox appears.
Hawaii.....	S	In vaccination of children, only bovine virus obtained from standard manufacturers shall be used, vaccination shall be only by scarifier and points put up in hermetically sealed tubes or other antiseptic receptacles, each receptacle shall be opened immediately before a scarifier or point is to be used in presence of person to be vaccinated, and no scarifier or point shall be used for vaccination of more than 1 person.
New York.....	S	Vaccination shall be performed in such manner only as prescribed by State health commissioner.
	R	One of following methods shall be used, unless special permission for use of another method is obtained from State health commissioner: (a) Single scratch method; (b) multiple pressure method. Following methods are specifically disapproved: (a) Cross hatching, (b) multiple scratches, or scarifications, less than 1 inch apart; (c) scratches more than ¼ inch in length.
Puerto Rico.....	R	Only mode employed shall be by puncture, incision, or scraping by means of sterilized needles, glass, or ivory points or scalpel, taking care not to cause flow of blood or unnecessary skin irritation; scarification should not be crossed nor should dry points be used.

¹ Statute or regulation.

PROCEDURE FOR THE MAINTENANCE OF HOUSING STANDARDS IN MILWAUKEE¹

By CHARLES L. SENN, *Assistant Chief in Charge of Sanitary Inspection, Milwaukee Health Department*

How far should housing concern the health department? This question has been posed many times, most recently at the American Public Health Association Convention in Detroit in October 1940. For the purpose of this article, the question may be rephrased: How far does housing concern the health department in Milwaukee?

Sufficient evidence has been accumulated to show that there is a definite relationship between housing and health. It appears to be agreed, generally, that housing is a concern of all health departments, and that health departments in the routine conduct of their duties do many things of immediate, practical value in maintaining reasonable dwelling standards in the communities which they serve.

But to what extent are defects in housing the direct responsibility of the health department? Who is to enforce existing codes? What about housing for families on relief? Should a housing authority or commission be created within the municipal administration? Should the building inspection department be made responsible? Will the Federal housing programs solve the problem? Should new codes be adopted?

It is clear that no two cities are going to solve their housing problems in exactly the same way; nor will they draw upon the same agencies for cooperation. Enforcement of laws relating to healthful

¹ Acknowledgment is made of the many helpful suggestions and assistance given by Mr. J. C. Leukhardt of the United States Public Health Service, in the preparation of this article.

housing will not be accomplished in the same ways by various municipal agencies.

The solution of problems encountered in the broad field of urban housing involves the combined work of several departments and agencies—zoning commissions, park and playground departments, building departments, relief and social agencies, fire prevention bureaus, plumbing departments, and health departments.

In Milwaukee, the plan now in effect joins together the city's health and housing functions. This coordination is attempted through the defining and sharing of responsibility on the part of several agencies.

It is true that the codes and rules applicable to the situation are still inadequate. Nevertheless, through fair and impartial enforcement and through mutual action by the building inspection department and the health department, progress is being made.

Discussion of some of the housing problems arising in Milwaukee and of the steps taken toward their solution will serve to show what one city is doing to raise the level of housing standards.

ROOMING HOUSES AND "LIGHT HOUSEKEEPING" ROOMS

The shift, a few years ago, of the "best residential" section from large homes in the central city to the newer suburban areas, left many large residences unoccupied. These have been taken over by tenants who desired to use them for the establishment of rooming houses and for light housekeeping rooms.

Thus, a number of families have come to live under one roof, sharing bathrooms and laundries, and cooking their meals in rooms originally intended only for sleeping purposes. These light housekeeping rooms are used largely by persons financially unable to establish homes in apartments, houses, or flats. To rent the usual dwelling unit would require a considerable outlay of money on their part. They would have to pay 1 month's rent in advance, to pay deposits to gas and electric companies, and to provide furniture. In light housekeeping rooms, by paying 1 week's rent in advance, they can obtain completely furnished living quarters within their means, including cooking facilities, heat, light, and gas.

These light housekeeping places present a housing problem in terms of crowding, safety, and sanitation. In 1917 an ordinance was adopted requiring that whenever four or more persons, in addition to the operator's family, live in a building not actually divided into complete, individual apartments, a rooming house license must be obtained from the health department. Licensing under this code requires at least 400 cubic feet of air space per adult occupant, window

areas of at least one-tenth the floor areas, and one toilet for each eight occupants.

Reasonable rules and regulations were decided upon, giving the health department power to require installation of a certain number of baths or showers and to exact on the part of the landlord a certain amount of cleanliness, the extermination of vermin, and the provision of clean, sanitary bedding.

A license to operate a rooming house is not issued until the occupancy permit is granted by the building inspection department and until all the rules of the health department have been complied with. Application for a license makes it possible to locate the houses and to keep records of the manner in which they are operated. Licensing also assists in enforcement since, each year before the license is renewed, compliance with all codes under the jurisdiction of the health department can be insisted upon. Following the routine health department check-up, lack of adequate fire escapes, installation of improper or illegal plumbing or wiring, and accumulation of material which might create a fire hazard, are called to the attention of proper departments. The health department withholds licenses when rooms on third floors do not have proper exits and fire escapes, although enforcement of this regulation is actually a building inspection department function.

It was soon realized that, even with frequent inspection and rigid enforcement, it would be difficult to maintain satisfactory housing in places having several light housekeeping units.

In May 1939, at the suggestion of the building inspector, Milwaukee's building code was changed to prohibit the installation or creation of new "nonregulation" dwelling units. That is to say, all new dwelling units to be used for sleeping and cooking purposes are required to have a minimum of 280 square feet of floor area, an individual sink, and at least one complete bathroom for each two units. This law is not retroactive.

Following passage of this code, the sanitary inspectors of the health department made a rooming house survey. All nonregulation dwelling units in existence at the time of passage of the new ordinance (i.e., units which met requirements of the rooming house law but not those of the new building code) were investigated. Sanitary facilities available in each place, the total number of nonregulation dwelling units, the number of persons living in such units, and the amount of rent paid were noted. At the time of the survey there were in Milwaukee 11,774 nonregulation dwelling units occupied by 19,462 persons. The total rooming house population was about 30,000.

These data were recorded on a card for each rooming house. Thus, at the annual inspection, the number of units recorded for each building may be checked against the number allowable. If units have

been added during the year, the owner is ordered to remove the stove and cooking facilities and to reserve the rooms for sleeping purposes only.

One of the most objectionable features of light housekeeping has been the lack of adequate means for procuring and disposing of water. One clause in the new ordinance has made possible the alleviation of such conditions to a marked degree. Under this clause, a sink must be installed in each dwelling unit. Occupants need not obtain all water from the bathroom if there is running water available to them in their own living quarters, nor do they have to dispose of all waste water by returning it to the bathroom. It is possible to wash and shave within their own rooms, and the inevitable long waits where a great many people are using the same bathroom are avoided. Unfortunately, this clause is not retroactive.

Upon adoption of the new ordinance, enforcement of all existing provisions was pressed. Places having more than the allowable number of persons for each toilet were ordered to install additional toilets or to reduce the number of roomers. Many rooms, which had been rented and licensed for a period of years, had insufficient window area. These were ordered vacated until the window area could be increased to comply with the ordinance. Units on third floors having but one stairway were no longer licensed. Inside rooms having no windows and rooms that were too small for healthful use were ordered vacated. Operators were required to install at least one bath or shower for every 15 persons. Violations of fire and safety regulations were promptly referred to the building inspection department.

Places regularly found to be in good condition are now inspected but once a year. Special records are kept of those houses requiring frequent inspection. Since State regulations require a special electric rate for rooming houses, an interchange of rooming house lists with the local electric company assists in keeping track of new places and of changes in ownership.

In order to secure uniform interpretation and enforcement of the rules and ordinances, all rules and policies of the health department are given to inspectors in written form. The city is divided into 16 inspection districts. All inspectors are required to investigate the rooming houses in their districts. Inspectors best qualified for housing work are assigned to the districts in which most of the rooming houses are located. One additional inspector is assigned exclusively to rooming house inspection.

In 1937 a complete check of all the buildings in the city was made by the police department. This check revealed only 25 unlicensed rooming houses at a time when there were 2,500 licensed rooming houses in the city.

Changes and improvements are accomplished with very little opposition; it is rarely necessary to bring an offender into court.

HOUSING STANDARDS FOR PUBLIC ASSISTANCE FAMILIES

An important factor in the Milwaukee procedure for improving housing standards has been the close cooperation of the department of public assistance with local enforcement agencies.

The department of public assistance of Milwaukee County² has shown a keen interest in the housing problem of families receiving assistance. It has aided materially in bringing about housing improvements by insisting that rooms which are too small, which have inadequate window areas, or which lack fire exits are not to be occupied by relief clients. This department routinely has refused to rent units in rooming houses which are not licensed by the health department.

The housing division of the department of public assistance permits clients to find their own quarters within the limits of their budget. The rent is paid directly to the landlord by the county. Rents are paid according to a definite evaluation schedule, and no place is rented until complete investigation has been made by the housing division.

Dwelling units are classified, in order that the maximum amount of rent allowable may be determined. The rates are established according to the availability of water, gas, electricity, inside toilets, private toilets, and like facilities. Quarters are further considered with reference to the number of rooms and the number of persons in the family to occupy them.

Based on these considerations, a maximum rent of \$18 per month, for example, would be paid for three rooms to be occupied by three people, if the rooms were equipped with water, gas, electricity, and inside toilet.

Housing investigators of the public assistance department check the buildings for general upkeep, cleanliness, screens, type and quantity of furniture, sanitary facilities, window areas, tightness of windows, type of heating, dampness, condition of basements, attics, stairs, hallways, and other pertinent factors. Deductions are made for each of the points in which the dwelling unit is deficient. A maximum rent allowance can be paid for any place rating between 85 and 100 percent. Rent allowance is proportionately decreased until a rate of 65 percent is reached. No quarters rating at or under 65 percent are rented without referring the premises to the attention of the building inspection department or to the health department for investigation. Once declared unfit by the building inspection department, a place will not be rented by the department of public

² See "How can a department of public assistance secure improved housing for client families?" Publication No. N-126, July 1940. National Association of Housing Officials, 1313 East Sixtieth Street, Chicago, Ill.

assistance. If the building is structurally unsafe, it is, of course, condemned by the building inspection department.

Minor defects in one- and two-family places—such as faulty plumbing, leaky roofs, broken windows, and the like—are referred directly to the owner by the housing division of the department of public assistance. When the owner refuses to correct insanitary conditions, the health department investigates. Upon decision that the quarters are unfit for human habitation, the relief department refuses to pay further rent until the conditions are corrected.

Violations of the rooming house law are referred to the health department for enforcement.

Insanitary conditions are not always attributable to the dwellings. Quite frequently conditions detrimental to health are caused by poor housekeeping on the part of the occupants. Heavy vermin infestations in quarters occupied by careless or ignorant housekeepers may result in the health department serving frequent notices to rooming house keepers to clean up and to exterminate the pests. The tenants responsible are usually ordered to move after repeated notices. They may move several times in a single year, and each time they bring vermin to their new rooms.

Many of these families are relief clients and the department of public assistance is now attempting to encourage them to maintain their premises in a reasonably clean and vermin-free condition. A housekeeping instructor visits the offending families and assists them to adopt better methods of housekeeping. In one- and two-family houses where the landlord cannot officially be made responsible for pest control, the visiting housekeeper furnishes clients with exterminating materials and instructions on ridding the rooms of household pests.

HEATING

For healthful occupancy there must be maintained in living rooms a temperature which will avoid "undue heat loss from the human body."³ An ordinance requiring maintenance of at least 70 degrees of heat, whenever the heat is furnished by the landlord, is enforced by the health department. The majority of houses occupied by multiple family units come under the provisions of this ordinance. Enforcement is by the usual method of education and cooperation, with court cases being the exception rather than the rule.

When complaints are made, inspectors are instructed to find the cause of the lack of heat. Frequently only one or two of the tenants in a building complain. Investigation commonly reveals faulty valves, improper circulating systems within the heating plant, or loss of heat due to loose or broken windows. All such conditions may

³Quotation from "Basic principles of healthful housing." Report of Committee on Hygiene of Housing, American Public Health Association.

be corrected readily by the landlord, and usually he is willing to cooperate if the defect is brought to his attention. If the lack of heat seems due to intentional economy or to neglect in caring for the heating apparatus, the landlord is instructed to comply with the provisions of the ordinance. If the orders are not obeyed, recording thermometers are installed in the complainant's quarters. When substandard temperature charts are presented in court, conviction usually follows.

GENERAL SANITATION

Efforts were made to improve sanitary conditions in areas where yards and alley passages were objectionable because of open piles of garbage and refuse. Rats and flies were attracted by the nuisance, and disagreeable odors resulted. Five health department inspectors were assigned to a single area during the summer of 1939 and as many as 100 written orders to clean up were issued in such districts in a single day.

Rat surveys carried out by district sanitary inspectors revealed the areas and buildings which were badly infested. The inspectors encouraged whole neighborhoods to work together for rat control. Thousands of pamphlets were distributed and improvement was brought about by ratproofing and by the elimination of feeding places and rat harborage.

There is still need of further control of dust and odor nuisances and of more strict regulation of city noise. Existing ordinances give the health department ample authority to respond to complaints in connection with these matters. Except in the heavy industrial areas, loud and sharp night noises from industrial plants and construction projects are prohibited. Noises caused by the hum of industrial ventilator fans, unmuffled motors, and compressors can be controlled by the health department. The enforcement of building and zoning laws will do much to prevent the establishment of new residential areas too near the noisy, malodorous, and dust-producing industries. The unnecessary blowing of auto horns is covered by an ordinance enforced by the police department. Certain other unnecessary noises, such as the loud playing of radios and other musical instruments, and noises made by heavy street cars, are still imperfectly restrained.

HOUSES IN OUTLYING SECTIONS

Before certain outlying districts were incorporated in the city limit, numerous individual bungalow-garages were built in these districts by persons who hoped soon to have funds with which to construct permanent homes. During the depression, building and loan companies and finance corporations took over many of these structures

planned by their owners as temporary and makeshift dwellings, and rented them as low-cost housing units.

Health problems soon developed, for with careless tenants occupying a building which had no sink, no inside toilet, and no running water, the improperly placed wells were soon contaminated. There was also the practice on the part of housewives of throwing waste water into the yards, further to complicate sanitary enforcement.

In 1937 a survey was made to determine how many privies, chemical toilets, and private wells were in use by the impoverished families in outlying sections. Orders were issued to install city water and sewer connections on all premises abutting on streets having public sewers and water. Owners who lived on the premises generally complied when orders were issued, even at considerable financial sacrifice. Many of the landlords and corporations, however, failed to comply. A decision by the city attorney held that existing ordinances did not give the health department authority to enforce these orders and more than 100 contemplated orders were dismissed before action was brought.

When the passage of a new ordinance was being considered, companies holding the properties for rental purposes argued that if the building foundations were improved, plumbing installed, and proper connections for running water made, large increases in rent would necessarily follow. This would, in turn, oblige the low rent tenants to move to rooming houses or to more dilapidated buildings in the congested part of the city. Pending adoption of a covering ordinance, the health department is attempting to require flyproof privy vaults, safe water supplies, and reasonable adherence to sanitary conditions. If it is found that such standards cannot be sustained, it is required that water and sewer connections be made or the property be vacated as a health hazard and a nuisance.

TENEMENTS

Places housing three or more families, not classed as rooming houses, are regulated by the tenement house sanitary code. The tenement code authorizes the health department to correct conditions detrimental to health, to order extermination of vermin, to insist upon provisions of sufficient window area in the sleeping rooms, and to prevent overcrowding.

Apartments and tenements are inspected annually by the health department. Additional inspections are made of places usually found in poor condition. While it is doubtful whether inspectors legally can insist on inspection of individual apartments, they do ask the privilege of going through dwelling units in buildings which are obviously in poor condition.

TRAILERS

Although the use of trailers for housing is not usual in Milwaukee, there are several trailer camps and a number of individual trailers in use in the city. An ordinance has recently been adopted requiring use of approved sites and provision of sanitary facilities. Use of trailers for living purposes is forbidden, except on sites accommodating at least 30 trailers. Persons may not occupy a trailer for more than 6 months in a year, within the city.

Occupancy permits for trailer camps must be obtained from the building inspector and annual licenses must be procured from the health department.

CONCLUSION

The new Federal housing policy of making available suitable dwelling places to lower income groups will help only a limited number of persons in a city the size of Milwaukee. For years to come there will exist the need of controlling the housing situation in the congested areas of the city, so that safe places to live, measuring up to known and legally enforceable standards, may be provided for people with low incomes and for families on relief.

Through close cooperation of the health department and the building inspection department, supported by the insistence of the tenants themselves that they be afforded better living accommodations, it is hoped that higher standards will be established, applicable to all existing units.

Improved new units, built under newly established standards, are the result of an extensive educational and enforcement program now in effect in Milwaukee. By clearly defining the duties of the several enforcement agencies, Milwaukee has strengthened the ordinances, and made the housing codes more comprehensive. Through close cooperation between local departments and agencies, improved housing for low income families has been advanced and opportunity for healthful living extended.

COURT DECISION ON PUBLIC HEALTH

Tuberculosis held not to be compensable under workmen's compensation act.—(Massachusetts Supreme Judicial Court; *Smith's Case*, 30 N.E.2d 536; decided December 10, 1940.) The widow of a deceased employee sought compensation under the Massachusetts Workmen's Compensation Act as a dependent. It appeared that the employee was in the service of a municipal hospital for contagious diseases from March 1, 1932, until his death from tuberculosis on January 19, 1938. At times he worked in the tuberculosis ward, taking meals to the patients, removing their dishes, and burning their

sputum boxes. It could be found, according to the supreme court's statement, that in 1934 he contracted tuberculosis. No means of infection other than inhalation of germs was shown. Compensation was awarded in the lower court and the city appealed.

The supreme court stated that the compensation act required only a personal injury, not personal injury by accident, and that the question for decision was whether germs of disease, present because of the employment, result in personal injury when they are inhaled by an employee and perform their function of producing disease. It was declared that the distinction between personal injury and germ disease had to be drawn, for the purposes of the compensation act, in accordance with common understanding as revealed in common speech and that the two concepts at times might overlap. "But," said the court, "when the disability has no cause connected with the employment except the presence, due to the employment, of germs of disease, and those germs find lodgment in the system only through the normal and natural process of respiration or inhalation, we think that there is disease, and not personal injury within the meaning of the act." In the instant case there was no evidence that the channel of infection was other than the nose and mouth into which the germs were carried by the natural act of respiration and the court's view was that the employee suffered from and died of disease, not personal injury.

DEATHS DURING WEEK ENDED JANUARY 18, 1941

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

	Week ended Jan. 18, 1941	Correspond- ing week, 1940
Data from 88 large cities of the United States:		
Total deaths.....	9,724	9,368
Average for 3 prior years.....	9,111	-----
Total deaths, first 3 weeks of year.....	28,777	28,334
Deaths under 1 year of age.....	550	565
Average for 3 prior years.....	533	-----
Deaths under 1 year of age, first 3 weeks of year.....	1,704	1,693
Data from industrial insurance companies:		
Policies in force.....	64,741,274	66,384,377
Number of death claims.....	13,858	15,167
Death claims per 1,000 policies in force, annual rate.....	11.2	11.9
Death claims per 1,000 policies, first 3 weeks of year, annual rate.....	9.8	10.0

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 JANUARY 25, 1941

Summary

The incidence of influenza, which has been increasing in the country as a whole since last November, registered a decline for the current week, with 96,652 cases reported as compared with 120,006¹ for the preceding week. These figures include only New York City for New York State; and while the State health officer of Pennsylvania reports further increase of upper respiratory infection, with scattered cases of influenza, he states that the disease is not epidemic there.

Increases for the current week were shown for only 3 geographic areas—the Middle Atlantic, East North Central, and South Atlantic—with the latter area reporting the largest number of cases and the largest numerical increase, from 46,255 to 50,310, or 52 percent of the current total. West Virginia, with 14,003 cases, as compared with 8,867 last week, reported the highest incidence and the largest increase for any State during the current week. The disease declined sharply in the two South Central and the Mountain and Pacific areas, where the incidence has previously been high.

For the current week the Bureau of the Census reports 10,472 deaths in 88 major cities of the United States, as compared with 9,724 last week and with a 3-year (1938–40) average of 9,321. From November through the week of January 4, mortality in these cities remained below or close to the 3-year average, but for the weeks ended January 11, 18, and 25, the numbers of deaths were 484, 613, and 1,151 above the respective weekly averages.

Of the other 8 communicable diseases included in the weekly table, only measles and poliomyelitis were above the 5-year (1936–40) medians, while the incidence of diphtheria, smallpox, and typhoid fever was below that for each of the preceding 5 years.

Two cases of tularemia were reported in North Carolina and 1 case in Utah. Of 29 cases of endemic typhus fever, 15 cases were reported in North Carolina and 5 cases in Georgia.

¹ The total of 119,006 cases previously recorded for last week was increased by a delayed report of 1,000 cases in New Hampshire.

Telegraphic morbidity reports from State health officers for the week ended January 25, 1941, and comparison with corresponding week of 1940 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 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40
	Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940	
NEW ENG.												
Maine.....	0	4	3	1,138	34	34	34	154	143	0	0	0
New Hampshire.....	0	0	0	44	-----	1	15	6	12	0	0	0
Vermont.....	0	1	0	23	-----	-----	36	22	22	0	0	0
Massachusetts.....	3	4	4	-----	-----	-----	341	210	344	0	0	2
Rhode Island.....	0	0	0	29	-----	-----	2	96	96	1	1	0
Connecticut.....	1	2	2	1,869	4	6	21	164	164	0	0	1
MID. ATL.												
New York.....	18	28	33	1,822	116	121	3,125	312	564	2	3	7
New Jersey.....	22	1	12	377	32	19	688	28	33	1	0	1
Pennsylvania.....	6	26	41	-----	-----	-----	2,486	52	140	4	15	9
E. NO. CEN.												
Ohio.....	8	23	27	3,245	21	7	770	38	60	2	2	3
Indiana.....	11	20	21	432	25	25	126	16	16	2	1	1
Illinois.....	14	33	41	171	79	35	1,210	32	32	0	0	5
Michigan.....	4	9	11	412	12	4	1,199	354	354	0	1	2
Wisconsin.....	1	3	3	230	64	53	286	214	214	3	1	0
W. NO. CEN.												
Minnesota.....	3	1	4	954	8	4	7	235	104	0	0	1
Iowa.....	5	3	6	671	22	7	109	78	78	1	0	0
Missouri.....	3	3	20	147	26	145	26	4	8	2	1	2
North Dakota.....	3	2	3	141	42	16	13	6	6	0	0	0
South Dakota.....	9	0	3	5	4	2	39	5	5	0	0	0
Nebraska.....	4	5	0	34	-----	1	2	28	28	0	1	1
Kansas.....	1	4	7	750	142	25	223	213	41	1	0	1
SO. ATL.												
Delaware.....	1	2	1	392	-----	-----	20	0	11	1	0	0
Maryland ¹	5	2	7	624	132	47	25	7	137	1	0	3
Dist. of Col.....	1	4	7	168	19	4	5	1	12	0	0	1
Virginia.....	6	17	23	12,868	2,107	304	41	135	2	1	1	4
West Virginia ¹	2	17	17	14,003	53	53	58	4	11	11	1	2
North Carolina ¹	24	10	30	1,277	122	34	87	42	54	2	0	3
South Carolina ¹	8	10	9	11,731	2,169	711	25	11	11	1	0	1
Georgia ¹	2	4	13	9,031	1,249	193	63	24	24	0	0	0
Florida ¹	1	5	10	216	62	13	6	33	33	1	0	0
E. SO. CEN.												
Kentucky.....	8	13	11	2,450	59	46	164	23	48	2	1	8
Tennessee.....	5	3	10	3,528	325	185	42	47	47	2	2	3
Alabama ¹	5	12	23	7,043	900	362	81	40	40	2	3	2
Mississippi ^{1,2}	2	2	8	-----	-----	-----	-----	-----	-----	1	1	1
W. SO. CEN.												
Arkansas.....	12	10	10	2,633	1,859	190	63	19	19	2	0	1
Louisiana.....	4	6	10	660	42	22	1	2	4	0	0	0
Oklahoma.....	9	8	10	1,521	373	217	5	2	13	1	1	2
Texas ¹	28	35	58	12,841	2,158	719	84	196	75	7	0	3
MOUNTAIN												
Montana.....	3	0	1	721	9	50	3	32	32	0	2	0
Idaho.....	0	3	2	79	1	2	0	148	73	0	0	0
Wyoming.....	2	1	0	616	2	-----	2	10	9	0	0	0
Colorado.....	1	8	9	603	-----	-----	57	27	27	0	0	1
New Mexico.....	0	0	3	159	19	10	84	9	26	0	0	0
Arizona.....	4	3	2	528	271	130	106	10	2	1	0	0
Utah ¹	3	0	0	155	45	7	16	149	54	0	1	0
Nevada.....	0	-----	-----	-----	-----	-----	0	-----	-----	0	-----	-----
PACIFIC												
Washington.....	2	3	3	110	13	4	82	301	113	1	0	0
Oregon.....	0	9	2	125	221	53	223	147	23	1	1	1
California.....	17	24	30	1,376	474	144	83	389	389	2	0	2
Total.....	271	383	601	96,652	13,242	3,295	11,448	4,283	5,806	60	42	104
4 weeks.....	1,220	1,829	2,507	283,630	47,966	12,765	40,419	15,633	18,891	166	129	277

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 25, 1941, and comparison with corresponding week of 1940 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40	Week ended		Median 1936-40
	Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940	
NEW ENG.												
Maine.....	0	0	0	5	17	21	0	0	0	1	1	1
New Hampshire.....	0	0	0	4	8	8	0	0	0	0	0	0
Vermont.....	0	0	0	11	11	11	0	0	0	0	0	0
Massachusetts.....	0	0	0	149	139	249	0	0	0	1	1	1
Rhode Island.....	0	0	0	4	8	20	0	0	0	0	0	0
Connecticut.....	0	0	0	39	82	82	0	0	0	1	10	0
MID. ATL.												
New York.....	2	0	0	440	597	677	0	0	0	2	6	6
New Jersey.....	0	0	1	269	254	177	0	0	0	0	0	0
Pennsylvania.....	2	0	1	253	388	569	0	0	0	2	10	7
E. NO. CEN.												
Ohio.....	1	1	0	247	376	433	0	1	8	1	0	0
Indiana.....	0	1	0	157	189	195	2	7	7	3	1	0
Illinois.....	2	1	1	410	489	551	0	1	17	8	1	3
Michigan.....	4	0	0	187	317	560	4	0	0	2	2	2
Wisconsin.....	2	0	0	147	167	289	2	2	13	0	1	1
W. NO. CEN.												
Minnesota.....	0	2	0	56	125	147	3	13	15	1	0	0
Iowa.....	5	6	0	56	71	191	7	11	24	4	2	1
Missouri.....	0	0	0	91	86	210	6	2	10	1	2	2
North Dakota.....	0	0	0	3	23	23	0	0	10	0	0	0
South Dakota.....	0	0	0	29	16	21	0	0	4	0	0	0
Nebraska.....	0	0	0	20	36	47	0	0	2	0	0	0
Kansas.....	1	1	0	64	114	213	2	0	11	0	0	0
SO. ATL.												
Delaware.....	0	0	0	13	14	14	0	0	0	0	0	0
Maryland ¹	0	0	0	83	54	57	0	0	0	2	2	2
Dist. of Col.....	0	0	0	11	31	16	0	0	0	0	0	0
Virginia.....	0	0	0	50	68	47	0	3	0	2	3	3
West Virginia ²	0	2	0	60	60	51	0	0	0	1	0	3
North Carolina ³	1	0	1	46	48	50	0	0	0	0	0	5
South Carolina ³	1	1	0	6	7	7	0	0	0	0	2	2
Georgia ³	3	0	0	25	12	16	0	0	0	1	4	3
Florida ³	2	0	0	1	6	11	0	1	0	0	0	1
E. SO. CEN.												
Kentucky.....	4	1	1	66	61	67	0	0	0	7	0	2
Tennessee.....	0	0	0	93	54	43	1	0	0	5	0	2
Alabama ³	0	2	1	19	16	14	0	0	0	3	0	2
Mississippi ^{1,2}	0	0	0	7	4	4	2	0	0	2	1	1
W. SO. CEN.												
Arkansas.....	0	0	0	8	13	9	0	2	2	1	3	3
Louisiana.....	2	0	1	10	18	16	0	0	0	1	3	4
Oklahoma.....	0	1	0	27	43	48	0	0	1	3	0	1
Texas ³	1	1	2	46	66	110	1	5	5	6	4	9
MOUNTAIN												
Montana.....	0	1	0	24	30	35	0	0	7	1	0	0
Idaho.....	0	1	0	14	4	29	0	0	3	0	7	0
Wyoming.....	0	0	0	8	14	14	0	0	0	0	0	0
Colorado.....	0	0	0	29	36	36	12	4	4	2	1	1
New Mexico.....	0	0	0	6	16	18	2	0	0	2	6	2
Arizona.....	0	0	0	5	14	14	0	0	0	0	3	0
Utah ²	1	1	0	6	25	25	0	0	0	0	0	0
Nevada.....	0						0			3		
PACIFIC												
Washington.....	1	0	0	27	61	74	1	0	10	2	0	0
Oregon.....	0	0	0	12	46	70	0	0	11	0	0	0
California.....	2	10	2	112	192	252	1	3	4	1	3	4
Total.....	37	33	26	3,485	4,528	6,359	46	55	275	72	79	101
4 weeks.....	170	151	85	12,674	16,488	23,666	190	319	1,144	312	329	458

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 25, 1941, and comparison with corresponding week of 1940 and 5-year median—Con.

Division and State	Whooping cough		Division and State	Whooping cough	
	Week ended			Week ended	
	Jan. 25, 1941	Jan. 27, 1940		Jan. 25, 1941	Jan. 27, 1940
NEW ENG.			SO. ATL.—Continued		
Maine.....	18	130	Georgia ¹	26	9
New Hampshire.....	0	7	Florida ²	7	5
Vermont.....	17	139	E. SO. CEN.		
Massachusetts.....	250	104	Kentucky.....	46	84
Rhode Island.....	6	4	Tennessee.....	64	18
Connecticut.....	89	78	Alabama ³	26	10
MID. ATL.			Mississippi: ³		
New York.....	351	405	W. SO. CEN.		
New Jersey.....	126	69	Arkansas.....	24	17
Pennsylvania.....	494	349	Louisiana.....	7	1
E. NO. CEN.			Oklahoma.....	20	5
Ohio.....	332	80	Texas ³	138	60
Indiana.....	22	23	MOUNTAIN		
Illinois.....	108	85	Montana.....	15	5
Michigan.....	331	102	Idaho.....	18	6
Wisconsin.....	149	103	Wyoming.....	0	12
W. NO. CEN.			Colorado.....	34	32
Minnesota.....	49	47	New Mexico.....	39	62
Iowa.....	15	5	Arizona.....	10	12
Missouri.....	42	11	Utah ³	57	149
North Dakota.....	32	0	Nevada.....	0	
South Dakota.....	3	2	PACIFIC		
Nebraska.....	2	3	Washington.....	96	29
Kansas.....	93	22	Oregon.....	16	29
SO. ATL.			California.....	318	166
Delaware.....	21	7	Total.....	4,130	2,678
Maryland ³	87	86	4 weeks.....	16,857	10,417
Dist. of Col.....	7	1			
Virginia.....	128	21			
West Virginia ²	59	32			
North Carolina ²	218	44			
South Carolina ²	120	8			

¹ New York City only.

² Period ended earlier than Saturday.

³ Typhus fever, week ended January 25, 1941, 30 cases, as follows: North Carolina, 15; South Carolina, 2; Georgia, 5; Florida, 1; Alabama, 3; Mississippi, 2; Texas, 2.

WEEKLY REPORTS FROM CITIES

City reports for week ended January 11, 1941

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average.....	167	1,078	124	1,872	919	1,540	28	356	20	1,051	-----
Current week ¹	65	5,479	151	4,499	661	640	9	334	16	1,498	-----
Maine:											
Portland.....	0	2	0	1	3	2	0	0	0	14	20
New Hampshire:											
Concord.....	0	0	0	0	0	0	0	0	0	0	5
Manchester.....	0	0	0	0	3	12	0	1	0	0	13
Nashua.....	0	0	0	0	0	4	0	0	0	2	-----

¹ Figures for Hartford, Wilmington, N. C., Shreveport, Boise, and Los Angeles (cases) estimated; reports not received.

City reports for week ended January 11, 1941—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia death ^s	Scar- let fever cases	Small- pox case ^s	Tuber- culosis death ^s	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
South Dakota:											
Aberdeen.....	0			0		0	0		0	1	
Sioux Falls.....	0		0	0	0	2	0	0	0	0	4
Nebraska:											
Lincoln.....	1			2		8	0		0	1	
Omaha.....	0		0	2	5	8	1	5	0	0	58
Kansas:											
Lawrence.....	0	47	0	10	1	0	0	0	0	0	7
Topeka.....	0	21	0	6	1	2	0	0	0	5	2
Wichita.....	0	54	1	0	10	2	1	1	0	13	33
Delaware:											
Wilmington.....	0			3	2	1	0	0	0	5	35
Maryland:											
Baltimore.....	4	20	2	8	12	17	0	6	0	55	245
Cumberland.....	0		0	0	0	0	0	0	0	0	12
Frederick.....	0		0	0	0	0	0	0	0	0	2
Dist. of Col.:											
Washington.....	1	90	0	4	11	22	0	10	2	10	207
Virginia:											
Lynchburg.....	1		0	0	1	0	0	0	0	4	16
Norfolk.....	0	199	0	5	2	2	0	2	0	1	24
Richmond.....	0		0	2	2	3	0	1	0	0	55
Roanoke.....	0		0	26	3	0	0	0	0	4	21
West Virginia:											
Charleston.....	0	3	0	0	3	0	0	1	0	0	29
Huntington.....	1	12		2		0	0	0	0	1	
Wheeling.....	0		0	1	3	2	0	0	0	4	14
North Carolina:											
Gastonia.....	0			0		0	0		0	0	
Raleigh.....	0		0	0	4	4	0	0	0	13	10
Wilmington.....											
Winston-Salem.....	1		1	2	1	0	0	1	0	40	12
South Carolina:											
Charleston.....	0	267	0	22	5	0	0	1	0	1	23
Florence.....	0		0	0	2	0	0	1	0	0	16
Greenville.....	1		0	0	2	0	0	0	0	6	17
Georgia:											
Atlanta.....	0	853	11	4	5	3	0	0	0	2	102
Brunswick.....	0		0	0	2	0	0	0	0	0	7
Savannah.....	0	224	4	1	2	1	0	1	1	1	35
Florida:											
Miami.....	0	10	1	1	3	2	0	1	1	2	46
Tampa.....	0	16	1	0	2	0	0	1	1	1	28
Kentucky:											
Ashland.....	0	85	0	0	0	0	0	2	0	1	6
Covington.....	0	6	0	11	2	2	0	3	0	0	15
Lexington.....	0		0	53	4	0	0	1	0	2	20
Tennessee:											
Knoxville.....	1	3,250	2	1	3	4	0	2	0	0	26
Memphis.....	1	276	12	19	10	6	0	4	1	4	135
Nashville.....	0		2	3	9	3	0	0	0	4	57
Alabama:											
Birmingham.....	4	45	4	20	6	2	0	2	0	1	68
Mobile.....	0	70	3	2	5	2	0	0	0	0	33
Montgomery.....	0	53		3		1	0		0	0	
Arkansas:											
Fort Smith.....	0	51		0		1	0		0	0	
Little Rock.....	0	300	1	0	8	1	0	1	0	0	52
Louisiana:											
Lake Charles.....	1	1	0	0	3	0	0	0	0	0	15
New Orleans.....	1	59	8	0	13	2	0	11	0	4	162
Shreveport.....											
Oklahoma:											
Oklahoma City.....	0	198	0	0	8	1	0	2	0	0	69
Tulsa.....	0		0	0	9	0	0	0	0	2	30
Texas:											
Dallas.....	0	11	3	0	6	5	0	5	0	1	88
Fort Worth.....	1		1	25	8	2	0	1	1	0	51
Galveston.....	0		0	0	4	0	0	1	0	0	19
Houston.....	2	1,404	6	0	9	2	0	6	0	0	92
San Antonio.....	0	16	10	0	19	0	0	11	0	0	97
Montana:											
Billings.....	0	8	0	0	4	0	0	0	0	0	18
Great Falls.....	0	34	0	0	5	1	0	0	0	0	15
Helena.....	0	170	0	0	1	0	0	0	0	0	6
Missoula.....	0	154	0	0	2	1	0	0	0	0	8

City reports for week ended January 11, 1941—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Idaho:											
Boise.....											
Colorado:											
Colorado Springs.....	0		0	1	3	1	0	2	0	1	16
Denver.....	2	191	9	14	14	5	0	6	1	15	112
Pueblo.....	0		1	0	1	0	0	0	0	0	8
New Mexico:											
Albuquerque.....	0	16	0	0	2	2	0	3	0	0	12
Utah:											
Salt Lake City.....	0		0	0	6	2	0	0	0	10	41
Washington:											
Seattle.....	0		6	1	5	2	0	5	0	3	91
Spokane.....	0	2	2	0	0	6	0	1	0	1	45
Tacoma.....	0		6	2	2	0	0	0	0	1	40
Oregon:											
Portland.....	1	55	1	6	7	3	0	3	0	0	97
Salem.....	0	66		1		0	0		0	2	
California:											
Los Angeles.....	3	391	8	5	8	20	0	31	0	52	503
Sacramento.....	0	15	1	1	6	0	0	3	0	4	38
San Francisco.....	1	116	4	1	6	7	0	3	1	42	192

State and city	Meningitis, meningococcus		Polio-myelitis cases	State and city	Meningitis, meningococcus		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
Rhode Island:				Missouri:			
Providence.....	0	0	1	Kansas City.....	0	0	1
New York:				District of Columbia:			
New York.....	3	1	2	Washington.....	0	0	1
Pennsylvania:				Florida:			
Philadelphia.....	0	0	1	Miami.....	0	0	1
Ohio:				Colorado:			
Cleveland.....	0	0	1	Denver.....	1	0	0
Illinois:							
Chicago.....	0	0	1				

Encephalitis, epidemic or lethargic.—Cases: St. Paul, 1.

Pellagra.—Cases: Charleston, S. C., 2.

Typhus fever.—Cases: Raleigh, 2; Brunswick, 1; Savannah, 1; San Antonio, 1. Deaths: New Orleans, 1.

TERRITORIES AND POSSESSIONS

VIRGIN ISLANDS OF THE UNITED STATES

Notifiable diseases—October–December 1940.—During the months of October, November, and December 1940, cases of certain notifiable diseases were reported in the Virgin Islands of the United States as follows:

Disease	October	November	December
Filariasis.....	1	8	10
Gonorrhoea.....	6	8	7
Hookworm disease.....	5	5	3
Malaria.....			1
Measles.....			1
Pneumonia.....	1		
Schistosomiasis.....			1
Syphilis.....	19	49	17
Trachoma.....	1		
Tuberculosis.....	4	4	2

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended December 21, 1940.—

During the week ended December 21, 1940, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis.....		10	1	2	9	1			2	25
Chickenpox.....			3	228	398	50	88	90	74	881
Diphtheria.....		24		41	1	4	5			75
Dysentery.....					55					55
Influenza.....		711			67	49	98		645	1,570
Measles.....		95	8	65	282	125	76	156	143	930
Mumps.....				49	52	12	1	13	9	136
Pneumonia.....		6			17	4			10	37
Scarlet fever.....		25	4	107	107	10	4	13	18	288
Tuberculosis.....	1	20	3	63	32	48	1	1		169
Typhoid and paratyphoid fever.....				29		1				30
Whooping cough.....			1	161	149	15	19		17	362

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated total are for approximate dates.

Place	January-October 1940	November 1940	December 1940—week ended—			
			7	14	21	28
ASIA						
Ceylon.....	C					
China:.....		1				
Dairen.....	C					
Foochow.....	C	2				
Hong Kong.....	C	578	34			
Macao.....	C	804	44			
Manchuria.....	C	488	25			
Shanghai.....	C	31				
Shantung Province.....	C	563	8			
India.....	C	244				
Bassein.....	C	43,094				
Bombay.....	C	164				
Calcutta.....	C	13				
Cawnpore.....	C	2,008				
Chittagong.....	C	333				
Karachi.....	C	4				
Madras.....	C	65				
Moulmein.....	C	1				
Porto Novo.....	C	16				
Rangoon.....	C	1				
Vizagapatam.....	C	43		10	6	2
India (French).....	C	21				
Indochina (French).....	C	34				
Thailand.....	C	436				
	C	235				

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE

[C indicates cases; D, deaths]

Place	Janu- ary- October 1940	Novem- ber 1940	December 1940—week ended—			
			7	14	21	28
AFRICA						
Algeria.....	C	22				1
Plague-infected rats.....		2				
Belgian Congo.....	C	23				
British East Africa:						
Kenya.....	C	9				
Uganda.....	C	171				
Egypt.....	C	1,409				
Madagascar.....	C	489	62	23	10	14
Morocco ¹	C	30				
Rhodesia, Northern.....	C	1				
Senegal:						
Dakar.....	D	1				
Thies.....	C	1				
Tivaouane.....	C	3				
Tunisia: Tunis.....	C	6	4			
Plague-infected rats.....		1				
Union of South Africa.....	C	25	6			
ASIA						
China, ⁴						
Dutch East Indies:						
Java and Madura.....	C	325				
West Java.....	C	8				
India.....	C	14,438				
Bassein.....	C	18				
Cochin.....	C	1				
Plague-infected rats.....		5				
Rangoon.....	C	6				
Indochina (French).....	C	3	1	1		
Thailand:						
Bangkok.....	C	3				
Plague-infected rats.....		2				
Bismulok Province.....	C	3				
Chingmal.....	C	3				
Dhonpuri Province.....	C	1				
Jayanad Province.....	C	3				
Kamphaeng Bajar Province.....	C	29				
Kanchanapuri Province.....	C	12				
Koan Kaen Province.....	C	5				
Nagara Svarga Province.....	C	30				
Noangkhai Province.....	C	4				
Sukhodaya Province.....	C	22				
EUROPE						
Portugal: Azores Islands.....	C	2	1			
SOUTH AMERICA						
Argentina:						
Catamarca Province.....	C	8				
Cordoba Province.....	C	32	4			
Jujuy Province.....	C	9				
La Rioja Province.....	C	1				
Salta Province.....	C	8				
San Luis Province.....	C	1				
Santiago del Estero Province.....	C	79	1			
Tucuman Province.....	C	21				

¹ Includes 5 cases of pneumonic plague.

² A report dated May 11, 1940, also stated that there was an epidemic of bubonic plague in southern Morocco where several hundred cases had been unofficially reported.

³ Imported.

⁴ Pneumonic.

⁵ Information dated July 7 states that up to July 6, 17 cases of plague had been reported near Tungliao, Hainan Province, China; and a report dated July 13 states that an outbreak of bubonic plague occurred along the Yunnan-Burma border in the districts of Loiwing, Chefang, Juili, and Muchien. Information dated Aug. 17 states that 45 cases of plague with 36 deaths have occurred in Nungen District and a telegram dated Oct. 2 states that 15 cases of bubonic plague with 3 deaths occurred in Hsinking, Manchuria. During the week ended Nov. 16, 1940, an epidemic of bubonic plague was reported in Ningpo District, Chekiang Province, China.

⁶ Includes 15 cases of pneumonic plague.

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths]

Place	January-October 1940	November 1940	December 1940—week ended—			
			7	14	21	28
SOUTH AMERICA—continued						
Brazil:						
Alagoas State.....	C 9					
Pernambuco State.....	C 4					
Ecuador: El Oro Province.....	C 6					
Peru:						
Cajabamba Department.....	C 1					
Cajamarca Department.....	C 28					
Lambayeque Department.....	C 13	2				
Libertad Department.....	C 49	3				
Lima Department.....	C 54	2				
Piura Department.....	C 6					
Tumbes Department.....	C 20					
OCEANIA						
Hawaii Territory: Plague-infected rats.....	43	1	3	4	2	1

¹ Includes 3 suspected cases.

² During the week ended Dec. 7, a mass inoculation of 12 rats and 1 mouse was also reported.

SMALLPOX

[C indicates cases; D, deaths]

AFRICA						
Algeria.....	C 5	1				
Angola.....	C 103					
Belgian Congo.....	C 3,343					
British East Africa.....	C 54					
Dahomey.....	C 71	10				8
French Guinea.....	C 13	3				
Gibraltar.....	C 1					
Ivory Coast.....	C 113	18				1
Nigeria.....	C 2,146					
Niger Territory.....	C 599	41		11		2
Nyasaland.....	C 73	1				
Portuguese East Africa.....	C 1					
Rhodesia:						
Northern.....	C 6					
Southern.....	C 225	15				
Senegal.....	C 145	4				11
Sierra Leone.....	C 10					
Sudan (Anglo-Egyptian).....	C 522	7				3
Sudan (French).....	C 1	2				
Union of South Africa.....	C 106					
ASIA						
Arabia.....	C 255					
China.....	C 831	2				
Chosen.....	C 541					
Dutch East Indies—Sabang.....	C 4					
India.....	154,740					
India (French).....	C 5					
India (Portuguese).....	C 20					
Indochina (French).....	C 1,436	51				42
Iran.....	C 177					
Iraq.....	C 617	157	20			
Japan.....	C 500	1				
Straits Settlements.....	C 1					
Sumatra.....	C 1					
Thailand.....	C 189	12			2	
EUROPE						
Great Britain.....	C 2					
Greece.....	C 23					
Portugal.....	C 354					
Spain.....	C 756					
Turkey.....	C 139	20				

¹ Imported.

² For the month of December.

**WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS
FEVER, AND YELLOW FEVER—Continued**
PLAGUE—Continued

[C indicates cases; D, deaths]

Place	January- October 1940	November 1940	December 1940—week ended—			
			7	14	21	28
NORTH AMERICA						
Canada..... C	9	3	2	3		
Guatemala..... C	35					
Mexico..... C	55					
SOUTH AMERICA						
Bolivia..... C	288					
Brazil..... C	3					
Colombia..... C	1,730					
Ecuador..... C	1					
Peru..... C	212					
Venezuela (alastrim)..... C	194	19		5		

TYPHUS FEVER

[C indicates cases; D, deaths]

AFRICA						
Algeria..... C	1,819	146				181
Belgian Congo..... C	1,210					
British East Africa..... C	2					
Egypt..... C	3,615	21				
Eritrea..... C	40					
Morocco..... C	277					
Rhodesia, Northern..... C	7					
Tunisia..... C	515	24	25	60		8
Union of South Africa..... C	154		6			
ASIA						
China..... C	2,127	17				
Chosen..... C	359					
India..... C	3					
Indochina (French)..... C	2					
Iran..... C	233					
Iraq..... C	156	2				
Japan..... C	2					
Palestine..... C	175	29				
Straits Settlements..... C	10					
Sumatra..... C	1					
Trans-Jordan..... C	15					
EUROPE						
Bulgaria..... C	145	9	1			
Germany..... C	213					
Greece..... C	37	2	1	1	1	1
Hungary..... C	78			1		
Irish Free State..... C	10					
Lithuania..... C	115					
Rumania..... C	1,259	27	10	21	42	44
Spain..... C	14					
Turkey..... C	519					
Yugoslavia..... C	282					
NORTH AMERICA						
Guatemala..... C	281	20				
Mexico..... C	199	3	1			
Panama Canal Zone..... C	3					
SOUTH AMERICA						
Bolivia..... C	626					
Chile..... C	312					
Ecuador..... C	2					
Peru..... C	968					
Venezuela..... C	12					
OCEANIA						
Australia..... C	11					
Hawaii Territory..... C	22	4	2			

† For the month of December.

‡ For the month of July.

**WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS
FEVER, AND YELLOW FEVER—Continued**

YELLOW FEVER

[C indicates cases; D, deaths]

Place	Janu- ary- October 1940	Novem- ber 1940	December 1940—week ended—			
			7	14	21	28
AFRICA						
Belgian Congo: Yatolet.....	C	1				
Cameroon: Nkongssamba.....	C	1 ¹				
French Equatorial Africa: Fort Archambault.....	C	1 ¹				
Gold Coast.....	C	1				
Ivory Coast.....	C	2 ⁵	1 ¹			
Nigeria:						
Ibadan.....	C	1				
Oshogbo.....	C	1 ¹				
Sudan (Anglo-Egyptian): Kordofan Province ²	C		773			
Sudan (French): Segou.....	C		1 ¹			
Togo (French).....	C	1				
SOUTH AMERICA						
Brazil:						
Bahia State.....	D	1				
Espírito Santo State.....	D	140 ⁴				
Minas Geraes State.....	D	2				
Para State.....	D	1				
Rio de Janeiro State.....	D	5 ⁵				
Santa Catarina State.....	D	2				
Colombia:						
Antioquia Department—San Luis.....	D	2				
Caldas Department—						
La Pradera.....	D	1				
Samana.....	D	1				
Victoria.....	D	1				
Intendencias and Commissaries.....	C	1				
Meta Department.....	D	3				
Municipality of Jesus Maria.....	D	1				
Santander Department.....	D	3				

¹ Suspected.

² Includes 3 suspected cases.

³ A report dated November 13, 1940, states that 8,000 cases of yellow fever with 800 deaths have been reported in Kordofan Province, Anglo-Egyptian Sudan.

⁴ Includes 28 deaths from jungle type.

⁵ Includes 1 death from jungle type.

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