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No. 3

PREVENTION OF MALARIA.

The following summary regarding malaria and its prevention is taken from a report on malaria investigations in the island of Mauritius by Prof. Ronald Ross, of the University of Liverpool:

Facts regarding malarial fever.—In the light of modern knowledge it may be safely affirmed that malaria will not remain in a locality (1) unless the carrying agents (*Anophelines*) are numerous enough, (2) unless there is a sufficient number of infected persons to infect the carriers, and (3) if the insects are prevented from biting human beings.

Three groups of preventive measures may therefore be employed to reduce the disease, namely: (1) *Anopheline* reduction, (2) case reduction, (3) isolation.

The precise details of the first method were first laid down in 1899 and have since been put into practice with great success in both the Suez and Panama canal zones.

The second great antimalaria measure, that of case reduction, was originated in 1900 by Koch and Celli, who, feeling doubt as to the possibility of mosquito reduction, urged that the best way of dealing with malaria would be to leave the mosquitoes alone and to cure the human patients from whom the insects become infected. Thus, though mosquitoes would continue to abound, they would find no parasites to carry. By the use of this method Stephansort, in New Guinea, was cleared of malaria by Koch in a few months.

The third measure, isolation or protection from bites of mosquitoes, has been unconsciously in use for a long time, the ancient Romans being already familiar with mosquito nets, while in America wire gauze screens for windows and verandas have long been employed.

Relative value of these measures.—It is obvious that any of the above measures, if completely carried out, must result in the complete suppression of endemic malaria in any locality. On comparing them, however, the first consideration which must strike the practical sanitarian is the following: Isolation and case reduction require ready compliance on the part of the public; mosquito reduction does not. To use culicifuges and mosquito nets, to screen windows and verandas, to take quinine day after day, to force one's children to take it, and to submit to constant inspections require an endless amount of trouble on the part of the people, equal trouble on the

part of the authorities, expense, and perhaps friction with the community. On the other hand, no one objects to the drainage of swamps and clearing of water courses, which can be done by the authorities without troubling anyone.

Next, case reduction guards against malaria only, but isolation and mosquito reduction protect against all mosquito-borne diseases.

Again, isolation gives only partial and temporary respite from mosquitoes; mosquito reduction, where thoroughly carried out, a much greater security.

Lastly, mosquito reduction has a great general sanitary advantage which is not conferred by the other measures. It practically compels the sanitary department to maintain a minute inspection of the area in its charge and becomes therefore a sort of general insurance policy for good sanitation.

Theoretically, therefore, mosquito reduction has the advantage in every way. Practically, however, the preference for any of these measures must be determined by local conditions, as questions of cost and feasibility have to be considered. The following general law has been enunciated by Doctor Ross: The greater the density of population the greater the advantages of mosquito reduction. In rural areas mosquito reduction may not be nearly so advantageous. This measure is for the city, the town, and perhaps the village, not for the wilderness. For isolated houses, quinine, isolation, and treatment of small neighboring waters, if possible, are called for; larger works of drainage can be indulged in only by rich house owners, not by the authorities. Also in small towns and villages situated in the midst of large marshes or marshy forests, or flat, water-logged country, the cost of mosquito reduction may be too great.

General preventive measures.—The measures likely to do most good for the expenditure of money and labor involved are the following: (1) Measuring the amount of malaria in the locality affected. (2) Treatment of children in schools, and a certain amount of free distribution of quinine. (3) House protection. (4) Mosquito reduction where advisable (a) by minor works and (b) by major works. (5) A suitable permanent organization and an annual malaria report.

(1) The ideal way to ascertain the amount of malaria in a locality would be to search for the parasites in the blood of every person in the place. But the parasites can not often be found even when present; too much time is taken by such an examination, and hence to estimate correctly the proportion of infected people throughout a large population would be a great and practically impossible task. The blood examination should therefore be used only for small populations. For large ones there is, however, available a much easier though less rigid method, which consists in examining the people for enlargement of the spleen, so frequent in cases of malaria. This can be done literally in a few seconds for each person. In practice, also, the examinations are usually confined to children, say, under 16 years of age. This is done for several reasons. Children are easily accessible in schools, while men are generally out at work, and women often object to the examination. But the most important reason is that adults have in many cases become partially immune.

By taking a *periodical spleen census* of school children there can be determined: (1) The localities most affected by malaria; (2) the

effect of the preventive measures; (3) the children who require treatment. For this purpose a register of all children of 15 years or under with enlarged spleens should be kept at each school. This register should contain the age, sex, and names of the parents of the children, with columns for noting whether the enlargement is small, medium, or great, and a column for remarks. An examination of all the children attending school should be made every quarter by a medical officer, for the purpose of selecting those with enlarged spleen and making the proper entries in the register. Twice a year the figures and data in this register should be collected and forwarded to the health department.

(2) *Treatment of children and free distribution of quinine.*—The objects proposed are to improve the health of the individuals (especially children) and to prevent them from becoming a source of infection to others. Children are the principal homes of the parasites, and can be treated more methodically in schools than elsewhere. At each quarterly inspection the medical officer should indicate the children with enlarged spleen, who should be given quinine, and the dose for each. This would be regularly given to the children by the teacher until discontinued by order of the medical officer. The dosage and mode of administration of quinine should be left largely in the hands of each practitioner. It seems, however, preferable to use small and frequently repeated doses rather than occasional large ones.

(3) *House protection.*—This is suggested chiefly as a prospective vicarious measure, its object being to exclude mosquitoes in localities where, owing to large marshes or much forest, they can not easily be reduced. The aim to be attained would therefore be the design of a type of a house which will exclude mosquitoes, and could be adopted by the community, and failing in this a cheap method to protect the houses by wire or muslin netting could be devised.

(4) *Mosquito reduction.*—The measure is advised, as a rule, only for densely populated areas. The works required may be divided into two classes, minor and major works. Minor works are those which can be continuously carried out without the special services of an engineer, such as the clearing of water channels and drains, release of surface pools, filling of holes, removal of house breeding waters, cutting of underwood, removal of grass, weeds, etc., from the margin of ponds and streams, etc. Major works are those which require to be designed by an engineer, such as the drainage of swamps, canalization of streams, etc.

(5) *Annual report.*—Here should be given the details of the work done during the year with the cost and the results obtained, and also figures for previous years for comparison.

UNITED STATES.

REPORTS TO THE SURGEON-GENERAL, PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

PLAGUE-PREVENTION WORK.

Passed Assistant Surgeon McCoy reports:

SAN FRANCISCO, CAL.

Last case of human plague sickened January 30, 1908. Last plague-infected rat was trapped October 23, 1908. Total number of plague-infected rats found to date, 398.

Week ended January 8, 1910. Premises inspected, 988. Houses destroyed, 8. Buildings condemned, 6. Nuisances abated, 167. Poisons placed, 8,270. Rats trapped, 1,949. Rats found dead, 16. Rats identified, 1,965, as follows: *Mus norvegicus*, 1,368; *Mus rattus*, 99; *Mus musculus*, 424; *Mus alexandrimus*, 74. Rats examined bacteriologically, 1,419. No plague-infected rats were found.

OAKLAND, CAL.

Last case of human plague sickened October 26, 1909. Last plague-infected rodent was found December 1, 1908.

Week ended January 1, 1910. Rats found dead, 11. Rats trapped, 548. Rats identified, 558, as follows: *Mus norvegicus*, 492; *Mus musculus*, 66. Rats examined bacteriologically, 492. No plague-infected rat found.

Week ended January 8. Rats found dead, 13. Rats trapped, 645. Rats identified, 658, as follows: *Mus norvegicus*, 572; *Mus rattus*, 1; *Mus musculus*, 85. Rats examined bacteriologically, 573. No plague-infected rat found.

Passed Assistant Surgeon Glover reports:

SEATTLE, WASH.

No case of human plague since October 30, 1907. The last plague-infected rat was found September 26, 1908. Total plague-infected rats found to date, 21.

Assistant Surgeon Chapin reports, January 7, through Passed Assistant Surgeon Glover:

Work resumed December 15, 1909. Total number of rats received from December 15 to 31, 2,342. Rats necropsied, 2,100. No plague-infected rat was found.

During the time the laboratory was building, from August 25 to December 15, 1909, 22,344 rats were received and destroyed without examination.

SMALLPOX IN THE UNITED STATES.

Reports Received During Week Ended January 21, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Montgomery.....	Jan. 2-8.....	61		
California:				
Oakland.....	Dec. 26-Jan. 1.....	1		
Kansas:				
Clay County.....	Nov. 1-30.....	1		
Cloud County.....	Nov. 1-30.....	1		
Cowley County.....	Nov. 1-30.....	3		
Decatur County.....	Nov. 1-30.....	2		
Graham County.....	Nov. 1-30.....	20		
Lane County.....	Nov. 1-30.....	1		
Montgomery County.....	Nov. 1-30.....	6		
Norton County.....	Nov. 1-30.....	30		
Reno County.....	Nov. 1-30.....	16		
Scott County.....	Nov. 1-30.....	2		
Shawnee County—				
Topeka.....	Nov. 1-30.....	1		
Sheridan County.....	Nov. 1-30.....	5		
Sumner County.....	Nov. 1-30.....	9		
Wabaunsee County.....	Nov. 1-30.....	3		
Wilson County.....	Nov. 1-30.....	2		
Wyandotte County—				
Kansas City.....	Dec. 26-Jan. 1.....	8		
Kentucky:				
Paducah.....	Jan. 5-11.....	1		
Louisiana:				
New Orleans.....	Jan. 2-8.....	3		
Maryland:				
Dorchester County.....	Dec. 1-31.....	1		
Minnesota:				
Beltrami County.....	Dec. 21-27.....	1		
Benton County.....	Dec. 14-20.....	7		
Blue Earth County.....	Dec. 21-27.....	1		
Carver County.....	Dec. 7-Jan. 3.....	4		
Goodhue County.....	Dec. 28-Jan. 3.....	1		
Hennepin County.....	Dec. 28-Jan. 3.....	5		
Itasca County.....	Dec. 14-20.....	1		
Kandiyohi County.....	Dec. 7-13.....	1		
Mower County.....	Dec. 28-Jan. 3.....	1		
Ottertail County.....	Dec. 21-27.....	2		
Polk County.....	Dec. 7-13.....	1		
Red Lake County.....	Dec. 7-13.....	1		
Renville County.....	Dec. 7-13.....	1		
Rock County.....	Dec. 7-27.....	13		
Roseau County.....	Dec. 7-Jan. 3.....	12		
St. Louis County.....	Dec. 7-27.....	3		
Sibley County.....	Dec. 7-13.....	4		
Todd County.....	Dec. 28-Jan. 3.....	1		
Wabasha County.....	Dec. 7-13.....	1		
Watsonwan County.....	Dec. 28-Jan. 3.....	1		
Wright County.....	Dec. 7-Jan. 3.....	14		
Mississippi:				
Biloxi.....	Jan. 2-8.....	2		
Holly Springs.....	Jan. 2-8.....	2		
Natchez.....	Jan. 2-8.....	10		
Missouri:				
Kansas City.....	Jan. 2-8.....	4		
Nebraska:				
South Omaha.....	Dec. 5-11.....	3		
New York, general.....	Nov. 1-30.....	27		
North Carolina:				
Catawba County.....	Oct. 1-31.....	2		
Chowan County.....	Oct. 1-31.....	1		
Currituck County.....	Oct. 1-31.....	2		
Davidson County.....	Oct. 1-31.....	4		
Forsyth County.....	Oct. 1-31.....	4		
Franklin County.....	Oct. 1-31.....	15		
Jones County.....	Oct. 1-31.....	3		
Robeson County.....	Oct. 1-31.....	1		
Surry County.....	Oct. 1-31.....	1		
Union County.....	Oct. 1-31.....	2		
Yadkin County.....	Oct. 1-31.....	1		
Oklahoma:				
Blaine County.....	Dec. 1-31.....	7		
Oregon:				
Portland.....	Nov. 1-30.....	2		
Tennessee:				
Chattanooga.....	Jan. 2-8.....	2		
Knoxville.....	Jan. 2-8.....	2		
De Kalb County.....	Dec. 26-Jan. 1.....	2		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received During Week Ended January 21, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas:				
Fort Worth.....	Dec. 1-31.....	3	.....
San Antonio.....	Dec. 19-25.....	3	.....
Washington:				
Spokane.....	Dec. 26-Jan. 1.....	1	.....

Reports Received from January 1 to January 14, 1910.

For reports received from June 25, 1909, to December 31, 1909, see PUBLIC HEALTH REPORTS for December 31, 1909. In accordance with custom the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Montgomery.....	Dec. 19-31.....	47	.....
Total for State.....		47	.....
California:				
Sacramento.....	Dec. 12-18.....	2	.....
San Francisco.....	Dec. 19-25.....	4	.....
Total for State.....		6	.....
Colorado:				
Boulder.....	Dec. 19-25.....	1	.....
Fruita District.....	Dec. 26-Jan. 1.....	3	.....
Total for State.....		4	.....
District of Columbia.....	Dec. 19-Jan. 1.....	1	.....
Total for District.....		1	.....
Illinois:				
Chicago.....	Dec. 19-25.....	2	.....
Total for State.....		2	.....
Indiana:				
Flora.....	Dec. 1-31.....	3	.....
Indianapolis.....	Dec. 12-18.....	1	.....
South Bend.....	Dec. 26-Jan. 1.....	1	.....
Total for State.....		5	.....
Iowa:				
Cedar Rapids.....	Dec. 1-31.....	7	.....
Sioux City.....	Dec. 1-31.....	2	.....
Total for State.....		9	.....
Kansas:				
Montgomery County— Independence.....	Dec. 19-Jan. 1.....	17	.....
Wyandotte County— Kansas City.....	Dec. 19-25.....	1	.....
Total for State.....		18	.....
Kentucky:				
Hartford.....	Dec. 12-18.....	2	.....
Lexington.....	Dec. 12-18.....	1	.....
Total for State.....		3	.....
Louisiana:				
New Orleans.....	Dec. 26-Jan. 1.....	6	.....
Total for State.....		6	.....
Maryland:				
Baltimore.....	Dec. 26-Jan. 1.....	1	.....
Total for State.....		1	.....

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to January 14, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Michigan:				
Alcona County.....	Nov. 1-30.....	12		
Antrim County.....	Nov. 1-30.....	11		
Arenac County.....	Nov. 1-30.....	66		
Bay County.....	Nov. 1-30.....	4		
Bay City.....	Dec. 5-11.....	15		
Emmet County.....	Nov. 1-30.....	2		
Genesee County.....	Nov. 1-30.....	60		
Gladwin County.....	Nov. 1-30.....	1		
Gratiot County.....	Nov. 1-30.....	1		
Houghton County.....	Nov. 1-30.....	11		
Ionia County.....	Nov. 1-30.....	23		
Lapeer County.....	Nov. 1-30.....	2		
Livingston County.....	Nov. 1-30.....	7		
Marquette County.....	Nov. 1-30.....	1		
Mason County.....	Nov. 1-30.....	1		
Montcalm County.....	Nov. 1-30.....	3		
Ontonagon County.....	Nov. 1-30.....	2		
Sanilac County.....	Nov. 1-30.....	2		
Wayne County—				
Detroit.....	Dec. 26-Jan. 1....	1		
Total for State.....		225		
Mississippi:				
Natchez.....	Dec. 26-Jan. 1....	7		
Clalbourne County—				
Port Gibson.....	Dec. 19-25.....	1		
Total for State.....		8		
Missouri:				
St. Louis.....	Dec. 26-Jan. 1....	1		
Total for State.....		1		
Montana:				
Dawson County.....	Nov. 1-30.....	1		
Flathead County.....	Oct. 1-Nov. 30....	6		
Jefferson County.....	Nov. 1-30.....	1		
Lewis and Clark County.....	Oct. 1-Nov. 30....	3		
Missoula County.....	Oct. 1-Nov. 30....	22		
Park County.....	Nov. 1-30.....	1		
Powell County.....	Nov. 1-30.....	1		
Ravalli County.....	Nov. 1-30.....	2		
Silver Bow County.....	Oct. 1-Nov. 30....	15		
Butte.....	Dec. 19-31.....	14		
Total for State.....		66		
New York, general.....	Sept. 1-Oct. 31....		1	
Lockport.....	Dec. 5-11.....	1		
Total for State.....		7	1	
North Carolina:				
Greensboro.....	Dec. 26-Jan. 1....	1		
Charlotte.....	Dec. 19-Jan. 1....	7		
Total for State.....		8		
North Dakota:				
Bottineau County.....	Oct. 1-31.....	1		
Total for State.....		1		
Ohio:				
Cleveland.....	Dec. 19-26.....	1		
Stryker.....	Dec. 19-25.....	1		
Total for State.....		2		
Tennessee:				
Chattanooga.....	Dec. 26-Jan. 1....	2		
Memphis.....	Nov. 1-30.....	20		
Dekalb County.....	Dec. 12-25.....	7		
Washington County.....	Dec. 26-Jan. 1....	7		
Total for State.....		36		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to January 14, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas:				
El Paso.....	Nov. 1-Jan. 1.....	3		
Fort Worth.....	Nov. 1-30.....	2		
San Antonio.....	Dec. 5-11.....	2		
Denton County.....	Dec. 26-Jan. 1.....	9		
Total for State.....		16		
Washington:				
Spokane.....	Dec. 19-25.....	1		
Total for State.....		1		
Wisconsin:				
La Crosse.....	Dec. 19-Jan. 1.....	2		
Milwaukee.....	Dec. 19-Jan. 1.....	2		
Superior.....	Dec. 19-Jan. 1.....	6		
Total for State.....		10		
Grand total for the United States.....		485	1	

MORBIDITY AND MORTALITY.

WEEKLY MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES.

[For smallpox see special tables.]

Cities.	Week ended—	Estimated population 1909.	Total deaths from all causes.	Cases and deaths.											
				Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.....	Jan. 8	50,814	13					1		2	1				
Ashtabula.....	do	16,648	4	1											
Baltimore, Md.....	do	576,023	251	24	1	4	2	18	3	13	3	17	1	20	3
Bayonne, N. J.....	do	49,894	3	3	1					6	2	1		1	
Beaver Falls, Pa.....	do	10,341										10			
Biloxi, Miss.....	Jan. 1		2	1	1										
Binghamton, N. Y.....	Jan. 8	45,855	18	1	3					2					
Do.....	Jan. 1		8									11			
Birmingham, Ala.....	Jan. 8	49,553	33	1	3			6		4	1				
Boston, Mass.....	do	622,970	268	56	23	7	1	50		57	7	106	1	5	
Boulder, Colo.....	Jan. 1		7		2			4		1					
Bradock, Pa.....	do	21,000	13				1						1	1	1
Bridgeport, Conn.....	do	90,913	34	11	3	1		19		7		1			
Do.....	Jan. 8		28	4	5	4		27	1	3				1	
Cambridge, Mass.....	do	101,872	39	5	5	4		4		5		2		3	
Cambridge, Ohio.....	do	11,733	5	1		2									
Camden, N. J.....	do	89,305	34		2	1				10	3	1			
Canton, Ohio.....	Jan. 1	40,037	7					2		4	1				
Do.....	Jan. 8		17					1		1					
Carbondale, Pa.....	do	15,698	7					1				17			
Chelsea, Mass.....	do	39,862	11	3	2			1				2			
Chicopee, Mass.....	do	20,010	9		1			1		3		3			
Cincinnati, Ohio.....	Jan. 1	351,212		11	12	4	2	9				12		2	
Do.....	Jan. 8			9	17	1	1	8		6		23		7	
Cleveland, Ohio.....	Jan. 7	506,938	134	19	6	6	3	14	1	22	1	152	1	5	
Columbus, Ga.....	Jan. 8	17,893	13		1										
Columbus, Ohio.....	do	155,340	55	26	9	2	1	11		5		37	1	1	
Covington, Ky.....	do		16		4	2		1		3					
Danville, Ill.....	Jan. 8	27,387	8	1	1			1				1			
Dunkirk, N. Y.....	do	18,061	4	1	1					3	1	2			
Elmira, N. Y.....	Jan. 1	35,765	5			1		2		5		1			

MORBIDITY AND MORTALITY—Continued.

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Estimated population 1909.	Total deaths from all causes.	Cases and deaths.											
				Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Elmira, N. Y.	Jan. 8		13	20	2	4				3	1	1			
El Paso, Tex.	Jan. 1	22,911	30	8	5					1	2	13			
Evansville Ind.	Jan. 8	66,948	24	1	1			4		2		2			
Everett Mass.	do.	32,931	11	2	1			1	1						
Everett Wash.	Jan. 1		7		2			2							
Fall River, Mass.	Jan. 8	106,481	32	2	2		1	5		1					
Galesburg, Ill.	do.	21,615	6					7							
Galveston, Tex.	Dec. 25	36,964	3	1	3	1				1					
Do	Jan. 8			4						2					
Grand Rapids, Mich.	do.	105,909	38	1	3	6		32		1		5		5	
Haverhill, Mich.	do.			2	2			2		3		2		3	
Hyde Park, Mass.	do.	15,522	9												
Houston, Tex.	Dec. 18	63,625	23		3					9	1				
Do	Jan. 10		37		8			1		5					
Jacksonville, Fla.	Jan. 1	40,798	13		2			1		7					
Do	Jan. 8		23	1	2							1			
Jersey City, N. J.	Jan. 2	253,711	92	1	4		1	18		11		3		1	
Johnstown, Pa.	Jan. 8	46,520	15					3		2		14			
Kalamazoo, Mich.	do.	35,504	14	3	1					2		3			
Kearny, N. J.	do.	15,765	3	1	1			2		5		6			
Kingston, N. Y.	do.	20,110	12	1	1			2		2					
Lackawanna, N. Y.	Jan. 1		4	1	1	2		2	1	1		9			
Do	Jan. 8		7					1		2		15	2		
La Fayette, Ind.	do.	19,801	9												
Lancaster, Pa.	do.	49,962	10	1				1				24			
Lawrence, Mass.	Jan. 1	76,042	31		6		1			6		4			
Lebanon, Pa.	Jan. 8	20,295	7							1					
Los Angeles, Cal.	Jan. 1	a 103,000	105	14				13	1	5	3	161		1	
Lowell, Mass.	Jan. 8	95,125	48	7	5			2		9	1	27	1		
Lynchburg, Va.	do.	29,457						3							
Lynn, Mass.	Jan. 1	29,457	21		6	1		12		5					
Malden, Mass.	do.	41,535	12					3		1		1			
Manchester, N. H.	Jan. 8	68,561	32	4	4	1	1	1		4		12			
Mansfield, Ohio.	do.	21,390								1					
Manistee, Mich.	do.	10,788		1						2					
Manitowoc, Wis.	do.	13,490	3					1							
Marinette, Wis.	do.	14,682	3					2		1					
Marlboro, Mass.	do.	14,444	4					3	1			1			
Massillon, Ohio.	do.	13,610	10		1										
McKeesport, Pa.	Dec. 4	47,677	13		1	2		1		4	2			2	
Do	Dec. 11		8		1				1	3					
Do	Dec. 18		18	1	1	7	1	3		1		1		3	
Do	Dec. 25		15			1	2			1		3		1	
Do	Jan. 1		14	5		8		6	1	4		1			
Medford, Mass.	Jan. 8	20,836	9		2					1	1				
Melrose, Mass.	Jan. 1	15,361	5	3	2			2				1			
Milwaukee, Wis.	do.	332,495	79	10	9	29	3	36	1	20	4	15	1	3	
Mobile, Ala.	Dec. 31	45,122	32		4										
Do	Jan. 8		28		4		1	2		2					
Moline, Ill.	do.	23,081	8							1					
Montclair, N. J.	do.	18,296	5	2				4				5			
Morristown, N. J.	Jan. 1	12,849	7	2		1		6							
Do	Jan. 8		4					2							
Mount Vernon, N. Y.	do.	27,891												5	
Muncie, Ind.	do.														
Muskegon, Mich.	Jan. 1	20,995	7					1				11			
Do	Jan. 8											8			
Nanticoke, Pa.	Jan. 9	13,980	6						1	1		1			
Nashville, Tenn.	Jan. 8	106,476	53	1	3		1	7		2					
Nebraska City, Nebr.	do.		1											4	
Newark, N. J.	do.	308,669		15	17	5	1	81		61	3		4		1
New Bedford, Mass.	do.	83,898	36	9	1	5	1	14	4	1	1	34			
Newburyport, Mass.	do.	14,832	3												
Newport, Ky.	Jan. 9	31,345	10												
New York, N. Y.	Jan. 8	4,450,963	1,755	505	177	46	13	534	36	356	44	925	17	35	5
Niagara Falls, N. Y.	do.	32,012	13		1	4		6				43			
Norristown, Pa.	do.	24,491	15	2				1						4	

a Population 1900. No estimate 1909.

MORBIDITY AND MORTALITY—Continued.

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Estimated population 1909.	Total deaths from all causes.	Cases and deaths.											
				Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
North Adams, Mass.	Jan. 8	20,510	8					2							
Northampton, Mass.	do.	21,008	3	2		1		1							
Ottumwa, Iowa.	Jan. 1	21,648	16		2										
Do.	Jan. 8		11												
Orange, N. J.	do.	27,669	10		1		1	9		2		8			1
Palmer, Mass.	do.		6		1					1					
Peekskill, N. Y.	do.	15,473	6		2					2		4			
Philadelphia, Pa.	do.	1,491,082	49	72	34	7	38	5	88	13	17	1	3	1	
Plainfield, N. J.	do.	20,947	6	2	1			2				12			
Plymouth, Pa.	do.	17,524								1		35			
Do.	Jan. 1		8					2		7		1			
Portsmouth, N. H.	do.	11,336								2					
Do.	Jan. 8									3					
Portsmouth, Va.	Jan. 4	19,225	13					3		3					
Do.	Jan. 11		6					1		1					
Pottstown, Pa.	Jan. 1	19,225	12	1				2		2					
Do.	Jan. 8		5		1					1					
Providence, R. I.	Jan. 8	217,065	61	2	5	1	1	21		7		53	1		
Rock Island, Ill.	Dec. 25	24,766	4												
Do.	Jan. 1		9	1	1					1					
Do.	Jan. 8		256	46	36	7	4	39	3	36	4	12		23	
St. Louis, Mo.	Jan. 1	686,369	206	46	33	10	1	34	4	33	7	5		12	
Do.	Jan. 8														
San Antonio, Tex.	Jan. 1	67,404													
Sandusky, Ohio.	Jan. 8		5			1									
San Francisco, Cal.	Jan. 1	• 342,782	154	22	12			15		7	3	7	1	3	
San Jose, Cal.	do.	24,596	5		1										
Schenectady, N. Y.	do.	73,037	16	2	1					4		94			
Seattle, Wash.	Dec. 31	• 80,671	56	6	7	12		7		7	1	7			
Somerville, Mass.	Jan. 8	75,375	25	2	2	3		11		4	3	1			
Springfield, Mass.	do.		28	2	2			5		11	1	1			
Springfield, Ohio.	do.	43,975	14		1			2		3	1	1			
S. Bethlehem, Pa.	do.	15,886	4	1		1						1			
Steelton, Pa.	do.	14,769	5							2	1	10			
Superior, Wis.	Jan. 1	40,919	12				1		1	2					
Tacoma, Wash.	do.	• 37,714	21	2	1		1	2				2			
Taunton, Mass.	Jan. 8	30,926	24	1	1		1	1				2			
Titusville, Pa.	do.	8,397	4							1					
Trenton, N. J.	do.	92,878	7	6	5	1		18	1	5	1				
Utica, N. Y.	do.	69,458	1	3				1		1		12			
Vincennes, Ind.	do.	11,979	5		1										
Waltham, Mass.	do.	28,522	6					1		2	1	2	2		
West Newton, Mass.	do.	39,419		1				1		3		1			
Weymouth, Mass.	do.	11,793	2							1					
Wheeling, W. Va.	Dec. 25	42,799	7	1		2	1	4		1					
Do.	Jan. 1		16	3	2	3		3				1			
Wichita, Kans.	do.	39,612	17	2				1		2	1				
Do.	Jan. 8		15		2			1				1			
Wilksburg, Pa.	do.	19,999	2		1							1			
Wilkes-Barre, Pa.	do.	64,323	32	6	4	1		9		3		9		18	
Wilmington, Del.	do.	88,980	27		2		1								
Winona, Minn.	do.	20,830	6												
Woburn, Mass.	do.	14,520	2		1			1		3		1			
Yonkers, N. Y.	Dec. 18	72,200	13	3	1			4		7	1	1	1		
Do.	Dec. 25		27	4	2			9		6	1	1			
Do.	Jan. 1		27	5	2			9		6	1	1			
Do.	Jan. 8		33	5	1			12	2	4	2				
Zanesville, Ohio.	do.	25,614	7		2	3				1					

• Estimated population 1906. No estimate 1909.

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES (untabulated).

FLORIDA—Pensacola.—Month of December, 1909. Estimated population, 30,000. Total number of deaths 44, including tuberculosis 3, typhoid fever 1, whooping cough 1.

ILLINOIS—Alton.—Month of December, 1909. Estimated population, 22,000. Total number of deaths 20, including tuberculosis 1. Cases reported: Diphtheria 2, scarlet fever 1.

Quincy.—Month of December, 1909. Estimated population, 43,000. Total number of deaths 41, including tuberculosis 7, typhoid fever, 2. Cases reported: Diphtheria 8, scarlet fever 1, typhoid fever 3.

Springfield.—Month of December, 1909. Estimated population, 60,000. Total number of deaths 64, including tuberculosis 6, typhoid fever 1. Cases reported: Diphtheria 8, scarlet fever 8, typhoid fever 1.

IOWA—Cedar Rapids.—Month of December, 1909. Estimated population, 35,000. Total number of deaths 32, including tuberculosis 5, typhoid fever 1. Cases reported: Diphtheria 2, scarlet fever 4, smallpox 7.

LOUISIANA—Shreveport.—Month of December, 1909. Estimated population, 30,000. Total number of deaths 67 (residents 42, non-residents 25), including diphtheria 1, tuberculosis 8.

MAINE—Portland.—Four weeks ended December 11, 1909. Population, 62,000. Total number of deaths 71, including diphtheria 3, tuberculosis 4. Cases reported: Diphtheria, 13, scarlet fever 4, typhoid fever 9.

MARYLAND.—Month of October, 1909. Population, 1,190,050. Total number of deaths 739, including diphtheria 9, measles 3, scarlet fever 1, tuberculosis 64, typhoid fever 49, whooping cough 9. Cases reported: Diphtheria 106, measles 120, scarlet fever 56, smallpox cases 3, typhoid fever 291. The cases of typhoid fever were distributed as follows: Patapsco River watershed (Baltimore County), 41 cases; Patuxent River watershed (3 counties), 8 cases; Potomac River watershed (6 counties), 83 cases; Herring Run watershed (Baltimore County), 5 cases.

MINNESOTA.—Month of October, 1909. Reports received by the state board of health from cities and towns having a population of 1,000 and over, from other parts of the State and from State institutions (aggregate population, 1,751,395), show a total of 1,626 deaths, including diphtheria 49, scarlet fever 7, tuberculosis 182, typhoid fever 56, whooping cough 14.

OREGON—Portland.—Month of October, 1909. Population, 255,000. Total number of deaths 148, including diphtheria 3, scarlet fever 1, tuberculosis 14, typhoid fever 6.

TEXAS.—Month of November, 1909. Population, 3,048,710. Total number of deaths 1,035, including diphtheria 23, smallpox 2, tuberculosis 153, typhoid fever 84.

Fort Worth.—Month of December, 1909. Estimated population, 60,000. Total number of deaths 143. Cases reported: Diphtheria 5, scarlet fever 4, smallpox 3, typhoid fever 6.

VIRGINIA—*Petersburg.*—Month of November, 1909. Estimated population, 30,000. Total number of deaths 47, including diphtheria 1, tuberculosis 5, typhoid fever 1.

Month of December, 1909. Total number of deaths 54, including tuberculosis 4, typhoid fever 2.

FOREIGN AND INSULAR.

CHINA.

AMOY—Examination of Emigrants.

Passed Assistant Surgeon Foster reports, December 6, 1909:

Week ended December 4. Original bill of health was granted to the British steamship *Taisang* with 63 members of crew and 208 steerage passengers for Manila. One passenger was rejected for favus. The crew and steerage passengers were bathed and their clothing was disinfected by steam. All on board were inspected at time of sailing. Vessel anchored in stream while in port. Manifests were viséed for 2,296 pieces of freight.

One death from smallpox occurred during the week in the international settlement of Kulangsu.

The special quarantine restrictions imposed March 22, 1909, upon vessels leaving Amoy for the Philippine Islands have been revoked by the chief quarantine officer for the Philippine Islands.

HONGKONG—Examination of Emigrants—Plague.

Acting Assistant Surgeon Hough reports, December 1 and 6, 1909:

Weeks ended November 27 and December 4. Quarantine restrictions enforced by and against Hongkong remain as reported November 20.

Quarantinable disease.—Week ended November 27. Plague, 1 case; 1 death.

Aliens for Honolulu and Pacific coast ports.—Week ended November 27. Examined, 346; rejected, 53. Week ended December 4. Examined, 0; rejected, 0.

Aliens for Philippine Islands.—Week ended November 27. Examined, 29; rejected, 16. Week ended December 4. Examined, 10; rejected, 7.

INSPECTION AND DISINFECTION OF VESSELS.

Week ended November 27.

Vessels granted bills of health.....	6
Total members of crews.....	444
Total cabin passengers.....	146
Total steerage passengers.....	95
Members of crew bathed.....	341
Steerage passengers bathed.....	50
Pieces of baggage disinfected.....	387
Vessels disinfected to kill rats.....	2
Crews' quarters disinfected:	
By formaldehyde.....	3
By sulphur.....	2

Week ended December 4.

Vessels granted bills of health.....	10
Total members of crews.....	964
Total cabin passengers.....	246
Total steerage passengers.....	582
Members of crew bathed.....	778
Steerage passengers bathed.....	460
Pieces of baggage disinfected.....	1, 238
Vessels disinfected to kill rats.....	3
Crews' quarters disinfected:	
By formaldehyde.....	5
By sulphur.....	3

Summary of plague.—From January 1, 1909, to date there have been 135 cases of plague, with 124 deaths. From August 18 to November 22 no plague was reported in Hongkong.

CUBA.**CIENFUEGOS—Inspection of Vessels.**

Acting Assistant Surgeon Suarez reports, December 25:

Week ended December 25.

Vessel inspected.....	1
Bill of health issued.....	1
Members of crew of outgoing vessel inspected.....	26

No quarantinable disease reported.

HABANA—Inspection of Vessels.

Acting Assistant Surgeon Villoldo reports, January 11:

Week ended January 8.

Bills of health issued.....	23
Vessels inspected.....	19
Members of crews of outgoing vessels inspected.....	1, 290
Passengers of outgoing vessels inspected.....	1, 112
Certificates of inspection of hides issued.....	6

The report of the work of the mosquito brigade for the period from December 21 to 31 shows 26,795 houses inspected and 2,636 water deposits destroyed or petrolled.

The national sanitary department reports for the period from December 11 to 20, 321 cases of leprosy under treatment in the island.

MATANZAS—Inspection of Vessels.

Acting Assistant Surgeon Nuñez reports, January 11:

Week ended January 8. Bills of health granted to 7 vessels clearing for United States ports. They carried 183 members of crews and no passengers. No quarantinable disease was reported.

The investigation as to the existence of pellagra in this district has resulted negatively. Four cases were observed during the period of Spanish rule. Of these 3 occurred in Spaniards and 1 in a native of the Canary Islands.

SANTIAGO—Inspection of Vessels.

Acting Assistant Surgeon Wilson reports, January 5:

Week ended January 1. Bills of health issued to 8 vessels bound for the United States. No quarantinable disease reported. The sanitary department reports that 2,290 houses were inspected.

HAWAII.**HONOLULU—Plague-prevention Work.**

Chief Quarantine Officer Hobdy reports, December 27, 1909:

The last case of human plague at Honolulu occurred July 17, 1907. The last plague-infected rat was found at Aiea, 9 miles from Honolulu, August 22, 1907.

Week ended December 25, 1909.

Total rats taken.....	452
Trapped.....	431
Found dead.....	0
Shot from trees.....	21
Examined bacteriologically.....	317
Plague rats.....	0
Classification of rats trapped:	
<i>Mus alexandrinus</i>	39
<i>Mus musculus</i>	199
<i>Mus norvegicus</i>	48
<i>Mus rattus</i>	145
Classification of rats shot from trees:	
<i>Mus rattus</i>	19
Average number of traps set daily.....	1, 294

Doctor Hobdy further reports, December 17, as follows relative to the reported case of plague noted in the Public Health Reports of August 6, 1909, as having arrived at Honolulu on the steamship *Korea*, July 20, 1909:-

Regarding the case of suspected plague removed from the steamship *Korea* on July 20, 1909, I have to state that suspicious organisms were discovered in the case in question when on shipboard. They could never be demonstrated after that, however, either by microscope or by animal inoculations; cultures also were negative. The patient was seriously ill, however, and could not be discharged from the hospital till October 22, 1909. In my opinion, therefore, this was not a case of plague.

HILO.

Last case human plague occurred at Papeekee, Hilo, October 4, 1909. Last plague-infected rat was found December 6, 1909.

INDIA.**CALCUTTA—Cholera and Plague.**

Acting Assistant Surgeon Allan reports, December 16:

Week ended December 4. At Calcutta there were 19 deaths from cholera and 5 from plague; in all Bengal, 159 cases of plague with 115 deaths; in all India, 5,042 cases of plague with 4,012 deaths.

Week ended December 11. Bill of health issued to the steamship *Imkenturm* for Philadelphia and New York. The usual precautions were taken, holds fumigated, rat guards placed on wharf lines, and effects of Asiatics disinfected.

JAPAN.**KOBE—Examination of Emigrants—Plague.**

Acting Assistant Surgeon Knight reports, December 15, 1909:

Week ended December 11. Supplemental bills of health granted to 3 steamships and original bill of health granted to 1 steamship. There were inspected 464 members of crews and 466 steerage passengers, and 68 members of crews and 12 steerage passengers were

bathed; their effects were disinfected by steam. The number of pieces of baggage steamed was 233 and bedding 24. Manifests were viséed for 50,560 pieces of freight, amounting to 4,544 tons. Thirty-five cases of human hair, 25 bales of feathers, and 6 cases of personal effects were disinfected with formalin. One vessel was fumigated with sulphur to destroy vermin, and the forecastle washed down with antiseptic solution.

Emigrants examined.—Per steamship *Korea* for Honolulu, passed 11, recommended for rejection 37; for San Francisco, passed 1, rejected 6. The emigrants were 7 days in quarantine detention at Ono before embarkation.

Plague.—The official returns of infectious diseases for the week show 6 cases of plague with 4 deaths in Kobe.

JAVA.

BATAVIA—Cholera.

Consul Rairden reports, November 20, 1909:

Palembang, island of Sumatra, is now free from cholera, and cholera conditions in Batavia are improved.

MARTINIQUE.

Mosquito destruction.

From the Archives Thérapeutique et d'Hygiène Coloniales, December, 1909, quoted in the Bulletin Sanitaire of Algeria:

A permanent service of prophylaxis against yellow fever by the destruction of mosquitoes has been established in the island of Martinique. A notable diminution in the number of house mosquitoes has been observed. No case of yellow fever has been reported in Fort de France or vicinity since March, 1909.

MEXICO.

Report from the Superior Board of Health of Mexico.

In compliance with articles 1 and 2 of the international sanitary convention held at Washington October 14, 1905, the acting president of the superior board of health of Mexico reports, January 10, that no case of yellow fever and no death from the said disease was registered in the Mexican Republic during the week ended January 8, 1910, and that the prophylactic measures against yellow fever reported September 28, 1908, continue to be carried out.

COATZACOALCOS—Inspection of Vessels.

Acting Assistant Surgeon Thompson reports, January 6:

Week ended January 5. Vessels inspected: January 1, steamship *J. M. Guffey*. January 3, steamship *San Cristobal* for Port Arthur via Veracruz.

RUSSIA.

ST. PETERSBURG—Plague in the Government of Astrakhan.

The following is received from Chargé d'Affaires Schuyler, under date of December 21, through the Department of State:

The ministry for foreign affairs states that the district of Kamych-Samar of the Kirghiz Steppes, Government of Astrakhan, is declared infected by plague.

LIBAU—Cholera, Plague, and Smallpox—Examination of Emigrants.

Acting Assistant Surgeon De Forest reports, December 27:

Cholera.—At Moscow from December 17 to 24 there were 106 cases of cholera, with 15 deaths.

Leprosy.—At Libau from December 1 to 15, 1 case.

Plague.—In Uralsk from December 5 to 24 there were 160 cases of plague, with 144 deaths. Fourteen cases are still present. In Astrakhan from December 5 to 24 there were 42 cases, with 38 deaths.

Smallpox.—At Libau from December 12 to 19 there was 1 case of smallpox.

Examination of emigrants.—Week ended December 24. For steamship *Estonia* sailing from Libau December 28 for New York 577 emigrants have been examined. At time of examination all were in good physical condition and free from quarantinable diseases. One hundred pieces of baggage were disinfected.

No other vessel leaves Libau for New York until January 22, 1910.

VENEZUELA.**LA GUAIRA—Inspection of Vessels.**

Acting Assistant Surgeon Kellogg reports, December 26, 1909:

Week ended December 25. Vessels inspected: December 20, steamship *Yucatan* for Galveston, crew 41, passengers in transit 5, no passengers taken. December 21, steamship *Citta di Milano* for Colon, crew 84, passengers in transit 118, passengers taken 7. December 23, steamship *Prins Nederlanden* for New York, crew 40, passengers in transit 18, passengers taken 26. December 24, steamship *Versailles* for Colon, crew 148, passengers in transit 26, passengers taken 4.

No quarantinable diseases reported at La Guaira, Maiquetia, or Puerto Cabello.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.**Reports Received During Week Ended January 21, 1910.**

[These tables include cases and deaths recorded in reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Dec. 1-21.....		6	
Calcutta.....	Nov. 21-Dec. 11.....		63	
Rangoon.....	Dec. 5-11.....		4	
Java:				
Batavia.....	Nov. 21-Dec. 4.....	103	46	
Persia:				
Astara.....	Dec. 6-9.....	4	4	
Siam:				
Bangkok.....	Oct. 28-Nov. 27.....	3	3	

YELLOW FEVER.

Brazil:				
Para.....	Dec. 19-25.....	13	10	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended January 21, 1910.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Para.....	Dec. 19-25.....	1	1	
Pernambuco.....	Nov. 1-15.....		3	
Egypt:				
Alexandria.....	Dec. 9-15.....	1	1	
Port Said.....	Nov. 30-Dec. 22...	2	1	
Provinces—				
Assiout.....	Dec. 17-22.....	7	3	
Beni Souef.....	Dec. 19-22.....	9	2	
Menouf.....	Dec. 5-15.....	3	2	
Japan:				
Kobe.....	Dec. 5-18.....	11	10	
Russia:				
Astrakhan.....	Dec. 5-24.....	42	38	Revised report. Do.
Uralsk, district.....	Dec. 5-24.....	160	144	
Siam:				
Bangkok.....	Oct. 28-Nov. 27...	5	5	
Turkey in Asia:				
Beirut.....	Nov. 29-Dec. 14...	3		

SMALLPOX.

Algeria, general.....	Dec. 1-15.....	22		
Brazil:				
Pernambuco.....	Nov. 1-15.....		42	
China:				
Amoy.....	Nov. 28-Dec. 4.....		1	
Egypt, general.....	Nov. 26-Dec. 9.....	112	28	
Alexandria.....	Dec. 3-9.....		1	
Cairo.....	Dec. 17-23.....	1		
France:				
Paris.....	Dec. 19-25.....	4		
Germany, general.....	Dec. 19-25.....	5		
Konigsberg.....	Dec. 12-18.....	1	1	In vicinity.
Great Britain:				
Liverpool.....	Dec. 19-25.....	1		
London.....	do.....	4		
Greece:				
Athens.....	Dec. 5-11.....		1	
India:				
Bombay.....	Dec. 16-21.....		8	
Calcutta.....	Dec. 5-11.....		2	
Rangoon.....	do.....		3	
Italy, general.....	Dec. 20-26.....	2		
Malta:				
Valetta.....	Dec. 12-18.....	1		
Mexico:				
Aguascalientes.....	Dec. 26-Jan. 8.....		2	
Chihuahua.....	Jan. 3-9.....	1		
Portugal:				
Lisbon.....	Dec. 19-25.....	12		Oct. 16, one death.
Russia:				
Libau.....	Dec. 13-26.....	8		
Riga.....	Dec. 13-18.....	17		
St. Petersburg.....	Dec. 12-18.....	53	12	Oct. 1-31, five deaths.
Warsaw.....	Oct. 31-Nov. 6.....		15	
Spain:				
Almeria.....	Nov. 1-30.....		5	
Tripoli:				
Tripoli.....	Dec. 12-25.....	5	1	
Turkey in Asia:				
Bagdad.....	Nov. 28-Dec. 11...			Present.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from January 1 to January 14, 1910.

[For reports received from June 25, 1909, to December 31, 1909, see PUBLIC HEALTH REPORTS for December 31, 1909. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Java:				
Batavia.....	Nov. 14-20.....	200	30	
Germany:				
Heydekrug.....	Nov. 19-Dec. 4.....	2		
Niederung.....	Nov. 16-22.....	1		
India:				
Bombay.....	Nov. 24-30.....		5	
Calcutta.....	Nov. 14-20.....		26	
Rangoon.....	Nov. 14-Dec. 4.....		9	
Persia:				
Astara.....	Dec. 1-5.....	31	18	
Philippine Islands:				
Manila.....	Nov. 7-20.....	19	20	
Provinces—				
Albay.....	Nov. 7-20.....	6	6	
Bataan.....	Nov. 7-20.....	115	73	
Bohol.....	Nov. 7-20.....	25	14	
Bulacan.....	Nov. 7-20.....	24	19	
Camarines.....	Nov. 7-20.....	5	5	
Cavite.....	Nov. 7-20.....	61	48	
Cebu.....	Nov. 7-20.....	207	156	Nov. 20, 1 case on s. s. Yaptico.
Oriental Negros.....	Nov. 7-20.....	10	5	
Pampanga.....	Nov. 7-20.....	8	5	
Rizal.....	Nov. 7-13.....	4	3	
Tarlac.....	Nov. 7-13.....	9	5	
Russia, general.....	Nov. 21-Dec. 11.....	231	105	
Baku, government.....	Nov. 21-Dec. 11.....	10	8	
Baku.....	Nov. 21-Dec. 11.....	23	15	
Don, territory.....	Nov. 28-Dec. 11.....	4	2	
Ekaterinislav, govern- ment.....	Nov. 21-Dec. 11.....	13	5	
Jaroslav, government.....	Nov. 21-27.....		1	
Kostroma, government.....	Nov. 21-27.....	3	4	
Kovna, government.....	Nov. 21-27.....	8	3	
Kursk, government.....	Nov. 21-Dec. 11.....	6		
Moscow, government—				
Moscow.....	Nov. 29-Dec. 11.....	85	41	
Pskov, government.....	Nov. 21-27.....	10		
St. Petersburg, government.....	Nov. 21-Dec. 11.....	14	10	
St. Petersburg.....	Nov. 21-Dec. 11.....	36	10	
Taurida, government.....	Nov. 21-Dec. 11.....	59	22	
Vitebsk, government.....	Nov. 21-27.....	2		
Turkey in Asia:				
Trebizond.....	Nov. 28.....	a 1		On a vessel from Batum.

YELLOW FEVER.

Brazil:				
Manaos.....	Nov. 21-Dec. 11.....		3	
Para.....	Nov. 28-Dec. 18.....	7	7	
Ecuador:				
Guayaquil.....	Dec. 1-15.....	12	5	
Peru:				
Callao.....	Nov. 2-Dec. 2.....	1	1	From s. s. Loa.
Mexico:				
Yucatan—				
Merida.....	Dec. 20-21.....	1	1	
Santa Cruz de Bravo.....	Dec. 20.....	1	1	
Trinidad:				
Port of Spain.....	Nov. 28-Dec. 4.....	1	1	

PLAGUE.

Brazil:				
Bahia.....	Nov. 20-26.....	2	1	
Para.....	Nov. 28-Dec. 18.....	10	7	
Pernambuco.....	Oct. 15-31.....		3	
Rio de Janeiro.....	Nov. 2-Dec. 5.....	9	2	
China:				
Hongkong.....	Nov. 21-27.....	1	1	

a From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Dec. 15, 1909.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from January 1 to January 14, 1910.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Alexandria.....	Nov. 19-29.....		2	
Provinces—				
Assiout.....	Sept. 29-Nov. 16..	8	2	
Beherach.....	Dec. 8-14.....	1		
Menouf.....	Nov. 28-Dec. 5.....	14	4	
India:				
Bombay Presidency and Sind.....	Nov. 7-Dec. 4.....	4,432	3,011	
Madras Presidency.....	Nov. 7-Dec. 4.....	420	297	
Bengal.....	Nov. 7-Dec. 4.....	926	706	
United provinces.....	Nov. 7-Dec. 4.....	5,532	4,942	
Punjab.....	Nov. 7-Dec. 4.....	3,374	2,663	
Burma.....	Nov. 7-Dec. 4.....	114	101	
Central provinces, including Berar.....	Nov. 7-Dec. 4.....	2,586	2,172	
Coorg.....	Nov. 14-27.....	5	1	
Mysore State.....	Nov. 7-Dec. 4.....	763	532	
Hyderabad State.....	Nov. 7-Dec. 4.....	47	42	
Central India.....	Nov. 7-Dec. 4.....	516	382	
Rajputana and Ajmer-Merwara.....	Nov. 7-Dec. 4.....	1,687	1,473	
Kashmir.....	Nov. 7-Dec. 4.....	55	37	
Grand total.....		20,457	16,359	
Indo-China:				
Saigon.....	Nov. 7-13.....	1		
Japan:				
Kobe.....	Nov. 28-Dec. 4.....	6	5	
Paraguay.....	Dec. 10.....		30	In the northern part.
Peru:				
Provinces—				
Lambayeque.....	Oct. 1-18.....	27	9	
Lima.....	Oct. 22-Nov. 18..	3	1	
Russia:				
Astrakhan, district.....	Dec. 10-16.....	14	13	50 miles south of Beiskulak.
Beiskulak.....	Dec. 10-16.....	18	16	
Libau.....	Dec. 3-9.....	1	1	
Uralsk, district.....	Dec. 5-16.....		23	
Turkey:				
Alexandretta.....	Dec. 1.....		3	
Beirut.....	Nov. 27-28.....	2		

SMALLPOX.

Algeria:				
Algiers.....	Nov. 1-30.....		1	
Argentina:				
Buenos Aires.....	Oct. 1-31.....		2	
Brazil:				
Bahia.....	Nov. 20-26.....	18	12	
Pernambuco.....	Oct. 16-30.....		32	
Rio de Janeiro.....	Nov. 2-Dec. 5.....	11		
Sao Paulo.....	Nov. 1-21.....		2	
Canada:				
Nova Scotia—				
Halifax.....	Dec. 19-25.....	2		
Chile:				
Quillota.....	Nov. 28-Dec. 4.....			Present.
Valparaiso.....	Nov. 20.....			Do.
China:				
Shanghai.....	Nov. 1-28.....		2	Among Chinese.
Cuba:				
Habana.....	Dec. 3-9.....	1		From s. s. La Navarre.
Egypt, general.....	Nov. 5-25.....	100	42	
Alexandria.....	Nov. 5-30.....	15	15	
Cairo.....	Nov. 26-Dec. 9.....	5	1	
France:				
Paris.....	Dec. 5-18.....	14		
Germany, general.....	Dec. 5-18.....	4		
Great Britain:				
London.....	Nov. 28-Dec. 13.....	4		
Plymouth.....	Nov. 12-18.....		1	
Southampton.....	Nov. 12-18.....	1		

a From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Dec. 22, 1909.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from January 1 to January 14, 1910.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece:				
Athens.....	Nov. 22-Dec. 4.....		7	
India:				
Bombay.....	Nov. 24-Dec. 14.....		15	
Calcutta.....	Nov. 14-20.....		1	
Rangoon.....	Nov. 20-27.....		6	
Indo-China:				
Saigon.....	Dec. 7-13.....	1		
Italy, general.....	Nov. 29-Dec. 19.....	102		
Genoa.....	Dec. 1-15.....	1		
Naples.....	Dec. 6-19.....	31	4	
Mexico:				
Aguascalientes.....	Dec. 12-25.....		3	
Chihuahua.....	Dec. 13-26.....	2	2	
Mexico.....	Nov. 14-27.....		6	
Monterey.....	Nov. 13-19.....		1	
Netherlands:				
Rotterdam.....	Dec. 5-11.....	7		
Persia:				
Hamadan.....	Nov. 15.....			Present.
Sultanabad.....	Nov. 15.....			Do.
Peru:				
Callao.....	Dec. 6-12.....			Do.
Philippine Islands:				
Manila.....	Nov. 14-20.....	2		
Portugal:				
Lisbon.....	Dec. 5-18.....	28		
Porto Rico, general.....	July 1-Oct. 31.....	38	12	Received out of date.
Russia:				
Libau.....	Dec. 6-12.....	4		
Moscow.....	Nov. 21-Dec. 11.....	16	2	
Odessa.....	Nov. 21-Dec. 1.....	26	10	
Riga.....	Dec. 5-11.....	2		
St. Petersburg.....	Nov. 28-Dec. 11.....	82	31	
Warsaw.....	Oct. 24-30.....		10	
Spain:				
Barcelona.....	Dec. 14-26.....		4	
Huelva.....	Nov. 1-30.....		11	
Tripoli:				
Tripoli.....	Nov. 14-Dec. 11.....	237	23	
Turkey in Asia:				
Bagdad.....	Nov. 21-27.....			Do.
Smyrna.....	Nov. 5-Dec. 1.....		31	
Uruguay:				
Montevideo.....	Oct. 1-31.....		7	

MORTALITY.

WEEKLY MORTALITY TABLE, FOREIGN AND INSULAR CITIES.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen.....	Dec. 31	181,918	54									1	1	
Aix la Chapelle.....	Dec. 4	160,531	51	4										
Alexandria.....	Nov. 25	391,121	207	13				4		12		5		
Do.....	Dec. 2		192	23				12		12		1	6	
Amoy.....	Nov. 27	8,000	5	1								1		
Do.....	Dec. 4		5	1				1						
Amsterdam.....	Dec. 25	567,367	155	21								1	2	2
Antwerp.....	Dec. 18	323,921	95	5								1	4	1
Asuncion, Paraguay.....	Nov. 27	75,000	11	1						12				
Athens.....	Dec. 4	241,058	82	15				5		1		2		

MORTALITY—Continued.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.
Barcelona.....	Dec. 26	591,272	395	20				2		12	1	2	
Barmen.....	Nov. 27	163,100	36	2									1
Do.....	Dec. 4	163,400	41	2								1	1
Barranquilla.....	Dec. 18	40,000	21	1						1			
Basel.....	do.	131,000	23	4									
Batavia.....	Nov. 27	217,630	28			25							
Belgrade.....	Dec. 25	80,000									1		
Berlin.....	Dec. 4	2,110,211	585	69					3	19	2	14	4
Birmingham.....	Dec. 25	558,336	170	43	6	4		6	3	2	1		3
Bombay.....	Dec. 7	977,822	588	47	8	1		6	1				5
Do.....	Dec. 14		556	11									1
Bordeaux.....	Dec. 18	253,000	123	8									1
Bradford.....	do.	293,983	81	7							2		
Bremen.....	Dec. 25	235,648	79	6						2		4	3
Bristol.....	do.	377,642	112	6									1
Brussels.....	Dec. 18	562,895	210	19								5	2
Budapest.....	Dec. 11	804,200							1	2		2	1
Cairo.....	Dec. 16	704,836	345	18					7	2		19	
Calcutta.....	Nov. 27	847,796	558	42	5	23							
Do.....	Dec. 4		571	43	5	19						2	
Chemnitz.....	Dec. 11	280,675	89	9							1	3	
Chihuahua.....	Jan. 2	27,000	14	2									1
Christiania.....	Dec. 25	236,000	44	8							1	3	
Coburg.....	Dec. 11	23,536	4										
Cognac.....	Dec. 25	19,483	2										
Cologne.....	Dec. 11	473,091	144	16					1	4	7	3	1
Colombo.....	Nov. 27	183,872	104	16					1				
Colon.....	Dec. 25	16,000	9										
Copenhagen.....	Dec. 11	450,000	99	14							1	1	
Dalny.....	do.	38,879	20						1				
Dublin.....	do.	394,525	177	25					1	1	1	1	2
Do.....	Dec. 18		158	21					1	1	2		2
Do.....	Dec. 25		155	18					3	1			2
Dundee.....	do.	169,409	74	8						2			
Edinburgh.....	Dec. 18	355,366	117	13					1	1	1	4	3
Do.....	Dec. 25	355,366	111	15						1	2	6	1
Erfurt.....	Dec. 11	109,031	27	3						1			
Flume.....	Dec. 18	50,811	18	7								1	
Georgetown.....	Dec. 25	56,000	57	4									
Ghent.....	Dec. 18	164,579	40	4									1
Göthenburg.....	Dec. 18	162,400	31	8								5	1
Greenock.....	Dec. 25	72,300	20	2									1
Halifax.....	Jan. 1	50,000	16	2									
Hamburg.....	Dec. 18	872,252	264	23						5	11	2	
Havre.....	do.	132,430	64	13					2				
Hilo.....	do.	3,500	2										
Kobe.....	Dec. 11	380,717	187		4				4	3			
Königsberg.....	do.	240,000	86	5								10	
Leeds.....	Dec. 18	484,012	133	10							2	2	2
Do.....	Dec. 25		130	15					2		1	3	
Leipzig.....	Dec. 4	540,891	147	19						1	2	2	1
Do.....	Dec. 11		154	14						1	3	4	
Leith.....	Dec. 18	85,721	21	2									
Do.....	Dec. 25		28	3									
Libau.....	Dec. 19	90,000								1			
Liege.....	Dec. 18	175,968	56	4					1			1	
Lisbon.....	Oct. 16	406,869	199	28				1	3	1	1	3	1
Liverpool.....	Dec. 25	760,357	258	13					2	5	2	1	5
London.....	do.	7,429,740	1,934						13	8	17	21	39
Lubeck.....	Dec. 18	91,541	27	1							2	2	
Lyon.....	Dec. 4	472,114	188	34					1				
Do.....	Dec. 11		166	22					4		3		
Madras.....	Dec. 3	509,346	334									1	
Do.....	Dec. 10		371									1	
Manchester.....	Dec. 25	631,533	207	21					1	3	2	5	1
Mannheim.....	Dec. 4	184,992	42	4									
Milan.....	Dec. 19	900,000	10						8		2		
Monterey.....	Dec. 26	100,000	64	4									
Do.....	Jan. 2		54	2					1				
Montreal.....	Jan. 1	389,837	154	7					13	1	1		3

MORTALITY—Continued.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—								
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.
Munich.	Dec. 18	566,000	178	32							1	2
Nantes.	Dec. 26	161,908	67	8					1			1
Newcastle-on-Tyne.	Dec. 25	281,584	87									
Nuevo Laredo.	Jan. 1	8,000	7	2						1		
Nuremberg.	Dec. 4	316,180	71	10								1
Palermo.	do.	335,000	138	10								
Do.	Dec. 11		131	3								1
Do.	Dec. 18		177	6								2
Paris.	Dec. 25	2,776,394	991	175					3	1	4	10
Penang.	Dec. 4	102,520	71	17								
Prague.	Dec. 17	233,649	119	15							4	2
Rangoon.	Nov. 27	252,155	200	6	1			3				
Do.	Dec. 4		179	5	3	4						
Rio de Janeiro.	Nov. 28	811,443	199	45	1				3			1
St. John, N. B.	Jan. 8	40,711	6	6								
Santa Cruz de Teneriffe.	Dec. 18	46,000	16	1								3
Sheffield.	do.	472,000	125	9								1
Do.	Dec. 25		123	9						2		
Singapore.	Dec. 4	271,060	207	25					1			
Southampton.	Dec. 25	124,667	30	2								
South Shields.	Dec. 18	117,627	35	2						1		1
Do.	Dec. 25		31	6							1	
Stettin.	Dec. 4	239,000	78	5					4		3	
Stockholm.	Dec. 11	339,582	87	25								1
Tarragona.	Dec. 25	20,400	6	1								
Trieste.	Dec. 11	219,777	121									2
Valencia.	Dec. 18	240,000	92	9					1		2	
Do.	Dec. 25		78	12					1	1	1	
Valetta.	Dec. 11	212,888	100	8								
Victoria.	Jan. 1	35,000	5	1								
Vienna.	Dec. 18	2,085,888	651	103					3	3	7	2
Vigo.	do.	40,000	15	2								
Warsaw.	Oct. 30	764,054	315	39				10	1	2	11	13
West Hartlepool.	Dec. 25	66,750	18									
Winnipeg.	Jan. 1	122,000	33	2								
Yokaiichi.	Oct. 30	32,000	15	2								
Do.	Nov. 6		6	3								
Do.	Nov. 13		14									
Do.	Nov. 20		9	2								
Do.	Nov. 27		11	2								
Do.	Dec. 4		16	6					1			
Do.	Dec. 11		9								1	
Yokohama.	Dec. 13	392,870							1		1	

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES (untabulated).

ALGERIA—*Algiers*.—Two weeks ended December 15, 1909. Estimated population, 155,000. Total number of deaths 143. No contagious diseases reported.

AZORES—*St. Michaels*.—Month of October, 1909. Population, 131,183. Total number of deaths 280, including tuberculosis 4, typhoid fever 8.

BRAZIL—*Pernambuco*.—Two weeks ended November 15, 1909. Estimated population, 210,000. Total number of deaths 341, including measles 5, plague 3, smallpox 42, tuberculosis 42.

Campinas, São Paulo, and Santos.—Two weeks ended November 21, 1909. Population, 300,000. Total number of deaths 480,

diphtheria 2, measles 9, scarlet fever 4, smallpox 2, tuberculosis 18, typhoid fever 12.

CANADA—*Yukon Territory—Dawson.*—Month of October, 1909. Population, 9,142. Total number of deaths 7, including tuberculosis 2.

CUBA—*Matanzas.*—Ten days ended December 20, 1909. Estimated population, 36,009. Total number of deaths 21, including tuberculosis 5.

Formosa.—Two weeks ended December 11, 1909. Estimated population, 3,108,723. Total number of deaths not reported. Two deaths from diphtheria and 7 from typhoid fever reported.

FRANCE—*Saint Etienne.*—Two weeks ended December 15, 1909. Estimated population, 150,000. Total number of deaths 127, including diphtheria 2, tuberculosis 22, typhoid fever 1.

GREAT BRITAIN.—Week ended December 18, 1909:

England and Wales.—The deaths registered in 76 great towns correspond to an annual rate of 15 per 1,000 of the population, which is estimated at 16,445,281.

Ireland.—The deaths registered in 21 principal town districts having an aggregate estimated population of 1,142,308 correspond to an annual rate of 21.7 per 1,000 of the population. The lowest rate was recorded at Queenstown, viz, 6.6, and the highest at Lisburn, 40.9, per 1,000 of the population.

Scotland.—The deaths registered in 8 principal towns having an aggregate population of 1,865,571 show a total of 700, including diphtheria 5, measles 46, scarlet fever 6, typhoid fever 3, whooping cough 9.

RUSSIA—*Riga.*—Month of October, 1909. Estimated population, 353,000. Total number of deaths 536, including cholera 7, diphtheria 6, measles 3, scarlet fever 25, smallpox 5, tuberculosis 47, typhoid fever 12, typhus fever 4.

SIAM — *Bangkok.*—Month of November, 1909. Population, 600,000. Total number of deaths not reported. Three deaths from cholera and 5 from tuberculosis reported.

SOUTH AFRICA—*Jahannesburg.*—Two weeks ended November 27, 1909. Estimated population, 180,687. Total number of deaths 150, including measles 2, scarlet fever 4, tuberculosis 13, typhoid fever 5, whooping cough 1.

SPAIN—*Cadiz.*—Month of November, 1909. Estimated population, 69,382. Total number of deaths 164, including measles 1, tuberculosis 27, typhoid fever 2, whooping cough 13.

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon-General,

United States Public Health and Marine-Hospital Service.