

ABSTRACT OF SANITARY REPORTS.

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UNITED STATES.

Report of official experiments with the Koch lymph in progress.

WASHINGTON, D. C., March 10, 1891.

SIR: I have the honor to submit the following report upon the progress of the experiments with tuberculin at the Providence Hospital:

In the case of lupus, injections of .006 and .007 have failed on three occasions to produce any general "reaction" beyond 37.5 c. A slight feeling of malaise, moderate frontal headache, and a depression of the pulse to 60 per minute have been noted. The local manifestations, however, have been very marked. There have been manifested upon each of these treatments, in periods of time varying from eight to twelve hours, decided hyperæmia of the diseased area and the surrounding tissues; a sense of throbbing and burning; increased exudation, and the formation of vesicles upon the surface of the ulcer, and the appearance upon the cheeks of well marked erythematous eruption, which persists for twenty-four to thirty hours, and is in some places succeeded by a "branny" desquamation.

Granulation and cicatrization are proceeding steadily, though more slowly than at first, and the patient shows a gain in weight of 1.477 kilos over his previous weight.

In cases Nos. 1 and 3 there has been a marked improvement in the past two weeks. In both, there is to be noted a continued absence of tubercle bacilli in the sputum; cessation of night sweats; expectoration very scanty; no cough; slight increase of weight in case No. 1, and in both a diminution in the areas of dullness first mapped out, decrease of the bronchial and increase of the vesicular breathing sound.

In case No. 4 the laryngeal symptoms after showing decided improvement have returned with increased severity.

In case No. 5 the general condition is much worse than at last report; there are now profuse night sweats, severe hectic and increasing debility and prostration.

Case No. 9 has left the hospital, at his own instance, in about the same condition as upon admission, certainly with no marked change for better or worse. In case No. 11 the laryngeal symptoms have assumed a great degree of severity, the patient has rapidly lost weight, and the treatment has been temporarily suspended.

I append a tabulated statement of weight of patients, etc., for purposes of comparison :

Patient.	Weight at last statement, Feb. 25, 1891.	Present weight.	Difference in weight.		No. of injections.	Maximum dose.	Remarks.
			Gain.	Loss.			
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>		<i>Grams.</i>	
1	71.55	73.636	2.086	14	.007	Died.
2							
3	67.95	68.863	.913	.....	14	.007
4	52.65	50		2.650	15	.006	
5	51.525	49.545		1.980	15	.006	
6	54	55.227	1.227	.....	15	.007
7	69.75	72.272	2.522	.....	15	.006
8	39.60	43.636	4.036	.....	15	.006
9	45				8	.005	Left hospital.
10	51.75	51.69		.06	12	.006	
11	55.35	52.272		3.078	8	.005	Treatment suspended,
12	55.775	56.818	1.043	.....	6	.006

Very respectfully, your obedient servant,

H. D. GEDDINGS,

Assistant Surgeon, M.-H. S.

To the SUPERVISING SURGEON-GENERAL.

CAPE CHARLES QUARANTINE—*Smallpox*.—The steamship *Helmshley* arrived at Newport News, Va., from Philadelphia, February 24, having on board a case of smallpox, and by request of State authorities was ordered to the U. S. Quarantine Station at Fisherman's Island, near Cape Charles, Va.

Assistant Surgeon Groenevelt reports as follows :

Helmshley proceeded to Fisherman's Island February 26. Attempted to transfer patient to the island February 27, but unable to land through breakers. Succeeded in landing February 28. Fumigated vessel March 2; washed down with $\frac{1}{1000}$ sol. hydrarg-bichlor. March 3. Vessel to be released two weeks from conclusion of disinfection, provided that no new cases develop on board. The delay in transferring patient and disinfecting vessel was due to a severe gale. Patient doing well.

Reports of States, and yearly and monthly reports of cities.

CALIFORNIA—*Los Angeles*.—Month of February, 1891. Population, 65,000. Total deaths, 80, including phthisis pulmonalis 20 and diphtheria 2.

Sacramento.—Month of February, 1891. Population, 30,000. Total deaths, 43, including phthisis pulmonalis, 6; croup, 1; and whooping cough, 1.

CONNECTICUT.—Month of January, 1891. Reports to the State board of health from 166 cities and towns, having an aggregate population of 741,766, show a total of 989 deaths, including phthisis pulmonalis, 111;

enteric fever, 14; scarlet fever, 13; diphtheria and croup, 41; measles, 10; and whooping cough, 3.

The *Monthly Bulletin* says:

La grippe is mentioned as presenting a reappearance during the month in several parts of the State, but in a much milder form than a year ago, and only to a limited extent.

The following report of an outbreak of diphtheria in East Haddam is illustrative of its mode of importation. Three cases occurred in one family. A son had been confined in the Willard Parker Hospital three weeks, and came home after the resident physician had declared it safe. Soon after his brother was taken, and in two days more his sister, both children, the next day his mother, and were all sick seven to ten days. Five others visiting the family, young adults, were moderately ill with the disease, and these communicated it to others, who are now sick with it.

GEORGIA—*Savannah*—*Smallpox*.—P. A. Surgeon Carrington of the Marine-Hospital Service, under date of March 2, 1891, reports as follows:

SIR: I have the honor to make the following report of smallpox in Savannah, during the month ended February 28, viz: Cases under treatment January 28, 2; new cases, 8; died, 5; recovered, 2; remaining under treatment February 28, 3. All the cases reported during the month were negroes, and, with one exception, were discovered in the originally infected locality. The negroes almost invariably attempt to hide smallpox from the sanitary authorities, and occasionally succeed in doing so until the case is in the suppurative stage, which no doubt accounts for the continuance of smallpox here in spite of the energetic efforts of the authorities to stamp it out.

INDIANA—*Evansville*.—Month of February, 1891. Population, 50,600. Total deaths, 60, including phthisis pulmonalis, 4; enteric fever, 1; scarlet fever, 2; diphtheria, 9; croup, 2; and measles, 2.

IOWA—*Keokuk*.—Month of February, 1891. Population, 18,589. Total deaths, 28, including phthisis pulmonalis, 2; scarlet fever, 1; diphtheria, 1; and croup, 1.

MARYLAND—*Baltimore*.—Month of January, 1891. Population, 434,439. Total deaths, 780, including phthisis pulmonalis, 104; enteric fever, 15; scarlet fever, 4; diphtheria, 26; croup, 4; and measles, 5.

During the month 186 cases of infectious diseases were reported, a decrease of 44 from December, 1890. The greatest decrease occurred in diphtheria, croup, and scarlet fever, and there was a decided increase in measles. Diphtheria, croup, and scarlet fever fell from 104, 22, and 73 cases, respectively, in December, to 59, 14, and 55 in January. Measles increased from 4 cases in December to 33 in January, and whooping cough from 23 to 24.

MICHIGAN.—Month of February, 1891. Reports from observers, compared with the preceding month, indicate that dysentery, cerebro-spinal meningitis, cholera infantum, inflammation of brain, measles, inflammation of bowels, and diphtheria increased, and that whooping cough decreased in prevalence.

Compared with the average for the month of February, in the five years, 1886–1890, membranous croup, cholera infantum, cholera morbus, influenza, and erysipelas were more prevalent, and smallpox, whooping cough, typho-malarial fever, and measles were less prevalent in February, 1891.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of February, 1891, at 68 places, scarlet fever at 93 places, typhoid fever at 32 places, and measles at 59 places.

Reports from all sources show diphtheria reported at 10 places less, scarlet fever at 8 places less, typhoid fever at 9 places less, and measles at 11 places less in the month of February, 1891, than in the preceding month.

Grand Rapids.—Month of February, 1891. Population, 75,000. Total deaths, 90, including phthisis pulmonalis, 8; enteric fever, 4; scarlet fever, 2; and diphtheria, 4.

MINNESOTA—*Winona*.—Month of February, 1891. Population, 19,000. Total deaths, 11, including phthisis pulmonalis 2 and diphtheria 1.

NORTH CAROLINA.—Month of January, 1891. Reports to the State board of health from 13 cities and towns, having an aggregate population of 89,826, show a total of 128 deaths, including phthisis pulmonalis, 15; enteric fever, 2; diphtheria, 1; measles, 2; and whooping cough, 1.

OHIO—*Cincinnati*.—Month of February, 1891. Population, 296,908. Total deaths, 483, including phthisis pulmonalis, 70; enteric fever, 17; scarlet fever, 1; diphtheria, 23; and whooping cough, 1.

RHODE ISLAND—*Newport*.—Month of February, 1891. Population, 19,449. Total deaths, 30, including phthisis 2 and croup 1.

SOUTH CAROLINA—*Hardeeville*—*Smallpox*.—Dr. Allan Stuart transmits a report through P. A. Surgeon Wasdin, M.-H. S., of the recent outbreak of smallpox, there having been 8 cases and 1 death in January and February, 1891.

TEXAS—*Smallpox*.—The following report has been received from the United States sanitary inspector at El Paso, dated February 28, 1891:

In compliance with telegraphic instructions dated Washington, February 7, 1891, I proceeded to different villages and ranches in New Mexico, and revisited the villages and ranches reported January 31, 1891, and have the satisfaction to state that no new cases of smallpox have

developed, and with the exception of two cases, vaccination has been successful.

Smallpox, though sporadically still in several Texas towns, is rapidly on the decline.

I am informed that smallpox is badly at Escalon, on the Mexican Central Road, about 500 miles south of El Paso.

Many died of smallpox in the little village of San Ygnacio, about 40 miles from El Paso, Tex., almost opposite Fort Hancock, Tex.

Every possible effort is being made by vaccination and quarantine to prevent the spread of the disease to reach the American side.

Judge Blacker, of El Paso County, has made vaccination compulsory in the public schools of the county, besides all poor children and grown persons not already protected by vaccination.

I understand that the minister of the interior of Mexico has issued a circular to the governors of the several States, directing them to immediately take the necessary measures to enforce compulsory vaccination.

I am informed by the oldest inhabitants of Paso del Norte, Mex., that smallpox had been prevalent in their community from time immemorial.

To vaccination it owes now its immunity from smallpox since the past few years, while the disease has prevailed in every other Mexican city of importance on the Rio Grande.

Publications received.

Annual report of the health department of the city of Baltimore, 1890.

Twelfth annual report of the board of health of the city of Atlanta, 1890.

Report of the board of health of Salem, Mass., 1890.

Eleventh annual report of the board of health of the city of Memphis, 1889.

Twelfth annual report of the board of health of the city of Memphis, 1890.

Death rate of certain cities of the United States.

Through the courtesy of the Superintendent of the Census, the populations of the following-named cities as returned by the enumerators of the United States Census of 1890 have been furnished to the Bureau in advance of the census bulletin. The figures marked by a star have been clerically verified, and the subsequent corrections of those not so marked, if any, will be so small as not to materially affect the percentages, and will be noted in a subsequent issue.

This list comprises the cities which furnished weekly reports to the Marine-Hospital Bureau throughout the year 1890.

No attempt is made in the table to give separate percentages for the white and colored population, which latter, with excessive death rate,

forms so large a proportion of the total population of some of the southern cities.

Cities.	Population — United States Census of 1890.	Total deaths from all causes for the year ended December 20, 1890.	Annual death rate per 1,000 of the population.
New York, N. Y.	*1,513,501	40,288	26.6
Chicago, Ill.	1,099,133	21,616	19.6
Philadelphia, Pa.	*1,046,964	21,706	20.7
Brooklyn, N. Y.	*806,343	19,797	24.3
Baltimore, Md.	*434,439	10,127	23.3
St. Louis, Mo.	460,357	8,433	18.3
Boston, Mass.	*448,477	10,291	22.9
San Francisco, Cal.	*298,997	6,808	22.8
Cincinnati, Ohio.	*296,908	6,617	22.3
New Orleans, La.	241,995	7,088	29.2
Detroit, Mich.	205,669	3,884	18.8
Washington, D. C.	*230,392	5,468	23.7
Cleveland, Ohio.	261,546	5,044	19.2
Pittsburgh, Pa.	*233,617	5,084	21.3
Milwaukee, Wis.	204,150	3,668	17.9
Newark, N. J.	181,518	4,567	25.1
Louisville, Ky.	161,005	3,529	21.9
Minneapolis, Minn.	164,738	2,431	14.7
Kansas City, Mo.	132,416	2,186	16.5
Denver, Colo.	106,670	2,878	26.9
Rochester, N. Y.	138,327	2,192	15.8
Providence, R. I.	132,043	2,849	19.2
Indianapolis, Ind.	107,445	1,733	16.2
Toledo, Ohio.	82,652	1,357	16.4
Richmond, Va.	80,838	2,288	28.3
Fall River, Mass.	*74,398	1,650	22.1
Nashville, Tenn.	76,309	1,442	18.8
Charleston, S. C.	54,592	1,771	32.4
Portland, Me.	36,608	729	19.9
Galveston, Tex.	29,118	596	20.4
Council Bluffs, Iowa.	21,388	313	14.6
Binghamton, N. Y.	35,093	563	16.0
Yonkers, N. Y.	31,945	539	16.8
Altoona, Pa.	30,269	464	15.3
Auburn, N. Y.	25,887	571	22.1
Newton, Mass.	24,357	362	14.8
Newport, R. I.	19,449	332	17.1
Rock Island, Ill.	13,596	197	14.4
San Diego, Cal.	16,153	172	10.6
Pensacola, Fla.	11,751	237	10.6

* Has been clerically verified in the Census Office.

Table of temperature and rainfall, week ended March 6, 1891.

[Received from War Department, Signal Office.]

Locality.	Mean temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me.....	25		44	1.13		.42
Portland, Me.....	27		62	.85		.25
Boston, Mass.....	31		65	.97	.30	
Block Island, R. I.....	33		42	1.03		.40
Middle Atlantic States:						
Albany, N. Y.....	29		64	.70	.07	
New York, N. Y.....	34		52	.98		.86
Philadelphia, Pa.....	37		63	.76		.30
Atlantic City, N. J.....	35		45	.85		.64
Baltimore, Md.....	39		73	.97		.15
Washington, D. C.....	43		67	.90		.16
Lynchburg, Va.....	38		81	.85	.96	
Norfolk, Va.....	45		65	.98	.40	
South Atlantic States:						
Charlotte, N. C.....	48		83	1.11	.42	
Wilmington, N. C.....	52		48	.90		.04
Charleston, S. C.....	55		23	.88		.84
Augusta, Ga.....	54		51	1.10	.24	
Savannah, Ga.....	57		29	.77		.70
Jacksonville, Fla.....	61	1		.77		.76
Key West, Fla.....	72		14	.29		
Gulf States:						
Atlanta, Ga.....	50		69	1.41	.28	
Pensacola, Fla.....	58	9		1.21		1.16
Mobile, Ala.....	57	9		1.42		1.13
Montgomery, Ala.....	55		18	1.40		.13
Vicksburg, Miss.....	56		16	1.34	.80	
New Orleans, La.....	60	24		1.18		.82
Shreveport, La.....	48		26	1.06		.20
Fort Smith, Ark.....	48		72	.68		.32
Little Rock, Ark.....	50		74	1.31		.81
Palestine, Tex.....	56		33	.92		.70
Galveston, Tex.....	60	21		.70		.58
San Antonio, Tex.....	55		13	.43		.32
Corpus Christi, Tex.....	61		5	.42		.36
Brownsville, Tex.....	65	4		.41		.41
Rio Grande City, Tex.....	69	14		.28		.28
Ohio Valley and Tennessee:						
Memphis, Tenn.....	49		68	1.33		.29
Nashville, Tenn.....	46		58	1.19	1.23	
Chattanooga, Tenn.....	48		60	1.51	.55	
Knoxville, Tenn.....	46		53	1.33	1.00	
Louisville, Ky.....	42		80	.99		.12
Indianapolis, Ind.....	36		105	.91		.28
Cincinnati, Ohio.....	39		93	.84		.85
Columbus, Ohio.....	35		100	.78	.18	
Pittsburgh, Pa.....	36		84	.63		.27
Lake Region:						
Oswego, N. Y.....	26		56	.63		.49
Rochester, N. Y.....	27		52	.63	.02	
Buffalo, N. Y.....	26		49	.63		.16
Erie, Pa.....	30		60	.74		.49
Cleveland, Ohio.....	30		63	.70		.31
Sandusky, Ohio.....	31		72	.64		.33
Toledo, Ohio.....	31		75	.49		.31
Detroit, Mich.....	30		83	.56		.36
Port Huron, Mich.....	25		60	.69		.21
Alpena, Mich.....	20		50	.49	.75	
Marquette, Mich.....	18		49	.35	.81	
Grand Haven, Mich.....	27		68	.50	.43	
Milwaukee, Wis.....	27		56	.55	.30	
Chicago, Ill.....	31		75	.56	.08	
Duluth, Minn.....	19		67	.28	.22	
Upper Mississippi Valley:						
St. Paul, Minn.....	22		85	.28		.10
La Crosse, Wis.....	25		68	.34	.31	
Dubuque, Iowa.....	23		82	.48	.12	
Davenport, Iowa.....	30		91	.49	.08	
Des Moines, Iowa.....	29		98	.28	.09	
Keokuk, Iowa.....	33		108	.49	.08	
Springfield, Ill.....	36		115	.61	.20	
Cairo, Ill.....	44		83	.95	.85	
St. Louis, Mo.....	40		97	.65		.16

Table of temperature and rainfall, week ended March 6, 1891—Continued.

Locality.	Mean temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
Missouri Valley:						
Springfield, Mo.....	41		86	.71		.25
Kansas City, Mo.....	38		101	.42		.23
Concordia, Kans.....	20		104	.30		.15
Omaha, Nebr.....	31		120	.21	.04	
Valentine, Nebr.....	29		186	.20	1.14	
Huron, Dak.....	21		130	.14	.42	
Extreme Northwest:						
Moorhead, Minn.....	13		114	.15	.21	
Bismarck, Dak.....	17		146	.21		.01
Buford, Fort, Dak.....	17		176	.07	.02	
Rocky Mountain Slope:						
Assinniboine, Fort, Mont.....	23		238	.14		.10
Helena, Mont.....	29		224	.14	.50	
Custer, Fort, Mont.....	29		212	.14	.12	
Rapid City, Dak.....	29		180	.21		.05
Salt Lake City, Utah.....	39		22	.41	1.22	
Cheyenne, Wyo.....	32		67	.14	.00	.00
North Platte, Nebr.....	32		125	.14	.13	.08
Denver, Colo.....	37		59	.14	.05	
Montrose, Colo.....	37	9		.08	.13	
Pueblo, Colo.....	39		40	.08	.04	
Dodge City, Kans.....	38		90	.14		.10
Abilene, Tex.....	53		42	.28		.27
Sill, Fort, Ind. T.....	47		196	.27		.30
El Paso, Tex.....	53	42		.14		.10
Santa Fé, N. Mex.....	37	14		.08		.04
Pacific Coast:						
Spokane Falls, Wash.....	46		154	.36		.30
Olympia, Wash.....	42		56	1.64		1.30
Portland, Oreg.....	46		84	1.61		1.50
Roseburg, Oreg.....	46		70	.89	2.20	
Sacramento, Cal.....	53	1		.76	1.10	
San Francisco, Cal.....	53		14	.78	.70	
Los Angeles, Cal.....	56	14		.77		.60
San Diego, Cal.....	56	14		.43		.40
Yuma, Ariz.....	62			.07		.10

F O R E I G N .

(Reports received through the Department of State and other channels.)

AFRICA.—*Loanda—Smallpox.*—Month of August, 1890. Population, 14,500. Total deaths, 102, including 25 from smallpox.

Month of September, 1890. Total deaths, 105, including 30 from smallpox.

The United States vice-consul reports that no proper precautions are taken to prevent the spread of contagious diseases. Beds, bedding, clothing, etc., used by persons who have died of smallpox continue in use in the families of the victims.

BRAZIL—*Rio de Janeiro—Yellow fever, etc.*—Week ended January 31, 1891. Population, 450,000. Total deaths, 330, including yellow fever, 18; smallpox, 13; enteric fever, 3; scarlet fever, 1; pernicious fever, 18; diphtheria, 2; and phthisis pulmonalis, 35.

The United States sanitary inspector says:

The sanitary condition of the city is not so good as it was, owing to the increasing heat, though it compares favorably with the same period for other years. Yellow fever can not be said to be epidemic *as yet*, with an average of 3 deaths daily.

CANÁDA—*Mortality in the principal cities for the month of January 1891.*—*Montreal*: Population, 233,000. Total deaths, 402, including, phthisis, 33; typhus, enteric, and continued fevers, 7; scarlet fever, 1; diphtheria, 7; measles, 14; and whooping cough 1. *Toronto*: Population, 178,000. Total deaths, 203, including phthisis, 24; typhus, enteric, and continued fevers, 8; and diphtheria, 8. *Quebec*: Population, 67,000. Total deaths, 190, including phthisis, 13; scarlet fever, 3; diphtheria, 29; measles, 11; and whooping cough, 1. *Hamilton*: Population, 45,000. Total deaths, 64, including phthisis, 6; typhus, enteric, and continued fevers, 2; diphtheria, 4. *St. John, N. B.*: Population, 45,000. Total deaths, 56, including phthisis, 8; diphtheria, 3; scarlet fever, 1; and whooping cough, 2. *Ottawa*: Population, 44,000. Total deaths, 69, including phthisis, 5; diphtheria, 5; and scarlet fever, 1. *Halifax*: Population, 42,000. Total deaths, 87, including phthisis, 11; typhus, enteric, and continued fevers, 1; and diphtheria, 22.

CEYLON—*Colombo—Smallpox.*—Under date of February 2, 1891, the United States consul reports 83 cases of smallpox and 12 deaths during the week ended January 31, 1891.

Galle—Cholera.—The United States consul at Colombo, under date of February 2, 1891, reports 30 cases of cholera and 8 deaths in the sea-port town of Galle, during the week ended January 31, 1891.

CUBA—*Havana*.—The United States sanitary inspector sends the following weekly report, dated February 21, 1891:

Week ended February 19, 1891. Total deaths, 138, including yellow fever 2 (4 new cases); enteric fever, 2; billious fever, 1; diphtheria, 1; measles, 1; glanders, 1; and hydrophobia, 1.

Santiago de Cuba.—Two weeks ended January 15, 1891. Total deaths, 51, including phthisis pulmonalis, 10; yellow fever, 4; smallpox, 1; and whooping cough, 1.

EGYPT.—Week ended January 29, 1891. The towns in upper and lower Egypt, including Gizeh and the Suez Canal, show a total of 763 deaths, including phthisis pulmonalis, 54; enteric fever, 18; smallpox, 1; diphtheria and croup, 6; measles, 1; and whooping cough, 9.

FRANCE—*Marseilles*.—Month of January, 1891. Population, 375,378. Total deaths, 1,467, including smallpox, 87; enteric fever, 19; scarlet fever, 2; diphtheria and croup, 102; measles, 9; and whooping cough, 5.

GIBRALTAR—*Removal of quarantine*.—

FEBRUARY 18, 1891.

With reference to the notice of the 20th September last, the board of health this day decided to remove the quarantine now imposed on arrivals from ports in Syria.

By order:

JOHN C. KING,
Secretary to the Board of Health.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 28 great towns of England and Wales during the week ended February 21 corresponded to an annual rate of 21.6 a thousand of the aggregate population, which is estimated at 10,010,426. The lowest rate was recorded in Nottingham, viz, 14.5, and the highest in Halifax, viz, 37.7 a thousand. Diphtheria caused 7 deaths in Manchester and 2 in Derby.

London.—One thousand seven hundred and sixty-two deaths were registered during the week, including measles, 24; scarlet fever, 13; diphtheria, 34; whooping cough, 45; enteric fever, 6; and diarrhoea and dysentery, 10. The deaths from all causes corresponded to an annual rate of 20.4 a thousand. Diseases of the respiratory organs caused 524 deaths. In greater London 2,180 deaths were registered, corresponding to an annual rate of 19.3 a thousand of the population. In the "outer ring" the deaths included whooping cough 11 and diphtheria 5.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended February 21, in the 16 principal town districts of Ireland, was 21.6 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.4, and the highest in Kilkenny, viz, 38.1 a thousand. In Dublin and suburbs 185 deaths were registered, including diphtheria 1 and whooping cough 2.

Scotland.—The deaths registered in eight principal towns during the week ended February 21 corresponded to an annual rate of 22.6 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Greenock, viz, 14.3, and the highest in Paisley, viz, 29.9 a thousand. The aggregate number of deaths registered from all causes was 591, including measles, 8; scarlet fever, 9; diphtheria, 7; whooping cough, 26; fever, 7; and diarrhoea, 5.

Switzerland—Lucerne.—Month of January, 1891. Population, 20,600. Total deaths, 33, including 1 from diphtheria.

WEST INDIES—Health of Trinidad.—The United States consul, under date of February 6, 1891, referring to a report that Trinidad is an "exceedingly unhealthy post," submits the following:

I judge it was an unhealthy post many years ago, and about ten years ago (1880 or 1881) a serious epidemic, which some pronounced yellow fever, others not, destroyed many lives here. But for several years the sanitary condition of ports of Spain has been good, and the climate, while hot, and of course enervating, is no more productive of material complaints, probably not as much so, as the climate generally of the Cuban seaports or of the seaports of our Gulf States. Mr. Hamilton, who has been clerking at the consulate since 1877, informs me that clean bills of health, without probably a single exception, have been issued at the consulate since 1881.

I beg to add that the quarantine laws are rigidly enforced, and every reasonable precaution is taken to guard against a recurrence of the epidemic referred to.

Unsanitary condition of Havana.

[Abstract from an address on Preventive Medicine, read by Dr. Erastus Wilson before the Medical Congress of Cuba, January, 1891.]

In England practical sanitation has reduced the annual rate of mortality one-half, and in the metropolis to less than 20 to 1,000 inhabitants, while in Havana, notwithstanding better ventilation and a freer circulation of air in houses, due to the fact that the climate permits of open doors and windows, the rate of mortality is almost double that of London.

The present occasion is propitious for an examination of our water supply and atmosphere as vehicles for the propagation of disease.

The city has no system of drainage approved by science. Many of the streets are unpaved, which renders surface and underground drainage, if not impracticable, extremely imperfect. Standing pools, charged with pathogenic matter, are formed in the streets, and the atmosphere of dwellings is poisoned by exhalations from sinks behind the houses or in the courtyards, and in many cases from stables in the very houses themselves. The soil is almost always saturated with water, for want of underground drainage, and the dampness of houses in direct contact with the soil and unprotected by a layer of hydraulic cement or asphalt causes rheumatism and its sequelæ, especially heart affections, which are common.

Added to these sources of insalubrity is the harbor ; its marshy shores disseminate malaria and the harbor itself, contaminated by the drainage of the streets and with animal excreta, is converted into a general sink, pestiferous to the whole population.

Inspection of the sources of water supply and distribution shows that the reservoir is uncovered, and is, in fact, an aquarium of animal and vegetable life, generated by the excessive light and heat of the climate. The reservoir is, moreover, adjacent to the cemetery, in a section of which the dead from infectious diseases are interred. The great rapidity with which water absorbs the gases exhaled by bodies in a state of decomposition is well known ; also the brief life of the aquatic plants referred to, and of the inferior zoological species with which the reservoir is peopled. The reservoir should be protected with a roof, and the cemetery should cease to be used for the sepulture of the dead from smallpox and other infectious diseases. A furnace for the incineration of such bodies should be provided.

Estimating our rate of mortality to be 40 to 1,000, and our population to be 200,000, we have the number of 8,000 deaths annually.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
London.....	Feb. 7.....	5,877,390	2,072					6	24	38	21	
Paris.....	Feb. 14.....	2,260,945	1,031			2		17	5	38	17	8
Liverpool.....	Feb. 14.....	620,443	249					1	4			
Hamburg.....	Feb. 7.....	570,534	243						3	4		
Brussels.....	Feb. 7.....	469,459	211			9		4				
Brussels.....	Feb. 14.....	469,459	237			12		3				
Lyons.....	Feb. 7.....	401,930	194					3		3		
Copenhagen.....	Feb. 7.....	312,387	106			1				3		
Odessa.....	Jan. 17.....	295,000	104						6	2	1	
Edinburgh.....	Feb. 14.....	275,436	112									
Barcelona.....	Feb. 13.....	272,000	428			5		11		19		
Palermo.....	Feb. 14.....	250,000	196							1		
Palermo.....	Feb. 7.....	250,000	161					1		2		
Antwerp.....	Feb. 7.....	238,788	104			1		2				
Bristol.....	Feb. 14.....	235,171	82						2			
Belfast.....	Feb. 14.....	234,822	125					8	1	2		
Rotterdam.....	Feb. 14.....	209,137	115									
Rotterdam.....	Feb. 21.....	209,137	102									
Florence.....	Feb. 14.....	182,534	138									
Konigsberg.....	Feb. 8.....	161,149						7				
Ghent.....	Feb. 7.....	152,395	57					1	1	4		
Ghent.....	Feb. 14.....	152,395	76			1		4	1	1	2	2
Christiania.....	Feb. 14.....	143,300	49							1		
Funchal.....	Feb. 7.....	133,250	21					1		7		
Funchal.....	Feb. 14.....	133,250	15									
Danzig.....	Feb. 7.....	119,000	56					5		4		
Stettin.....	Feb. 14.....	116,090	57						1	1		
Havre.....	Feb. 14.....	112,074	65					2				
Gothenburg.....	Feb. 7.....	106,246	27						1			
Leghorn.....	Feb. 15.....	104,021	75						2	2		
Rheims.....	Feb. 21.....	97,903	49					1				
Leith.....	Feb. 14.....	80,736	32									
Mannheim.....	Feb. 7.....	80,000	33									
Mannheim.....	Feb. 14.....	80,000	24									
Messina.....	Feb. 14.....	79,971	57							1	1	
Jerez de la Frontera.....	Jan. 24.....	61,708	57			4				2		
Jerez de la Frontera.....	Jan. 31.....	61,708	51			5						
Cadiz.....	Jan. 24.....	57,157	68									
Cadiz.....	Jan. 31.....	57,157	81					2		2		
Merida.....	Feb. 7.....	46,566	26									
Merida.....	Feb. 15.....	46,566	27									
Trapani.....	Feb. 7.....	43,095	8									
Trapani.....	Feb. 14.....	43,095	10									
Marsala.....	Feb. 7.....	40,131	22							1		
Marsala.....	Feb. 14.....	40,131	23									
Schiedam.....	Feb. 14.....	25,400	7									
Schiedam.....	Feb. 21.....	25,400	14									
Curaçoa.....	Feb. 14.....	25,000	4									
Gibraltar.....	Feb. 15.....	23,981	8					2				
Girgenti.....	Feb. 7.....	23,547	12									
Girgenti.....	Feb. 14.....	23,547	11									
Licata.....	Feb. 7.....	19,000	6									
Licata.....	Feb. 14.....	19,000	9						1	3		
Matamoras.....	Feb. 21.....	16,000	12									
Hamilton, Bermuda.....	Feb. 19.....	15,700	1									
Hamilton, Bermuda.....	Feb. 26.....	15,700	1									
Sagua la Grande.....	Feb. 21.....	15,605	6					1				
Flushing.....	Feb. 7.....	13,200	6									
Flushing.....	Feb. 14.....	13,300	7									
Flushing.....	Feb. 21.....	13,200	3									
Guelph.....	Mar. 1.....	10,175	5							2		
Tuxpan.....	Feb. 14.....	9,000	4									
Chatham, Ont.....	Feb. 18.....	8,730	3									
La Guayra.....	Feb. 14.....	7,641	8									
Sarnia.....	Feb. 28.....	6,200	1									
Amherstburg.....	Feb. 28.....	3,100	3									
Prescott.....	Feb. 26.....	2,988	2									

OFFICIAL:

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