

STATISTICAL REPORTS

From the Government of Puerto Rico, Department of Health,
Bureau of Vital Statistics

CAUSES OF INFANT MORTALITY IN 1931.—In a previous Bulletin it was reported that the number of deaths in children under one year of age had totalled 8,529 in 1931, as against 6,878 in 1930, without mentioning the causes which were responsible for said mortality. The principal causes of infant mortality in Puerto Rico for the year 1931 have been the following:

Gastroenteritis, with 2,602 deaths; congenital debility, with 1,616; Bronchitis, bronchopneumonia and pneumonia combined which caused 1,544 deaths; malaria, with 512, and tetanus with 332. These five causes combined produced 6,606 deaths or 77.4 per cent of the total number of deaths in children under one year of age (8,529).

Other important causes of death were: congenital syphilis, with 190 deaths; whooping cough, with 119; acute nephritis, with 112, and congenital malformation with 106.

The following table shows the principal causes of infant mortality in 1931, as compared with that registered from the same causes during 1930, and the percentage each cause represents with respect to the total, for each year respectively.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE BY PRINCIPAL CAUSES OF DEATH IN 1931 AND 1930 SHOWING PERCENTAGE OF TOTAL INFANT DEATHS FROM EACH CAUSE

Int. List No.	Cause of Death	1931		1930	
		Deaths	Percent of Total	Deaths	Percent of Total
	All causes	8,529	100.00	6,878	100.00
119	Diarrhea and Enteritis	2,602	30.51	2,246	32.65
158	Congenital Debility	1,616	18.95	1,305	18.97
106-107a	Bronchitis (514), Broncho-				
109	pneumonia (809) and Pneu-	1,544	18.10	1,302	18.93
	monia (221) (*).				
38	Malaria	512	6.00	270	3.93
22	Tetanus	332	3.89	378	5.50
34	Syphilis	190	2.23	110	1.60
9	Whooping cough	119	1.40	56	.81
130	Acute nephritis	112	1.31	104	1.51
167	Congenital malformations	106	1.24	85	1.24
	All other causes	1,396	16.37	1,022	14.86

(*) Figures in parenthesis correspond to total deaths from each cause respectively in 1931.

As shown in the above table, a decrease has been registered in the percentage of total deaths in 1931, as compared with the percentage for the year 1930 in the following causes: gastroenteritis, from 32.65 per cent in 1930 to 30.51 per cent in 1931; diseases of the respiratory system, from 18.93 per cent to 18.10 per cent; tetanus, from 5.50 per cent to 3.89 per cent, and acute nephritis from 1.51 per cent to 1.31 per cent. The following increases have been registered: malaria, from 3.93 per cent in 1930 to 6.00 per cent in 1931; syphilis, from 1.60 per cent to 2.23 per cent; whooping cough, from 0.81 per cent to 1.40. There was practically no change in the congenital causes; the percentage of deaths from congenital debility being 18.95 per cent in 1931, and 18.97 per cent in 1930, and from congenital malformations 1.24 per cent in each year. Aside from those mentioned, some deaths were registered during the year 1931 from other causes pertaining to the group of transmissible diseases, and deserve special mention, owing to the number of deaths registered. They are as follows: diphtheria, with 10 deaths in 1931 as against 9 in 1930; influenza, with 41 deaths in 1931 and 15 in 1930, and tuberculosis (all forms) with 50 deaths in 1931 and 36 in 1930.

DEATHS OF CHILDREN FROM 1 TO 2 YEARS OF AGE IN 1931.—The number of children from 1 to 2 years of age who died in Puerto Rico in 1931 was 2,273 as against 1,979 in 1930, an increase of 294 deaths or 14.8 per cent.

The principal causes of death in both years 1931 and 1930, and the percentage that each cause represented in regard to the total number of deaths in this age group, are shown in the following table:

Int. List No.	Cause of Death	1931		1930	
		Deaths	Percent of Total	Deaths	Percent of Total
	All causes	2,273	100.00	1,979	100.00
119	Diarrhea and Enteritis	891	39.19	776	39.21
106-107a . . .	Bronchitis (108) Broncho				
109	pneumonia (291) Pneumonia				
	(89) (*)	488	21.46	469	25.21
38	Malaria	233	10.25	124	6.26
130	Acute nephritis	98	4.31	89	4.49
79a	Simple meningitis	38	1.67	32	1.61
23-32	Tuberculosis (all forms)	28	1.23	18	0.90
10	Diphtheria	27	1.18	10	0.50
9	Whooping cough	26	1.14	24	1.21
	All other causes	444	19.53	407	20.56

(*) Figures in parenthesis correspond to total deaths from each cause respectively in 1931.

The figures of the preceding table demonstrate that in this age group gastrointestinal disorders caused 891 deaths; respiratory diseases (tuberculosis excepted) caused 488 deaths; and malaria 233 deaths. These three causes or groups of causes combined were responsible for 1,612 deaths or 70.9 per cent of the total registered in this age group (2,273).

It has been previously announced (Bulletin No. 4) that the number of deaths in children under one year of age occurring in Puerto Rico during the calendar year 1931 was 8,529 which represents 26.57 per cent of the total number of deaths registered in that year (32,091). The 2,273 deaths of children from 1 to 2 years of age represents 7.08 per cent of said total. The number of deaths in both ages combined (under one year and from 1 to 2 years) represents 33.65 per cent or slightly over one-third of the total number of deaths registered in 1931.

The following table shows the number of deaths of children under one year of age and the percentage these deaths represent with respect to the total in Puerto Rico and in certain other places outside of Puerto Rico:

Area	Total Deaths	Deaths under One Year	Percent of Total Deaths
State of New York (1930).....	147,424	12,636	8.57
U. S. Reg. Area (1928).....	1,378,675	155,858	11.30
State of Alabama (1928).....	31,847	4,765	14.96
State of Arizona (1928).....	6,444	1,266	19.64
PUERTO RICO (1931).....	32,091	8,529	26.57
Republic of Chile (1931).....	95,189	34,663	36.41

GENERAL MORTALITY DURING THE FIRST QUARTER OF 1932.—
During the first quarter of 1932 an increase of 507 deaths has been registered in the general mortality, in comparison with the number of deaths registered during the same period of the year 1931. The total number of deaths occurred during the months of January, February and March of the year 1932 reaches to 8,401, while in the same period of the year 1931 only 7,894 deaths were registered.

In the group of transmissible diseases there has been practically no change, a decrease of only one death having been registered; that is, while the increases reach a total of

182 deaths, the decreases reached to 183, which represents a net decrease of one death. The most important decreases have been registered in Malaria (131) and Influenza (41); the increases of more importance have been registered in Tuberculosis in all its forms (114), and Syphilis (42). The following table offers the necessary details:

TABLE I.—DEATHS FROM TRANSMISSIBLE DISEASES DURING THE FIRST QUARTER OF 1932 AND 1931

Causes of Death	January		February		March		Total in the 3 months	
	1932	1931	1932	1931	1932	1931	1932	1931
ALL THESE CAUSES.....	728	783	712	711	793	740	2,233	2,234
Typhoid fever.....	4	11	9	5	11	9	24	25
Measles.....	1	1	3	5
Whooping-cough.....	16	13	7	12	16	15	39	40
Diphtheria.....	3	4	6	2	10	4	19	10
Influenza.....	12	8	6	17	12	46	30	71
Dysentery (all forms).....	7	9	4	8	8	9	19	28
Tetanus.....	38	34	38	30	38	43	114	107
Tuberculosis (all forms).....	383	373	394	353	414	353	1,191	1,077
Syphilis.....	38	22	28	26	39	15	105	63
Septicemia.....	13	19	25	24	28	18	66	61
Malaria.....	213	290	194	234	214	228	621	752

OTHER IMPORTANT CAUSES.—Among the other important causes of death, the following show decreases, in the amounts shown in parentheses: pneumonia (30), simple meningitis (17), cerebral hemorrhage (8), nephritis, acute and chronic, (3) and the group of puerperal causes (2), while increases have been registered in bronchopneumonia (119), diarrhea and enteritis, 2 years of age and over (70), diarrhea and enteritis, under 2 years of age (67), congenital debility (44), other diseases of early infancy (40), uncinariasis and other parasitic diseases (36), diseases of the heart (23), bronchitis (20), cancer in all its forms (14) and senility (11).

A table showing the number of deaths registered from every one of these causes during the months of January, February and March of 1932 and 1931 follows:

TABLE II.—MORTALITY FROM CERTAIN IMPORTANT CAUSES DURING THE FIRST QUARTER OF 1932 AND 1931

Causes of Death	January		February		March		Total in the 3 months	
	1932	1931	1932	1931	1932	1931	1932	1931
ALL THESE CAUSES.....	1,692	1,536	1,512	1,455	1,693	1,523	4,897	4,514
Pneumonia.....	119	112	94	122	125	134	338	368
Simple meningitis.....	14	19	10	14	19	27	43	60
Cerebral hemorrhage.....	40	35	32	27	24	42	96	104
Nephritis (acute & chronic)...	199	185	164	180	183	184	546	549
Puerperal causes (all).....	37	35	33	51	40	26	110	112
Cirrhosis of the liver.....	8	19	18	10	14	12	40	41
Bronchopneumonia.....	181	122	167	150	204	161	552	433
Diarrhea & enteritis (2 years and over).....	187	169	152	148	170	122	509	439
Diarrhea & enteritis (under 2 years).....	275	285	258	225	314	270	847	780
Congenital debility.....	152	136	147	132	138	125	437	393
Other diseases of early infancy.....	39	16	39	27	34	29	112	72
Uncinariasis and other parasitic diseases.....	59	53	61	48	65	48	185	149
Diseases of the heart.....	134	135	128	125	159	138	421	398
Bronchitis.....	87	69	64	57	61	66	212	192
Cancer (all forms).....	70	65	57	51	57	54	184	170
Senility.....	91	81	88	88	86	85	265	254

SUMMARY

The following table gives a summary of the data given above, as well as that referring to the number of violent deaths and to deaths from causes not specified or ill-defined occurring during the months stated. This table naturally gives the total number of deaths registered in each month and the total number for the quarter.

TABLE III.—SUMMARY OF THE MORTALITY REGISTERED IN PUERTO RICO DURING THE FIRST QUARTER OF 1932 AND 1931

Causes of Death	January		February		March		Total in the 3 months	
	1932	1931	1932	1931	1932	1931	1932	1931
ALL CAUSES.....	2,835	2,725	2,627	2,550	2,939	2,619	8,401	7,894
Transmissible diseases, Table I.....	728	783	712	711	793	740	2,233	2,234
Other important causes, Table II.....	1,692	1,536	1,512	1,455	1,693	1,523	4,897	4,514
Violent deaths.....	77	87	78	85	109	75	264	247
Ill-defined causes.....	152	143	132	126	142	97	426	366
All other causes.....	186	176	193	173	202	184	581	533

SOME IMPORTANT CAUSES OF DEATH, 1931.—The death rate from MALARIA for the year 1931 has been the highest ever registered in the history of Puerto Rico and is the principal cause in the increase of the general death rate. The disease presented itself in an EPIDEMIC form in a large number of towns and cities on the southern, western and eastern coasts, where it is endemic, as well as in various towns on the northern coast and in the interior where it is less frequent.

The total number of deaths from malaria in 1931 reached 3,198 with a death rate of 203.1 per 100,000 population as against 1,887 deaths and a death rate of 121.8 registered in 1930, and 2,105 deaths and a death rate of 137.9 registered in 1929.

The increase in the number of deaths from malaria in 1931 is 69.5 per cent over that registered for 1930 and 58.2 per cent over the average number of deaths from the same cause during the past five years (1926-1930).

Below is given the number of deaths registered and the death rate from malaria in Puerto Rico for the past six years.

Year	Deaths	Death Rate Per 100,000 Population
1926.....	2,040	140.2
1927.....	1,910	129.2
1928.....	2,166	144.2
1929.....	2,105	137.9
1930.....	1,887	121.7
1931.....	3,198	203.1

The number of deaths from TYPHOID FEVER (including paratyphoid) registered during the year 1931 is 104 with a death rate of 6.6 per 100,000 population, which is the lowest death rate from this cause registered since 1919. Contrary to what happens with the mortality from other important causes of death, which show annual fluctuations of increase and decrease, the mortality from typhoid fever has been steadily on the decline during the last six years, with the sole exception of the year 1928 in which the hurricane of San Felipe took place. Note the number of deaths and the death rate per 100,000 population registered during the last six years:

Year	Deaths	Death Rate Per 100,000 Population
1926.....	307	21.1
1927.....	303	20.5
1928.....	463	30.8
1929.....	222	14.5
1930.....	132	8.5
1931.....	104	6.6

Undoubtedly the extensive antityphoid vaccination carried on in the rural zone of certain sections of Puerto Rico, together with other prophylactic measures put into effect by the Departments, have resulted in the decrease of the death rate from this cause. Note that the decrease is greater during the last three years (1929 to 1931), the preventive measures above referred to having been intensified during the second semester of the year 1928.

The municipalities where the greatest number of deaths have occurred during the year 1931 from typhoid fever are Ponce, with 14 deaths as against 23 registered in 1930; San Juan with 10 deaths as against 7 in 1930; Salinas with 7 deaths as against 4 in 1930, and Bayamón and Cabo Rojo with 6 and 5 deaths as against 1 and 9 respectively registered in 1930.

It should be borne in mind that almost all the deaths from typhoid fever occurring in San Juan are cases brought from other parts of the island to the Quarantine Hospital for treatment.

A total of 4,336 persons died from TUBERCULOSIS (all forms) during the year 1931, which means an increase of 256 deaths as compared with those registered in 1930, namely 4,080. The death rates for both years are 275.4 per 100,000 population in 1931 and 263.2 per 100,000 population in 1930.

As in previous years the highest death rates from this cause were registered in the larger towns and in those sections of the coast where malaria is more prevalent.

DIARRHEA AND ENTERITIS in children under 2 years of age shows a total number of deaths for 1931 of 3,486, which is higher than the figure for 1930 (3,022) by 464 deaths, while the number of deaths from diarrhea and enteritis in persons of 2 years and over has decreased from 2,049 in 1930 to 1,837 in 1931, or a decrease of 212 in the absolute number of deaths.

The death rate in the two age groups during the two years mentioned has been 221.4 per 100,000 population in 1931 as against 195.0 in 1930 in diarrhea and enteritis under 2 years of age and 116.7 in 1931 and 132.2 in 1930 in persons 2 years of age and over.

The net increase in the number of deaths for 1931 for both groups combined, as compared with figures for 1930, is 252 deaths, in absolute number.