

ANNUAL REPORT OF THE DISPENSARIES OF CHILD WELFARE, MATERNITY AND TUBERCULOSIS, OF THE HEALTH DEPARTMENT OF PORTO RICO, 1927-28¹

In 1923, for the first time in the island of Porto Rico, the Department of Health organized a complete system of public health dispensaries, with efficient files, a properly qualified staff of paid physicians, visiting nurses, and clinics for Tuberculosis, Child Welfare, Maternity and Venereal Diseases.

Twenty-five dispensaries were opened in thirteen towns of the island. A division of Social Service, under a well trained Superintendent, was started in San Juan at that time, and was the first attempt on the part of the government of Porto Rico to carry out scientific Social Welfare Work.

A systematic educational campaign was launched, with moving pictures, health posters and pamphlets, conferences, and the organization of "Little Mothers' Leagues", and classes on Nutrition among school children, in the towns where public health dispensaries had been organized. In 1926, "Teachers' Institutes" were organized in several parts of the island, and thousands of public school teachers were given a chance to attend conferences and demonstrations on the most important public health problems of their districts.

These activities have created a greater interest on the part of the public in health matters, and as a proof of such interest, we might mention the "Society for the Prevention of Tuberculosis in Children", a public health association founded in 1924, and supported exclusively by private donations and contributions. This Society is now building a Preventorium in Guaynabo, one of the highest and healthiest regions near San Juan, at a total cost of fifteen thousand dollars.

The Anti-Tuberculosis League completed a twenty-thousand dollar building in 1927. This building has been turned over to the Health Department, to be used as a center for tuberculosis and child welfare clinics.

The educational campaign carried out by the Department of Health through the Bureau of Social Medicine, has been instrumental in arousing in the medical profession a new interest in the diagnosis

¹ This is part of the Annual Report of the Bureau of Social Medicine.

of early tuberculosis, and also in the reporting of this disease. This new interest of the medical profession in the reporting of cases of tuberculosis is shown by the fact that, for the first time in the history of our Public Health activities, the number of cases of tuberculosis reported to the Health Department in 1926-27 and 1927-28, was greater than the number of deaths reported.

In 1926-27, the physicians of the island reported to the Health Department, 4,692 cases of tuberculosis. The number of deaths for this same year from tuberculosis was 3,842. In 1927-28, 5,189 cases were reported and 3,607 deaths occurred.

From the following table, the proportion of deaths to cases reported during the last five years, can be compared:

Year	Cases reported	Deaths
1923-24	1,629	2,824
1924-25	1,929	3,087
1925-26	2,044	3,408
1926-27	4,692	3,842
1927-28	5,189	3,607

The educational campaign of the Bureau of Social Medicine has impressed upon the public the importance of Child Welfare Work. Much interest was evidenced in the cooperation which many municipalities have given to our dispensaries. The towns of Vieques, Yauco, Villalba, Juana Díaz, Cataño, Morovis, Comerío, Juncos, Humacao, and more recently Caguas, have supplied quarters for our dispensaries. Vieques pays the dispensary nurse, and Caguas has assigned funds in her budget for two nurses next year. Humacao and Coamo supply part of the medicines used in the local dispensaries; Yauco has assigned a small part of her budget for rendering financial assistance to the patients attending the tuberculosis dispensary, and Aguadilla has set aside several beds in the Maternity Department of her municipal hospital, to be filled exclusively by patients referred from our own dispensary.

The Department of Health, through the agency of the Bureau of Social Medicine, has introduced in Porto Rico two essential factors in modern Public Health work: the Visiting Nurse, and the Social Worker. Our Bureau of Social Medicine has prepared the way for the organization of Municipal Health Units in many municipalities throughout the island, by educating public opinion for such work; it has proved the convenience and necessity of the well organized dispensary as an important factor in the safeguarding of the health of

the poor; and it has created throughout the island a favorable attitude towards every kind of sanitary work. It may be truthfully said that never before was our Department of Health more popular, nor better understood by the people than now. The Bureau of Social Medicine, through its dispensaries, its visiting nurses, its social workers and the physicians working in its clinics, has helped considerably to create an attitude of good will in the minds of the people towards other phases of the work carried out by our Health Department.

For the first time in five years, the tuberculosis mortality rate this year has shown a tendency to come down. As may be seen from the above table, the number of persons who died from tuberculosis this year was 3,607 as compared with 3,842 last year. The mortality rates from tuberculosis were 267 deaths per 100,000 inhabitants in 1926-27, and 235 in 1927-28.

Undoubtedly the anti-tuberculosis campaign of the Health Department, by creating a greater interest in the early diagnosis of tuberculosis, was largely responsible for the apparent increase in the tuberculosis mortality rates from 1923 to 1927. This can be easily understood when it is considered that, since the year 1923, 15,139 persons with symptoms of tuberculosis have been examined in our dispensaries. Probably thousands of cases of tuberculosis were discovered through these dispensaries which would never have been diagnosed otherwise. It is possible that from this year on, the tuberculosis mortality rate in the island will show a steady tendency to come down. Sooner or later, the campaign which the Department of Health has been carrying out for the prevention and early diagnosis of tuberculosis, must show permanent results. Such results will not be entirely satisfactory until we have more hospitals for the isolation of advanced cases of tuberculosis, and until a higher scale of salaries is secured for laborers. However, the educational and diagnostic campaign of the Department has done much good, and it is undoubtedly beginning to exert an influence on our morbidity and mortality rates.

The infant mortality rate has also been lower this year. In 1925-26 it was 150 per each thousand births. In 1926-27 it was 167. This year it has been 146. The lowest rates were those of Corozal (60), Jayuya (66), Morovis (68), and Naranjito (72). The highest were those of Yabucoa (265), Añasco (246), Loíza (242), and Mauabo (221).

Santa Isabel had, during the past three years, the highest infantile mortality in the island, as can be seen from the following table:

Infant Mortality in Santa Isabel

1924-25-----	268 per thousand living births
1925-26-----	314 per thousand living births
1926-27-----	356 per thousand living births

This year the infantile mortality in Santa Isabel came down suddenly from 256 to 209, a diminution of 41 percent. It might be curious to investigate the causes of this sudden lowering of the infant mortality rate in that part of the island.

Añasco had the highest general mortality in the island this year, and also one of the highest infant mortality rates. Careful surveys of the districts showing the highest and lowest infant mortality rates should be carried out next year, to determine the definite factors that are responsible for the wide variation in infant mortality in different parts of the island.¹

The mortality from puerperal septicemia and other puerperal causes among the 1,032 patients of our Maternity Dispensaries who gave birth to children this year, was as follows:

Mortality from Puerperal Causes Among Patients of the Maternity Dispensaries this Year

Town	No. of expectant mothers who gave birth, 1927-28	No. of deaths	Causes of deaths
San Juan	20	.....
Cataño	55	.....
Santurce.. ..	125	2	Puerperal infection
Barrio Obrero	130	1	Puerperal infection
Ponce	111	1	Eclampsia
		1	Hemorrhage
Mayagüez	161	1	Eclampsia
Guayama	71	.....
Juncos.. ..	4	.....
Carolina	119	.....
Comerio	42	.....
Morovis	30	.....
Yauco	35	.....
Humacao	6	.....
Caguas	123	1	Puerperal infection
Total	1,032	7	

According to the above table, the mortality rate from puerperal causes was 6.77 per thousand total births, among the maternity patients attending our dispensaries.

¹ After the presentation of this report, Dr. A. Fernós Isern, Assistant Commissioner of Health, and Dr. J. Rodríguez Pastor, Chief of the Bureau of Tuberculosis, made a rather complete study of the causes of Infant Mortality in the Island. This study, which was read at the annual assembly of the Porto Rico Medical Association, will appear shortly in "El Boletín de la Asociación Médica de Puerto Rico" and in this Review.

The general mortality from puerperal septicemia and other puerperal causes in the island, was as follows:

Mortality from Puerperal Septicemia and other Puerperal Causes in the Island of Porto Rico, 1927-28

Year	Deaths	Rate per 1,000 total births
1924-25	389	6.53
1925-26	393	6.42
1926-27	375	6.75
1927-28	399	6.84

There were 80 abortions and 56 stillbirths among the patients who attended our maternity dispensaries. The stillbirth rate was 54 per thousand total births.

The general stillbirth rate for the island as a whole has been as follows:

Stillbirth Rates in the Island

Year	Rate per each 1,000 Total Births
1925-26	79
1926-27	86
1927-28	89

As may be seen from the former table, the stillbirth rate this year was quite low among the maternity cases attending our dispensaries, as compared with the stillbirth rate for the island as a whole. Our death rate from puerperal causes, however, was not so low as it should have been.

To bring about a lowering of the death rate from puerperal causes among the patients attending our maternity dispensaries, we kept a register of all the midwives practicing in the towns where we have dispensaries. We made investigations as to their name, address, age, race, preparation, and as to whether they had government license to practice their chosen callings. The results of such a survey may be judged from the following table:

Survey Concerning Midwives in Sixteen Urban Centers

Town	No. of Midwives	Race			Ave- rage age	Li- cense
		W	N	M		
Cataño.....	11	5	4	2	46	.....
Santurce.....	14	6	7	1	49	2
Barrio Obrero.....	7	4	2	1	37	2
Ponce.....	10	7	3	3	37	10
Mayagüez.....	16	5	5	6	55	2
Guayama.....	4	2	1	1	46	
Juncos.....	4	1	1	2	46	
Carolina.....	6	...	...	6	46	1
Comerío.....	7	2	...	5	51	
Morovis.....	1	1	...	...	36	
Yauco.....	6	5	...	1	48	
Humacao.....	4	2	...	2	42	
Coamo.....	5	3	...	2	59	
Villalba.....	5	2	...	3	57	
Juana Díaz.....	1	...	1	...	54	
Caguas.....	9	8	...	1	49	2
Total.....	110	53	21	36	47	19

As may be seen from the above, only 19 out of 110 midwives had government licenses to practice.

We are making arrangements to give a course of instruction on obstetrics to all the midwives practicing in the towns where we have maternity dispensaries, and will take steps to see that each midwife practicing in these districts will acquire enough knowledge on the practice of modern midwifery to make her a help instead of a hindrance to the welfare of the community.

The importance of these measures can be appreciated when it is considered that, out of 1,032 confinements among women attending our maternity dispensaries, 750, or 72 percent were attended by midwives, and only 28 percent were attended by doctors. The extreme poverty of the women attending our dispensaries makes it hard for them to secure the services of a doctor.

The following table will give an idea of these and other data concerning this problem:

Mothers Treated	Dispensaries												Total		
	San Juan	Cataño	Santurce	Barrio Obrero	Ponce	Mayagüez	Guayama	Juncos	Carolina	Comerio	Moroyis	Yauco		Humacao	Caguas
No. of mothers who gave birth during year.....	20	55	125	130	111	161	71	4	119	42	30	35	6	123	1,082
No. of infants born alive.....	20	55	118	121	108	147	64	3	117	41	30	32	6	119	976
No. of stillbirths.....	.....	.....	12	9	3	14	7	1	2	1	.....	2	.....	4	56
No. of abortions.....	.....	.....	8	9	.....	16	27	.....	1	.....	2	1	11	4	80
No. of mothers giving birth at home.....	.....	50	70	96	71	140	67	.....	1	.....	2	1	11	4	791
No. of mothers giving birth in hospital.....	20	5	55	34	40	21	4	.....	12	3	.....	15	1	31	241
No. of mothers attended by midwives.....	.....	50	65	87	71	121	67	4	99	39	30	20	5	92	750
No. of confinements attended by doctors.....	.....	.....	5	9	.....	19	.....	.....	8	.....	.....	.....	.....	.....	.....

During the past fiscal year (1927-28), 3,103 clinics were held in the dispensaries of the Bureau of Social Medicine, and 64,228 consultations were attended by physicians of the dispensaries.

The total attendance of patients to our dispensaries, was 21,343. Of these, 9,811 were new patients and the rest had been registered in former years. There were 9,378 patients discharged during 1927-28.

There were 9,245 specimens of sputum, blood, feces, etc., sent to the Biological Laboratory for analysis.

Out of the 21,343 patients that attended the clinics during 1927-28, 10,141 were patients of the Child Welfare clinics; 4,709 attended the Tuberculosis clinics, 3,888 were prenatal cases, and 2,605 were cared for at the clinics for venereal diseases.

The children registered during the year in the Child Welfare clinics were classified according to age, race and sex, as follows:

Children Registered During the Year in the Child Welfare Clinics

Age	Male			Female		
	W	M	N	W	M	N
0-1 year.....	573	212	51	523	206	96
1-2 years.....	318	117	25	297	111	17
2-3 years.....	175	88	25	153	60	12
3-4 years.....	140	38	10	121	56	11
4-5 years.....	78	32	6	64	26	6
5-6 years.....	62	34	5	73	19	5
6-7 years.....	31	16	3	45	20	5
7-8 years.....	14	3	3	14	3	3
8-9 years.....	3	1	.....	3	.....	.....
9-10 years.....	2	.....	.....	.....	.....	.....
Total.....	1,396	541	128	1,293	501	155

Out of 10,141 children who attended the clinics this year, 165 died, of whom 110, or nearly 70 percent, were under two years. Out of these 110 children under two who died this year, 84 had been breast-fed, and 26 had been artificially fed.

The Schick test was performed on 4,347 dispensary children and 1,530 received toxin-antitoxin immunization against diphtheria this year. One thousand and eighteen were vaccinated against small-pox.

During the year 1927-28, 943 child welfare clinics were held. The doctors working in these clinics attended 20,473 consultations. At the end of the fiscal year 4,230 children were discharged and 5,911 children were still registered in the child welfare dispensaries.

Out of 2,583 children under two years who were registered in our clinics this year, 1,616 had been breast-fed and 967 had been artificially fed.

Out of 1,428 children over the age of two registered this year, 422 were receiving very insufficient food; 558 were getting food of a fair quality, and 448 were being reasonably well fed.

When registered in the clinics, 984 of the children under two years had normal weight; 1,317 were under weight, and 282 were over weight.

The children registered in the Child Welfare clinics this year, suffered from the following diseases:

Gastro Intestinal disorders.....	864
Affections of the respiratory apparatus.....	780
Intestinal parasites.....	621
Hereditary syphilis.....	110
Cutaneous affections.....	398
Malaria.....	180
Filariasis.....	1
Anemia.....	1,989
Other conditions.....	1,057

PRENATAL CLINICS

There were 565 clinics held in the Prenatal clinics of the Bureau of Social Medicine, and 7,986 consultations were attended by the physicians of the dispensaries. Out of the 3,888 patients that attended the prenatal clinics during 1927-28, 2,165 were new patients and the rest had been registered in former years. During the year 2,268 patients were discharged and 1,620 patients were still registered in the prenatal clinics at the end of the fiscal year.

The patients registered during the year in the Prenatal Clinics were classified according to age, and race as follows:

Women Registered During the Year in the Prenatal Clinics

Age	White	Negroes	Mulattoes
15-20 years.....	490	58	144
20-25 years.....	424	65	140
25-30 years.....	301	67	120
30-40 years.....	192	31	88
40-50 years.....	27	9	9
Total.....	1,434	230	501

When registered at the clinics, 2,021 of the prenatal patients were expectant mothers, and 119 had just given birth.

During the period of pregnancy the patients from the prenatal clinics showed the following morbid symptoms: 731 suffered from vomiting; 1,171 from nausea; 1,061 from constipation; 1,211 from headaches; 503 from endema, and 381 from varicose veins.

The new patients of the prenatal clinics this year, had already had the following deliveries:

653.....None	51.....Eight
422.....One	29.....Nine
274.....Two	15.....Ten
221.....Three	8.....Eleven
180.....Four	5.....Twelve
131.....Five	7.....Thirteen
85.....Six	3.....Fourteen
79.....Seven	2.....Fifteen

One thousand five hundred and seventy-eight patients were married, 548 lived in concubinage, 13 were divorced and 26 were widowed.

The occupations of the prenatal patients during their pregnancy period were the following:

Domestic	1,577
Laundress	64
Ironer	49
Servant	27
Cook	25
Cigar maker	129
Cigar selector	24
Needle worker	172
Seamstress	78
Store clerk	2
Merchant	3
Student	1
Teacher	9
Janitor	1
Midwife	1
Waitress	1
Other occupations	2

Three hundred and twenty-one patients had had one abortion; 126, two abortions; 52, three abortions; 23, four abortions, and 12, five abortions.

To expectant mothers attending the dispensaries, 1,211 prophylactic packages were distributed.

The visiting nurses made 19,408 visits to the patients' homes.

TUBERCULOSIS CLINICS

The physicians of the Tuberculosis dispensaries attended 10,107 consultations this year, and 4,709 patients attended the clinics.

Out of these 4,709 patients, 2,882 were new patients. There were 2,502 patients discharged and 2,207 patients were still registered in the tuberculosis clinics at the end of the fiscal year 1927-28.

Out of the 2,882 new patients who attended the tuberculosis dispensaries this year, 875 were positive cases of tuberculosis, 1,667 were negative cases, and 340 were under observation and without definite diagnosis at the end of the fiscal year.

The new patients registered in the Tuberculosis dispensaries were classified according to age, sex, race and stage, as follows:

The New Tuberculosis Patients Classified According to Age, Sex, Race and Stage

Age	Incipient				Mod. advanced				Advanced				Negatives						
	Male		Female		Male		Female		Male		Female		Male		Female				
	W	N	M	W	N	M	W	N	M	W	N	M	W	N	M	W	N	M	
0 to 1	1					1												1	
2 to 5	4		1	1		3		3										21	
5 to 10	17		1	8		2		9		2								101	3
10 to 15	17	1	3	15	1	3	11	2	5	15	2	8	3		5			91	19
15 to 20	15			14	2	5	22	1	11	33	4	4	5		2			79	3
20 to 25	20			29	3	14	20	1	4	21	3	11	9	1				16	1
25 to 30	8		5	32	3	12	19		3	33	2	7	7		3			10	5
30 to 40	7		2	6	2	11	18	3	11	33	2	13	19		4			20	1
40 to 50	2	1	1	3			13	2	2	15	1	5	6		1			6	3
50 to 60	2	1		2		3	9			2	1	2	4					16	2
Over 60	1											2	1	1				4	2

Under observation----- 333

The civil status of the adult tuberculosis patients was as follows:

Civil Condition	Male	Female
Single	400	429
Married	250	652
Divorced	9	19
Widowed	45	143
Common law married	81	289

There were 22 cases in which tuberculosis occurred in both husband and wife. A number of the patients attending the tuberculosis dispensaries suspected of having tuberculosis were found to suffer from other diseases. Those patients were classified, according to the diagnosis made by the physicians, as follows:

Bronchitis-----	239
Uncinariasis-----	165
Pleurisy-----	13
Asthma-----	43
Malaria-----	85
Influenza-----	10
Malnutrition-----	213
Endocarditis-----	14
Syphilis-----	52
Other diseases-----	306

The tuberculin subcutaneous test was made on 104 patients suspected of having tuberculosis, in the dispensaries of San Juan, Cañaño and Santurce.

The Von Pirquet test was performed on 735 children with the following results:

Age	Male	Female	Male	Female	Percent- age of positives
0-1 year	2	3	.....	.....	100
1-2 years	8	4	10	5	44
2-5 years	15	9	17	16	42
5-10 years	41	59	72	89	38
10-15 years	85	112	79	109	50

The following chart shows the different types of tuberculosis found in the patients who attended the dispensaries:

Type	Male	Female
Tuberculosis of the vertebral column	2	1
Tuberculosis of the bones	4	.....
Tuberculosis of the joints	3	.....
Miliary tuberculosis	1	1
Glandular tuberculosis	13	13
Pulmonary tuberculosis	331	495
Tuberculosis of other organs	4	7
Total	358	517

The 2,502 patients discharged during the year, were classified as follows:

	White		Negro		Mulatto	
	Male	Female	Male	Female	Male	Female
Cured	82	187	14	16	51	97
Improved	210	409	29	43	65	162
Not improved	228	432	22	49	86	147
Deaths	53	72	7	7	12	22

The tuberculosis dispensaries at San Juan, Santurce, Barrio Cbrero and Cataño sent a total of 267 patients to the Division of Roentgenology for examination.

The visiting nurses made a total of 16,952 visits to the homes of the tuberculosis patients.

Information regarding the demonstrations, classes, etc., given at the dispensaries.

Little Mothers' Leagues.

Number of classes given during the year	285
Number of groups	87
Number of girls who were granted their diplomas	280

Personal hygiene classes to under weight school children.

Number of classes held during the year.....	66
Number of groups.....	12
Number of pupils who attended the classes.....	386

Classes to the patients of the prenatal clinics.

Number of classes given during the year.....	321
Number of pupils.....	1,482

Dietetics demonstrations.

Number of demonstrations given during the year.....	174
Number of pupils.....	604