

# REPORT OF THE MUNICIPAL HEALTH UNITS FOR THE FISCAL YEAR ENDING JUNE 30, 1927

## Part II

### CONTROL OF COMMUNICABLE DISEASES

Prior to the organization of the municipal health unit the reporting of communicable diseases occurring in Río Piedras was defective, as it is in most towns in Porto Rico. In order to bring about effective control measures it was first necessary to improve the reporting of cases. This was undertaken through personal contact with the physicians and a study of their complaints in regard to the system then in use. An effort was made to make reporting as easy and as convenient as possible for the physicians and there was a steady improvement in the co-operation of the physicians throughout the year. Effective assistance in locating cases of communicable diseases was rendered by the school teachers.

#### Laboratory Work on Communicable Diseases.

Included in the equipment of the unit was a laboratory in which the simpler diagnostic operations could be performed. Fecal specimens were examined for intestinal parasites, direct smears were examined for diphtheria, a few blood smears were examined for malaria and many diphtheria cultures were grown in this laboratory. As a routine, however, specimens were sent to other laboratories for procedures involving more complicated technique or specialized equipment. The laboratory service was an important assistance which was rendered to the medical profession of Río Piedras during the year and the extent to which it was used may be judged from the statistical portion of the report.

#### Isolation and Quarantine.

The regulations of the Department of Health regarding the isolation of cases of communicable disease were put into effect from the establishment of the unit. An epidemiological study was made of every case of the more important diseases. Cases are visited in their homes to enforce measures of isolation and to give instructions for the safety of other members of the households. In diphtheria two negative cultures were required before the patient was released and this regulation was strictly enforced.



Epidemiological investigation and the systematic examination of contacts led to the discovery of sixty-two diphtheria carriers of which sixty-one were treated. A contaminated water supply was also found which appeared to have been the source of infection for two cases of typhoid fever in the force of laborers employed in the construction of the new penitentiary. The water supply was closed and no new cases developed.

The occurrence of seventy-two cases of diphtheria in the nine months for which this report was made is probably the most astonishing observation recorded by the unit. There were two deaths, one of which was in a case of the laryngeal type. A total of three cases of severe laryngeal diphtheria was seen. One recovered and the third was a fatal case who lived outside the municipality. The case fatality rate during the current year was less than three per cent, but even this is higher than is usually believed to prevail for this disease in the tropics. This mortality occurred in spite of effective efforts to see that due publicity was given to the presence of the disease and that physicians should be consulted early. Besides isolation and exclusion of contacts from school, diphtheria was combated with free antitoxin to the poor, prophylactic antitoxin to young children, and a systematic toxin-antitoxin campaign in April and May. All of the information accumulated tends to show the prevalence of diphtheria indicated by this report and the virulence of the infection is a condition which has existed for a long time and is not a new development.

#### **Specific Prophylaxis and Treatment.**

The diseases against which the most extensive specific prophylactic measures were directed were: diphtheria, smallpox, uncinariasis and scabies. The toxin-antitoxin campaign for immunization against diphtheria was conducted in the schools but included many children of pre-school age. Two thousand six hundred and forty-nine children received three injections of toxin-antitoxin. In addition to these, one hundred and fifty-six school children over ten years of age showed immunity to the disease when tested by the Schick test. Two hundred and two children of the same groups showed positive Schick tests and received toxin-antitoxin. Children of ten years and under were given toxin-antitoxin without preliminary Schick test.

Vigorous specific measures against smallpox were undertaken by enforcement of the vaccination law in the schools. Under this plan 6,445 vaccinations had been performed before the end of the fiscal year. The campaign will continue until every child in the schools is vaccinated.



Uncinariasis was attacked by treatment, by enforcement of latrine construction, and by the reduction of soil pollution through educational measures. Nine hundred and ninety-one school children were given treatment for this condition. Four hundred and forty-four of these were found negative after the first treatment and four hundred and nineteen received a second treatment. No reexaminations were made after the second treatment. Public lectures and demonstrations were held to teach the danger of soil pollution and the rural school teachers received special instruction in an institute conducted in Río Piedras in November.

Latrine construction was efficiently carried on in the municipality during the year by the Bureau of Rural Sanitation of the Department of Health. In the beginning of the year there were few latrines at the homes of the peasants, but at the end of the year it was estimated that more than half of these homes had been supplied with a substantial structure.

Scabies was attacked with specific measures because it was found that in a few rural schools the proportion of children suffering from this condition was high. It was believed that it might act as a definite handicap to education and it could not be handled by simple exclusion from school. The children of each school were treated in a group by the nurse or physician and each was given sufficient sulphur ointment for one application at home. Instructions in regard to bathing and disinfection of clothing were also given. There was a high percentage of cures following this simple method.

#### **Tuberculosis Control.**

Facilities for the care of the tuberculous are limited in the municipality of Río Piedras and little could be done by the unit beyond the location of cases, examination of contacts for early diagnosis, and giving prophylactic advice. A clinic was conducted at the headquarters of the unit with the co-operation of the Insular Tuberculosis Sanatorium. This institution supplied a physician for diagnostic work in the clinic while the unit supplied quarters, nurse, and clerical assistance. During the nine months 383 consultations were held at the dispensary and forty positive cases were found. At the end of the year 156 cases were still under observation. The nurses made 489 visits to homes in connection with the follow-up work of this dispensary. The work of the dispensary and the improvement in case reporting generally has resulted in a decided advance in the knowledge of the location of cases of tuberculosis in the municipality but even yet the number of cases known is not in proportion to the high



death rate from this cause which is usually reported from Río Piedras.

The unit co-operated with the Río Piedras League for the Prevention of Tuberculosis in Children in their efforts to raise money for a preventorium for non-tuberculosis children from infected households. The league was granted the use of the quarters and personnel of the unit in conducting its financial campaign. More than \$2,000 was raised but further efforts will be necessary before a sufficient amount is on hand for the building to be constructed.

#### **Venereal-Disease Control.**

No definite program of venereal disease control has been undertaken. Such work as has been done has been incidental to work in other lines. Forty-six cases of venereal diseases were diagnosed among four hundred and forty-one persons who were examined for this purpose.

#### **Maternal and Child Hygiene.**

During the last three months of the fiscal year clinics for the care of expectant mothers, infants, and pre-school children were established. The purpose of these clinics was instruction of mothers in the care of themselves and their children and the early recognition of pathological conditions. Such conditions when recognized were referred to physicians of the town for treatment. Home visits were made by the nurses of the unit for the purpose of following up the instructions given in the clinics and assisting the mothers to carry them out in their homes.

#### **School Medical Inspection.**

Among the duties assumed by the Health Unit of Río Piedras was the examination of more than four thousand school children with the correction of the defects found. This effort was practically without precedent. The school children of Río Piedras had never been examined and such examinations as had been made in other parts of the Island had rarely been followed by any adequate efforts at correction. It was recognized that the task was too large to be completed by the available personnel in a single year so it was decided that efforts should be concentrated on the first four grades of the school and that the program of correction for the year should include only those which are causing the most severe handicap in the progress of the child. It was soon recognized that the most important of these was uncinariasis and that another urgent need was dental work.



During the nine months of operation of the unit 1,358 school children received complete physical examinations. The most common defects in the order of their frequency were as follows:

Defective teeth .....	934
Intestinal parasites .....	896
Not vaccinated against smallpox.....	786
Enlarged tonsils.....	490
More than ten per cent underweight.....	456

The question of enlarged tonsils is probably not so important as the numbers indicate. In practically all cases the enlargement was so slight that operation was not indicated. Cases of mouth breathing and other evidences of obstruction of the air passages were conspicuously rare. The question of nutrition is probably more important but the records of underweight children are based on standards used for children of the continental United States and they may not hold true for the children of Porto Rico.

The treatment of the school children for uncinariasis has already been discussed. In the effort to obtain correction of dental defects the personnel of the unit conducted children to the municipal dentist daily, whenever the services of the dentist were available, but examination of the statistical portion of this report will show that the results were negligible when compared with the number of children needing correction. It appears that the facilities for dental treatment are in urgent need of reorganization; and plans are under the control of the Director of the unit although the expenses will continue to be borne by the municipality.

One defect which has been found 471 times in the 1,358 school children examined is a granular condition of the conjunctive which has not yet been differentiated from trachoma. These cases have been recorded as trachoma but no plans for the treatment of the condition have been made and children have not been excluded from the schools on account of it. There is no evidence that it causes the child any inconvenience except in the acute stage, which lasts only a few weeks. No cases of the lesions of advanced trachoma have been seen.

#### Sanitation.

Immediately before the end of the year orders were issued by which the inspectors in charge of sanitary police in the municipality would come under the order of the director of the unit on July 1, 1927, the beginning of the new fiscal year. During the year 1926-27 the unit took no part in sanitation.

**Social Service.**

It was inevitable that the unit should encounter many cases in which the efforts of the public-health nurse could be effectively supplemented by those of a social worker. In order to fill this need a social worker was assigned to the unit by the Department of Health in the month of April and she served in this position until the end of the year. There was a number of cases in which effective work was done but social work in connection with the health unit is still in its infancy and needs much further study, development, and training of suitable personnel before it can be recommended as a profitable activity for general adoption.

