

THE RURAL HEALTH DEMONSTRATION

Controlling Tuberculosis in Cattaraugus County

THE death rate from pulmonary tuberculosis in Cattaraugus County has been around 70 per 100,000 population for the past decade. While the rate in rural communities generally has steadily and continuously declined, and while the rate in the original registration states and the District of Columbia has decreased 32 per cent, the Cattaraugus County rate has shown no marked trend. The county is typically rural, relatively isolated, affected only slightly by recent immigration. The increase in population during the past five years has been approximately 5 per cent, which has influenced almost exclusively the urban centers. Dairying is the chief industry, although approximately 10,000 people are engaged in manufacturing. Ten per cent of the population are foreign born, German and Polish predominating.

As a means towards the reduction of the death rate from tuberculosis, an intensive effort has been and is being made to discover all cases of tuberculosis resident in the six health districts, into which Cattaraugus County has been divided. This work, which is being done with the assistance of the district health nurses, and under the supervision of the Director of the Bureau of Tuberculosis of the County Board of Health, is carried on chiefly through the diagnostic clinics located in the district health stations. Each of these stations is open at all times, and each has been equipped with adequate clinical facilities, including X-ray appliances. It is estimated that a minimum of approximately 15,000 examinations will be made in these clinics during the period of intensive demonstration.

Attendance at the regular clinics, which at present averages ten full days monthly, is constantly increasing. In addition to a general medical examination, a chest examination is made, the results of which are reported to the physician attending the patient. Stress is placed on the value of yearly physical examinations. Clinical examination as a method of finding new cases, is supplemented by consultation service with private physicians, and by school medical examinations. Increased demands for the development of a consultation service resulted in a recent authorization of the appointment of an Assistant Director of the Tuberculosis Bureau to assist in this work.

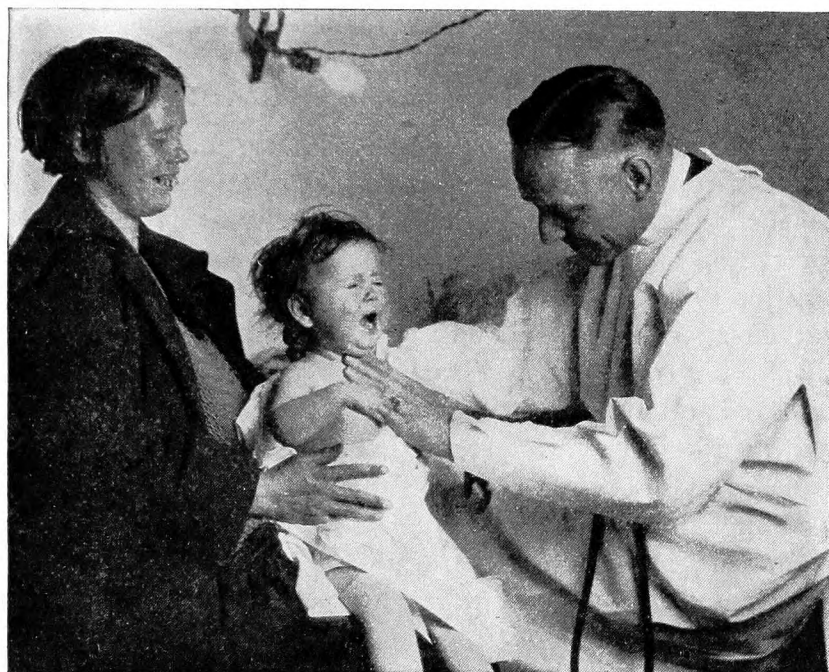
To December 1, 1924, a total of 3,156 examinations for tuberculosis had been made at the clinics. Of these, 2,645 were made during eleven months in 1924. A total of 2,636 persons were examined, 2,152 of them in the latter period. There has been a corresponding increase in the finding of active tuberculosis cases, with the result that 270 were reported to the New York State Department of Health during the first eleven months of 1924, as against 108 in 1923, and 25 in 1922.

It has been estimated that 1,800, or 15 per cent, of the total number of school children in Cattaraugus County between the ages of five and fourteen should receive careful, and in many instances repeated, examinations. These constitute (a) children who are 10 per cent or more below the accepted standard of weight for age; (b) those who are known to have been exposed to tuberculosis in their homes; and (c) those whose physical condition is below par and considered unsatisfactory by the family physician or teacher.

It is estimated that approximately 150, or 8 per cent, of these children will, upon thorough examination, be found tuberculous. To December 1, 1924, fifty had already been found to be suffering from tuberculosis and had been placed

in the County Sanatorium or under medical control and nursing supervision in their homes.

Excluding the cases undergoing treatment at the sana-



Persons of all ages come and are brought to the diagnostic clinics held in the six district health stations. Each patient is given a chest examination.

torium, there were on November first, approximately 300 cases in the county under the supervision of the nursing service of the demonstration, about 25 per cent of them active. During the year ended October 31, 1924, a total of 1,350 visits out of 1,800 were made to active tuberculous patients by the nursing staff, which in addition to a supervising nurse and an assistant assigned especially to do tuberculosis work, numbers thirteen field nurses. There is also a supervisor of school nursing work. The program of treatment for tuberculosis includes the home visiting by the

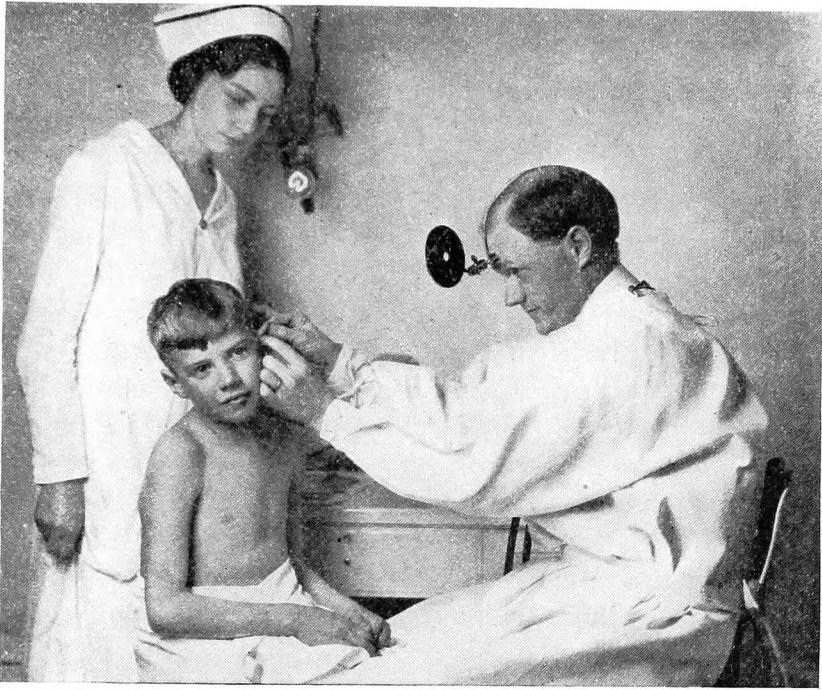
nurses of those cases requiring it, the spreading of information about the disease to their families, and a complete follow-up service for patients, suspects and contacts. This routine is based upon the sanatorium-home treatment program adopted by the American Sanatorium Association in 1921, and the standards followed cover hygiene and social conditions, medical and nursing care.

The system of supervised home care was inaugurated because of some prejudice towards sanatorium treatment and because of limited facilities for institutional care, particularly for the so-called "pre-tuberculous" group of children. In treating tuberculosis it is often not practicable to deal with a patient apart from his or her family and such action is not always advisable or necessary. A comparison of results achieved by home treatment as compared with sanatorium treatment will be an interesting study of the demonstration.

Based upon the ratio of cases to deaths, established in the Framingham demonstration (e.g., that for every death from pulmonary tuberculosis there are nine active cases of this disease), it is estimated that there are approximately 550 cases of tuberculosis in Cattaraugus County, which may be discovered by a thorough case finding campaign. It is also probable that a minimum of 400 new cases will develop during the next four years. Stress is therefore being placed upon the value of a yearly medical examination for all members of the community.

The Director of the Bureau of Tuberculosis is also Superintendent of the County Sanatorium. Prior to the beginning of the demonstration, the principle that the effectiveness of sanatoria depends upon their ability to serve the incipient case first, had been practiced at the Cattaraugus County institution only to a limited extent. In common with most rural county sanatoria, it had been utilized chiefly as a domicile for patients in advanced stages of tuberculosis. This gave rise to a general impression that such treatment

was not so effective when applied to incipient cases. In their educational work in the county, the public health nurses are attempting to correct this belief.



The close scrutiny given each child attending the diagnostic clinics includes an examination of the ear drums.

About 27 per cent of the cases now discovered are incipient. Results already accomplished indicate that by the development of adequate machinery for early diagnosis, the percentage now discovered in the average rural community of cases with tuberculosis in a stage offering the best prospects for permanent arrest, can be doubled, tripled, or in some instances even quadrupled. There is every reason to suppose that the supervision and treating of these cases will in a comparatively short time result in a marked reduction in the morbidity and mortality rates from tuberculosis in Cataugaus County.

An appropriation of \$10,000 was made recently by the County Board of Supervisors for the construction of an addition to the sanatorium for the separate accommodation and treatment of children. The present capacity of the institution is forty beds and it is expected that the minimum capacity will ultimately be increased to one bed for each annual death. The present institution has recently undergone repairs and renovation.

Applications for admission to sanatoria from any community are apparently in direct proportion to the amount of clinical and consultation work done there, and to the extent of the local popular knowledge about the results of treatment of tuberculosis. During 1922, previous to the beginning of the demonstration in Cattaraugus County, nine clinics were held in the county. The total number of patients examined was ninety-two. According to an estimate made in July, 1924, approximately three times this number are now being examined monthly. Forty patients were admitted to the County Sanatorium during the fiscal year ending in 1923, and eighty-four during the same period in 1924—an increase of 110 per cent. There were 14,294 hospital days in the latter year as compared with 12,775 in the former—an increase of 1,500 hospital days. Since the inauguration of intensive clinical work and consultation services, a waiting list has been established at the sanatorium, the annual “turnover” has been increased one-third, and a larger percentage of less advanced cases are being admitted. In addition, a number of cases have been admitted to the state sanatorium.

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Orthopedic Work in Cattaraugus County

A survey of crippled children has recently been made in Cattaraugus County. At the time the Board of Supervisors

initially considered co-operation in an intensive health demonstration in the county, Homer Folks, Secretary of the State Charities Aid Association, suggested that such an inquiry would no doubt be needed, and that provisions would need to be made for clinical treatment of the handicapped, and funds made available for relief in cases where necessary. The task of finding disabled children and of securing necessary relief funds, was undertaken by the Cattaraugus County Tuberculosis and Public Health Association. Sixty-six cases were reported during the first month of the survey, which was made by Mrs. Ella M. Finch, field secretary of the association. In making the census, valuable information was supplied by the School Medical Service and by local physicians, clergymen, nurses and others. By February 1st, 1924, 166 crippled children had been found, the majority of them boys. Of the twenty of those residing in Olean, sixteen were boys and four were girls. Of the nineteen in Salamanca, nine were boys and ten were girls. Of the 127 living elsewhere in the county, eighty were boys and forty-seven, girls.

Important information about each of the handicapped children is kept in the Association files. In addition to the name and age of the child, this includes the parents' names, information about the type, location, cause and degree of the disability, and about any medical care which has been provided. In the cases of those children treated at the orthopedic clinics, full histories together with recommendations of the surgeon, are available.

Of a total of 175 crippled children noted since the beginning of the survey, only one can be considered totally disabled. As in 48 per cent of the cases, this child's handicap resulted from infantile paralysis. Twenty per cent are charged as being due to congenital deformities; 12 per cent, to tuberculosis; 10 per cent, to accidents at birth; and 10 per cent, to injuries.

Five orthopedic clinics have been held in Cattaraugus

County during 1924, and as a result practically 60 per cent of the eighty-two children examined there for handicaps are being given treatment for their disabilities. The first clinic, attended by twenty crippled children, was held in Olean on January 31st, with Dr. Le Roy Hubbard, orthopedic surgeon of the New York State Department of Health, as clinician. The other clinics were held by Dr. Hubbard in May—twenty-three children being examined in a clinic held in Salamanca, seven at one held in Randolph, sixteen in Franklinville, and sixteen in Cattaraugus.

In accordance with the recommendations of the clinician, treatment has been carried out in the majority of cases of those children who were brought to the clinics. Miss Helena T. Mahony, of the nursing staff of the State Department of Health, with the co-operation of local physicians and nurses, assisted the field secretary of the Association in arranging for the after care of many of these patients. In one instance, treatment involved the performing of seven major operations. Where exercises were recommended, in many cases mothers and older children were instructed to aid the child. In others, the child has been taught to carry out exercises himself.

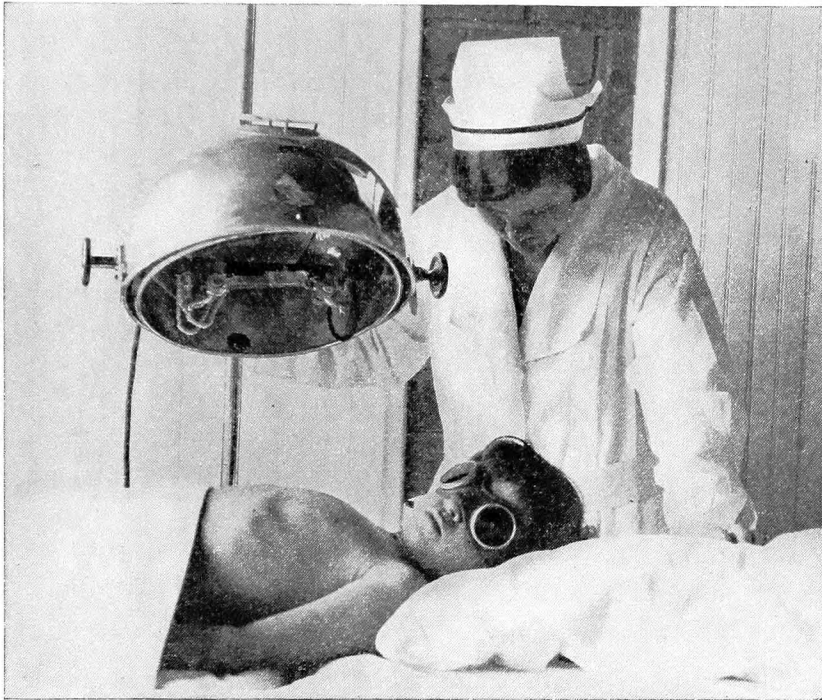
In many communities in the county, committees have been formed to assist in financing the treatment of children, whose parents are not able to afford it. Lodges and local clubs have assisted in this work, which is under the supervision of a county committee of the Association. A fund of \$4,000 has been raised from private subscription for this purpose. On the committee of the Association acting as a clearing house for the financing of treatment in indigent or temporarily indigent cases, are G. C. Carey, Wm. A. Dusenbury, Edward V. Vreeland and John Walrath.

JOHN ARMSTRONG,

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Rural County Laboratory Service

Laboratory methods and facilities for the diagnosis, treatment and control of disease have been made readily available



When admitted to the County Sanatorium, this little girl of seven was suffering from serious tuberculous infection in both lungs and in the glands of the neck. With the aid of the modern facilities afforded at the Sanatorium, she is being treated with remarkable success.

to local physicians in Cattaraugus County, including members of the demonstration staff, by the development there of the County Diagnostic Laboratory at Olean. Formerly it was necessary to depend largely upon the New York State laboratory at Albany for many of the services now afforded by the county laboratory. The existence there of an adequately equipped laboratory has made possible more rapid diagnosis, earlier treatment, and therefore better local facilities for the control of communicable diseases.

The Diagnostic Laboratory is prepared to make practically all of the established routine examinations used in public health work. In addition, it offers to the county a so-called clinical laboratory service, acting as a depot for the distribution of the various serums and vaccines used in the prevention and treatment of disease. Through seven sub-stations located in different sections of the county, it makes these valuable agents readily accessible to physicians in the county. The services of the Director of the laboratory are also available to physicians in obtaining specimens and for consultation.

By mail, the laboratory offers to the rural physician remote from Olean the same service afforded those near at hand. Through its sub-stations, as well as from the laboratory itself, it supplies complete outfits for the taking and mailing of specimens for examination. While the time interval in the receipt of specimens may be longer, once examination has been made, the doctor is able to learn the result immediately by telephone. The mailing outfits are so made and sealed that there is practically no danger of breakage or leakage.

That the laboratory is being used more and more is evidenced by the increase in its mail service. During the first ten months of 1924, a total of 4,149 mailing outfits have been supplied to physicians by the laboratory. At the same time, 1,087 packages of serums and vaccines have been distributed. A total of 4,344 examinations have been made at the laboratory during this period.

Prior to May 1, 1923, the laboratory was maintained by the Board of Health of the City of Olean, having been established by that body principally for the bacteriological and chemical examination of milk, and subsequently equipped to serve the community as a diagnostic laboratory, offering its services gratis to physicians outside of Olean. One of the first steps urged by Dr. Leverett D. Bristol upon his ap-

pointment by the newly created Board of Health as County Health Officer and as Director of the Cattaraugus County Health Demonstration was the establishment of a laboratory



Complete mailing outfits supplied by the Cattaraugus County Diagnostic Laboratory enable physicians in remote parts of the county to avail themselves of modern laboratory facilities in arriving at correct diagnoses.

which would give county wide service. The city authorities co-operating, this resulted in the re-establishment by the county health board of the existing laboratory in Olean as the Diagnostic Laboratory of Cattaraugus County, on the above date. Additional quarters were provided in the City Hall at Olean, together with necessary additional equipment. The director of the city laboratory continued in charge, being employed on a full time basis and provided with an assistant.

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