

to the fact that the bedrock of the tuberculosis problem is economic. Neither the one who has acquired full time working ability, nor the part-time worker is fit physically to take his place in the labor market alongside healthy workers. If such effort is continued for any length of time, the inevitable tragedy of a relapse is the result. Those suffering from tuberculosis, even when the disease is quiescent, are happier and do better among their own kind. To be surrounded by restless activities of well people who usually shun the unwell is exciting and tantalizing to the delicate psychic make-up of the average tuberculous individual. Idleness, pauperism and institutionalism can be traced to these economic factors. A plea is made for a concerted national effort to establish tuberculosis industrial settlements in proven health centres to which the patient, while yet in the sanatorium, may look as his final haven of refuge where he can live with his family after the trying and tedious months or years of "curing" are over. The subsidy which such settlements would require would be far less in amount than what is now expended to maintain the numerous idling ex-patients who have full or part time working ability together with their families. The establishment of such settlements would eliminate the worry and anxiety which retards recovery; it would restore thousands to a useful life which at present is but a mere phantom; it would minimize the dangers of relapse which is now swelling the records of invalidism and death; it would for once give a satisfactory answer to the eternal question: After the Sanatorium, What? Finally, it would create a more sympathetic feeling among the patients for the public, for they would come to realize that society has at last awakened to their needs, and embarked upon an effort which will make the task of rehabilitation complete and permanent.

#### References

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On motion made, seconded and carried in regular form, it was voted to have the paper of Mr. Hochhauser immediately.

CHAIRMAN LEVY: We now have the pleasure of hearing the next paper, "The Altro Work Shops for the Tuberculous," by Mr. Edward Hochhauser, Ex-Director, Committee for the Care of the Jewish Tuberculous, New York City.

Mr. Hochhauser read his paper.

### THE ALTRO WORK SHOPS FOR THE TUBERCULOUS

BY EDWARD HOCHHAUSER

Although social workers are interested primarily in the prevention of tuberculosis and hope the decrease in the incidence and deaths from this disease may continue as they have during the last ten years, for a long time we will have the problem of productive work as well as the reduction of the large percentage of relapses.

As we have no panaceas in sanatoria treatment, we have no panaceas in after sanatoria treatment.

Any experience that tends to reduce relapses, that helps patients toward partial or complete self-support may be suggestive.

Speaking in the city of Denver, a non-resident must be

careful in discussing tuberculosis. Miss Elizabeth Cromwell, who organized and developed the Association of Tuberculosis Clinics in New York, said a number of years ago, "I wish I knew as much about tuberculosis now as I thought I did my first year in the work."

We have been told tuberculosis is a social disease with many contributing causes, the economic cause of great importance; that it is an insidious wasting disease, a long time developing and a longer time curing. In the rehabilitation of the tuberculous, we have to treat the patient economically or socially as well as medically and take the long distance point of view, lest we become impatient or discouraged and fail to give him a fair deal. In tuberculosis, as with many chronic diseases, we do not see the treatment through with the result that much work is not carried to fruition. Many years ago in an appeal circular we asked: "Would you lead a blind man half way across Broadway and then leave him to care for himself the rest of the way?" "Would you help the tuberculous with sanatorium treatment half way across the road to restored health and economic usefulness and then let him go the rest of the way as best he can?"

A number of studies of what happened to patients after sanatorium treatment were made between 1910 and 1913 including one, which led to the formation of the Committee for the Care of the Jewish Tuberculous. These studies showed that approximately 50% of the patients discharged as improved, quiescent or better, were worse or dead within six months to two years after they left the sanatorium.

Placement work for the handicapped, has for many years been carried on with varying success in a number of cities. Employment Bureaus for the tuberculous in some cities report a large number of successful placements. In New York City, the New York Tuberculosis Committee is completing a three year experiment which they probably will discontinue. They have found placing tuberculous patients very costly and as many of us have experienced, the most successful placements are those who place themselves. They found that a large percentage of the patients who applied for work, were not equal to a normal day in industry or their working capacity was very uncertain. When we remember it takes many years before the successful case may be called

apparently cured and that the average stay at a sanatorium is considerably less than one year, we appreciate the great gap between sanatorium care and a full day job. This was brought home to us in 1913 when the Committee was organized, frankly as an experiment to determine whether the tremendous waste due to relapses could be materially reduced.

Most of the patients after sanatorium treatment examined by a specialist in tuberculosis, were found able to work but part time. We were impressed with the fact that even the two or three hours prescribed was in the nature of an experiment subject to change on each examination. At that time phthisiophobia, the exaggerated fear of tuberculosis, was the rule, today it is more the exception. Patients who admitted sanatorium experience had difficulty in securing a job even though they were able and willing to work. The light job, usually light in pay, was hard to get and often unsuitable. After many unsuccessful attempts to secure part time work, the Committee realized that if the doctor was to be the boss as far as hours of work were concerned, they must start a factory of their own.

There were two propositions submitted and discussed. One was an industrial or farm colony removed from the city. It was felt that this experiment would be very costly, the patients would have to be very carefully selected and it would not help in the solution of the problem of our urban group. It meant moving the entire family, depriving the children of the associations and the opportunities for study and advancement which the large city affords. The other proposition was that a factory be started in New York, the patient to live at home and that his family maintain all their normal relationship. Where necessary the family could be moved to a better apartment, always keeping in mind that the home must be the type the family can afford when the patient is rehabilitated.

A study of the occupations of patients passing through Bedford, Montefiore's large tuberculosis sanatorium at Bedford Hills, N. Y., indicated that nearly half of the patients had been engaged at some branch of the needle trade. In New York City there was the possibility of earning a living wage in sanitary commercial factories after graduating from a needle factory. The patient who did not know this

work would require but a short training period. This was important as they were impatient to earn. Any scheme of after sanatoria treatment without wages would not secure the full cooperation of the patient.

It was decided to take only negative sputum patients. This would mean a somewhat selected group, and minimize the difficulty of securing work during the trial period. Contract work was secured, the manufacturer supplying the cut materials and we the labor. This required no investment in raw materials or made up stock; in fact for the first year the sewing machines were rented.

Ours was a scheme for industrial convalescence, not occupational therapy.

The surroundings and conditions of work should be similar to those the patient might find in a well housed commercial factory. We did not anticipate difficulty in securing a loft for our workshop. We believed that we should be honest with our landlord, tell him of our plans and explain why we were not a menace to other tenants or to the people in the neighborhood. We had many opportunities to explain. One experience was with a piano manufacturer, who had a top floor to rent. It was a desirable loft and we could use the roof during rest periods. In going through the piano factory, particularly the finishing room, we found heavy offensive odors with no ventilating appliances. The owner had urged as a desirable feature that we would not come in contact with his employees. After agreeing on rental we told him of the purpose of our factory. He refused to rent us the loft. He could not chance his employees becoming infected. We offered to make a medical examination of his approximately 100 employees with the understanding that if we did not find venereal disease or tuberculosis without any precautions on his part, we would pay double rent, if we found these diseases, he would rent us his property on the terms he had proposed. We were compelled to list our piano manufacturer as one of the uneducated public.

The eastern part of Bronx Borough in New York City was found desirable. There were many new law tenements and patients who might continue to live in the lower part of Manhattan would be riding against traffic instead of with the crowds.

In 1914 when the factory was opened, rents in the Bronx were reasonable and most of the workers were moved within walking distance or a short car ride.

The factory was started on the top floor of a two story tax payer, extra windows being broken through on the south side and a tent arrangement put up on the roof making it available for rest periods most of the year. In 1914 and ever since then, we have had to overcome the prejudices of the patients, nurses and social workers to indoor work. A successful manufacturer was sure that tuberculous patients who had warmed steamer chairs for many months, those families were dependent upon charitable assistance, could not turn out high grade salable merchandise. But the group of men and women who made up the Committee associated with the United Hebrew Charities, Montefiore Hospital and Free Synagogue, had seen the waste of lack of care and were willing to invest the necessary money in an experiment, watching the patients very carefully so as to reduce to a minimum the dangers of breakdown. Some of the leading specialists in tuberculosis who were skeptical at first are now interested advocates of the workshop idea.

We realized that the patient might look upon the whole plan with suspicion. In the scheme of subsidizing wages this was recognized, so that the patient found that it paid to work and earn. It was decided to pay on the task basis and never less than the Union wage for similar work. Very few, if any commercial factories making the garments we do, pay as high a wage. Our patients do not produce more than one-quarter to two-thirds the quantity a well worker might produce in the same hours. The patient is working hard, for during the first year after sanatorium treatment, it requires greater effort to turn out half his normal capacity.

Every patient is examined before admission to determine whether he is in need of graduated work, the hours he may work as well as the extent of the disease and general physical condition. At each examination, the doctor notes on patient's chart hours of work and when he is to return for re-examination; usually once in two weeks in the beginning, then once a month and later every two or three months. The nurse at the factory provides the medication and sees that patients do not work more than the hours prescribed. She may order the patient in for reexamination earlier than

requested by the doctor, supervises the rest periods, the luncheons and extra nourishment. Her real job is to know each patient, whom to wheedle and whom to threaten. To treat the patient mentally is as important as treating him medically. Not only the patient, but the whole family, is under medical and social supervision and care. This includes dental treatment, for it is recognized that a healthy mouth is fundamental to good health. As has been demonstrated many times, the welfare of the members of the family has a very definite effect upon the patient's condition.

The National Tuberculosis Association made an intensive study of the first nine years, examining the medical records of the workers of the families as well as the patients. They found 1097 contacts received 5776 examinations or  $5\frac{1}{4}$  per contact. Dr. Shields wrote "The investigators consider that the Committee for the Care of the Jewish Tuberculous have been and are doing a very instructive and commendable piece of public health work as regards the frequency and carefulness of the physical examination given both to the patients themselves as to the contact cases."

As part of the social care, the family is assured the necessary minimum income. Where relatives are not in a position to assist, the patient receives his necessary minimum. This minimum is made up of cash representing earnings and a personal check for the subsidy. The patient is said to be proving out, if in the course of time his hours of work increase, which means improvement medically and the cash increases while the amount of the check decreases indicating improvement in effort. As he becomes proficient and his earnings increase, he is allowed more than the minimum which gives him some margin of choice and encourages him to earn more. Very early in our experience one of the patients considered a "schnorer," was overheard saying to another patient: "What is the use of working, you get your allowance anyhow." When he found that his allowance was greater as he earned more, he responded; his subsidy was gradually reduced and before it was discontinued the man volunteered that he now was able to pay his own rent. In this family the wife found to be tuberculous was treated at home and is considered apparently cured. A daughter who had been committed to an institution for wayward girls, through our nurse was found to be suffering from a gynecological condition which caused all her disturbances. She was discharged to our care, successful treatment secured and has since married and is the mother of a child.

Will Irwin, who wrote a popular story on the workshop, was particularly interested in our time clock, which we use to see that patients do not work too long. On each time card is noted the hours prescribed so that the nurse or factory foreman can tell at a glance if the patient should be at rest. With very few exceptions the time control is sufficient. The patients are much concerned with their health and are not apt to overwork. We had one man who indicated the importance of knowing each patient. His hours had been slowly increased to six hours when due to a cold the doctor ordered a reduction to four hours. He was found trying to do as much in four hours as he had previously in six. It was necessary to give him a quantitative limitation, two-thirds of the work he had formerly done.

Patients belong to us for the full work day, although those living some distance from the factory and working part time, are permitted to report between 9 and 10 o'clock. Those working five hours or less have a two hour rest period after luncheon. All work half their prescribed hours mornings and the other half during the afternoon.

It may not be efficient management to permit a man working but four hours a day exclusive use of a machine, but the welfare of the patient comes first. As his hours of work are increased, it is very important psychologically that his machine be available at the time he is able to work. The factory is run on a five day week.

A good nourishing luncheon is served at cost (18c to 25c) and morning and afternoon milk or milk and egg as desired or prescribed by the physician. Nearly all our patients are Jews, many observing the dietary laws. We do not serve meats allaying all suspicions and doing away with the need of double service. The Italians have been the only non-Jews referred to work. This is due to the fact that many are engaged in the needle trade.

During the war we found more than half of the patients leaving or discharged from the sanatorium had positive sputa. We presented to our Board the need of providing graduated work for positive sputum patients. The Board felt that a more ideal factory than the one we had should

be provided for these open cases of tuberculosis, and consideration was temporarily postponed. Shortly after this, one of the disgruntled patients, discharged after striking a fellow worker, sent a complaint to Washington and the Navy Yard in Brooklyn, as we were making sailors' blouses, stating at great length that we were a menace and a danger to the men who had offered their lives in service to their country. A young petty officer from the Brooklyn Navy Yard came to investigate and asked whether it was true that we employed tuberculous patients. We admitted we did, but pointed out that our patients had negative sputum, all were under medical supervision, that we knew they were not suffering from venereal or any other communicable diseases, and that we did not permit anyone to work in whose home there were cases of infantile paralysis. We asked if he knew of any other factories doing government work who could say as much. He realized that ours was the safest factory and then for the first time did the Navy Department know that we were not a commercial concern. We were also visited by a Captain from the Public Health Service who told the nurse he had a serious criticism to make. We were denying admittance to positive sputum patients compelling them to go elsewhere, working more than their strength permitted and observing no precautions. As we had accepted the responsibility of conducting a workshop for the tuberculous we should admit the positive sputum patients and treat their work as we did that of the negative sputum patients. This criticism prompted our Board to start an annex for positive sputum patients which was later merged with the main factory so that today no one but the nurse knows who is negative and who is positive. In our dining room as in our factory everything is sterilized and is absolutely safe. It was not until two years ago, while in Washington discussing this experience with the Assistant to the Surgeon General of the United States Public Health Service, (Dr. Smith), that we learned that he was the Captain who had made this criticism and suggestion.

Among our positive sputum patients we have had some of our most constructive cases, social as well as medical. Instead of being at a hospital, they have been at work, happier, in many instances their condition better, and par-

tially or completely self-supporting. One interesting patient, Bernard, had chased the cure for many years before the charities referred him for work. He had tried the city sanatorium at Otisville and private sanatorium at Bedford Hills, but he made no gain, he could not adjust himself to institutional life. Our doctor was loath to permit the patient to work even two hours a day. He was an advanced case and the doctor wrote "prognosis poor." He considered the chances of rehabilitation very doubtful. His hours of work were increased slowly with occasionally a week or two of absolute rest, until in the third year he was working up to seven hours a day. It is now seven years since Bernard entered the workshop, his family dependent upon charitable aid for many years, has been self-supporting for more than two years. An X-ray of his chest would show that a considerable part of his lung had been affected but the disease process is arrested.

Since December 1924 we are in our new workshop. It is the only factory of its kind, of reenforced concrete, practically all glass and open on four sides. It faces three streets, South, East and West and we own fifty feet to the North. The factory equipment, modern throughout, contains some unique and interesting features. The sewing machines have individual motors with a novel tunnel system so that the completed work feeds into boxes improving the appearance of the workshop and reducing the danger of oil stains. Special adjustable posture chairs hit the right spot in the back. Wind brakes permit ventilation without drafts. A clothes dryer with change of clothing, including socks, stockings and slippers minimize the danger of colds due to wet clothes. Tub baths for women and showers for men are provided, for as we have put it, the management of the factory is interested in the cleanliness of its workers as well as the cleanliness of its garments. There is a nurse's office and emergency room, a well equipped kitchen and dining room, indoor rest rooms for men and women and a large part of the roof for outdoor rest room. A very interesting pressing arrangement is in use which sterilizes and adds to the attractiveness of the garments. A special boiler generates steam which goes through asbestos covered pipes and rubber hose to a steam jacketed electric iron which superheats the steam and ejects it through fine perforations in the bottom of the iron.

Under the contract scheme which prevailed at first, the prices we secured were barely sufficient to pay the labor costs, so that we had nothing left for factory overhead. This meant large deficits.

During the war we made over a half million blouses for the U. S. Navy and earned the commendation of the officers in charge because of our high standards of work. Although we paid the highest wages, our earnings were sufficient to pay for new machinery and cover the deficit of the first year after the war. This experience indicated that what might be the profits of the commercial manufacturer would help meet our deficits. After considerable deliberation it was determined to organize a selling force and manufacture and sell garments for hospitals and children's institutions. This was in line with the work we had been doing and we believed that because of our work, we might secure a sympathetic hearing from these institutions. We have had all the difficulties of selling a quality product that a commercial concern might experience. While many institutions give us consideration and even preference, the majority are interested in price only. Through mail order campaign and personal solicitation, we have been trying to build up a demand for our product not on a sentimental, but on a value basis. We have coined the trade mark "STERIGARM" for commercially speaking ours is a sterilized garment, in that our method of pressing actually sterilizes and everyone who handles the garments from the pressing department through the shipping department is free from any disease.

Ours is probably the only workshop which has a letter from the Dept. of Health stating that our method of pressing seems to destroy live tubercle bacilli. When one takes into account the ideal sanitary control, there is no danger of infection even without this special sterilizing process. The slogan at the workshop is "you can't make it too good." Even an inexpensive hospital bed gown is made well, for the patient is taught that he must acquire skill and do good work, for as he acquires skill he can depend less on speed. The therapeutic value of productive work cannot be overstated. The output of the workshop is sold on value to hospitals, institutions, nurses, hotels and laymen.

The factory is conducted under the style name, Altro

Work Shops, Inc., (Altro) a play on its altruistic purpose. This is done for business reasons, but more to safeguard the self-respect of the patient. Visitors are always welcome at the factory, but every effort is made to protect the workers from the curious; they are not on display.

Sanatorium experience has tried the morale of the patient. To reawaken his self-respect he is treated as a sick man trying to get well and not as a dependent whose desire to work is being tested. He is paid wages for work performed and in turn he pays for his luncheons even though his earnings must be subsidized.

In the invitation to the dedication of the new factory, we said:

"The business of this unusual manufacturing enterprise is that of giving the convalescent tuberculous paid employment, and of allowing them to do only the amount of work per day for which they are fitted. A time clock and a trained nurse see to that. The balance of their time they give to development of hope in their own hearts and health in their own bodies. This turns invalids into men and men can compete in the open market, just as the wearing apparel, made by them during their working hours, competes in the open market, on a quality basis."