THE ECONOMIC POSITION OF THE TUBERCULOUS PATIENT.
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Probably no branch of medicine is so intertwined with the subjects of sanitation and hygiene as is tuberculosis. Violation of hygienic laws on the part of our ancestors has spread the tuberculous infection until now it is practically universal. Violation of hygienic laws by the individual to-day reduces resistance to the infection and renders him a victim to the disease.

By the strict enforcing of hygienic laws we attempt to cure the infected case, and by education in sanitation and hygiene we hope to check the future ravages of the disease. From first to last, therefore, the fight for hygiene and sanitation is the fight against tuberculosis.

The campaign against tuberculosis is a modern one and is yet in the developmental stage. Some facts have been proved and some positions in the fight have been won. Other facts are still unproved and other positions that we hope to win are still in the hands of the enemy. That differences of opinion have arisen between leaders in the campaign is but natural, for no campaign has ever been conducted without mistakes and no leader has ever been free from criticism. That too much importance has been given to these differences of opinion is regrettable, for it is through them that different plans are being tried out and that the perfect plan will ultimately be discovered. At the present time three methods of attack have been developed which have been generally approved and which are being carried out with considerable energy. These are:

First.—The protection of the uninfected by public education, hygiene, improved housing conditions, improved working conditions, etc.

Second.—The dispensary for the diagnosis of the disease in the infected and their education, care and supervision while remaining in their homes.

Third.—The sanatorium for the isolation, education and treatment of patients whom it is advisable and possible to remove from their homes.

Beyond these three general methods of attack are many others, perhaps good, but as yet still experimental and therefore not generally approved or adopted. That something more is needed is unquestioned. We are attempting to care for the uninfected, for the infected when sick in their homes, and for the infected when isolated in our sanatoria. But our infected are not
always sick, nor under present economic conditions can they always be kept idle or isolated from the uninfected. We cannot in Pennsylvania today isolate 100,000 tuberculous persons, nor under the present economic conditions could we keep that number of persons idle, non-productive and dependent for any length of time. Many of our tuberculous must be wage earners through a considerable portion of their disease. It appears, therefore, that the weakest point in our present campaign against tuberculosis is that we are not paying sufficient attention to the tuberculous wage earner. We are making little effort to rearrange economic conditions or to re-educate our tuberculous so that the partially crippled can earn a part or all of their livelihood without endangering themselves or others. Our campaign must be extended to satisfy these conditions:

First.—The education of the public and of the tuberculous patients so that the tuberculous who are able to work under present economic conditions without injury to themselves, will be allowed to work. Further, that they will be allowed to work in such a way that they will not injure others.

Second.—The re-education of our convalescent patients along lines of work suitable for them, so that the partially crippled, without injury to health, can become entirely or in part self-supporting. I do not know whether you as physicians have ever had impressed on you the injustice of the public toward the tuberculous wage earner—the injustice of unreasoning fear. For years we have been teaching the public caution, and it has learned terror. We have taught sanitary restraint and it has learned persecution. Our educational work is by no means complete. I am going to tell you the story of the man who first impressed this point on me. The patient in question presented himself at the dispensary after an absence of several weeks. Knowing he had been working, I asked him: "Are you using your napkins and sputum cup while at work in the factory?" "No, doctor, I am not." "Why not?" "Because I must work or my family will starve."

This man was intelligent, honest, and in no way depraved. He had been at the State Sanatorium for six months. His sputum was still positive, and he knew it. He could protect others from infection and he knew how to do it. As far as tuberculosis was concerned he was an educated man; as far as morals were concerned, he was a moral man; but he flatly refused to take the necessary precautions to protect others from infection. Something here was radically wrong. This man was in excellent physical condition and he knew how to care for himself but had been warned that his sputum contained tubercle bacilli. He had gone to work and was proving himself able to work. He had now but slight cough and little expectoration. Soon he discovered that on the street car on his way to work he was an object of fear to his fellow passengers. When he coughed the man in the seat beside him got up and stood in the aisle; those standing near crowded to the far end of the car. Others in the car coughed more than he, others expectorated more. Why was he alone dreaded and shunned? Soon he discovered it was not the cough that was dreaded but the paper napkin, not the sputum but the sanitary sputum
box. The others coughed but were unnoticed, for they held no protecting napkin before the face. The others expectorated but were unfeared, for they expectorated out of the window or on the floor.

In a few days he received notice from the shop foreman that he was no longer needed. "Is not my work good?" "Yes." "What then is wrong?" "We can't have consumptives here." The man at the bench beside him coughed more than he and expectorated oftener than he, but that man coughed freely into the air and expectorated on the floor or into the filthy cuspidor. He was unnoticed and unfeared. Again it was the napkin and the sanitary sputum box! Not yet discouraged he secured a second position. This time his fellow employees, some of them coughing and expectorating more than he, protested and refused to work beside a man using a sputum box! The lesson was now complete. Work he must, cough he must, but protect others he would not. This is the story of a man who honestly tried to protect others and failed through no fault of his own—a man who is now a menace to his fellow workers because they would not allow him to protect them. His story emphasizes the first point in our campaign for the proper economic position of the working tuberculous patient—the education of the public so that tuberculous patients who are able to work will be allowed to work in such a way that they will not injure others. The development of phthisiophobia on the part of the public has been but natural; it now becomes the physician's duty to temper unreasoning fear with reason and thus to prevent the injustice now being done the tuberculous worker, and in a large measure neutralizing our efforts to render him a safe citizen.

The solution of the second point in our larger campaign is not so simple—the re-education of our tuberculous patients along lines of work suitable for them, and the reorganizing of suitable lines of industry to give employment to those partially crippled. When it comes to teaching we can all add our little and the total is much, but when it is a matter of industrial education and organization there are few Elbert Hubbards to do the work. That it must be done and will be done is undoubted, but who will do it and how it will be done is as yet unproved. The thing that we as physicians must realize in order to make the work possible is that the tuberculous patient whose disease has become cured or arrested is cured in the same sense that a man is cured who has had a toe or a leg cut off. He is cured but he is crippled. The amount of crippling varies directly with the stage of disease at the time of the cure or arrest—if incipient the crippling is slight, if far advanced the crippling is great, but always there is the crippling. The greatest misfortune to the tuberculous worker is that he looks just the same after he is crippled as he did when he was whole. Had he lost a leg he could see that he was crippled; his friends and his doctor could see that he was crippled, and by united effort economic conditions would somehow be adjusted for him to accord with his crippled condition; but when he has lost a lung he looks just as well as he did before, and neither he nor those around him realize or make allowance for the crippling. He expects to do a whole man's work in competition with whole men, and he breaks under the strain. The fault was not the fault of the sanatorium. No sanatorium claims to replace a lung that has been destroyed any more than
the surgeon replaces the leg he has cut off. The fault was that the cripple was considered a whole man and that no economic adjustments were made for him. When the fact of the permanent crippling of the tuberculous has been taught and accepted, the leaders and the money necessary for the economic reorganization for the tuberculous will be found, and the patients themselves will appreciate the necessity of re-education along suitable economic lines. To-day in Europe thousands of cripples are being manufactured, and in all the warring countries vast movements are already on foot to re-educate these cripples, and to make suitable economic adjustments to render them as far as possible self-supporting—all this because they can see that these men are crippled. At the same time vastly greater numbers of tuberculous cripples are being economically wasted or are perishing in the struggle because they do not look crippled and their handicapped condition is not realized.

DISCUSSION.

Dr. H. B. Replogle, Altoona: The laity have not been sufficiently educated to the fact that when they have a cough, this cough is apt to be a menace to their companions. You find, especially in the smaller cities, that many persons will go around for months with a cough, without thinking of having a real examination made as to the cause of this cough. A great many of these people are a menace to their fellow workers, and the public at large, because their cases are diagnosed as chronic bronchitis and various other forms of pulmonary disease that really do not exist. Later on, they are sent to a sanitarium or, as we find in my own city, they go to a sanitarium after their money has been about all spent and they have lost a great deal of valuable time that could have been used in receiving treatment. I think that we should try to educate the laity to the fact that every cough is liable to be a menace to others, and that a person having a persistent cough should have a proper examination made. If he goes to a physician and does not receive a proper examination, it is his duty to go to someone who will give it to him.

Dr. Clarence Barti-lett, Philadelphia: For ten or eleven years I have been aware of an iron-clad rule made by hotelkeepers of Pike and Monroe counties that no tuberculous patients shall be accepted as guests. Now, ninety-eight per cent, of us are or have been tuberculous; and tuberculous persons still go to the Poconos, and they spit everywhere. You do not see a sputum cup in the whole county; but these people are there just the same. I know that they are, because I have sent them there to get well, and they have got well; and other doctors have done the same thing. We are no better off in the present insane quarantine against infantile paralysis. I know of persons who have gone through an attack of infantile paralysis and have obtained certificates of good health from their own boards of health permitting them to come to Pennsylvania. There is one man who stands at the edge of the town and gets the children into a tent, so that in a short time there are quite a number of children congregated there. This is the very way to spread the disease. I went into Port Jervis with my boy, and we were given fifteen minutes to get out or be fined. When these children can sleep with each other and not transmit the disease, and our streets are allowed to go...
unsprinkled, I think it would be better if we should get up some hysteria about street cleaning.

Dr. H. W. Chaplin, Towanda: I am glad that Dr. Turnbull has called our attention to the reason why men who come from sanitariums are at such a disadvantage. There must be public education in regard to this matter, in order to prevent this phthisophobia to which he has called attention. I wish to refer to an incident that came to my notice a few weeks ago. I was sent for by a patient of mine who is a domestic. She said, "My mistress says that if I have tuberculosis, I must go; I have not yet told her that if I have not I am going to leave." This was a woman who had been a satisfactory servant for a year and a half. Her mistress fancied that she had tuberculosis, because so many of our lay people can diagnose that disease on the appearance of the person. This servant was thin and had lost weight, or had never had any to speak of. I think that if, in some manner, we can instruct the people that so long as the sputum contains free tubercle bacilli, the patient is a menace to the public; or, if possible, our tuberculosis sanitariums or our stations in the various cities under State supervision, could convince such persons much more thoroughly than they now do that they have this disease. A large percentage of them now, even though told that they have tuberculosis, do not believe it. They go to a physician, who diagnoses their condition as chronic bronchitis or some other irritation of the bronchial tubes. I think that we want to make more thorough and definite investigations of our cases, and help to instruct patients as to whether they ought to associate with others or not.

Dr. Champlin: There are a number of school teachers engaged in the "active practice of their profession who are tuberculous, and yet are protected by a certificate from a supposed physician stating that they are free from the disease. It is entirely too easy for them to get such a certificate. They put a blank form in front of the family physician or someone who does not know them, and for a paltry sum he signs his name to it. Perhaps he feels pity for the sick girl, knowing that she had been engaged as a teacher and needs the position. If we endorse such methods as that, however, we shall be criticised severely by the laity. We should not let the laity get the start of us, as they often do. We should be careful about giving certificates of good health to tuberculous teachers.

Dr. M. M. Fleagle, Hanover: Dr. Turnbull has said that education of the public is a very necessary thing. I want to say that I think that a great mistake in this respect was made in the beginning with regard to tuberculosis, just as a similar mistake is now being made with regard to infantile paralysis. A year from now the people will be just as much afraid of that disease as they now are of tuberculosis. If, as Dr. Bartlett has said, ninety-eight per cent, of us are or have been tuberculous, I want to know what becomes of those persons who are supposed to carry tubercle bacilli, and yet do not develop the disease. Just so long as we hunt bugs and educate the people to look for bugs, regardless of the constitution of the people and regardless of the soil, just that long we are going to have an unnatural fear inculcated into the minds of the people. You may have a germ (I do not deny the existence of germs); but, as you cannot grow
corn on a State road, because you have not the proper soil, so you cannot grow tubercle bacilli unless the system is in a condition to propagate them. If you educate the people to understand that even though there may be germs, and there are germs, if people take proper care of their bodies, these germs will be innocuous, I think it will go a long way towards dispelling this unnatural fear that has arisen among the people. That will be an education that will do more to prevent fear of sanitarium patients than anything else. The people must be taught that if they are up to par physically, they have nothing to fear from tuberculosis patients.

Dr. John Ege, Reading: We all know that corn will not grow in the street, but will in a garden; but how are we to know whether we are like the street or like the garden? Can we make ourselves like the garden, if we are like the street? I say, let us see that the germs do not come; and it does not matter which we are like. When my boy came home from New York, I put him for a whole week in a separate room and disinfected him. I did not know whether he had any disease or not. Until we do know whether we are gardens or roads, we should keep the roads clean. As Ehrlich says, "When you do something, do it right."

Dr. R. L. Piper, Tyrone: We all send our patients to the splendid sanitariums that we have in Pennsylvania for the special reason that there they get the best air that we have in this State. Why, then, do we not urge them to live and sleep, when at home, in the open air as much as possible? I am a fresh-air enthusiast, and when I see a house being built in my home town, I try to get the people to put a sleeping porch on it. I have been able to induce many of my friends to do this within the last five years: they have slept on these porches, with the very greatest benefit. If we would all urge our patients to breathe freely and use freely the greatest gift that they have, fresh air, we should not have so many cases of tuberculosis.

Dr. Howard Terry, Jr., Phoenixville: It is all right to urge the patients to do it; but it is one thing to urge them to do, and another to make them do it. It is one thing, also, to make the diagnosis, and another to make the patients believe the diagnosis. Dr. Ege: Years ago I made a specialty of consumption. I made the experiment of having the sputum frozen and, six months afterwards, injecting it into a rabbit, and the animal developed the disease. It had some young ones and nursed them, and afterwards died of tuberculosis. I put half the young ones in the woods and let them run, and the other half I kept shut up. Those that I kept closed up died of tuberculosis. When we keep the patients at home, there is a liability of adding to the disease. It is an easy thing to make a diagnosis of tuberculosis. There is no excuse for not diagnosing it. If it is diagnosed, we should prevent its spread by putting the people where they will not contaminate others.

Dr. J. W. Stitzel, Hollidaysburg: It is all right to advise keeping the patient away from other people; but what are you going to do if you do not do something to support him. The tubercular patient has no business to be walking around and spitting everywhere, but the economic part of the question impresses me. That is, what are you going to do with such a man? If you send
him to a sanitarium, there is no reason why he should not be earning something, unless it interferes with the rules of some of our labor unions. Various men who can work ought to be isolated, but we ought to be able to give them something to do by which they can earn their own livelihood. We have no business to suppose they are going to protect us, if we do not do something for them.

Dr. Turnbull (closing): We have been educating the people to fear the tuberculous patient, and not the carelessness of the tuberculous patient. This is both unfair and unjust. If you should come into this hotel and notice that there are fire escapes on the outside and also ropes and other appliances in the rooms, you would not become panicky because you thought you were going to burn up; but that is what we are teaching the public to do as far as tuberculosis is concerned. You want to go to a hotel because it takes precautions to keep you from burning up: "but when you come in contact with a tuberculosis patient who takes the proper precautions, you are afraid. You do not mind being closely associated with one who does not take these precautions, however; although you would not think of going to a hotel that was without fire protection. We are making lepers of our tuberculous people. The hesitation on the part of the public to have the diagnosis made is due to the fact that they know that they will then become as lepers, so that all will be afraid of them. Now the tuberculous patient may be harmless and may be harmful. A man who takes the proper precautions can be harmless; but the one who does not do so, whether the diagnosis is made or not, is a dangerous person. So far as expectoration and coughing are concerned, this must be taken up by means of proper education. This question of educating everybody not to cough and expectorate. So long as those who assume that they are not tuberculous cough and people who hold napkins in front of their faces are shunned, there will be a spread of the infection. It is as improper to cough in public without proper protection as to urinate in public without protection. How can we educate the people? How did we accomplish the present education? By slow teaching. The public has taken hold of it. That in some cases it should get beyond what we intended was undoubtedly to have been expected. We must, by the same method, put in front of them the fact that they have got an insane view of the matter. The point regarding school teachers is good. A town near Cresson employed twenty teachers, all of whom had certificates that they were not tuberculous; but one male teacher got scared because he had a hemorrhage in school, and came to me to be examined. His was an acute case, and he has since died. When I reported it to the school board, they sent all the teachers to me for examination, and out of the twenty, seven were definitely tuberculous. When I report a thing like that, I am afraid that people will think that I am a tuberculosis crank, and would diagnose that disease any way. Nevertheless, five of these seven had positive sputum. That is only an example of what is happening in all the schools—and will, so long as everybody is allowed to give certificates of health. If they say, for instance, that waitresses must be in perfect health, they must give the qualifications of those who are to examine them; because these women can now go to an eye doctor and ask for a certificate. Very likely he says, "You are well, aren't you?" and the waitress replies, "Yes"; and he hands her a certificate. Our laws on the subject at
The remarks about the necessity of a field for the spread of tuberculosis are correct, but there is one thing that I want to add to that. There is one way in which we differ from State roads and gardens, and that is in the fact that it takes a very short time for one of us who is a State road to turn into a garden. We may be a State road to-day; but next week, or in six months to a year, when something has happened to run down the natural resistance, we may be a garden. We do not know when the change took place or that it did take place. The fact that ninety-eight per cent.—or, for practical purposes, one hundred per cent.—of all persons have the germs of tuberculosis present is now conceded. Another point that is now admitted, though not undisputed in the past, is that we have these germs present from childhood up, very few persons becoming infected after they pass fifteen years of age. Nevertheless, for years they were State roads; and then they suddenly became gardens and got tuberculosis.