TROPICAL DISEASES AND PUBLIC HEALTH

THE EVOLUTION UNDER WAY IN PUBLIC HEALTH ACTIVITIES*

BY JOHN A. FERRELL, M.D.,
Assistant Director General, International
Health Board,
New York, N. Y.

Intelligent procedure in the control of any disease must be based upon accurate knowledge of the disease in all of its aspects. Health agencies are recognizing this more and more, with the result that capable men are being stimulated to carry on investigative and experimental work. Medical schools are maintaining research bureaus, the United States Public Health Service is increasing the number of men engaged in investigative fields, and many public and private agencies have staffs at work with a multitude of experiments which it is hoped may point the way to more effective and more general control of disease. In one instance a force is studying infantile paralysis, in other instances malaria, pellagra, syphilis, cancer, yaws, and so forth, throughout the list of diseases. Experiments with vaccines, antitoxins, and drugs are being made and are no less important than the study of the germs or the methods of dealing effectively with persons who harbor them. The bacteriologist is looking for new pathogenic organisms and is seeking to simplify methods for the detection of those already known; the epidemiologist is making excursions afield to discover the source of epidemics, while the administrator is experimenting with working programs in the hope of finding a plan that will result in the control of a given disease on the most economic basis. All will contribute to the yield in tangible results. One of the most hopeful signs of the times is that, instead of reaching conclusions on insufficient data, our scientists and our administrators are withholding public expressions of their views until they have

confirmed them by adequate investigation.

It is in this way that public health work is developing into a definite science. Procedure based upon accurate, scientific knowledge is rapidly replacing the blind, ineffective effort of past years. A reasonably clear line of demarkation has arisen to separate our tangible knowledge from the intangible; and as this knowledge has grown in breadth and become more definite, it has become more and more necessary that men wishing to engage in public health work should undergo special preliminary training. All of these developments are being witnessed by the people, whose confidence and co-operation are being rapidly won.

Fortunately, at the very inception of the new movement in public health work, striking demonstrations in the control of disease were made in Cuba, Panama, and Brazil, as well as in other countries. As a result, health officers in general, some of whom were then at the head of embryonic health departments, were provided with concrete evidence of the possibility of controlling disease. This evidence they used effectively in their educational propaganda, and the people in many sections were brought with remarkable rapidity to appreciate the value of public health work. Progress in perfecting health organizations, in obtaining effective laws, and in securing largely increased appropriations denotes that the people, as well as the scientists and administrators, have begun to take health work seriously. As an evidence of this growing appreciation on the part of the public may be cited the fact that in eleven Southern states the state health appropriations increased from \$216,195 in 1910 to \$512,300 in 1915. This is an increase of 136 per cent. North Carolina, with an appropriation of \$12,500 in 1910, now has approximately \$100,000, an increase in five years of about 700 per cent. Almost all of these states have experienced such growth in the size of the working force that several different divisions have been formed, each having its own administrative head, its own allot-

*Read in Section on Public Health, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.

ment of funds, and each being held responsible for results in its special field; while some have as many as twelve full-time medical men connected directly with the state health office, not to mention the large number of non-professional men and women who are utilized effectively in subordinate positions. And as another instance of the rapid development of public health work may be cited the fact that New York State alone now has about twelve hundred persons in the employ of its State Department of Health.

With such increase in the number of persons employed, it was but natural that the work of each person should become more or less specialized and that a demand should arise for trained men to fill administrative positions, to conduct experiments in the laboratory, to become epidemiologists, sanitary engineers, and statisticians. With this demand came the need of schools for training men to follow these careers. Already Harvard, Michigan, Pennsylvania, Tulane, and other medical schools are giving special courses for health officers, and Johns Hopkins is expected to begin its training-school next fall. With growing stability in health organization, increased appropriations, and enlarged staffs, the field will make a strong appeal to young men who are seeking careers, and the training-schools may be expected to flourish. Unfortunately, however, in many cases the salaries being paid do not warrant a full course in one of the new schools. As an alternative plan, the practice of having new employees serve an apprenticeship under persons older in the service who have exhibited marked proficiency has been found a valuable method of training. It will doubtless be followed in connection with the school courses as a means of providing practical training for the student of health work, in much the same manner as the hospital serves to provide practical training for the medical student.

As the work becomes more and more specialized, each of the specialists gains added knowledge appropriate to his particular field and makes advances in applying this knowledge, so that when the results of all of the specialists, each working in his own line, are brought together and properly correlated, it naturally follows that the results accomplished are shown to

have been much more intensive than would otherwise have been possible. Formerly, public health work was confined largely to lectures, the printed page, pamphlets, and text-books, with evidence here and there of public health measures being enforced by law; but although by these means a wide audience was reached and large numbers of people acquainted with the principles of disease prevention, the lesson could not be brought home to them forcibly enough in all cases for the measures to be applied. More lately, coincident with the intensification of efforts naturally resulting from increased specialization along all lines, working methods have been developed which do not depend solely upon the printed page, lectures, and educational work of this kind, but aim to secure a response from the people through definite progress in the control of disease within limited areas.

While the method of conducting the work has been intensified, the range of territory in which the work is carried on has been growing more restricted, until very close concentration upon a problem within a small area has resulted in a high standard of efficiency being reached. It is probable, however, that the work as finally developed will fall somewhere between this type, which aims at an efficiency of say 80 per cent. in the control of a given disease, and work such as, for instance, the hookworm dispensary work formerly conducted in the Southern states.

In the organization of adequate health departments, properly correlated for nation, state, county, and municipality, practically all states hold the idea that the most satisfactory initial step consists in the development of a satisfactory framework for the central health department of the state. Beyond this step there is some difference of opinion. One group of health officers holds that the next step should be the grouping of counties into districts and the establishment of district health officers, and that these in turn should seek to establish county and town health officers, who should gather about themselves the necessary force to carry on simultaneously and effectively a wide range of activities.

Others object to this program because they think the state will not provide funds

for the erection of so large a framework of new officers without having concrete evidence, in terms they can understand, that what may be accomplished in the end is not mere speculation. Moreover, it is feared that the creation of an office before the accomplishment of results and the development of public opinion warrant it will serve merely to cheapen the office, make it a toy of politicians, and frequently permit the election of men without vision, training, or other qualifications essential for a full measure of success. They believe that after the central framework is reasonably well established, further development will be more rapid if in a given task,—the control of malaria, for example—an effective working force, composed of directors and staffs especially trained and selected for their efficiency, is organized to devote itself in a given area to obtaining measurable progress on a cost basis within the economic reach of the people.

It will be recalled that the national and state departments of agriculture developed to a certain point from above downward. Stagnation was then evidenced in their work until a change in policy caused them to begin at the bottom and work upward. When they began to conduct farm demonstration work, corn clubs, tomato clubs, and pig clubs, a remarkable transformation followed, resulting in their organizations being strengthened and their usefulness multiplied.

Similarly, there are those who believe that if one enterprise after another in the field of preventive medicine is organized and effectively conducted in small units of territory, more or less as experiments at first, confidence in the work and in health officers will be strengthened and the purse-strings loosened. In a given county, for example, after a few successful demonstrations with different problems, it is believed the county would follow business principles and consider the wisdom of consolidating the separate working forces into one organization in a way to increase the efficiency of each but at the same time to reduce to a minimum the overhead charges. Work of this kind would make a strong appeal to the tax-payers because it would be conducted under civil conditions in home territory, and the figures involved in results yielded and in cost would be simple

and convincing. Once the people have been acquainted with thorough work such as this, they may be depended upon to provide the funds necessary for financing it; while if the state has thus guided and fostered the demonstrations in public health work, it may be expected that it will continue to guide the activities of the county departments of health which will be organized as a result of the demonstrations. It may be that the most effective plan for the development of adequate health organizations in the smallest governmental units will come partly from above downward and partly from below upward. Which plan would yield most speedy results remains to be seen. The cause is so impelling, however, that either method of procedure should succeed in the end.

Those engaged in health work should be patient with the point of view held by others and should realize that all are engaged in a common cause, starting for the same goal, and finding it necessary in many cases to blaze trails. In the beginning the paths may seem to diverge widely, but those persevering health officers who proceed intelligently, profiting as far as practicable by the experience of others, will find as the work goes on that their paths are converging with the paths of others, so that, regardless of the direction pursued in the beginning, the field as a whole will be covered and the goal that all set out for will be reached.

DISCUSSION

Dr. Oscar Dowling, Shreveport, La.—I am in thorough accord with the policy outlined by Doctor Ferrell. The sooner we can succeed in having whole time health officers the sooner will we get the results we are working for. Now as you know, the average physician must depend on his practice for a living; often he isn't disposed to enforce regulations,—isn't enthusiastic, naturally, about anything that will interfere with his patronage. This means on the part of some, no co-operation in efforts for improved sanitation, sometimes not any in other lines. I know of instances where doctors will report cases of infectious diseases, and invariably close by saying either verbally or in writing, "whatever you do don't tell them that I told you." One can go into communities to advocate various forms of improvements and if the physician finds his patrons don't approve of the idea there will be no support of the movement in that neighborhood. How long will it be before we can secure all-time health officers properly compensated for their services, with funds necessary

for office help, referred to by Doctor Ferrell? Not until there is a public demand for efficient service. We are moving slowly, however, in the South, but we are making progress and I hope the time is not far distant when we will be provided with appropriations sufficient to make effective both state and local health departments.

Dr. Roy K. Flannagan, Assistant Commissioner of Health of Virginia, Richmond, Va.—The idea that Doctor Ferrell advanced in the course of his remarks about the necessity for demonstrating the value of the work of public health departments is of tremendous importance. Public health departments everywhere have developed just as their value has been shown to the public by the public health officer. The state departments of health have to depend upon doctors who get no money, in many instances, for their work, and those that are paid, are paid too little for what they do.

Their work along public health lines therefore has not for the most part been very constructive. I would like to cite you an experience of how an underpaid officer in one of the towns of the South took his job seriously and the result of it. He was kicked into the office over night because of a squabble in the town council over a matter of quarantine applied by his predecessor. The salary was little or nothing, but by actually working and working pretty hard over a period of about two years, he did make things go. He started a publicity campaign, and taking up one thing at a time (it was impossible to do more because he had to make his living practicing medicine) he cleaned up that town; and then the first time the question of salary came up before the town council, they increased it about thirty per cent. It was a mere pittance even then, but thirty per cent. is a pretty fair increase in a man's pay. In the course of the next six months, the work continuing to grow and the people more and more catching on to the idea, his pay was increased nearly a hundred per cent. That brought it up to just \$50 a month, but still, it showed that the idea was growing and that he was being appreciated in some degree. Now it so happened that this doctor's good work attracted attention elsewhere, and so he was removed from that locality and got a very much better job in public health work elsewhere, and his successor came into the office at \$100.00 a month. There was no effort on the part of the health officer to increase his salary other than to do the job that was before him. I commend this experience to you fellows who are getting practically nothing, certainly an inadequate compensation for what you do. If you will just show the people that you know your job and are in earnest and can produce results, something is going to come out of it, and I believe something will be substantial.

Dr. J. Howell Way, Waynesville, N. C.—I have been very much interested in the papers and the discussions this afternoon, particularly the paper of Doctor Ferrell, dealing as it did, not so much with intimate details but with proximate or basic principles of this work. I remarked to my friend with whom I was sitting that this section is a much younger body than the men in attendance on the section on Practice of Medicine, but I said that's perfectly natural, because the practice of medicine is as old as the days of Adam, and the

practice of public health is a fairly recent production. Public health work is, as I see it, just beginning; it has just been born; and its faint initial cry echoes over the world. I won't say that it has been dressed, because I dare not, because before I get back home some public health worker will have fashioned a new theory of public health on some particular line and say that the particular frock that he had on down at Atlanta isn't the right thing for him to wear, and he must put this on. There is the danger of being too positive, too definite about many of the details of public health work. It is new. Now, there are some things that we know we can stress, those we can take our stand on,—certain principles, and stand there, but a great deal of our work is yet in the evolutionary process. It is in the formative stage.

Take my own State of North Carolina, with an area of fifty-two thousand square miles and a population of two and a quarter million, divided into a hundred counties, with an average of five hundred square miles per county, and an average of twenty-two thousand population for every county. We have now about one-sixth,—one county out of every six has a whole-time health officer, on, I may say, fair salaries in the main—and I believe in doctors being paid (I never made any reputation in my life as a low charger, as our Secretary there knows)—these men are fairly well paid for their work, for their experience, for their capacity. They are paid on the average as much as the average good doctor in the counties where they are working is earning. We often hear it said that we need more whole-time health officers. Yes, we do, but, gentlemen, a man can get his mind working on a hat or a fancy vest and a pair of striped breeches until he thinks that's about the only thing that it will take to make his dressed. That's not so. In North Carolina, the men charged with the executive administration of public health work have privately come to the conclusion that we have there just about as many whole-time county health officers as we want now. Not as we want later, but as we want now; for the reason that this work is new, it is yet in the evolutionary stage, so many problems are yet to be worked out, worked out individually, worked out collectively, worked out by the men in the field with the friendly, cordial assistance of the men in the executive offices.

I think we are making great progress, we are making splendid progress. We are going forward in North Carolina, as we are going forward in the whole South. In our state, six years ago we had about \$12,000 from the Legislature for our health work. Now we get \$100,000.00. Four years ago we had our different departments and the men in them more or less coquetting and flirting with the legislature and the members of it as to how much money they were to get for their departments. Two years ago, as the director of our laboratory of hygiene sitting before me will recall, we got all of those men together at a session of the State Board,—the head of the Bureau of Vital Statistics, Laboratory of Hygiene, Tuberculosis Sanitarium,—at the executive offices in Raleigh and had each one of them to make an average of just what he needed and just what he wanted money to do with in the next two years, and then we put that before our Board

of Health, and the Board of Health said, "well, it's all good, we'll go to the Legislature and ask for all that money that you men want," and we got it. And, gentlemen, in my state, we have quit saying a word about the indisposition of the Legislature and the reluctance of the powers that be to furnish money, because, I'll tell you, gentlemen, in North Carolina as fast as we show the people of my state that we can use that money for helpful purposes, we get it, and I believe, sir, that is true, and that's growing more and more true, of every state in the South. But seriously here, gentlemen, I believe the time has come for us to shut our mouths about the unwillingness of the people to put up the money. The people will put up the money just as fast as we show them that we are giving them a hundred per cent. on the dollar for what they give us.

Dr. A. T. McCormack, Bowling Green, Ky.—I wish very much I could bring you a solution of all the problems that have been raised here this afternoon. While I agree quite fully with every statement I have heard that is material, whether by the county health officers or by Dr. Ferrell, on the principles involved, there are some matters of detail about which my experience has forced some very clear ideas upon me. I especially agree with Dr. Way, that our legislatures are giving us all the money we ought to have, just as I feel that every doctor makes as much money as he is worth. There are not many under-paid doctors. A lot of them have very small incomes but most of this class are not worth much. Nearly every man makes as much as he is worth, whether he is a doctor, selling silk or cotton or what-not. In my state, our doctors have felt that health work was largely a patriotic duty, and most of them have received but little compensation for it. However, this voluntary, part-time, persuasive work has laid the basis and created the demand for all-time health officers who will be paid in proportion as they deliver the goods.

I entirely disagree with Dr. Way in his desire for a few health officers in North Carolina. I would be glad to accept the responsibility for one hundred and twenty all-time health officers in Kentucky, by tomorrow. I would rather have Dr. Abercrombie, and the practical men of whom he is a type, help me solve the health problems of Kentucky than to have all the faculties of Johns Hopkins, Tulane and the rest of them. I do not believe there is a teacher in a single faculty in the United States, who has not been a county health officer himself, and has not had the problems handed him for solution which are brought to the county health officers each day of their work, who can teach our real health officers who have been trained in the practice of medicine, very much. I do not believe that a man should be a health officer until he has had actual service as a general practitioner of medicine. I do believe, with Dr. Abercrombie, that a post-graduate course, after having become an integral part of the great profession of medicine, after being familiar with the work, I do believe the health officer can get great good from the school of hygiene, provided it is practical.

We have in my town in Kentucky, a normal school created by a great genius, who started out without money; he brought in a lot of

students and had but three members of his first faculty and he soon had many more students than teachers, so he took all the students that knew anything and soon had them teaching those who knew less. If the faculties of the average course in hygiene could be developed along such a line, they would be far more successful than if they select their teachers from pure scientists who never saw a city council or board of county commissioners, and who do not understand the importance of the human question in the solution of health problems. The modern doctor, whatever be his specialty, has to be trained, well trained to begin with, and then he has to have enough common sense and enough of that something that we can hardly describe and yet we all know exists, that enables him to secure the confidence of the people. I believe the health officer should continue to do enough of the practice in the county or city's eleemosynary institutions to bring him in some personal contact with sick people. I do not believe for a minute that the health officer is meant to take care of well people only. Not yet, and not for a million years! He may in the millennium, but in the present age and for a long time to come, there will be enough sick people to make our most important problem to keep them from spreading their diseased conditions, for him to have to know a great deal not only about disease, but about the thoughts and motives both of those who are sick and their families.

It is difficult to have a successful talk with sick people or their well relatives, without having down in you somewhere that feeling that only comes to the conscientious physician; and, in a general way, this is the reason I believe a man trained as a general practitioner just as I believe a man trained as a general practitioner makes the best surgeon, or the best anesthetist, or the best specialist in diseases of the eye—yes, I believe such a man trained in the general practice makes the best health officer, the best superintendent of an asylum or the best anything else that is to come in contact with or prevent sickness, disability, ineffectiveness or disease.

Dr. Mullins has come to us in Kentucky, from the Public Health Service, realizing that he has a definite problem to solve and he has begun doing his job thoroughly, in fact, he has done it so effectively and so well that every health officer, every public official, yes, every citizen that has known anything of him and his work, is anxious that that sort of thing be done for the afflicted of their communities not only in the cure and prevention of trachoma, but regardless of the particular afflictions from which they suffer. The state departments, the national departments, those great voluntary endowed agencies that are training men and solving particular problems, each of these things and all of them create the desire, the demand for the all-time health officer, and the thing for us to do, is to keep before our eyes and before our people all the time the effectively worked health department, and when we ask for the organization, as Dr. Ferrell has so well said, when we ask for legislation for the all time health officer, let us not simply ask that the office of all-time health officer be created, but that a bill permitting counties to have health departments un-

der the supervision and control of an all-time health officer shall be passed, and, at the same time, authorize him to have assistants as rapidly as ways and means and the public demand can be created. This is a most important element. We have thirty-eight all-time health nurses in thirty-eight different counties in Kentucky, and they are creating a tremendous demand for the all-time health officer, for they are almost powerless without him and each of our all-time health officers, in turn, wants a public health nurse and other assistants, and it is far easier to pass general legislation than specific legislation. It is easier to get a number of assistants than one, if you fix that one's salary. We find it a lot easier to get a department created for the State Board of Health than to get an individual officer with a fixed salary.

Legislators have an uncanny sort of wisdom and if we go before them with half-baked plans that seem to savor more of personal aggrandizement than public welfare, they see through our flimsy schemes so quickly that, in our superior wisdom, we are apt to condemn all legislative bodies as unthinking. On the other hand, take before a legislative body or committee a complete plan, show them that a given department can and will do good for the great common people, of whom they are a part, and whom they are elected to represent, and it is my experience that you gain their support just in proportion as your plan is worth while. Personally, I believe all these things are going to work out, the demand coming at the same time up from the people and down from the various departments. I believe we are going to have a National Department of Health, of which the present Public Health Service will be the executive right arm, and that it is going to have a sort of co-operative supervision of state health departments, and that these, in turn, will supervise county and city health departments with competent, civil service protected all-time health officers and the necessary assistants to solve the health problems that confront us in all parts of our Southland. Until that day, we will make progress but slowly, but in proportion as each of us acts well his part in laying the foundation for the health department of the future which will banish preventable diseases, make medicine more honorable and the people of our section more effective, longer lived and happier.

Dr. Wm. S. Kelster, Roanoke, Va.—I hesitate to discuss a subject like this without being more experienced than I am, but I believe from certain facts during these discussions and these magnificent papers, that I have been able to read the signs of the times. I believe the sign of the times today is popularizing public health. It is a little unpopular at the present time, but the trend of public health activity is to make preventative medicine the popular thing. I believe, too, the public wants preventative medicine. I believe they are anxious for it, I know health officers are anxious to give it to them. Why don't they get it? There is a big gap between us yet. That gap can only be bridged by education. Now, we must cover up that gap in some way. We have been content during the years gone by to let the charlatans and quacks and patent medicine fakirs and every other "schism" and "ism" advertise its remedies and fool the public and we have sat idly

by and done nothing, and I say we have got to do about. If it is necessary to have a torch-light procession or brass band to play every time you build a sanitary privy, we had better do it. The people want spectacular things, that's the public idea, that's the reason moving picture shows are overflowed today, and health officials have to take to the spectacular if we want to gain the public to our side. I believe there is two sides to educating the public, one is the education of the adult and the other the child.

The greatest hope, of course, is in the school, educating the child, and sometimes I think it is a pity to ever have public gatherings of school children or teachers anywhere unless there is a health teacher there to give them a talk,—not a long drawn out affair that will tire everybody out, but a short, snappy talk with demonstrations, something that will catch the eye,—with pictures. Then there are a lot of old hay-seeds we never will convert, especially among the white people. But the Negro is a child, he wants to be led, and I think one of the most hopeful things in public health work is trying to lead the Negro, and, of course, the least hopeful is the adult white man, but we must try to get him, too. If we can entertain as we instruct then we can lead them, but we have got to combine entertainment with instruction.

Dr. L. B. McBrayer, Sanatorium, N. C.—I want to express my appreciation of Dr. Ferrell's paper. He suggested that he prepared it this morning, and if he told the truth about it,—and I have no reason in the world to doubt what he says, because he is too shrewd to ever get caught in an untruth, if he ever got consent of his conscience to tell one—but if he did prepare it this morning, he did so for the reason that he wanted to feel the pulse and find out what the folks here were saying, so that he could fit his paper into the things we have been talking about. I don't think if he had studied a hundred years he could have prepared a better paper for our information than the one he presented to us this afternoon; and personally, I desire to express my appreciation and thanks to him.

I intended to say just what Dr. McCormack has said, but I am mighty glad he said it, because he said it so much better than I could, and I want to add this one thing: I agree with Dr. McCormack, and I don't believe that the degree of Doctor of Public Health is worth much. I thought on one occasion I wanted my son to get that on the side while he was graduating at the University of Pennsylvania, and later on I thought it was hardly worth while because, as Doctor McCormack so well said, they don't know how to teach a health officer, they don't know what a health officer is, and they are not going to, either, until they come down and find out. Now, the thing we need is the real work under a man like Doctor Abercrombie and Doctor Sevier and a good many others whom I could mention. I will tell you for the fear that you don't know, that Doctor Rankin, who isn't present at this session, Secretary of the State Board of Health in North Carolina, has had in mind for some time the organization of a school for health officers, and his idea was that they should pass through every department of the work of the State Board of Health;

that they should go into his office for a certain number of weeks and find out how he was doing things, that they should go over to the Bureau of Vital Statistics and then they should go down to Doctor Shore's State Laboratory of Hygiene and spend a certain length of time and then to Doctor Cooper's Bureau of Rural Sanitation and then to the State Sanitarium for the treatment of tuberculosis until they were familiar with all those things, and after that they should go out with our whole-time county health officers and spend a period of several months, perhaps six, and the whole course to cover perhaps not less than a year. Now, that's a feasible thing, that's a workable thing, because during that time they would be receiving a salary, they would be receiving, say \$50.00 per month, and perhaps they would be doing for the State Board of Health, through its various activities, an amount equal to \$100.00 a month, but they would be paying these men \$50.00 a month in instruction. I believe that that particular kind of course is needed worse today than it has ever been, and that it must be supplied in the near future.

Dr. Ferrell (closing):—The opinions that have been expressed appear to me more or less in harmony. We are all aiming at the same end. Our working methods as paths will inevitably and fortunately diverge. In each instance where the impracticable features are eliminated and the practicable ones strengthened we may confidently expect the paths finally to draw together again so that these courses will all fall into one broad road. We need not therefore be alarmed at the views of our colleagues with reference to any particular procedure or working method. If, for example, there be no need for special schools for the training of health officers they will not succeed. If they are needed they will survive. If there is a real need for well rounded health organizations for counties, we shall have them and those working from the community up and those working from the state capitol down each in his own way will contribute something toward the final structure. Experience, intelligent observation of all that is being done, and an assimilation and application of what is practicable, will shorten the road to the final goal on which there will certainly be a survival of the fittest.

THE IMPORTANCE OF THE CONTROL OF CHILDHOOD INFECTION IN THE CRUSADE FOR THE ERADICATION OF TUBERCULOSIS*

BY CHARLES L. MINOR, M.D.,
Asheville, N. C.

The world having at last been awakened to a realization of the great impor-

ance of the tuberculosis problem and its bearing upon the welfare of the body politic, we can not today complain of any lack of interest in the subject when all over our land splendid and purposeful efforts are being put forward toward the eradication of this pest. No live and up-to-date society, in its section on public health, could fail to pay some attention to the question of the prevention of the transmission of this disease. Hence I need make no apology for the title of my paper today.

In the study of the means at our disposal for the eradication of tuberculosis, there are two things to be considered: first, the infectible subject; and secondly, the infecting organism. As to the second, very rightly, extreme importance has been placed upon the necessity of effort to destroy the germ by the proper disposal and destruction of the sputum of all consumptives; and it is doubtless true that if we could destroy all such sputum we could justifiably hope to put an end to this disease in a relatively short time.

However, as long as the American public continue to expectorate as promiscuously and enthusiastically as they now do, and as long as we can create no strong public sentiment against the disgusting habit so that spitting will be regarded as nasty, such an aim must remain nothing but the iridescent dream of an optimistic hygienist, and can not become a realized fact. Of course, the impossibility of inculcating proper spitting habits in the general American public is no reason for lessening our efforts properly to care for the sputum of all those whose actions we can control; and efforts in this direction will always have an important and prominent place in preventive medicine. But this subject has been sufficiently treated by many authors and need not be gone further into in this place.

Again, in any study of the infecting organism, we will have to take into consideration the virulence of the germ, which varies greatly. It is usually believed, though I do not think there is any absolute scientific proof of it, that the short, thick, deeply-staining germs, coming from rather acute cases, are more dangerous and the beaded, poorly staining long germs, coming from old chronic

*Read in Section on Public Health, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.