accurate data—an answer which might on the one hand be an encouragement or on the other hand a wholesome check on ill-judged procedures and unbridled enthusiasms. The Medical Research Committee has founded and staffed for the benefit of the Army Medical Service a statistical department worthy of imitation. It is easy to see what fruitful fields of collective investigation would open out under the guidance of a skilled staff, and, again, what favourable opportunities would be afforded to clever men to make manifest their worth.

Advantages to the Public and the Profession.

What advantages would accrue to members of the public and doctors by such a change in medical organization? As regards the public, their health would be guarded and the beginnings of disease would be detected and dealt with at a stage when treatment is likely to be effective; there would be at their disposal the means of collective investigation and buildings equipped for the purpose, and institutional treatment where necessary.

But not the least of the advantages would be that the trusted medical men of their choice would be more efficient because they would have the opportunities of doing good work which are so often now denied them. Can anything be more heartbreaking and ultimately more dulling to the intelligence than constantly to feel you are prevented probing to the bottom of a problem?

The suggested plan would bring more interest and stimulus into the life of the doctor—he would continue to develop; he would have the inspiration and opportunities of good work, could follow up his cases and exchange ideas with his colleagues in the "settlement," which would become a centre of intellectual life.

Financial Rewards.

And how would he stand as regards material prosperity? He would do his work in less time with less fatigue and at less expense because more of it would be ordered and localized. He would have the advantage of the clinic and equipment for his private patients, and without doubt private hospital wards should be established by co-operation or otherwise. Salaried posts in the health service would be open to him, and salary has the advantage of greater security. If a doctor under the Insurance Act, he would have the proceeds of his panel or any modification of the panel system that might come about. He would certainly get more repose, for the association of doctors would be much closer, and therefore mutual help easier.

As regards remuneration justice demands reform. When you consider the exacting nature of a doctor's life—the long hours, disturbed nights, high tension of his work—it is only just he should be so paid as to live a reasonable life without anxiety. That is not so now. Take the salary of the Poor Law medical officer. Compare the salary and responsibilities of many a medical officer of health with those of a County Court judge—deplorable. Take a doctor who may get £30 a year net for a panel of 350 patients, or innumerable instances of doctors being paid salaries which workmen would reject with contumely.

These things must be changed. If only the truth is presented they cannot continue. It is unthinkable that friendly societies, insurance authorities, trades unions—so many of whose members have fought strongly and justly for better pay and shorter hours for their class—should be unwilling that doctors, to whom they owe so much, should have adequate remuneration and reasonable conditions.

On the other hand, there should be a more strict limitation of the number of the patients which a doctor may place on his panel. While huge panels are permissible, pecuniary reward goes too much to the man with physical endurance and plausible tongue and too little to the man possessed of brain and conscience.

Ministry of Health.

It is obvious that such a body politic would need a brain at the centre to inspire, guide, and control its activities. This would be the purpose of the Ministry of Health, the foundation of which is the most pressing of all reconstructive problems. With so much of the flower of our manhood sacrificed for the great cause, the rearing of a healthy race has become a supreme necessity.

How is that ministry to be established?

Doubtless an independent department unencumbered by vested interests and prejudices would be best; but with a Parliament which has long lost the faith and enthusiasm of youth, the difficulties of passing such a scheme might be great. On grounds of expediency the administrative association of the new Ministry with the Local Government Board and the Insurance Commission has something to recommend it as offering a line of lesser resistance. But if the adoption of this plan is not merely for convenience of organization, but means that the Ministry of Health is not going to have a bigger horizon than that of the Local Government Board and Insurance Commission, then we must emphatically say "No." And alas! there are evidences that such is the prevalent spirit: witness the departmental obstruction to the formation of a Health Ministry and the introduction of pettifogging measures seemingly actuated by the desire rather of vested interests to dig themselves in, than for real progress.

We should all be prepared to give and take and subordinate predilection to the attainment of a great object. But on principles there can be no compromise. The needs of the nation require a comprehensive reorganization of the medical services. That reorganization, involving, as it must, every branch of the profession, can only succeed if it enlists the confidence and support of the doctors. The Ministry will need to draw to its counsels representatives from all departments of medicine, both preventive and curative, and these counsellors must have real power, with direct access to the Minister, in contrast to the baneful tradition at the Local Government Board whereby the medical officer can only advise the Minister through the intermediary of a lay official.

The profession for its part needs to realize the weight of its responsibility, close its ranks, work out a sound policy, improve its organization for expressing its views, and thus secure that proper influence in public affairs which, to the detriment of the state, is now so sadly lacking.

In the United States the medical profession occupies a leading position in the life and counsels of the American nation. In England, although doctors in their individual capacity enjoy the confidence and even the affection of their patients, yet as a profession their influence is small and their advice regarded as of small account. This must change, and let us see to it that we come into our kingdom.

THE CLINICAL ORGANIZATION OF THE PROFESSION FROM A GENERAL PRACTITIONER'S POINT OF VIEW.

BEING THE PRESIDENTIAL ADDRESS TO THE METROPOLITAN
COUNTIES BRANCH OF THE BRITISH MEDICAL
ASSOCIATION.

By M. G. BIGGS, M.D.

ORGANIZATION of the profession in all its details essentially belongs to the British Medical Association; the only reason that the clinical side has not been so carefully looked after is due to pre-occupation during the last few years with two serious crises—the Insurance Act and its developments, and the great war still going on its way; even so, however, this side of the work has been by no means overlooked, and it is my special wish to point out that general practitioners must take the matter in hand themselves and work out their own salvation by elaborating a reasonable scheme.

The question may naturally be asked, What are the reasons for organizing the clinical work of the profession?

The answer in its most general terms is that our knowledge of the extremely complex and elusive organism with which all our work is associated has been so enormously enlarged and so many instrumental means of investigating disease have been introduced that it is beyond any ordinary man's power to use all successfully, and many, if not most of them, require the whole service of one individual, in order that he may become expert and possess the necessary experience which shall enable him to interpret his results accurately.

In my opinion it will be necessary for general practitioners to specialize to some extent in the future, and then by team work, either in partnerships or some other way convenient to all, to enable mutual work to be done amongst and for ourselves, and to the great advantage of our patients. Cannot general practitioners do something themselves to promote this pooling of clinical work?

Before we can move to any advantage we must throw overboard one fetish—namely, the all-sufficiency of the individual practitioner. Such a claim might be set up for a Boerhaave, but it is frankly impossible in our day. This also leads to an intensely individualistic outlook.

My predecessor pointed out that the local hospital should be the highest unit, and from it should radiate all the energies devoted to the prevention and healing of disease, and with this I cordially agree. Such hospital should be thoroughly organized, with a full staff of specialists, all apparatus for examination and treatment, laboratories, clinical and pathological, so that all doubtful and difficult cases and those requiring special treatment should find all required for their successful healing. At the present time, however, all are not so equipped. The staff should do everything to encourage post-graduate study by lectures, demonstrations, etc., and to this end the out-patient department should be consultative, and every encouragement held out to practitioners to bring their patients, and so get the full advantage of the consultation.

The necessity of arranging some means by which the general practitioner should be able to dovetail in with his clinical work preventive medicine is urgent, and no great improvement in this branch will result until this is done.

Such an arrangement would make it clear beyond cavil that the real aim of medicine is to prevent disease, and that our clinical efforts must be infused with the full recognition that our duty is not done when we have prescribed medicine or treatment, as we are bound to explain that sickness is the outcome of breaches of hygienic laws; we must act as hygienic missionaries and so bring about a fruitful marriage between clinical and preventive medicine.

Men must also work together—team work as against individual—team work between consultant and general practitioner, nurse and doctor, qualified and unqualified persons. Much of a doctor's time could be saved by utilizing the services of assistants, such as dressers under qualified medical supervision, and between general practitioners themselves. A form of team work would be to encourage partnerships, each partner developing his own special line and attending those cases that fell within his sphere. For example, three men might easily join together, one a general practitioner taking ordinary work, a second doing nose, ear, and throat work, and a third eye work. Such partnerships would, I believe, be very successful, and would tend to keep in our own hands much work that now finds its way into the practice of the unqualified.

Before the Insurance Acts became law, it was my opinion that local clinics would tend to solve many of our problems, and now such clinics are the order of the day under the names of Poor Law, maternity and child welfare, and venereal.

These local clinics should be centrally situated so as easily to be reached—well adapted for their purpose, thoroughly hygienic, with a sufficiency of rooms so that several doctors might be seeing patients at the same time.

Special rooms for ophthalmic, microscopic, and x-ray work should be provided, and one or two beds, so that, for instance, a patient might be taken in at night, given a test meal, and in the morning the test duly applied. A nurse should also be in attendance whenever patients are being seen.

In this way men would be brought together in one building, and this would make it easier to develop mutual help and assistance. There ought to be no illusions. We may either lead the way of and by ourselves or we shall assuredly be forced into a way devised for us by those who do not understand the position, because they are united, whilst we present an unorganized mob, riddled with doubts and differences, the result being easy defeat because of the failure to grasp the emergency and deal with it properly.

This address is intended to be suggestive, to cause all practitioners to think and act so as to preserve their independence by agreeing upon a common course of action.

THE SYMPATHETIC NERVOUS SYSTEM AND THE "IRRITABLE HEART OF SOLDIERS."

BY

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THE condition known as the "irritable heart of soldiers" is recognized by a symptom complex, consisting of increase of pulse-rate, shortness of breath, palpitation, precordial pain, and dizziness provoked by slight stimulation such as exertion or excitement. The cases that exhibit this complex of symptoms may be divided into two groups, in one of which signs of organic disease can be elicited. The cases in which the investigations to be reported were made belong to the other group, to which for purposes of convenience the term "soldier's heart" is usually confined. This group may be considered to include: (a) Cases with a history of acute rheumatism or allied infections, even if some years before the onset of the symptoms of irritable heart, but without signs of organic disease; (b) cases with a history of an acute infection, such as typhoid fever, dysentery, "influenza," trench fever, etc., or of "gassing" at a short period before the onset of the symptoms, and (c) cases with a history of shell shock or severe physical or mental stress immediately preceding the onset.

These patients appear to differ from healthy men only in that a stimulus, such as excitement or emotion, produces an unusually large response. The usual methods of clinical examination show them to be free from any other signs of disease. Investigations into their condition may be expected therefore to show quantitative but not qualitative divergences from the standards of healthy men.

One of the purposes of this investigation was to find out the mechanism by which certain of the symptoms are produced; the result required was a therapeutic measure of relief. The symptoms by which the condition may be recognized are associated with the organs of circulation and respiration, organs the mechanism of which are related to the involuntary nervous system.¹ Bearing this in mind four drugs have been considered by us to promise means of modifying the innervation of the heart in patients in whom this system is considered disturbed—namely, adrenalin, apocodeine, acetyl-choline, and atropine; the first two affect the sympathetic system, adrenalin by stimulating it, apocodeine by inhibiting it; and the second two affect the vago-sacral system, acetyl-choline by stimulating it, atropine by inhibiting it. We have had opportunities of testing reactions of the first two only.

In all cases the intravenous method of administration was employed as being the most accurate and as imitating the physiological and pharmacological methods by which the actions of the drugs were originally ascertained. Since the patients differ from healthy men in that the "threshold" of reaction to normal stimulus is lower, it has been convenient to determine, if possible, a dose of each drug that would give a reaction in the patients, but not in healthy men, or in healthy men and not in the patients. Such a dose would be the minimal dose producing a reaction in the more susceptible group, but would not necessarily produce all the possible reactions of the drug in question, since different doses are required to produce all the possible reactions. Excitement and emotion produce to a varying degree the symptoms and signs of "irritable heart" and also the symptoms and signs to be expected from stimulation or inhibition of the involuntary nervous system, and since in some of the patients the effect of excitement is great, precautions had to be taken to avoid this reaction interfering with the effect of the drug.

Records of pulse-rate and respiration were made with a Mackenzie ink polygraph, and of the systolic blood pressure by means of the Riva-Rocci type of sphygmomanometer and the auscultatory method of reading. The patient was allowed to lie flat on the bed for ten minutes or more to avoid any disturbances due to exertion, and observations and records were then begun, and continued for a further ten minutes before the arm was cleaned for the injection. The records were continued