THE NEEDS OF THE MEDICAL SERVICE OF THE ARMY.

As reorganisation and reform in the Army Medical Service will probably soon engage the attention of the War Office, it appears well to offer the following observations and suggestions, based on intimate knowledge of the inner life and duties of the service, as well as on its external relations to the medical schools and the profession at large.

The statement represents broadly the wants, disabilities, and drawbacks which still make military service unpopular, or at least undesirable, among young medical men, who otherwise might contemplate an army career.

The following reforms, the necessity for which has often been stated before, may for ready comprehension be again recapitulated under a few heads:

I.—Rank and Title.

After prolonged controversy and opposition the late War Minister, Lord Lansdowne, granted to medical officers, with the happiest results, army rank and titles in a Royal corps. That necessary and legitimate status was at once ungrudgingly accepted by the army at large, and has undoubtedly much enhanced the efficiency of both officers and men in the campaign in South Africa. All that now seems to be required under this head is that the corps be placed precisely on the same footing as other corps in the service, subject to limitation in command. This can be effected by expunging from the Regulations such obsolete orders as may seem to imply inferiority in the army status of the medical service; by carrying out official procedure as in other branches; as, for instance, by gazetting to staff appointments; conferring local or temporary rank on those acting in superior appointments; giving due recognition in ceremonial functions, and a fair share of honours and rewards, etc.

II.—Undermanning.

There need be no hesitation in stating that this notorious defect lies at the very root of the continued unpopularity of the service in the medical schools, through far-reaching consequences operating as follows:

(*a*) By necessitating sudden and frequent moves from station to station, causing a feeling of constant apprehension and unrest, and entailing much personal expenditure and loss.

(*b*) By making ordinary leave most difficult to obtain, and much-desired "study" leave impossible.

(*c*) By causing a serious disproportion between home and foreign tours of service, whereby the average officer spends two-thirds, or even three-fourths, of his service abroad, mostly in tropical climates.

(*d*) By rendering ordinary and especially "orderly" duties unduly severe, and at times excessively harassing.

The evils of an undermanned establishment in peace become much aggravated in time of war. Before the Boer war, with about one-third only of the officers at home, all the military districts at home were chronically short of their regulation complements to the extent of 20 to 50 per cent. During the war these districts have been practically denuded of officers on the active list, and duty has only been carried on under difficulties by the employment of retired officers and a large number of civilian surgeons, which latter, having necessarily no army status, placed the discipline of the hospitals in grave jeopardy.

The total number of medical officers on the active list is at present about 900. This may be contrasted with an establishment forty years ago of about 1,150; remembering further the facts that during these years the strength of the regular army has been increased at least 25 per cent.; while the militia, which then had a medical service of its own, has now practically none, and is entirely dependent on the attenuated regular medical service.

The present medical establishments, both in officers and men, are notoriously inadequate for the efficient carrying out of peace duties, and cannot provide for the mobilisation of one army corps without dislocating the duties at home, suspending foreign reliefs, and absorbing all margin for waste or casualties. The chief part of the foreign service of medical officers is naturally passed in India, where over 300 are constantly employed with British troops; but service in India would really be popular if the Government of that country acted with fairness and liberality, which unfortunately it does not, as will be mentioned under the head of pay. But the wants of India are, indeed, intimately bound up with undermanning of the Royal Army Medical Corps, for the interdependence between the latter and the Indian Medical Service steadily grows greater in proportion as India becomes a base in Eastern wars, as exemplified in the present China expedition. It may be mentioned that through that expedition the Indian Medical Service, in both its civil and military branches, is at present seriously embarrassed. Such facts must not be lost sight of in any augmentation of the medical services.

III.—Pay.

It cannot be doubted that the pay of the junior ranks of the Royal Army Medical Corps is inadequate, both at home and in India, whether it be viewed in relation to inevitable expenses or to the scale of remuneration which young medical men can command in civil life.

The element of supply and demand must be kept in view, and it must be remembered that the army as a career for young medical men has to compete at once with a more liberally endowed Indian Service, a relatively better paid Naval Service, and recently increased remuneration in civil life. Since the abolition and prohibition of unqualfied assistantships in civil life, qualified juniors receive salaries as assistants or *locum tenens* from 25 to 100 per cent. greater than they did a few years ago.

The feeling among young medical men on the question of army pay may be stated as follows. They reason that bringing as they do to the service of the State a lengthened, complete, and expensive professional education (the most expensive and exacting, as recently shown, of all the learned professions), they have a right in such employment to pay which shall from the first enable them to live in reasonable comfort; but this is impossible without private means, whether at home or in India.

Inadequate pay presses on juniors quite as much or more in India than elsewhere, a fact the more damaging to the popularity of the Army Medical Service, inasmuch as the great majority of junior medical officers spend a large portion of their first years of service in that country; they are handed over to the Government of India about their second year, and cannot help themselves.

The attitude of the Government of India for many years towards the financial aspects of successive medical Royal Warrants has been most short-sighted and regrettable. It seems hardly creditable that the automatic increase of medical pay, under the rank of major in India, is still based on a warrant long obsolete, and on a scale fixed nearly forty years ago! A result is that a lieutenant of the Royal Army Medical Corps, who becomes a captain after three years, does not get the pay of his rank until he has completed five or six years' service. Again, when the important semi-administrative rank of brigade-surgeon was created, with increased pay, by the Royal Warrant of 1879, its financial consequences were long absolutely ignored in India, with the result that not a few of the rank retired early rather than serve in a false and unrequited position.

Certain limited concessions in the pay of medical officers in India have, indeed, of late years been made, but chiefly in connection with the depreciated rupee; and certainly not sufficient to invalidate the broad statement that the financial provisions of several Royal Warrants have not been given effect in India. The failure to do so has no doubt deterred medical candidates from the army, who justly reason that, as such service would entail many years in India, they had better spend it in the higher paid Indian Medical Service.

IV.—Organic and Administrative Reform.

Such reforms must be initiated on the responsibility of the War Office; but the salient points requiring attention are as follows:

1. The active list of the officers and men of the Royal Army Medical Corps should be increased sufficiently to meet (*a*) the ordinary peace duties connected with the regular army and militia at home and abroad; (*b*) to be of a strength always available at home to meet the sudden mobilisation of two army corps for service abroad, without at the same time

wholly denuding the home establishment, and altogether paralysing foreign reliefs.

2. A trained and really available reserve of officers, men, and female nurses should be formed, which will no doubt prove a difficult matter.

3. Due reserves of hospital equipment and stores must be kept up; these were officially declared to be very deficient at the beginning of the war.

4. Pay must be increased and readjusted, especially in the junior ranks, both at home, in the Colonies, and in India,

5. Larger autonomy should be conceded to hospital transport in the field; and fuller powers given to medical officers to acquire hospital equipments and supplies in emergency.

6. The Surgeon-General of an army in the field should be on the staff of the General Officer Commanding in Chief, always in close and direct communication with him, instead of on the line of communications.

7. Medical officers acting in superior appointments should be gazetted to a step in local or temporary rank, as in other branches of the service.

GERMAN MALARIA EXPEDITION.

PROFESSOR ROBERT KOCH, head of the German Malaria Expedition, has sent a sixth and final report of his investigations to the Colonial Department of the German Foreign Office. The following is a translation of the report, which is published in the *Deutsche medicinishe Wochenschrift* of November 15th[1]:

We started on our homeward journey from Herbertshöhe on August 6th. The line of steamers newly established by the North German Lloyd, which go from Sydney by New Guinea to Hong Kong, calling at the Caroline and Marianne Islands, offered the opportunity of investigating those islands, and, as far as the short stay admitted, of taking a glance at their sanitary conditions. Mainly on this ground I chose this line for the home journey, and I was able, on August 12th and 13th at Ponape, and on the 17th at Saipan, to make researches, in which I was assisted by the Government Medical Officer, Dr. Girschner.

NO MALARIA IN CAROLINE OR MARIANNE ISLANDS.

At Ponape, not only at the seat of Government, Colonia, but in six other places situated at some distance, in all 79 children were examined for malaria. In no single one were the characteristic marks of malaria—enlarged spleen and the presence of malaria parasites in the blood—observed. This leads me to conclude with certainty that this island is free from malaria. It is said that for a long time only one case of dysentery had occurred. According to the statements of Dr. Girschner the skin diseases so extraordinarily widespread in the South Sea, and framboesia, which is frequently confounded with syphilis, seem to play no great part on this island.

At Saipan, among 24 children examined there were likewise neither swollen spleens nor malaria parasites. Therefore this island, too, is free from malaria.

FRAMBŒSIA IN THE SOUTH SEA.

Among the many persons pointed out to me as suffering from syphilis, lupus, and leprosy, there were none suffering from any of these diseases. What was mistaken for them was framboesia, a disease which appears to be very common at Saipan. This malady, called by the English yaws, is extraordinarily widespread in the South Sea. In the Bismarck Archipelago I have seen places in which almost all the the children were affected therewith. Even the children of Europeans occasionally suffer from it. Very often framboesia is mistaken by laymen, and even by medical practitioners, for syphilis, and I feel warranted in assuming that the statements as to the great diffusion of syphilis in the South Sea, and particularly in the German colonial region, are based on the confusion of syphilis with framboesia. It is much to be wished that a medical man thoroughly conversant with syphilis and skin diseases—if possible a specialist—should be sent out to Dutch New Guinea in order to make a closer investigation of the relations of these diseases and the skin affections which are so extraordinarily frequent in the South Sea.

PECULIAR DISEASE AT SAIPAN.

At Saipan there also occurs a peculiar disease which in its course and symptoms—fever and lasting paralysis of individual limbs—is suggestive of beri-beri. Of cases of this kind brought to me, one was the subject of hemiplegia others of articular and muscular rheumatism. There was not a single case of beri-beri among them.

On the whole, I got the impression that the health conditions of Ponape and Saipan are very good, inasmuch as there is no malaria in these islands, and except for framboesia they appear to be free from other tropical diseases.

MALARIA IN EGYPT.

From Hong Kong we proceeded by the main line of North German Lloyd steamers to Suez, where the journey was broken by a short stay in Egypt.

Our investigations in Egypt were directed to the clearing up of the contradictory statements respecting malaria in that country. This object has been so far attained that in Alexandria several cases of malaria which undoubtedly originated in that city or its vicinity were found, and genuine foci of endemic malaria were discovered in Helouan near Cairo, and at Wadi Natrum, west of the Nile Delta, in the middle of the desert.

STEPHANSORT.

According to the latest news which reached me from Stephansort coming down to August 8th the favourable conditions in regard to malaria described in my previous reports remain unchanged.

MALARIA PRACTICALLY EXTINCT IN GERMANY.

In order to arrange for a repetition in Germany of this New Guinea research which has proved so fruitful of result, Professor Frosch, a former member of the malaria expedition, has at my suggestion visited many parts of North Germany which appeared suitable for the purpose and made inquiries as to the presence of malaria. It has thus been shown that malaria everywhere is rapidly dying out. In many places previously known as foci of malaria the disease has well-nigh disappeared. In others, as, for example, in the marsh lands on the North Sea Coast, it occurs only in isolated cases, but nowhere could there be found a focus of malaria suitable for my purpose.

END OF THE EXPEDITION.

Under these circumstances there remains nothing else to be done but for the present to bring the malaria expedition to an end.

[1] Translations of the second, third, fourth, and fifth reports were published in the BRITISH MEDICAL JOURNAL of February 10th, p. 325; May 12th, p. 1183; June 30th, p. 1597; and September 1st, p. 606.

PROFESSOR CALMETTE ON THE PLAGUE.

THE last of the three Harben Lectures on bubonic plague was given on November 21st at the Examination Hall of the Royal Colleges of Physicians and Surgeons by Professor Calmette, Director of the Pasteur Institute of Lille.

In this concluding lecture of the series Professor Calmette discussed the defensive measures that should be taken for protection against plague, commented on the subject of vaccination in connection with the disease, and detailed the conclusions he had arrived at concerning individual and general prophylaxis. In his opinion it was incontestable that vaccination by heated cultures was capable of rendering great defensive service in times of epidemic. In the hope of elucidating the principal points urged against preceding methods of vaccination he had studied the question last year. In the preparation of his vaccine cultures Professor Calmette employed a plague virus which originated in Oporto, and had never passed through any kind of animal. The cultures were placed on gelose in large flat bottles, in which, after 48 hours, there was an enormous microbic development; 20 c.cm. of sterilised water was then added, the culture was scraped, and the emulsion obtained was poured upon a fine linen filter to separate out the fragments of gelose carried away. The filtrate was then poured on a paper filter, and the microbes left thereon were washed to clear them of adherent toxin. They were then heated in a small quantity of water for