EAST INDIA (MEDICAL SERVICES COMMITTEE)

REPORT

OF THE

COMMITTEE APPOINTED BY THE GOVERNMENT OF INDIA TO EXAMINE THE QUESTION OF THE RE-ORGANIZATION

OF THE

MEDICAL SERVICES IN INDIA

(President: Sir Verney Lovett, K.C.S.I., I.C.S.)

April 1919

Presented to Parliament by Command of His Majesty.

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MEDICAL SERVICES COMMITTEE

No. 51-1.

Simla, the 22nd April 1919.

FROM

THE PRESIDENT,
MEDICAL SERVICES COMMITTEE

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
ARMY DEPARTMENT.

SIR,

I have the honour to submit herewith the report of the Medical Services Committee.

2. The orders of the Government of India appointing the Committee, as well as the terms of reference, are contained in your letter No. 16239-1 (A. D.), dated the 15th January, 1919, to the address of the Director-General, Indian Medical Service, the first four paragraphs of which run as follows :—

"I am directed to say that the Government of India have decided to appoint a committee, composed as under, to examine and report on the question of the re-organization of the medical services in India, both civil and military :—

PRESIDENT.

The Hon'ble Sir Verney Lovett, K.C.S.I., I.C.S.

MEMBERS.

Major-General G. Cree, C.B., C.M.G., A.M.S.
Major-General P. Hehir, C.B., C.M.G., C.I.E., M.B., I.M.S.
Major-General H. Hendley, M.D., K.H.S., I.M.S.
The Hon'ble Major-General G. G. Giffard, C.S.I., I.M.S.
Lieutenant-Colonel A. Shairp, C.M.G.
Lieutenant-Colonel G. B. A. Rind.
An officer of the Home Department to be nominated later.

SECRETARY.

Major A. A. McNeight, M.B., I.M.S.

"2. The committee, which will meet in Delhi in January, 1919, should examine the question from the standpoint that it is desirable that there should be a unified medical service for India. The committee is not a travelling committee, but if they or any of their sub-committees consider it desirable to visit other places in the course of their enquiries, they are authorised to do so.

"3. The committee is empowered to summon to Delhi officers whose oral evidence is considered necessary or to consult by means of correspondence any officer whose views might be valuable.

"4. The Government of India desire that the committee, in carrying out their duty, should first formulate a general scheme for the future organization of the medical services in India. This portion of the work is urgent and the views of the committee should be submitted to this Department as early as possible, in order that the opinions of Local Governments and Administrations may be obtained. As soon as this report has been submitted, the committee should proceed with the examination of the position of military and civil assistant and sub-assistant surgeons and provincial subordinate medical services under the scheme, and also the future organization of the Medical Store Department. In dealing with these points sub-committees may be formed, co-opting, if necessary, other officers to serve thereon. In this connection it is desirable that the views of Indian medical men should be obtained and for this purpose, therefore, one Indian officer of the Indian Medical Service and one Indian private-practitioner will be co-opted. I am to ask that the names of suitable Indians may be intimated to this Department as soon as possible."

3. The officer nominated by the Home Department to serve as a member of the committee was Mr. S. R. Hignell, C.I.E., I.C.S.

Owing to my duties in connection with the Imperial Legislative Council, I was unfortunately prevented from presiding over all the meetings of the Committee and was compelled to return to Delhi from Calcutta when the remainder of the Committee proceeded to Madras. I rejoined my colleagues at Bombay. During my absence Mr. Hignell officiated as President.

Lieutenant-Colonel Rind was unable, owing to his duties at Army Headquarters, to accompany us on tour, or to serve with the committee after our return to Simla. Major M. T. Cramer-Roberts, D.S.O., of the Adjutant-General's Branch at Army Headquarters, took his place on the Committee.

Three Indian gentlemen, instead of two, were co-opted as members of the Committee. These were the Hon'ble Colonel H. E. Banatvala, C.S.I., I.M.S., Inspector-General of Civil Hospitals, Assam, Lieutenant-Colonel Bhola Nath, C.I.E., I.M.S., and Sir Temulji B. Nariman, Kt., of Bombay. Lieutenant-Colonel Bhola Nath and Sir Temulji Nariman served with the committee during our sittings at Calcutta, Madras and Bombay. Colonel Banatvala was not relieved of his civil duties in time to join us before we reached Bombay. He sat with us there, and continued to serve on the Committee after our arrival at Simla. He has taken part in all our consultations here and authorises us to say that he concurs in all our recommendations.

The only other officer whom we co-opted was Lieutenant-Colonel H. Ross, O.B.E., I.M.S., Assistant Director-General, Indian Medical Service (Stores). He assisted our colleague, Lieutenant-Colonel A. Shairp, C.M.G., in examining the question of the future organization of the Medical Store Department.

4 The Committee assembled at Delhi on the 22nd January, and examined the first witness there on the 11th February. The time allowed for our enquiries was, as we speedily discovered, very short, as they obviously must embrace a variety of thorny and delicate questions. We considered that we would be most likely to elicit full facts and real opinions if we sat *in camera*. We, therefore, held our sittings in private throughout—they numbered 46 in all.

On the 23rd February we proceeded on tour, visiting successively Lucknow, Patna, Calcutta, Madras and Bombay, and examining witnesses at each of these places. On the conclusion of our inquiries at Bombay we proceeded to Simla to prepare our report. While at Delhi, and on tour, we examined in all 102 witnesses, consisting of 43 officers of the Indian Medical Service (including 3 Indians) 4 officers of the Army Medical Service and Royal Army Medical Corps, 7 members of the Indian Medical Department, 21 independent private practitioners (of whom 6 were Europeans and 15 Indians), 9 civil assistant surgeons, 5 civil sub-assistant surgeons, 2 medical missionaries, 6 non-official Indian gentlemen not connected with the medical profession, and 5 other witnesses including the Adjutant-General in India and a representative of the Government of Bombay. Among the 43 Indian Medical Service officers were 2 Surgeons-General with Local Governments, 5 Inspectors-

General of Civil Hospitals and 3 Medical Storekeepers to Government. The views of 5 Local Governments were presented to us by officers of the Indian Medical Service, who appeared as witnesses. The Government of Burma sent us a written statement of their views. We received other written statements from public bodies and individuals. At the end of our examinations of witnesses our co-opted colleagues favoured us with their views which are submitted with the records of these examinations.

5. The sub-committee formed to consider the future organization of the Medical Store Department visited the Government Medical Store Depôts at Lahore, Calcutta, Madras and Bombay. The main committee visited the depôts at the three last-named places, and examined the Medical Storekeepers on the spot.

6. We have carefully considered the views of the non-official Indian members of the Imperial Legislative Council, as expressed in the debate of the 8th March, 1918. We invited the mover of the resolution on that occasion to favour us with any further expression of his views. He informs us that they remain unchanged.

7. Whenever asked if statements or evidence were to be treated as confidential, we have always replied that the decision of that question rested with the Government of India, but that, so far as we were concerned, the report and its appendices would be confidential.

8. We submit separate volumes containing the evidence recorded and the more important papers which have been placed before us.

9. We have to express our great obligation to all who have assisted us, to the witnesses, to the Governments of the various provinces, and to the Heads of Departments at Delhi.

10. We have framed a scheme for a unified medical service; but, as we have stated in the report, we fully realise that this scheme cannot be carried out unless it commends itself to the War Office. We trust that it will be acceptable, as it is, in our opinion, the only scheme of a unified service which is practicable; and if a unified service be not introduced, many present difficulties will continue. We should state that it was impossible to separate our work into two parts, and to submit two reports as was contemplated by the orders of the Government of India. The formulation of our scheme demanded as careful an examination of details as we could accomplish within the time, and has occupied us continuously up to the very day of submitting this report.

11. We endeavoured to estimate the financial effects of our proposals, but found time and data alike insufficient for the purpose. Moreover, we understand from paragraph 3 (iv) of the Secretary of State's despatch of the 11th October, 1918, to the Government of India, that what is required of us is to produce a scheme the details of which can be worked out in England.

12. In conclusion we wish to bring to your favourable notice the valuable and untiring labours of our Secretary, Major A. A. McNeight, I.M.S., to whom we are greatly indebted.

I have the honour to be,

SIR,

Your most obedient servant,

H. V. LOVETT,

President, Medical Services Committee.

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REPORT.

CHAPTER I.

INTRODUCTORY.

1. WE have been directed to examine and report on the question of the re-organization of the medical services in India, both civil and military. We are to do this from the standpoint that it is desirable that there should be, if possible, a unified medical service for India. We are first to formulate a general scheme for the future re-organization of the medical services. We are then to examine the position, under our scheme, of military and civil assistant and sub-assistant surgeons, and of provincial subordinate medical services, as well as the future organization of the medical stores department. In dealing with these points we were invited to form sub-committees, co-opting, if necessary, other officers to serve thereon, and further co-opting one Indian officer of the Indian Medical Service and one Indian private practitioner. **Purpose of appointment of this Committee.**

2. The medical services in India are, first, the Royal Army Medical Corps, which is headed and directed by majors-general and colonels of the Army Medical Service, and, secondly, the Indian Medical Service. The Royal Army Medical Corps is exclusively military and solely concerned with the care of British troops. It forms part of a powerful and highly efficient corps which is entrusted with the medical and sanitary care of the British Army in all parts of the world. Its strength in India is determined by the War Office, which nominates the officers detailed for duty in this country. The normal tour of service in India for a Royal Army Medical Corps officer is five years; but this period may be extended to seven years. The sanctioned establishment of Royal Army Medical Corps officers in India is 320. Of these, 15 hold staff appointments and the rest perform executive duties. The arrangement provides 4 Royal Army Medical Corps officers per mille of a pre-war garrison of 75,000 British troops. This strength includes a leave reserve and allows for casualties, but it does not provide any war reserve whatever in this country. A short history of the Royal Army Medical Corps is given in our annexure I. **Medical services in India—the Royal Army Medical Corps.**

3. The Indian Medical Service is primarily military,* but its considerable war reserve has hitherto been employed on civil duties. Four hundred and twenty-two civil medical appointments may be held by Indian Medical Service officers, but of these 133 are not absorbed by the ordinary war reserve, and some may be held by medical men who do not belong to the Indian Medical Service. **The Indian Medical Service.**

The civil duties performed by Indian Medical service officers have been described in paragraph 3 of annexure XII of the report of the Public Services Commission (page 246) in the following terms:—

> "(*i*) attendance on the police and on all Government servants entitled to free medical attendance;
> "(*ii*) the administration and inspection of all Government hospitals and dispensaries;
> "(*iii*) the charge of the headquarters hospital of each district and the performance there of the more important surgical operations;
> "(*iv*) the medico-legal work connected with the administration of justice;
> "(*v*) the examination of recruits for the army, police and State employment generally; and
> "(*vi*) the issue of health certificates to all Government servants."

* "The question whether the Medical Service is primarily military or civil is one which has repeatedly been brought forward during the century and a half of its existence. On two occasions in the eighteenth century, in 1766 and again in 1796, it was divided into two separate services, military and civil. On both occasions separation was found impracticable and the two services were speedily again united. With these two exceptions, the question has always been decided in one way, and has been finally so settled. This decision is, that officers of the Indian Medical Service are all primarily military officers, that those in civil employ are only temporarily lent for civil duty, in which they form a reserve for the army, and that they are all liable to recall to military duty at any time." Crawford, *History of the Indian Medical Service*, vol. I, page 249.

The Commission go on to state that there are also other duties of a quasi-medical character, particularly in connection with jails and the public health, which, as a matter of economy and convenience, are entrusted to medical officers in addition to their public duties. To perform all these duties a regular service of officers is maintained in each province. At the head of these organizations is the surgeon-general in Madras, Bombay, and Bengal, and the inspector-general of civil hospitals in other provinces. Below them, at the headquarters of each civil district, is a medical officer, known in Madras as the District Medical and Sanitary Officer, and in other provinces as the Civil Surgeon. The civil surgeon has under his orders a provincially recruited staff of assistant and sub-assistant surgeons.

The Commissioners say, and say truly, that, "in the present conditions of India, if there were no State service there would be large tracts of country which would be left without any regular provision of medical relief. We are also convinced that State control is necessary in order to secure the continued and extended diffusion in India of western medical knowledge." These remarks this Committee entirely endorses for reasons which we shall state further on. The Indian Medical Service has not only performed its military functions, administered jails, asylums, and dispensaries, and initiated measures relating to sanitation and public health—it has conducted the medical education of the country. That education is, as we shall show later, in a decidedly incomplete state.

All officers of the Indian Medical Service at first serve with troops. After two years' service they may apply for civil employment in particular provinces, but of late transfers have not generally taken place until after the completion of 6 or 8 years' service. Before the war about 62 per cent. of Indian Medical Service officers were ordinarily in civil employment, and each of these could be reverted to military duty at his own request. The total strength of the service at the same period averaged from 750 to 775, including leave reserves. In March, 1914, the number of officers on military duty was 265, of whom 19 were employed in staff and administrative appointments. The remaining 246 were employed on executive duties in connection with Indian troops and followers, giving a ratio of 1·28 per mille. The total strength of Indian Medical Service officers in civil employment at the beginning of August, 1914, was approximately 470. Of these 331, distributed among 7 calls, were looked upon as available for military duty in the event of general mobilization. In fact, about 350 officers were reverted from civil to military duty before the end of the war. Even these, however, did not suffice for military needs, and it was found necessary to utilize the services of private practitioners and civil assistant surgeons. At present the Indian Medical Service includes about 800 Indian temporary officers.

Military subordination of both services to the Director, Medical Services in India.

4. Both the Royal Army Medical Corps in India and the Indian Medical Service are, so far as military work is concerned, under the Director, Medical Services in India. He is a staff officer of the Commander-in-Chief and is charged with the distribution of the entire medical forces at the disposal of His Excellency. He is not, however, responsible for the recruitment, promotion or retirement of officers of either service, except, to the extent stated below, for the promotion of Indian Medical Service officers. These responsibilities pertain, in the case of the Royal Army Medical Corps, to the Director-General, Army Medical Service, at the War Office, and in the case of officers of the Indian Medical Service to the Director-General of that service, who is ordinarily a member of the Imperial Legislative Council, and works with the Government of India in regard to civil matters through the Home Department. In promoting his officers he has to obtain the concurrence of His Excellency the Commander-in-Chief, whose adviser in such matters is the Director, Medical Services. The latter has hitherto been an officer of the Army Medical Service and, although the appointment may be held by an Indian Medical Service officer, it has in fact never been so held, except for short periods in an officiating vacancy.

The fact that the Director-General, Indian Medical Service, cannot promote even officers in civil employment without obtaining the concurrence

of the highest military authorities is explained by the circumstances that at any time such officers may be needed for active service with troops, and that, even in peace time, some are reverted to military duty after years of civil employment and given military administrative appointments after short periods of preliminary training.

Comparative advantages of the two services.

5. It follows then that, although an officer of the Indian Medical Service has often been for years together in civil employment, he has in fact always been largely subordinate to a military chief and has been liable to recall to military duty. An officer of the Royal Army Medical Corps, on the other hand, has served always in India as a military officer pure and simple. In peace time the Indian Medical Service officer has had more varied chances and more opportunity of adding to his income by private practice. But in time of war, and especially during the past four and a half years, Indian Medical Service officers who have served for years in civil employ have been at some disadvantage in comparison with officers of a purely military medical service. It is not unnatural that a measure of friction has resulted. This friction existed before the war; but in endeavouring to frame some plan for removing it, we have found ourselves confronted by larger issues; and, in order that these may be thoroughly grasped and that the ground may be cleared for the consideration of constructive proposals, we will endeavour to trace briefly the history of our subject for the past thirty years.

History of the Royal Army Medical Corps in India and of the Indian Medical Service from the year 1879. The proposals of that year.

6. After receipt of the report of the Indian Army Commission of 1879 the Surgeon-General, Her Majesty's Forces in India, and the Surgeon-General with the Government of India (who then corresponded to the present Director, Medical Services in India, and Director-General, Indian Medical Service) were directed to draw up a scheme for the unification of the Army Medical Department and the Indian Medical Service into a single service under the Government of India. They fulfilled their mission and submitted proposals, which were not, however, approved by the War Office. That authority propounded an alternative scheme recommending that the whole charge of the army in India, British and Indian, should be handed over to the Army Medical Department, and that in future the Indian Medical Service should confine its energies to civil work. This scheme was promptly rejected by the Government of India, and nothing was done.

The proposals of 1897-1902.

7. In the year 1897, the Army Medical Department, which had become the Army Medical Staff, was unpopular and unable to attract sufficient recruits. The Indian Medical Service however was, and had been for years, in a highly flourishing condition. The Secretary of State for War (Lord Lansdowne) addressed the Secretary of State for India to the following effect: "The time has come to consider whether this difficulty cannot be successfully overcome by the severance of that portion of the Army Medical Staff which is necessarily and permanently required for Indian Service, from that which is sufficient for the Imperial Service at home and in the Colonies, and by a corresponding increase of the Indian Medical Service."

Discussion took place, and eventually in 1901 the Secretary of State for India addressed the Government of India proposing:—

(*a*) that the establishment of officers of the Army Medical Staff, which had become the Royal Army Medical Corps, serving in India should be increased by 40; and,

(*b*) that the rates of pay of officers below the rank of major while serving in India should be increased so as to bear to the proposed British rates the same ratio that then existed between the British and Indian scales.

To this the Government of India replied on the 13th of February, 1902.

They pointed out that the existing strength of Royal Army Medical Corps officers in India (322) was sufficient for peace requirements. The proposed addition must therefore be regarded as an addition to the war reserve. It was unnecessary for India to maintain a larger reserve of Royal Army Medical Corps officers for war; whatever additional number of officers might be necessary for war should belong to the Indian Medical Service, which could employ its officers usefully in either war or peace service in this country. An

available surplus in the Royal Army Medical Corps could not be utilised on peace service, and could not be employed to relieve a strain on the Indian Medical Service.

The Government considered that the existing system of maintaining the two services side by side promoted friction. They considered the arrangement an anachronism, only justifiable in the days when the army of the East India Company was entirely separate from that of the Crown. The real desideratum was a single medical service for the whole army in India—British and Indian. To obtain this, either the military side of the Indian Medical Service must be divorced from the civil side and united to the Royal Army Medical Corps, which would then supply medical officers for the whole army in India; or charge of British troops in India must be taken away from the Royal Army Medical Corps, and all the medical work, whether military or civil, must be undertaken by the Indian Medical Service.

The first alternative Lord Curzon's Government rejected on the following grounds:—

(*a*) separation of the military from the civil side of the Indian Medical Service would result in the deterioration of both;

(*b*) the war reserve, then economically provided by the liability of recall to military service of medical officers in civil employ, would disappear;

(*c*) it was impossible for the Royal Army Medical Corps to take over charge of the Indian Army, as that service was unpopular and could hardly be kept at its then existing strength.

The second alternative Lord Curzon's Government advocated. They put forward the following arguments:—

(*a*) it would not, in their opinion, be injurious to the officers of the Royal Army Medical Corps to close to them the field of Indian service;

(*b*) the exclusion of the Royal Army Medical Corps from India would not tend to any narrowing of the professional attainments of officers of the Indian Medical Service. (No difficulty was then found in maintaining the high standard of qualifications possessed by officers entering that service);

(*c*) they thought that a reduction in the proportion of civil appointments to the total strength of the Indian Medical Service would not seriously impair the attractions of that service;

(*d*) only nine Indians had received commissions in the Indian Medical Service during the preceding two years, and it was therefore obvious that it would be easy to arrange that this small proportion should always be employed with Indian troops, or in the civil department, so as to keep a legitimate career open to the best Indian talent;

(*e*) efficiency would be promoted; friction would disappear; power would be economized; the machine would work more smoothly; the Director-General, Indian Medical Service, would administer the whole service.

It was proposed to call for volunteers from the Royal Army Medical Corps for permanent service, and (among senior officers) for temporary service, in India.

The Government of India submitted a detailed scheme in accordance with their proposals, but the Commander-in-Chief, while signing the despatch, added a note which entirely dissented from its main proposition. He was strongly against the abolition of the Royal Army Medical Corps, so far as India was concerned. He also considered that "it would be most unwise to divorce the civil from the military side of the Indian Medical Service." He gave clear and substantial reasons for his views.

The proposals of the Government of India for a unified medical service were not accepted by the Secretary of State.

ord Morley's oposals and scussion ereon.

8. The years 1903-8 were marked by a very rapid development of educated Indian ambitions, and the then Secretary of State, Lord Morley, consulted the Government of India on the possibility of fostering the growth of an inde-

pendent medical profession in India by transferring to independent practitioners some of the posts then held by officers of the Indian Medical Service. The Government of India replied that, as about one-third of the Indian Medical Service officers in civil employ did not form part of the real war reserve, there would be no military objection to the transfer to independent practitioners of the civil appointments held by them. They stated, however, that any transfer of this kind should be gradual, tentative, and mainly from the bottom; that it should be made only as really qualified candidates became available; that nothing should be done to lower the efficiency of the medical schools and their hospitals; that a sufficient number of civil appointments should be reserved in order to provide for the economical employment of the war reserve of the Indian Medical Service, and that, in determining what these appointments should be, the necessity of maintaining the attractiveness of the Indian Medical Service should be borne in mind. Lord Morley agreed and asked to be informed of the measures which the Government of India would suggest in order to carry out their proposals. At the same time he ruled that no further increase of the Indian Medical Service could be allowed, and that efforts must be made to reduce its strength by gradually and increasingly recruiting in India independent medical practitioners. The Government of India then consulted local Governments, and replied to the Secretary of State that, in their original despatch, they had " gravely underestimated objections," on other than military grounds, to the contemplated transfer of appointments. They were now of opinion that the mere transfer of a certain number of Government appointments from the Indian Medical Service to private practitioners would not materially encourage the growth of an independent medical profession; that most of the civil appointments then held by the Indian Medical Service could not suitably be given to men not in regular Government service, with whom private practice would naturally be the first consideration; that the retention of a considerable number of superior civil medical appointments for the Indian Medical Service was essential, not only in the interests of administrative efficiency, but also for the purpose of making the service itself attractive to able medical men. It was important to do nothing which would lower the attractiveness of the Indian Medical Service; and, even though there might be no objection, from the military point of view, to the transfer to independent practitioners of the civil appointments held by one-third of the Indian Medical Service officers in civil employ, it was obvious that the subtraction of these appointments would greatly impair the advantages of the service.

The Secretary of State (Lord Crewe) accepted these views. He, also, was of opinion that the question of the steps to be taken to promote the growth of the unofficial medical profession in India must be treated as distinct from that of limiting or reducing the civil cadre of the Indian Medical Service. He considered that the criterion to be adopted was that the Indian Medical Service should be restricted to the military needs of the country, both from the point of view of economy and from that of the desirability of increasing as far as possible the number of important posts held by Indians. He subsequently asked for some form of statement showing approximately the manner in which military requirements were estimated from time to time, in order to facilitate a closer scrutiny of any proposed additions to the civil cadre of the Indian Medical Service. In reply, the Government of India wrote on the 5th March, 1914: "The civil side of the Indian Medical Service is the medical war reserve of the army in India, and in the event of the mobilization of the field army on a large scale our deficiency in medical officers (Royal Army Medical Corps and Indian Medical Service) would be in round numbers 360, of which the shortage in the Indian Medical Service would be about 150, while in addition there would be a deficiency in military assistant surgeons of 246. We feel no doubt that Your Lordship will be convinced by the figures referred to that the civil side of the Indian Medical Service can be largely increased without exceeding potential military requirements." This correspondence was edited and published in 1914.

Discussion of 1911.

9. In 1911, the question was further considered in the Army Department of the Government of India. The number of Indians entering the Indian

Sir Pardey Lukis's note.

Medical Service was materially increasing. Again it was proposed to make the Indian Medical Service a purely civil service and to organize the Royal Army Medical Corps in such a manner as to enable it to fulfil all military requirements. Indians would enter the former but not the latter. A full and interesting note was recorded by Sir Pardey Lukis, then Director-General, Indian Medical Service. He objected that the scheme would abolish the Indian Medical Service war reserve. There was already a complete mobilization scheme, and the civil authorities were bound to supply 326 officers, distributed over six calls. In fact, complete mobilization of the Indian Army would require a total number of 652 executive Indian Medical Service officers. Sir Pardey Lukis supported this statement by figures. He pointed out that 234 Indian Medical Service officers were in military employ. This figure included officers on furlough; the number who would be medically unfit might be computed at 5 per cent, or 12 in all; 326 officers might be surrendered from civil employ, making a total of 548 officers available for 652 appointments. In no way could this reserve be replaced either from England or from the independent medical profession in India. The introduction of the 5 years' curriculum had materially decreased the number of medical students in England, and the employment of civilian practitioners in war had been by no means an unqualified success. The independent medical profession in India was chiefly represented by 201 European and Eurasian, as well as 49 Indian practitioners with British qualifications. The majority of these were under contract with private firms and companies. The best men among ordinary Indian practitioners were enjoying lucrative practices among their fellow-countrymen. The army could not afford to lose the services of " well-trained and highly qualified civil surgeons, all of whom possess four to seven years' previous military experience; who have an intimate knowledge of the country, and who have had unrivalled opportunities of acquiring skill as operating surgeons, and as administrators of large hospitals."

Sir Pardey Lukis went on to show the large percentage of higher qualifications among Indian Medical Service officers, especially in the matter of surgery. He proved that the standard was still being maintained, and that the death rate among Indian troops had within the past 30 years fallen from 39·22 to 5·62, while that among British troops had only fallen from 24·85 to 6·25. He emphasized the valuable services rendered by Indian Medical Service officers in civil employ in connection with the training of the assistant surgeons and sub-assistant surgeons who constitute an important part of the personnel of British and Indian military hospitals and, when drafted to civil employ, go to swell the numbers of the war reserve. He referred to the work done by Indian Medical Service officers in imparting post-graduate instruction to officers of both services. He asserted that if, as a military medical machine, the Indian Medical Service fell short of the standard attained by the Royal Army Medical Corps, this deficiency was due to the maintenance in the Indian army of the obsolete regimental as opposed to the station hospital system.* The latter should be introduced and specialists should be grouped at brigade and divisional head-quarters, as was done in the case of the Royal Army Medical Corps.

Sir Pardey pointed out, however, that the medical schools in England were beginning not to send their best men into the Indian Medical Service as the future of that service was considered uncertain. Indian candidates were thus entering in greater number, but, if the Government of India would definitely proclaim that they contemplated no further radical change in the constitution of the Indian Medical Service, equilibrium would be re-established.

He considered that the grievances of Indian Medical Service officers in military employ were remediable and that to convert the Indian Medical Service into a civil service would mean worse men and higher salaries. " With all the glamour of military rank and titles taken away, is it conceivable that good men will come to India to struggle for a pittance with the ever increasing

*See " Note on the Introduction of the Station Hospital System for Indian Troops " (Annexure II).

tide of Indians, except on the condition that they receive far higher pay than they do at present?"

Sir Pardey Lukis's note resulted in the dropping of the question. It was intended that a station hospital system for Indian troops should be inaugurated, but this intention was not carried out till quite recently. It was believed in some influential quarters that the maintenance of the regimental doctor was better adapted to the needs and administration of the Indian Army.

Declining popularity of the Indian Medical Service.

10. With effect, however, from the time when Lord Morley's proposals and views regarding the future of the Indian Medical Service became known, uncertainty as to its prospects began to affect competition for entrance in England. Indian candidates too increased, and Indian private practitioners, who had been for some years growing in numbers and improving in quality, greatly extended their practice among their fellow-countrymen. Private fees and practice had already been by regulations restricted for Indian Medical Service officers, and dwindled rapidly before this extra competition and rising Indian nationalism. Salaries, however, remained absolutely stationary. The service speedily declined in popularity, and in September, 1913, the Secretary of State for India invited the assistance of the British Medical Association in order to ascertain the causes of discontent. After careful inquiry, the Association drew up a memorandum which was placed by the Secretary of State before the Indian Public Services Commission which sat in London in July, 1914. The chief points dealt with in the memorandum were: (1) the inadequate scale of remuneration; (2) the difficulties in obtaining ordinary and study leave; (3) the constant irritating and damaging interference with private practice; and (4) the unsatisfactory position of the director-general and surgeons-general in relation to the Government of India and local Governments. Evidence on these matters was given by Colonel Elliott, on behalf of the Association, before the Public Services Commission. The Commission supplemented this evidence by the testimony of a number of witnesses examined in India.

The recommendations of the Public Services Commission.

11. Their report was completed on the 14th of August, 1915, but was, on account of the war, not published until January, 1917. Their field of inquiry was limited to civil services, imperial and provincial. It related to "the method of recruitment and the systems of training and probation; the conditions of service, salary, leave and pensions"; and last but not least "such limitations as still exist in the employment of non-Europeans and the working of the existing system of the division of services into imperial and provincial." In dealing with medical services they included in their inquiry all those appointments which, though not necessarily medical in character, were then filled by officers possessing medical qualifications, *e.g.*, the professorships, chemical examinerships and their connected posts, and the posts in the alienist, bacteriological, sanitary, and jail departments. The more important of these were then filled by officers forming the war reserves either of the Indian Medical Service or of the Indian Subordinate Medical Department. The Commission dealt with pre-war conditions. They found that there were 772 Indian Medical Service officers in all, of whom 475, or 62 per cent., were engaged on civil duties. In the assistant surgeon branch of the Indian Subordinate Medical Department there were 713 officers, of whom 41 per cent. were in civil employment. Only a few of them held superior appointments. Altogether, out of a total of 566 officers in superior civil medical employment within the sphere of the Commission's investigations, 493, or 87 per cent, were military and 73, or 13 per cent., were civil officers.

The Commission observed that the dependence of the civil medical administration on the military was a subject of complaint on the part of most non-official witnesses. It was, however, obvious that under the existing arrangements the civil medical work of the country had hitherto been performed satisfactorily and economically, and that no case had been made out, either on the ground of expense or of efficiency, for ceasing to employ the medical war reserve of the army in India on civil duty. As regards the needs of the civil population, Government must obtain such additional assistance as might

be necessary by some form of civil recruitment. The machinery of the present system had stood the test of previous wars, but must be re-examined in the light of experience gained in the present great war.

The Commission laid stress on *the necessity for calculating separately on their merits the needs of the army and of the civil administration, and for abandoning the idea that the civil medical administration should be dependent on the requirements of a military reserve.* "At the conclusion of the war," they wrote, "it should be possible to estimate more closely than has hitherto been the case what are the military requirements, and to what extent these can be met by private practitioners in England or in India. Calculations should also be made, and reviewed from time to time, of the civil needs of the country, and a purely civil machinery should be created to meet all civil requirements. The officers forming the medical reserve of the army should be admitted to the civil cadres so formed. But if, after an estimate has been made of the military requirements in time of war, it is found that the number of Indian Medical Service officers available for civil employment, as determined solely by military requirements, is insufficient for the needs of the civil administration, then every civil medical post for which no war reserve officer is available should be filled by civil recruitment, the method of which we shall proceed to indicate."

They recommended imperial and provincial civil medical services. The provincial medical services would, in each province, carry out duties of minor importance, and would be called after the name of their province, Madras (Bombay, or Punjab) Civil Medical Service. The Commission wrote as follows: "Officers of the Indian Medical Service, who have been admitted permanently to the Indian Civil Medical Service, should be at the disposal of the military authorities only if they are not of administrative rank, and only in the event of war. The present practice by which senior officers on the civil side are promoted to hold medical commands on the military side towards the end of their careers produces an unnecessary disturbance, and should be discontinued in the case of all future entrants. Officers already in the service should maintain their existing privileges."

They further recommended that, if the military reserve were increased so largely as to endanger seriously the maintenance of a civil element in the civil medical administration, it should be considered whether a minimum number of civil officers in the civil medical service should not be fixed. They thought it important that the military officers admitted to civil cadres should take their place with civilian officers in the manner in which officers of the army hold Indian Civil Service posts in the regulation provinces, or are employed in the Public Works and Railway Departments. Steps should also be taken to secure that, even under the gravest war conditions, the civil cadres should not be unduly depleted, and in particular that no dislocation of the educational and scientific work of the country should take place. They would entrust the imperial Indian civil medical service mainly with the work of supervision. It would include all the civil surgeoncies and posts of similar or superior position; and all the officers holding them should be on one list with seniority as amongst themselves, counting from the day of their entry on the list. All would be equally eligible for appointments of a purely civil character.

As regards appointments in the civil medical service not reserved for the war reserve of the Indian Medical Service or for officers of that service, they would fill these by the promotion of assistant surgeons and otherwise by direct civil recruitment, regard being had to the special needs of European officers entitled to free medical attendance and of their families.

The Commission recommended increases of salaries for higher administrative officers, and a temporary increase of 12½ per cent. in the salaries of all other officers of the Indian Medical Service.

cumstances which the mmission ported.

12. These were the main proposals of the Public Services Commission.

Two Indian members, Sir Mahadeo Chaubal and Mr. Justice Abdur Rahim, submitted separate notes. The former recommended that only a fixed

proportion of the war reserve should be employed in the civil medical administration. Mr. Rahim recommended that military officers should be admitted only to a limited proportion, about one-third, of the superior appointments in the civil medical service. The proposals of both these gentlemen were dictated by the desire that civil should not be subordinated to military requirements. This, in a minor degree, was the view of the Commission.

At the time of the Commission's inquiries, out of 772 officers in the Indian Medical Service, 54, or 7 per cent. were Indians; but the number of Indians competing in the entrance examinations in London had risen from 5 in 1910 and 3 in 1911, to 8 in 1913 and 14 in 1914.

It must be noted that the Commission considered one side only of the problem before us, and also that they wrote before the scheme of provincial decentralization proposed by the Montagu-Chelmsford report had come into outline, and before the present great shrinkage of medical students and medical men in England had occurred. It does not appear that anything of this kind entered into their calculations. Thus they did not take into account various factors which have perplexed us.

As we have already shown, their report was pigeon-holed from August, 1915, to January, 1917. Nothing whatever was done to alleviate the discontent of the Indian Medical Service, and in the meantime events moved fast. The great war had begun before the report of the Public Services Commission was completed and, as it proceeded, gradually searched out weak spots and defects in military preparations and organization.

The medical services and the War.

13. Twelve officers (5 lieutenant-colonels, 5 majors and 2 captains) on the Indian strength of the Royal Army Medical Corps were on leave or sick leave in England on the 4th August, 1914. These were all transferred to the home establishment. Between the beginning of the war and the 31st December, 1915, 38 more officers of the Army Medical Service and Royal Army Medical Corps (12 colonels, 11 lieutenant-colonels, 9 majors and 6 captains) were transferred from India to England. Other regular officers of the British medical services left India for service with the Indian Expeditionary Forces in addition to those who had actually accompanied them on mobilization. In place of these officers whom she gave up, India received 82 Royal Army Medical Corps officers (1 lieutenant-colonel, 3 majors, 30 captains and 48 lieutenants). Only 3 of these were regular officers; the remainder belonged to the Territorial Force, or Special Reserve, or held temporary commissions. It is therefore, obvious that the War Office used the Army Medical Service and Royal Army Medical Corps contingent in India as a valuable trained reserve, for spheres of war outside India.

The civil side of the Indian Medical Service was considerably depleted by the war. On the 8th of April, 1915, the Director-General, Indian Medical Service, prepared a memorandum showing that, whereas under existing arrangements the civil administrations were bound to surrender 337 officers on mobilization, they had in fact already surrendered 286 officers, and had warned 15 more to be in readiness to proceed on active service without delay, should their services be required.

The following officers had been surrendered: 188 civil surgeons, 15 officers on plague duty, 17 superintendents of central jails, 8 professors, and 13 officers employed on bacteriological work. Minor details are needless.

The vacancies so caused had been filled by various expedients, principally by recalling all officers from leave and by promoting civil assistant surgeons of the provincial services. Only 15 had been filled by the employment of private medical practitioners, or uncovenanted medical officers; 31 had been filled by appointing civil surgeons to be in visiting charge of neighbouring districts; while 11 had been filled by placing civil surgeoncies in collateral charge of officers in military employ. The administrative charge of central jails had been made over either to members of the Indian Civil Service or to police officers, or to retired military assistant surgeons and uncovenanted officers who, whilst on the active list, had been in charge of district jails. Whenever a non-medical officer was placed in administrative charge of a

central jail, the civil surgeon took over the medical duties connected with the jail, as a collateral charge. Great care had been taken to prevent any interference with teaching in the various medical colleges. Only 8 officers holding professorial appointments had been surrendered. One hundred and thirteen military assistant surgeons had been reverted to military duty.*

The total number of Indian Medical Service officers in civil employment who were surrendered for military duty between the 4th August, 1914, and the 31st December, 1918, was 393. During the same period 71 officers were returned to civil employment. The 393 officers surrendered included 197 civil surgeons, 15 officers on plague duty, 36 superintendents of central jails, 6 superintendents of lunatic asylums, 24 professors, 24 officers of the bacteriological department, and 28 of the sanitary department.

The Indian Medical Service and the War.

14. The war thus meant dislocation in the domestic and financial arrangements of many Indian Medical Service officers. Some, too, on returning to military duty of a peculiarly exacting kind, after years of civil employment, found themselves at a disadvantage when serving alongside officers of the Royal Army Medical Corps who had devoted the whole of their active careers to the army. It is clear, moreover, from the reports of the Mesopotamia and Vincent-Bingley Commissions, that many Indian Medical Service officers must, for the first two years or so, have suffered severely in the field for the manner in which military medical expenditure in India had been starved in the past, for the long continued omission to introduce the station hospital system, and for the lack of sufficient medical personnel and equipment. The deficiency in assistant surgeons and sub-assistant surgeons was severely felt in Mesopotamia, and other medical establishments were quite inadequate. The supply of stores also was unsatisfactory. The reports referred to above, while strongly emphasizing the evils of parsimony in medical administration, suggest the conclusion that, as the medical organization of an army is an integral part of its military organization, its administration will be best conducted by officers whose training has been almost exclusively military. The reports advised the immediate institution of the station hospital system in the Indian Army and their advice has since been followed. Their publication exercised a further depressing influence on a service already depressed.

It is clear from various evidence that cases of friction between officers of the two medical services occurred during the war. It is probable that these largely resulted from their some times widely different antecedents, and from the fact that, while the one service had been exclusively military, the other had not. It is certain that many officers of the Indian Medical Service expressed their grievances to the British Medical Association in strong terms. "We have received," said Colonel Elliot to the Secretary of State last June, " a large number of letters containing cold details of the financial position of the writers, shewing that they have been living on their savings or on their other sources of private income for the past three-and-a half years, and are now heavily in debt. They complain that their services have not been used to the best advantage, and that they have been constantly superseded by officers junior to them in other branches of the medical organization, and that they are not being paid a living wage."

The Government of India and the Secretary of State addressed themselves to remedy some of these grievances. They improved the rates of staff pay in the field; they developed a system of accelerated and acting promotion to prevent supersession of Indian Medical Service officers by officers of the Royal Army Medical Corps, and they took other steps. But in the meantime the report of the Public Services Commission had been published; political ambitions were speaking loudly in India, and the interests of the Indian Medical Service were assailed from a political quarter.

Indian political views regarding the future of the medical services in India.

15. On the 8th of March, 1918, the Hon'ble Mr. Sastri, a prominent politician, moved a resolution in the Imperial Legislative Council recommending the constitution of a civil medical service which should be wholly independent of the medical organization of the Indian Army; that the higher

*See page 20 of the Report of the Public Services Commission.

medical posts, at present filled by officers of the Indian Medical Service, should be transferred to the civil medical service; and that the civil medical service should be recruited from the civil medical officers and the independent medical profession.

He also proposed that the salaries of Indian Medical Service officers employed on civil duty should not be enhanced as recommended by the Public Services Commission; and that military assistant surgeons should not be given preference over civil assistant surgeons, and should not receive more than one-sixth of the higher posts reserved for subordinate medical officers.

Mr. Sastri's first argument was that the civil medical service of the country should not be kept in subordination to the military, so that, when trouble came, there were "absolute dislocation and paralysis of civil work throughout the country. The interests of the civil medical service are paramount in themselves." He next argued that the "coming in of the Indian Medical Service into civil employ shuts out Indian talent, hinders the progress of the independent medical profession, and makes the civil population, for their ordinary medical needs, depend upon a service, which is called upon to serve in the military both at the beginning and at the end of their careers, and in war time would not be available at all." "When therefore," he said, "we are asking that a complete separation should be made, it is impossible for us to countenance the suggestion that, in order to render civil employment attractive to officers, their salaries should be raised and a further drain imposed on the resources of the country." He urged that professorial chairs, upon the successful occupation of which depends the welfare of millions, should not be treated as the private property of any service constituted primarily for war needs. He finished with the following words: "I do not deny that the Indian Medical Service has done wonders for India in the past. It has produced many eminent doctors. It has contributed much to the sum of medical knowledge. But when all this is said—and I say it with all my heart without meaning to take away anything from the credit due to the Indian Medical Service—let me say that it must not be allowed any more to dominate the whole of the civil medical profession, to keep the children of the soil out of what is their rightful place, and generally to check the growth of the independent medical profession and treat all the professorial chairs and the research chairs as their private appanage, thus producing, as I said before, some harm to the progress of the science itself, and at the same time, in many cases, doing no good to the positions themselves."

In reply to Mr. Sastri, the Director-General, Indian Medical Service, Surgeon-General Edwards, pointed out that 34 members of the Indian Medical Service had gained the blue ribbon of the scientific world, the Fellowship of the Royal Society. He laid stress on the research achievements of the service, on the excellence of the medical colleges, and on the small incomes from private practice as compared with medical incomes in England. Indians were being admitted to the service in steadily increasing numbers. He was not in favour of forming a separate Indian civil medical service. Provincial services could do all that could be done by such a service. The war reserve of the Indian Medical Service would be a nucleus for these. The existence of this war reserve was vital. It was the existence of this reserve that enabled the Indian divisions, when they proceeded overseas, to go fully mobilized, at the most critical period of the Empire's history.

"It is obvious," he said, "that in peace time, if military medical officers are to be kept fully employed, less than half their numbers are amply sufficient to carry on routine duties, and the remainder should be employed on civil work. The Hon'ble Member may say, 'If this is so, why is this not done in the Royal Army Medical Corps?' My reply is, that it would undoubtedly be done, were the British army in peace time stationed in England, and were there a civil medical service into which its surplus medical officers could be drafted."

The Resolution was also opposed by Sir William Vincent, Home Member, on the ground that civil efficiency must be combined with and subserve to military preparedness, and that the imposition of obligations for war

service on purely civil medical officers had, so far as experience went (*e.g.*, in the case of civil sub-assistant surgeons), proved a bruised reed. " We have had," he said, " a number of men who have resigned their appointments, or have been dismissed, rather than accept the alternative of going on service. Further, however efficient civil medical officers may be in civil employment, they must be totally inexperienced in military duties and would have to adjust themselves rapidly in war time to an organization with which they would be entirely unfamiliar, their usefulness being proportionately impaired. Finally, I may say that the removal of purely civil officers in war-time from their ordinary employment would cause no greater and no less dislocation than is at present caused by the removal of Indian Medical Service officers." The Home Member also opposed the resolution on the ground that it was premature, as the present was no time for revolutionizing the medical administration. The Government of India had come to no conclusion on the recommendation of the Public Services Commission that the pay of the Indian Medical Service should be raised. He argued that, if the prospect of civil employment were denied to candidates for a military medical service, that service would expect to be paid at a far higher rate than at present.

The resolution was put to the vote and lost. It was supported by all the non-official Indian members of the Council.*

Sir G. Makins's views.

16. In February, 1918, Sir G. Makins, K.C.M.G., C.B., President of the Royal College of Surgeons of England, after examining much of the work of the Indian Medical Service in peace and in war, recorded an interesting memorandum which appears as annexure III of this report.

The Secretary of State's anxiety for the future of the Indian Medical Service.

17. About the same time the position and prospects of the service were occupying the attention of the Right Hon'ble the Secretary of State, and on returning from India he received an important deputation from the British Medical Association. This deputation expressed extreme disappointment with the recommendations of the Public Services Commission, and emphasized the depressed condition of the Indian Medical Service. In reply, Mr. Montagu stated that the present situation was one which must give rise to the greatest apprehension among those who were responsible for the future of the service, and must reflect a very unsatisfactory state of affairs in the service itself. The question was one of ensuring a supply of good doctors for India. " Just as India," he said, "cannot to-day, or, so far as anybody can see—I was going to say, for ever—do without the services of those who help to govern her, so India cannot command the services of those who help to govern her, unless the Europeans who carry the burden of the Empire in India can be supplied with the best expert medical aid. And therefore, as you, Sir, rightly said, the Indian Medical Service can be regarded as the pivot upon which all other imperial services in India depend. But, over and above that, the Indian Medical Service is a service on which India is mainly dependent for the satisfaction of all its manifold medical and sanitary requirements, and also—and not least—for the education of future generations of medical men in India. I therefore think it is an essential part of our duty to see that the Indian Medical Service should not be allowed to deteriorate, and I can assure you that I am determined to do everything that I can to provide for India a medical service of the highest quality obtainable."

Mr. Montagu mentioned steps which had been taken to alleviate the grievances of Indian Medical Service officers reverted from civil to military duty. He indicated the limitation of professional opportunities which must arise from divorcing the civil from the military side of the service. He stated that he had no objection to according freedom to Indian Medical Service officers to practise privately within " well recognized and quite wide limits." There was no reason why the indigenous medical profession should not grow up in an atmosphere of free competition with highly trained European doctors. He considered that the remuneration offered to the service must be adequate, that the cadre of the service must provide a sufficient leave reserve, and that the service must afford in its organization increased and increasing opportunities for Indians to enter it. Aided schools and colleges

*The report of the debate is reproduced in volume III of this Report.

in India must be developed. Moreover, the conditions of the service must be as free as possible from irritation, friction or annoyance. Therefore the Indian Medical Service and the Royal Army Medical Corps must be considered together, with a view to promoting harmony and, as far as possible, achieving unification. There must also be a drastic re-organization of the relations of the Indian Medical Service with the Government. Mr. Montagu concluded by dealing with recommendations which the deputation had made regarding education and recruitment.

The despatch of the 11th October, 1918.

18. On the 11th of October last the Secretary of State addressed the Government of India, forwarding copies of the above proceedings, and pointing out the principles which he considered essential for observance, if the Indian Medical Service was to be rescued from ruin. He asked that " the whole mechanism by which the medical needs of India (and especially medical education) are to be satisfied in future " should be examined. He pointed out that, if it were decided to amalgamate the Indian Medical Service and Royal Army Medical Corps, the war reserve would be so large as practically to monopolise the civil appointments, and the civil departments would thus become more than ever adjuncts of the military service, a condition of affairs which the Public Services Commission recommended should be abandoned. What was necessary, *at a time when the demand for medical men elsewhere would far exceed the supply*, was to put before the medical profession in England a scheme that would attract to India candidates of the requisite qualifications and in sufficient numbers. Half-measures and provisional schemes were no longer practicable. The details of any scheme proposed by the Government of India must be worked out in England in consultation with the War Office and the medical authorities in England. The views of the Government of India were invited on all these points and on any other measures which seemed likely to improve the position and prospects of the Indian Medical Service.

The pay of the Indian Medical Service raised materially.

19. From the papers which have been shown to us it appears that, after consulting local Governments regarding the proposals of the Public Services Commission to raise the pay of the Indian Medical Service, the Government of India made certain proposals to the Secretary of State in this connection. On the 10th of December last the Secretary of State cabled that an increase of pay of Indian Medical Service officers in military employment equivalent to 33⅓ per cent. of military grade pay, as it stood before the introduction of the station hospital system for Indian troops, was necessary. Civil pay was also to be increased by 33⅓ per cent. of the grade pay which the officers would have drawn if in military employment under the regimental system. The increase would be announced before details had been worked out. The revised scale of pay intended to attract European candidates with the highest professional qualifications.

Appointment of this Committee.

20. The Government of India in the Army Department appointed this Committee. At our first meeting it was explained to us that, although paragraph 2 of our letter of appointment directed us to discuss the question of the re-organization of the medical services in India from the standpoint that it was desirable that there should be a unified medical service, the Government of India did not intend this to prevent us from submitting different proposals, should we consider that a unified medical service would not provide the best solution of the problem.

A brief survey of present circumstances.

21. It is plain from this chapter that, although the problem before us is not a new one, its conditions have altered remarkably since the discussions of twenty years ago. The searching experiences of a prolonged and world-wide war against enemies armed with all the resources of modern science have induced a strong military preference for medical services trained mainly or exclusively with troops in peace-time. The Royal Army Medical Corps is now a flourishing service, while the Indian Medical Service has become depressed and has ceased to attract the British competition which it once commanded so easily. Medical students and medical men in the United Kingdom have been greatly reduced in numbers. We do not know how soon this shortage will be remedied. Medical education in England has become more

expensive, and medical aspirants and their fathers have become poorer. The Government of India will have to face keen competition at a time when in India the political balance has considerably shifted and may shift further. An Indian career occupies a position in popular estimation in England decidedly inferior to the position which it occupied in 1902. But while British competition has so much declined, Indian candidature for all Government services has greatly increased and will go on increasing.

This increase does not mean that the practice of western medicine has made great headway against the indigenous medical systems of India. These systems, the Ayurvedic and Unani, Hindu and Arabic, still appeal to the masses and, in a less degree, to the educated classes. The records of recent debates in the various Legislative Councils on the subject of registration of medical practitioners show this clearly; and it is probable that, when provincial Governments become in some degree dependent on popular votes, they will be frequently urged to spend public money on Ayurvedic and Unani schools and dispensaries. On the other hand, all available funds are badly needed for extending medical relief and sanitary prevention on western lines. This is manifest from the recent speech of the Director-General, Indian Medical Service, in the Imperial Legislative Council, which appears as annexure IV of our report. Major-General Edwards explained in some detail how great is the field for "medical research, preventive medicine, and the education of the people of India in public health measures." We are convinced that, unless vigorously supported and pioneered by thoroughly efficient and energetic Government services, western medicine and methods of sanitation will rather lose than gain ground in this country. However much medical graduates may multiply, they will not spontaneously incline to practice in the villages and smaller towns where no dispensaries have been established by Government or local bodies. Even in the Madras presidency, where English education is comparatively widespread, a recent inquiry showed that in only one of all the towns of 8,000 inhabitants or less was a single registered private practitioner of western medicine to be found working alone in the absence of a dispensary maintained by public funds. We cannot suppose that similar inquiries in other provinces would show any better conditions. An increasing output of medical graduates will multiply aspirants for Government service, and will increase the numbers of independent practitioners in cities and the larger towns, but will not by itself advance western medicine or sanitation in the country at large. It will, however, tend to hasten an already remarkable decline in private practice for officers of the superior Government medical service, and we must take this circumstance into account in considering the prospects of the future.

All these various factors have engaged our attention, but before proceeding to offer constructive proposals, we must give some account of the minor and provincial medical services of the country.

CHAPTER II.

PROVINCIAL AND MINOR MEDICAL SERVICES.

A.—Military.

The Indian Medical Department.

22. THE Indian Medical Department, until last year known as the Indian Subordinate Medical Department, consists of two branches:—

(*a*) the Military Assistant Surgeon Branch, and
(*b*) the Military Sub-Assistant Surgeon Branch.

Military assistant surgeons.

23. Military assistant surgeons are recruited by competition from among Europeans and Anglo-Indians, between the ages of 16 and 20 years. The examination, which is much the same as that of standard VII, takes place early in February at a large number of centres. It is conducted under the orders of the Director of Public Instruction, Bengal, and the vacancies are filled by the Director-General, Indian Medical Service, from among candi-

dates who have obtained over 40 per cent. The paucity of candidates in recent years has necessitated the lowering of this standard to 30 per cent.

Selected candidates are sent as military pupils to the medical colleges at Calcutta, Bombay, and Madras, to undergo a four years' course of professional training at the expense of Government. In the two former places they are accommodated in the hostels provided by Government, in the last-named they make their own arrangements. In each college they are under a superintendent, who is a senior officer of the Indian Medical Department, and are trained in drill, physical exercises, etc., by a British sergeant instructor. On completion of the course, the principals of the colleges report as to the fitness of the students for admission into the Indian Medical Department. Those declared fit are examined by written papers issued by the Director-General, Indian Medical Service, and the total marks obtained determine their position in the general list which is maintained. They are then gazetted as warrant officers, and enter the service as fourth class assistant surgeons.

The shortage of well-educated lads of a suitable class necessitated improvements in pay and prospects. These were introduced in November, 1914. At this time it was determined to change the system of recruitment by competitive examination to one of nomination of selected candidates who had passed a general educational test recognized by the General Medical Council of Great Britain and Ireland entitling them to be registered as medical students. A five years' course was likewise determined on. This would permit of all students obtaining a medical qualification registrable in the United Kingdom. It was intended to enter the students for the membership of the College of Physicians and Surgeons, Bombay, the State Medical Faculty, Bengal, and the corresponding examination in Madras. At the time it was expected that these qualifications would be accepted by the General Medical Council as entitling the holders to registration in the United Kingdom. This anticipation, however, has so far not been fulfilled, and the system of nomination and the extension of the course to five years have been held in abeyance on account of the war.

Owing to the introduction of the Medical Degrees of 1916, it is now necessary that all military assistant surgeons should obtain qualifications registrable in India, and to comply with this act students are now entered for the licentiate examinations of the State Medical Faculty, Bengal, the College of Physicians and Surgeons, Bombay, and the Board of Examiners, Madras. These examinations may be passed after a four years' course. This is a temporary arrangement only, and it is hoped that by the beginning of 1920 it will be possible to introduce admission by nomination with a five years' professional course.

Military assistant surgeons are recruited for service with British troops in India, and are attached for duty to British station hospitals; they do not normally serve with Indian troops or under Indian Medical Service officers. The authorized cadre is 739, of whom 303 are ordinarily in civil employment, forming the war reserve for the army.

Duties.

24. The duties of military assistant surgeons are varied, but in British station hospitals they include those of a clerk, compounder, ward master, steward, and store-keeper. The assistant surgeons maintain discipline in the hospital and see that the orders in connection with the treatment of patients given by the Royal Army Medical Corps officers under whom they are serving are duly carried out. They have to be on duty at hospital at all times, and to this extent discharge the functions of a resident medical officer. They are frequently employed to proceed in medical charge of patients or British troops moving by rail or road from one station to another, and in such cases take the place of a medical officer. On the whole they have little scope for essentially professional work while on military duty.

Civil employment.

25. Military assistant surgeons selected for civil employment, which is greatly prized, remain on probation for the first 5 years, during which time the local Government may move the Government of India to return them to

military duty if they are found unsuitable. If given an independent civil charge, an officer of their class may, during the first 3 years of holding such a charge, be returned to military duty, if for any reason he is found unfit for the post.

Military sub-assistant surgeons.

26. Military sub-assistant surgeons are recruited for service with Indian troops. They are attached to Indian station hospitals and serve under Indian Medical Service officers. When the regimental system was abrogated on the 1st December, 1918, they ceased to be attached to Indian units.

The total sanctioned strength is 894. Of this number 154, who form the war reserve, may be employed in civil appointments, including miscellaneous military charges and other semi-military posts. These appointments are, as a rule, greatly prized.

Recruitment and training.

27. Recruitment is made by selection from among Indian candidates of all classes, between the ages of 16 and 20 years, who offer themselves at the beginning of each session to the principals of the medical schools at Agra, Lahore, Bombay, and Madras.

All candidates for employment as sub-assistant surgeons, both civil and military, are required to pass the university matriculation examination or equivalent test before admission to the medical schools.

Formerly, the pupils were neither enrolled nor subject to military law; but since 1917 they have been enrolled and placed under military law and the principal of the medical school exercises over them the powers of a commanding officer.

Military students are educated at Government expense, are provided with free quarters, and receive a monthly allowance of Rs. 12. They undergo a four years' course of professional training, and are now obliged, with the civil students of their class, to enter for the licentiate examination of the College of Physicians and Surgeons, Bombay, the Board of Examiners, Madras, and the L.M.P., and M.P.L. diplomas of the United Provinces and the Punjab, respectively.

On admission to the Indian Medical Department they are gazetted into the service as third class sub-assistant surgeons and hold the rank of warrant officers, being the only branch of the Indian Army who hold such rank. Those trained at Lahore and Agra are borne on the Bengal list, those at Poona and Ahmedabad on the Bombay list, and those at Madras on the Madras list. On joining the service they sign a declaration that they will serve in the Indian Medical Department for a period of 7 years.

Duties.

28. The duties of a sub-assistant surgeon serving in an Indian station hospital correspond with those of a military assistant surgeon in a British station hospital, and consist mainly in those of a clerk, compounder, and ward-master; he maintains discipline in the hospital and, in the matter of the treatment of patients, carries out the orders of the Indian Medical Service officer under whom he is serving. He likewise attends to the medical wants of the families of the Indian units to which he may be attached, and, under a medical officer, discharges certain sanitary duties in Indian troops' lines. He is frequently sent in medical charge of detachments of Indian troops moving by rail or road, or going into camp for musketry practice, etc.

B.—Civil.

Establishment.

29. The medical service of each province and local administration is under the control of an administrative medical officer, and consists, besides himself, of (*a*) Commissioned officers of the Indian Medical Service, (*b*) military and civil assistant surgeons, some of whom are employed as civil surgeons in medical charge of districts, and (*c*) military and civil sub-assistant surgeons.

Position and duties of the head of the department.

30. The surgeon-general or inspector-general, as the head of the civil medical department of the province, is responsible for the superintendence of all hospitals, dispensaries, lunatic asylums and other similar institutions, as also for the supervision of medical colleges and schools. He has the control of the medical staff and arranges for the recruitment, transfer and promotion

of the purely provincial medical personnel. He is the adviser of his Government upon all matters connected with the medical administration of the province.

Indian Medical Service officers.

31. Each province has on its permanent staff a number of Indian Medical Service officers varying from 11 in Assam to 51 in Bombay and Madras. The creation of each additional appointment in a province involves an increase in the Indian Medical Service cadre, and requires the sanction of the Secretary of State; but once an officer is allotted, unless he belongs to an imperial department or to an appointment requiring the concurrence of the Government of India, such as a professorial appointment, he can be moved within the province at the will of the local Government. The bulk of these officers are employed as civil surgeons in charge of districts.

Civil assistant surgeons. Recruitment and training.

32. The grade of civil assistant surgeon was established in 1847 when Government authorised the formation of a superior grade of Indian practitioners. It is now open to Europeans, Anglo-Indians and Indians. The number employed in the various provinces varies from 49 in Assam to 232 in Madras.

The present day civil assistant surgeon is a passed student of a medical college, and he is either a graduate (M. B.) or a diplomate (L. M. S.) of a university.

Candidates for appointment to the provincial services are selected either according to their position at their final professional examination, or by a separate competitive examination, or by nomination to fill vacancies or fresh appointments on the temporary establishment.

On being appointed permanently to Government service they are required to execute a bond to serve the civil Government for five years, or in default to pay a fine of Rs. 500. There is no liability for military service expressed in the bond.

Duties.

33. There are a certain number of civil surgeoncies reserved for this class. Members of the service are employed as lecturers in the medical schools, demonstrators and assistant professors in the colleges, as house surgeons and house physicians in the large hospitals, in charge of hospitals at headquarters and the larger rural dispensaries, as assistants to the chemical examiner, in various railway appointments, and as medical inspectors of schools.

Civil sub-assistant surgeons. Recruitment and training.

34. So far as we have been able to ascertain the total number of civil sub-assistant surgeons in India is no less than 3,442. In addition, we understand, that a considerable number in excess are entertained in each province on a temporary list. The civil sub-assistant surgeon was formerly known as the civil hospital assistant, and has been for years the backbone of the provincial medical services. He is educated at a provincial medical school, usually distinct from the medical college. A considerable number of the students receives scholarships from the State, or local fund sources, but a proportion pay their own way. Government is not bound to take its own scholars into its service, but naturally prefers to take the best men of their year. As in the case of the assistant surgeons, the sub-assistant surgeons are recruited to fill vacancies or fresh appointments on the temporary establishment.

Local Governments have been empowered to promote sub-assistant surgeons to the rank of civil assistant surgeon, with the pay and privileges of that class, on the condition that the concession is jealously guarded and strictly confined to a few men with not less than 20 years' service, who in the exercise of their profession have shown themselves to be possessed of very exceptional attainments.

On promotion to the permanent list the sub-assistant surgeon signs a bond which binds him to serve the civil Government for five years, but in addition he agrees, in case of necessity, to serve on military duty in India. The penalty is fixed at Rs. 400 in case he commits any breach of duty which has the result of terminating his service, or Rs. 200 for every act of disobedience of the rules and regulations prescribed for his conduct while on military duty.

The question of altering the provisions of the bond so as to include liability for military duty in peace and war, in or out of India, was discussed by the Government of India and referred to local Governments in 1915, owing to the difficulty experienced in obtaining the services of medical practitioners of this class to serve in the field. It was decided that no alteration in the terms of service should be made while the war lasted, but that the whole question of the period of civil and military services to be rendered by sub-assistant surgeons, together with the remuneration and tours of military service to be granted to and imposed on them, should be considered after the war.

Duties.

35. The duties which sub-assistant surgeons may be called upon to perform are varied. They are placed in sub-charge of police, jails, lunatic asylums, and State railway hospitals; they hold independent charge of local fund, canal and itinerating dispensaries; they are employed as travelling medical subordinates on State railways and with survey and forest parties, and have to deal with outbreaks of epidemic disease occurring in the vicinity of their charges. They are employed on all kinds of duties connected with epidemics generally, and more especially in the measures taken to cope with outbreaks at fairs and other large gatherings. They are entrusted with medico-legal work as far as their own immediate charges are concerned, but they are not permitted to undertake post-mortem examinations or to deal with such cases as the police consider should be referred to the civil surgeon.

Compounders.

36. No account of the organization of the provincial medical services would be complete without a reference to the compounders. This class is recruited locally. They must have sufficient education to read and write in the vernacular, and are encouraged to obtain a working knowledge of English. Their duties are to compound medicines prescribed by the medical officer in charge, to do such dressings as are delegated to them, and to assist generally in the care and treatment of both in and out patients.

CHAPTER III.

THE MAIN PROBLEM.

Lessons of the War.

37. THE War has impressed upon the military authorities that the medical requirements of armies are best met by a medical service which is progressively and pre-eminently military. It has impressed upon provincial Governments that no province can well afford long to be denuded of the bulk of its best medical officers, and that care must be taken not to restrict a much needed supply of doctors qualified in western methods by depriving colleges of professors or taking specialists from their particular tasks. As regards, however, this aspect of the past four years, we are not surprised that the greatest of all wars demanded unprecedented sacrifices from the medical as well as from other departments of the civil administration. There can be no doubt that this department suffered considerably, that sanitary efficiency and good surgery declined, and medico-legal work deteriorated, as did also jail discipline and management. All this was to be expected. But, on the whole, we see no reason for dissenting from the considered opinion of one of our most valuable witnesses, Colonel Mactaggart, Inspector-General of Civil Hospitals in the United Provinces, that one lesson of the war is that " it is possible for local Governments to surrender a large proportion of their medical officers on a military emergency and still manage to maintain for a considerable time fairly efficient medical, sanitary and jail administration, provided that the administrative officers and a proportion of the senior commissioned medical officers are left in civil employ." We would add to this provision another, which is that this residue of officers should belong to a service of substantial merit and high standards of duty. For as their service is, so will they be.

The lessons which this war has taught as to the medical training best adaptable to service in the field have been explained to us by highly competent experts and may be gathered from the pages of official reports. They

cannot be ignored. But in applying them we must consider reasonable possibilities, as well as the claims of medical administration in various provinces which differ considerably from each other in educational development.

Exceptional circumstances of the present.

38. Before we offer constructive proposals we must state that everywhere we have found the officers of the Indian Medical Service in a state of acute discontent, partly by reason of various grievances mentioned in our first chapter, especially lack of leave and straitened means, and partly because they share in the unusual anxiety with which the future is now regarded by British officers in all the civil services. It may be that this anxiety will lessen later, and will be counter-balanced by a recognition that, if things are difficult in India, they are also difficult and uncertain elsewhere. We cannot foretell the future; we merely indicate the ways of thinking which now prevail in the Indian Medical Service.

At present, too, the composition of all the medical services, imperial and provincial, is abnormal. In both the Royal Army Medical Corps and the Indian Medical Service there are many officers to whom leave has long been overdue. Both are employing large numbers of temporary officers. In the Indian Medical Service there are 354 Indian temporary captains and lieutenants serving overseas, as well as 331 in this country. Return to pre-war conditions has, up to the present, been extremely slow.

So far we have written of India. But in England, too, circumstances are exceptional. There the supply of medical students and medical men is, and will for some time be, limited. The needs of India will have to compete against the needs of the United Kingdom, and possibly those of Egypt, Mesopotamia, East Africa and Palestine. Altogether we are hardly in a position to estimate the exact degree of inducement which medical service in this country should offer, and our calculations are further disturbed by generally abnormal conditions and ignorance of the precise extent of shrinkage in the supply of medical students available in Great Britain. We conjecture, however, that some number will still be attracted by an Indian career, provided that the political prospect clears, that the pecuniary and leave conditions are attractive, and that candidates are not asked to pledge themselves irrevocably for thirty years to a service the conditions of which, they are likely to be told, are obscure.

One Indian medical service must serve military and civil needs.

39. We must add another condition which, we are convinced by the evidence before us, is essential, if a good class of British competitors is to be attracted to medical service in this country. The condition is, that such service shall partake of the nature of a mixed career, military, civil, professorial, sanitary, and research, and that it shall offer the varied opportunities which appeal to men of action as well as to men skilled in the different branches of the medical profession. For this reason we are opposed to any attempt to start in London separate competitions for two Indian medical services, a military and a civil; because the former, competing on the one side with the Royal Army Medical Corps and on the other side with an Indian civil medical service, would certainly, for years to come, fail to attract sufficient of worthy British candidates. Unless we decide to ignore abundant evidence of unquestionable authority, we must hold that a military career in India, without any of the opportunities which civil employment affords, will appeal to few well educated European medical men, although, on account of the good pay from the point of view of an Indian student, it would attract candidates from this country.

We must mention an alternative solution which we have carefully considered. It was suggested that we might make over the care of the entire army in India to the Royal Army Medical Corps, aided by a supplementary Indian branch, and convert the Indian Medical Service into a purely civil service, the members of which would be liable to periods of military training. We did not accept this suggestion for various reasons, of which the more prominent were: first, that the Royal Army Medical Corps is, by charter, exclusively European, and to relegate Indians to a supplementary, and what would, we think, be considered an inferior branch of this corps would, according to much of the evidence before us and to our own anticipa-

tions, be resented as treatment unworthy of the part which India has played and plays in the defence of the Empire; and, secondly, that we find that the present Indian Medical Service would be generally opposed to such an arrangement. We do not think that an Indian Medical Service which was civil from start to finish, would in any way recover the ground which has been lost. It would produce a type of officer inferior to the type of the past. It is true that such a service was, in a qualified degree, contemplated by the Public Services Commission; but, as has already been pointed out in paragraph 12, we write under largely different conditions.

Thus the only solution of our difficult problem is the creation of one Indian Medical Service which will compete in London for candidates who desire a career of mixed opportunities, military and civil. Such a service will, we believe, give better all-round results than any other.

The service should be a corps.

40. It is clear that the military authorities strongly desire a military medical service organized much on the lines on which the Army Medical Service and Royal Army Medical Corps are organized in England, and emphatically a 'corps.' They would be willing to spare officers of this corps to serve for periods of five years or less in civil employment, but they would not assent to a continuance of the hitherto existing arrangements whereby officers of the Indian Medical Service remain in civil employment for long periods and are recalled to military duty at the close of such periods. They consider that arrangements of this kind produce a medical officer unsuited to army requirements in peace and war.

The Governments of the various provinces, on the other hand, would never assent to an arrangement whereby the officers who form the main strength of provincial medical services were merely lent for short periods. They would, however, we anticipate, be willing to utilize officers so lent, on occasions of epidemics and in a certain fixed number or proportion of appointments. We think they could reasonably be required to do this in the interest of the efficiency of the medical administration of the army which defends the Empire, of which they form part, and that in so doing they would benefit their own medical and sanitary administration. We would give the Indian army a corps with its own leave and study reserves, as well as its ordinary war reserve of officers lent to civil administrations or for service under the Foreign or other Departments of the Government of India for periods not exceeding five years. We would also, as we shall show later, in our paragraphs 47 and 48, give that corps a distinctly civil side.

Is absorption in this corps of all Army Medical Service and Royal Army Medical Corps officers serving in India practicable? Advantages of such a unification.

41. This leads us to consideration of the larger question, whether it will be possible to commit to that corps, which we would call the Indian Medical Corps, the care of all British and Indian troops, and to absorb into it all Army Medical Service and Royal Army Medical Corps officers serving in India. It must be remembered that these officers do not come to this country with their corps, but only as officers of their corps. When they arrive they work in British station hospitals, without the non-commissioned officers and men of their corps, but with inefficient indigenous substitutes. It is therefore *primâ facie* desirable to include them in the new Indian Medical Corps, and to provide the combined corps with a unified service of well trained subordinates. If this can be done, all officers of the new corps will have the same training and tradition; all will have their own Director. The amalgamation of British and Indian station hospitals will be facilitated and the friction engendered by the existence of two cadres of medical officers with different rates of pay, rules of leave and pensions, will disappear. There will be many other advantages. Although at the present day it is impossible in peace time to mix up, at once and entirely, British and Indian doctors and to use them indiscriminately for the treatment of British and Indian troops, we believe that if there were a unified service it would be possible to extend gradually the medical treatment of British troops by Indian officers. The British officer and soldier seem to object to treatment by Indian doctors, not because they are Indians, but largely because they believe that Indian doctors have not as yet generally attained to so high a standard of medical and surgical knowledge as have British doctors. It is also as difficult for an Indian

medical officer to understand the habits, diet and methods of thought of the British soldier as it is for a British medical officer to enter into the predilections, customs and manners of Indian troops of various races. But, were the medical officers of British and Indian army hospitals to belong to one corps, much that separates them would, we believe, gradually disappear.

It would lead to more co-ordination between military and civil hospital administration.

42. Indeed we may go further and say that, if our Indian Medical Corps served both British and Indian troops, and on its civil side, which we will subsequently discuss, supplied the mainsprings of provincial medical administration, it would be possible to get rid of much unnecessary duplication of personnel and hospital equipment and buildings. One of our members notes: "I have lately been in a military station in India where the British station hospital was staffed with 15 medical officers with only 80 patients to treat; the Indian station hospital had 4 officers with 200 patients, and the civil hospital had one medical officer and 180 patients." This was, of course, in war time, when some officers were waiting at particular hospitals to be sent elsewhere; but experiences of such a kind are not unique, and we think that, with closer co-ordination between British and Indian station hospitals, both staffed by officers of one corps, and between military and civil hospitals, also staffed by the same corps, they should be impossible. With an Indian Medical Corps serving military needs on one side and civil needs on the other, far closer co-ordination than is otherwise practicable could be arranged.

We have indicated an ideal to which we would like to see effort directed. There should be more co-operation than there is between the military administration and civil Governments in the matter of hospital management and hospital buildings. With a little mutual arrangement savings would be effected; convenience and a high standard of treatment would be more easily attainable, notably in regard to the wives and families of European civil and military officers. Moreover, on mobilization of the field army, were groups of civil and military hospitals working more or less together, field medical units could be despatched with greater facility than at present, and with less dislocation of hospital arrangements in India. We believe that co-operation of this kind was recently practised in Canada with great success. We do not see why it should not be eventually practicable, at least to some extent, in this country.

Scheme of unification and formation of one corps.

43. A substantial obstacle to the immediate absorption into the new Indian Medical Corps of all Army Medical Service and Royal Army Medical Corps officers who wish to serve in India is, that the rapid promotion which so many of these officers have received during the war would be liable to result in the immediate domination of the new Indian Medical Corps by officers transferred from the British service. It is, however, so important, in our opinion, that unification of the medical services in India should take place that we consider that no such obstacle should be permitted to stand in the way. Proposals for the equalization of the seniority of such officers as will be affected when the Indian Medical Corps is formed will be found in annexure V. It is proposed that the new Indian Medical Corps shall be composed of the officers of the existing Indian Medical Service, together with officers who agree to voluntarily transfer, during the next three or four years, from the Army Medical Service and Royal Army Medical Corps, as well as a large number of officers nominated for commissions by the Secretary of State from among past and present temporary members of the Royal Army Medical Corps and Indian Medical Service. We feel strongly that, if ever a serious attempt is to be made to terminate the inconveniences and friction which result from the existence side by side of two military medical services in India, that attempt should be made now. We anticipate that within three or four years the new Indian Medical Corps will have become sufficiently organised to take over the whole of the military medical work in India, and will from its civil side be able to assist the provincial medical services with a cadre of medical officers less liable to depletion than the present supply from the Indian Medical Service. Further on we will give reasons for the latter expectation.

If our views are adopted, the Army Medical Service and Royal Army Medical Corps officers who have not volunteered to join the Indian Medical Corps will gradually revert to the home establishment during the transition period of three or four years. Thus the Indian Medical Corps will be formed by the gradual filling up of its cadre by voluntary transfers and by new officers, either nominated by the Secretary of State or admitted by examination in London. We recommend that the Secretary of State should lose no time in forming the new corps, as it is important to obtain the services of volunteers from the temporary cadre both of the Royal Army Medical Corps and of the Indian Medical Service before demobilization has been largely effected. There is at the present day not only a certain degree of friction between the two existing services but a considerable amount of overlapping and reduplication of effort. When one Indian Medical Corps has been formed co-operation and the interchange of duties will be easy. As the Indian Medical Corps will be organized on the same lines as the Royal Army Medical Corps, and as in peace time it will work on the station hospital system, the officers and men of these two corps will find it possible and indeed easy to work together when they meet outside the boundaries of India on field service. It is our aim that the two services be so alike and be so organized on the same lines, that, if in the future an Imperial Medical Service for the whole of the British Empire be established, the Indian Medical Corps should fit into it with the least possible disturbance or modification in its constitution.

Composition of the military side of the Indian Medical Corps.

44. The new corps would include commissioned officers, military assistant surgeons and sub-assistant surgeons, the Army Hospital Corps, the Army Bearer Corps and other hospital establishments. A skeleton outline of the proposed organization is given in annexure VIII.

We are not certain whether it will be necessary, should this corps be formed, to remove from it all colonels and general officers, as is done in the case of the Royal Army Medical Corps. If this removal be carried out, the title, Indian Medical Service, should be retained in order to denote officers of these two ranks.

The military side of the new corps should have its own leave and casualty reserve of 25 per cent. and study reserve of 4 per cent., besides a war reserve calculated on the numbers that are necessary to meet the medical requirements of the field army of India on mobilization.

We recommend that the military cadre of officers for the corps should be calculated at the ratio of 3 per mille of the total strength of British and Indian troops and followers in the army in India. The present authorized cadres of the Royal Army Medical Corps and Indian Medical Service in military employ allow for a ratio of 4 and 1·28 per mille respectively, as shown in our paragraphs 1 and 2. In view of the higher standard of medical treatment and sanitation required in connection with Indian troops, the necessity for which has already been admitted in the despatches leading up to the introduction of the station hospital system, we consider that it will be necessary to recommend that in future the general ratio be fixed at 3 per mille.

We have already stated, in paragraph 42, that the formation of one Indian Medical Corps to take over the care of both British and Indian troops will lead to economy in personnel and hospital buildings. But we do not consider that this economy in personnel will allow of the employment of a smaller proportion of medical officers than 3 per mille, until combined hospitals for British and Indian troops are introduced—and this will probably take considerable time.

In Chapter V, we recommend that the medical education of military assistant surgeons should be improved to such an extent as to provide them with qualifications registrable in the United Kingdom, or, at any rate, in India, and that, in future, they should be employed on purely professional duties of the same nature as those of commissioned officers. If effect is given to these proposals, and to others which we make later on regarding the

performance of duties now allotted to assistant surgeons, it will be possible to reduce the cadre of commissioned officers, calculated on the ratio recommended above, in proportion to the extent to which such officers are replaced by assistant surgeons, or, as they may well be called in the future, assistant medical officers.

Whether such replacement takes place or not, it is obvious that the cadre of the Indian Medical Corps must be very much larger than that of the military side of the present Indian Medical Service. It is of the greatest importance that this increase should not be confined to the junior ranks but should include a considerable proportion of senior officers of experience. It is, therefore, most desirable that, if possible, a large number of officers of the Army Medical Service and Royal Army Medical Corps should transfer to the new corps. Such officers would become eligible for the rates of pay of the Indian Medical Corps, and we recommend that they should be permitted to count all previous service in India, or overseas with Indian formations, towards earning a proportionate Indian pension.

We do not contemplate that it will be necessary to maintain a larger ordinary war reserve for the unified corps than would be required for the Indian Medical Service if the existing system were continued. In the past it was never, so far as we can ascertain, found necessary to bring additional Royal Army Medical Corps officers out to this country in connection with military operations on the frontiers.

A central depôt and school of instruction for the Indian Medical Corps.

45. We consider it essential that the new Indian Medical Corps should have a central depôt and school of instruction to be its educative and social home. In the uncertainty which prevails as to the future organization and geographical distribution of the army in India we are unable to suggest any specific location for this depôt, but we consider that the following are essential conditions for its success:—

(*a*) a good climate in which training can be conducted throughout the year;

(*b*) the presence of a large number of troops, both British and Indian; and,

(*c*) large permanent hospitals, both British and Indian.

A central position in India is also desirable. We realise that it may be found necessary to have subsidiary depôts located in the areas of recruitment, for the initial training of the rank and file. It is obvious also that the distribution of the rank and file after training in the central depôt should so far as practicable be territorial. The training should be conducted on the lines followed in the Royal Army Medical Corps Depôt and company headquarters in England. Our suggestions for the organization of the corps depôt, as well as a skeleton syllabus of the course of instruction to be given at the school, are contained in annexure VI. We suggest that, in the event of the adoption of mechanical transport for ambulance purposes in India, the drivers and other personnel of such transport should, after training at a central mechanical transport school, be incorporated in the Indian Medical Corps.

Training of officers in tropical medicine.

46. As will be seen from annexure VI, we propose that all junior officers of the Indian Medical Corps when they first arrive in India, as well as all assistant surgeons and sub-assistant surgeons and other ranks of the corps when they first join it, should undergo courses of instruction at this depôt.

We are in agreement with the views of Sir G. Makins,* although the introduction of the station hospital system for Indian troops has altered conditions since he wrote, that junior officers should, before they are posted to military hospitals in India for duty, spend some time in the practical study of tropical diseases at either a large civil hospital or a school of tropical medicine in India. Satisfactory training in this subject cannot be obtained in England or in the military hospitals in India, whereas the institutions which we have mentioned above offer unrivalled opportunities for it. We

*See Annexure III.

recommend, therefore, that officers should, either before joining the depot or immediately on leaving it, be attached for a period of 3 to 6 months to one of these institutions. We understand that sanction has already been accorded to a proposal that newly appointed officers of the Indian Medical Service should, on first arrival in India, be attached to presidency hospitals for 2 months for clinical instruction in tropical diseases. We do not, however, consider two months a sufficient period.

The Special Reserve.

47. Behind the leave, casualty, study and war reserves of the Indian Medical Corps should be a further reserve, which we will call the Special Reserve, to be drawn on for professional and not administrative work, only on occasions of national emergency, and then subject to certain restrictions. We would recruit this special reserve partly from civil assistant surgeons and independent medical practitioners voluntarily enrolled and periodically trained. We would suggest that provincial Governments should give the former special privileges when enrolled, and that the latter should be granted retaining fees, and further that temporary rank should be given to both whilst under training, as well as honorary rank thereafter. But we would recruit the main strength of this special reserve from the civil side of our new Indian Medical Corps, which we suggest should be composed of officers who have begun their Indian career by three or four years of military service.

It has been represented to us that there is now no need to maintain a war reserve of officers of the Indian Medical Service, as such a reserve can safely be composed entirely of civil assistant surgeons and independent medical practitioners, all of whom, it is said, have given signal proof of their patriotism during the war. In view of this claim we have been at some pains to ascertain the true facts regarding the recruitment of Indian private practitioners during the recent war. Facts and figures supplied to us by the office of the Director-General, Indian Medical Service, leave no doubt that there was a general disinclination on the part of Indian private practitioners to proceed overseas, although they were offered for such service the same rates of pay as temporary Royal Army Medical Corps officers engaged in England. In this connection we were told that, during the first flush of patriotic excitement and pressure at the beginning of the war, the private medical practitioners of one of the provinces assembled together and telegraphed to His Excellency the Viceroy that over 50 of their number had resolved to offer their services to Government for use in any manner considered desirable. Later on, however, so many impossible conditions were attached to the offer that, of the original number of volunteers, there remained only six who were willing to serve out of India. Of all the private medical practitioners in India only 373 volunteered for military service, and 125 of these were not prepared to proceed overseas. It must, however, be noted that, until July 1917, only those who held qualifications registrable in the United Kingdom were accepted for temporary commissions. Of the 248 who volunteered for general service 104 were young doctors under 28 years of age, and 144 were over that age. Further, we are informed that, so far from the supply of temporary Indian Medical Service officers having been sufficient to meet all demands in connection with the war, the Commander-in-Chief in India was compelled to inform the War Office in 1917 that he was unable to supply medical officers as reinforcements for Mesopotamia, Egypt and East Africa. The War Office then undertook to provide such reinforcements for Indian as well as British units in those theatres of war, from among practitioners recruited from other parts of the Empire.

We have also made careful enquiries as to the quality of these recruits, and are satisfied that, as would naturally be the case, they were as a general rule decidedly inferior to Indian regular officers of the Indian Medical Service who had finished their medical education in England and had at some time or other been accustomed to serve with troops. As the result of these enquiries we are convinced that it would be unsafe for Government, in present circumstances, to rely largely for its war reserve on the non-official classes. We therefore propose that the special reserve shall draw its main strength from the Indian Medical Corps.

48. Whatever may be the results of the present conferences at Paris, India will remain a continent rich in potentialities, which from time immemorial, in the words of an Indian speaker in the Imperial Legislative Council, "has attracted the cupidity of powerful rulers and states." **The civil side of the Indian Medical Corps.**

Moreover, the responsibilities of the British Empire, as one of the great powers of the world and a mandatory of the League of Nations, are about to widen and not to narrow. We must therefore reckon on the clear possibility that one day the army in India may require help from the imperial and provincial civil medical services. For this reason, and because the civil medical service or services of this country must for some time at any rate, in their own interest, draw their chief strength from British recruitment, for which we can devise no better door than the new Indian Medical Corps, we recommend that this corps should include a distinctively civil side. Transference to this civil side should be on the basis of figures to be furnished now to the Imperial Government by the provincial Governments, who would state the number of posts which they wish to fill as permanent civil appointments from the Indian Medical Corps. The Imperial Government would have its own list of appointments under the Foreign and other Departments. The holders of these posts would be liable to be called on for military service on occasions of serious national emergency and then only. Even on such occasions, if holding certain residuary, teaching, or research appointments for which no fit incumbents could be found, they should not be called out. When once permanently employed in civil, officers would not revert to military duty by choice. They would continue to receive military promotion in accordance with a time scale until they reached the rank of lieutenant-colonel, after which they would receive no further advance in army rank. Officers holding civil administrative appointments should, however, be granted special precedence in accordance with those appointments.

We propose, in fact, that the Indian Medical Corps shall recruit alike for the military and for the higher civil medical service, that all newly joined officers shall for their first three or four years serve with troops, and shall then elect for the civil or the military side. As opportunity occurs, and as far as possible in accordance with their choice, they would be assigned to temporary civil employment for periods of 5 years, and would then be eligible for permanent civil employ if they chose, and if they were approved by the provincial Government, or the department of the Government of India, concerned. When once permanently civil medical officers, they would be liable to recall to military duty only on occasions of grave national emergency.

49. We do not propose that the civil side and the war reserve of the military side of the Indian Medical Corps should furnish the whole of the superior civil medical service of the country. We have already stated that it will be for each provincial administration to estimate and report to the Government of India the number of posts which it would reserve, as permanent appointments, for officers of the civil side. Similarly, the military authorities would supply the figures of the numbers needed as an ordinary war reserve. We consider that provincial administrations are bound to employ this reserve in the interests of the defence of the Empire, without diminishing their cadre of Indian Medical Corps officers in permanent civil employment. By doing so, they will only partly provide for provincial needs. We invite attention to the evidence of Major Norman White, C.I.E., Sanitary Commissioner with the Government of India, which our own experience entirely endorses. The existing civil organization is, he says, "hopelessly inadequate" to meet the medical needs of the country. Major-General Robinson, C.B., Surgeon-General with the Government of Bengal, told us: "The Indian Medical Service hitherto has been starved in every way, under-staffed, under-paid. It has consistently been starved for money both in civil and military. * * * The epidemic diseases of India particularly require study and investigation, and there are dozens of diseases to be prevented, and that could be prevented were means taken to do so. It is a question of money to a very large extent." We are, of course, well aware that the great obstacle to medical and sanitary improvement is the conserva- **Provincial medical services.**

tive and apathetic character of the mass of the people who intensely prefer to walk in the ways of their fathers. We are sure that it is beyond the wit and power of any Government, however wealthy and generous it may be, to produce substantial improvement, unless it be aided by strong, persistent, and widespread popular effort. We welcome the first sign that such an effort may one day come, in the co-operative movement in Bengal for medical relief and anti-malarial measures, described to us by the Hon'ble Mr. P. C. Mitter of Calcutta. We invite careful attention to this movement which deserves generous support from all who would see India become a strong, prosperous, self-governing unit of the British Empire. But all movements of this kind need encouragement and help from parallel Government action. The Government organization and staff of medical officers must not be "hopelessly inadequate." We have examined the figures of medical expenditure, both imperial and provincial, for the past six years and compared them with the figures of educational expenditure for the same period. The medical figures are considerably less than half the education figures. To those who know the conditions of India the former are decidedly unsatisfactory.

There is ample need for better and wider medical organization in all provinces. Civil surgeons are over-worked; colleges and schools are understaffed; far more deputy sanitary commissioners are required; research institutes need money and workers; travelling dispensaries could with great advantage be indefinitely multiplied. All the provincial medical and sanitary administrations are, even in ordinary times, undermanned. The present is emphatically the time for a new start. Should the proposals of the Montagu-Chelmsford scheme be accepted by Parliament, substantial steps will immediately be taken toward the goal of responsible provincial government, and provincial administration will at once become far more decentralized than at present. It is, we believe, contemplated that possibly provincial medical and sanitary administration may pass to the control of Indian ministers. In all provinces, as is stated in the Montagu-Chelmsford report, and as has been emphasised by our co-opted colleague, Sir Temulji Nariman, a considerable British element is necessary in the medical as in other branches of the civil administration. The provinces differ greatly in educational progress, but all should draw their main strength for medical and sanitary progress from adequate staffs of high class officers. These they will draw from the new corps; but they will supplement these staffs by local officers whom they will themselves appoint. They will thus develop their medical and sanitary administrations for themselves on secure foundations. They will not give up their permanent civil officers of the Indian Medical Corps for any ordinary expedition or minor war, but only in case of a grave national emergency. Should such an emergency arise, they will do what all Governments do on these occasions and make the best arrangements that they can for filling vacancies caused by the withdrawal of any portion of the special reserve. They would have to do this whether or not their most important medical officers had begun their careers in military service.

Thus the provincial medical services will include officers belonging to the following categories:—(*a*) Indian Medical Corps officers holding residuary appointments, who can never be recalled to military duty; (*b*) Indian Medical Corps in temporary civil employment. Provincial Governments will be recalled to military duty, as professional men and not as administrators, in case of grave national emergency; and (*c*) military officers of the Indian Medical Corps in temporary civil employment. Provincial Governments will be able to select officers, who are or have been in temporary civil employment, for permanent employment, as occasion offers. Such officers will pass into categories (*a*) or (*b*). Provincial Governments will also employ (*d*) purely civil officers whom they will appoint themselves.

European medical attendance on Europeans in outlying districts.

50. In considering the needs of the civil populations we should mention that both the Bengal Chamber of Commerce and the European Association consider that our scheme of re-organization should recognize as a basic principle that, at every military station and at every civil district headquarters, there should be available a European medical officer. We see no

reason to suppose that under our scheme there will not be a European medical officer at every large military station; but we cannot propose that there shall be one at every civil district headquarters. This has not been the case in the past; and in future there will be many district headquarters at which there will be no European officials or non-officials. At central or important places, such as divisional headquarters, there should always be European medical officers. It is at such places that non-official Europeans mainly reside. Officials, however, go where they are sent; and, although there will in ensuing years be a diminishing number of European officials in outlying stations, we feel strongly that Government should certainly arrange that European medical attendance is secured for these officials, their wives and families. European women in India, as a rule, strongly prefer doctors of their own race for themselves and their children. It is only natural that this should be so; and special arrangements must be made in acknowledgment of the fact. European civil surgeons should be in charge of the hill stations during the hot weather; suitable hospital and other accommodation for the sick should be maintained at the headquarters of civil divisions and in the larger plains stations; and European officers of the Indian Medical Corps should be held ready to go to outlying stations where their services are required either for European officials or their wives and families. The services of such medical officers should also be available for European planting, railway, and other non-official communities.

A system of optional retirement on gratuity desirable, to attract candidates to the new corps.

51. We do not think that it will be possible to secure a sufficient supply of European candidates for the new Indian Medical Corps unless retirements with gratuities be permitted after fixed periods, before pension is earned. It must be some time before the medical profession in Britain recovers its equilibrium. A system of retirement with gratuity exists in the Royal Army Medical Corps and in the Medical Department of the Royal Navy. It should certainly be introduced into the Indian Medical Corps in order to guarantee British candidates against a possible prospect of being tied for life to India much against their will. It must also apply to Indian candidates, as we cannot differentiate between races in this matter. We believe that every effort will be made to assure the position of the services by parliamentary legislation. But we should not be doing our duty if we did not clearly voice certain apprehensions which are current, and we cannot do so better than by quoting from the evidence of a distinguished officer of the Indian Medical Service. Recommending a system of possiblle retirement with gratuity, and speaking "entirely from the point of view of recruitment" and with every wish for the success of the coming reforms, he said:

> The proposal of the Montagu-Chelmsford scheme to place the civil medical department under an Indian minister, and the further proposal to recast the constitution every ten years or so, introduces an element of uncertainty into the careers of men entering a service with the prospect of spending their lives in it, as they can form no idea of what their position will be as regards the more attractive civil work at least in the future except that it is almost certain to be altered for the worse.
>
> This uncertainty will militate more against recruitment than any other factor, when it is realized in Great Britain. It will therefore be necessary to allow all officers, including these already in the service, to retire at stated periods of their early service, before they become pensionable, on liberal gratuities, which would enable them to buy a practice or partnership at home, as is already in force in the Royal Army Medical Corps and in the Medical Service of the Royal Navy. They should have this option every four or five years of their service.
>
> The frequency with which officers availed themselves of this right would be a very valuable guide to the Government regarding the popularity or otherwise of the service, which should allow them to gauge any discontent in time to enable wise statesmen to take the necessary steps to remove the causes of such discontent before the Indian Medical Service is again brought to the present position of being unable to recruit the class of men whom it used, not long ago, to command, and which only very liberal and expensive remedies will now relieve.

We would suggest a system of optional retirement with the following gratuities: £500 after 4 years' service; £1,000 after 7 years' service, with a first class passage to England in each case for European officers.

Conditions of admission to the corps.

52. We have shown the reasons which impel us to recommend the constitution of a new Indian Medical Corps which shall absorb the present Indian Medical Service and will become the Indian imperial medical service of the future for both civil and military duties. We have stated conditions which, we trust, will make this corps a success. Before going further, we will briefly propose conditions for admission to it.

We consider it essential that there should be only one examination for the Indian Medical Corps, and that this should take place twice a year in London. In annexure VII, we suggest a syllabus of subjects. It will be noticed that, in accordance with the recommendation of the Public Services Commission, in paragraph 9 of annexure XII of their report (page 249), we aim at making the examination more practical than it is now. As we wish the Indian Medical Corps to be a *corps d'élite*, we consider that the men who enter it should have received a high class training in all branches of practical medicine. Such a training is unobtainable in India at the present day. It is impossible to obtain in Indian medical colleges complete instruction in gynæcology, obstetrics, and diseases of children; and in these colleges generally, education in ear, nose and throat surgery, advanced X-ray therapeutics and electro-therapeutics is either defective or unobtainable. All candidates should go through courses of instruction in these subjects in Great Britain.

To give Indians a fair chance of completing all the subjects of their medical education and of competing on an equality with doctors educated in the United Kingdom, we suggest that Government should offer for competition in India, after nomination, a limited number of scholarships, tenable for 18 months or two years in the United Kingdom, to medical students who have completed their third year, or to medical graduates of the five universities at Madras, Bombay, Calcutta, Lahore and Allahabad. The scholarships, would, as far as possible, be shared equally by the five universities, and their number would bear some relation to the number of impending vacancies in the Indian Medical Corps. Even if scholars did not succeed in finally obtaining admission to the corps, they would return to India much the better for the training which they had undergone, and would easily find places in the provincial services, or be able to set up in private practice with good prospects of success. We do not mean to exclude from the examination Indians who wish to compete but are not scholarship-holders.

The Public Services Commission, in the paragraph quoted above, pointed out that medical education for, at any rate, a civil practitioner could not in some respects be satisfactorily completed "in many parts of India," owing to the customs of the country. They added: "if it be found necessary to give Indians this training" (in midwifery and the diseases of women and children) "in the United Kingdom, sufficient facilities should be provided there for them." Our suggestions are in accordance with these views.

We consider that, in the present emergency, and before examination again becomes the only portal of entry, temporary officers of the Indian Medical Service should not be excluded from nomination to permanent commissions in the Indian Medical Corps, even though their medical education has been entirely received in India. Facilities for the completion of this education should be accorded to such nominated officers.

We have carefully considered the view expressed in paragraph 317 of the Montagu-Chelmsford report, that there should be, in all services now recruited from England, a fixed and annually rising percentage of recruitment in India. We are, however, unanimously of opinion that it is not advisable to attempt to fix a percentage of Indians to be admitted to the Indian Medical Corps. It is our desire as stated above, to form the Indian Medical Corps into a *corps d'élite*, and, whilst we consider that the State may legitimately help Indians to appear at the London examination, we consider it of paramount importance that the best possible doctors should be attracted to the corps. We believe that, if adequate professional opportunities, salaries and leave conditions are offered, the corps will in time obtain

the popularity in Britain which the Indian Medical Service formerly enjoyed.

Miscellaneous departments and residuary posts.

53. The recruitment and prospects of the new corps will be considerably affected by the opportunities to be offered to its members, both British and Indian, in the fields of research, bacteriology and sanitation. The Secretary of State recognized this fact when he recently said to a deputation from the British Medical Association: "You and I are in complete agreement in thinking that opportunities for research and reward for research form an important part in the considerations which are necessary to ensure a good medical service for India."

Unless our scheme reserves to officers on both sides of the corps full opportunities for a career in scientific medicine, it will fail to attract highly trained men. We would therefore admit officers of the Indian Medical Corps to a first call on important research and bacteriological appointments. These appointments are few in number. It seems probable that they will shortly be in the gift of an Imperial Health or Advisory Board, research and bacteriology remaining imperial departments. We are in favour of such arrangements. In the absence of a suitable candidate from the Indian Medical Corps for one of the principal research or bacteriological appointments, the vacancy should be filled from outside. Officers of the corps who are admitted to these departments should in no case afterwards be liable to recall as ordinary military officers, but only as specialists. We would invite independent medical practitioners who wish to take part in research to work in the Government research institutes, giving them a salary if necessary.

Each province should develop its own sanitary department with the help of a sanitary commissioner who should be a member of the Indian Medical Corps. As many as possible of the deputy sanitary commissioners of each province should belong to the same corps. Sanitation is a subject which is of vital importance to the army and which is exceedingly well taught in army medical schools. It is also a subject in which the provincial Governments require additional expert aid.

The Jail Department is about to be examined by a committee of experts. We would provide that the inspectors-general of prisons and the superintendents of central jails should belong to the civil side of the Indian Medical Corps. No superintendent of a central jail who belongs to the corps should be considered available for military duty in any circumstances. These appointments should be placed in the residuary category, but officers in charge of smaller jails should be available for the ordinary war reserve. We consider that higher jail allowances should be given to civil surgeons in executive charge of jails. Such charges add greatly to their work and responsibilities.

The Public Services Commission recommended that "the teaching staff of each Government college should be treated as a separate unit." We think on the contrary, that professors in Government medical colleges should be selected, by an Advisory Board, from a special all-India list. No local Government can satisfactorily staff its medical colleges on all occasions from its own small cadre. We would reserve all clinical professorships for officers of the Indian Medical Corps. We would throw scientific professorships open, allowing a prior claim to officers of the corps, provided that candidates are thoroughly competent to fill the particular chairs concerned. There can be no doubt that such opportunities are necessary to attract to the corps men of scientific merit and attainments. We refer only to chairs in Government medical colleges. Chairs in aided colleges should be entirely open to the medical profession in India and the United Kingdom.

We would reserve superior posts in the chemical and alienist departments for officers of the corps, should suitable candidates be forthcoming.

We would debar medical officers holding scientific posts from private practice, giving them instead monthly allowances. Officers holding clinical posts should be allowed consulting and operating practice in their own subjects. So should chemical examiners and alienists.

No officer of the corps holding any superior chair on a professorial staff, or a chemical examinership, or an alienist post, should be liable to recall to military duty in any circumstances.

A junior Indian Medical Corps officer in temporary civil employment should be lost to the ordinary army reserve whilst holding a scientific professorial appointment, but he would again join the reserve [category (*c*)] if and when he gave up such an appointment.

The only alternative to our proposals.

54. Such are our main proposals. We have observed the chief principle emphasised by the Public Services Commission: the necessity for calculating separately on their merits the needs of the army and of the civil administration; but we are clearly of opinion that the wants of each will be best served by a system which entrusts the higher direction of military and civil medical affairs to distinct branches of one select and well-trained corps of officers who begin their careers with military service.

The only alternative to the scheme which we suggest is to abandon all attempts at unification, and to confine our recommendations simply to the formation of a medical corps for the Indian army, and substantial improvements in the salaries and leave rules of the Indian Medical Service. It would be necessary to equalize the attractions of this service and those of the Royal Army Medical Corps by fixing the salaries of officers of the former at considerably higher rates than those which suffice for officers of the latter.

The Indian Medical Corps would, in this case, be formed by the amalgamation into one corps of the officers of the military side of the Indian Medical Service, the sub-assistant surgeons of the Indian Medical Department, and the rank and file of the Army Hospital Corps and Army Bearer Corps, with the necessary establishments for Indian station hospitals. In order to carry out the required expansion in the cadre of officers to 3 per mille, it would be necessary to call for some volunteers from the Royal Army Medical Corps. But the Army Medical Service and Royal Army Medical Corps would remain distinct in India. Should this alternative be adopted, the friction and many of the inconveniences which have led to the appointment of our Committee will be perpetuated. The staff of British station hospitals would then consist of:—

(1) officers of the Royal Army Medical Corps;

(2) military assistant surgeons of the Indian Medical Department (to be used, according to our proposals in chapter V, solely as professional men);

(3) some of the rank and file of the Royal Army Medical Corps; and,

(4) some of the rank and file of the Indian Medical Corps.

Under this arrangement the staff of these hospitals would consist of members of three different services, the members of two of which (the Indian Medical Department and the Indian Medical Corps) would be serving under officers of a corps to which they do not in any sense belong.

Thus, although the alternative scheme would consolidate the staff of Indian station hospitals, it would perpetuate present disadvantages and reduplications. We wish, therefore, to press Government to accept unification, which seems to us to be the only satisfactory scheme in the circumstances. Now that from a military point of view a medical corps is imperative for the Indian Army, and that the old regimental system is gone for ever, the medical corps of the Indian Army must, in the interest of economical and smooth military administration, be amalgamated with the medical corps of the British Army in India.

Consent of the War Office necessary for the adoption of our scheme.

55. We fully realize that the consent of the War Office is necessary for the adoption of our scheme. That consent would also be necessary if the alternative scheme were adopted as it would be impossible at present to form a medical corps for the Indian Army alone without including therein transfers from the permanent or temporary personnel of the Royal Army Medical Corps. We trust that the War Office will accept the larger measure which we have proposed in the interest of the whole army in India.

We realize that the exclusion of officers of the Royal Army Medical Corps from India would deprive that corps of a valuable field of experience in tropical medicine. Its officers have, however, in other parts of the Empire, excellent opportunities in this direction. To obviate any disability arising from the closure to them of the field of research in India, we recommend that arrangements should be made whereby as many officers of the Royal Army Medical Corps as is considered desirable can be attached to any of the medical institutions in India.

Our proposals considered in the light of some other proposals detailed in our introductory chapter.

56. We are under great obligations to the excellent report of the Public Services Commission, and have only differed from them when we felt impelled to do so by altered circumstances, and a wider survey of the medical services than they were required to make, and by consideration of the lessons taught to India by the great war. In conformity with the general proposals of the Montagu-Chelmsford scheme we contemplate provincial civil medical services which will draw their main strength from our new corps. We have carefully considered the best means of meeting the wishes of educated Indians which are apparent from the debate in the Imperial Legislative Council referred to in paragraph 15 of our chapter I. We have already given reasons for our inability to recommend the formation of a civil medical service which would be wholly independent of the medical organization of the army in India. We have done our best to devise a system which will differentiate the military and civil medical services more effectively in time of war, whilst we point the way to greater mutual assistance and complementary effort during peace.

We do not find that, even during the great war, there was anything approaching "absolute dislocation and paralysis of civil work throughout the country"; nor do we think that officers of the civil medical service should ever consider themselves divorced from all obligation to take part, if so required, in the defence of India. We by no means intend that Indian talent shall be excluded from either the civil or the military side of our new medical corps. On the contrary, we have proposed increased facilities for qualified Indian candidates. We find that, so far from the drafting of Indian Medical Service officers into civil employ being a hindrance to the progress and expansion of the independent medical profession, the latter owes its existence and growth to this very circumstance. We are sure that it will continue to grow, and will grow all the faster by contact with a strong and efficient superior civil medical service, and the influence which such a service must exercise on the spread of western medicine and sanitation among the people. We agree with the Public Services Commission that, "if there were no State service in the country, there would be large tracts which would be left without any provision for western medical relief." With them we "are convinced that State control is necessary in order to secure the continued and extended diffusion in India of western medical knowledge." We are also sure that this State control should be exercised by means of a thoroughly efficient service consisting of British and Indians. The British element will, as the Secretary of State has already realized, not be obtainable without the offer of adequate salaries and wide professional opportunities. And, as a considerable British element is essential, both in the interest of the progress of western medicine in the country, and because, in the words of the Secretary of State, the medical service is "the pivot upon which all other imperial services in India depend," we recommend that measures be taken which will effectually secure it. At the same time we have no desire either that this British element shall monopolise the new corps, or that the latter shall absorb the civil medical services of the country. We hope that this corps will contain a strong and high class Indian element, and that the Governments of the various provinces will, with the help of officers from that corps, develop their own medical administrations, appointing their own officers as occasion arises. We further desire that western medicine be advanced in every way possible both by Government and by non-official efforts, and we have emphasized the need which exists for far wider and more general endeavours in this direction. We have done our best to meet Indian political opinion in so far as we could do so with the knowledge which we have acquired of the many-sided conditions of the problem before us.

CHAPTER IV

IMPROVEMENTS IN THE OFFICER GRADE.

General causes of discontent.

57. THE causes of discontent in the Indian Medical Service are apparent from our paragraphs 9, 10, 14 and 38. We may add to those already stated the present high cost of living in India, which, in the absence of an increase of salaries, has for years pressed heavily on all officers of the Indian services who have wives and families and do not occupy high positions. Recruiting for the Indian Medical Service was, up to the year 1900, maintained largely by the traditions of the service founded on conditions which had even in those days passed away. It was still a common belief in England that India was a cheap country to live in. India is no longer a cheap country to live in. The average officer with a family pays more rent for his bungalow in India than he does for a house in England suitable for a man of his position to live in. He also often pays more in servants' wages than an officer of his position does in England. Furthermore, he has the burden of keeping up two establishments in the hot season, and of the heavy travelling expenses connected with the annual move of his family to the hills, and the journey for himself and his family to the United Kingdom when he can obtain leave. In addition, all imported articles, such as wearing apparel and provisions, are much more expensive in India than in England. In fact the only necessaries of life that are cheaper in India than in England are the common articles of food produced in the country, such as meat, vegetables, bread, etc., the cost of which forms only a small proportion of his obligatory expenditure. The purchasing power of officers' pay has fallen so much that in many instances they are unable to save enough to meet the expenses connected with furlough to England, including the cost of passage both ways. Unless an officer has saved substantially he cannot take furlough, as his income is then considerably reduced.

In 1913, Mr. Datta's Committee, which toured India for two years, reported that the rise of prices in the previous few years had been 22½ per cent. The increase is now computed to be far in excess of this figure.

The special causes which have worked for discontent in the Indian Medical Service are as follows :—

(*a*) The salary of an Indian Medical Service officer was fixed many years ago on the understanding that, private practice being permitted, a large number of officers would be able greatly to increase their income from this source. There can be no doubt that, except in the case of comparatively few officers, private practice has diminished very considerably and has in many instances completely disappeared. We are, of course, aware that steps have already been taken to remedy the inadequacy of salaries.

(*b*) Although the leave rules contemplate that an officer will ordinarily spend 6 years on furlough out of 30 years' service in India, the experience of the senior officers of the service proves that leave has been difficult and in many instances impossible to obtain. Leave was totally closed to the Indian Medical Service during the Burma war, the Tirah campaign, the China war, the South African war and this war. It has also been closed, if not to the whole service, at any rate to the civil side in some provinces, at different times owing to plague and famine. One senior officer who gave evidence before us stated that the average period of furlough enjoyed by Indian Medical Service officers in civil employment during 30 years' service was probably less than 3 years. In fact the leave cadre of the service has never been sufficient to allow of the grant to officers of the total amount of leave admissible under regulations. Other services in India maintain higher leave reserves, although they come under simi-

lar furlough rules. The Indian Medical Service leave reserve was, till recently, 20 per cent., the Indian Civil Service 25·89 per cent., the Supply and Transport Corps, Military Works Service, and Military Accounts Department, 25 per cent. The majority of the officers of the service had, on the civil side at any rate, large accumulations of leave due to them before the war. When the benefit of study leave was granted no extra provision was made to enlarge the leave reserve and consequently, in the past, when study leave was taken it was at the expense of ordinary furlough. It is true that sanction was accorded, in 1916, to an increase of the leave and study reserves of the Indian Medical Service to a total of 23½ per cent., but, owing to the cessation of recruiting, this increase has not yet had time to have any effect. But if leave has been scanty work has been abundant.

(*c*) Every Indian Medical Service officer of above 15 years' service has told us that work has enormously increased in amount and that a higher standard is generally required. In the meantime medical education has become more expensive, more difficult, and more prolonged. As work has increased and leave has become more difficult to obtain, the 30 years of Indian service have become more onerous, but the savings of officers have at the same time diminished. This has led to delayed retirement, with the result that officers have reached administrative rank too late in life.

(*d*) A considerable amount of discontent has existed in the Indian Medical Service on account of the fact that its military side has always been administered by an officer of the Army Medical Service (see our paragraph 4). We have already referred, in paragraph 14, to the consequences of the war to officers of the Indian Medical Service.

(*e*) There is a feeling that substantive promotions to administrative grades have been inadequate in number in view of the increase that has occurred in the Indian Army.

(*f*) The station hospital system has only just superseded the regimental system in the Indian army. Station hospital buildings are so far unsatisfactory. Indeed, they are generally incomplete, obsolete, and likely to depress, from the point of view of their profession, high-class medical officers who may be deputed to work in them. In the interests of the patients and of such officers, an improved class of building should be introduced as rapidly as is financially possible.

58. The remedies for all these disabilities and grievances fall naturally into five groups:— **Remedies.**

(*a*) *Increased salaries.*—This is now under consideration.

(*b*) *More liberal leave.*—Leave, next to pay, is to the officers of the Indian Medical Service the most important consideration just now. We strongly recommend that efforts should be made by Government, both on the military and on the civil side, to give, at as early a date as possible, such leave to regular officers of the Indian Medical Service as is long overdue. We recommend also that study leave be converted into study duty, and that officers be granted passages to the United Kingdom and back when absent from India on study duty. The leave, casualty and study reserves should be brought up to sufficient strength to enable officers to obtain furlough in accordance with regulations.

(*c*) *Earlier full pension.*—We have received evidence from Indian Medical Service officers to the effect that the conditions of service have so changed that it has become necessary to shorten the

period of service for full pension from 30 to 28 years. The reasons given for this are, that work in India has enormously increased, that greater responsibility is thrown on individual officers, and that the ordinary civil surgeon is so occupied with his work that he has no time for private practice. In addition to this the average age at which officers enter the service has considerably increased in recent years.

(*d*) *Improved position of civil administrative officers.*—Complaint has been made that the position of the Director-General, Indian Medical Service, and surgeons-general and inspectors-general under the Government of India and provincial Governments is unsatisfactory. This question was discussed by the Public Services Commission. They did not recommend that civil administrative medical officers should be appointed secretaries to Government. The director-general and all the administrative officers have stated that they desire to have the right of direct access to the Viceroy and heads of provinces, respectively. We have found that in most of the provinces custom and good feeling between the Government and the administrative officers have already led to this access being given, but we think that it would be better to constitute it a right.

(*e*) *Improvement of Indian station hospital buildings.*—We recommend that these buildings be brought up to date as early as possible.

CHAPTER V.

IMPROVEMENTS IN THE MINOR AND PROVINCIAL SERVICES.

A.—Military Assistant Surgeons.

Their future place in the medical organization.

59. IN no branch of the medical services have we found so much discontent as in that of the military assistant surgeons, and we have no doubt that their status and prospects should be improved materially. It has been suggested to us by a number of witnesses that recruitment of this class should be discontinued, but we are convinced that this is not feasible, in view of the fact that they fill, in the medical organization of the country, a place which cannot be filled otherwise, except by the employment, at prohibitive cost, of additional commissioned medical officers. The duties on the military side to which we refer are those of assistant medical officers, or house surgeons, in station hospitals, and those of medical officers in charge of small parties of troops or camps. On the civil side they can be employed with advantage on railways, in stations on the Persian Gulf, in out of the way stations on the frontier, in small hill stations and in other appointments of a similar character.

Future standard of education.

60. In future, in accordance with orders issued by the Government of India, in 1914, candidates for admission to medical colleges as military medical pupils must possess a preliminary education of the standard required by the General Medical Council of the United Kingdom, and their course of training in the colleges will last for five years instead of four. In these circumstances military medical pupils will be able to sit for examinations which will, if they pass, give them a qualification registrable in the United Kingdom. We recommend that only those pupils be entertained whose academic qualifications are such as to enable them to sit in the university classes in the medical colleges and to proceed to a medical degree. We are of opinion that those pupils who fail to obtain such a qualification should only be admitted to the Indian Medical Corps if they pass the membership examination of the College of Surgeons and Physicians, Bombay, or of one of the provincial State Medical Faculties. We attach the greatest importance to this proposal because, as already explained in paragraph 44, we contemplate in our scheme of re-organization that the military assistant surgeon should be employed in

the Indian Medical Corps on purely professional duties of the same nature as those of a commissioned medical officer.

61. They should all be required to serve Government for a period of ten years in return for the free medical education which they have received. **Obligations and conditions of service.**

We would make a distinction between those military assistant surgeons who obtain a degree and those who only secure a diploma. We suggest that the former, at the end of three years' service be permitted, after selection, to proceed, at Government expense where necessary, to the United Kingdom and compete for the Indian Medical Corps commissioned ranks. The remainder should serve Government for seven years as warrant officers, for seven years as lieutenants, for six years as captains and for the rest of their service as majors, beyond which rank they should not rise.

We recognize that, with the superior qualifications to be required of the military assistant surgeon, it will be necessary to give him substantial increases of pay and pension, though we are not in a position to recommend what these should be.

B.—Military Sub-Assistant Surgeons.

62. The military sub-assistant surgeon is an integral part of our Indian Army organization, and a valuable assistant to the medical services in peace and war. The importance of his work in the army is shown by the vast expansion of this branch that has taken place during the war. The number of military sub-assistant surgeons in peace time is 894, of whom 154 (the war reserve) are in civil employment. On the 30th November, 1918, there were in military employment in India 1,256, and overseas 721, a total of 1,977, or more than twice the peace strength. This was not sufficient to meet demands from overseas forces connected with India, and 1,323 dressers had to be entertained as substitutes. **Their importance to the army.**

63. Some witnesses whom we examined were in favour of the abolition of the military sub-assistant surgeon, on the ground that the duties he now performs as resident medical officer should be carried out by officers of commissioned rank. We are unable to agree to this, if only on account of the large increase in expenditure that would be involved by acceptance of the proposal. **Abolition suggested by some witnesses.**

64. The Committee received a number of representations from sub-assistant surgeons and their associations. These largely dealt with questions of preliminary education for entry into the medical schools; eligibility for assistant surgeons' appointments; the duration of the professional curriculum and the standard of their medical education; provision of hostels for Indian military medical pupils; amount of the stipend granted to such pupils; change of designation; improvement of quarters; study periods; grant of Indian commissions on leaving their medical schools; increase of pay, allowances, pensions and rates of travelling allowances. **Summary of grievances of sub-assistant surgeons.**

We know of no branch of Government service to which such a large number of concessions have been made during the last 20 years than to the one under reference. For example, in the matter of pay we find that, up to 1910, third class hospital assistants were in receipt of Rs. 20 per mensem, with Rs. 5 extra if they were qualified in English; to-day they receive Rs. 60 per mensem. The various sub-charge allowances, although fewer, have been increased in amount; the sub-assistant surgeon now receives free rations, and free quarters; and the course of his professional education has been extended from 3 to 4 years at Government expense.

65. There is considerable disparity in the preliminary education required of this class for admission to the various medical schools. In none is it up to the standard required of university medical students in India, or that of the General Medical Council of Great Britain and Ireland, yet sub-assistant surgeons wish to be allowed to compete for university qualifications and to obtain diplomas registrable in the United Kingdom. We are of opinion that they should all be educated up to the standard of the Indian university matriculation examination, but we do not consider that sufficient grounds **Preliminary education.**

exist for us to recommend that Government should undertake the additional expenditure involved in extending their free education to the extent which they desire, particularly as the qualifications to which they aspire are not necessary for the duties required or likely to be required of them.

Difference in training of assistant surgeons and sub-assistant surgeons.

66. Military assistant surgeons obtain their professional training at the three presidency medical colleges and attend the same classes and do the same work in the colleges and hospitals as pupils of the civil assistant surgeon class. Military sub-assistant surgeons, on the other hand, receive their professional training at medical schools, in which the technical teaching is not up to the standard of the medical colleges. For various reasons it has been found necessary to train the assistant surgeon and sub-assistant surgeon pupils in different institutions, even when they are in the same city or town.

It is doubtless desirable that lads of exceptional talent should be given opportunities for further study and advance in a medical career, and we suggest that any military sub-assistant surgeon who has obtained a membership diploma of the Bombay College of Surgeons and Physicians, or of a State Medical Faculty, shall be eligible for transfer to the military assistant surgeon branch.

Hostels.

67. Hostels are provided in certain of the medical schools. We are of opinion that they should be provided in all.

Change of designation.

68. Many witnesses have asked for a change in designation. Most of them wish to be called Assistant Surgeons. There are several reasons against this. They began with the name of Dresser; then they became Hospital Assistants; in 1910 they were called Sub-Assistant Surgeons, a title which, until 1874, had denoted the civil assistant surgeons of the present day. If Government do not see their way to granting Indian commissioned rank, as suggested below, we find it difficult to suggest a better designation than the present.

Indian commissioned rank to all sub-assistant surgeons.

69. The military sub-assistant surgeon asks to be given a commission as soon as he qualifies, and he is supported in this request by some of the senior Indian Medical Service officers who have given evidence before us.

At present about 10 per cent. of sub-assistant surgeons hold Indian commissions as jemadars and subadars, but such rank is not generally attained until after 20 years' service. We understand that the Government of India have under consideration a proposal to grant Indian commissions to this class at an earlier date. We do not think that, under existing conditions, a sub-assistant surgeon is fit to assume the military responsibilities associated with the rank of jemadar until he has had at least 5 years' service. We would recommend, however, that all sub-assistant surgeons should go through a full course of military training, when they first enter the service, at the proposed Indian Medical Corps Depôt and School of Instruction. If this is done, we think that every sub-assistant surgeon might be given commissioned rank, as jemadar, on completing the course and passing an examination in the subjects in which he has been trained.

Physical training at medical schools.

70. It has been represented to us that military sub-assistant surgeons break down under the strain of field service more rapidly than any other branch of the Indian Army. This is ascribed largely to defects in physique. We therefore recommend that they be selected with greater regard to physical fitness, and that they be put through a regular system of physical training during their medical school career.

Study periods.

71. Military sub-assistant surgeons should be required to undergo study duty periods at regular intervals in post-graduate courses, and at the proposed depot and school.

Pay.

72. We consider that the military sub-assistant surgeon is now in receipt of a liberal wage when the facts that he has received a free medical education, and is in receipt of free rations, quarters, and clothing allowance, are taken into account.

Sub-charge allowance.

73. A frequent complaint is that many sub-assistant surgeons, by the change from the regimental to the station hospital system, have been deprived

of sub-charge allowances. When regimental hospitals existed there were usually two sub-assistant surgeons attached to each, the senior of whom drew sub-charge allowance. Under the new system, in Indian station hospitals, some of which have as many as 16 or more sub-assistant surgeons, only one of them gets this allowance.

The allowance for sub-medical charge of a regiment under the old system was Rs. 10 per mensem, and was, under normal conditions, rarely drawn by a sub-assistant surgeon with less than 15 years' service. To compensate for the loss of this allowance, the pay of all sub-assistant surgeons with more than 15 years' service has been raised by Rs. 15 per mensem. In addition, liberal allowances for the sub-charge of Indian station hospitals have been sanctioned. The lowest of these allowances is Rs. 15 per mensem and the highest Rs. 40, as compared with Rs. 5 and Rs. 20 for the sub-charge of the central stores and office of the Senior Medical Officer, Indian Medical Service, under the old system. In these circumstances we do not consider that any case exists for an increase of allowances.

Expenses connected with transfers from one station to another.

74. We have received many complaints that officers of this class have been exposed to frequent—sometimes technically "temporary"—transfers involving them in either separation from their families or excessive expense in taking their families with them. We should like to bring this to the notice of Government as being a serious and, we are disposed to think, often justified cause of discontent.

Allowances while travelling on duty.

75. The allowances, admissible under Army Regulations, India, volume I, paragraph 907 (foot-note), to sub-assistant surgeons while travelling on duty are, in our opinion, inadequate. Sub-assistant surgeons are required to travel on duty, *e.g.*, in medical charge of troops and invalids, much more frequently than Indian officers and men of combatant units. We understand that many sub-assistant surgeons have been put to very considerable financial loss through the performance of frequent journeys with inadequate allowances. We recommend that the allowances be so increased as to prevent such loss.

Pensions.

76. We understand that the question of the revision of the rates of pension and family pension admissible to military sub-assistant surgeons was deferred for consideration after the war. We recommend that these matters be taken up as early as possible. We should like to see some form of provident fund introduced. Many of the witnesses examined expressed their willingness to contribute to such a fund if constituted.

C.—Civil Assistant Surgeons.

Claims to superior appointments.

77. The evidence we have recorded brings out the fact that the civil assistant surgeon lays claim not only to the superior civil appointments now open to the military assistant surgeon, but to a larger proportion of those held in each province by members of the Indian Medical Service. He asserts that his class is, as shown in the recent war, perfectly able to take the place of the Indian Medical Service officer and of the military assistant surgeon as a war reserve. It is unnecessary for us to give in detail the reasons why we are unable to accept this contention.

Previously to the war assistant surgeons held only a small number, calculated on a percentage prescribed by the Government of India, of the superior district appointments. It is doubtful if any administration would endorse a suggestion made to us to throw open the superior appointments now held by civil assistant surgeons to competitive examination; but we think that selection for superior appointments should take place earlier in their service, perhaps at the fourteenth year, subject to a period of probation for those who have not been tried already in officiating appointments. At present few obtain such promotion before twenty years' service, and the average is considerably above this period.

Alleged disabilities.

78. We will now refer to the more important of the disabilities under which civil assistant surgeons allege that they labour. Most of these are

common to all the provinces. They complain that facilities for independent work are wanting; that civil surgeons are inclined to monopolise the more important surgical operations; that they obtain no study leave or post-graduate courses. They contend that the latter should be substituted for the septennial examinations. Exception was taken in Bombay to the reservation of the resident medical officer appointments for military assistant surgeons. Other demands are in connection with the conditions of service; for pensions to be given at 25 years' service, or 20 years on medical certificate; abolition of the designation of assistant surgeon, as suggested by the Public Services Commission; eligibility for professorial appointments in Government colleges; greater recognition on ceremonial occasions; and lastly and most important, an increase of pay.

Remedies proposed.

79. We proceed to suggest remedies where these seem essential.

We understand that in some provinces civil assistant surgeons are being substituted for sub-assistant surgeons in charge of dispensaries in growing towns, and it would seem advantageous for provincial governments to assist district boards and municipalities to do this more extensively. A considerable number of independent charges are held by graduates who have therein an opportunity for advancing their reputation. We consider that self-reliance and a sense of responsibility might be still further developed in this class, by using them more than at present to supervise the work carried on in rural dispensaries by sub-assistant surgeons, and by giving them a definite place in the sanitary work of the sub-district or tahsil in which their charge lies.

We consider that they should be required to undergo study periods at regular intervals during their service, and that an examination should be held after each course to test the extent to which they have profited by it.

Unless Government makes a radical change in the nomenclature of the minor medical services, we would make no change in the designation of this class.

As regards the claim to professorial appointments in Government colleges, we understand that some such appointments have already been thrown open alike to the assistant surgeon class and to the independent medical profession. In paragraph 53 of our report we have suggested the policy which should be adopted in making these appointments.

There can be no doubt that the pay of the civil assistant surgeon is inadequate and that an increase for all grades is overdue. We would indeed go further than the recommendation made by the Public Services Commission to the effect that the future pay of the service should be for all provinces, except Burma, Rs. 150 rising by triennial increments to Rs. 400, and propose that the minimum pay of this class should be Rs. 200 per mensem. This rate we consider would not be in any way excessive when the qualifications which should be required of the civil assistant surgeon are taken into consideration. We have been informed that in some provinces, owing to the present low rates of pay, Government is now not obtaining, as it should, the best men of this class.

There is a very laudable desire expressed for some kind of military training, which however most of the witnesses considered should be restricted to the earlier years of service. It would be impossible to give all civil assistant surgeons a prolonged training such as has been suggested by some witnesses, but we consider that, from both a military and a civil point of view, it would be of great advantage if a limited number were given periods of training at the proposed Indian Medical Corps Depot and School of Instruction.

D.—Civil Sub-Assistant Surgeons.

Status and qualifications.

80. Civil sub-assistant surgeons, on account of their numbers and the nature of their duties, form an important part of the medical organization of the country, and many of them have represented to us that their status should be improved so as to approximate to that of the civil assistant surgeon. But this request seems to us unreasonable. The qualifications required of the two classes are widely different, and the cost of raising the status of the sub-

assistant surgeon to the extent proposed would be prohibitive. We may look forward to a time when the Government will only employ on medical duties those who have obtained a complete medical education, but for some years to come the sub-assistant surgeon class, as at present constituted, will pay an indispensable part in the medical organization of India.

Pay.

81. The pay of the civil sub-assistant surgeon varies in the different provinces and is now much lower than that of the military sub-assistant surgeon. The Bombay Government has adopted the time scale already in force in Madras, and we are of opinion that, considering (*a*) the enhanced cost of living throughout India, (*b*) the nature and responsibilities of the duties that devolve upon them, and (*c*) the temptations in connection with medico-legal work, especially to junior men, the example set by these two governments should be generally followed.

Designation.

82. We have considered the wish expressed generally by civil sub-assistant surgeons for the abolition of their present designation. We do not consider that their claim to be called Assistant Surgeons is justified, and we would not advise that the existing designation, denoting rank, as it does, should be abolished, unless this is also done in the case of the civil assistant surgeon.

Standard of education.

83. We are of opinion that the sub-assistant surgeon should have a more complete medical education, and a sufficiently good general education to enable him to obtain the fullest benefit from the instruction given to him. The matriculation examination standard is now very generally demanded from civil students entering a medical school, and we consider that this practice should become universal, and also that a minimum and uniform standard of medical education for this class should be adopted in all provinces.

The war reserve of sub-assistant surgeons in civil employment.

84. Although it has been suggested to us that all civil sub-assistant surgeons should be required to undergo military training before admission to the provincial services, it is doubtful whether such a radical change could be made applicable to the whole of India, or indeed whether it is really necessary. We have, however, to ensure that a sufficient number of sub-assistant surgeons can be made available as a war reserve for service, not only in India but also overseas. In the United Provinces it was considered that it would only be necessary to extend the period of liability to remain in Government service to 10 years, and to increase the penalty in case of default to Rs. 1,000. We cannot think of a better solution of this difficult problem. We have received a suggestion that every civil sub-assistant surgeon should be required to sign an agreement binding him to serve wherever he may be required, on either civil or military duty, as a condition of service under the civil government. We strongly recommend that, if possible, effect may be given to this suggestion; for it is obvious from the experience of the recent war, during which the most liberal inducements completely failed to provide an adequate number of volunteers, that it will be necessary to take steps to ensure for the army a sufficient reserve of sub-assistant surgeons when they are required in the future. We recommend, also, that those civil sub-assistant surgeons who are called up for military service should be given three months training in the proposed Indian Medical Corps Depot and School, at the end of which they should be given the temporary rank of jemadar and supplied with uniform.

Post-graduate courses for sub-assistant surgeons.

85. It is, if anything, more necessary for the sub-assistant surgeon than for the assistant surgeon to have compulsory courses of post-graduate instruction, and these should be arranged for him at regular intervals.

We are also of opinion that arrangements should be made to bring into district headquarters, as frequently as possible, for periods of training there, all sub-assistant surgeons in charge of rural dispensaries.

CHAPTER VI.

Medical Store Department.

The question of re-organiza-

86. In view of the many complex and intricate problems involved in considering any re-organization of the Medical Store Department, and also in

tion referred to a sub-committee.

view of the short time at our disposal, we considered it desirable to refer the whole question to a sub-committee, consisting of Lieutenant-Colonel Shairp and Lieutenant-Colonel H. Ross, Assistant Director-General, Indian Medical Service (Stores), who was co-opted for this purpose.

The sub-committee went most carefully into all the questions affecting the Medical Store Department and, although they are unable, for want of time, to visit the Medical Store Depot at Rangoon, they inspected all the depots in India.

Report of the sub-committee.

87. We attach, as annexure IX the full and valuable report which they have submitted, and with which those of us who belong to the medical services are in general agreement. The President, Mr. Hignell and Major Cramer-Roberts feel that they have been unable, from lack of time and technical knowledge, to give this subject as much attention as would entitle them to express an opinion. We desire to invite particular attention to the following points.

The necessity for improved accommodation.

88. Having seen for ourselves the depots at Madras and Bombay, we are convinced of the necessity for the early provision of improved accommodation at both places, and in view of the description of the Lahore depot, which the committee as a whole were unable to visit, we consider that a scheme for rebuilding it, and for providing improved accommodation there also, should be taken in hand as early as practicable. More particularly is this extension and improvement of accommodation necessary in the case of the laboratories at the Madras and Bombay depots, if the development of manufacture and the pioneering of industries in connection with preparations from indigenous products is to be extended.

Closing of the laboratory at Lahore.

89. We concur in the recommendations as to the closing of the laboratory at Lahore and the transfer of such machinery as can be more usefully employed at one of the larger depots. We also agree that the services of the chemist now at Lahore should be utilised elsewhere.

Status and emoluments of medical storekeepers.

90. We are convinced that a considerable improvement in the terms of employment of medical storekeepers, and the establishments in medical store depots is urgently required. The work is arduous and by no means congenial to the professional man, and we consider it most necessary that there should be adequate provision for purposes of leave and for the due performance of the administrative and supervisory duties. We, therefore, strongly support the recommendations of the sub-committee for an increase of cadre and for the retention of the posts of deputy medical storekeeper which were instituted as a war measure. We are not, however, in agreement with the sub-committee in regard to the scales of pay and allowances which they recommend for the medical storekeepers. We consider that, instead of the intricate system of various allowances which they propose, it would be preferable to institute, if possible, a scale of consolidated pay based upon the importance of the work carried out at each of the depots. We therefore recommend that the medical storekeepers at Madras and Bombay should be graded for purposes of pay as Assistant Directors of Medical Services holding administrative appointments, and draw the consolidated rate of pay which, it is understood, has been recommended for this administrative grade. At Calcutta and Lahore, where the work is of a less arduous nature, we consider that it would be sufficient if the Medical Storekeepers were graded, for purposes of pay, as Assistant Directors of Medical Services at Army Headquarters. We realise that, at the present time, in view of the junior rank of the officers who must shortly succeed to these appointments, the rates of pay may appear unduly high, but we would not let this stand in the way of our recommendations.

Designation of medical Storekeeper.

91. We support the recommendation that the designation of Medical Storekeeper should be changed to that of Officer-in-charge, Medical Store Depot.

Establishments.

92. At all the depots which we visited the deficiency in trained and adequate establishment was brought forcibly to our notice. We, therefore, strongly support the recommendation that this question should now be fully examined, and that the scale of establishment should be raised, and a better

class of men entertained. In no class is the deficiency of adequate establishment more marked than in that of compounders, and we would strongly recommend that these men to whom is entrusted the issue of many poisonous drugs, should be required to undergo a specific examination. We consider that this examination should be in the nature of a standard prescribed by Government and should not be left to the discretion of the medical storekeeper concerned. Compounders should be recruited from among men who have passed this test, or, should there be an exceptionally intelligent employee in a depot, he might be allowed to undergo training and pass the examination at the proposed Indian Medical Corps Depot and School. We have been informed that a serious accident occurred recently at one of the depots owing to the deficient education of a so-called compounder, and it is most desirable that the possibility of such occurrences should be removed.

Emergent indents.

93. We consider that the number of emergent indents appears to be far in excess of what is necessary, and we concur in the opinion of the sub-committee that administrative medical officers should exercise greater control over such indents and their submission.

Institutions to be supplied by the depots.

94. We support the policy recommended by the sub-committee for the supply of drugs, etc., to medical institutions in this country.

Measures to prevent the adulteration of drugs.

95. We are convinced of the desirability of some form of protection as regards the quality of drugs offered for sale in the open market. We recommend that the consideration of the feasibility of such a measure should be taken up as soon as possible, though we recognise the difficulties inherent in the introduction of legislation of this nature.

Employment of military assistant surgeons in medical store depots.

96. We are of opinion that, if our proposals, given elsewhere in this report, with regard to the improvement of the position of military assistant surgeons are accepted, the number of officers of this class employed in medical store depots could be considerably reduced. It will be a waste of technical education and the high qualifications with which we now propose that the assistant surgeon should be invested to employ him in a subordinate position where these qualifications are of comparatively little value. We suggest, therefore, that the appointments now held by military assistant surgeons should be filled from the more intelligent men of the depot establishment, and that a suitable grading and scale of pay should be devised for them and submitted to Government by the Director-General, Indian Medical Service. We recognise, however, that it may be necessary in an exceptional case, such as that of the Rangoon depot, which is a collateral charge, to retain the services of a military assistant surgeon for the purpose of supervision.

Employment of research and pharmaceutical chemists.

97. We consider it very necessary that research and pharmaceutical chemists should be employed in certain of the depots. Much valuable work of the nature which these chemists would do has, in the past, been performed by some of the military assistant surgeons now employed. The reduction, as suggested in the previous paragraph, the number of assistant surgeons employed in these depots would increase the necessity for employing chemists, although we consider that this necessity would not be obviated by their retention.

Equipment list and forms in use in depots.

98. We strongly support the recommendation for the standardization of the forms in use in medical store depots and for the revision of the equipment list. It is most desirable that the latter should always be kept up to date.

Increase in the staff of the office of the Director-General, Indian Medical Service.

99. The sub-committee has recommended that certain work, such as the pricing of the home indents, should be thrown upon the office of the Director-General, Indian Medical Service. If these proposals are accepted, the staff in the office of the Director-General should be increased. We are of opinion that the senior officer dealing with questions regarding medical stores, in this office, should be graded as a Deputy Director-General, Indian Medical Service, and that he should be assisted by an officer graded as Assistant Director-General, together with a suitable staff of clerks. These appointments should be open to the cadre of the Medical Store Department, which should be increased permanently, or temporarily, to the extent necessary.

Verification of stocks.

100. We regret that we are unable to support in their entirety the views of the sub-committee with regard to the verification of stocks. We consider that a reduction in this verification to the extent apparently contemplated by the sub-committee might possibly prove disastrous. We, therefore, recommend that the complete verification of all stocks held in medical store depots should be undertaken at least once in every three years.

System of accounting.

101. We are convinced of the necessity for a change in the system of accounting at present in force in medical store depots, and we consider that that recommended by the sub-committee should be adopted, at any rate as an experimental measure.

The future control of the department.

102. We have not as yet touched upon the question of the future control of the Medical Store Department in the event of our proposals for an Indian Medical Corps being accepted. The large civil obligations of the department seem to make it impossible to place it under the Commander-in-Chief. On the whole, we are inclined to rcommend that the Medical Store Department should be placed under that Department of the Government of India which will in future control the civil medical service.

CHAPTER VII.

MISCELLANEOUS.

A.—Sanitary and Bacteriological Departments.

Co-operation between research and clinical medicine.

103. We have had a considerable amount of information connected with the administration and working of the Sanitary and Bacteriological Departments placed at our disposal, but we are chiefly indebted to the report of the conference of sanitary and bacteriological experts held at Delhi, in December last.

We are unanimously of opinion that to obtain the best results there must be closer co-operation between medical research and applied preventive and curative medicine.

Health boards.

104. We would recommend the formation of one Imperial Health Board, with the head of the Indian civil medical service as its president, and provincial health boards with the administrative-heads of the provincial medical services occupying a similar position.

If, as we consider most necessary, a directorship of medical research is created, then this director and the Sanitary Commissioner with the Government of India would be the more important members of the central board, with the Deputy Director-General, Indian Medical Service, as secretary. In the provinces the members would advantageously and conveniently be the Sanitary Commissioner, the Inspector-General of Prisons, a representative of the Medical Council of Registration, either a representative of medical research or one of the professors of the local medical college, and the provincial Sanitary Engineer. Each board would have the power to co-opt members for long or short periods as required.

Expansion of the departments.

105. The Secretary of State has emphasized the necessity for a more liberal provision of public health institutes and research laboratories. We would endorse all that has been said in this connection, and add that our inquiries have shown us how great the future expansion of the bacteriological and sanitary services generally must be, if there is to be an adequate expansion of sanitary work in India.

Officers for sanitary work.

106. There is great need for more officers of the type of the Indian Medical Service officer, who must, we consider, be highly trained in public health and tropical medicine, and must also be men accustomed to control others. We would not, however, confine these appointments to the Indian Medical Service, but offer inducements to attract the best men trained in the United Kingdom or in India, whether European or Indian. At present good men are often deterred from preparing themselves for a career in public health owing to the poor prospects which such a career now offers. It is not

only in the matter of pay but also in the conditions of service that there is discontent amongst men serving in provincial sanitary appointments; they find service under municipal bodies unsatisfactory, and clamour for the establishment of a properly graded service, which would give them a better official status and would also offer within it prospects of promotion and a certain pension, as well as providing them with a professional head to whom they could look to safeguard their interests.

Co-operation in the provinces.

107. We desire to emphasize the necessity for closer co-operation between the administrative heads of the medical services of provinces and sanitary commissioners. There is, we consider, a tendency for these officers to work independently.

We consider that the two services should be controlled by the same department of government.

B.—Alienist Department.

History.

108. As far as the history of the administration and management of lunatic asylums in India goes we may confine ourselves to the consideration of three important decisions of the Secretary of State and the Government of India. These decisions were: (*a*) to maintain one central asylum in each of the five large provinces, (*b*) to substitute whole-time for part-time superintendents in these central asylums, and (*c*) to keep alienist appointments open to, but not to reserve them for, Indian Medical Service officers.

Central and district asylums.

109. There are now 6 central asylums managed by whole-time officers of the Indian Medical Service, and 14 district asylums, the charge of which is held by civil surgeons in addition to their other duties. These asylums are controlled by local governments and inspected by the administrative medical heads of the provinces.

Considering the great strides made in the treatment and care of persons suffering from mental diseases, we are of opinion that Government's decision in favour of central asylums in substitution of district asylums should be acted upon to a further degree, so as to permit of the majority of cases coming under the care of trained experts or specialists at as early a period in the course of the malady as possible.

The recruitment of alienists.

110. We would adhere to the decision to keep asylum appointments open to others than Indian Medical Corps officers, but we would insist upon all who are selected having a practical training in the treatment and management of mental cases.

Formation of a department.

111. We are of opinion that no great advance is likely to be made in the administrative control of asylums until there is established a definite and properly organized department, with its own leave and study reserves.

Medical officers and assistants.

112. We are satisfied that more medical officers are required if the treatment of insanes is to be efficiently carried out; there should in our opinion be not less than two qualified alienists in each of the large asylums, besides assistants, and each provincial asylum should be in charge of a trained alienist. We would continue the employment of military assistant surgeons as assistants to the superintendents, but we suggest that an attempt should be made, by offering a more suitable salary, to induce the best men of this class and also Indian graduates to take up mental work.

Superintendents of central asylums as military consultants.

113. We endorse the suggestion made in the course of our inquiries that, when a department is established and properly organized, superintendents of the central asylums would naturally become consultants to military hospitals, but we would add that such an arrangement would necessarily follow on the adoption of our scheme for a unified service.

C.—Women's Medical Service in India.

History.

114. The early history of medical relief for Indian women by women doctors is associated with missionary enterprise, but in about 1873 government medical colleges and schools commenced to open their doors to women, who were taught in the same classes as male students. These Indian medical

women when qualified received a certificate or license similar to that given to sub-assistant surgeons. They were left to find employment for themselves, and most of them entered the service of local bodies for work in the women's departments of general hospitals or dispensaries. They did not belong to any organized service.

The Dufferin Fund.

115. At the instance of the Countess of Dufferin a fund was established in 1885, mainly with the object of bringing out medical women from England for employment in local fund hospitals. The pay of these posts was, however, small and owing to this, and to the absence of pension and official status, the appointments offered failed to attract women of ability in the numbers required.

In 1909 an appeal for assistance was made to the Government of India, and eventually, in 1913, an annual grant-in-aid was given to the National Association for Supplying Female Aid to the Women of India, to enable it to constitute a women's medical service to be under its sole administration and control.

We are of opinion that, as the new service was only constituted in 1914, it is too early to venture upon an opinion as to whether it is likely to develop along lines which will enable it to allow fully for the necessary future expansion of a superior women's service.

We understand, however, that the funds at the disposal of the association are insufficient to allow of a much needed increase in the cadre or to raise the pay of the different grades of the service, steps which alone will now induce suitable women to come out to India. We are therefore of opinion that, in the absence of a state service, this association should be placed in a position to meet these demands, and we strongly recommend its needs to the early consideration of Government.

Demand for more medical women of a lower grade.

116. The demand for qualified women of the sub-assistant surgeon class is rapidly growing, and we consider that the time has come for them to be more largely taught by persons of their own sex in their own medical schools and hospitals. These need not be State institutions but we recommend that they should receive financial assistance from Government and be regularly inspected.

Women serving under local bodies.

117. It has long been realised that the position of women doctors of the assistant-surgeon and sub-assistant grades is not satisfactory and we understand that the Dufferin Committee has under its consideration the creation of a service, affiliated to its superior service, which will include the former, whilst certain of the local governments are engaged on schemes for services for the latter.

Post-graduate courses of instruction.

118. The necessity for post-graduate training is, in our opinion, even greater for women doctors of these grades than for the ordinary assistant and sub-assistant surgeon, and we consider that efforts should be made to introduce classes for such training.

Women doctors as a reserve.

119. During the war the Women's Medical Service has undertaken the whole of the executive professional work in one of the special war hospitals at Bombay, while members of it have worked singly in other military hospitals; there would thus seem to be no reason why they should not be reckoned upon as a reserve to take the place of medical officers in the treatment of women in family hospitals, and in times of emergency, that of men in military hospitals in the general wards and casualty departments. Doubtless too, as they increase in number in rural districts, their services would be available for the care of women and children in the absence of European medical officers.

D.—Nursing Services of the Army in India.

Unsatisfactory state of nursing in military hospitals in India.

120. There is a considerable amount of evidence before the Committee showing that nursing in the army in India is far from satisfactory; that in British station hospitals it does not approximate in quality to the standard considered essential in the United Kingdom, whilst in Indian station hospitals scientific nursing is non-existent. The present day standards of nursing

and of efficiency and discipline demanded of nurses of all classes are on a much higher level than they were a generation ago.

The present organization.

121. Nursing duties in the military hospitals in India are performed by the following classes of personnel :—

(*a*) In British station hospitals, by

(1) the Queen Alexandra's Military Nursing Service for India (a short history of this service and its organization are given in annexure X);

(2) nursing orderlies drawn from the various British combatant units in the stations concerned, and trained to a certain extent by the nursing sisters and the medical officers in the hospitals; and

(3) Indian ward servants of the Army Hospital Corps.

(*b*) In station family hospitals, by a matron, trained and holding a certificate in midwifery, assisted by a menial staff, under the supervision of a medical officer and military assistant surgeon.

(*c*) In Indian station hospitals, by Indian ward orderlies, drawn from combatant units, and trained to a very limited extent by the medical officers and sub-assistant surgeons in the hospitals.

Defects in British station hospitals.

122. In the British station hospitals there are several factors which impede the progress of nursing; these are :—

(*i*) the conditions of service of the Queen Alexandra's Military Nursing Service for India,

(*ii*) the employment of partially trained combatant soldiers, as nursing orderlies, and

(*iii*) the employment of low caste Indians as ward attendants.

Queen Alexandra's Military Nursing Service for India.

123. Since all the ladies of the Queen Alexandra's Military Nursing Service for India retain the same rank and standing as they had when they first joined, to probably their third term of service, there is not that chain of responsibility which is essential for good administration. Even the lady superintendent of a circle may hold at the same time the position of matron in a first class station hospital, and be occupied also in executive nursing duties. Consequently she has neither the time nor the position to exercise administrative and disciplinary functions over the remaining members of the service who are junior to herself. The chief disadvantages of continuous service in India have been the effects of the climate and life in this country upon the average nursing sister, and professional deterioration due to want of facilities for keeping in touch with modern knowledge and methods.

British nursing orderlies.

124. British soldiers are selected by their commanding officers from amongst the rank and file, for employment as nursing orderlies, and are sent to the various hospitals to be trained. This training must of necessity, from the short time available for the purpose and the frequent changes of personnel, be of a sketchy and perfunctory character. Furthermore, the nursing orderly is changed every 6 months, as a longer period of duty in a hospital is considered detrimental to his efficiency as a fighting soldier. They are taken away on mobilization, and for regimental training, at the will of their commanding officers.

Ward servants.

125. The employment of Indian ward servants on any form of nursing duty has always been a mistake. The men are of very low caste, and most venal and dirty in their habits. They are untrustworthy, and perform even the most menial of nursing duties in a very indifferent way.

Station family hospitals.

126. In station family hospitals the whole of the nursing, as well as the conduct of uncomplicated cases of labour, is carried out by a matron, assisted by some menial female servants. The matron has, as a rule, no training in general nursing, and, though she may be an efficient midwife, she cannot have that knowledge of ordinary sick nursing which is essential for the proper attendance on the various classes of cases that find admission to the hospitals.

Indian station hospitals.

127. In Indian station hospitals the present arrangement is that a certain number of sepoys (8 per 100 beds) are attached to these hospitals as ward orderlies. The men chosen are as a rule those who have failed in some way as soldiers. This is radically wrong. It is hoped that the Indian Medical Corps of the future will contain a nursing section, the members of which will be properly trained. But to ensure this, nursing sisters are required in Indian station hospitals.

In annexure XI will be found specific and detailed recommendations made by the expert members of the Committee in connection with the whole question of nursing in military hospitals in India.

CHAPTER VIII.

SUMMARY OF RECOMMENDATIONS.

128. THE changes which we have recommended are as follows:—

General recommendations.

(1) The formation of an Indian Medical Corps which shall take the place of the Indian Medical Service and, in addition, do the work now done by the Royal Army Medical Corps in India. It should also recruit for, and include the higher civil medical service of the country (paragraphs 37—48).

(2) It should have an ordinary war reserve of officers lent to civil administrations for five years or less (paragraph 40), and a special reserve of officers belonging to its civil branch who should only be recalled to military duty on occasions of grave national emergency, and not even then if holding certain residuary appointments (paragraphs 47—48).

(3) It should include transfers from the Army Medical Service and the Royal Army Medical Corps (paragraph 44).

(4) The military side of the corps should have its own depôt and school of instruction (paragraph 45).

(5) Junior officers should, shortly after their first arrival in India, be attached to a large civil hospital or school of tropical medicine for practical instruction in tropical diseases (paragraph 46).

(6) The special reserve should be partly recruited from civil assistant surgeons and independent medical practitioners (paragraph 47).

(7) The governments of the various provinces should supplement their contingents of officers from the Indian Medical Corps with exclusively civil medical officers whom they will themselves appoint (paragraph 49).

(8) Special arrangements should be made by Government to secure European medical attendance for European officers and non-officials, when required (paragraph 50).

(9) A system of optional retirement on gratuity should be adopted in order to secure a sufficiency of candidates for the new corps (paragraph 51).

(10) Admission to the corps should be through the portal of a single examination held in England twice a year. Selected Indian students from the five Indian universities should be assisted by scholarships to compete in this examination (paragraph 52).

(11) Immediate admission, however, must be by transfer and nomination (paragraphs 43, 44 and 52).

(12) Special opportunities should be provided for work in research and scientific medicine. Certain posts in the sanitary and other departments should be reserved to officers of the new corps (paragraph 53).

(13) There is only one possible alternative scheme, which we indicate but regard as decidedly inferior to the scheme which we recommend (paragraph 54).

Improvements in the officer grade.

(14) Salaries should be increased. More liberal provision should be made for leave. Full pension should be admissible at an earlier date. The

position of civil administrative medical officers should be improved. Better buildings should be provided for Indian station hospitals (paragraph 58).

(15) The number of officers of the corps required for duty in peace time should be calculated at 3 per mille of the total strength of the army in India. A leave and casualty reserve of 25 per cent and a study reserve of 4 per cent of the officers required for duty should be provided (annexure VIII, paragraph 2).

(16) Promotion should be on the same system as promotion in the Royal Army Medical Corps, including selection for promotion to the rank of lieutenant-colonel to fill a fixed establishment. Every officer should, between his seventh and tenth years of service, undergo a post-graduate course at the Royal Army Medical College. All officers should on attaining the rank of lieutenant-colonel make their choice between the careers of (*a*) military administration, (*b*) professional employment as consultants, and (*c*) permanent civil employment. No officer should be eligible for transfer from civil to military, or military to civil employment after promotion to the rank of lieutenant-colonel (annexure VIII, paragraph 9).

(17) The head of the military side of the new corps should be an officer of the corps. A board should be established for the selection of officers for promotion (annexure VIII, paragraph 15).

Improvements in the minor and provincial services.

A. Military Assistant Surgeons.

(18) The standard of education should be raised so as to admit of their obtaining a registrable qualification. They should be employed only on professional duties (paragraph 60).

(19) Those who obtain a qualification registrable in the United Kingdom should be allowed to proceed to England and compete for admission to the commissioned ranks of the Indian Medical Corps. Their pay and pension should be raised in consequence of the previous recommendations (paragraph 61).

B. Military Sub-Assistant Surgeons.

(20) Their standard of general education should be raised (paragraph 65).

(21) Sub-assistant surgeons who obtain certain diplomas should be eligible for transfer to the military assistant surgeon branch (paragraph 66).

(22) Hostels should be provided in all medical schools (paragraph 67).

(23) Sub-assistant surgeons should, on first joining the corps, undergo a full course of training at the Indian Medical Corps Depôt and School (paragraph 69).

(24) They should be put through systematic physical training at the medical schools (paragraph 70).

(25) Post-graduate instruction should be provided (paragraph 71).

(26) Allowances while travelling on duty should be increased (paragraph 75).

(27) The question of increasing their pensions and family pensions should be considered, and a provident fund introduced (paragraph 76).

C. Civil Assistant Surgeons.

(28) Selection for superior appointments should take place earlier than at present (paragraph 77).

(29) They should undergo regular study periods. Their pay should be raised. A limited number should be trained for the special reserve, at the Indian Medical Corps Depôt and School of Instruction (paragraph 79).

D. Civil Sub-Assistant Surgeons.

(30) The time scale of pay should be adopted generally (paragraph 81).

(31) The standard of preliminary education should be raised, and a minimum and uniform standard of medical education for this class should be adopted in all provinces (paragraph 83).

(32) They should all be required to sign an agreement to serve wherever they may be required, on civil or military duty. When called up for military service they should be given 3 months training at the Indian Medical Corps Depôt and School (paragraph 84).

(33) They should undergo courses of post-graduate training (paragraph 85).

Medical Store Department.

(34) Improved accommodation should be provided for the depôts at Madras, Bombay and Lahore (paragraph 88).

(35) The laboratory at the Lahore Depôt should be closed (paragraph 89).

(36) The cadre of medical storekeepers should be increased, and the pay of these appointments raised (paragraph 90).

(37) Medical storekeepers should in future be known as Officers-in-charge, Medical Store Depôts (paragraph 91).

(38) The scales of subordinate establishment should be raised and a better class of men entertained (paragraph 92).

(39) Compounders should be required to undergo a prescribed examination (paragraph 92).

(40) Greater control should be exercised by administrative medical officers over the submission of emergent indents (paragraph 93).

(41) The question of the introduction of measures to prevent the adulteration of drugs should be considered at an early date (paragraph 95).

(42) The number of military assistant surgeons employed in the depôts should be reduced (paragraph 96).

(43) Research and pharmaceutical chemists should be employed in certain depôts (paragraph 97).

(44) The forms in use in depôts should be standardized, and the equipment list revise and kept up to date (paragraph 98).

(45) The staff of the office of the Director-General, Indian Medical Service, should, under certain conditions, be increased. There should be a Deputy Director-General, Indian Medical Service, and an Assistant Director-General, Indian Medical Service, to deal with questions regarding medical stores. These appointments should be open to the cadre of the Medical Store Department (paragraph 99).

(46) Stocks should be verified at least once in every three years (paragraph 100).

(47) The system of accounting should be changed (paragraph 101).

Sanitary and Bacteriological Departments.

(48) Imperial and provincial health boards should be formed (paragraph 104).

(49) Both the departments should be expanded (paragraph 105).

(50) The staff of officers in the Sanitary Department should be increased and inducements should be offered which would be likely to attract the best men (paragraph 106).

(51) Greater co-operation is required between the administrative heads of provincial medical services and sanitary commissioners (paragraph 107).

Alienist Department.

(52) Central asylums should be still further substituted for smaller asylums (paragraph 109).

(53) The department should be properly organized with its own leave and study reserves (paragraph 111).

(54) The cadre should be increased. Greater inducements should be offered to military assistant surgeons and Indian graduates to take up mental work (paragraph 112).

(55) Superintendents of central asylums should become consultants to military hospitals (paragraph 113).

Women's Medical Service in India.

(56) The National Association for Supplying Female Aid to the Women of India should be placed in a position to enable it to augment its cadre and increase the pay of the medical women employed by it (paragraph 115).

(57) Women students of the sub-assistant surgeon class should be taught by women doctors in female medical schools and hospitals. These institutions should be assisted financially by Government, and regularly inspected (paragraph 116).

(58) Women doctors of the assistant and sub-assistant surgeon class should receive post-graduate instruction (paragraph 118).

Indian Medical Corps and Nursing Services of the Army in India.

(59) Proposals for the organization of the Indian Medical Corps, and the future organization of the nursing services for the army in India are contained in annexures VIII and XI, respectively.

(Signed) H. V. LOVETT,
President.
G. CREE, *Major-General.*
P. HEHIR, *Major-General.*
H. HENDLEY, *Major-General.*
GERALD G. GIFFARD, *Maj.-Genl.*
S. R. HIGNELL.
A. SHAIRP, *Lieut.-Colonel.*
M. T. CRAMER-ROBERTS, *Major*
A. A. McNEIGHT, *Major,*
Secretary.

DATED, SIMLA, THE 22ND APRIL, 1919.


सत्यमेव जयते

List of

ANNEXURES to the REPORT.

सत्यमेव जयते

ANNEXURE I.

SHORT HISTORY OF THE ROYAL ARMY MEDICAL CORPS.

BEFORE the year 1872, the medical services of the British Army were entirely constituted on a regimental basis, that is, every regiment had its quota of medical officers, generally three per battalion, its own hospital, and nursing orderlies drawn from the regiment itself. The senior of the medical officers in a battalion did not command the regimental hospital, nor were the medical officers responsible for the equipment or dieting, the command being vested in the officer commanding the battalion and the supplies in the quartermaster. There were also no female nurses beyond a few soldiers' wives who were occasionally employed.

After the failure of the medical services in the Crimea the matter was taken up in Parliament, and a Commission of inquiry was appointed in 1859, under the Presidency of Lord Herbert of Lea. This Commission recommended many changes, including the abolition of the regimental system, the institution of station hospitals, the formation of a hospital corps, and the introduction of nursing sisters in military hospitals. Nothing very much was done till the year 1872, owing to the opposition of the combatant officers and a disinclination on the part of many regimental medical officers to cut themselves adrift from their regiments.

In 1872, a unified medical service was introduced and called the Army Medical Department, and all medical officers in the army, with the exception of those in the Guards, both foot and horse, were placed on one list for promotion, appointment, etc. Station hospitals were introduced, and a corps to undertake the nursing, clerical and other subordinate work was instituted and called the Army Hospital Corps. This corps was officered and commanded, not by medical officers, but by special officers called Lieutenants, Captains and Majors of Orderlies, who were also responsible for the supplies of its hospitals as well as the discipline of the other ranks of the Army Hospital Corps.

From this date the unpopularity of the Army Medical Department commenced to make itself apparent. The loss of social status resultant on being taken away from regiments, and the fact that medical officers were no longer any body's children, the lack of substantive rank, the indifferent pay and prospects, the want of proper recognition by the combatant officers, and the divided administration of the hospitals, all had their effect, with the consequence that in a few years it was found most difficult to obtain candidates for commissions. The medical schools, especially those of London, all set their faces against the Army Medical Service, and the War Office were obliged to "scrape the pot" to get any candidates at all. This culminated, in 1887 to 1889, in the service being entirely closed, no candidates at all being obtainable. The British Medical Association had interested itself in the question for some time and were able now to insist on some amelioration of the conditions in the Army Medical Department. These resulted in the granting of compound titles to the officers: Surgeon-Captain, Surgeon-Major, etc., the change of the designation of the service to Medical Staff and Medical Staff Corps, with complete command of the latter, and also of the station hospitals, by officers of the Medical Staff. This was followed by a substantial increase of pay and better prospects of promotion and pension. However, the Army Medical Department had been so thoroughly discredited in the medical schools that even with these concessions it was found difficult to obtain candidates of a good stamp for commissions. The Indian Medical Service and Royal Navy invariably had the first choice. The British Medical Association and the medical schools still continued their campaign with the War Office, fighting a difficult battle against much prejudice and vested interest, till the time of the South African war, when one medical corps for the army was formed, giving the officers military titles and complete and absolute command of the other ranks of the corps, and a further increase of pay and a betterment of prospects. The corps was called the Army Medical Corps,

and shortly afterwards the title of "Royal" was conferred by the late Queen Victoria.

From now commenced an era of increasing prosperity for the Royal Army Medical Corps, its rehabilitation in the eyes of the medical schools and its gradual appreciation by the rest of the army. Co-incident with these was the institution of a far better system of training for the officers after joining, and of examination before promotion, which ensured at least that each officer had devoted a portion of his time to learning his trade and keeping himself abreast of modern methods. The introduction of specialists in all branches of medical science, after a long post-graduate course and examination, opened an avenue of attraction to men who were desirous of devoting themselves to particular branches of medicine, with the happiest results. All this was made possible by the building of the Royal Army Medical College at Millbank, with its close connection with the great London hospitals and medical schools. The attractions of the Royal Army Medical Corps now became established, and instead of, as formerly, it being difficult to obtain the right sort of candidate, competition became strong, and the pick of the medical schools presented themselves for the entrance examinations. This was influenced to a certain extent by the increasing unpopularity of the Indian Medical Service and also that of the medical service of the Royal Navy, but the fact remained that the Royal Army Medical Corps offered an attractive career to the young man who desired an adventurous life, as well as to those who wished to devote themselves to research but had not sufficient means to support themselves while doing so. The final step in popularising the corps was the grant, in 1918, of the ranks of major-general and lieutenant-general instead of the old title of surgeon-general.

Previous to the institution of the Royal Army Medical College at Millbank, in about 1902, all successful candidates were sent to the Royal Victoria Hospital, Netley, for courses of instruction in military medical affairs. From its isolated position, and disconnection with the centres of medical education, as well as from its lack of clinical material, this institution was considered obsolete, and with the reconstruction of the Royal Army Medical Corps the College at Millbank was built. This college houses all the research departments of the Royal Army Medical Corps, and instruction on these subjects is carried out there, but clinical work is done at the Queen Alexandra Hospital, Millbank, which is the military hospital for the whole London Command, and at the special Military Venereal Hospital, Rochester Row, as well as the great London general hospitals.

The instruction is carried out by a combination of special officers of the Royal Army Medical Corps and professors chosen from the teaching bodies of London. The examinations at the completion of the courses are also conducted by the same combination of examiners.

The social point of view is not lost sight of, as the Royal Army Medical Corps London Mess is situated there, and all bachelor officers going through the classes live in the college.

There are two special points connected with admission to the Royal Army Medical Corps which are worthy of note: (1) that each candidate signs a declaration that he is of unmixed European parentage, and (2) that he has to appear at a personal interview with the Director-General, Army Medical Service, before he is allowed to compete. The competitive examinations for the Royal Army Medical Corps and Indian Medical Service differ entirely in their character and are not comparable.

After successful competition all young officers proceed to the Royal Army Medical College, Millbank, where they undergo a course of study in special military medical subjects, which lasts for two months. At the completion of this they are examined in those subjects. They are then sent to the depot of the Royal Army Medical Corps, where they undergo a course in military subjects, drill, equitation, field work, etc. This lasts for three months, and on its completion they are again examined in those subjects.

The combined marks obtained at the entrance examination, at Millbank, and at the depot, determine their final position in their batch.

Between the seventh and tenth years of their service all Royal Army Medical Corps officers proceed to Millbank for a post-graduate course. This course lasts altogether for nine months, and is divided into three periods of three months each. At the completion of these periods examinations are held and it is possible for an officer, by the results of these examinations, to accelerate his promotion by from six to eighteen months, as well as to qualify for a specialist appointment. The examinations are conducted by a mixed board of examiners as above. Officers who fail at this examination are re-examined after six months, but do not attend any further course at Millbank. If they fail a second time they are retired with a bonus.

The functions of the Royal Army Medical College, as will be seen, are educational, disciplinary and social, in addition to which it is also the centre for the great work of research that is always in progress there.

ANNEXURE II.

NOTE ON THE INTRODUCTION OF THE STATION HOSPITAL SYSTEM FOR INDIAN TROOPS.

History.

FROM time to time it had been proposed to introduce into the Indian Army the station hospital system, which had proved so satisfactory in the case of British troops. In 1880, sanction was actually accorded to the establishment in each station of a combined hospital for the treatment of all the sick of the Indian garrison. Effect was, however, never given to this sanction. The question came up again for consideration in 1883, but was negatived on account of the expense that was anticipated. The Secretary of State next suggested, in 1886, the possibility of effecting a reduction in the cadre of the Indian Medical Service if station hospitals were introduced. His query was met by the answer that there was no prospect of the system being adopted owing to its alleged unpopularity with officers and men. It is interesting to record that on the next occasion when the question was mooted, in 1890, its reconsideration was due to a suggestion made to the effect that the adoption of the station hospital system would allow of an interchange of Indian Medical Service and Royal Army Medical Corps officers, and so permit of the freeing of Indian Medical Service officers for civil employ. The system was tried at Calcutta and Rawalpindi in 1891, and, although it failed to produce evidence on the point that gave rise to the experiment, it brought to light the very indifferent menial, nursing and clothing arrangements under the regimental system, and it conclusively showed that no reduction in officers or establishments would be possible. The introduction of the system was not favoured by Lord Roberts, who held the opinion that it was not suited to the Native Army.

Although, in 1900, a proposal to try the station hospital system in the late Hyderabad Contingent was submitted and accepted, and Lord Curzon's Government expressed the opinion to the Secretary of State "that the advantages that might be anticipated from the proposed system outweighed the arguments against its adoption," it was not until 1906 that any real progress was made. In that year, combined regimental hospitals for Indian troops were introduced. Under this system, which was a compromise designed to make good, as far as possible, the defects of the former system, but at the same time maintaining its essential features, the sick of all regiments in a station were treated in a central hospital, retaining their regimental customs and arrangements. Administration was placed under the senior of the regimental medical officers, but the disciplinary control over medical officers and subordinates remained, as before, in the hands of officers commanding regiments. This system resulted in anomalies, in that at times it was impossible to avoid all the medical officers doing duty at a station being very junior in rank while at other times all might be men of standing and experience. It

afforded no opportunity of ensuring that the most capable officers were selected for the higher and more responsible positions. It did not allow efficient co-ordination between the regimental hospitals constituting each combined hospital, nor was it economical in personnel and equipment, as each regimental hospital was still separately maintained.

The Lukis Committee.

In 1910, a committee, with the late Surgeon-General Sir C. P. Lukis as president, was appointed to examine the question anew. This committee presented a report which recommended the abolition of the system of regimental hospitals, the raising of an Indian Army Hospital Corps and of a Corps of Ward Orderlies to take the place of regimentally enlisted men, and the retention of the existing establishment of Indian Medical Service officers. After a careful examination of the proposals the Government of India decided that it was unable to accept them, for financial reasons.

The question of giving effect to the recommendation of the Lukis Committee was again raised in 1912, but no decision had been reached when war broke out in 1914, and the further consideration of the case was deferred.

Introduction of the station hospital system.

As a result of the report of the Mesopotamia Commission, and at the instance of the Secretary of State, the question was once more considered. The Government of India proposed to introduce the station hospital system as recommended by the Lukis Committee, and, further, to carry out other suggestions made by it, for the dieting of the sick, the provision of clothing and bedding, and the equipment of the hospitals with such furniture, medical and surgical equipment, staff and buildings as modern requirements demanded. The Secretary of State approved of the proposals and the Government of India issued orders for the introduction of the new system with effect from the 1st December, 1918.

Changes made by the introduction.

The changes effected by the introduction of the station hospital system may be briefly stated as follows:—

(*i*) the abolition of regimental and followers' hospitals, and the substitution for them, in each station, of a single hospital, or sections of a single hospital, in which all the Indian sick of a garrison, both troops and followers, are treated;

(*ii*) the hospitals are commanded and administered by Indian Medical Service officers;

(*iii*) all junior officers, medical subordinates, and menials engaged in the care of the sick, instead of being under the control of regimental commanders, are under the orders of the officer commanding the hospital;

(*iv*) the hospital establishment is recruited directly for the purpose, instead of being passed through regimental channels;

(*v*) the sick in hospital are dieted by the State, in addition to the extras that were formerly provided, and they are given appropriate clothing and bedding;

(*vi*) the effect on the Indian Medical Service officer is that, instead of his being one of the officers of a regiment, he is now an officer in what is becoming a "corps;"

(*vii*) the general effect will be the more efficient treatment of the sick in a single hospital, better staffed and equipped, and with an organization assimilated to conditions which prevail in war.

ANNEXURE III.

MEMORANDUM, DATED FEBRUARY, 1918, BY SIR G. H. MAKINS, K.C.M.G., C.B., PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN ENGLAND.

IN India the close relation existing between the civil and military elements of the medical profession should form the ideal. If this relation be disturbed, the military element would suffer in medical experience, since either British or Indian soldiers—a body of carefully sifted, sound, healthy

young men—offer comparatively small opportunities for practice, except in so far as such endemic diseases as malaria, the minor ailments common to soldiers in camp, and a small number of emergency cases due to acute disease or occasional accidental injuries are concerned. The civil element, on the other hand, practising amongst the mass of the population, beyond such cases as those enumerated above, is called upon to deal with every form of disease, and has abundant opportunity of acquiring practical experience. A close and intimate relation is therefore to be desired between the two branches of the service in order that the ideal should be fully realised.

Certain reasons appear to have interfered with this desirable result, some of which may be indicated:—

(1) a want of sufficient interchange between the civil and military elements;

(2) the maintenance of a purely military element;

(3) the indiscriminate employment, in time of war, of officers who have been engaged in special forms of work, and during many years have gained experience of the greatest value, in purely administrative military posts. These officers are suddenly switched off to perform duties to which they are unaccustomed, with the result that, while valuable experience is sacrificed, yet an inferior administration only may be obtained.

The question of interchange is not one of any great apparent difficulty if the service be treated as a homogeneous whole. The custom prevailing of attaching officers on their arrival in India to a regiment, and continuing them as regimental officers for a period of five years or more, seems to be the first step in the wrong direction. As already mentioned, military service offers few opportunities for acquiring practical experience in medicine and surgery, yet these young officers, but recently qualified, are at the outset of their careers placed in this unsatisfactory position, which is moreover exaggerated by the fact that some of the diseases they are called upon to treat are of an unfamiliar nature to them. The whole position would be reversed were the newly-joined officer sent directly to a civil hospital and kept there doing duty for at least one year, as a junior resident medical officer. During this period he would acquire invaluable experience of the forms of disease met with in India, and when sent to a military hospital later he would not only be more capable, but he would also have already acquired interest in his work and be far more likely to utilise such material as would come under his charge.

The proposition that has been made that officers during their period of military duties should attend "post-graduate courses dealing with X-ray work, bacteriology, malaria technique, serology, and tropical medicine," and further should have *systematic access* to neighbouring station and civil hospitals, *in their leisure* hours, is unpractical. Such courses could only be arranged for successfully by the institution of an Indian Medical Staff College, *a practical necessity* not yet provided, while casual attendance on hospital practice, unaccompanied by the assumption of any practical work and individual responsibility, is of very slight educational value. A preliminary two years' civil work followed by three years' military duty would be a far better method of procuring a highly-trained medical officer at the termination of his first five years of service.

The question of post-graduate instruction can only be successfully solved by the establishment of an Indian Medical Staff College. It may be pointed out that such a college not only provides for scientific study, but also allows the heads of the service to take stock from time to time of the officers at their disposal, to become acquainted with the capabilities and individual character of every officer, and thus become enabled to make a better distribution of the officers to posts suitable to their individual attainments and personal disposition. When necessity arises to transfer specially capable men in any branch of medicine from civil to military duty, it should be possible for a highly trained physician or surgeon to be utilised as such and yet attain the same rank and receive the same pay and allowances as a purely administrative medical officer.

The scope of the work performed by the Indian Medical Service is perhaps hardly realised in India itself, and certainly not without its borders. To the service is confided :—

(*a*) the medical charge of the European members of the Government and of the Indian Civil Service, also a leading part in the medical treatment of the whole Indian community;
(*b*) the inception and regulation of measures relating to the public health and sanitation of the whole country;
(*c*) the management of jails and asylums;
(*d*) the medico-legal work of the whole community;
(*e*) regimental duties and the care of the hospitals of Indian troops;
(*f*) the exertion of a certain political influence directly dependent on the close relation which medical duties establish between the officers of the service and individuals of the Indian population;
(*g*) the medical education of the country.

It may be well, in view of the present unpopularity of a service entrusted with such important duties, to first ask what position the medical service holds with regard to the executive Government of the country. The duties are second to none, so far as the well-being of the entire Indian community is concerned, yet such a thing as an Indian Medical Department cannot be said to exist. The service as a whole is represented by a Director-General with a ministerial staff, who makes indirect recommendations to a Council on which he has no seat or opportunity of refuting criticism which may be made, while his recommendations often relate to matters which it is difficult for the civilian to grasp or fully understand. Again, even in the internal management of the service something in the way of a dual control exists, as in time of war officers employed in civil work are handed over from the department and pass under the control of military officers not fully cognisant either of their professional capacity or their individual characteristics. To the outside observer, in fact, the Indian Medical Service appears to be a congregation of individuals, held together by the common tie of similar duties, but possessing no proper central administrative department to correlate and combine the various paths of work, or to which the members of the service can look to for advice, direction or support.

In England the multifarious duties fulfilled by the Indian Medical Service are controlled and directed by no less than three important bodies, the Privy Council, the Local Government Board, and the General Medical Council, a tripartite arrangement which it would be easy for the Government of India to improve upon. In India it is not easy to appreciate what obstacle can exist to the formation of a single Board to undertake the duties, and to, on the one hand, facilitate the work of the Director-General, Indian Medical Service, and on the other, control effectively the whole medical organisation of the country, including sanitation, medical research, and medical education. Such a Board should consist of both medical and civil representatives and be itself represented on the Executive Council of the country by medical and civil members.

ANNEXURE IV.

SPEECH BY THE HON'BLE MAJOR-GENERAL W. R. EDWARDS, C.B., C.M.G., DIRECTOR-GENERAL, INDIAN MEDICAL SERVICE, IN THE IMPERIAL LEGISLATIVE COUNCIL, ON THE 10TH MARCH 1919.

" SIR, my illustrious predecessor, the late Sir Pardey Lukis, when he addressed this Council two years ago, pointed out that scientific investigation and preventive medicine could never again be relegated to the background. Medical research is now admitted on all sides to be a vital part of government activities. The appalling pandemic of influenza which swept over and ravaged the whole of India has drawn attention in an acute form

to the urgent necessity, not only of developing all our existing arrangements for research, but also of applying the knowledge, so acquired, by means of efficiently organized public health services. I wish to say something further on these points, but before doing so, I will give a brief review of our activities during the last two years.

" The exigencies of the war demanded the reversion of the majority of the officers of the Bacteriological Department to military duty, where they formed the major part of the staffs of the central laboratories in Mesopotamia. Those remaining in India were engaged almost entirely on war work, that is in the preparation of vaccines, intended to protect the troops, in India and overseas, from typhoid and para-typhoid fever and cholera. I am proud to be able to say that, in spite of the enormous demands for vaccines, we have been able to meet such demands without indenting on the Home authorities, and we supplied His Majesty's forces in Mesopotamia, East Africa, Egypt and Palestine, as well as in India. The Central Research Institute at Kasauli developed its vaccine production to an almost incredible extent. The yearly average before the war was eighteen and a half thousand cubic centimeters. During the war it rose to over 2½ million cubic centimeters, and included anti-typhoid, cholera, pneumonia and influenza vaccine. From a monetary point of view alone the value of this Kasauli vaccine, for the period of the war, was about half a million sterling. In addition to turning out these vaccines, Kasauli also equipped three laboratories, two of which were sent overseas. I am sure the Council will agree with me that the greatest credit is due to Lieutenant-Colonel Harvey, Director of the Institute, and his staff, for their excellent and most successful work.

" The Bombay Bacteriological Laboratory at Parel has also enormously developed its production of vaccines, other than plague, which latter is their speciality and the manufacture of which continued. The total vaccines issued from this laboratory to the troops in India and abroad was over 1½ million doses and, in addition to this, the Director, Lieutenant-Colonel Glen Liston, from June, 1916, undertook the supervision of the bacteriological work in the base hospitals of Bombay.

" The Pasteur Institute at Kasauli also assisted in the war. For it treated no less than 2,177 soldiers sent from the war areas overseas.

" To all medical officers connected with the medical laboratories of India, and who, in consequence, were denied the privilege of proceeding on active service, I now take this opportunity of offering my thanks, for their unselfish devotion to duty and for their loyal co-operation.

" In spite of the war and the absence of so many of our officers, we have nevertheless succeeded in carrying out a considerable amount of research.

" An inquiry into diabetes was continued by Major McCay and his co-workers in Calcutta, and a series of papers which are of great scientific value are being published in the Indian Journal of Medical Research. A report has just been submitted by the same officer on the treatment of diabetes, which is also, in my opinion, of very great importance, and I propose to approach the Governing Body of the Indian Research Fund Association for funds with which to continue these investigations.

" The Research Fund has continued to finance the inquiry at Poona on the subject of plague prevention, and Dr. Chitre, under the advice of Lieutenant-Colonel Hutchinson and Major Kunhardt, has made numerous experiments concerning the best methods of rat destruction. This inquiry has yielded good results which will shortly take practical shape.

" At Karachi, Lieutenant-Colonel Greig, working under the Indian Research Fund Association, continued his valuable work on cholera carriers, and he also investigated the anti-beriberi value of certain foodstuffs. His expert advice has been of constant value both to me and to the military authorities. Recently he has submitted a most value paper on influenza written in collaboration with Captain Maitra. From his laboratory at Karachi we have also had valuable studies on the curative values of certain drugs, such as chenopodium oil, and thymol, used in the treatment of anky-

lostomiasis. These were contributed by Captain Wrench, R.A.M.C. Lieutenant-Colonel Greig has just been deputed by the Government of India to proceed with Major Norman White to the Inter-Allied Conference at Paris in connection with influenza.

" Lieutenant-Colonel McCarrison is on special duty in charge of an inquiry into beriberi, and is investigating other so called ' deficiency diseases.' A very important paper on his initial results appeared in the January number of the Indian Journal of Medical Research. Three further papers from his pen are in the press and will be published in April.

" The study of ' hookworm disease ' has been pursued by Lieutenant-Colonel Clayton Lane in Bengal and by Dr. Mhaskar in Madras. The results show that the incidence of hookworm infection is in many places nearly one hundred per cent. They have further shown that this disease can, not only be cured, but even eradicated, if only the people could be sufficiently educated in sanitary matters.

" Captain Knowles, who is Director of the Pasteur Institute at Shillong, is now engaged in an investigation as to the mode of infection of kala-azar; he also is being assisted by the Indian Research Fund Association.

" Mr. Awati has continued his investigation into the bionomics of house flies and has contributed papers regarding the specific differences of the genus musca. This work is of much importance, as we know that the house fly is a terrible carrier of disease.

"Another insect engaging our attention is the sand-fly, and an effort is being made to discover and destroy these pests in their larval state. This investigation is being conducted by Mr. Mitter at Lahore, who has done good work in this direction.

" Sir Leonard Rogers, among other activities, continues to conduct the general direction of an inquiry into the chemistry of chaulmoogra oil and other oils found useful in the treatment of leprosy. Meanwhile, the Mission to Lepers has instituted a trial, by qualified medical men and women, into the comparative effects of drugs thus prepared. These trials are under the general advice of Sir Leonard Rogers, and the Mission is being helped financially for this purpose by the Government of India.

" There are several other lines of research in progress in India; some of them are of a highly technical nature. For example, a study is being made regarding the best constitution of media, with reference to vaccine production on a large scale. This is engaging the attention of the staff at Kasauli, who are being assisted by Dr. Norris.

" Dr. Annandale has undertaken surveys in Madras, Persia, Baluchistan and North India in connection with molluscs, with reference to the possibility of the spread of bilharzia. In the Bombay Bacteriological Laboratory valuable work has been done on molluscs by Dr. Soparkar. The staff of the Bombay laboratory has also been engaged in perfecting methods for detecting typhoid carriers. Captain Malone, who has come out with an excellent reputaton for research, has recently been sent to investigate influenza.

" From what I have just said I am sure that all will agree that medical research work is of the utmost importance and further that it is most necessary that we should give the inhabitants of India every chance of getting a first-class training in medical research in India. Thanks to the energy of Sir Leonard Rogers, a school of tropical medicine, with a special hospital of its own attached to it, will shortly be opened in Calcutta, and now I have the greatest pleasure in stating that there is every prospect of another school of tropical medicine and medical research being shortly opened in Bombay. This school will be based on the splendid Parel Laboratory, which Colonel Glen Liston has by his indefatigable labours brought to such perfection. It will also have a special hospital of its own attached to it. That well-known philanthropist, Sir Dorab Tata, has by a munificent gift of a lakh a year enabled the Bombay Government to proceed with their school, which will not only be well staffed, but also have a number of valuable scholarships, including

travelling ones, attached to it. We shall thus shortly have means of giving the best possible training in medical research to Indians. This will enable them to aspire, not only to professorships, but also to the winning of world-wide reputations.

"In addition to these schools it is very necessary that we should have at least two institutes of medical research. I want to see an imperial institute comprising an imperial library and bureau of medical research opened in Delhi, and another institute opened in Southern India. For the first we must depend on the Government of India, and for the second I have reason to believe that we can rely on the munificence of the Tata family, and other wealthy philanthropists of that great presidency of Bombay. I have just been asked by Sir Dorab Tata if a first-class expert could be found to visit India, at Sir Dorab's expense, to advise on this matter.

"So much for research, but it must be remembered that without a Ministry of Public Health, such as is now being instituted in Great Britain, and well organised provincial health services, the knowledge that we thus acquire cannot be efficiently applied. This at least is my private opinion. In such public health services all the officers must be responsible, not merely to the members of a municipality or district board, but through their superior officers to Government itself. It is only by means of well-paid and pensioned services that officers of public health can act efficiently, without fear or favour.

"A third factor is, however, absolutely essential to the preservation of public health, and that is the education of the masses. Without this the best organized preventive medical service in the world must work in vain. An ignorant populace not understanding the meaning of advice, or the value of orders, will not follow the former, and will actively or passively resist the latter. District visitors and magic lantern lectures cannot do more than touch the fringe of the dense ignorance of the masses. There is only one way to remove this ignorance. The knowledge of public health, like all other knowledge, must be imparted through the schools and colleges of India; this is essential. I know the difficulty; it is first necessary to educate the teachers. Unfortunately, too, in practically every country in the world, the rulers themselves have never received any education in public health. They therefore find it difficult to believe, even now, in the absolute necessity of giving this instruction in every school throughout the land. I would indeed go further than simply teach. I would, in order to impress the vital necessity of this knowledge on the educated classes, make public health, if not a compulsory subject, at least a highly marked optional subject, in the matriculation examination of every university in India.

" To bring the immense importance of this subject home, I can say without fear of contradiction that such teaching would, alone, without a single additional doctor, or a single drug, save India hundreds of thousands of lives and millions of money every year. To substantiate this last remark of mine I would like, as time permits, to mention a few diseases concerning which every inhabitant of India should have some knowledge.

"Take first hookworm, or ankylostomiasis. This parasite affects to a greater or less extent the rural population of the whole of India, in many parts infecting as many as 90 per cent. It causes anæmia and debility, it renders the sufferers unfit for hard work and an easy pray to other diseases. The means of infection is briefly as follows. Microscopic larvæ hatch out of eggs deposited with human excrement. These larvæ, attaching themselves to the feet or legs of the next comer, penetrate the skin painlessly, get into the blood current, and so go to the lungs; from the lungs they find their way through the air passages and working up to the throat are then swallowed and thus infect the intestinal canal. This debilitating disease, so universal in India, could be eradicated by the use of properly attended latrines. It is also not a difficult disease to cure. Another disease is Guinea-worm, which in parts of India is a veritable scourge. It is propagated by minute insects (the cyclops) which act as the intermediary hosts and are swallowed with drinking water. This disease may be entirely avoided by

straining all drinking water through a cloth as the Jains have been taught to do. Of course boiling the water would also make it safe to drink. Then again take malaria itself. How many villagers know that this disease cannot be contracted except through the bite of an infected mosquito, and that the systematic use of mosquito nets and surface drainage would make an enormous difference in its incidence.

"Cholera, dysentery and typhoid are diseases due to germs derived solely from human excrement. These diseases can only be contracted by drinking water which has been fouled by such excrement or by taking contaminated food or milk. Flies which have been feeding on human excrement are the usual source of food contamination. These germs are killed by a temperature of 140°, and therefore by eating only freshly cooked food with clean hands and drinking only hot fluids you can live without danger in the midst of an epidemic of cholera. Typhus again, which has recently ravaged the United Provinces, is spread by lice and can be avoided by cleanliness.

"That terrible scourge bubonic plague is contracted from the bite of an infected rat flea. Obviously the way to eradicate it is to keep rats out of houses and grain stores, and to destroy them as far as possible. During an epidemic keeping the skin oiled will probably prevent a flea biting. Lastly, take tuberculosis. The knowledge we have of this worldwide disease, if acted on, would make an enormous difference in its incidence and so save untold misery and innumerable lives,

"I think I have said enough to show that, if the knowledge of even these few diseases alone was systematically imparted in every school throughout the land, the effect would be of enormous benefit to the entire population of India. With regard to influenza we have, I regret to say, much to learn. The latest researches go to prove that we have not yet even discovered the germ, which is undoubtedly ultra-microscopic and filter passing. This and many other diseases call for and are receiving close investigation.

"I trust that I have not wearied the Council and that I have said enough to convince everyone of the immense importance of medical research, preventive medicine and the education of the whole people of India in public health measures."

ANNEXURE V.

Proposals for equalizing the seniority of officers of the Indian Medical Corps.

In transferring officers from the Royal Army Medical Corps to the Indian Medical Corps, it is essential to maintain equality between officers of the two services. We suggest that any officer of the Royal Army Medical Corps who transfers to the Indian Medical Corps should be placed in the list of the latter corps exactly as if he had joined the Indian Medical Service originally, dating his seniority in that list according to the length of his service. In those cases in which two corresponding batches of Royal Army Medical Corps and Indian Medical Service officers have different dates of first commission, we propose that, for purposes of seniority, it be assumed that each officer has the Indan Medical Service dates of first commission as lieutenant. promotion to captain, and promotion to major.

As regards the position of each officer in his respective batch, some difficulty is experienced, and there are two possible solutions of the problem: (1) to place each Royal Army Medical Corps officer at the top of the batch, because he originally belonged to the senior service; and (2) to place him at the bottom of the batch, as he is transferring from one service to another at his own option.

No difficulty need be experienced over the question of six months accelerated promotion given for study leave, as all officers transferred would

come under the same rules, and if they had not already had any opportunity of taking study leave they would in course of time qualify exactly as Indian Medical Service officers do at present.

The real difficulty lies in arranging equitably the transfer of the Royal Army Medical Corps officers who have been granted the rank of lieutenant-colonel when they had not completed 20 years total service. It is obvious that if these officers are permitted to transfer to the unified service, they will supersede, by virtue of their rank, Indian Medical Service officers who do not receive promotion to lieutenant-colonel until they have completed 20 years service. The difficulty is a serious one and can only be overcome by the arbitrary expedient of placing the Royal Army Medical Corps officers in the unified list assuming them to be majors. Although we think that this should be their position as regards seniority in the Indian Medical Corps list, yet we cannot ask officers who have been granted the rank of lieutenant-colonel to revert to that of major. We therefore propose that they should retain this rank, but be regarded for all purposes of pay, position and seniority in the unified list according to their length of total service, that is to say, although they are lieutenant-colonels they would be paid according to the time scale of pay laid down for the Indian Medical Service. This procedure partakes of the same nature (but reversed) as the late practice in the Royal Army Medical Corps by which an officer who had completed 20 years service, but for whom there was no vacancy in the establishment of lieutenant-colonels, was paid as a lieutenant-colonel although he still was a major. Lieutenant-colonels who voluntarily transfer to the Indian Medical Corps will obtain the benefits of an Indian pension. This may be considered as a set off to the loss of pay entailed by their being treated as majors until they have completed 20 years service. Such difficulties that arise through the difference in army rank will have to be surmounted by careful postings of officers. The difficulty will not last for more than 3 or 4 years at the longest, as officers of the Royal Army Medical Corps who would transfer have over 16 or 17 years service.

Officers of the Royal Army Medical Corps who have been superseded or passed over for promotion to the rank of lieutenant-colonel should certainly not be allowed to transfer.

The problem is however, so difficult that it seems probable that, if equal treatment is to be secured, each individual case will have to be considered on its merits.

ANNEXURE VI.

PROPOSED ORGANIZATION OF THE INDIAN MEDICAL CORPS DEPOT, TRAINING SCHOOL AND RECORD OFFICE, AND SKELETON SYLLABUS OF INSTRUCTION.

I.—ORGANIZATION.

A.—*Commandant and Staff*:—

Commandant—Colonel—graded as an Assistant Director, Medical Services.

Second-in-Command (who will also be Chief Instructor).

British.	Indian.
Adjutant.	Jemadar Adjutant.
Quartermaster.	Jemadar Quartermaster.
Regimental sergeant-major.	Regimental habildar-major.
Quartermaster sergeant.	Quartermaster havildar.

Orderly room clerks:

B.—*Depot Staff* :—

Officers Commanding Companies and Platoons (who will also act as Officer Instructors).

British.	Indian.
Company sergeant-majors.	Company havildar-majors.
Sergeants.	Havildars.
Corporals.	Naiks.
Lance-corporals.	Lance-naiks.
Buglers.	Buglers.

C.—*Instructional Staff* :—

Officer Instructors (company and platoon commanders—see under B above).

Assistant Instructors (assistant surgeons and sub-assistant surgeons).

Non-commissioned officers (British and Indian).

Instructor in equitation (not necessarily a whole-time appointment).

D.—*Record Office* :—

Officer-in-charge of records.

Assistant to the officer-in-charge.

Staff of clerks.

II.—Skeleton Syllabus of Instruction.

A.—*Officers* :—

1. Indian army organization.
2. Elementary principles of Indian military law.
3. Discipline.
4. Caste and racial differences of Indians.
5. Military hygiene and sanitation as applicable to India, in both peace and war.

B.—*Assistant surgeons and sub-assistant surgeons* :—

As above*, with the addition of the following :—

1. Drill and physical training.
2. First aid.
3. Equitation and stable management.
4. Field service training.
5. Care and custody of medical mobilization stores and equipment.
6. Duties in military hospitals.
7. Principles of sick nursing.

C.—*Other ranks* :—

On first entering the depot every recruit should receive primary instruction in his vernacular and in English to the extent considered necessary in each individual case. (If subsidiary depots are established this instruction would be given there.) Concurrently with the above there should be instruction in drill and physical training. During this period of preliminary training each man's individual capacity should be watched, so that on its

*Note.—It is realized that the instruction in caste and racial differences of Indians need not be complete for these classes as for officers.

completion he may be drafted to specialized training in accordance with his aptitude. The specialized training should be under four heads:—

I.—*Nursing*—including—

1. First aid.
2. Duties in wards, as laid down in appendix 2, Standing Orders for the Royal Army Medical Corps, modified to suit the intelligence of the men.
3. Massage.
4. Duties of attendants in skiagraphy and electro-therapeutical departments.
5. Duties of operating room attendants.

II.—*Clerical.*—General duties in connection with accounts, correspondence, completion of forms, etc.

III.—*Store Keeping.*—

1. Care and custody of stores.
2. Quality of supplies.
3. Preparation of store returns and connected forms, etc.

IV.—*Ambulance.*—

1. First aid.
2. Stretcher drill including ambulance transport, and improvisation, etc.

ANNEXURE VII.

EXAMINATION PROPOSED FOR CANDIDATES FOR THE INDIAN MEDICAL CORPS.

	Marks.
I. Written papers—	
1. Surgery—General	100
2. Surgical Anatomy	50
3. Medicine—General (including therapeutics)	100
4. Obstetrics—Midwifery and diseases of children	100
5. Bacteriology and Pathology	100
II. *Viva Voce* and practical—	
1. Clinical Surgery	100
2. Surgical Pathology with specimens	100
3. Operative Surgery and Surgical Anatomy	100
4. Clinical Medicine	100
5. Medical Pathology with specimens	100
6. Gynæcology	100
7. Midwifery and Instruments	100
8. Bacteriology and Pathology	100

ANNEXURE VIII.

ORGANIZATION OF THE INDIAN MEDICAL CORPS.

The organization of the proposed Indian Medical Corps must provide for all the needs of British and Indian station hospitals as regards personnel. It should, therefore, consist of the following categories:—

1. Officers.
2. Assistant medical officers.

3. Sub-assistant surgeons.
4. Other ranks :—
   (*a*) Nursing section.
   (*b*) Clerical section.
   (*c*) Ambulance section.
   (*d*) Storekeeping section.
   (*e*) General section.

The sections must be divided into two classes, British and Indian, as will be explained hereafter, in order to provide for the different needs of British and Indian hospitals.

Officers.

2. The cadre of officers of the corps should be calculated as follows :—

(1) Actual military peace requirements including those on study duty.	These officers will be in Military employment.
(2) Leave and casualty reserve.	
(3) Ordinary reserve for the army.	
(4) Special reserve, consisting of officers in civil employment who are considered as normally lost to the military side.	These officers will be in civil employment.

The actual strength of the Indian Medical Corps, under (1), should be calculated at 3 per mille for both British and Indian troops and followers, the strength for study duty being taken at 4 per cent of officers in addition. The strength under (2) should be 25 per cent of (1). It is impossible for us to suggest any figures for (3) and (4) as they will depend entirely on the numbers considered necessary, (*a*) to bring the army up to its highest expansion on mobilization for all ordinary wars or expeditions, and (*b*) in the event of a grave national emergency. The numbers under (1) and (2), above, do not include officers of the administrative grades. The number of the latter must obviously be determined by the future organization and geographical distribution of the army in India. The officers under (3) are included in the cadre of the Indian Medical Corps, but those under (4) should be considered as supernumerary to it.

Assistant medical officers.

3. It has been suggested in the main body of the report that the status of the present military assistant surgeons should be considerably improved, and that in future they should be employed solely on professional duties, and not as at present. As this will involve an improvement, not only in their qualifications, but also in their status, we consider that their cadre will bear reduction. It is impossible to say at what figure their future cadre should be fixed, but, assuming that their value will be doubled, we are of opinion that a cadre of some 200, in place of the 400 odd at present in military employ, should prove sufficient. As these men will now be highly trained doctors we consider that they can be employed in lieu of commissioned medical officers, and that the strength calculated for (1), above, can be correspondingly reduced.

Military sub-assistant surgeons.

4. The conditions of service of this class have recently been much improved. In order to increase their military value we would give them a course of training, when they join, at the proposed depot and school.

Other ranks.

5. These five sections of the corps will consist of all ranks up to warrant officer, or, as may be found necessary in the case of Indian ranks, up to Indian officer.

Nursing, clerical and storekeeping sections.

6. These sections should be divided into two classes, British and Indian. The British division should be recruited from the Anglo-Indian community and should be trained in the duties pertaining to the sections, at the proposed corps depot and school. In addition there should be a skeleton cadre of volunteers from the Royal Army Medical Corps, in order to provide, at any rate in the early existence of the corps, an element of trained and disciplined men. There is under the consideration of Government a scheme for the for-

mation of an Indian Hospital Corps. From details of these scheme which we have seen we consider that no difficulty should be experienced in incorporating it into our proposed Indian Medical Corps.

Ambulance section.

7. This section must consist entirely of Indians.

General section.

8. This will also consist entirely of Indians, and will include those of trade designations, such as dhobies, barbers, cooks, water carriers and sweepers.

Should it be desirable to employ members of the Anglo-Indian community as cooks in British station hospitals, a special section will have to be formed for this purpose.

Conditions of service—officers.

9. For the officer personnel of the Indian Medical Corps the conditions of entrance and promotion should be on the same basis as those of the Royal Army Medical Corps, including selection for promotion to the rank of lieutenant-colonel to fill an establishment. We may here explain that our 4 per cent for study duty has been provided in order that every officer of the Indian Medical Corps may, between the seventh and tenth year of his service, undergo the post-graduate course at the Royal Army Medical College in England.

It is recommended that, as all officers are not desirous of becoming purely administrative officers, each, on attaining the rank of lieutenant-colonel, should decide on one or other of the following careers:—

(*a*) military administration,
(*b*) specialists, namely, consulting surgeons and physicians to the army, or
(*c*) permanent civil employment.

In (*a*) officers will be eligible for promotion to the highest ranks and, after being selected for the rank of lieutenant-colonel, should be required to undergo a special course at a staff college, either Quetta or Camberley.

In (*b*) they will be promoted to fill a cadre of specialists and consultants, the numbers being decided later. They will not be promoted beyond the rank of colonel, but will be eligible for such administrative extra pensions as may be admissible from time to time in that rank.

The cadre for (*c*) has been dealt with in the main body of the report, but we would here emphasise that no officer after promotion to the rank of lieutenant-colonel should be considered eligible for transfer from military to civil employment, or *vice versa*; in other words, that on promotion to that rank every officer must select definitely for one or other branch of medical employment.

Training of officers.

10. It is proposed that, on first arrival in India, after undergoing the courses at Millbank and the Royal Army Medical Corps Depot, which a young officer of the Indian Medical Service has now to undergo, the young officer of the Indian Medical Corps should proceed to the proposed depot and school, where he would receive further instruction, an outline of which will be found in annexure VI. After this he should undergo a course of training in tropical medicine, as indicated in paragraph 46 of our report.

Assistant medical officers—conditions of service.

11. The future status of the military assistant surgeon, the proposed designation for whom is assistant medical officer, will be so changed that it will be necessary to draw up entirely new conditions of service. We would suggest that this can best be done in consultation with the heads of the medical colleges.

Assistant medical officers—training.

12. On leaving his medical college the assistant medical officer should proceed to the Indian Medical Corps Depot and School for a course of training analogous to that of the commissioned medical officer.

Other ranks—conditions of service.

13. As regards the Indian ranks of the corps, we understand that this question has already been fully examined. The conditions of service of the proposed skeleton cadre of the Royal Army Medical Corps, other ranks, must of necessity be considered in consultation with the War Office. Those of the Anglo-Indian community present many difficulties and we suggest that they be further considered, if and when the general scheme is accepted.

14. We have indicated, in our annexure dealing with the formation of the proposed school and depot, the courses of training which these other ranks should undergo. **Other ranks—training.**

15. The military side of the Indian Medical Corps, the constitution of which is outlined above, should be administered by the Commander-in-Chief in India, through the Director of Medical Services, who should in future be selected from the corps. In order to provide for the selection of the fittest officers for promotion, and to fill the various military appointments, we would suggest that a selection board be established. The Director of Medical Services, the head of the Civil Medical Service, and the Sanitary Commissioner with the Government of India should be *ex-officio* members of this board. With them would be co-opted, as occasion required, the surgeons-general with the major provincial governments and the Deputy Directors of Medical Services. **Governance.**

16. It is also considered desirable to have a cadre of dental surgeons and assistants, attached to the military side of the Indian Medical Corps. They should be recruited in the United Kingdom by the Secretary of State, and should be eligible for promotion up to the rank of lieutenant-colonel on a time scale. The terms of service, pay, etc., can only be decided by the Secretary of State in consultation with the British Dental Association. **Dental service.**

ANNEXURE IX.

REPORT OF THE SUB-COMMITTEE APPOINTED TO EXAMINE THE QUESTION OF THE RE-ORGANIZATION OF THE GOVERNMENT MEDICAL STORE DEPARTMENT.

In the year 1894 all government medical store depots in India were first brought under the control of the Government of India in the Military Department and directly under the administration of the Surgeon-General with the Government of India (subsequently Director-General, Indian Medical Service), Surgeons-General with the Governments of Bombay and Madras acting under instructions from the Surgeon-General with the Government of India in respect of all matters connected with the management of the medical store depots at Bombay, Madras and Rangoon. **History of the Department.**

In Military Department letter no. 3991-D., dated the 14th August, 1896, it was decided that the surgeons-general with the governments of Madras and Bombay should cease to have any connection with the management of the medical store depots at Madras, Rangoon and Bombay subject to the conditions that(*a*) the surgeons-general, Madras and Bombay, should retain the right to correspond direct with the medical storekeepers at Madras, Bombay and Rangoon, regarding matters connected with the issue of drugs and stores to civil charges under the control of the surgeons-general, and (*b*) that the present interests and rights enjoyed by the civil department in the supply of stores etc., should be maintained.

So far as is known no modification of these orders has been made and they are still in force.

From 1896 to 1910 the work of the Medical Store Department progressively increased and, in the latter year, the Government of India sanctioned a conference of medical storekeepers with a view to drawing up a scheme embodying various proposals for improvement in the working of the department.

This conference drew up and submitted to Government a report containing various proposals, but certain of these proposals had, for various reasons, not been carried into effect up to August 1914. The strain suddenly thrown on the ill-equipped and understaffed Medical Store Department from the date of the outbreak of war was enormous, and the manner in which demands were met, and the work carried out, without a breakdown, reflects the greatest credit on the departmental staff.

Following the cessation of hostilities the Director-General, Indian Medical Service, considering that it was not in the best interests of Government that this large and important department should continue to work under difficulties due chiefly to inadequate staff and accommodation, proposed to Government that Lieutenant-Colonel Shairp and Ross should visit each depot in turn, ascertaining the views of medical storekeepers on various administrative questions with a view to framing proposals for the reorganization of the department.

The Government of India agreed to this proposal, but considered that the enquiry came within the scope of the Medical Services Committee, and that Lieutenant-Colonels Shairp and Ross should be appointed as a sub-committee with a view to their drawing up a scheme of reorganization for the consideration of the Medical Services Committee.

The sub-committee visited the various depots on the following dates:—

Lahore	6th to 8th February.
Calcutta	3rd to 7th March.
Madras	10th to 14th March.
Bombay	17th to 22nd March.

The Medical Services Committee visited the depôt at Calcutta on 3rd March, Madras on 10th March, Bombay on 19th March.

Time did not permit of a visit to the Rangoon depôt.

Functions of the Medical Store Department.

2. The Director-General, Indian Medical Service is, in conjunction with the Director, Medical Services in India, responsible to the Government of India in the Army Department, for the equipment and supply of all military medical stores, and with the Quartermaster-General in India for military veterinary stores. In addition he is responsible for the supply of medical stores to Government and Government aided institutions (both medical and veterinary) on the civil side. Since the outbreak of war, the supply of artificial limbs to disabled soldiers, dental equipment to army dentists throughout India, and the equipment of orthopaedic institutions has also devolved on the Medical Store Department.

He also, at the request of other Government departments, assists in procuring or manufacturing, a great variety of articles urgently required for war purposes, which cannot, strictly speaking, be adjudged as coming under 'medical supplies.'

The stores required are obtained:—

(1) By importation through the India Office.
(2) From other Government departments, such as the Supply and Transport Corps, Military Works Department, Revenue and Agriculture Department, etc.
(3) By purchase from business firms and contractors in India.
(4) By manufacture at Medical Store Depots.

For storage, manufacture and distribution there are five Government Medical Store Depots, *viz.*, Calcutta, Lahore Cantonment, Madras, Bombay and Rangoon, under the control of the Director-General, Indian Medical Service; of these, the depots at Lahore Cantonment, Madras and Bombay are manufacturing, as well as supply depots, those at Calcutta and Rangoon being mainly supply depots.

The Medical Store Department also undertakes the repair of surgical instruments, etc., returned by both civil and military institutions.

Prior to the outbreak of war, it was manufacturing pharmaceutical preparations to a considerable extent, and the fact that it was in a position to do so was of material assistance in meeting the greatly increased demands, not only from military hospitals in India, but from overseas forces.

Prior to the arrival of a British base depot of medical stores at Bombay in January, 1917, the Medical Store Department was responsible for the supply of all the medical and surgical stores required by the army in Mesopotamia; it still continues largely to supplement the requirements of this depot, in addition to supplying all articles coming under the heading of

Indian pattern field medical equipment. It has equipped all general hospitals, field ambulances, clearing and stationary hospitals, advanced depots of medical stores, and sanitary sections to meet the demands both for the army in India and for overseas forces, as from time to time required by the military authorities.

Owing to freight difficulties and in order to relieve strain on home resources, every endeavour has been made to develop the manufacture of medical requirements from Indian sources. It was recognised that many articles formerly imported could, and should, be manufactured in India.

Present accommodation provided for medical store depots.

3. *Lahore.*—The depot, situated in the centre of the cantonment, is located in a series of old bungalows enclosed by a wall, which have, from time to time, been supplemented by minor additions. The sub-committee are of opinion that the present buildings are most unsuitable and inadequate. Owing to lack of accommodation the compound of the depot is, of necessity, littered with valuable stock thus causing considerable loss, both from breakage and deterioration, as well as increasing enormously the daily work of the depot and rendering impossible a true, or even approximately true, verification of the stock. Owing to the fact that Lahore Cantonment will, in the future, become a large military supply base and that any frontier expedition will largely depend on it for supplies, the Medical Store Depot at Lahore will increase rather than diminish in importance. The location of two base depots of medical stores containing about 4,000 packages at the Lahore depot has lately been decided upon.

We are of opinion that the erection of a new depot on modern lines on a new site is most necessary as it would undoubtedly result in the work being performed with greater efficiency and expedition, also greatly simplifying verification of stock, reducing losses from deterioration of stores, allowing for future expansion, and minimizing risk from fire.

Calcutta.—The depot is well housed and ample accommodation is available.

Madras.—This depot is accommodated in buildings formerly occupied by the Madras Gun Carriage Factory.

Ample space for expansion is available and with the exception of altering existing buildings to permit of expansion of the laboratory, and the provision of suitable accommodation for the analytical chemist to carry out research work, little in the way of new buildings will be required.

The godowns in which bulk dressings are stored are overcrowded. This can, however, be remedied by closing in the verandahs by ' expanded metal.' The medical storekeeper has been asked to submit his proposals.

Bombay.—It has, for a considerable time, been recognised by Government that complete reconstruction of this depot is necessary, and His Excellency the Commander-in-Chief, in January, 1917, issued instructions that the work was to be expedited in every way possible.

Since that date only one double-storeyed building has been erected and, at the time of our visit, work on the other buildings had not even been commenced.

It is most essential that this work should be completed at as early a date as possible, more particularly the construction of the proposed large three-storeyed block.

The present buildings are overcrowded and most unsuitable and it is with the greatest difficulty that the work of the depot is being carried out.

When No. 11 Base Depot Medical Stores is closed, presumably in the near future, it is probable that the Medical Store Depot, Bombay, will supply both the civil and military requirements of Mesopotamia.

Establishment.

4. *General.*—The establishment now employed has been sanctioned from time to time to meet the individual requirements of each depot. There is thus no uniformity, or interchange of staff between the various depots; each has its own promotion list and promotion is usually given by virtue of seniority and not necessarily according to merit.

The system does not commend itself and we suggest that all depot establishments (with the exception of menial establishment) should be borne on an all-India cadre subject to transfer from one depot to any other.

Controlling Establishment.—Each depot is in charge of an Indian Medical Service officer who is known as the Medical Storekeeper to Government. These are whole time appointments at the Medical Store Depots at Bombay, Madras, Calcutta and Lahore, the Rangoon depot being a collateral charge usually held by an Indian Medical Service officer on military duty in Rangoon.

The name Medical Storekeeper appears a misnomer and should, it is thought, be altered to Officer-in-charge, Medical Store Depot.

It is customary for officers once selected as medical storekeepers to remain in the Department throughout the greater part of their service. The cadre at present consists of four permanent appointments, no provision having apparently been considered necessary to provide either for leave, furlough or casualty vacancies. The duties, always extremely arduous, are becoming progressively more so, and these officers have to work continuously in such enervating climates as Madras, Bombay and Calcutta.

During the war 3 out of the 4 permanent medical storekeepers have been obliged to take sick leave for considerable periods, their places being filled by assistant surgeons owing to no trained reserve being available. It is obviously undesirable false economy to continue working with an undermanned cadre and medical storekeepers should be encouraged to take a reasonable amount of furlough.

Deputy medical storekeepers.

5. Owing to the increase during the war in the work of medical storekeepers both in complexity and extent, it was found necessary to create temporary appointments as Deputy Medical Storekeepers at Madras and Bombay. The sub-committee consider that these appointments should be made permanent, as at these depots it is quite impossible for one man, no matter how energetic and hardworking, to carry out efficiently the manifold duties involved.

In addition, a junior Indian Medical Service officer should be permanently appointed as deputy medical storekeeper to the Lahore depot which will shortly include the Quetta division in its circle of supply. His duty would primarily be the charge of the mobilization reserves including the regular turn-over of stocks in the two base depots of medical stores which will be located there; he would in addition assist in the general work of the depot which has become too great to be efficiently carried out by one man.

If it is decided to adopt the name Officer-in charge, Medical Store Depot, in place of that of Medical Storekeeper to Government, Deputy Medical Storekeepers will be known as Assistants to Officers-in-charge, Medical Store Depots.

For the appointment of deputy medical storekeeper young Indian Medical Service officers of from 5 to 8 years service should be selected.

A deputy medical storekeeper must elect to serve in the Department for a minimum period of 3 years at the end of which time he will, if the Director-General considers him suitable, be asked whether he desires to be appointed permanently to the department. Once permanently appointed he will not be permitted to revert to other duty, except at the discretion of the Director General.

The cadre of officers would thus consist of:—

Medical Storekeepers	4
Deputy Medical Storekeepers	3
TOTAL	7
Add for leave and casualty reserve	2
TOTAL	9

Pay of medical storekeepers.

6. The pay drawn by medical storekeepers was fixed in Military Department notification no. 132, dated the 17th February 1905. Three of the four permanent appointments are now held by senior lieutenant-colonels all of whom have served for many years in this department. Candidates are not forthcoming and, at the moment, there is only one suitable officer on the waiting list.

The reasons for the present undoubted unpopularity of service in this department are manifold, a few of the most important being that these officers are underpaid and are required to live in expensive presidency towns, they are deprived of all opportunities of private practice, the work is of an extremely arduous and harassing nature and it is impossible for them to keep up their professional knowledge as medical men. It is extremely unlikely and will probably become more so in the future, that medical storekeepers can ever attain to administrative rank. With the increased attractions for senior officers offered by the station hospital system it will be more difficult than ever to get officers for these posts unless the emoluments are made sufficiently large to attract candidates.

In suggesting revised rates of pay and allowances the best basis to go on will be to take the case of each appointment separately, it being assumed that medical storekeepers will benefit in common with the rest of the service in the increased rate of pay lately sanctioned by the Secretary of State.

Bombay.—This is a large manufacturing depot which, owing to its geographical situation, will continue to be a most responsible and onerous charge.

The cost of living at Bombay has, of late years, increased to such an extent that the present pay is inadequate; house rents have gone up enormously and it is at present impossible to obtain even a small flat at a lower rental than Rs. 250 to 300 per mensem. Owing to the location of the depot at Byculla it is necessary for the medical storekeeper to live either on Malabar Hill, or in the Fort, and he is forced to maintain a motor car for the efficient performance of his duties. To obviate these disadvantages we suggest that the Medical Storekeeper, Bombay, should continue to draw his present staff pay at the rate of Rs. 500 per mensem and that this staff pay should be drawn irrespective of rank as the responsibilities are similar for all holders of the appointment. He should receive an additional Rs. 100 per mensem, manufacturing depot allowance.

The Medical Storekeeper, Bombay, does not come within the Bombay House Allowance Scheme *vide* Appendix XIII Army Regulations, India, volume I, although the appointment is a permanent military one; he should be allotted Government quarters at the usual rates or admitted to the Bombay House Allowance Scheme. To compensate the medical storekeeper for being debarred from private practice a local allowance of Rs. 200 per mensem should be granted.

Madras.—This is the largest manufacturing depot.

The cost of living at Madras is not nearly so high as at Bombay but the duties are equally arduous. It is suggested that the pay of this appointment should be fixed at grade pay *plus* present staff pay of Rs. 500 per mensem *plus* Rs. 100 manufacturing depot allowance *plus* Rs. 200 per mensem local allowance in lieu of private practice.

Calcutta.— } The pay of these appointments should be grade pay *plus*
Lahore.— } present staff pay of Rs. 500 per mensem *plus* Rs. 200 per mensem local allowance in lieu of private practice.

The extra expense of living in Calcutta is to a large extent compensated by the existence of Government quarters for the medical storekeeper.

Pay of deputy medical storekeepers.

7. The pay of deputy medical storekeeper should be the pay of rank for officers in military employ now under consideration *plus* Rs. 200 staff pay rising to Rs. 400 per mensem after five years service in the department. In the case of Bombay, he should either be allotted Government quarters at the usual rates or admitted to the Bombay House Allowance Scheme.

Subordinate establishment.

8. The cadre at present consists of 9 military assistant surgeons—3 each at Madras and Bombay, 1 each at Calcutta, Lahore and Rangoon.

At each depot the senior military assistant surgeon is placed in sub-charge of the depot and at the large manufacturing depots at Madras and Bombay an assistant surgeon acts as superintendent of the laboratory and another as superintendent in charge of the surgical instruments and appliances sections.

The duties carried out by military assistant surgeons attached to medical store depots are of a technical nature and a course of training in these duties is necessary to render them efficient.

At present owing to their being no leave reserve an inexperienced man is brought in to fill leave vacancies. This does not tend to efficiency and we urge the advisability of adding an additional appointment to permit of one assistant surgeon always being on leave. This would bring the strength of the cadre of military assistant surgeons to 10.

Pay of Military assistant surgeons attached to medical store depots.

9. The present rates of allowances as laid down in Army Regulations, India, volume I, paragraph 398, are considered inadequate.

The same arguments as those noted in the case of medical storekeepers apply, to a minor degree, in the case of these men. Their duties are of a responsible nature for which men of integrity are necessary. They are debarred from civil employment thus foregoing all chance of private practice. Furthermore, on retirement, they are no longer competent to add to their pensions by doing professional work.

Recruitment should only be made from the ranks of fourth class assistant surgeons as it is most advisable that men should be trained in their early years of service.

We recommend the abolition of the present allowances laid down in Army Regulations, India, volume I, paragraph 398, and the substitution of the following inclusive allowances irrespective of the duties performed.

	Pay. Rs.	Allowances. Rs.
4th class assistant surgeon	100	*plus* 100 per mensem.
4th class assistant surgeon after 5 years in the Medical Store Department.	100	*plus* 125 per mensem.
3rd class assistant surgeon after 7 years in the department.	150	*plus* 125 per mensem.
3rd class assistant surgeon after 10 years in the department.	150	*plus* 150 per mensem.
2nd class assistant surgeon after 12 years in the department.	200	*plus* 150 per mensem.
2nd class assistant surgeon after 15 years in the department.	200	*plus* 175 per mensem.
1st class assistant surgeon after 19 years in the department.	250	*plus* 175 per mensem.

any of the above when acting as manager *plus* 50.

Permanent manager—pay of rank *plus* 250.

In addition they should be entitled, as at present, to free quarters (or house allowance in lieu).

Assistant surgeons should be on probation for two years after joining the department, at the expiry of which, if considered suitable, they should elect to remain permanently in the Medical Store Department.

Military sub assistant surgeons.

10. Military sub-assistant surgeons are employed as stock holders at the smaller depots. In view of the fact that they are employed in stations where the cost of living is high and that they are, from the nature of their duties, debarred from any opportunity of private practice, we consider that the present allowance, *viz.*, 25 per cent. of grade pay, should be abolished and in its place substituted an allowance of Rs. 40 per mensem for all ranks.

Superior establishment.

11. This consists of (*a*) clerical (*b*) depot establishment and (*c*) laboratory establishment.

As regards these establishments, no two depots are alike either in rates of pay, personnel or designation. In the case of each depot extra establishment has been entertained as required to meet increasing work and many of the present appointments are temporary, sanctioned only for the duration of the war. There is, in our opinion, no doubt that these establishments are both understaffed and underpaid, and that the administration of the department is considerably handicapped by these conditions. We have already suggested the advisability of having an all-India cadre, and, if this principle is accepted, detailed suggestions regarding the establishments to be entertained, including a reserve for purposes of furlough and leave, with proposed rates of pay, will be submitted for the consideration of Government by the Director-General, Indian Medical Service. This however will involve considerable work, necessitating frequent references to the various medical storekeepers, and cannot, owing to lack of time, be embodied in the present report. We would point out, however, that certain proposals which we are submitting aim at effecting a considerable reduction in labour both in the clerical and depot work, and that the question of the strength of the establishment required will largely depend on whether these proposals are accepted or not. If the principle of having the superior establishment brought on to an all-India cadre is accepted, all such establishment will be placed on equal rates of pay according to grade, and prospects will be improved by the grant of local allowances. As regards the designation of the various employees all depots should be the same. Establishments already engaged will be given the option of accepting service under the all-India cadre scheme.

Menial staff.

12. The adequacy or otherwise of the menial staff need not be brought within the scope of this report. Medical storekeepers will be asked to submit proposals which, when received, will be submitted to Government for sanction.

The menial staff need not be brought under an all-India cadre.

Depot assistants (compounders).

13. We consider it necessary to draw attention to the class of man employed as depot assistants (compounders). The duties consist in the retail issue of drugs, which in many instances are extremely valuable and poisonous. The rates of pay range from Rs. 15 to Rs. 40 per mensem.

The men are recruited from the more intelligent cooly boys, who have acquired a very haphazard smattering of English, in order that they may be able to decipher the printed labels, etc., handed to them. With this very moderate mental equipment these men are expected to be able to issue in retail preparations which are frequently poisonous. It appears quite unnecessary to emphasize the danger of this practice, and we consider that provision should be made for adequately trained men on suitable rates of pay. It is quite possible that the variation from book balances which are discovered at the daily and annual verifications of stock are largely due to the inaccuracy of these untrained men.

In order to ensure efficiency, all compounders employed should have passed the provincial examination for compounders employed under the civil department, and no promotion should be made until candidates have passed the examination prescribed for their contemporaries in ordinary civil employ.

We suggest three grades—

3rd grade compounders on Rs. 30 per mensem.
2nd grade compounders on Rs. 40 per mensem.
1st grade compounders on Rs. 50 per mensem.

In the case of Bombay a local allowance of Rs. 10 per mensem should be sanctioned in each grade.

It will not be necessary to include compounders on an all-India cadre and they should in future be classed as "compounders" and not as "depot assistants."

Scope of work undertaken by medical store depots.

14. (*a*) *Military.*—The Medical Store Department is normally responsible for the supply of all medical stores both to military medical and veterinary institutions of the army in India, as well as for the equipment of all field

medical and veterinary units. Medical stores are also supplied to vessels of the British Navy in Indian waters as well as to the Royal Indian Marine. During the war the work increased enormously owing to the fact that the department had to meet very large unanticipated demands from overseas forces, in addition to undertaking supplies to army dental surgeons throughout India, the manufacture of artificial limbs, orthopædic appliances, etc. Military charges indent annually for their requirements basing their demands on the scales authorised in Army Tables, Medical, for non-expendible stores, expendible stores being demanded on an "as required" scale. We found that much unnecessary work is being thrown on the Medical Store Department owing to the great number of emergent indents submitted by military hospitals.

The fact that many hundreds of emergent indents from military hospitals are submitted annually appears to show, not only that military medical officers do not exercise sufficient care in the preparation of their annual indents, but that Army Tables, Medical, are in urgent need of revision. Certain articles are being continually demanded in excess of authorised scale, and in such cases these scales should be revised so as to obviate the necessity for the submission of so large a number of emergent indents. If the military medical authorities instructed officers commanding military hospitals that this frequent submission of emergent indents means bad hospital administration, much will have been done towards reducing the work now being thrown on the Medical Store Department. M. 1216, Military Annual Indent Form, does not correspond with Army Tables, Medical, and should be made to do so.

Unauthorised articles are frequently demanded in annual indents for military hospitals and almost invariably passed for supply by the administrative medical officers concerned. This necessitates careful check of all military medical indents at medical store depots to ascertain if unauthorised demands are included and whether authorised stores are demanded in the authorised quantities as laid down at the end of paragraph 178, Army Regulations, India, volume II. It is considered that such check should be carried out in the office of the military administrative officer who should alone be held responsible for demands made.

When unauthorized articles are required, their supply should either be authorized by the Director, Medical Services in India, or he should delegate such authority to military administrative officers.

We suggest that the ruling referred to should be made applicable to officers countersigning such indents, thereby greatly decreasing the work now thrown on medical storekeepers.

If these suggestions are accepted the medical storekeeper would simply comply with all demands received without being held responsible for check, thus considerably reducing his work, speeding up compliance with indents, and freeing him from criticism as to delay which is now so often made.

(*b*) *Civil.* (*1*).—Although prior to the war a very large number of Government civil medical institutions indented on the Medical Store Department for articles included in the Depot Equipment List many institutions preferred to indent either on the Director General of Stores, India Office, London, direct, or on private firms in England. In 1917 the Government of India, Indian Munitions Board, drew attention to this fact and asked the Director-General, Indian Medical Service, whether it would not be possible for the Medical Store Department to undertake the supply of such stores as are normally stocked at medical store depots to all Government civil hospitals, medical colleges, Government schools, museums and similar institutions; also whether he would agree to include in the Depot Equipment List articles, not already in the list, for which a continued demand exists.

Following this reference orders were issued by the Government of India, Indian Munitions Board, *vide* their letter no. P.-44, dated the 26th February 1918, (enclosure no. 1) in which all the above classes of institutions were instructed to indent on the Medical Store Department with a view to obviat-

ing the waste of money and labour involved in piece-meal purchasing by the India Office. There can be no doubt that the introduction of this very necessary order will effect a considerable saving to Government, as, not only will it permit of wholesale, instead of piece-meal, purchasing by the India Office at correspondingly lower rates, but in many cases civil institutions will, from a monetary point of view, benefit considerably by purchasing drugs which are now being manufactured at medical store depots from indigenous products at prices much lower than those at which firms at home can possibly supply them.

There are grave indications that local governments are not altogether satisfied with their dealings with medical store depots, the chief complaint made by most of the witnesses summoned before the Medical Services Committee, being of undue delay in compliance with demands. A general speeding up of the depot work is undoubtedly desirable, and this is an administrative question which must be carefully examined by the Director-General, Indian Medical Service. In fairness to the department, however, it is pointed out that this delay is largely due to the chronic condition of overwork at all depots, owing chiefly to inadequately paid and undermanned staffs, also to lack of sufficient suitable storage accommodation, and in addition to the fact that indents are frequently submitted which have been carelessly drawn up necessitating careful check at the depots.

The time taken by the India Office in complying with demands submitted in annual indents appears unduly long, supplies, on occasions, not being received in India within a year after date of submission. Such long delays should not occur and the India Office should be asked to endeavour to comply more rapidly with demands.

Civil hospitals are supposed to submit indents on due dates but, in practice, they frequently fail to do so. This naturally results in delay in compliance as the depots are, on occasions, unable to deal with all the indents received as rapidly as is desirable. Every civil hospital is notified as to the date on which its annual indent should be sent in and administrative medical officers should be asked to issue strict injunctions to civil surgeons that failure to despatch their indents on due dates will be considered as reflecting on their administration.

(2) *Municipal and District Board Dispensaries.*—The Government Medical Store Department supplies the great majority of these institutions throughout the Madras and Bombay presidencies. In these presidencies this concession was continued when, in the year 1894, the administrative control of provincial depots was taken over by the military department, and it is considered by the local governments in question as a vested right, any attempt to do away with which would undoubtedly be strongly opposed. No attempt therefore should be made to discontinue the supply of medical stores to municipal and district board dispensaries in the Madras or Bombay presidencies. These institutions throughout India are, in most cases partly financed by means of Government grants-in-aid, and it is beyond question that the present practice of purchase, either through travelling agents, or direct from private firms in India, is an extravagant one and frequently involves the purchase of inferior drugs, a most grave danger and one which cannot be obviated until a Drugs Adulteration Act has been introduced into India.

Owing to war conditions the purchase in India of considerable quantities of medical stores by the Government Medical Store Department proved necessary and it was in many cases found that even firms which were generally considered reputable were not above supplying drugs of inferior quality.

The experience gained in the last few years goes to prove that municipal and district board dispensaries, which purchase in the market in India in preference to availing themselves of the concession of obtaining supplies from the Government Medical Store Department, not only pay very much higher rates for their requirements but, in many cases, obtain drugs of poor quality. As most of these institutions are assisted by Government grants-in-aid it

follows that Government money is being wasted by this practice at the expense of the general public.

The Medical Store Department has at present as much work as can be carried out without considerable expansion and, all things considered, we do not think it advisable to press for any extension in the direction of supplying these State-aided institutions.

Apart from the question of overburdening the depots, opposition is to be expected from the trade, and it is desirable that private enterprise should be encouraged and that there should be additional sources of supply available in times of emergency. Until, however, a Drugs Act is brought into force in India the quality of drugs in the bazaar will continue to be below the standard required. We strongly urge therefore that a Drugs Act should be brought into force as soon as possible.

It should continue optional for district board and municipal dispensaries as to whether they obtain their supplies from the Medical Store Department or by purchase in the open market.

(3) *Native States.*—A few Native States are being supplied and many others would undoubtedly welcome the concession of being permitted to obtain supplies from the Government Medical Store Department, but extension in this direction would interfere with the interests of private firms and tend to retard development of the drug industry in India. It is therefore thought that any extension in this direction is inadvisable.

(4) *Mission Hospitals.*—A certain number of these institutions in the Madras and Bombay presidencies are, on the recommendation of the local surgeons-general, supplied by the Government Medical Store Department.

It should not be forgotten that these institutions relieve Government of a large amount of its responsibility for the medical treatment of people often in otherwise inaccessible areas, and it seems reasonable that they be permitted to share the advantage as to economy, etc., which would result from their being permitted to indent regularly upon the Government Medical Store Department.

Owing to the present high cost of drugs, etc., which makes it difficult for missionaries to obtain their requirements in the open market while working within their budget allotments, and the difficulty of obtaining many drugs at the present time, a number of requests have been received asking for permission to obtain their requirements from the Government Medical Store Department.

If the concession of being permitted to deal with Government depots was extended to mission hospitals it would be greatly appreciated.

(5) *Supply to medical institutions independent of Government.*—With a view to lightening the work of the Government Medical Store Department it was decided in Home Department resolution No. $\frac{5\text{-Medical}}{360\text{-}369}$, dated the 11th June, 1888, that medical institutions independent of Government should no longer have the privilege of indenting on the Government Medical Store Department. In Government of India, Home Department (Medical) resolution, No. 380-393, dated 26th March 1898, it was considered advisable, owing to the receipt of numerous applications from non-Government medical institutions asking for exemption from this ruling, to reconsider the above order, and it was decided that, subject to certain conditions, local governments and administrations should be empowered to authorise any medical institutions within their respective jurisdictions to obtain their supplies of medicines, etc., from the Government Medical Store Department.

We are aware that the Government of India (Home Department) in its letter No. 361-369, dated the 4th May 1912, decided on the continuance of the arrangement under which non-Government institutions and private bodies were allowed this privilege, but we consider that the question should be reviewed in the light of the recommendations made in the report of the Indian Industrial Commission, and that in view of the necessity of encouraging private enterprise and manufacture in India, the continuance of this practice

is not advisable; we therefore suggest that no medical institution financially independent of Government should be allowed to indent on the Government Medical Store Department for their supplies of drugs, etc.

15. Although, prior to 1914, the Medical Store Department was manufacturing many pharmaceutical preparations on a considerable scale the strain of war led to a great development in the utilization of Indian resources. It was recognised that many articles formerly imported could, and should, be manufactured in India from indigenous products. Analytical chemists were engaged and are working at the manufacturing depots at Bombay and Madras and many preparations are being manufactured at these depots from indigenous raw materials which were, before the war imported from home. **Manufacture in medical store depots.**

Every effort has been made to develop the manufacture of surgical dressings at the depots and, at the same time, to encourage reliable private firms to extend their output in this direction.

The Medical Store Department is a very large purchaser of surgical instruments and appliances, of which an important source of supply for many years has been the workshops at the Medical Store Depot, Bombay. Part of these premises has been handed over to a private concern which has established in it a factory that provides a considerable portion of the requirements of the Department. It employs several hundred workmen who have been trained to manufacture and repair instruments and appliances and the articles turned out are of excellent workmanship and finish, comparing favourably with similar articles manufactured by the best known surgical instrument makers at home, both in quality and price. War demands have led to many new developments including the manufacture of shaped artificial limbs and orthopaedic appliances.

The question of ascertaining what raw materials are, or can be, made available in India and the best methods of obtaining supplies, both for immediate requirements and with a view to future developments, has been a subject of close investigation for some time. It is an undoubted fact that up to now the indigenous resources of India have not been utilized to anything like the extent possible. The practice, prior to war, was to purchase in England through the medium of the India Office not only manufactured drugs, but also most of the raw materials required for the manufacture of pharmaceutical products, many of which raw materials had actually been exported to England from India.

The general investigation as to the possibilities of obtaining Indian grown products has for some time been carefully gone into by the Director-General, Indian Medical Service, who in December, 1917, drew up and submitted a note to the Revenue and Agriculture Department pointing out the desirability of actively taking up the question of the organized cultivation of medicinal trees and plants. It has been decided that this question will come within the scope of a Drugs Manufacture Committee with the Director-General, Indian Medical Service, as President.

So far, the information available merely, as it were, touches the fringe of possibilities, and, owing to the almost complete lack of data in the form of any up-to-date literature or reliable information on the subject, the problem is an extremely difficult one.

Many of the medicinal plants required grow wild in the Indian forests and owing to the hitherto small demands are classified as minor forest produce, and no special attention appears to have been paid to them nor does there exist, as far as is known, any effective organization for collection. Within the last few years a considerable advance has been made in utilizing resources, and medicinal plants are now being grown in various parts of India for supply to the Medical Store Department. Much remains to be done, as many other valuable medicinal plants are known to grow wild in large quantities in the Indian forests, but until an organized survey is undertaken the problem of collection and utilization of these products cannot be satisfactorily solved. In order to demonstrate the great advance in the manufacture

of drugs which has taken place in the laboratories of the Medical Store Department within the last few years we attach a list (enclosure No. 2) shewing the more important drugs, etc., of which the total requirements of Government are now being manufactured.

The necessity of encouraging, in every way possible, the manufacture of drugs in India so as to render the country as self-supporting as possible, has been fully recognised, but a considerable amount of research investigation will be necessary before private enterprise can be expected to capitalize the drug industry on a commercial scale.

The Indian Industrial Commission in their report advocate the establishment by Government of " Pioneer " or " Demonstration " factories with a view to the inception by Government of industries on a small commercial scale in order to ascertain and overcome the initial difficulties, and discover if the industry can be worked at a profit.

In dealing with drugs the question of quality is so important that it is essential that Government should not discontinue any manufacture until reliable commercial firms have proved that they can manufacture drugs of the necessary quality on a sufficiently large scale as to render it absolutely certain that Government will be able to obtain all its requirements without difficulty and at prices comparing favourably with Government cost production. It has unfortunately, up-to-now, frequently been the experience of the Medical Store Department in dealing with firms in India that the difference between samples submitted and actual supplies subsequently delivered is liable to be considerable and much time must elapse before it will be possible to close down, or limit the scope of, our manufacturing laboratories at Madras and Bombay. These laboratories are already established and in full working order with up-to-date machinery. Their output, already large, should be increased by the addition of an extra staff of permanent research chemists.

Extra machinery is required and proposals for this will, it is understood, shortly be submitted to Government by the Director-General, Indian Medical Service.

They can be utilized as " Demonstration Factories " for educational purposes serving as schools for training Indian chemists. Commercial firms desirous of taking up drug manufacture would be advised to send men possessing a knowledge of chemistry for training under expert guidance in the processes of manufacture.

At the present time drugs and pharmaceutical preparations are being manufactured at three medical store depots, *viz.*, Madras, Bombay and Lahore, the laboratories at the two former places are very large that at Lahore being a small one poorly equipped with machinery. We are of opinion that the maintenance of this small laboratory at Lahore is both a waste of time and money. One power-driven tablet making machine, which we saw is obviously far beyond the necessities of Lahore and would be far more usefully employed in increasing the output of a large depot where it would be regularly, instead of spasmodically, used. The services of the pharmaceutical chemist now employed at Lahore, would be utilized to greater advantage if working with others similarly employed than in carrying out routine details.

We therefore recommend the closing down of the laboratory at Lahore, the establishment and equipment being transferred to Bombay with the exception of the pharmaceutical chemist who would be transferred to Madras.

Research chemists.

16. In order to carry out the research work required to develop drug manufacture with a view to making India self-supporting, the services of highly qualified research chemists are necessary. In Europe the value of scientists in industrial work is being increasingly recognised with the inevitable result of raising their remuneration. India cannot afford to have second-rate men in her technical services, and in order to obtain the best she must be prepared to offer adequate inducements.

At the present time Captain MacCulloch, late Royal Field Artillery, who was temporarily attached as analytical chemist to the Madras depot, on 27th

April, 1917, as a war measure, is the only chemist employed possessing the necessary higher qualifications. This officer before the war was employed at Edinburgh as a research chemist under the Medical Research Committee to investigate the chemical side of bacteriological problems under Professor Ritchie of Edinburgh University. On the outbreak of war his services were utilized for research work on the high explosive, tri-nitro-toluene. He is a M. A., B. Sc. (honours) of Edinburgh University and an associate of the Institute of Chemistry. The investigations into the possibilities of drug manufacture from indigenous products carried out by this officer during the past two years have led to the manufacture of many drugs and chemicals not previously manufactured in India.

We are strongly convinced of the advisability of the services of such analytical chemists being obtained permanently for research work under the Medical Store Department and suggest the following terms as regards the future recruitment and service of research chemists employed under the Government Medical Store Department :—

Pay on joining the department at the rate of Rs. 600 per mensem rising to Rs. 1,400 by annual increments of Rs. 50, pensionable on the completion of 20 years service. Leave and furlough to be based on the rules laid down in Civil Service Regulations for gazetted officers.

In view of the great importance of the research work to be udertaken, we would press strongly on Government the advisability of sanctioning the permanent employment, in addition to Captain MacCulloch (assuming that he will be retained in the department) of a well qualified research chemist for the Bombay depot. These officers to come under any house allowance schemes ruling at Madras and Bombay.

The advisability of these research chemists being eventually absorbed into the Indian Chemical Service suggested by the Indian Industrial Commission, remaining seconded for employment in the Medical Store Department and being eligible for higher appointments in that service can be considered at a later date when the Indian Chemical Service has come into being.

We have reason to believe that an enquiry into the financial working of the Government medical store depot laboratories would now show a profit to Government of several lakhs of rupees annually after payment of all charges.

Pharmaceutical chemist.

17. In addition to the above superior appointments we suggest that Private J. E. Bowen, now temporarily employed as pharmaceutical chemist in the laboratory at the Bombay medical store depot, be permanently engaged as pharmaceutical chemist at Bombay. Private Bowen, a member of the Pharmaceutical Society, came out to India in the Royal Army Medical Corps, and has been employed at the Medical Store Depot, Bombay, since May, 1917. The work which he has carried out while so employed has been most valuable and the retention of his services is desirable.

He has practical experience of the work required, having, before the war, been employed under a well known firm of manufacturing chemists in England. We suggest the following terms as regards his engagement :—

(*a*) Pay Rs. 450—20—850 per mensem.

(*b*) That for purposes of leave, furlough, and pension he should be under the Civil Service Regulations.

(*c*) That during the period of his service he be granted two passages to England and back and a free passage on the termination of his contract.

(*d*) That contribution by him towards a general provident fund be obligatory.

(*e*) Engagement in England.—(1) That upon his discharge from military service he be engaged by the Secretary of State, if found to be physically fit, at as early a date as possible and sent out to India on a free passage.

(2) That his Indian service and Indian rates of pay count from the date of his embarkation for India.

(*f*) Termination of service.—(1) That his first appointment be probationary for one year.

(2) After being confirmed, his services should be liable to termination on six clear calendar months' notice on either side.

Assistant chemists.

18. In addition to the above we consider the employment of assistant chemists desirable. These would be recruited as required from Indians, who have had a scientific training in India.

We suggest two grades:—

2nd grade on pay Rs. 75—5—150 per mensem.

1st grade on pay Rs. 150—10—300 per mensem.

Organization of depots.

19. During our visit to the various medical store depots we were impressed with the fact that much of the work being carried out could either be simplified or done away with as not necessary, and with this in view we make the following suggestions.

Preparation of home indents.

20. At the present time the annual home indent is priced by the medical storekeeper who prepares it, the prices being obtained from the home invoices. The latter are sent out by the India Office to the Senior Controller of Military Supply Accounts who, after noting the prices, proceeds to circulate them to the various depots. As each depot in turn has to copy out each invoice, the process of complete circulation may frequently take as long as two years. As there is a constant succession of home invoices with varying prices it follows that, at the time of the submission of the home indent, each depot has different rates available, with the resultant anomaly of an instrument for the Bombay depot being priced at possibly double the cost of an exactly similar instrument required for the Madras depot. This absurdity has, of course, been emphasized by war conditions, but inquiry would doubtless prove that similar instances could be found to have occurred before the war.

We strongly urge, therefore, that the Director-General, Indian Medical Service, who consolidates the home indent, should in future alone be responsible for its pricing, and that duplicate copies of the home invoices when despatched to the Senior Controller should be sent direct by the India Office, to his office. The centralization of this laborious work would relieve medical storekeepers of a large amount of work which, as now carried out, is entirely valueless owing to its inaccuracy.

The prices entered in the printed copies of the consolidated home indent, circulated to medical storekeepers from the Director-General's office, should form a sufficient guide to them when making local emergent purchases or for any estimate purposes.

The adoption of this suggestion has been approved of both by all medical storekeepers and the Senior Controller of Military Supply Accounts.

Home estimates.

21. If the suggestion that the pricing of home indents will in future be carried out in the office of the Director-General, Indian Medical Service, is adopted, it naturally follows that the home estimates will be drawn up entirely by that office.

It would also considerably reduce the work at medical store depots if in future, the office of the Director-General carried out the compilation of statements concerning all depots, as well as furnishing information asked for regarding the pricing of field equipment and furnishing estimates as to the cost of equipment required for both military and civil hospitals, and the preparation of estimates for new schemes.

Stocks of Europe stores to be held at medical store depots.

22. As regards stocks to be held at medical store depots, in view of the extension indicated in Government of India, Indian Munitions Board, letter No. P.-44, dated the 26th February, 1918 (enclosure No. 1), we consider that no reduction should be made in the present practice of basing demands for non-perishable articles on a three years established proportion. We consider that any reduction would be unsafe, as in actual practice, there is rarely, if ever, more than a two years stock actually in the depots, and this three

years stock of non-perishable articles is thought to be the irreducible minimum required as the margin of safety in the event of war.

As regards perishable articles, demands should be based on an 18 months established proportion, but in the case of articles subject to rapid deterioration in India, such as bleaching powder, rubber gloves, rubber tubing, etc., arrangements should be made with the India Office to send out in monthly or quarterly consignments as demanded in the home indent.

In calculating the established proportion, abnormal expenditure of any articles in any one year should be carefully considered by the medical storekeepers in working out the required quantity, and it should also be taken into account whether such abnormal expenditure represents actual issues to charges or includes transfer to other depots. Such should not be taken into account if unlikely to recur.

Inter-depot indents.

23. When a medical storekeeper indents on another depot to replenish stock the present procedure is to submit monthly a consolidated indent to the office of the Director-General, Indian Medical Service, for countersignature.

This does not appear to serve any useful purpose, and it is thought that the signature of medical storekeepers is sufficient, a copy of such indents being however submitted quarterly by both indenting and supplying officers to the office of the Director-General for scrutiny.

The submission of vouchers for the Director-General's countersignature in the case of transfer of articles from quick to dead stock is also considered unnecessary and should be abolished.

Registers and forms.

24. There seem to be a large number of local forms in use which have been adopted to suit the convenience of each separate depot. This system is undesirable and standard forms should be drawn up by the Director-General, Indian Medical Service, in consultation with medical storekeepers for use in all depots.

Disposal of obsolete stores.

25. A list showing stocks of obsolete articles should be submitted annually, on June 1st, by medical storekeepers to the office of the Director-General who will issue instructions as to their disposal.

Disposal of surplus Europe stores.

26. On the receipt of the home indent from medical store depots, the office of the Director-General, will arrange for the transference of stocks shown to be surplus to other depots, a corresponding reduction being made in the home indents of the depots in question. This procedure will lead to a reduction in the work at medical store depots and prevent accumulation of stocks. Any stores remaining surplus after the transfers proposed, should be intimated annually to other medical store depots by medical storekeepers in order that they may be brought into consumption as soon as possible.

Revision of the equipment list for medical store depots.

27. The last revision of this list was carried out in 1915 and it is in urgent need of a further complete revision throughout. The absence of an up-to-date list must increase the work and correspondence of medical storekeepers very considerably. The present list should be scrutinized as regards sections 1 to 8 by acknowledged authorities in medicine, surgery, veterinary science, bacteriology, etc., with the object of obtaining suggestions for the exclusion of articles considered out of date or unnecessary and the inclusion of new articles likely to be useful.

It will be necessary for the actual work of compilation to be carried out in the office of the Director-General, Indian Medical Service. It will greatly assist in carrying out future revisions if military and civil administrative officers were instructed to submit annually a statement of such additions or deletions as they think desirable.

Proposed alteration in the present system of placing contracts for local supplies.

28. The present system is not satisfactory. Too great an interval elapses between calling for tenders and the actual allotment of contracts. Owing to the limited financial powers which medical storekeepers possess for the purchase of articles of local produce it has been necessary to include in the schedules a large number of items required in trivial quantities.

Much of the labour associated with the placing of contracts would disappear if medical storekeepers were granted moderate powers of purchasing Indian products.

The following illustrates the unnecessary elaboration of the present system.

The current year's requirement of cassia pulp for the Lahore depot was 10 lbs. at a total cost of Re. 1 annas 9.

To comply with the regulations in force the medical storekeeper had to include this item in his annual contract schedule; otherwise he would have had to obtain the sanction of the Director-General to the purchase.

A large number of similar trivial orders are invariably included in the contract schedule which is submitted to the office of the Director-General for scrutiny and sanction. From a scrutiny of this year's contract schedule of the Lahore depot we found that 142 out of 192 items might be said to be of a trivial nature.

With a view to the elimination of what appears to be unnecessary work, we suggest the grant to medical storekeepers of contractual powers to purchase any article of local supply required (*a*) for depot use, (*b*) for laboratory use, or (*c*) for stock, up to a limit of Rs. 1,000 per annum in the case of any one article, and that the financial power of the Director-General, Indian Medical Service, be increased from Rs. 2,500 to Rs. 5,000 as in the case of divisional commanders, thus obviating unnecessary references to Government.

Again, the present system of calling for tenders in the month of October for contracts to supply in the ensuing financial year beginning from the 1st April means that tenderers have to forecast market prices a very long period ahead, with the result that, if the market price rises to any appreciable extent, contractors are unable to supply at tendered rates except at a loss and applications are received for enhancement of rates.

This unsatisfactory state of affairs will be largely remedied if our suggestion above is accepted, as the period elapsing between calling for tenders and their acceptance must be greatly reduced, owing to the fact that they have not to be referred to the office of the Director-General. An exception should be made in the case of articles, the rates of supply of which are dependent largely on seasonal crops; tenders for the supply of such should be called for at the most suitable time.

Abolition of the Rangoon medical store depot.

29. The abolition of this depot was recommended in the report of the conference of medical storekeepers held in October 1910; medical stores to be supplied to charges direct from the Madras depot.

We agree that Madras should supply the Rangoon depot but consider that the proposal to abolish the latter is not a well-advised one.

During the war, sea communication between Madras and Burma was at one time non-existent for months at a time, and, during the whole period of the war, ships sailed only at very irregular intervals.

Again Burma is a rapidly developing province and the number of medical institutions is increasing.

It is thought that considerable practical difficulties and delays would arise in supplying medical charges direct from Madras, which would only be partly obviated even if stores were sent through the medium of a local agent for Government consignments at Rangoon.

Leave rules for medical storekeepers.

30. We would draw attention to the anomaly of the rules laid down in paragraph 122, volume I, Army Regulations, India, with regard to the leave rules for medical storekeepers. We consider that, as the Medical Store Department is a military department, medical storekeepers should be subject to military leave rules regardless of the rules, military or civil, under which they were serving at the time of their transfer to the Medical Store Department.

Repair of surgical instruments.

31. With reference to appendix II, volume III, Army Regulations, India, we do not understand why no charge is made against the civil department for the repair of surgical instruments. We are of opinion that a charge should be made for such repairs, the percentage of cost being calculated in the same way as for the issue of drugs, etc.

32. At the present time there are two systems of stock-taking in force in medical store depots, namely, annual and daily. The annual stock-taking requires that the medical store depot shall be closed for all, except emergent, work for one month, namely, March, during the year. We have been told by all medical storekeepers that this closure involves no increase of work, but we are entirely at a loss to understand how such an opinion can be expressed when it obviously means that the work of twelve months has to be compressed into eleven. While we admit that this annual stock-taking may be of value as regards costly or poisonous drugs, we fail to see that the advantage gained by this dislocation of work in a store depot in ascertaining the actual balances of such items as feeding cups, urinals, etc., is commensurate. **Verification of stocks.**

The daily verification is carried out by means of a clerk whose sole duty it is to ascertain balances, or reputed balances, of articles in the store. He works straight through a list and it is thus perfectly easy for any stock-holder by means of simple calculation to arrange that the balances of items which he knows will be shortly checked are correct. Were the system carried out by means of a surprise verification we could understand its value, but under the present arrangement it seems entirely unnecessary and a waste of establishment.

When in Calcutta we discussed this question of stock-taking and verification at some length with the Senior Controller of Military Supply Accounts. The Controller is in favour of discontinuance of the daily verification of non-expendible articles, the stock-holder being held responsible for deficiencies. He considers that a daily verification of expendible articles, *i.e.*, drugs, etc., should be carried out as a surprise verification by an officer, namely, the medical storekeeper or his deputy, this verification being so arranged that each item is checked once in three years. The Controller further considers that the annual stock-taking may be abolished, subject to the condition that any balance may be examined and verified at the time of the inspection of the depot by the local auditor. In addition to the above there is a verification which is carried out annually during two days by a senior Indian Medical Service officer, who is deputed specially for this duty. We fail to see the value of this further verification and recommend its immediate abolition.

We must admit that the medical store-keepers are, in the main, opposed to any variation of the present system, but it seems to us that the system of accounts at present in force in medical store depots is very largely the cause of the view that the present system must be continued.

33. The present system of ledger posting in the depots seems to lead to a great waste of time in the preparation of the ledgers for the quarter during which they are to be used. These ledgers are written in duplicate by means of carbon paper, one of which is sent to the Controller for audit the other being retained in the depot for record purposes. As the circulation of the vouchers for stores being issued takes some time it is frequently a week or more before an issue is recorded in the ledger; even then it is recorded without showing the day on which the stores were actually issued. It is obvious, therefore, that this system of ledger posting renders it practically impossible for a correct balance of any item in the depot to be struck at any given moment. We therefore fail to see how the system of verification and stock-taking to which we have referred above can be of any value when it is impossible to ascertain actual balances. **Ledger system.**

By the courtesy of the Director, Royal Indian Marine, we were permitted to examine the system of storekeeping and ledger posting in force in the Marine Store Dockyard, Bombay. We append a note by Captain Constable, the marine storekeeper, as to the system there employed (enclosure No. 3), and are of opinion that this should be adapted to the Medical Store Department, retaining its essential features. We understand that this system has now been in force in the marine dockyard for the past year or more, and is about to be introduced into the dockyard at Kidderpore, Calcutta. We think that this would be an opportunity for an experimental trial of the system at the Medical Store Depot in Calcutta, where the storage accommodation available is such as to make it most readily applicable. We admit that the marine

system requires special arrangements as regards storage, but with the alterations in the accommodation now in progress at the medical store depots we cannot see that this difficulty is insuperable. We may add that this method of storekeeping and ledger posting was discussed with the Senior Controller of Military Supply Accounts, who expressed himself as being entirely in favour of it.

Cost accounts.

34. The system of cost accounting at present in force in medical store depots appears to be unnecessarily elaborate. This has already been recognised by the Senior Controller of Military Supply Accounts, and he has put forward certain proposals for their simplification. We append a copy of Colonel Hudson's note on this subject (Enclosure No. 4), and are entirely in accord with him, as also we understand the medical storekeepers to be, and recommend that the system advocated therein should be adopted as soon as practicable.

We may add that the medical storekeeper, Madras, has suggested that the only system which would remove the present difficulties in matters of accounts which are experienced by medical storekeepers would be by the introduction of an accounting section detailed by the Senior Controller of Military Supply Accounts, to be attached to manufacturing depots. The inherent difficulties and possibilities of collusion, were such a system to be adopted, are to us so obvious as to make the suggestion not worthy of further consideration.

Percentages added to cost prices in the case of issues to the civil department.

35. In our examination of past budget figures relating to medical store depots we have found that in some years the cost of administration has been reduced or entirely wiped out, and possibly even a surplus realised, owing apparently to large receipts as profit from issues made to civil institutions. This is apparently the result of the present system of adding percentages on an arbitrary basis to the original cost of the articles. While admitting that this arbitrary percentage is necessary for the simplification of accounts, we consider that in practice they would appear to have been fixed at too high a level. We therefore recommend that the whole system of percentages for freight, packing, handling, etc., should be reviewed by the Senior Controller of Military Supply Accounts.

Standing Orders for Medical Store Depots.

36. The manual, Standing Orders for Medical Store Depots in India, has not been revised since 1911. An entire re-compilation is necessary and will best be carried out when decisions have been arrived at regarding the various proposals formulated in this scheme.

Enclosure No. 1.

LETTER No. P.-44, DATED THE 26TH FEBRUARY, 1918, FROM THE SECRETARY, INDIAN MUNITIONS BOARD, GOVERNMENT OF INDIA, TO ALL LOCAL GOVERNMENTS AND ADMINISTRATIONS.

It has been brought to the notice of the Government of India that a large number of indents necessitating many small purchases are sent to the Director-General of Stores, India Office, London, every year from civil hospitals, medical colleges, Government schools and museums, and similar institutions. Although the demands from these departments are small in total value, they usually consist of many items which, under the present system, have to be purchased piecemeal. Practically all of the indents ask for small quantities of various descriptions of medicines, chemicals, surgical and scientific instruments and apparatus and accessories such as operation gloves, bottles, and specimen jars.

2. With the object of obviating the waste in money and labour involved in such repeated purchases, the Government of India have decided, with the approval of His Majesty's Secretary of State for India, that such medical stores and scientific apparatus as are on the Equipment List required by the institutions in question should, in future, be obtained from the Medical Store Depots at Bombay, Calcutta, Madras, Lahore and Rangoon, at each of which

large stocks are maintained which are replenished from the bulk supplies demanded in the consolidated indents of the Medical Department.

3. There is no objection to indents being sent, as before, on the Director-General of Stores in respect of articles of a character not ordinarily stocked in the Medical Depots, but the Government of India will be glad to consider the question of the inclusion in the Equipment List of articles not already in the List for which a continued demand exists.

4. With regard to chemicals and scientific instruments which are of minor importance, or of stereotyped pattern, and which it is not considered desirable to include in the list, I am to invite attention to the resolution of the Government of India in the Indian Munitions Board, No. P.-44, dated the 26th February 1918, which authorises the direct purchase of such articles.

5. I am to request that, with the permission of His Excellency the Governor in Council / His Honour the Lieutenant-Governor (in Council), necessary instructions on the subject may be issued to the authorities concerned.

Copy forwarded to the Home Department, with the request that the Director-General, Indian Medical Service, may be instructed to issue the necessary instructions on the subject to the Medical Storekeepers.

Enclosure No. 2.

LIST OF ARTICLES, WHICH WERE PREVIOUS TO THE WAR IMPORTED, NOW BEING MANUFACTURED IN THE GOVERNMENT MEDICAL STORE DEPOTS.

1. Absolute alcohol, from rectified spirit.
2. Aloes preparations, from Indian grown aloes.
3. Amylum B. P. (starch), from rice.
4. Anti-fly spray.
5. Argenti nitras induratus—made from argenti nitras crystals obtained from the Gujrat chemical works.
6. Bamber oil—an insecticide oil.
7. Belladonna preparations, from Indian grown belladonna.
8. Borated talc powder.
9. Calcium carbonate precipitated, B. P., from calcium chloride and sodium carbonate.
10. Calcium sulphide solution.
11. Citric acid and citrates, from Indian limes.
12. Collodium flexile—made from cotton, nitric acid, sulphuric acid, Canada balsam and oleum ricini, all of which are made in India.
13. Creta preparata, B. P., from a very pure limestone obtained in the Madras presidency.
14. Digitalis preparations, formerly manufactured from imported leaves, now manufactured from Indian leaves.
15. Electuary, cough (veterinary).
16. Extractum cascaræ sagradæ liquidum, made from pulvis cascaræ sagradæ and alcohol 90 per cent.
17. Extractum glycyrrhizæ liquidum, made from glycyrrhiza radix, Indian grown, and alcohol 90 per cent.
18. Extractum hyoscyami from hyoscyamus leaves obtained from the Government botanical gardens, Saharanpur, and from alcohol, 90 per cent, obtained from the Ahmedabad distillery.
19. Ferrous sulphate, from iron filings (foundry waste) and sulphuric acid.

20. Fly oil (veterinary).

21. Keating's powder, an insecticide substitute for.

22. Liquor bismuthi et ammonii citratis—made from bismuth subnitrate, potassium citrate, potassium carbonate, nitric acid, and liquor ammoniæ.

23. Lysol, from cresol.

24. Magnesii carbonas levis, B. P., from magnesii sulphas made in India from crude magnesite and sulphuric acid.

25. Mannite, from manna grown in India.

26. N. C. I. powder (made from naphthaline, creosote, and iodoform).

27. Nux vomica preparations, from the Indian seeds.

28. Oleum anethi, from dill seeds.

29. Oleum crotonis, from croton-seeds.

30. Oleum santali, from sandal wood.

31. Oleum anisi, from aniseed.

32. Oleum myristicæ, from nutmegs.

33. Oleum cedri, from shavings from the Madras Pencil Factory.

34. Oleum caryophylli, from cloves.

35. Oleum theobromatis, from cocoa beans.

36. Oxymel scillæ from acetum scillæ and honey, both obtained locally in India.

37. Paper, litmus, prepared from litmus, alcohol 90 per cent, hydrochloric acid and filtering paper; all except litmus are obtained locally.

38. Potassium carbonate, B. P., from nitre obtained as a soil efflorescence in India.

39. Sinclair's glue—a substitute for adhesive plaster.

40. Sapo mollis, B. P., from ground nut oil and caustic potash.

41. Sodium carbonate, B. P., made from soda ash, and used in the preparation of Benedict's solution which now replaces Fehling's solution.

42. Sodium chloride, chemically pure—the magnesium sulphate present is precipitated by barium chloride made from barytes obtained in abundance and in excellent quality in the Madras presidency.

43. Sodium nitrate.

44. Sodium phosphate, calcium phosphate and phosphoric acid, from char dust.

45. Sodii sulphas exsiccatus made from crude sodium sulphate—a bye-product from soda water factories.

46. Syrupus ferri phosphatis co—made from iron wire, concentrated phosphoric acid precipitated calcium carbonate, potassium bicarbonate, sodium phosphate, coccus, sugar and glucose. The iron wire, calcium carbonate and sugar are obtained locally.

47. Talc, prepared from a suitable steatite obtained in abundance in the Madras presidency.

48. Talcum purificatum—a purified form of French chalk.

49. Tannic acid from divi divi and myrabolams—both Indian grown.

50. Thymol, B. P., from Indian ajwan seeds.

Enclosure No. 3.

NOTE ON METHOD OF STOREKEEPING FOLLOWED IN THE STORE DEPARTMENT, ROYAL INDIAN MARINE DOCKYARD, BOMBAY.

The store is divided into sub-heads, *i.e.* "A" comprises timber, "B" ironmongery, "C" coal, etc. Each sub-head is in charge of a conductor assisted by a sub-conductor, storehousemen, and store lascars.

2. For every article in the Store there is a bin ledger for recording receipts, issues and the balance. Every article has a pattern number allotted to it, and when referring to an article it is usual to quote the pattern number with the full description of the article. The bin ledgers also show the ledger folio number of the main ledger (see remarks against main ledger). **Bin ledgers.**

3. These are maintained in the Marine Store Office according to sub-heads by a separate staff named the Ledger Section. To each sheet of the ledger is allotted a folio number. **Main ledgers.**

4. Stores required by ships and outside Government departments are demanded from the Store Department on indent form in triplicate. Stores required by the manufacturing departments of the dockyard are demanded on demand note form. On receipt indents and demand notes are registered in the Marine Store Office and sent to the conductor concerned for compliance. Simultaneously with the issue of stores the relative indents and demand notes are completed by the conductor with details showing actual quantities issued and the ledger folio number is inserted. **Indents and demand notes.**

The vouchers are then stamped "Issued" and date of issue shown with conductor's signature. When stores are drawn at Bombay, receipt for them is passed on the indent or demand note by the officer drawing the stores.

The vouchers are then disposed of as follows :—

(*a*) *For stores issued at Bombay.*

INDENTS—

Original . } Duplicate . }	To be sent to office . . .	Disposal by conductor.
Triplicate .	To be made over to party drawing stores.	
(1) Original to be sent to the Chief Accountant for rating and transmission to the Controller of Marine Accounts.		Disposal by office.
(2) Duplicate to be sent to ledger section at once .		

(*b*) *For stores despatched to outstations.*

Original . }	To be sent to office . . .	Disposal by conductor.
Duplicate . }	Original to be enfaced "Shipping."	
Triplicate .	To accompany relative package list and sent to shipping section for disposal.	
(1) Original to be sent to shipping section for entering shipping details. On completion to be sent to Chief Accountant.		Disposal by office.
(2) Duplicate to be sent to ledger section at once .		

DEMAND NOTES—

Original . } Duplicate . }	To be sent to office . . .	Disposal by conductor.
Triplicate .	To be made over to party drawing stores.	
(1) Original to be sent to ledger section at once .		Disposal by office.
(2) Duplicate to be sent to Chief Accountant . .		

The copy for the ledger section is on receipt in that section given a serial number. The register of the ledger section also shows for easy refer-

ence the number and date allotted to the vouchers when first received in the Marine Store Office. The copy is then passed by the register clerk to the posting clerk. He passes it on to the next man and it travels thus through the section till it comes to the man who has charge of the ledger to which it appertains. It is then posted by him and passed on till it has reached the last posting clerk, each posting clerk initialling the voucher whether it concerns him or not. The voucher is then made over again to the register clerk who files it.

(*c*) *For stores received from England or out stations, made in the Yard for stock, surplus stores returned by manufacturing department or stores returned to store on survey report.* A supply note in triplicate is prepared and disposed of as follows :—

Original . . .	To be sent by receiving conductor to issuing conductor, who will receipt and immediately return the duplicate and triplicate to the receiving conductor who will send up to office the duplicate copy and retain the triplicate. The original to be posted by the issuing conductor and sent to office when completed.	Disposal by conductor.
Duplicate . . .		
Triplicate . . .		

(1) Original to be sent at once to ledger section.	Disposal by office.
(2) Duplicate to be filed.	

(*d*) *Local orders for stores.* These are made out in quintuplicate and disposed of as follows :—

Original . . .	To be sent to receiving conductor.	Disposal by office.
Duplicate . . .		
Quintuplicate . .		
Triplicate . . .	To be sent to vendor.	
Quadruplicate . .	Retained in office.	
Original . . .	To be completed by receiving conductor and sent with stores to issuing conductor for receipting and posting. Original and duplicate to be sent to office. Quintuplicate returned to receiving conductor.	Disposal by conductor.
Duplicate . . .		
Quintuplicate . .		
Original . . .	To be attached to vendor's bill.	Disposal by office.
Duplicate . . .	Sent to ledger section at once.	

NOTE.—In all cases of supply note and local orders for the ledger section, the same procedure as regards registering them and posting them as in the case of indents and demand notes is followed.

Enclosure No. 4.

SIMPLIFICATION OF COST ACCOUNTS OF MEDICAL STORE DEPOTS.

The following proposals are offered after an examination of the accounts kept at the depots at Madras and Bombay.

Cutlers' accounts.—There are no cutlers' accounts at Bombay, the repairs being done there by Mr. Eyres. The remarks on the Madras accounts will doubtless apply to Lahore depot also.

2. The cutlers' accounts are hardly worth the trouble bestowed on them. At Madras a permanent clerk is employed all his time in the laboratory and on cutlers' accounts, the latter taking him about a week to complete each month. He maintains separately for the cutlers' accounts :—

(1) abstract of material,
(2) non-production account,
(3) final abstract of material and percentage charges,
(4) total output statement,
(5) cost ledger, and
(6) work order book.

He works out the non-production account to show non-production charges correct to annas and pies; yet the allocation to this account of some charges can only be a rule-of-thumb allocation, *e.g.*, one-sixtieth of the medical storekeeper's pay each month is allocated, while amounts are added for superannuation and leave allowances. The other charges, which are worked out more exactly are : (1) pay of head cutler, (2) extra establishment not charged direct, (3) value of stores drawn for shop use—not spare parts of instruments, and (4) depreciation on the value of buildings. These give the non-production charges. The power charges are taken at one-twentieth of the total power charges of the factory.

3. The charges for direct labour are the basis of the cutlers' accounts. An all-round rate for the pay of the cutlers is struck. It has long been 2 annas per hour in Madras. The number of hours spent on each job is recorded, and the direct charges are obtained by multiplying the all-round rate by the number of hours the cutlers spent on all jobs. Monthly totals are thus available for (*a*) direct charges, (*b*) non-production charges, and (*c*) power charges.

The clerk then works out figures for his final abstract each month under the following heads for each job separately :—

(*a*) direct charges,
(*b*) non-production charges,
(*c*) power charges, and
(*d*) value of materials issued from stock, *i.e.*, spare parts of instruments. Here (*a*)—2 annas multiplied by the number of hours spent by cutlers on the job and (*b*) and (*c*) are obtained from the equations $\frac{b}{a} = \frac{B}{A}$ and $\frac{c}{a} \frac{C}{A}$.

4. The clerk works out (*a*), (*b*) and (*c*) even for military items. This is done that he may be able to check the totals of his final abstract, but in many cases for no other purpose; no recoveries being made for the numerous military items except when the repairs are done on payment, which items are few. This refinement of accounting is hardly necessary as the total charges for Madras, including those for which no recoveries are effected are only Rs. 200 or 300 a month.

5. The following percentages were added to direct charges for the first six months of 1917-18, after which period the cutlers' shop closed down owing to the move of the depot.

1917.	Percentages added to direct charges.	
	For non-production charges.	For power charges.
April	69	20
May	72	24
June	71	24
July	65	19
August	104	20
September	96	10
Average	80	20

If therefore the clerk had added, on account of non-production and power charges, 100 per cent to his direct charges for each job, he would have arrived at the same grand total for the six months and his results would have been more consistent; for under the present system he added 84 per cent for a job completed in July, but if the same job had been completed in August he would have added 124 per cent., which is not consistent.

6. Instead therefore of keeping up the present elaborate accounts it would be sufficient to record merely the number of hours spent by each cutler on each job and in the case of Madras to charge 2 annas for each hour so spent. This would give the direct charges; while to charge 4 annas for each hour would cover direct and non-production and power charges. This is probably what a commercial firm would do, except that it would charge at least 8 annas in order to make a profit. The cost of materials should be added when materials are used. No cost should be worked out for military items unless recovery has to be effected.

7. This proposal might be adopted for this year. At the close of 1918-19, and of each future year, the non-production and power charges might be worked out for the year and the ratio which they bear to direct charges examined. If there should be much variation from the results shown in paragraph 5, the controller would determine the percentage to be added to direct charges. The percentage would thus be based on the actual of the previous year. Similarly percentages for 1917-18 and for future years might be worked out for Lahore.

8. If this proposal is adopted all the accounts now maintained may be dispensed with except the non-production account—to include power charges and total output account. The work cards at present maintained for each man should be kept up; they will give the figures required for the " total output."

9. *Laboratory Accounts.*—These occupy one clerk all his time in Bombay and in Madras one clerk for three weeks each month. The depots maintained the following accounts :—

(1) abstract of material,
(2) non-production account,
(3) power cost for month,
(4) power account,
(5) machinery account,
(6) final abstract of labour and material,
(7) total output,
(8) cost ledger, and
(9) work order book.

No. (1) may be dispensed with. It merely shows the total value of materials for each work order, these figures are available in the cost ledger.

10. The non-production account and power account are prepared with the same attention to minutiæ as in the case of cutlers' accounts. The former includes : (1) one-third of the pay of the medical storekeeper each month, (2) pay of the superintendent and compounders, (3) value of stores for shop use, *e.g.*, cloth, paper, and not drugs, (4) depreciation on buildings, (5) establishment, and (6) superannuation and leave allowances. The total (A) of the non-production charges for a year is calculated. The total output in pounds (B) for the year is also worked out on the system authorised in 1911-1912. The figure $\frac{A}{B}$ to the nearest pie gives the amount to be added on account of non-production charges to the value of one pound of outturn of each medicine, tablet, etc., made up. The total (C) of the power account for the year is also calculated and the figure $\frac{C}{B}$ gives the amount to be added on account of power charges to the value of one pound of outturn of each medicine for which power is used.

11. The prices of medicines made up are entered in the final abstract and other accounts correct to the last pie. The final abstract with typical entries is as follows :—

1	2	3	4	5	6	7
Serial number of work orders.	Work orders.	Amount of outturn.	Value of material.	Non-production charges at Rs. per lb.	Power charges at Rs. per lb.	Total of columns 4, 5 and 6.
		lbs oz.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
13. Liniment belladonna . .	...	500	2,544 12 8	23 7 0	...	2,568 3 8
16. Tinct. scillae . . .	...	324	32 8 0	15 3 0	...	47 11 0
28. Unguent hydrarg .. .	...	72	47 3 6	3 6 0	1 2 0	51 11 6

These 3 items are taken from the accounts of the Bombay depot for 1916-17, in which year the rates in columns 5 and 6 were Re. 0-0-9 and Re. 0-0-3 per lb., respectively. The office of the Supply Controller worked out rates of laboratory medicines for its triennial price list of 1917 for Bombay depot from these accounts and the accounts of the two previous years. But that office had to ignore the refinement of these accounts. Thus the stock book rate of belladonna liniment if worked out from item 13 only would have been Rs. 5 per lb. for military and Rs. 5-8-0 for civil institutions, the rules for simplification of stock book rates being adhered to. Hence this refinement in the cost accounts is wasted.

12. Major Marr suggests that power charges should be allocated not only to the work order for which power is used, but over all work orders. He points out that even for work orders for which power is used the present rule acts unfairly; in some jobs very little power is used; for other jobs, the engine may be employed for some days; yet in the accounts these two jobs are treated as if the same amount of power had been used for each. As the total non-production charges for 1916-17 were Rs. 20,327-2-0 and the power charges were only Rs. 3,386-5-1 this proposal will cause only a slight variation of rates, while greatly reducing clerical labour. It would mean for Bombay for that year an all round addition of 0-0-10 per lb. instead of Re. 0-0-9 for those items where power charges are not now borne and instead of Re. 0-1-0 for those items where power charges are now borne (paragraph 11 above).

13. Thus if Major Marr's proposal were in force the values in column 7 for the 3 typical items given in paragraph 11 would be—

	Rs. A. P.		Rs. A. P.
Liniment belladonna . .	2,570 13 4	and not	2,568 3 8
Tinct. scillae	49 6 0	„	47 11 0
Unguent hydrarg. . . .	50 15 6	„	51 11 6

The materials for the first item are much more expensive than those for the second. This and the "poundage system" explain the greater comparative difference in the values of the second item.

14. If the proposal to charge power against all laboratory preparations is adopted the credit entry in the power account "Amount charged direct, etc., etc.," should be altered to "Amount charged against non-production in the non-production account."

The final abstract should be prepared at all depots as it is now prepared at Lahore, *viz.*, columns 5, 6 and 7 should not be filled in monthly; at the end of the year a summary in the final abstract should be made of the cost of each separate preparation for the year, columns 5, 6 and 7 being filled in for the summary. As this procedure has been accepted by the medical storekeeper at Lahore, the Controller, Military Supply Accounts, might request the other

two depots to follow it. The remaining accounts given in paragraph 9 should be maintained as at present, No. (1) being abolished, see last clause of paragraph 9.

15. Major Marr has made the further suggestion that the military accounts department should revise every year or even half year not only for laboratory supplies but for all medicines supplied by the depot, the "Medicines" section of the price list, which price list is now revised throughout triennially. There should be no difficulty in doing this with the present establishment of the military Accounts Department. But as the production account is only completed yearly for reasons advocated by Mr. Rawcliffe in 1911, the revision of the "Medicines" Section could not well be done oftener than once a year.

16. These proposals (paragraphs 6, 7, 8, 12, 14 and 15) do not affect the main principle, of cost accounts but only the manner in which these principles have been applied. They will need the sanction of Government.

17. An alternative proposal of Major Marr's is that all supplies to civil institutions, whether made up in the laboratories, or issued as purchased by depots, should be priced at 10 per cent below current local rates. This would admit of a very large profit being made on medicines so large that it would not be necessary to levy departmental charges against civil institutions, which charges often act very unfairly. And it would allow of instruments being sold cheaper by depots than by local dealers, whereas at present instruments are often to be obtained cheaper from the latter. But this proposal is not likely to meet with favour of Government, as it would overthrow the cost accounts system.

ANNEXURE X.

Short History of the Queen Alexandra's Military Nursing Service for India.

The Queen Alexandra's Military Nursing Service for India was inaugurated in 1888, as the Indian Nursing Servce. Prior to this date trained female nurses were not employed in military hospitals in India.

The first batch of English trained nurses, ten in number, arrived in India on the 21st March 1888. Of these, six were located at Rawalpindi and four at Bangalore. During 1890-1 the total number of nurses was increased to 28. The employment of these nurses in India was regarded more or less as an experiment for the first few years. In 1892-3 the scheme was considered sufficiently successful to have justified its trial and continuance. From 1893 the nursing service was recognized as an integral part of the military medical service. From 1896 it was known as the Indian Army Nursing Service, and the establishment was increased to 52.

The nurses were distributed to the principal station hospitals. Four circles were formed, each containing three or four stations where nurses were employed. Four lady superintendents were appointed in independent charge of these circles, with their headquarters at Rawalpindi, Meerut, Bangalore and Poona. Deputy lady superintendents were appointed in charge at stations where lady superintendents were not located. The staff of nursing sisters allotted to a station varied from two to four. Sisters were not in charge of their own wards. Each took her turn on duty to supervise the general nursing in the one or two special wards where the nursing sisters were employed, so that in each station the sisters had to subordinate their work to one another, and this proved difficult and often unsatisfactory. Such a system required mutual tact and good feeling to carry it through successfully, and this was not always possible. It was a trial to many who had held responsible and independent posts in England.

It was originally intended that the lady nurses should merely superintend the nursing of serious cases concentrated in the special wards. British nursing orderlies, drawn from the local combatant units, were allotted to do

the actual nursing with the assistance of Indian ward servants. These orderlies were totally ignorant of the most rudimentary principles of nursing, and the sisters had to work with them in order to instruct them in practical detail and by force of example get them to take an interest in their duties.

About 1902, a committee was appointed to consider the re-organization of the British nursing service. The War Office suggested amalgamation of the British and Indian services, but this proposal was rejected by the Indian authorities.

About a year later the Indian service became the Queen Alexandra's Military Nursing Service for India, and its strength was increased to 91.

There are now in this service 4 lady superintendents and 16 senior nursing sisters, the remaining 71 being known as nursing sisters. One of the lady superintendents is styled Chief Lady Superintendent, and is the recognised advisor of the Director, Medical Services in India, in matters affecting the interior economy and welfare of the nursing service.

Lady nurses are engaged for a term of 5 years. With the permission of the Government of India, and if pronounced by a medical board to be physically fit for further service in India, they may re-engage for a second and third term, and further, if in all respects efficient, and if specially recommended by the Commander-in-Chief, for a fourth term.

ANNEXURE XI.

PROPOSED FUTURE ORGANIZATION OF THE NURSING SERVICES OF THE ARMY IN INDIA.

The Committee propose that the following changes should be made in the present organization of the nursing services of the army in India :—

(1) That the present Queen Alexandra's Military Nursing Service for India be abolished and its place taken by the Queen Alexandra's Imperial Military Nursing Service as described below. Members of this service should come to India for tours of duty, as they do in various other parts of the Empire.

(2) The introduction of Royal Army Medical Corps, other ranks, and eventually the nursing section of the Indian Medical Corps, composed of a skeleton cadre of Royal Army Medical Corps men with members of the domiciled community, as contemplated in our scheme, in British station hospitals.

(3) The introduction of the nursing section of the Indian Medical Corps into Indian station hospitals.

(4) The matrons of station family hospitals should possess a certificate in general nursing, in addition to that in midwifery, and should have a competent staff of female nurses under them.

(5) The whole of these nursing services should be under the supervision of the senior ladies of the Queen Alexandra's Imperial Nursing Service as contemplated below.

The requirements in personnel of the Queen Alexandra's Imperial Military Nursing Service and the functions they should perform, should be as follows :—

at Army Headquarters—Matron-in-Chief with an appropriate staff.
at Command Headquarters—A Principal Matron and staff.
at Divisional Headquarters—A Senior Matron and staff.

These will form the administrative ranks of the service and should not be engaged in executive nursing duties. They would be responsible for the distribution of the nurses, and the proper control and supervision of the nursing in all the station hospitals, both British and Indian, and station family hospitals in their area of administration.

Each hospital should have its proper proportion of nurses in their various grades, and the matron, or charge sister, as the case may be, should be considered to be the senior nursing official of the station in question. She should maintain the same supervision over all the nursing duties in that particular station as laid down for the ladies of the higher ranks.

The ladies of the nursing service in administrative appointments should be considered to be staff officers of the Director, Deputy Director, or Assistant Director, Medical Services, as the case may be.

It is realised that the abolition of the present Queen Alexandra's Military Nursing Service for India would necessitate some scheme for their disposal, and the following is proposed. Those who are in their second or later tour of service should be permitted to complete the necessary service for pension under their original terms of employment. They would continue to serve in such a grade in the Imperial service as their standing in the Indian service may warrant. In their first tour of service these ladies should, with their consent, be transferred to the Imperial Nursing Service, otherwise their employment should be terminated. Pensions, if admissible, could be arranged for all these latter, proportionately to their length of service in India.

It is considered that members of the Imperial Nursing Service should not be allowed to serve for longer tours than five years in this country, and should not be permitted to return for another tour until after three years' intervening service in the United Kingdom.

Ladies who are appointed to the position of Matron-in-Chief or Principal Matron should have completed one tour in India before such appointment.

The Matron-in-Chief should be selected by the Secretary of State on the recommendation of the Director-General, Army Medical Service, and the lower grades should be deputed to this country by the War Office as demanded by the Secretary of State.

Ladies who have been trained in the general and presidency hospitals in India should be eligible for admission to the Imperial Nursing Service provided that they fulfil the requirements of that service. If admitted they should join in the United Kingdom for duty.

It has been contemplated to place in each first class Indian station hospital a certain number of nurses for the supervision of nursing and training of ward orderlies. It is considered that these ladies should be a branch of the Imperial Nursing Service, and should be entertained for periods of five years under contract. The matron or charge sister of such a hospital should belong to the Imperial Nursing Service, and come under the jurisdiction of the local administrative nursing authority.

SGPI—L—55 AD—1-6-20—1,500