

CHAPTER IX

THE MEDICAL SERVICES DURING THE WAR

SCARCELY more than a year before the outbreak of hostilities the Army Medical Service had emerged successfully from a long struggle to obtain a position that gave it an organization and military status analogous to that of other branches of the military service and enabled it to undertake with greater confidence and self-reliance the many responsibilities which had been thrown upon it since the final abolition, in 1878,* of what was known as the "regimental system." The difficulties experienced by it in coping with the emergencies of war had been a chronic subject of Parliamentary inquiry ever since the ill-fated expedition to Walcheren in 1807, and the South African War was to carry on the tale, although with far more satisfactory results. Not only was the outcome of official investigation into the actual work done more to the credit of the service, but it has resulted in the introduction of comprehensive and far-reaching reforms, whose beneficial effects cannot fail to become evident in future wars.

The Army
Medical
Service before
the war.

In peace time the requirements of the Army Medical Service for war were apt to be forgotten; its interests were thrust aside in favour of other interests, and efforts to improve it, under the influence of the public attention that was attracted to it for the moment, lost spirit and determination when the lessons of the war were forgotten. Even the

Its neglect
by the
authorities.

* The regimental system was, strictly speaking, abolished in 1873 by Royal Warrant, but medical officers were retained in their regiments until 1878, when, except in the case of the Guards, the regimental medical officer ceased to exist.

improvements effected by these efforts were sometimes whittled away under the pressure of economic and other causes. There was a widespread belief in military and Government circles that the civil profession would supply the demand for additional medical establishment, and that numerous voluntary aid organizations would spring up on the occurrence of a serious national war, and, somehow or other, fit into the military arrangements. No anxiety was therefore felt as regards professional aid to the sick and wounded. This belief was strongly ingrained in the minds of those who saw only one side of a military medical service, who conceived its duties to consist solely in the professional treatment of injuries and disease, and who felt that any undue suffering from sickness and wounds could be equally well alleviated, perhaps better alleviated, by the sympathy and devotion of voluntary helpers. Even as recently as 1898 the military opinion expressed in connexion with the maintenance of an adequate medical establishment trained for war was to the effect that "wars are intended to be provided for by depleting home hospitals, and the remedy for that is extra women nurses and active recruiting."*

The effort to
secure
military
status and
organization.

This attitude entirely ignored the fact that to insure the really efficient working of the medical service in war, to secure adequate preparations, and to provide a framework for expansion in times of emergency, it was essential that it should form an integral portion of the military organization. The arguments which had made the engineer work, and, at a more recent date, the supply and transport work, an essential component part of an army, and not a mere external adjunct, applied with no less force to the medical and sanitary work. The constant demand of the medical officers for full military status and for the complete military organization of their service was not due to mere vanity and love of military titles, but to a realization on the part of all the keenest and most thoughtful among them of the difficulties that were

* See Minutes of Evidence, Royal Commission on South African Hospitals, Q. 13, where the Director-General of the Army Medical Service quotes this as the opinion of the then Adjutant-General (Sir Evelyn Wood).

bound to beset a medical service that had no recognized status in the military organization. The history not only of our own campaigns, but also of those of other countries, had exposed the danger over and over again, but full recognition of the military value of an adequately manned, trained and organized medical service was slow to arrive. For many years there existed in the Army a corps of men, recruited from soldiers already enlisted in the combatant ranks and subsequently trained for hospital duties, called the Medical Staff Corps, but it was not under the command of the medical officers. In 1861 its name was changed to the Army Hospital Corps, and part of its administration then came under the Director-General of the Army Medical Department, though its pay and discipline came directly under the department of the Purveyor-in-Chief. There was no real military position for medical officers, and, in fact, it was not until 1869, on the recommendation of a committee presided over by Lord Northbrook, that the Director-General was even attached to the Military Department at the War Office. In 1878 the Army Hospital Corps became recruited by direct enlistment, but no steps were as yet taken to bring its ranks into closer union with the medical officers with whom they had to work. The first step in this direction was taken by the Earl of Morley's Committee, which was appointed in 1883, after the Egyptian War, to consider the condition of army hospital organization and the transport of the sick. This Committee recommended that the Army Hospital Corps should be merged in the medical department as the "Royal Medical Corps," and that the medical officers should have undivided control in military hospitals. The time, however, was not ripe for such sweeping reforms, and a compromise was made by converting the medical officers into officers of the Medical Staff, and the Army Hospital Corps into the Medical Staff Corps—its old name—and by giving the officers of the Medical Staff complete command over the Medical Staff Corps, their uniform being at the same time changed from scarlet to blue in order to resemble more the uniform of the men.

The creation
of the
Royal Army
Medical
Corps.

Subsequently considerable agitation was carried on, mainly by the British Medical Association, with a view to the abolition of all distinctions that seemed to place the military medical officer in a position inferior to that of his combatant brother. The medical schools boycotted the service. Some concessions, such as the granting of compound titles, were made, but the end of the controversy was not reached until May 4, 1898, when Lord Lansdowne, speaking at the first banquet ever given by a Lord Mayor of London to the medical profession, announced, not only the fact that the Medical Staff and the Medical Staff Corps were in future to be consolidated in one Army Medical Corps, but also that her Majesty had been pleased to signify her intention of bestowing the title of "Royal" upon the new corps. The feeling in the medical profession at the time was expressed by Lord Lister, who, in a speech that followed, stated that Lord Lansdowne had removed a terrible cloud from the medical profession and a terrible evil from the nation.* The medical service thus entered a new life almost on the eve of the South African War. The Royal Warrant regulating the altered conditions was signed on June 23, 1898. A complete military hierarchy from private to colonel, the higher administrative ranks only retaining the old title of Surgeon-General, afforded at any rate the framework necessary for unity of action and purpose and for the discipline and training of the corps in the future. At this time, Surgeon-General J. Jameson was the Director-General of the Army Medical Service at the War Office. His staff at headquarters consisted of a Deputy Director-General, Surgeon-General (now Sir J.) Taylor, and three officers of the Royal Army Medical Corps—Lieut.-Colonel W. Gubbins,† Major W. G. Bedford, and Major W. G. Macpherson.

Unsatis-
factory
conditions.

The development of the Army Medical Service into a Royal Army Medical Corps, analogous in interior economy,

* *British Medical Journal*, May 7, 1898, p. 1215.

† Lieut.-Colonel Gubbins eventually went to South Africa as Principal Medical Officer of the Sixth Division, and his place was taken by Lieut.-Colonel W. Johnston, from the retired list. Major Bedford also went to South Africa as Secretary to the Principal Medical Officer of the Forces. His place was taken by Major E. M. Wilson.

command and external status to that of other professional or scientific corps, was an indispensable step in the creation of a medical service adequate to the needs of the Army. But it was only a step, and much yet remained to be done before the rise in military status could achieve the desired results in the way of increased strength and efficiency. The training and the career offered to the medical officer still left much to be desired. The limited opportunities and inadequate pay of the service continued to act as a deterrent to young men of ability and ambition. There was little regular instruction after joining; opportunities for gaining useful experience were very limited; few facilities for study were provided, and ambitious officers had usually to find them at their own expense and in their periods of leave. Promotion was almost wholly by seniority, independent of scientific merit. All the conditions in fact which stimulate efficiency on the part of the rising civil practitioner were absent. Considering the circumstances, what is surprising is, not that the *personnel* of the service was in many cases weak, but that it did include so many officers of scientific distinction and practical capacity.

The causes of these unsatisfactory conditions may have lain in part with the service itself. But in the main they were the result of the refusal of the military and political authorities to take the service sufficiently seriously. The recent changes had been regarded in many quarters more as a concession to the personal feelings of the service than as a measure intended to strengthen its power, and the real proof of interest, the readiness to provide money, was not forthcoming. Not only were the inducements offered to the individual insufficient, but it was impossible to induce the authorities to maintain the total strength of the corps at anything like an adequate figure. Before the war the authorized establishments of the corps in officers and men had fallen considerably below the minimum requirements of the two Army Corps and Cavalry Division, which was the standard adopted for purposes of mobilization for service overseas. The peace establishment of the Royal Army Medical Corps, when war was declared, was 3,045 non-commissioned officers

A starved
service.

and men in all parts of the Empire. Of this number 2,106 were serving at home; and when the original force for South Africa was mobilized along with its field medical units and its hospitals for the base and lines of communication, as many as 1,728 were swept away, leaving only a small balance for the work of the home hospitals, for replenishing wastage, and for the requirements of a second army corps, or any other troops that might be required in South Africa. This situation had long caused anxiety and misgiving to the Director-General and his staff, but although he had constantly struggled to obtain an adequate establishment of subordinate ranks, his demands had been met by half measures only. Even when 400 of all ranks were pressed for in the estimates of 1899-1900, in consequence of the increased establishment of the Army as a whole and of the fact that South Africa was gravely undermanned, only 150 were granted.* It was not until the war had begun that the balance was sanctioned. The capacities of expansion within the corps itself were extremely limited. The Reserves of the Royal Army Medical Corps of the first three classes numbered 760 only. They were called up on October 9, 1899. Fifty Volunteers of Class D came forward, and subsequently 180 were ordered out; this exhausted the whole of the Regular Reserves of trained men of the Corps. There was also a reserve of 127 officers retired from the Army, including 7 quartermasters, who were liable to be recalled to service. On the outbreak of war most of these took over charge of military hospitals at home, while some went to South Africa and were placed in charge of units, such as hospital ships, hospital trains, and some of the hospitals which were sent out by private individuals and committees.

Insufficiency
of nursing
sisters.

The Army Nursing Service, which had existed as a regular establishment of the Army since the Crimean War, had one lady superintendent, 18 superintendents, and 56 nursing sisters, distributed amongst the principal military hospitals at home and abroad in 1899; and there existed an Army

* Minutes of Evidence, Royal Commission on South African Hospitals. Q. 13, p. 3, evidence of the Director-General of the Army Medical Service.

Nursing Reserve* of nursing sisters, having the same nursing qualification as those of the Army Nursing Service. Their number was only 101 at the commencement of the war, though this number increased rapidly immediately after the outbreak of hostilities. This extraordinary inadequacy of the female nursing staff was due to a variety of causes. In the first place the medical authorities, anxious to make the best use of their narrow means, were naturally more concerned to secure the trained orderlies required in the field, whom it would be difficult to improvise, rather than nurses whose duties would lie mainly at the base and on the lines of communications, and who would require no special training. But there was also in the minds of most of the medical officers a marked disinclination to make use of the services of nurses. So much of the recent fighting of the British Army had been done in savage countries under conditions which practically excluded female nursing, so large a proportion of the peace work of the medical service had been concerned with particular forms of disease where such nursing was unsuitable, that, in spite of the lessons of the Crimea, the value of nurses in any war fought on a large scale and under civilized conditions was insufficiently realized. It was only for general hospitals that their use was contemplated; and the authorized scale of one matron and eight nurses to a hospital of 520 beds, as compared with the 145 male orderlies attached, is an indication of the position assigned to them. Fortunately, when the experience of the war brought with it a better recognition of their value, there was never any lack of devoted women helpers, the majority of them thoroughly trained for the work they undertook.

The Militia and Volunteer Medical Services were only partially organized and trained to supplement the Regular Army Medical Service. The former consisted partly of an old regimental system, which was being allowed to die out, and partly of a Militia Medical Staff Corps. The formation of the latter had been begun in 1892, and it was composed

Militia and
Volunteer
Medical
Services.

* This Reserve was founded by H.R.H. Princess Christian of Schleswig-Holstein, and was officially recognized by the Secretary of State for War in 1897.

in 1899 of five companies, organized to replace the Royal Army Medical Corps in military hospitals at home on the outbreak of war. They were at once embodied, and supplied 240 men for duty in the hospitals at Netley, Aldershot, and Woolwich. At the same time a special service section of the corps was authorized, and 120 men were thus obtained for service in South Africa. In the Volunteer forces and in the Yeomanry the regimental system existed in an exceptionally flourishing form. There was no restriction on the number of medical officers who joined and wore the uniform of Volunteer battalions, many of which had six on their establishment. This was no doubt excellent enough in its way, but it was not based on any rational principle of organization for war. But in addition there was a Volunteer Medical Staff Corps, which had been established, independently of the regimental system, in 1885. In 1899 it was composed of fourteen companies, organized originally for the purpose of affording general assistance to the Regular Army Medical Service, as required, but subsequently for providing field medical units for the Volunteer forces in the event of their mobilization for home defence. These companies were not utilized, therefore, as separate units during the war, but their number increased to twenty-six before it was concluded, and authority was obtained to accept a limited number of men belonging to them for service in South Africa, as was done with combatant Volunteers. Many of the medical officers, both of the Militia and Volunteers, were enrolled in what was then known as the Army Medical Reserve of officers, but, as the names on this reserve were also names on the establishment of Militia and Volunteer regiments, and other Militia and Volunteer units, it was not, strictly speaking, a reserve at all, and proved of no special value during the war. Besides these, civil medical men volunteered in large numbers and were engaged for duty in the stationary and general hospitals, and subsequently with field units, as contract surgeons.

The St. John
Ambulance
Brigade.

None of the auxiliary military organizations proved sufficient to meet the demand for the subordinate ranks, when medical units had to be got together in numbers beyond all previous anticipation, and arrangements were then made to take

advantage of a scheme that had been proposed in February, 1899, for the employment of men of the St. John Ambulance Brigade as auxiliaries to the Army Medical Service. The brigade is organized on a military basis, and its members had not only been thoroughly trained in the principles of first aid to sick and wounded, but many of them were also regularly employed in connexion with accidents in civil life. Their organization was so complete that little difficulty was found in mobilizing as many as chose to volunteer. They proved an invaluable addition to the Medical Services during the war, and served with every kind of medical unit. As many as 1,900 were handed over fully clothed and equipped to the Army medical authorities. Besides these, pharmacists and men with special nursing qualifications were specially engaged during the war. There was a great demand for the former, and as many as 200 out of a large number who came forward were accepted.

Special
enlistments.

Finally, there was that unknown quantity, voluntary aid. An unknown quantity, that is to say, in Great Britain, but in other great states a carefully exploited and organized auxiliary of the Medical Services in war. Shortly before the South African War an effort had been made by the War Office to bring the resources of aid of this kind into touch with the Army Medical Service, on the lines upon which the great Continental Red Cross organizations are controlled. An official report by Major Macpherson on the Sixth International Conference of Red Cross Societies, which was held in Vienna in 1897, led Lord Lansdowne to suggest the formation of a committee for this purpose, and in January, 1899, he officially recognized the committee as a Central British Red Cross Committee for organizing and dealing with all offers of voluntary aid in war. Lord Wantage was chairman, and it was formed of representatives of the Army Nursing Reserve, St. John Ambulance Association, the National Aid Society, and the War Office, with Major Macpherson as its honorary secretary.* In August, 1899, the Princess of Wales

Voluntary
aid and the
Central
British Red
Cross
Committee.

* The members of this committee at the commencement of the war were H.R.H. Princess Christian and Miss Wedgwood (Army Nursing Reserve), Viscount Knutsford and Mr. Furley (St. John Ambulance

accepted the appointment of honorary president. When the war broke out the Central Committee was able to regulate to some extent the numerous and varied offers of assistance that poured in, and to prevent overlapping and wastage. To it fell the duty of determining the best manner of expending the various funds that were subscribed for the sick and wounded, organizing special Red Cross units, such as hospital trains and hospital ships, distributing clothing, luxuries, and other comforts among the hospitals in South Africa by means of Red Cross commissioners and agents, and considering the various schemes of private hospitals, convalescent homes, and similar offers of assistance. The committee met weekly, sometimes oftener, during the greater part of the war, and proved of great service. But it had not been in existence long enough before the war to have created anything in the nature of a regular organization for the development and co-ordination of voluntary aid. Its function at first, indeed, was largely that of an intermediary between the Medical Department and the patriotic public, and the donors of hospitals and other voluntary helpers were sometimes inclined to regard it as too prone to act as the mouthpiece of official views on such subjects as female nursing or the exact size of hospital establishments.

Expansion
hardly con-
templated.

The fact was that in the Medical Service, as in every other, the contingency of expansion on a really large scale had never been contemplated by the political rulers of the country, and had consequently not entered, to any extent, into the calculations of the various departments of the War Office. The Medical Service was not behind the other services in this respect, nor did the response which it made to the unforeseen strain compare unfavourably with that made by other services. That it was able to do what it did was largely due to the reforms of the last few months before the war, which provided at any rate a central framework to which the heterogeneous voluntary assistance given could

Association), Lord Wantage, Lord Rothschild and Sir Wm. MacCormac (National Aid Society), Surgeon-General H. S. Muir, Colonel P. Lake and Lieut.-Colonel Gubbins (War Office).

attach itself, and some recognized channel for the co-ordination of patriotic effort.

In order that a proper estimate may be formed of the general condition of affairs on the outbreak of hostilities and the manner in which the difficulties of the situation, caused by an inadequate establishment, were met, a brief review of the field medical organization of the Army at that time and its requirements will be useful. Although, with the exception of the Foot Guards and Household Cavalry, no medical officers were attached or belonged to regiments in time of peace, each battalion of infantry, regiment of cavalry, brigade of artillery and similar unit had to have one medical officer given to it when it went on field service. He had no men of the Royal Army Medical Corps with him, but in each company two men were trained as stretcher-bearers, and a non-commissioned officer and private of the battalion were assigned to him to assist and to take charge of the medical and surgical equipment which accompanied him. His duties were to maintain general sanitary supervision over the battalion, to determine what men were unfit for duty and required to be sent away from it for treatment, to treat himself the more trivial cases, and to accompany the battalion into action and attend to the wounded when they fell. Each officer and man carried with him a first field dressing, and had thus on his own person material for the application of a temporary dressing, should he be hit. In touch with this regimental service there were bearer companies, and in touch with the bearer companies field hospitals, there being one bearer company to each brigade, and one field hospital also to each brigade, and to the headquarters of each division and each army corps. These were mobile units with a definite scale of transport for the conveyance of tents, medical and surgical supplies, and other equipment. Ten ambulance wagons for conveyance of sick and wounded to the field hospitals formed part of the transport equipment of each bearer company, but the field hospitals had no special transport of this nature. Each bearer company required an establishment of 3 officers and 58 of other ranks, and each field hospital 5 officers, including a quartermaster, and 34

Scheme of
Field Medical
Organization
in 1899.
Regimental
Medical
Service.

Bearer com-
panies and
field
hospitals.

of other ranks. The bearer company *personnel* formed 8 stretcher squads of 4 men each, and supplied a wagon orderly to each ambulance wagon and a dressing-station party. The field hospital formed a unit, nominally called a hospital, for 100 beds, but in reality not intended for hospital treatment at all. Instead of beds it had blankets and waterproof sheets for the temporary reception of sick and wounded. In addition to the *personnel* of the Royal Army Medical Corps, transport drivers of the Army Service Corps were nominally attached to these mobile units, but special arrangements were made, at the commencement of the war, to use buck-wagons, Scotch carts, and ox-carts* with mules, oxen and native drivers, in place of the regulation general service wagon and the Army Service Corps *personnel*, the scale allowed being 1 water cart, 2 buck wagons, and 1 ox-cart, together with the 10 ambulance wagons, for a bearer company, and 2 water carts, 4 buck wagons, 1 Scotch cart, and 1 ox-wagon for a field hospital. One conductor and 35 natives in charge of 139 mules and 6 oxen formed the transport *personnel* of the former, and 20 natives with 64 mules and 6 oxen the *personnel* of the latter.†

Stationary
and general
hospitals.

All the other units of the Medical Service were organized for the lines of communication and the base. They were not mobile units and had no fixed scale of transport. There were two kinds of hospitals—the stationary hospital, organized for 100 beds, and the general hospital for 520 beds.‡ The former was a comparatively light unit, capable of being readily conveyed by rail or other means of transport to advanced positions on the lines of communication. It was provided with stretchers instead of with hospital beds. The general hospital was much more elaborately equipped, and allowed of the treatment of sickness and wounds under very reasonably favourable conditions. Its normal position was intended to be at the base, but general hospitals were frequently

* The ox-cart is a light cart carrying a load of 1,500 lbs.

† Official Report on the Medical Arrangements in the South African War, p. 80.

‡ In nearly every instance the accommodation in these hospitals was greatly increased during the war, the number of beds being doubled, or even trebled, in many of them.

moved up the line during the war. The *personnel* required for a stationary hospital was 4 medical officers, 1 quartermaster, and 40 men, and for a general hospital 20 medical officers, one quartermaster, 145 men of the R.A.M.C., and eight (afterwards 20) nursing sisters of the Army Nursing Service. Other units, for which provision had to be made, were base and advanced medical supply stores. Each required one officer and a small *personnel*. *Personnel* for hospital trains and hospital ships was also estimated in the requirements of the Medical Service, and at home the general hospitals at Netley, with 1,100 beds, and at Woolwich, with 660 beds, for the reception of invalids sent home had to be considered.* Finally, an administrative staff had to be included, each Army Corps requiring a principal medical officer and two assistants, with a principal medical officer and an assistant for each division, for the line of communication, and for the base. It is typical of the way in which the Medical Service was starved, that though the scale of stationary and general hospitals provided for on mobilization was four of each to an Army Corps, it was not considered desirable to keep more than two of the former and one of the latter in the ordnance stores ready for mobilization.† This shortage had continued for years in spite of the repeated protests of the Director-General, and it was not till October 4, a week before the outbreak of war, that sanction was given for the preparation of the remaining hospitals needed for the expeditionary force. As it happened, the delay had no serious consequences; but it is not pleasant to speculate what would have happened if the force had been required to go rapidly into action and had sustained heavy losses in the first weeks of the war.

Other
medical
units.

Field ad-
ministrative
medical staff.

To meet all the requirements, even of the original force, and still more in order to provide for further expansion as the war progressed, the Director-General was faced with difficulties from the very first, and he soon had to turn to

Success of
the efforts
made in
England to
meet the
medical
requirements
of the
situation.

* Not only the Netley and Woolwich Military Hospitals, but also those at Aldershot, Shorncliffe, Devonport and Colchester had subsequently to be expanded for this purpose by the erection of huts, etc.

† Report of the Royal Commission on South African Hospitals, p. 8.

every possible source of supply outside the Royal Army Medical Corps, as the war began to assume dimensions in excess of anything that had been provided for. His efforts and those of his staff to cope with the situation met with considerable success. All the organized troops sent out to South Africa had their full complement of field medical units, though the later units were necessarily of a very improvised character. Sir Redvers Buller's force left England complete in every respect, with his medical units composed of the trained *personnel* of the Royal Army Medical Corps.* The mistakes made during the first Egyptian campaign had been carefully avoided, and all the equipment and transport material of the medical units, with only one or two exceptions, embarked with them on the same ships. The two hospital ships assigned to an Army Corps had also been got ready, and reached South Africa between the 9th and 19th October, 1899, before the Army Corps had sailed from England. These were the *Spartan* and *Trojan*, ships belonging to the Union Castle Line. They were fitted out at Southampton in September.

Preliminary
medical
arrangements
in South
Africa.

Before this time, both in Cape Colony and Natal, such action as was possible was being taken to make the Medical Service ready in the event of a sudden outbreak of hostilities. Colonel J. F. Supple was Principal Medical Officer of the military command, and was at its headquarters in Cape Town. Lieut.-Colonel W. Johnston was the Senior Medical Officer in Natal. There were permanent military hospitals at Cape Town and Wynberg, in Cape Colony, and at Ladysmith and Maritzburg, in Natal. The *personnel* of the Royal Army Medical Corps was just sufficient for the duties at these posts. There was a medical supply store at Cape Town with a small reserve of field equipment. The Cape Colonial Forces possessed a Medical Staff Corps of six officers and 140 other ranks, and both they and the Natal Volunteer Corps had also a regimental medical service. Equipment for three field hospitals and three bearer companies was

* From the very first, however, a number of civil surgeons were taken on for the general hospitals at the base, and over 50 of these had been appointed by October 14.

added in June to the medical store in Cape Town, and two hospital trains, as well as several ambulance vehicles, were subsequently prepared there. Another hospital train was got ready in Natal, an advanced medical store depot was moved up to Ladysmith, medical supplies and equipment were sent to De Aar, Kimberley, and Mafeking, and medical reconnaissances were made of the principal strategical posts along the lines of railway from East London and Port Elizabeth. Registers of civil doctors and nursing sisters who were willing to serve were kept both in Cape Town and Maritzburg, and arrangements were made to despatch invalids to England by the mail steamers weekly. All these preparations, quietly made in anticipation of hostilities, showed much initiative and resource, and give the impression that the administration of the Medical Service in South Africa before the war was in the hands of officers who were fully alive to the necessities of the situation. Under the circumstances which obtained at the time, it would have been difficult to have done more.

When the Indian contingent arrived in Natal early in October, it brought with it one half and three complete field hospitals for British troops, and one field hospital for natives of India accompanying it as transport drivers and in other capacities. These medical units were organized in a totally different manner from the corresponding units in the British service. They combined the functions of both field hospitals and bearer companies,* and had a large number of native dhoolie bearers with Lushai dandies, field-stretchers, and a proportion, but not all, of their regulation equipment of tongas.† With the exception of the officers of the British field hospitals who belonged to the R.A.M.C., the establishment was entirely Indian, and consisted, in addition to the officers of the Indian Medical Service with the native field hospital, of assistant-surgeons of the Indian Medical Service, native

Medical units
with the
Indian
contingent.

* This fusion of the field hospitals and bearer companies has, since the war, been introduced into the British Army as well.

† The Lushai dandy is a light litter, slung from a bamboo pole and carried on the shoulders of bearers, which has replaced the heavy dhoolie of former times. The tonga is a light but strongly constructed cart used on hill roads in India.

ward orderlies, water-carriers, cooks, sweepers, and others. Each battalion and regiment from India had also with it an officer of the R.A.M.C., and an assistant-surgeon of the Indian Medical Service.* No line of communication medical units, however, accompanied the contingent, and for continued treatment of its sick and wounded it had to depend on the resources of the colony, or on such hospitals as arrived from England.

The heterogeneous character of the resources out of which the medical requirements were met.

Throughout all these preparations, indeed, one feature is already clearly indicated, and that is the heterogeneous nature of everything that had subsequently to be got together in connexion with the Medical Services. Trained and untrained *personnel*, British, Indian, and Colonial systems of organization, military and civil elements, improvised resources at home and in South Africa, voluntary offers of every description—all had to be utilized and welded into some organized whole during the progress of the war. It was a state of affairs that gave great opportunities for developing latent qualities for administration, initiative, and resource, but that was no less bound to break down wherever there was a lack of tact, elasticity, and imagination. This heterogeneous character of the Medical Services became more marked as the war progressed, and the difficulties of dealing with its elements, partly inevitable, partly the lack of previous organization, were constantly in evidence.

The medical administrative staff with the forces in South Africa.

The task of coping with this difficult problem fell to the lot of Surgeon-General (now Sir W. D.) Wilson, who went out to South Africa with Sir Redvers Buller, as Principal Medical Officer. He had Major Bedford as his Secretary and Captain M. L. Hughes as the only other assistant on his staff.† When he arrived in South Africa Colonel

* The assistant-surgeons may belong to the class of Eurasians or they may be natives. But many are pure Europeans, often sons of retired non-commissioned officers who have settled in India. The officers of the I.M.S. are of the same class as the officers, R.A.M.C., but natives of India with British qualifications to practise medicine and surgery may become officers in the I.M.S.

† Captain Hughes accompanied Sir Redvers Buller to Natal and was killed at Colenso. He was not replaced on Surgeon-General Wilson's staff till August, 1900, when Major R. J. Simpson, and subsequently Captain A. F. Tyrrell, was appointed orderly officer to the P.M.O. of the Forces.

Supple became Principal Medical Officer of the base and lines of communication at Cape Town. Lieut.-Colonel Exham had already been sent to Natal as Principal Medical Officer with Sir George White. When Sir Redvers Buller's Army Corps was split up and he himself proceeded with the main portion of it to Natal, Surgeon-General Wilson remained behind at Cape Town to organize the Medical Services generally in South Africa, and Colonel (now Sir T.) Gallwey, with Major W. Babbie as his staff officer, then accompanied Sir R. Buller as Principal Medical Officer. Colonel E. Townsend became Principal Medical Officer with Lord Methuen in the north, and Colonel J. Dallas Edge with General Gatacre in the east of Cape Colony. In the narrative of the events connected with the Medical Service in the course of the war, only the special features of the various arrangements that had to be made will be noted. Incidents of professional or other interest must be sought elsewhere, in the numerous reports and books published by civil and other medical officers. Nor is any mention made here of the individual work of the officers, men, and nursing sisters of the Medical Services. They gained for themselves in all quarters a fully deserved reputation for courage and devotion to duty. Four officers of the R.A.M.C. (Major Babbie and Lieutenants W. H. Nickerson, E. T. Inkson, and H. E. Douglas) were awarded the Victoria Cross for conspicuous acts of bravery during the war.

In Ladysmith the field medical units were complete until the retreat of General Yule from Dundee, when two of the field hospitals had to be left behind with the wounded. An advanced depot of medical stores was already in the town, and all the sick and wounded had been removed to Maritzburg by hospital train before the place was invested. There was thus a fair provision of medical *personnel* and equipment for the siege and for the actions immediately preceding it. But the general arrangement of hospitals within the town was upset by the long-range guns of the Boers, and this led to the establishment, with General Joubert's consent, of a large hospital camp at Intombi Spruit, which was opened on November 5, 1899. All the available medical *personnel*, equipment, and supplies were

Medical
arrangements
during the
sieges of
Ladysmith,
Kimberley,
and
Mafeking.

used for the formation of this hospital, only a proportion of the field hospitals and bearer companies remaining within the area exposed to the fire of the Boers. The sick and wounded were transferred to Intombi by rail daily. The difficulties with which the officers who administered the hospital at Intombi had to contend have been related elsewhere.* The most acutely-felt want was suitable nourishment for the patients, who suffered chiefly from dysentery and enteric fever. In spite, however, of far from satisfactory conditions the mortality was not excessive. But with the numbers in the hospital increasing eventually to 2,500, the strain on the officers became very great. Five out of the 48 officers of the Royal Army Medical Corps and the Indian Medical Service were killed or died from disease, and practically half suffered from prolonged attacks of enteric fever and dysentery. In Kimberley and Mafeking the medical arrangements presented no special features. In both the defence was mainly by local Volunteer corps and town guards, and the local civil hospitals under local civil practitioners afforded means of treating the sick and wounded. The Royal Army Medical Corps officers, of whom there was one in each of the besieged towns (Lieutenant O'Gorman in Kimberley and Major Anderson in Mafeking), acted as Military Administrative Medical Officers and supervised the general sanitary condition of the troops.

The medical arrangements with Sir Redvers Buller's force in Natal. Their satisfactory features.

Of all medical arrangements during the war, those during Sir Redvers Buller's operations in Natal presented the most satisfactory features. This was due to a combination of causes. In the first place must be reckoned the capacity and initiative of Colonel Gallwey, the P.M.O. in Natal. Further, the most highly-trained and complete field units, those for which provision had long ago been made in the peace establishments and training of the Royal Army Medical Corps, and those whose mobilization was of a normal character, accompanied Sir Redvers Buller to Natal. There were no exhausting marches, no short rations, nothing in fact to try the health of the men. The fighting was done under conditions which made the collecting and bringing in

* See vol. iv., pp. 517-519.

of the wounded a comparatively easy and speedy matter. The line of communication with the base was also short and was amply supplied with hospital trains. In addition to the one that had been formed before the outbreak of hostilities, a second and similar train was prepared in November, and eventually the hospital train "Princess Christian," constructed in England by the Central British Red Cross Committee, arrived in Natal in time to be available when Ladysmith was relieved. An important base depot of medical stores had been established in Durban early in November, and it was possible to organize from it an advanced depot, which accompanied the field army. The chief difficulty was the formation of general and stationary hospitals on the lines of communication, mainly on account of the lack of suitable *personnel*. It was only in connexion with these that the shortage of regularly-trained *personnel* began to be felt in Natal. There was ample equipment for them; that of one stationary and one general hospital was in the colony, and two additional general and one stationary hospital had arrived in Natal from England by the time Ladysmith was relieved.

Colonel Gallwey and his staff made the best use of these advantages, and introduced some new features into the medical arrangements that proved of immense advantage. These were the formation of corps of stretcher-bearers and the conversion of large transports into hospital ships. It was anticipated that the fighting to relieve Ladysmith might be at some distance from the railway line, and that it would be impossible to depend upon the bearer companies to carry out the process of transporting the sick and wounded from the field hospitals to the hospital trains. This is a service, in fact, which has its own special organization in other armies, and Colonel Gallwey early recognised the necessity of filling in this gap in the chain of evacuation. There was a large number of refugees from the Transvaal in Natal, and a paid corps, called the Natal Volunteer Ambulance Corps, was rapidly raised and equipped with stretchers, just before the passage of the Tugela was attempted. Originally its strength was 1,200, but it was eventually increased to about

Colonel Gallwey's special measures.

The Natal Volunteer Ambulance Corps.

1,800. Four companies were formed, one for each brigade, with two officers, detached from regiments, in military command. The companies were further divided into sections of twenty-five under a leader elected by the men of the section. The work of the corps was invaluable in connexion with the actions at Colenso, Spion Kop, and Pieter's Hill. With their assistance the field at Colenso was cleared of 800 wounded before dark. In subsequent actions they also assisted the regular bearer companies and helped to clear the dressing-stations and field hospitals. When a stationary hospital was moved to Spearman's in connexion with the casualties at Spion Kop and Vaal Krantz, they carried the more serious cases on stretchers the whole way back to Frere on the line of railway. Another ambulance corps was raised at the same time. This was the "Indian Ambulance Corps," organized from among Indian indentured coolies by the Natal Public Works Department, and under the control of two of its officials.* It numbered some 800 men, who worked from rail-head to a point where they met the wounded brought in by the Natal Volunteer Ambulance Corps. The Natal Volunteer Ambulance Corps was disbanded after the relief of Ladysmith and the Indian Ambulance Corps in February. The former was replaced by the formation of a corps called the Imperial Bearer Corps, 100 men of which were attached to each regular bearer company.

The Indian
Ambulance
Corps.

Conversion of
transports
into hospital
ships at
Durban.
Their subse-
quent value.

The conversion of transports into hospital ships was begun at Durban by fitting up the *Lismore Castle* as an auxiliary ward of the Maritzburg hospital, in order to increase the hospital accommodation at the base. The *Spartan* was already there, but the accommodation on board was small and insufficient. The success that attended the conversion of the *Lismore Castle* led to the subsequent conversion of the *Nubia*, *Orcana*, and *Avoca*, and, after the relief of Ladysmith, of the *Dunera* and *Simla*, a fleet of six

* The idea of raising a corps of natives of India originated amongst themselves as a demonstration of loyalty. Their intention was to give their services free, or, at least, that the expenses of the corps should be borne by the wealthier members of the Indian community. See vol. iii., p. 100.

fine hospital ships being thus formed and a fortnightly service to England initiated. Colonel Gallwey, in this manner, established a complete chain of evacuation between his field medical units and England which was of the greatest value subsequently, when the hospitals in Natal became the chief base for invaliding sick and wounded to England.

In Cape Colony the chief centre of activity at first was Cape Town, where three large general hospitals were opened on their arrival from England at the end of October and in the course of November, 1899. Hospital No. 1, which was opened on October 30, occupied the whole of the Wynberg barrack huts, No. 2 a large camp area in Wynberg Camp, and No. 3 a fine situation at Rondebosch. Use was also made of the not very satisfactory old garrison hospital at Woodstock. A large convalescent camp was formed at Green Point later on. Small hospitals that had been established at De Aar and Orange River before the outbreak of hostilities were expanded and more completely equipped by stationary hospital units from England. The two hospital trains that had been prepared by Colonel Supple in September were manned by a complete *personnel* from England, and were kept in constant touch with Lord Methuen's advance. In most cases they were run up almost into the firing line, and during the actions at Belmont, Graspan, Modder River, and Magersfontein, they relieved the force of its sick and wounded in an incredibly short time, conveying some to De Aar and Orange River, and others to the general hospitals at Cape Town.

The medical arrangements in Cape Colony.

The chief difficulty in connexion with Lord Methuen's force was the provision of field medical units, owing to the splitting up of the Army Corps and the formation of new brigades out of battalions in South Africa not previously brigaded. The bearer company from the 3rd Brigade, which was being left at the base, had to be transferred to another brigade, a divisional field hospital had to be converted into a brigade field hospital, while the Army Corps field hospital was sent as a divisional field hospital to Natal. There was, in fact, in the Medical Service, as in every other, a general shuffling of the cards involved in the break-up of the Army Corps, and when eventually the 3rd Brigade was sent to

Difficulties in supplying field medical units to forces in Cape Colony.

join Lord Methuen's force on the Modder River it was without medical units. A company of the Cape Medical Staff Corps, under Surgeon Lieut.-Colonel Hartley, V.C., was then converted into a bearer company and joined it, while a field hospital was obtained from a divisional field hospital left in Cape Colony by one of Sir Redvers Buller's divisions. General Gatacre's force in the east of Cape Colony had also to be supplied with field medical units in a similar manner. His medical bases were East London and Port Elizabeth, where there were small hospitals, together with the hospital ship *Trojan*, which had been sent to the former port to act as a stationary hospital at the base. His field units were a divisional field hospital, a bearer company, also formed of one of the companies of the Cape Medical Staff Corps, and half a field hospital of the permanent Cape establishment. The small force under General French operating from Naauwpoort and Arundel had some of the Cavalry Division field medical units with it.

Success of the
medical
arrangements
in the first
three months.

The operations of the various fragments of the disintegrated Army Corps in November and December, 1899, and the operations in Natal up to the relief of Ladysmith, imposed no exceptionally severe strain on the Medical Service. The losses in action were in no case really heavy. The nature of the wounds made them easy to deal with; the Mauser bullet was a merciful instrument, and wounds from shell fire were rare. The fighting was almost all on the railway, so that rapid evacuation of the field hospitals was possible. The general health of the troops was remarkably good; enteric had hardly begun to make its appearance, and the men flourished on abundant rations in an invigorating climate. The undoubted success with which the Medical Service dealt with its task, added to the splendid gallantry shown by its officers and men on the battlefield, impressed not only the ordinary correspondent, but men of the highest professional attainments. The reports which reached England of the work of the R.A.M.C. sounded a note of praise and triumph, all the more gratifying by its contrast to our military reverses. That note was sustained by such eminent authorities as Sir W. MacCormac and Mr. Treves. At a dinner

given at the Reform Club on April 28, 1900, these two gentlemen, who had just returned from South Africa, where they had acted as consulting surgeons, declared that "it would not be possible to have anything more complete or better arranged than the medical service in this war."

At the same time, in South Africa, a certain under-current of criticism began to make itself felt. Away from the actual work of the battlefield those who came in contact with the management of the hospitals were impressed in many instances by the excessive influence of routine, the fear of unauthorized action, the reluctance to assume responsibility, which was the natural result of the cramped conditions under which the Medical Service had so long lived. The civil surgeons, fresh from the working of the great English hospitals, were struck not only by certain defects in equipment but by a certain want of elasticity on the part of the medical officers, a tendency, it almost seemed to them in some cases, to consider diet sheets more important than diet, and returns than cures. An undoubted instance of this want of elasticity was shown in the attitude of some of the hospital authorities to the question of female nursing. Trained orderlies were badly needed at the front; at Cape Town hundreds of qualified nurses, local or from England, could easily have taken their place; but it was only as the result of considerable pressure applied at the War Office from various quarters, and on Lord Roberts after his arrival, that the employment of nurses became at all general. Rumours that all was not perfect reached England, and in January, 1900, *The Times* sent Mr. W. Burdett-Coutts, M.P.—who, as a special commissioner during the Russo-Turkish War, had had some experience of medical arrangements in war—as a special correspondent to study the medical situation in South Africa. In a series of articles Mr. Burdett-Coutts described the hospital system at the base, dwelling on some of the weak points, suggesting various reforms, but also giving due emphasis to the difficulties which the Medical Service had to contend with, and to the successful aspects of the work done.

Signs of weakness.
The Times
sends out Mr.
Burdett-
Coutts.

Meanwhile enteric fever, the common scourge of all armies

Enteric fever
in South
Africa.

in the field, had begun to make its appearance amongst the troops in South Africa shortly before Lord Roberts's arrival. It had for long been endemic among the civil population of South Africa, and the possible outbreak of the disease had been anticipated—in fact, it was expected even earlier than it actually did appear—and measures had been taken to avert it, if possible.* When it came it attacked the troops in all spheres of military operations practically about the same time. Whatever may have been its origin, Lord Roberts's troops, during the advance on Bloemfontein, carried the germs of the disease with them from Modder River, while the exceptional conditions around Paardeberg and the existence of enteric fever in the Boer laager there assured the extension of the epidemic. The troops were worn out with hardship and short rations by the time Bloemfontein was occupied. Through a mistaken consideration for the comfort of the inhabitants, which no other army would have dreamt of showing, they were not quartered in the town, but had to bivouac, at first without tents and in rainy weather, on the veld outside. Measures were at once taken to establish hospitals in the town out of local resources. Ten field hospitals and ten bearer companies entered Bloemfontein on March 13, bringing 200 sick and wounded with them. In three days the number under treatment increased to 327, and then mounted up till it reached a maximum of over 4,000 at the end of May, when it gradually declined. Within the first week, various buildings in the town were converted into hospitals accommodating 500. An additional 233 beds were prepared in other buildings during the second week, and some 100 more later on, by which time all the available buildings suitable for hospital purposes, for which a *personnel* could be supplied, had been utilized. The *personnel* of the bearer companies had to be used to provide a staff for these buildings. A stationary hospital arrived in Bloemfontein on March 29 and opened in the Raadzaal the following day. It had been kept in readiness at De Aar to proceed to Bloem-

Conditions at
Bloemfontein
after its
occupation.

* Large numbers of the soldiers, 20,000 or more, were inoculated against enteric on the voyage out. But the results were doubtful and the practice was discontinued.

fontein as soon as the line was opened. The 45 tons of stores had to be carried by fatigue parties over $1\frac{1}{2}$ miles at Norval's Pont to entrain. An advanced depot of medical stores arrived on the same day. By the end of March, 56 nursing-sisters had been obtained, and during April 67 more had been added. A civil hospital, the Langman, arrived on April 2, and three general hospitals between the 7th and 11th of the month. Other civil hospitals, the Irish and the Portland, arrived on the 12th and 14th. The two hospital trains which had been working along the lines of communication in Cape Colony reached the town on April 2 and April 8 respectively, and evacuation of the hospitals was continued regularly after these dates, partly by the hospital trains, but to a larger extent by ordinary and locally prepared trains. General hospitals were opened at Naauwpoort, Deelfontein and Springfontein, and thus lessened the distance over which many of the cases had to be conveyed.

In spite of these measures it must, however, be admitted that for a considerable time the condition of a large part of the patients at Bloemfontein was by no means satisfactory. The accommodation in the general and civil hospitals was inadequate to deal with the rapidly increasing number of the sick, and many had perforce to be accommodated somehow in the field hospitals. These were, of course, never intended for such work. They possessed neither beds nor the necessary ward utensils for a fever hospital, and their equipment, scanty as it necessarily was, had been cut down heavily in order to economize transport on the march. The condition of things in some of these field hospitals, especially when contrasted with the extravagant eulogy of the speeches made at the Reform Club, stung Mr. Burdett-Coutts, after some weeks spent at Bloemfontein, to write an article (Number IX of the series) in which, deserting the judicial temper of his earlier articles, he launched into an impassioned invective against the state of affairs he had witnessed. A few sentences will suffice to indicate the character of the article:

Their unsatisfactory aspect. Mr. Burdett-Coutts's Article IX.

"On that night (Saturday, the 28th of April) hundreds of men to my knowledge were lying in the worst stages of typhoid,

with only a blanket and a thin waterproof sheet (not even the latter for many of them) between their aching bodies and the hard ground, with no milk and hardly any medicines, without beds, stretchers, or mattresses, without pillows, without linen of any kind, without a single nurse amongst them, with only a few ordinary private soldiers to act as 'orderlies,' rough and utterly untrained to nursing, and with only three doctors to attend on 350 patients. . . The tents were bell tents such as were mentioned in a former letter as affording sleeping accommodation for from six to eight orderlies when working and in sound health. In many of these tents there were ten typhoid cases lying closely packed together, the dying against the convalescent, the man in his 'crisis' pressed against the man hastening to it. There was not room to step between them. Think of this, you who know the sort of nursing a typhoid patient requires. With no beds or mattresses, and only forty-two stretchers in the whole hospital, it followed that 274 patients had to be on the earth. . . The ground is hard as stone, and at night the temperature falls to freezing point. Besides other deficiencies which cannot be described, there were no sheets or pillow-cases or pretence of bed linen of any kind; only the coarse rug grated against the sensitive skin burning with fever. The heat of these tents in the midday sun was overpowering, their odours sickening. Men lay with their faces covered with flies in black clusters, too weak to raise a hand to brush them off, trying in vain to dislodge them by painful twitching of the features. There was no one to do it for them."

The hardships possibly exaggerated, but not wholly unavoidable.

The language of the article was undoubtedly sensational. In any impartial survey of the situation it is essential to keep in mind the difficulties with which the medical authorities had to contend in getting up stores over a railway crowded to its utmost capacity with other traffic essential for Lord Roberts's purposes, and the fact that only a portion of the patients had to undergo the discomforts so luridly depicted. Moreover, taken as a whole, the epidemic of enteric fever, compared with the epidemics of previous campaigns, was not one of exceptional severity, when looked at in proportion to the strength of Lord Roberts's force. The number of sick and wounded in Bloemfontein was only 3.6 per cent. of the marching in strength by the end of March, and, when the epidemic was at its height in May the proportion of enteric

fever cases to strength did not exceed 5 per cent. of the total strength north of the Orange River.* Bloemfontein was then the great centre to which the sick and wounded were conveyed during the operations that followed to the north and east. Yet, making every allowance for the difficulties of the time, and avoiding all exaggeration as to the extent of the hardships undergone, it is hard to believe that they were wholly unavoidable. Even supposing that it had been absolutely impossible to get up any more medical stores, yet there was no insuperable obstacle to bringing up more nurses, or to enlisting more voluntary aid in Bloemfontein itself. Beds, or at least sheets, must have been procurable, if necessary, by commandeering. There is no reason to question the devotion to duty of the medical officers concerned, or their eagerness to do the utmost which circumstances permitted. What was lacking was not good-will, but the initiative, and possibly also the authority, to have forced stronger measures upon the Headquarters Staff. What was wanted was some one to insist that the troops should be billeted on the inhabitants, and not allowed to bivouac on the veld, some one prepared to fight tooth and nail for a few more trainloads of stores, some one not afraid to seize beds, sheets or any other private property required for hospital purposes, and to secure sanction afterwards.

The publication, at the end of June, of Mr. Burdett-Coutts's article created an immense sensation in England. Reinforced by other criticisms on the Medical Services made both outside and inside the House of Commons, it led to the appointment in July of a Royal Commission to consider and report upon the care and treatment of the sick and wounded during the war. Lord Justice Romer was President of this Commission, and the members were Sir David Richmond, Lord Provost of Glasgow; Dr. Church, President of the Royal College of Physicians, London; Professor D. J. Cunningham, Professor of Anatomy in Dublin University; and Mr. F.

The Royal
Commission
on South
African
Hospitals.
Its report.

* The actual percentage of admissions for enteric fever in Bloemfontein during the months of April and May was only 3·5 of the strength, the number of deaths being 0·65 of the strength (*British Medical Journal*, Feb. 2, 1901; i., p. 306).

Harrison, General Manager of the London and North Western Railway Company. The Commissioners took evidence in London and throughout South Africa, holding their first meeting in London on July 23, 1900, and proceeding to South Africa on August 4. They embarked for England again on October 10, and some other evidence was taken on their return to London. Their report was presented in January, 1901. While admitting the existence of hardship and suffering caused in some instances by oversight or mistakes, or due to unavoidable circumstances, the report was generally of a thoroughly reassuring character. In conclusion the Commissioners stated that, "in reviewing the campaign as a whole, it has not been one where it can properly be said that the medical and hospital arrangements have broken down. There has been nothing in the nature of a scandal with regard to the sick and wounded; no general or widespread neglect of patients, or indifference to their suffering, and all witnesses of experience in other wars are practically unanimous in the view that, taking it all in all, in no campaign have the sick and wounded been so well looked after as they have been in this." The report was freely criticized as being unduly favourable in its tendency, more particularly by Mr. Burdett-Coutts, who urged that the evidence taken was mainly that of officials, and that the absence of compulsory powers and other conditions of the inquiry made it impossible to get really satisfactory evidence from soldier patients, and that his own witnesses in particular were not heard. It is possible to admit the force of these criticisms, and yet to accept the substantial correctness and equity of the Commissioners' general conclusion. Taking the war as a whole, it undoubtedly marked a great improvement on previous wars. And, in spite of certain unsatisfactory features, it is only fair to Surgeon-General Wilson and to the staff of the R.A.M.C. to record that, in the main, their efforts to cope with the difficulties of an unprecedented task met with a very considerable measure of success. As for the author of the whole hospital controversy, it may readily be conceded that Mr. Burdett-Coutts's language was not always judicious; the fact remains,

that the attention focussed by his writings and speeches on the Medical Services resulted not only in immediate improvements, but also, after the war, in a series of reforms of the first importance.

To return to the narrative of the campaign. Until such time as Lord Roberts had firmly established himself in Pretoria, Kroonstad formed an intermediate post at which No. 3 General Hospital from Rondebosch, and a civil hospital, the Scottish National Red Cross Hospital, opened about a fortnight after Lord Roberts's arrival there. The scene was shifted to Pretoria in June, 1900, and for two years after its occupation the capital of the Transvaal became the most important centre of the Medical Service. On the date of its occupation, June 5, several Boer hospitals, each with a comparatively small number of beds, were found there. Their accommodation was rapidly expanded to 1,000 beds, until such time as general hospitals could be brought up. No. 2 General Hospital at Wynberg had been held in readiness to proceed to the Transvaal from May 21 onwards, but it was considerably delayed both at Bloemfontein and Kroonstad on its way up, and did not open in Pretoria till July 17. The advanced medical depot at De Aar was also kept ready to move up, experienced similar delay, and did not reach Pretoria till July. But before this time the Irish Hospital had come up, and on June 21 the Palace of Justice, in the centre of the town, was handed over to its *personnel* to be converted into a hospital. It was able to accommodate 450 beds, but its *personnel* was unable, of itself, to take charge of so many patients, and men from some of the military hospitals were lent to it. Soon afterwards other private hospitals came up to Pretoria; the Langman from Bloemfontein on July 21, and the Welsh Hospital from Springfontein on August 4. They were placed near No. 2 General Hospital. Later on various other additions and changes were made. A general hospital (No. 19) took over hospitals that had been established in three of the Pretoria schools, a branch hospital of the Imperial Yeomanry was established, and No. 7 General Hospital was brought up from Natal. When the hospital arrangements in

Pretoria becomes the centre of the medical arrangements in June, 1900.

Johannesburg and Elandsfontein became large hospital centres.

Pretoria were completed, there were 2,700 beds available in all. Half of the general hospital at Naauwpoort and No. 2 Stationary Hospital from East London and Kroonstad were brought up to Johannesburg. Convalescent camps were opened at both Pretoria and Johannesburg. Elandsfontein, eight miles east of Johannesburg, also became a hospital centre, and a general hospital (No. 16), and No. 2 Stationary Hospital from Johannesburg were opened there. Two more general hospitals were brought up in the following year, No. 20 in March, and No. 13 in May, 1901, and were established between Elandsfontein and Johannesburg. During the advance in the Eastern Transvaal, a hospital ship, the *Orcana*, was sent to Delagoa Bay, and sick and wounded were sent to it across Portuguese territory.

Medical arrangements during the period of guerilla warfare.

When the prolonged guerilla warfare set in, special medical services, both as regards *personnel* and material, were improvised to suit the occasion. The sick and wounded from the various columns were first brought to small or stationary hospitals, opened in such places as Belfast, Middelburg, Barberton, Komatipoort, Machadodorp, Waterval Onder and Lydenburg in the Transvaal, and Winburg, Heilbron, Harrismith and several minor posts, such as Thaba 'Nchu, Senekal, Ficksburg, Reitz, Bethlehem, Vrede and Brindisi, in the Orange River Colony. Small rest stations were also established along the lines of evacuation leading to these places, and to the general and stationary hospitals which were established at Standerton, Heidelberg, Krugersdorp, Kimberley and elsewhere on the line of railway, as well as at the larger centres already mentioned. Maritzburg and Cape Town became then merely large bases for invaliding men to England. The multiplication of medical posts and of small columns necessitated a complete breaking up and reorganization of the field medical units. Bearer companies and field hospitals ceased to exist as independent units, and a modified unit to carry on the functions of both, consisting of 2 officers and 25 non-commissioned officers and men, with 4 to 6 ambulance wagons or tongas, became the recognized mobile medical unit for a column. As the columns never operated far away, or for a long time, from their base, their sick and wounded



LIEUT.-COLONEL R. L. HIPPISEY, C.B., R.E..
DIRECTOR OF TELEGRAPHS, S. AFRICA, 1899-1902.

Photo by A. F. Hosking, Cape Town.



LIEUT.-COLONEL D. HENDERSON, D.S.O..
DIRECTOR OF MILITARY INTELLIGENCE, S. AFRICA, 1900-2.

Photo by W. B. Sherwood, Pietermaritzburg.



SURG.-GEN. SIR W. D. WILSON, K.C.M.G., M.B..
PRINCIPAL MEDICAL OFFICER, S. AFRICA, 1899-1902.

Photo by E. N. Collins, South Norwood.



LIEUT.-COLONEL (LOCAL COLONEL) W. H. BIRKBECK..
ASSISTANT INSPECTOR OF REMOUNTS, S. AFRICA, 1900-1902.

Photo by Lafayette, Ltd.

were readily brought in to the fixed hospitals by this modified field medical unit. As time went on, many of the smaller medical posts ceased to exist; and eventually, after peace was declared, large hospitals only remained open at the stations garrisoned by the troops, such as Pietersburg, Pretoria, Middelburg, Barberton, Standerton, Krugersdorp, and Potchefstroom in the Transvaal; Harrismith, Kroonstad, Bloemfontein, and Ladybrand in the Orange River Colony; Newcastle, Maritzburg, and Howick in Natal; and Kimberley, Naauwpoort, Burgersdorp, Middelburg, Stellenbosch, Winburg, and Cape Town in Cape Colony. Surgeon-General Wilson and his staff* returned to England shortly after the declaration of peace and after a beginning had been made of establishing the cantonments for the peace garrisons on sanitary lines. For nearly three years he had held the anxious and harassing position of Principal Medical Officer of the forces in the field. The many changes that took place during that time throughout South Africa, and the organizing, splitting-up and reorganizing of medical units to meet them, under conditions of exceptional difficulty as regards medical *personnel* and transport, imposed an immense task upon which Surgeon-General Wilson brought to bear not only the requisite firmness and tact, but also an untiring devotion to duty.

In addition to a large number of smaller temporary hospitals, the Army Medical Service mobilized during the war 22 general hospitals, 9 of which were formed in South Africa, the others being sent out from England, and 41 stationary hospitals, of which all but 5 were formed in South Africa. The number of mobile medical units is not very clear, but 26 field hospitals and 18 bearer companies were mobilized in England and sent out between September, 1899, and May, 1900, in addition to the field hospitals from India which accompanied the Indian contingent to Natal. Several additional bearer companies were formed in South Africa or came from other colonies. Afterwards in October, 1901, when bearer companies and field hospitals were reorganized

Summary of
the units
organized by
the Army
Medical
Service.

* Major Bedford was invalided to England in November, 1900, and his place was taken by Major Simpson.

into small units combining the functions of both, 84 such modified field units were formed. Seven ordinary trains were converted into hospital trains, and several first-class corridor car trains, unaltered, and a number of specially-fitted carriages, placed at convenient intervals on the railways as ambulance coaches, were also used. Six large transports were converted in South Africa into hospital ships in addition to the two hospital ships fitted out in England. Two base depots of medical stores and three advanced depots were mobilized and sent out from England, and three smaller depots were organized in South Africa.

Co-operation
of the
Colonial
Medical
Services.

Only incidental reference has so far been made to the manner in which the military medical arrangements were supplemented in all directions from colonial, voluntary, and non-military sources. The record would be far from complete without touching shortly on some of the special features of this supplementary aid. Canada, Australia, and New Zealand supplied 51 medical officers, 77 nursing sisters, and 214 subordinate ranks. Cape Colony supplied 10 medical officers and 768 men, while in Natal, 16 medical officers and 2,015 men were engaged locally.* In addition to these there were engaged locally in South Africa 186 civil surgeons, 405 nursing sisters, and 1,295 subordinates; while voluntary aid societies, formed in connection with the war, such as the Good Hope Red Cross Society, the Durban Ladies Patriotic League, the Maritzburg Aid Society, did excellent work in the supply of special articles of clothing, comforts, and luxuries for the sick and wounded. A Canadian branch of the British Red Cross Society, under Lieut.-Colonel Ryerson of the Canadian Medical Service, opened a depot in Bloemfontein for the supply of similar articles in conjunction with the work of the Central British Red Cross Committee. The Jewish community in Cape

* See Report of Royal Commission on South African Hospitals, Appendix to Minutes of Evidence, pp. 15, 356. The numbers for Cape Colony include the various companies of the Cape Medical Staff Corps, recruits enrolled by the P.M.O. of the Colonial Forces, enrolments for Carrington's force, and the Jewish Section, mentioned below. The numbers for Natal include the stretcher-bearers enrolled from amongst Transvaal refugees, but not the Indian Ambulance Corps.

Town raised and paid a section of a bearer company, selected from amongst its members.

Amongst the colonial contingents there were regularly-formed units which took their place in the field operations alongside the units of the Royal Army Medical Corps. The Cape Medical Staff Corps, under Lieut.-Colonel Hartley, V.C., was formed into bearer companies or field hospitals which accompanied Lord Methuen's, General Gatacre's, and Lord Roberts's forces. Lieut.-Colonel Hartley afterwards became Principal Medical Officer to the Colonial Division. A field ambulance, combining the functions of a bearer company and field hospital, under Major Fiaschi, formed part of the first New South Wales contingent, and was one of the field medical units during Lord Roberts's advance to Bloemfontein. Colonel Williams of the New South Wales Army Medical Corps, who accompanied it, became the Principal Medical Officer of the Mounted Infantry Division. A second contingent under Lieut.-Colonel Vandeleur Kelly, which contained a mounted bearer section, went to Springfontein and took over the hospital there in February, 1900. A third contingent with drafts for the two previous contingents followed. An Australian field hospital and bearer company under Major Green and Major Howie, V.C., arrived in Natal in March, 1902, as a contingent from the Commonwealth, and worked with the Australian troops during the short time that it was employed. The Canadian Army Medical Corps supplied a field hospital under Lieut.-Colonel Worthington, which was considered ideal in its transport and equipment, its chief features being transport vehicles convertible into ambulance wagons, a special pattern of ward-tent, the Hubert tent, and a plant for lighting the tents with acetylene gas.

The Cape
contingent.

The New
South Wales
contingent.

Australian
Common-
wealth
contingent.

The Canadian
contingent.

Reverting to the work of the Central British Red Cross Committee at home, an immense variety of supplementary aid was considered by it before being eventually accepted by the War Office. The most prominent sections of this aid were the hospitals formed by private individuals at their own expense or by subscriptions raised by them and by committees of management; the two hospital ships, *Princess*

The work of
the Central
British
Red Cross
Committee.

Red Cross
Society's
Commis-
sioners in
South Africa.

of Wales and Maine; and two hospital trains, the "Princess Christian Hospital train," and one of the trains formed in South Africa. Most valuable work was also done by commissioners sent out by the Central British Red Cross Committee to South Africa in order to organize the reception and forwarding of the various gifts and voluntary supplies of clothing, comforts, and luxuries to the sick and wounded in all parts of the country. Colonel Young was the first to go out in the capacity of Chief Commissioner, arriving in Cape Town in November, 1899. Dr. Chepmell and Mr. Bonham Carter were sent out as Assistant Commissioners (the former to Natal), and arrived early in January, 1900. Sir John Furley embarked for South Africa at the end of the month and replaced Colonel Young, who had been obliged to return to England. A Good Hope Red Cross Committee was formed by him in Cape Town, with Mr. Justice Buchanan as Chairman. Its members were four representatives of the Good Hope Society, two of the Army Nursing Reserve, two of the St. John Ambulance Association, and two of the General Officer commanding the lines of communication, together with the Chief Commissioner of the British Red Cross Committee. Depots were opened in various places and travelling agents appointed to accompany consignments and see them delivered to the hospitals.

The Good
Hope Red
Cross
Committee.

The private
hospitals.

The private hospitals that were sent to South Africa numbered nine in all, and played an important and admirable part in the medical arrangements. The first suggestion of their formation was due to a letter in *The Times* from Dr. George Stoker, who, with considerable previous experience of military hospital work, urged the sending out of self-contained independent units acting under the military authorities, but with their own staff, equipment and transport. The idea was at once taken up by Mrs. Bagot (wife of Captain Bagot, M.P. for South Westmoreland) and resulted in the formation of the Portland Hospital, the chief contributors being the Duke of Portland and residents in the counties of Westmoreland and Cumberland. It was organized as a hospital of 100 beds by a Committee of Management, in consultation with the Army Medical

The Portland
Hospital.

Department of the War Office, with Major-General Hon. H. P. Eaton as Honorary Secretary. It was opened as a section of No. 3 General Hospital at Rondebosch in January, 1900, was sent to Bloemfontein in April, and finally closed in July. It was followed by the Langman Hospital, presented by Mr. Langman, who had acted as Honorary Treasurer of the Portland Hospital. This was organized on similar lines, opened in Bloemfontein in April, 1900, went to Pretoria in August, and was eventually given to the Government by Mr. Langman as a free gift in November. An American citizen, Mr. Van Alen, equipped and took out a section of a field hospital, which went to Kimberley in March, 1900, and accompanied Lord Methuen in his operations north and west of that town in April. It was subsequently handed over to the military authorities at Paardekraal in July, 1900. Lord Iveagh was the donor of a hospital, called the Irish Hospital, of 100 beds, equipped as a stationary hospital but with a special transport of its own. Part of the latter on arrival in March, 1900, when the hospital was sent to Naauwpoort, accompanied Lord Kitchener's expedition to Prieska. It was not until April that the hospital was opened as a whole in Bloemfontein. A part of it accompanied Lord Roberts to Pretoria, and eventually the whole hospital, as already noted, developed into a large hospital in the Palace of Justice there. In October it ceased to exist as a private hospital, and all its stores and equipment were handed over to the military authorities as a free gift. A 100-bed stationary hospital was given by Mr. Alfred Mosely and called the Princess Christian Hospital. It took a number of huts with it, and was opened at Pinetown, Natal, in April, 1900. In July it was placed at the disposal of H.R.H. Princess Christian, who presented it to the Government. A committee of ladies and gentlemen associated with Wales organized a Welsh hospital, also of 100 beds, which was attached to No. 3 General Hospital at Springfontein in June, 1900, its *personnel* having been distributed amongst military hospitals in Cape Town and Bloemfontein until its equipment was got up. It was transferred to Pretoria in August, and handed over as a free gift

The Langman
Hospital.

Mr. Van
Alen's
Hospital.

The Irish
Hospital.

The
Princess
Christian
Hospital.

The Welsh
Hospital.

The
Edinburgh
Hospital and
the Scottish
National
Red Cross
Hospital.

to Government in November, 1900. Two hospitals were organized in Scotland; the Edinburgh Hospital, in Edinburgh and the East of Scotland, by a committee under the Lord Provost of Edinburgh, and the Scottish National Red Cross Hospital, in Glasgow and other parts of Scotland, by the St. Andrew's Ambulance Association. The former was a hospital of 100 beds. It opened at Norval's Pont in May, 1900, and worked there till the following October, when it was presented as a free gift to Government. The latter was commenced as a hospital of 100 beds, but eventually expanded into a general hospital of 520 beds. It went out to South Africa in three sections, and was opened at Kroonstad in June, 1900. It was handed over to Government in October.

The Imperial
Yeomanry
Hospitals.

The Imperial Yeomanry Hospital and its branches were organized on a larger scale than the other private hospitals, although they partook of the same character. The idea of providing special hospitals for the Yeomanry in South Africa originated with Lady Chesham and Lady Georgina Curzon (Countess Howe), and eventually took the form of a large general hospital, which was established at Deelfontein, near De Aar, in March, 1900. It continued open for a year. It was followed by a Yeomanry field hospital and bearer company, which accompanied various columns between August, 1900, and March, 1901. When Pretoria was occupied, a branch Yeomanry Hospital was organized and sent there by the representatives of the London Committee in South Africa. It was opened in August, 1900, and closed in September, 1901; it assumed the dimensions of a general hospital during that period. Three minor establishments were also formed in South Africa by the representatives of the London Committee, namely, a hospital of 100 beds at Mackenzie's Farm, Cape Town, a convalescent home for officers at Johannesburg, called the Chesham Home, and a small hospital at Elandsfontein. The first of these minor schemes was continued from August, 1900, to March, 1901, the second from May till October, 1901, and the last from June till December, 1901.

The Pretoria
Commission.

A form of voluntary aid which stands in a different position from the private hospitals, as it was organized by civilians on the spot, was the "Pretoria Commission."

When the troops arrived the military hospitals were at first deficient in many of the supplies necessary for the patients. Mr. Murray Guthrie, M.P., and Mr. Leigh Wood (who had already rendered notable service to the British prisoners at Waterval), acting under the sanction of the Military Governor and Lord Roberts, combined with four other civilians to form a committee to relieve the position. Being supplied with money by the military authorities, they went to work on the spot and bought everything available, sending notice to the hospitals to requisition; and from that time the necessities of thirty-five hospitals were amply supplied from this source. They further proceeded to take possession of the fine Palace of Justice and equip the building as a hospital, making it ready for the staff of the Irish Hospital on its arrival in Pretoria. The work of the Pretoria Commission affords a significant instance of what practical civilians, possessed of local knowledge, business training and energy, can do to assist the military authorities in an emergency. Many miscellaneous schemes of a minor character were also offered and utilized, and several of the Red Cross Societies of foreign countries offered their assistance.*

The hospital ship, *Princess of Wales*, was organized, equipped, and managed by the Central British Red Cross Committee at the request of H.R.H. The Princess of Wales, who devoted a special fund at her disposal for the purpose, and who never failed to visit it on its arrival at Southampton, on the several occasions on which it returned with invalids to England. It was admirably prepared and equipped for hospital work at Newcastle-on-Tyne, sailed for South Africa on December 8, 1899, and made three voyages to South Africa and back, in addition to acting as a hospital ship for some time at the base. The *Maine* was one of the American Transport Company's fleet, and was offered by the chairman

The
hospital ships
*Princess of
Wales and
Maine.*

* Parts viii., xi. and xii. of the Report of the Central British Red Cross Committee on Voluntary Organizations during the War give details of these schemes. They included much excellent work, more especially the formation of convalescent homes in England and Scotland for invalided officers and men. Mention, too, should be made in this connexion of the free accommodation offered to invalided officers by some of the hotels on the Riviera.

of the company, Mr. B. N. Baker, to Government early in the war. It was converted into a hospital ship in the Thames by subscriptions received by a committee of American ladies, under the presidency of Lady Randolph Churchill, and sailed for South Africa at the end of December, 1899. It made two voyages from South Africa with invalids, and in July, 1900, transferred the scene of its labours to China in connexion with the Boxer troubles, returning to England in January, 1901, when Mr. Baker presented the ship to the Government on behalf of his company, the ladies' committee giving all the hospital equipment and fittings which were on board. Since then it has been employed by the Admiralty as a hospital ship on the Mediterranean station.

The hospital
train
"Princess
Christian."

The hospital train, "Princess Christian," was constructed in Birmingham and consisted of seven bogie corridor carriages, with excellent and comfortably-arranged cots, kitchen, dispensary, and other accessories. Its cost was mainly defrayed by subscriptions raised by the borough of Windsor. It was taken out to South Africa and put together there, under Sir John Furley's supervision, in March, 1900, and was the first train to cross the temporary trestle bridge over the Tugela at Colenso and to enter Ladysmith. It was presented to the military authorities as a permanent hospital train in South Africa in June, 1901. The train, known as No. 4 Hospital Train, which was organized at East London by Sir John Furley, at the request of Surgeon-General Wilson, was also equipped out of funds provided by the British Red Cross Society. It commenced its work in June, 1900.

Private
hospitals com-
pared with
military
hospitals.

For purposes of command and military administration officers on the active or retired list of the Army Medical Service were assigned to practically all these voluntary aid units; apart from these the staff, which included many eminent members of the medical profession, was purely civilian. The staff of the hospital ship *Maine* came entirely from the United States, but an officer of the British Army Medical Service was appointed as its principal medical officer. As compared with the general and stationary hospitals of the regular service, the private hospitals were

luxuriously and lavishly equipped. In two respects this fact somewhat detracted from the eminent services which they otherwise rendered. It led to invidious comparisons between them and the military hospitals. It also added greatly to their weight, causing much difficulty in providing transport for the material at a time when transport was required for other purposes. A military general hospital, for example, of 520 beds, weighs 500 tons, and a stationary hospital of 100 beds, 35 tons. As compared with these, the Langman, Welsh, Portland, and Edinburgh Hospitals, each of 100 beds, weighed 45, 60, 70, and 400 tons respectively. The importance of reduction in weight and bulk cannot be overlooked, and when a private hospital of 100 beds, weighing, as the Edinburgh Hospital did, almost as much as a military hospital of 500 beds, is sent forward, there is a loss, so far as transport is concerned, of 400 beds. At critical times, such as the time of the epidemic of enteric fever at Bloemfontein, this is an important matter and will have to be considered in any arrangements for the employment of private hospitals in future wars. At the base or in the home territory they will always have opportunities of developing in a lavish and luxurious manner, but unless they are equipped, as is the regulation in some Continental armies, on a strictly military scale they are not adapted for work nearer the front.

The services of eminent members of the medical profession were not confined to the private hospitals alone. The consulting-surgeons. During the progress of the campaign the Government employed as consulting surgeons * Sir William MacCormac, Mr. Treves, Mr. G. H. Makins, Mr. Watson Cheyne, Sir William Stokes (who died in South Africa), Professor John Chiene, Mr. Kendal Franks, and Mr. Cheatle. Dr. Washbourne, who had gone to South Africa as one of the staff of the Imperial Yeomanry Hospital, was appointed locally to be a consulting physician. Many of them

* The consulting surgeons were paid by the Government at the rate of £5,000 per annum, but they left lucrative work at home in order to give the hospitals in South Africa the benefit of their experience and skill.

remained in South Africa during a considerable period of the campaign.*

The Medical Services with the Boer forces.

On the side of the Boers there was no organized medical service, but both the Orange Free State and the Transvaal Republic signified their adhesion to the Geneva Convention when war became imminent, and organized hospitals and ambulances under its protection. But most of the medical work was performed by ambulances from European states, and by the civil medical profession and civil hospitals existing in the country. In the later stages of the guerilla war the Boers were practically without medical assistance and, in fact, depended entirely upon the British, not only for the treatment of the seriously wounded, but also for supplies of medicines and surgical necessities. But during the major operations excellently-equipped field units from Germany, Holland, Russia, and other sources followed the Boer troops. Some of them fell at times into the hands of the British, just as, on other occasions, some of the British field medical units fell into the hands of the Boers. Pretoria was the chief centre of the Boer fixed hospitals, and, when Lord Roberts occupied the town, the Volks Hospital, a hospital established by Mr. Bourke, a resident of Pretoria, a hospital established by the Boer Government on the racecourse, a German ambulance, and a Dutch ambulance were found there. The racecourse hospital had been organized for the treatment of sick and wounded prisoners of war, and was under the charge of an Assistant-Surgeon of the Indian Medical Service, who was taken prisoner at Dundee. Wounded or sick prisoners of war were also found in all the other hospitals left by the Boers in Pretoria.

The Boer information bureau for sick and wounded.

An excellent information bureau was established in Pretoria by Dr. Molengraaf, the State Geologist, as a branch of the Transvaal Red Cross Society. It was supplied with information regarding men who were sick and wounded by agents in all parts of the field, who forwarded the necessary data to

* Surgeon-General Stevenson, the professor of military surgery at the Army Medical School, also went to South Africa as Consulting Surgeon to the Forces, but afterwards accompanied Lord Roberts as his principal medical officer. Sir T. Fitzgerald offered his services as a consulting surgeon from Australia, and they were accepted.

it by telegram or on special forms. This agency also supplied all the Boers and foreign auxiliaries in the field with identification cards. In this manner the information bureau was not only able to keep the families of the combatants informed as to the men who were killed, sick or wounded,* but was also ready to transmit similar information regarding the British prisoners of war. In fact, the general provisions of the Geneva Convention were properly applied by Boers as well as by British, although occasionally abuses were brought to light. The gravest abuse of all was committed by an international Red Cross Ambulance organized at Antwerp and a Red Cross Ambulance organized at Chicago.† Both of them were exploited for the purpose of enabling combatants from neutral states to gain admission into the Transvaal by way of Delagoa Bay under the shelter of the Red Cross, and both were eventually repudiated and disowned by the Red Cross Societies of Belgium and the United States, from which they respectively emanated.

Every war has its lessons and its comparisons. With The lessons
of the war.

* Full and interesting particulars of this work will be found in the Report of the Seventh International Conference of Red Cross Societies (p. 103), held in St. Petersburg in 1902. The International Red Cross Committee at Geneva endeavoured to open an International Red Cross Agency at Lorenzo Marques, under the auspices of the Portuguese Red Cross Society, but the scheme fell through (Report of the Central British Red Cross Committee on Voluntary Aid during the War, p. 38).

† At the Seventh International Congress of Red Cross Societies at St. Petersburg in May, 1902, Miss Clara Barton, the representative of the United States Red Cross Society, spoke as follows: "It is with humility, mortification, and indignation that I, speaking personally as president of the American Red Cross, am compelled to mention here a most regrettable occurrence which has transpired in relation to the war in the South African States." Miss Barton then went on to say that her Society had given sanction to a body of men in the city of Chicago, some fifty-six in number, to form a Red Cross ambulance for the Transvaal. "Each man of the fifty-six had given his sworn affidavit of loyalty to the cause he represented, and when they asked merely for a letter of recognition and the privilege of making a little Red Cross flag for themselves, that letter and flag were given to their agents. . . . Report said that the men, once safely past the outposts and admitted as Red Cross men, having torn off their brassards and trampled them, had taken allegiance to the Boer commander and entered the army as Irish-American recruits." Miss Barton stated that "the correctness of the report was no longer gainsaid" (Report of Seventh International Conference of Red Cross Societies, p. 192).

regard to the Medical Services, those lessons have been of the utmost value. There was little to learn as regards the work in the field, except the necessity, where military conditions allow it, of an adequate supply of stretcher-bearers and of field transport. The mobile units, and the units concerned with evacuation, were always hampered by difficulties of transport. As far as the management and equipment of the military hospitals on lines of communication and at the base is concerned, the British general and stationary hospitals were found to be well suited for their purpose, and capable of considerable expansion. The great part which female nursing can play in them, and the extent to which the strain on the trained military staff can be relieved in these hospitals by the introduction of civilian elements, has now been fully recognized. The main lesson, indeed, that had to be learnt from the war is the necessity of the peace organization of all available resources, and of the definite provision for systematic co-ordination on active service between all the various elements, regular, second-line and civilian, which will necessarily compose the Medical Service in any great war. The war served to bring home no less strongly the supreme importance of sanitation, and in this respect its lessons were still further emphasized in Manchuria. In war prevention of disease is far more important than cure. Serious illness, even if the men eventually recover, is, from the point of view of the immediate military operations, much more disastrous than an equally heavy loss of life, and an unhealthy bivouac may be more fatal than the most crushing defeat. The medical authorities fully understood the general sanitary conditions of South Africa before the war, and the regulations and instructions issued by them left little to be desired.* The real difficulty lay in the insufficient recognition by the army as a whole of the supreme importance of sanitation. Medical officers may, in some cases, have failed to

The importance of sanitation.

* Many comments and specific suggestions appeared in the public press during and after the war on questions of sanitation and prevention of disease, but they added little to the facts that had long since been recognized and acted on, so far as this was consistent with military operations, by the Army Medical Service. A commission, consisting of Colonel Notter, Professor of Military Hygiene at the Army Medical School, Netley,

insist sufficiently strongly on their point of view. But there are limits to the pressure a subordinate can bring to bear on an indifferent superior absorbed in what he considers more pressing questions, and no regulations can avert enteric from troops who will drink from every puddle. Great advances have been made since the war in these respects: every division and every garrison of any size now has its sanitary officer with a small staff; combatant officers are instructed in sanitary duties, and commanding officers are now definitely made responsible for the health of their command.

The work of the Medical Service in the prevention of disease during the South African War has been unfavourably compared with other wars, and especially with the work of the Japanese Medical Service in the Manchurian Campaign of 1904-5. This unfavourable comment is not justified by facts. Two standards of comparison have been taken, the incidence of enteric fever, and the proportion of deaths from disease to deaths from wounds. Neither with the war that preceded it, namely, that between the United States and Spain, nor with the Russo-Japanese War do the enteric fever statistics of the South African War present an unfavourable comparison, when certain important statistical factors are considered. With regard to the proportion of deaths from disease to deaths from wounds, this, of course, depends as much on the amount of fighting as on the amount of disease. The Japanese proportion was due to the greatness of the former and not to any peculiar diminution of the latter; while the British proportion in South Africa was due to the comparatively small extent of the fighting as compared with the duration of the campaign, the physical privations involved, and the consequent incidence of sickness. The general statistics of the war have not yet been published, but sufficient is known to justify the statement that its medical features show results which, on

Comparison
of the results
of the
medical work
with those of
other wars.

Professor Simpson, Professor of Hygiene at King's College, and Major (now Colonel Sir David) Bruce, R.A.M.C., was also employed in South Africa in studying the origin of dysentery in the field and its relationship to enteric fever, but it too failed to add to previous knowledge on the subject.

the whole, compare favourably with those of all wars in which Great Britain or other countries had been previously engaged.*

Reforms
introduced by
Mr. Brodrick.

When Mr. Brodrick became Secretary of State for War towards the end of 1900, he immediately set to work on the strengthening and improvement of the Army Medical Service. After consultation with the leading members of the medical profession who had been in South Africa, and more particularly with Sir A. Fripp, he formed a strong committee, over which he himself presided, composed mainly of civilians, but including, besides the secretary, Major H. E. R. James, a remarkably able representative of the R.A.M.C. in Lieut.-Colonel (now Surgeon-General Sir A.) Keogh, who had conducted one of the general hospitals in South Africa with conspicuous success. Acting on the recommendations of this committee, Mr. Brodrick carried through a number of reforms of the greatest importance to the service. A new warrant was issued in March, 1902; the pay of officers of the Royal Army Medical Service was increased; the Army Medical School was removed to London from Netley, where

* See, amongst other reliable sources of information, the statistics published in the *British Medical Journal* of Feb. 2, 1901, p. 306; Baron Takaku's statistics of the Japanese in Manchuria, *Journal of the Royal Army Medical Corps*, July, 1906, p. 57, Table iv., *The Russo-Japanese War; Medical and Sanitary Reports*, published by the General Staff, and Mr. Wyndham's speech in the House of Commons, June 29, 1900. During four months of the greatest prevalence of enteric fever in South Africa in 1900 (March to July) the admissions from enteric fever were 5·8 per cent. of the strength. Amongst the American camps during the war with Spain in 1898, 10·4 per cent. of the strength were admitted with undoubted enteric fever and 19·2 per cent. with probable enteric fever during a similar period of five months of greatest enteric prevalence (May to September). In the campaign in Manchuria the Japanese lost 4,073 men from enteric, or an enteric death-rate, on a probable average strength of 250,000, of 13 per thousand per annum. The enteric death-rate in the South African War comes to about 14 per thousand per annum. The case mortality from enteric fever in the South African War is 18 per cent. of admissions; in the Japanese troops in Manchuria it was 32·6 per cent.; in the German troops in South-West Africa 17 per cent.; in the London Hospital, for persons between the ages of 20 and 30, 21·32 per cent.; and, in fact, whatever comparison is made either with military expeditions, military hospitals in peace time, or the great civil hospitals of this country, it is in favour generally of the military hospitals in South Africa.

it had been established since the Crimean War, in order to bring it into closer touch with the great teaching schools; post-graduate courses for senior officers were instituted, with encouragement to specialize in the more important branches of the profession; an Advisory Board for medical services and a Nursing Board were formed, to which civil members of the profession, matrons of civil hospitals, and others were appointed; the nursing side of the Army was further developed by the creation of Queen Alexandra's Imperial Military Nursing Service. Meanwhile, in May, 1901, Surgeon-General Jameson had retired on the completion of his appointment as Director-General, after five years of conscientious and zealous administration of the Medical Service, and was succeeded by Surgeon-General Sir W. Taylor. At the same time Mr. Brodrick took the bold step of promoting Colonel Keogh as Deputy-Director-General over the heads of some thirty or forty senior officers, to assist in the task of carrying through the reforms. Since then the continuity of the new development of the service has been assured by the succession of Sir A. Keogh to the post of Director-General. To the work done by Mr. Brodrick and those who helped him the Medical Service can look back with gratitude, while the army and the nation may look forward with confidence to the account the service will render of itself in time of war.