THE WORK OF DIVISIONAL MEDICAL UNITS IN THE FIELD.¹

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The first portion of the lecture consisted of a short account of the Special Medical Manœuvres conducted at Salisbury Plain in August last year. The instruction contained in this part of the lecture consisted mainly of a description of:

(a) The duties of the Administrative Medical Officer of a division.
(b) The preparation of orders and messages.
(c) The organization and duties of the medical detachment with the advanced guard.
(d) The duties of field ambulances in taking up their position on the march from the area of concentration.

It is not considered necessary to reproduce this portion of the lecture, as the official account of the Medical Manœuvres has since been issued.

The second portion of the lecture is herewith detailed:

I presume, indeed I am assured, that you are all well acquainted with what is written on the subject of the duties of the Medical Service in the Field contained in chap. x, Field Service Regulations, part II. I am now going to review those duties in the collecting zone only, and suggest certain reforms which I believe would increase the efficiency of the units engaged therein. I want

¹ The précis of a lecture delivered at Royal Army Medical Corps Staff Tours held in Fifeshire, May, 1911.
you to understand that what I am going to say is quite unofficial, and is simply my own personal view on the subject.

I propose to discuss the following points:—
A. Personnel, duties and equipment of—
   (i) The medical establishment with units.
   (ii) The field ambulances.
B. Communication in the field.
C. The auxiliary transport supplied by the Army Service Corps.
D. The organization and functions of a clearing hospital.

A. (i) The Medical Establishment with Units.

The Personnel and their Duties: As you well know, the personnel of the medical establishment with units is composed of one medical officer, one corporal and four privates, Royal Army Medical Corps (for water duties), one non-commissioned officer and sixteen regimental men as stretcher-bearers, and two orderlies (regimental) for the medical officer, one of whom drives the Maltese cart or leads the pack animal. I have advisedly not included the regimental sanitary detachment, as they would not be used in rendering medical assistance in the field.

(1) You know what are the duties of the medical officer and the stretcher-bearers—they render first-aid to the wounded; this usually consists in applying the first field dressing, arresting haemorrhage, and furnishing supports for a broken limb. This is all they can do as regards the wound itself. They then, when opportunity offers, carry wounded not able to walk to suitable cover, and direct cases able to walk to a post selected for them. In addition, it is their duty to throw up shelter for cases that are too seriously wounded to be moved.

(2) We will now look at the duties of the regimental orderlies. How would they be employed in battle, and what training do they receive for it? One of these is usually a lance-corporal, and should carry the surgical haversack—the man who drives the cart has not, as far as I know, had any duties assigned to him when he is not doing so. You will see shortly, when I discuss the field stations of the regimental medical establishments, what I propose to do with him. What have you been doing to train these men? I address this question particularly to officers of the Territorial Medical Service. I will tell you what we have been doing in the regular army in the Scottish command. In each unit, the men who would have to carry out these duties in war have been specially
The corporal receives daily instruction in minor surgery, &c., as he is employed in the medical inspection room of his unit, and he would be very useful in war. The man who drives the Maltese cart has been trained in transport duties, looking after animals, keeping harness in order, &c. Any further training for him is not considered necessary.

(3) The employment of the N.C.O. and four privates, Royal Army Medical Corps in an action is rather a vexed question. They are, as you know, primarily intended for water duties, and it is argued that under no circumstances should they be taken from this important work. My answer is, that every such consideration must give place to the exigencies of battle. Moreover, you must remember that water-carts are at present second line transport, and would be far away from the battlefield, and the services of these men would be lost to the battalion. I will shortly tell you how I propose to employ them.

There is one other point I should like to draw your attention to, and that is the manner in which the regimental stretcher-squads should work. This should be done in an organized way, each squad being given a definite area in which to operate; if you do not do this you will find that they go wandering aimlessly about, and much time is lost thereby.

A very important subject regarding the first line of medical assistance is the formation of regimental or brigade field stations for wounded. There are certain cases of wounded that can walk from the battlefield, and others which have to be carried. I propose that a separate field station should be established for the former, and be named the "Regimental or Brigade Lightly-Wounded Aid-post," and that the latter be grouped at a station to be named the "Regimental or Brigade Collecting Post." I will more fully describe how I think these stations should be organized (see diagram).

The Lightly-wounded Aid-post.—It should be established at some well-defined spot, separated by some natural feature of terrain from the collecting post, sheltered from rifle fire, and its location notified to regimental commanders and company officers. One for each regiment would usually be established. I am now going to take the advantage of impressing upon you that one of the most important duties of the medical service in the field can here be accomplished, and that is, to return to the firing-line as quickly as possible every wounded man who is able to fire a rifle. It is difficult, unless you have had practical experience, to realize what large numbers of men are lost to commanders in the field...
by want of a system which, I believe, will be initiated by the establishment of this station. Auxiliaries to this system should exist further to the rear, and will be hereafter mentioned. Many wounded men feel faint and "shaky" when the wound itself is really a very trifling one. This condition of shock is frequently not at all commensurate with the gravity of the wound. You may see a man with a wound of the hand in an advanced state of shock,

Diagram to Illustrate Proposed Field Stations.

Approximate distance from fighting line to:

- Ambulance station = 3 miles.
- Divisional lightly-wounded aid-station = 6 miles.
- Clearing hospital = 12 miles.

while a man with a penetrating wound of the abdomen may exhibit none—it depends largely on the nervous organization of the individual. You will find that a man, faint from a trivial wound, after a little rest and a dose of sal-volatile or a feed of Bovril, can quickly return to the firing line. I think that it is the duty of army medical officers to explain to all ranks of the army that there is nothing particularly dreadful about a gunshot wound, because you will find there is a prevalent idea among soldiers that
it is likely to lead to "blood-poisoning." A large proportion of gunshot wounds, provided they do not break up bone or destroy blood-vessels, are not very much worse in their after effects than pin-pricks, less so than a prick with a dirty pin, as a modern projectile, impelled from the rifle with enormous velocity, is more or less sterilized. I will give you the following example: A soldier, wounded at Talana Hill at extreme range, came under my care at Durban; the bullet had passed right through his body, from behind forwards; as it left the body its velocity had apparently become expedited, and the man's waistbelt had been sufficient obstruction to its further passage—it had lain on the man's bare abdomen, and left a burn of the first degree of the exact shape of the bullet—that will show you that it must have been nearly red-hot when it left the muzzle of the rifle. With this digression I will return to my description of the post.

From this post others, more seriously wounded and not likely to recuperate quickly, but able to walk, should be directed to the "Divisional Lightly-wounded Collecting Station," which I shall describe hereafter.

As to the personnel and equipment of the "Lightly-wounded Aid-post" I suggest that the N.C.O. and one private, Royal Army Medical Corps, water duty man, be located here, together with the orderly, who in ordinary times drives the Maltese cart; the latter, of course, having taken steps to secure his horse. The equipment necessary would be the field medical companion, water-bottle and means of providing hot Bovril, &c.

As to the "Regimental or Brigade Collecting Post." This is the station to which casualties, who are unable to walk to the former station, are carried by the regimental stretcher-bearers, and where they are grouped ready to be handed over to the bearer sections of the field ambulances when the necessary touch has been established. It will depend on the disposition of the regiments in action whether a collecting post for each regiment will be necessary—frequently one for two regiments will suffice. It is by no means easy to open up communication from this station with the field ambulances, nor are there any means placed at the disposal of the regimental medical officer for doing so. I therefore consider that the medical officer's regimental N.C.O., whom I have placed in charge of this post, should, among his other qualifications, be a trained signaller. I also suggest that small flags should be provided in the regimental equipment for placing on some neighbouring prominent spot, such as a tree, to aid the bearer sections in locating them—these flags
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should be so fashioned that the regimental stretcher-bearers can carry them in their pockets. As regards the position of such a post, it should be sheltered from rifle fire, if possible in or around some building; if there is a good road approaching it well under cover so much the better. The most important duty devolving on this station, after the dressings, &c., applied by the stretcher-bearers have been looked to, is the early establishment and maintenance of touch with the bearer sections of the field ambulance working in that area of the battlefield.

In concluding my remarks on the duties of the field medical establishments with units I wish to bring to your notice one point that has forcibly impressed itself on me, and that is, that in addition to the medical officers appointed to each unit of an infantry brigade there should also be added one senior officer to act as senior medical officer of the brigade, and be on the staff of the brigadier-general commanding. This officer would have most important duties to perform, the chief of which would be:

(i) To supervise sanitation in the brigade.

(ii) Choose the location of brigade and regimental lightly wounded aid and collecting posts, and arrange for the establishment of touch with the field ambulance.

(iii) Organize a systematic searching of the field for wounded.

(iv) Arrange for evacuation and distribution of the daily sick of the brigade.

(v) Issue orders for the replenishment of the surgical and medical materials after an action.

(vi) Keep in constant communication with the administrative medical officer during the progress of a battle.

I shall have more to say about this last duty in my remarks on intercommunication in the field.

Equipment.—(i) Medical and surgical equipment consists of one surgical haversack, one field medical companion and one pair of panniers. In addition, one first field dressing is carried by every soldier in his right-hand skirt pocket. Is the surgical material from these sources sufficient to deal with the number of wounded likely to accrue in a unit in a modern battle? I think not. In the surgical haversack (1905) there are twelve loose-woven and four triangular bandages, 15 yards of double-cyanide gauze, and 12 oz. of double-cyanide wool. In the field medical companion (1905) there is exactly the same material, plus 1 yard of thin calico, which might be torn up into bandages. In No. 2 field medical pannier (1905) there are sixty loose-woven bandages,
four triangular bandages, 95 yards of double-cyanide gauze, 3 lb. of double-cyanide wool, and 4 yards of thin calico. The cyanide wool and gauze are extremely useful as dressings, and could be readily applied if collodion flexile were provided for the purpose, but it is not. You must remember that a wounded man very frequently has not only the entrance and exit wounds caused by one projectile, but may have half a dozen such. It is therefore suggested that each unit should be provided with far more surgical material, say, four surgical haversacks and a reserve of 100 first field dressings.

(ii) Medical Comforts.—The only "medical comfort" supplied is 1 lb. of Bovril in No. 2 pannier. The only means of cooking is one "Warmer, Food (Spirit Lamp, Mark 1)" in No. 2 pannier.

Nothing revives a wounded man so rapidly as hot soup. The amount of medical comforts and means for boiling large quantities of water are inadequate. It is advisable that one medical comfort pannier and two camp kettles be added to the equipment of the medical establishment with units.

(iii) Equipment for throwing up Shelters for Wounded.—I consider that some sort of trenching tool is necessary for this purpose and should be carried by the stretcher-bearers; also some cutting instrument, a small axe or knife like the Ghoruka's kookrie, would be valuable for lopping off branches of trees, &c.

Mention has already been made of the need for small flags for directing purposes. This completes what I have to say regarding the medical establishment with units.

(ii) Field Ambulances.

Duties of Commander.—Field ambulances are tactical units. I will, therefore, commence by a few remarks on their tactical handling. Every officer and man in a force is bound to help the General Officer in Command, to the best of his ability, to win the battle, and should certainly refrain from doing anything to hinder him in his aim. Now, the ambulance wagons of a field ambulance are most conspicuous objects, and can readily be seen from a long distance—if, during a tactical deployment of a force, numbers of these wagons are seen making their way to any part of the field of battle, it is obvious to any enemy that an attack is coming from that quarter.

I told you, in my description of the medical manoeuvres, how
ambulance wagons, moving out from the field ambulance bivouac, were easily seen by the enemy, and I said that I would refer to the matter hereafter. Well, at the battle of August 23rd, the movement of ambulance wagons from the bivouac to our right flank was observed by the enemy, and our Commander's projected attack on their left flank was thus disclosed. There is no reason whatever for field ambulances making any movement on to the battlefield until the tactical deployment of a force has been fully developed, and when no movement of theirs can in any way affect the military situation. Remember, that an ambulance wagon can, if necessary, be rendered much less conspicuous by dropping the top, as is done when in transit by rail, mechanical means being provided for this purpose on Mark VI type of wagon. In the other types not provided with this contrivance, the top might be removed altogether.

Now what are the further duties of a commander of a field ambulance regarding the handling of his unit? This is what I conceive should be his action: When the battle commences he should ride ahead on to the battlefield, accompanied by the serjeant-major; ascertain for himself what is occurring in the area allotted to his unit; endeavour to find out the location of regimental or brigade collecting posts; rapidly appreciate the situation as regards the best way of opening touch with the regimental medical establishments; determine the positions for his field stations and routes for the evacuation of the wounded from the battlefield. Having done this, and ascertained that the tactical development of the troops is fully accomplished, he can send the serjeant-major with the necessary orders to his unit. A commander of a field ambulance must be an officer of resource and initiative. Once the disposition of the field ambulances has been made by the administrative medical officer, it is wrong for him to issue detailed orders for every movement; commanders should have the entire handling of their units in the areas allotted to them. It is most inadvisable for an administrative medical officer to interfere with, and so warp, the initiative of his field ambulance commanders, so long as no glaring tactical or administrative error is committed.

In order to enable the administrative medical officer to secure the necessary co-ordination between the several units, it is the duty of the field ambulance commander to keep him constantly informed as to his movements and disposition. Another important point is, that individual methodical action of the sub-divisions of a field ambulance, when working in company with other sub-divisions, as well as when alone, must be maintained by ambu-
This distinct sub-divisional control is essential for rapidity of work. We will now consider that a field ambulance has been brought on to a field of battle with a due observance of every tactical consideration, and its first duty, that of establishing touch with the regimental medical establishments, has been accomplished.

**Work of the Unit.**—The next duty for the unit is to form its field stations, and I am now going to describe to you my ideas of how these stations should be organized. First, what I have called the "advanced dressing station" in my account of the medical manoeuvres, but which I now propose to designate the "dressing station," should be formed. It may be necessary on occasions to establish two such stations. This is done by the bearer division, or sub-divisions. They should be located in a position protected from shell and musketry fire, and with due consideration of the military situation. At this station, or stations, the ambulance wagons are parked. The equipment necessary to form the station is medical and surgical material, a comfort pannier, fuel, and a water-cart. Stretchers would also be carried there. The bearers would then proceed to carry casualties from the collecting posts of the regimental establishments, and group them ready for transport in the ambulance wagons. After any necessary medical attention (such as relief of over-tight bandages, urgent redressings, looking to tourniquets, &c.), and nourishment have been given, the wounded will be dispatched, as quickly as circumstances permit, to the station which I have previously described as the "main dressing station," but which I now propose to call the "ambulance station." This ambulance station is formed by the whole tent division, or one or more sub-divisions, and its organization and location is of paramount importance.

It should be established, if possible, on the main lines of advance and retreat, near to roads, with an ample water supply in its proximity—its distance from the firing line is a matter admitting of argument, I should say three miles at least. It should have complete immunity from long range rifle or shell fire. As its location is of such importance, I suggest that the advice of the divisional general staff should, if possible, be sought on the point.

As to the organization of this station: It should be divided into the following sections, with special personnel told off for each:

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1 In my lecture I termed the "ambulance station" the "field hospital." I think "ambulance station" is perhaps a better term.
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(a) Receiving and Classifying Section.
(b) Dispatching Section.
(c) Seriously Wounded Section.
(d) Severely Wounded Section.
(e) Mortally Wounded Section.
(f) Statistical Section.
(g) Packstore Section.
(h) Supply Section.

One complete tent sub-division should be detailed to form the Divisional Lightly Wounded Collecting Station—this section is so far removed, and has such different functions from the other sections, that I propose to describe it separately. Please do not forget, however, that I consider it should be looked on as part and parcel of the field ambulance organization.

Now you will say, "What a very complicated organization you are making of this ambulance station," but you will find in actual practice that such a division into sections is absolutely necessary. Let me just discuss the necessity for the sectional organization I propose.

(1) The Receiving and Classifying Section should be under the immediate supervision of a medical officer. As casualties arrive from the battlefield, he classifies them for the Seriously, Severely, and Mortally Wounded Sections, or may order a case straight to the operating tent, which is pitched in the middle of the station.

(2) If you do not organize a separate Dispatching Section, you will find that casualties arriving from the battlefield in ambulance wagons will block the way of, and seriously interfere with, the dispatch of convoys to the clearing hospital.

(3) Then as to the work of the Statistical Section—this is a most arduous duty, and it must be carefully and methodically carried out. A record of the description and destination of every casualty is essential. All trace of casualties is sometimes lost, and, if this does happen, endless worries may ensue. I shall submit to you hereafter my recommendations for the simplification of the work of this section. I may here mention that it is advisable to enter on the tally of each casualty the fact of his admission to any particular field ambulance, in order to avoid duplication of admissions. Thus the letter "A," with the number of the ambulance below it, might be written on the tally thus—

\[ A_1, A_2, A_3 \]

This would show that a case had been admitted into either Nos. 1,
2, or 3 field ambulance, and any casualty, arriving at any other hospital in the rear, not showing any such notification of admission into a field ambulance, should be duly entered in the Admission and Discharge book of that hospital.

(4) In the severely and seriously wounded sections, cases would be classified for transport to the rear in the following categories:—
(i) Stretcher cases.
(ii) Ordinary lying-down cases.
(iii) Sitting-up cases.

Those cases unfit to be moved must also be sorted out. You must remember that the classification of casualties in the first line of medical assistance is often largely based on the effect of the wound on the man's future efficiency as a soldier, but this classification does not always coincide with his capacity for standing fatigue in further transport to the rear.

(5) The need for a mortally wounded section is obvious.

(6) The supply section deals with the feeding of casualties, and should be, together with the packstore section, under the special charge of the quartermaster of the field ambulance. In my remarks on the equipment of a field ambulance, I shall have more to say on the feeding of casualties.

(7) The packstore section takes over the arms and accoutrements of casualties, and an inventory of them is made. It is tedious work.

I hope I have told you enough now, to convince you of the necessity for a sectional organization of this field station—the difficulty is, to maintain it when once formed, when there are large numbers of wounded to deal with.

I now come to the "Divisional Lightly-wounded Collecting Station." As I have previously told you, this is the station, the location of which section 75, para. 2—ii, chap. x, Field Service Regulations, part II, directs should be notified in operation orders. It should be formed by one or two tent sub-divisions of a field ambulance. Regarding a suitable site for it, the following appear to be the main considerations:—

(1) A group of buildings or a village, a prominent feature in the landscape.

(2) On the main road which will be used in case of retirement. You know it is one of the principal duties of the medical service to ensure that any lightly-wounded men should not fall into the hands of the enemy in case of, what I will term, a rapid strategical movement to the rear of your force—the capture by the enemy of your severely wounded does not matter nearly so much.
(3) An abundant water supply is essential.

(4) Great diversity of opinion exists as to the distance from the battlefield of this station. I have heard twelve miles suggested! This is the ideal distance at which a clearing hospital should be located. I consider six miles (approximately) the proper distance. A wounded man whom it is considered necessary to pass back there from a regimental lightly-wounded aid-post, if due discrimination has been observed, would never be able to march such a distance as twelve miles. The mentality of a wounded man must receive due consideration in fixing the location of this station.

It is at this station that you must be prepared to give lightly-wounded casualties a substantial meal, and where, possibly, you may have to provide sleeping accommodation for the night. It is the second barrier for preventing lightly-wounded men, who will soon be able to return to the fighting line, from straggling to the hospitals in the rear. I again impress on you the importance of this duty. In the “Medical History of the Russo-Japanese War,” it is recorded that at the Battle of Mukden, out of about 30,000 casualties, 20,000 found their way to the hospitals on the lines of communication without passing through the field ambulances. I wonder how many of this 20,000 would, after a rest and medical attention at such a station as I am describing, have been able, after a short time, to return to the fighting-line! We must never allow such a thing to happen in our army on service. I need hardly enlarge on the paramount importance of a good system of organization at this station, without which the crowds of casualties pouring in from the battlefield would soon lead to insuperable chaos. It would take me too long to describe what form I think this organization should assume; at any rate, one of the important duties would be, to pass on to the clearing hospital, as quickly as possible, any casualties who, from the nature of their wounds, would not be likely to be fit for the fighting-line within twenty-four hours. You would of course make use of any local resources you could lay your hands on for cases requiring transport. Civilian help in tending and feeding casualties should also be enlisted.

The question naturally arises: “What organization exists to ensure that the wounded despatched from the regimental aid-posts to the divisional collecting station arrive at their proper destination?” No such organization is definitely laid down, but it could be improvised without difficulty.

Personnel.—The commander of a field ambulance should, in my opinion, be extra-sectional—he, as you know, is in command
of "A" Section—I think he should be freed from all professional work during an action; if he is not, his initiative as a commander will be warped. Regarding rank and file, I consider the arrangement of the personnel requires revision on the following points:

(i) The personnel of the tent division is inadequate.
(ii) The number of men forming a stretcher squad is more than required. I propose that the stretcher squads should be reduced to four men, and that the personnel thus saved, should be added to the tent sub-division.

Equipment.—(i) The circular tents provided are of unsuitable shape for the treatment of sick and wounded, especially if they are placed on stretchers. The Indian field hospital type of tent, consisting of two side flies, with curtains of 18 in. on each side, would be an improvement. It has the advantage over a circular tent of accommodating more cases in the same space, and is more convenient for the attendants.
(ii) We had no opportunity of testing the "bull's-eye" lantern for searching for wounded at night during the manoeuvres. It is evident, however, they would be well-nigh useless for the purpose. You may justly accuse me of having neglected to say anything regarding work in the collecting zone at night, the time when most probably the whole work of collecting casualties would have to be done—my excuse is that the subject would require a special lecture, and there is no time for it now. In connection with the subject, I will only make this remark, that a high candle-power lamp, of petrol-gas or acetylene, is urgently required for searching for wounded, to which should be added a signalling apparatus, as calls for a medical officer by searchers would be frequent, and signalling would prove a handy means of obtaining this assistance.
(iii) A much larger number of directing flags is required.
(iv) Portable field kitchens are essential. One for each field ambulance has been suggested, but with the sectional organization of the field ambulance, "one" of anything can never be accepted; there must be one for each section.
(v) I will only just mention such items as an improved operation table, a mouth-gag, tincture of iodine, &c., which are urgently required.

Administration. (i) Statistical Section.—The statistical returns...
that have to be compiled contain much unnecessary detail, causing very heavy clerical work. Considering that each casualty is provided with an identity disc, it is suggested that the only details required to be entered in the Admission and Discharge Book for each casualty are: regimental number, regiment, nature of wound or disease, how disposed of.

(ii) Packstore Section.—The work of this section might be much diminished by taking over the patient's kit in bulk, each kit being distinctly labelled with the man's number and name, and by transferring it unopened with the patient. The checking of the details of the kit could be postponed until it reaches a stationary hospital.

Nomenclature of Component Parts of a Field Ambulance.—I will conclude my remarks concerning field ambulances by a suggestion as to the change of nomenclature of its component parts. It has been found that the present designations of these are most confusing, and require simplification. I suggest the title of "bearer and tent divisions" be changed to "bearer and tent companies." The term "division" to be reserved for the present sectional sub-divisions. Thus a field ambulance would consist of a "bearer and tent company," one section would consist of a "bearer and tent division."

B. Communication in the Field.

I conclude you are all well acquainted with the usual means of communication in the field, described in section 17, chap. ii, Field Service Regulations, part I. I am now going to discuss the special means at the disposal of the medical service, and how I suggest they can be improved. During an action, the administrative medical officer of a division is with the general officer commanding, and there also is the officer in charge of divisional communications. The brigade commanders communicate with the general officer commanding principally, I should say, by means of the field telegraph. You will find it stated in para. 11, section 77, chap. x, Field Service Regulations, part II.: "But a constant transmission of information regarding the situation, as affecting the number of casualties and the area where they are occurring, should be kept up between brigade and divisional headquarters, in order to enable the divisional administrative medical officer to maintain the links and have the reserve field ambulances and transport material brought up to the proper place at the proper
time." I propound two questions to you concerning the above quotation:—

(1) Who is going to transmit this information from brigade to the divisional headquarters?

(2) What means has the administrative medical officer at his disposal for communication with field ambulances or other units?

(a) As regards question (1): I suppose the brigadier or his brigade major are supposed to do this. I submit that they would be far too busily engaged in other duties to find time to do so—in the Medical Manœuvres not one scrap of information from this source ever reached me. I suggest that one of the principal duties of the Senior Medical Officer, whom I have proposed should be added to the staff of the brigadier, would be to transmit such information to the administrative medical officer by means of the field telegraph.

(b) As regards question (2): The answer is "practically none."

The administrative medical officer has one staff officer who could possibly be utilized for this purpose; I have previously described to you what duties he was performing during the actions which occurred during the special manœuvres. I recommend that three mounted orderlies be placed at the disposal of the administrative medical officer. I do not think cyclist orderlies would be found suitable in all kinds of battlefield grounds. Now as to the other necessary links of communication:

(1) From Regimental Medical Establishments to Field Ambulances.—No means for communication exist in the present organization of the regimental medical establishment. I have already suggested that the regimental N.C.O. should be a trained signaller.

(2) From the Field Ambulance Commander to his Section Commanders and to the Administrative Medical Officer.—The commander of a field ambulance should keep in constant communication with the administrative medical officer concerning the disposition of his unit. I have already brought to your notice how extremely important I consider the sub-divisional control of a field ambulance to be, and also the individual methodical action of its sub-division when working in company with other sub-divisions, as well as when alone. The means for carrying out these important duties of intercommunication consist of one bicycle orderly allotted to "A" Section, and six trained semaphore signallers, two to each section. In addition, there are a certain number of riding horses in a field ambulance; they might be made use of as an auxiliary
for communication purposes. I had previously thought additional cyclist orderlies should be added to the establishment, but, on reflection, I do not consider this necessary.

(3) Inter-Sectional Communication.—This, I consider, can be efficiently carried out by the means I have alluded to in the foregoing remarks. I will conclude my remarks on intercommunication in the field by a reference to the semaphore mode of signalling adopted by the medical service. This was not a success at the Medical Manoeuvres. It was stated that signals were read with difficulty—I never quite understood why, myself, but the complaint was general. It would appear desirable that the Morse Code system should be adopted. I have previously referred to the instrument I suggest might be used for night work.

C. THE AUXILIARY TRANSPORT PROVIDED BY THE ARMY SERVICE CORPS.

In section 78, para. 7, chap. x, Field Service Regulations, part II, it is stated, “the empty wagons of supply columns and parks returning to replenish at the advanced base may be used for this purpose.” The purpose referred to being the conveyance of sick and wounded back from clearing hospitals to the stationary hospitals or to the railway. It would be the duty of the administrative medical officer to arrange with the divisional transport officer as to a suitable rendezvous for this auxiliary transport. A position near the dispatching section of the ambulance station is advisable. I have told you in my narrative of the Medical Manoeuvres how the transport and supply column and park were used on that occasion.

The question is, “Could one always rely on this auxiliary on active service?” I think not. In chap. vi, Field Service Regulations, sections 42 and 43, you will learn how these transport columns and parks work. If you study these sections, you will readily recognize that this mode of transport for sick and wounded from the field ambulances to the clearing hospitals, and on to the stationary hospitals and the railhead, cannot be depended on. In section 42, which I have previously quoted, it is laid down that the supply columns may be used, on occasions, only to carry supplies obtained locally; and in section 43, para. 2, it states that the supply parks may possibly only be used to extend the radius of action of the supply columns in obtaining supplies from local resources. How then can this transport be looked on with certainty as a means of transport for sick and wounded?
There is no mention in the Field Service Regulations of the auxiliary transport companies of the Army Service Corps, which form the connecting link between the railway and the ammunition or supply columns or parks of the army being used for the conveyance of sick and wounded. I do not know why. They certainly would be available for that purpose occasionally. You will find them described in section 62, para. 2, chap. viii, Field Service Regulations, part II, and in War Establishments, 1910-1911, p. 148.

I think I ought here shortly to describe to you the reforms in transport and supply which are shortly to be brought about in the administrative transport of the expeditionary force. This will affect enormously the question of evacuation of sick and wounded from the field ambulances. The broad principle is, that motor vehicles generally will replace horse transport. I do not think it will be a waste of time if I give you details of these new proposals.

Details of New Proposals.—(1) All fighting units to carry a reserve ration (iron-ration) on the man or horse (in addition to the present emergency ration).

(2) Regimental transport to consist of the present first line transport, plus water-tank carts and travelling kitchens.

(3) All other regimental transport to be grouped by divisions, &c., and to form units of the Army Service Corps. These Army Service Corps units to be capable of division for brigades, &c. The supply wagons will, as now, carry one complete day's supplies and forage, plus an extra grocery ration.

(4) The supply wagons of the above Army Service Corps units to be replenished daily from the railway by mechanical transport convoys of fast motor lorries. (The carrying capacity of motor lorries for the cavalry and army troops to be 30 cwt., and for all other formations 3 tons.

(5) The motor lorries and light tractors required to complete the numbers necessary for mobilization to be obtained by means of a subsidizing scheme.

(6) Special motor lorries and horse-drawn vehicles to be built for the conveyance of fresh meat, which will be carried in quarters suspended from the roof of the vehicle.

(7) The driving and slaughtering of cattle and sheep to be removed from the vicinity of the troops.

(8) Field bakeries and field butcheries to be established on the railway line, each capable of turning out daily 22,300 rations of fresh meat or bread.
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(9) All other supplies to be sent by rail from a main supply depot to the regulating railway station, whence they will be forwarded daily to the railway refilling point, to which the fresh bread and meat will also be sent.

(10) Separate supply columns and ammunition parks to be made for the cavalry division and for army troops.

(11) Exploiting detachments have been added to the "train" of brigades and other formations. These consist of one officer and six to eight other ranks, mounted on bicycles, whose duty it will be to proceed, whenever practicable, with the advance guard, and obtain such supplies as hay, fuel, wood, fresh vegetables, &c. They are also available for general requisitioning duties.

(12) Six reserve convoys (horsed), capable of carrying two days' preserved rations for the whole force, to move in rear of the fighting troops, at least 30 miles behind, and in such a position as not to interfere with the free passage of the mechanical transport. These reserve convoys are considered necessary in the event of railway or mechanical transport not being available from unforeseen causes, such as abnormal weather, heavy floods or snow. This horse transport will also furnish immediate replacement of heavy horse transport casualties at the front, when time does not admit of replacement from the transport depots.

Advantage has been taken of the change of system to convert the whole of the divisional ammunition columns into mechanical transport ammunition parks.

D. CLEARING HOSPITALS.

You will wonder why, in undertaking to deal in this lecture with our field medical organization in the collecting zone, I have thought fit to include clearing hospitals, as they belong officially to the line of communication and the evacuating zone. My reason for doing so is, that I am strongly of opinion that these units should belong to the divisional organization, and that their proper place is in the collecting zone.

Now in the army for home defence you have no organized clearing hospitals—the administrative medical officer of the Highland Division, Territorial Force, who I am sorry to say is unable to take part in this tour, has written some notes on the subject of the relation of the British Red Cross Society to the Royal Army Medical Corps, Territorial Force, in the field, with regard to these hospitals, which Lieutenant-Colonel Kelly will read to you to-night. I shall, therefore, only deal with the organized clearing hospitals
of the regular army. Now the Field Service Regulations tell us, among other points, the following concerning clearing hospitals; they are contained in Section 78, paras. 2, 3, and 5, chap x., part II, Field Service Regulations:

1. That they resemble a tent division of a field ambulance on a large scale.

2. That they form the central point upon which the collecting zone converges and from which the evacuating and distributing zones diverge.

3. That they are the pivot upon which the whole system of evacuating sick and wounded turns.

4. That it is their business to push up within reach of the field ambulances, and, on certain occasions, to go right up to the latter units and take over the sick and wounded on the spot.

Surely no stronger arguments than these can be adduced to prove that clearing hospitals should be included among the units under divisional control.

Now let us examine the functions of these units more closely. Their first duty is to take over casualties from the field ambulances. In order to do this they must be brought within a few miles of these units. The ambulance wagons of a field ambulance, you must remember, are constantly moving to and fro between the dressing and ambulance stations, and, by the end of the day, the animals pulling them have done an enormous lot of work, and would not, therefore, be in a fit condition to undertake a journey to the clearing hospital of a longer distance than about ten miles there and back. I have already pointed out to you how much reliance can be placed on the auxiliary transport supplied by the Army Service Corps for the above purpose.

The second function of a clearing hospital is to evacuate as quickly as possible casualties received from the field ambulances to the nearest stationary hospital and railhead. This duty is again allotted to the empty wagons of the supply column and park returning to replenish at the advanced base. It is laid down in Field Service Regulations, that this transport will be reinforced by vehicles provided by hire or requisition, or by specially organized sick and wounded sections attached to the clearing hospitals. This local improvisation of transport presupposes that the enemy would have allowed it to fall into our hands.

Do you think that in the case of our expeditionary force operating in an enemy's country an alert foe would have been so thoughtful as to do this? I am doubtful on the point.
Do you not think that what I have said proves the point that I was leading up to, and that is, that a clearing hospital should be provided with its own properly organized transport for sick and wounded? I think this "convoy division," as it has lately been termed by a writer on the subject, should be composed of motor-driven ambulance wagons and 'buses. I find that I must draw my remarks to a close. I had intended to go more fully into the functions of a clearing hospital, but I have no time to do so.

In conclusion I have only one further remark to make. Have you noticed what a close resemblance there is between the personnel and equipment of a clearing hospital and a stationary hospital? As regards personnel, the latter may have nursing sisters, and the former never has; as regards equipment, the stationary hospitals have bedsteads and the clearing hospitals have not.