Lecture.

A SINGLE DIVISIONAL FIELD AMBULANCE.¹

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The subject I am putting before you, namely, the substitution of the present three field ambulances with a division by a single unit, is one that will, I think, commend itself to you all. The idea at first sight may seem rather revolutionary, but I hope that when you have listened to what I have to say you will have been persuaded to agree with me, at any rate in the broad principles involved. I must caution you that I am giving you only a general outline of my ideas and have purposely not entered into details, because they would not, I think, be useful at present and would only weary you.

The questions that naturally arise are: Whether there is any necessity for a change, and what has brought about this need? Is not our present field ambulance satisfactory for all purposes demanded of it, and what additional benefits would any new organization give?

If we look at the changes that have taken place during recent years in the administration of the division we find two causes at work, first, the introduction of mechanical transport, and second the modern development of the functions and composition of the division itself. Previous to the introduction of mechanical transport, the distance a division could be separated from railhead was a question more or less of the capabilities of the horse, and as these distances increased the difficulties connected with the supplies increased in direct ratio. But now with motor-lorries the majority of these difficulties have been overcome, with the result that the mobility of the division is greatly enhanced, and a distance of forty miles between it and railhead is contemplated with equanimity. This naturally means that the depth of the division must be increased, and refilling points for supply vehicles may easily be nine or ten miles behind the fighting troops. We are supposed to utilize the returning motor vehicles as far as possible for the clearing of our sick and wounded, but can we look without misgivings on a distance of eighteen or twenty miles for our ambulance wagons, in addition to their other duties? Such distances to mechanical transport are nothing. If the motor-lorries could come into the fighting area and there collect from

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¹ A paper read before the Aldershot Command Military Medical Society, on February 24, 1914, Colonel S. Hickson, K.H.S., in the Chair.
the field ambulances, our difficulties would be modified, but that can
scarcely be contemplated, as these vehicles have to keep to a time-table
and delays such as would arise could not be permitted.

As regards the changes in the division itself, during the past ten years
or so the division has developed from a mere collection of units into an
organized unit itself, and has now become a higher fighting unit. I
am speaking of the division of the expeditionary force; the exact com-
position and the duty expected of this force have led to the development
of the division. If we look at the changes that have taken place, we shall
see that they all point to two things: (1) The consolidation of the various
integral parts. (2) A more centralized control over them. To take the
most striking changes and think in what way they have come about, will
help us to consider presently the changes I propose in our divisional
medical units.

Taking first the signal company: Previously each unit had a certain
number of men trained as signallers, and so long as units trained by
themselves this answered all right; but with the collection of units into
larger organizations it was found that there was a want of cohesion when
the more elaborate work of communicating the duties of the larger
organizations in the field arose. From this sprang the necessity of
a distinct and separate signal service with a central divisional control.
Next, the divisional train: Here again the transport up to a certain
period has been entirely regimental, and as with the signal service, as
long as units were employed as such, worked well; but with the amal-
gamation of these units into a division it was soon apparent that serious
defects existed which demanded a rearrangement, with the result that
the divisional train came into existence. And again a third instance is
the ammunition column, whose history is much the same as the fore-
going, that is, a conversion of regimental and brigade organizations into
a divisional one, with an economical and efficient control from the
divisional head-quarters. There are probably others to follow, and in this
connexion I would recommend for your perusal an article in the
Journal
of the Royal United Services Institution, September, 1913, entitled, “The
Organization of a Division,” by “N.”

In view of the foregoing facts are we justified in not following the lead
of the others, and, without wishing in the least to belittle the present
field ambulances, can we say that they are in accordance with the modern
views, and that their organization, equipment, and even employment
could not be improved and simplified, both for our own benefit as well
as for the administration of the division? Of course the field ambulance
as it stands, as far as actual service is concerned, is an untried unit,
but with its actual employment in medical exercises, and its theoretical
use in staff tours and war games, we have gained an idea of its capabilities
and deficiencies.

If we consider the origin of the field ambulance, we shall gather the
reason of the majority of its defects, and also its present method of tactical employment. We may take it, roughly, that the field ambulance is the outcome of the amalgamation of the brigade bearer company and field hospital, and the three field ambulances for a division the result of the fact that there are three brigades to that unit; and here I think is the palpable explanation of the difference between our present arrangements and what is the case with the remaining administrative units of the division, which I submit we should copy.

The assistant director of medical services of a division has now three commanding officers to deal with, and three units to partition. The three commanding officers probably each have a different idea of what the assistant director wants, and a different method of carrying out his orders. The allocation of the units in the field is more difficult when there are three to place, and must lead to a certain amount of overlapping of the various constituent parts and the mixing up of the parts of the various ambulances employed. There has arisen a custom of allotting in action a field ambulance to each area covered by each brigade, and this leads to a rigidity of employment which hampers their redistribution to meet further contingencies. It has also come about that on the line of march a field ambulance is placed in rear of each brigade. What would happen in the event of an encounter battle? Would we not find our ambulances blocking the road for the deploying troops behind, and would we not find ourselves committed by this division of our units to a position that might seriously hamper any future change in their disposition? Again, I have found a custom has arisen of bivouacking a field ambulance in each brigade area. This may be convenient from a bivouacking point of view, but by doing so we are handing each unit over to each brigade, and the orders for that unit have to go through the brigade commander instead of direct. It also gives the brigade commander the idea that the field ambulance is necessarily to be employed in his brigade. Moreover, in the field with three units, there would probably be three places at least where the wounded would be dumped for future removal to railhead, instead of, as I suggest there should be, one point where all wounded, both slight and serious, should be collected for clearance, much on the lines of the "refilling point" of the supply vehicles.

Now all these are the outcome of having three units, and could be abolished if there was only one. Are we sure that in future there will be three brigades to a division? I think signs point to the fact that this will be changed.

I suggest what is required is one field ambulance to each division. Think of the simplicity from the point of view of the assistant director of medical services. One commanding officer to deal with, and one unit to partition. It would also be a genuine divisional unit and should bivouac by itself.

There are two ways of arriving at a single field ambulance, and these
are: (1) By amalgamating the present three units under one command-
ing officer, and rechristening it. (2) By creating a new unit altogether
on different lines. I plump entirely for the latter.

By (1) we are at the least only creating a makeshift unit, and carrying
on many of the present features that are better done away with. By
(2) we are getting a free hand to introduce modern ideas and methods
which are eminently necessary, and which I hold are going to simplify
the difficult task of getting out of the way of the fighting troops that
serious impediment, the sick and wounded.

My suggestions are: (1) One divisional field ambulance. (2) Abolish
the horse-drawn ambulance wagons and substitute for them light motor-
wagons which could be designed to carry 3 lying down and 6 sitting
up, or 12 sitting cases each. (3) Substitute a wheeled stretcher-
carriage for the present hand-carried one. (4) Abolish the tent division
altogether. (5) Reduce the number of non-commissioned officers and
men of the nursing section and increase the bearers. (6) Let the
head-quarters of the field ambulance compose the divisional collecting station,
and form a centre to which all wounded are dispatched.

The arguments in favour of these are:—For a divisional field
ambulance a more perfect administrative control, a greater elasticity
of the unit itself, and capability of coping with situations as they arise.

The horse-drawn ambulance wagon is slow moving, and its capabilities
limited by the endurance of the horses drawing it. If we remember that
in the majority of instances those horses will have done a march, and
some of them a long round of collecting morning sick from units, before
they are employed in their proper sphere of collecting the wounded from
the battle, it will be seen that at the most critical time these teams will
be tired out, and incapable of performing journeys of any distance when
they are wanted to do so. The horse-drawn vehicle also limits the
distance at which the head-quarters of a field ambulance can open behind
the firing line. With motor vehicles there is no such limitation of work
done, or of distance covered. It might be urged against this, that the
motor vehicle is incapable of going across fields and broken country, but
in the United Kingdom or Western Europe would this ever be necessary?
There are, as a rule, a multiplicity of roads all fit for light motor traffic,
and it is a fact that no scene of action would be so far from one that the
work of the bearers in bringing the wounded to the motor-wagons would
be appreciably increased. By substituting a motor for a horse-drawn
vehicle another very important fact is accomplished, and that is a reduc-
tion in the number of wagons required for a division. At present there
are 30 ambulance wagons to a division, the carrying capacity of which
is 120 lying, or 360 sitting, or 150 sitting and lying, or an average
accommodation of 220 for the division, which works out roughly at
1'4 per cent of the strength; so if 5 per cent only of the division were
wounded, three journeys at least of these wagons would be required.
Taking the journey at 6 miles each way, and the pace 3 miles per hour, each wagon would take 4 hours at the least to accomplish the trip, or 12 hours to clear 5 per cent of wounded. With 16 motor-wagons, each carrying 3 lying and 6 sitting, or 12 sitting, an average of say 10 to each wagon, the 16 wagons would carry 160 at each journey, and perform a journey of 10 miles in half an hour; and giving a quarter of an hour for taking the wounded out of the collecting station, the entire trip would be done in 1½ hour, as against 4 hours for the horse-drawn vehicles. That is, half as many wounded again could be dealt with in the same time with motor-wagons, and that with a reduced number of vehicles. The motor vehicle would also allow the headquarters of the ambulance being opened much farther back than is at present the case. Ten miles would be a good rough rule. Here the wounded would be well out of harm’s way, and, another important point, could be disposed of so that they would not block the road for other traffic in any way.

Now as regards the stretcher. Any of you who have not had personal experience in carrying a loaded stretcher (and most of us have done so at some time or another of our service) know the extremely hard work it is, especially over broken ground, and in how short a distance it becomes physically impossible to go farther without a rest. In fact I think fifty yards is about the limit of most men’s capabilities in this respect, and we should welcome anything that would ease the strain and at the same time increase the pace at which the wounded could be moved. Some years ago, when I was stationed in a foreign garrison where stretchers were very much used to convey sick, where the roads were rough and very hilly, we found that the strain imposed on the stretcher-bearers was very great, and consequently the pace the sick travelled very slow. We were able to get an Ashford litter from the ordnance store, and by fitting a couple of drag-ropes on to the axles, we found that with three bearers we were able greatly to increase the pace at which we could move, and also do that without inconveniencing the sick in any way, and save the bearers the appalling strain. Again, the last time I was in India, with a very rough and clumsy wheeled stretcher that probably most of you know, I found the former experience hold good, the secret of the whole being the drag-ropes on the axles. It will probably be said that the wheeled stretchers could not negotiate all the various conditions of country that might be met on active service, but I cannot myself imagine any conditions where such would be the case in this country or Western Europe, that is, provided the stretcher-carriages are intelligently designed and used. I have always used them with three bearers, one on each drag-rope, and one between the handles, and this is sufficient for all ordinary work; I have added a fourth, however, as a reserve. On the line of march, the wheeled stretchers could be carried in a wagon, and by having detachable and interchangeable wheels, they would pack fairly
closely. If, however, an engagement was expected, or when the bearers were following deploying troops, the stretchers could be wheeled along the roads with little effort. The present number of stretcher squads to each field ambulance is 18, that is 54 for the division, but my plan would give you 80 wheeled stretchers to each division, an increase of 26 stretchers. Think what that would mean to the officer commanding the field ambulance.

Now I come to a proposition that I am afraid some will look upon with horror, and that is the abolition of the tent division entirely. Yet if we look at the reason of our existence, and why we are in the field at all, we shall see that by carrying out my suggestion we are only realizing our best ideals. Our first and foremost duty is to remove the wounded as quickly as possible from the neighbourhood of the fighting troops and get them to where they will be in comparative comfort, and where their various injuries and ailments can be satisfactorily looked after. In the days of horse-drawn traffic, the distance between the fighting troops and railhead and the nearest stationary hospitals made it quite necessary at times for the officer commanding the field ambulance to be in possession of means to accommodate his wounded, till the slow-moving vehicles from behind could come up to him and relieve him of his charges. With motor transport this has all disappeared, and a railhead forty miles away would not mean untoward difficulties in getting rid of the wounded, or cause them any undue suffering. My opinion, consequently, is that there should be no hospital accommodation, speaking widely, nearer than railhead.

The next proposition follows as a natural sequence on the foregoing. With the abolition of the tent division, the necessity for a number of non-commissioned officers and men of the nursing section disappears. There are at present 6 sergeants and 63 privates of the nursing section present with the division; I propose to reduce these to 1 non-commissioned officer and 10 men. This will give 320 bearers with 80 stretchers in place of 377 bearers with 54 stretchers, an increase of 26 stretchers and a decrease of 57 bearers.

With the rapidity of movement consequent on the motor-wagon and the wheeled stretcher, the necessity of the dressing station will disappear. This I contend is an unmixed blessing. The tendency has been to erect tents and form dressing stations far too readily, and often before any real necessity for them has arisen, due, I think, to several factors, which are the slow-moving horse-drawn wagon and the consequent necessity of holding on to the wounded instead of being able to dispatch them to the rear at once, the discomfort of the ambulance wagon and a desire to prevent undue suffering of the seriously wounded, and, sometimes, to the simple fact that the tents were there and use had better be made of them. These dressing stations lead to the immobilizing of the field ambulance to a certain extent, and always to a slowness in following the troops. It is
more or less natural that with the extra labour involved in the erection of tents, the officer commanding the field ambulance would feel some compunction in changing his position freely. Even when no tents are used and accommodation for the wounded is found in the adjacent houses, the same slowness of movement appears. The divisional collecting station as at present constituted and described in regulations, is a well-defined spot, previously selected for the purpose, to where the slightly wounded are directed to walk. I propose to alter the constitution and function of this place so that it will combine the duties of dressing station and collecting station in one, and form the pivot on which the whole collection of wounded will turn. As is now the case, this point will be selected by the assistant director of medical services and notified to all concerned. Here the head-quarters of the field ambulance will proceed and make arrangements for the reception of the wounded. Here also all the transport of the field ambulance will remain, including the ambulance wagons, and all wounded brought. With motor transport, great latitude can be exercised in the selection of this place, and a few miles one way or the other would make no difference to its utility. It should be placed behind the ammunition column, and in such a spot that there would be other roads than the main one converging on it; that is to say, place it somewhere that is accessible to the wagons and yet in such a place that the movements of the wounded will not interfere with the main traffic of the division. Still, the fact must not be lost sight of that it must be accessible to the motor-lorries of the supply column, in fact the refilling point of the train would afford an excellent guide to the selection of the collecting station. In this country and in Western Europe I do not think any difficulty would be experienced in finding a suitable position.

Following on these lines I have suggested that the new unit should be organized as follows: it will consist, not including attached persons, of a head-quarters and four bearer sections.

The detail of the headquarters would be, personnel: 1 lieutenant-colonel commanding the unit; 1 major, second in command; 3 captains (or subalterns), one as adjutant; 1 quartermaster; 1 serjeant-major; 1 bugler; 5 serjeants (one of whom will be for nursing duties); 5 corporals (4 as wagon orderlies); 35 privates (10 nursing section, and 12 as wagon orderlies).

Vehicles: 1 bicycle; 1 motor-car, for the use of the officer commanding; 16 motor ambulance wagons; 2 three-ton motor- lorries; 1 water-cart.

Each bearer section will consist of, personnel: 4 officers, captains or subalterns; 4 serjeants; 1 bugler; 80 rank and file, of whom 20 should be lance-corporals. The section will be divided into sub-sections consisting of 5 stretcher squads, under the supervision of 1 officer and 1 serjeant. The vehicles will be: 1 bicycle; 1 water-cart; 1 cooker; 20 wheeled stretchers.
How does this compare with what at present exists for a division? There are now 30 officers (including 3 quartermasters), 3 warrant officers, 39 serjeants, 9 buglers, and 495 rank and file, and 3 bicycles, 9 forage carts, 9 water-carts, 3 cookers, 30 ambulance wagons, and 18 general service wagons. So there is a saving of 8 officers, 2 warrant officers, 18 serjeants, 4 buglers, and 135 rank and file, and of 39 vehicles, not including the wheeled stretcher-carriages.

Those are my suggestions, and though there is a considerable reduction, both in personnel and vehicles, I do not think that this is any detract from its utility. On the contrary, I believe by organizing a unit on these lines we are simplifying the work, and attaining a degree of mobility in every sense that the old units cannot give, and I trust that I have been able to show you the additional benefits to be derived from such an organization. Anyway it behoves us to make the fullest use of the capabilities of mechanical transport, and whether we do it in the field ambulance, or in the clearing hospital, is a moot point. Personally, I think it should be both. Such a change as I contemplate would naturally modify our tactics, and probably I think simplify them, but such modifications must be left to more able hands than mine to make, and I can only point out the need of them.

DISCUSSION.

Major TRavers E. R. CLARKE, D.A.A.G., said : I have taken Colonel Hickson's invitation to "get up and say something" in the light of a command, but I feel considerable misgivings at being the first to make any comment on Colonel Cree's admirable lecture. The first point that struck me was the statement made by the lecturer that, by the introduction of mechanical transport, the "mobility" of a division has been enhanced. I think he really means that a division has now a wider field of operations in relation to its railhead than heretofore; it is not, however, actually any more mobile. I think the lecturer has rather over-estimated the difficulties he considers the assistant director of medical services of a division must suffer in having three units and three commanding officers to deal with. The position of this assistant director is analogous to that of an infantry brigade commander who has four units to control, or possibly a better comparison would be that of a field artillery brigade commander who has three units under his command. Anyway, in neither case has any great difficulty been experienced in the command of these units. Moreover, if there were to be one field ambulance only in a division, could the retention of the assistant director of medical services be justified? We have a parallel in the recently created field squadron which is to absorb the four field troops of the cavalry brigades composing the cavalry division. With the formation of the field squadron the necessity of having a commander and an
adjutant of cavalry divisional engineers disappears, and both these officers have consequently also disappeared. I think, too, the assistant director would be deemed the fifth wheel, and his disappearance would be one of the outcomes of Colonel Cree's suggested remodelling of the field ambulance. A big unit, such as Colonel Cree contemplates, would throw a great deal of work on the commander, and I fancy in effect the single field ambulance would practically become four distinct units, each bearer section making a little kingdom of itself. With regard to Colonel Cree's statement that a custom has arisen of attaching a field ambulance to each brigade of infantry, and that therefore it may be assumed that on the line of march each ambulance will follow its brigade, I think we must accept this statement with reservations: it would not be possible, of course, for an ambulance to march in this manner when contact with the enemy was imminent. For purposes of administration, especially supply, a division when not in the immediate vicinity of the enemy sometimes marches in prearranged groups, and a field ambulance is often attached to a group; but it must not be forgotten that these groups would cease to exist as such when the tactical situation demanded. I think the lecturer rather contemplates a division employing one refilling point only, and he fixes this refilling point at some nine or ten miles behind the fighting troops. The efforts of the quartermaster-general's branch of the staff of any formation are, as a rule, directed to the practicability and possibility of securing good refilling points close up to the troops, and I think the occasions would be rare when some nine or ten miles separated a refilling point from the nearest body of troops; of course, when two divisions are using the one road, the conditions alter somewhat. Moreover, a divisional commander has the power to fix any number of refilling points; he is not confined to one, and it is possible that a concentration of wounded at one point, which Colonel Cree suggests should be the refilling point, would not be such as expeditious a way of evacuation as collection at several places.

I think it is agreed on all sides that we cannot rely on the mechanical transport vehicles of a supply column as a normal method of getting the sick and wounded away from the front; these columns have to keep practically scheduled time at railhead, and hence it would only be on exceptional occasions that we could make use of them. The use of the vehicles of an ammunition park for this purpose possesses, too, many drawbacks, and their employment can I think be disregarded.

In discussing this question, we must, in my opinion, first consider what are the limits of the zone of action of the field ambulances and the clearing hospitals. As matters stand at present, a clearing hospital is a cumbersome affair, it is hard to move, and when all its tentage is pitched and its paraphernalia unpacked and spread out, it cannot be shifted without great difficulty. It appears to me, therefore, that we must divest the clearing hospital of nearly all its tentage and of a great deal of its
equipment. Once shorn of this a motor-lorry should be able to move it, and its sphere of utility would be increased.

The abolition of the tent division of a field ambulance, suggested by Colonel Cree, has many supporters, but I think that very serious consideration would have to be given to the question before dispensing with the trained personnel of the medical units nearest the fighting zone. The evacuation of the wounded after a big engagement would be a long process, running probably into weeks, and I think undue prominence has been given to the idea that a wounded man must perforce be sent back with all speed to the base. It seems to me that the work of a field ambulance will be limited to collecting wounded in houses or buildings of sorts, treating them as best may be, and leaving them in these buildings, with some of the tent division personnel to look after them until relieved by personnel of the clearing hospital: on relief the men of the tent division would rejoin their ambulance. I think the term “tent division” is somewhat misleading. Tents would, I fancy, be rarely used. I would suggest the title be the “nursing section” or something of this nature.

If the inspector-general of communications had a reserve supply of mechanical transport, he could send up the clearing hospital shorn of its encumbrances as I have already said, when desired. The further evacuation towards the distributing zone might then become the task of the clearing hospital, and would be done gradually. Anyway, it appears to me that the spheres of action of the field ambulances and the clearing hospitals should be more clearly defined, and then perhaps the movement rearwards of the sick and wounded will not present a task of too great magnitude.

Colonel Cree advocates the abolition of horsed ambulance wagons, and the substitution of motor ambulance wagons. I must say at first sight motor ambulance wagons appear fascinating, but it must not be overlooked that this form of transport possesses certain disadvantages. Firstly, a motor vehicle cannot run for any length of time behind a slow-moving column. Secondly, the motor vehicles must preserve a distance between each other of fifty or a hundred yards. Thirdly, motor vehicles of a heavy type are difficult to turn round on a road, and ambulance wagons collecting wounded would, in all probability, have frequent “about turns” to make. Fourthly, heavy motor vehicles cannot readily be parked off the road: it is not often that they can be taken into a field, at least if you want to get them out again. Fifthly, a big motor ambulance wagon could not easily run up and down a column past troops, guns, etc. Of course, some of these difficulties could be got over by starting the ambulance wagons some time after the division, but you could not well do this if two divisions were using the same road. Anyway, many points have to be considered before one could advocate the abolition of horse-drawn ambulance wagons altogether.
As Colonel Cree says, we have no war test by which to judge our present organization, but I am inclined to believe that many of the difficulties that he contemplates will occur in the command and administration of the three field ambulances of a division would disappear if a scheme could be devised to ensure more complete identification with their division and its training in peace on the part of the medical officers detailed to command and serve with these field ambulances in war. At command head-quarters we are working to this end, and we hope that our efforts will be successful; if so the effect will be to offer the medical officers who on mobilization will join the field ambulances some practical training in their work, and will also give them that tactical understanding of the work of a division so essential to the efficient handling and working of the field ambulance in war.

Colonel Cree has given us much food for thought, and his suggestions will be carefully considered at command head-quarters. In common with all authors, he has to suffer a deal of criticism, but if the success of a lecture can be measured by the discussion it invokes, Colonel Cree has attained a measure of success brimful and overflowing.

Lieutenant-Colonel R. J. Marker, D.S.O., A.Q.M.G., said: You have suggested that I should make some remarks, but I really fear I have very little left to say. In the course of Colonel Cree’s most interesting lecture I had made a few notes, but Major Travers Clarke has touched already on practically all of them. I would say one word in regard to the analogy which has been drawn by the lecturer between the present organization of a divisional signal company and his suggested organization for field ambulances in a division. I am a little doubtful whether that analogy should be carried very far, owing to the essentially different employment for which the two units are formed. In the signal company the organization of three sections, one with each brigade, and a head-quarters and section at divisional disposal, is dictated by the necessity at all times of keeping communication between divisional headquarters and three units—brigades—which are necessarily at all times separated, if not in locality, at any rate in command. The field ambulances, on the contrary, are one unit for general use. A heavy butcher’s bill may be incurred in only one brigade, and the others may have no casualties. That butcher’s bill might conceivably, I think, tax the resources of the whole field ambulance power of a division, apart from routine work, and I think, therefore, that a centralized organization may be more applicable in the case of field ambulances than a permanent organization into “sections” for normal detached employment with three separate brigades.

Again, I would suggest that before we decide definitely on any reorganization of a field ambulance, we must have a very defined allotment of spheres of action in regard to the field ambulance and the clearing hospital. I fear in my own case I am very hazy as to where
the frontier line should be placed. But once that is clearly established I think the question of organization can be more confidently approached.

Finally, there is the factor of mechanical transport. This is always assumed to have simplified questions hinging on transport facilities enormously—among them that of removing wounded to railhead. I am not clear that it has simplified these questions so greatly. To my mind it has certainly increased the difficulty of most questions involving allotment of roads, and may be found also to have added more formidable problems of road congestion over large areas.

Lieutenant-Colonel S. Guise Moores, D.A.D.M.S., said: The lecturer thinks that, in the event of an encounter battle taking place, we should find that the field ambulances told off to follow brigades on the line of march would block the road for troops deploying. But would field ambulances be so placed in the event of there being any possibility of a general engagement with the enemy? I think not. Their disposition is entirely dependent on the enemy’s whereabouts.

Colonel Cree suggests the abolition of the horse-drawn ambulance wagons and their substitution by light motor-wagons. There are practical reasons against this innovation to which Major Travers Clarke has already called attention. If we can produce a motor vehicle which can accommodate itself to travelling continuously behind marching troops, then we have solved an important difficulty. To my mind, however, motor vehicles should always be available at railhead for wounded convoy work between the railhead or heads and the fighting area. Clearing hospital personnel and medical equipment should be sent forward with them as required. If this is done there is no need for any motor transport with field medical units.

Major J. G. McNaught, R.A.M.C., said: In considering our field medical organization, we, in Aldershot, naturally have in our minds the conditions of warfare in Western Europe. At the same time we should not forget that most of our wars are fought out in uncivilized or semi-civilized countries, and that, therefore, our arrangements must be capable of modification to suit circumstances. But even as regards European conditions, we must remember that in continental armies the medical personnel with regiments is much more numerous than in our service. The senior medical officer of a German regiment of four battalions has quite a large staff of medical officers, subordinate medical officers, and trained orderlies at his disposal. He has the means of improvising temporary hospitals, if necessary, and of attending to sick and wounded who cannot, for any reason, be moved. If, as Colonel Cree suggests, we reduce the personnel of our field ambulances we should be left with too small a staff to cope with the requirements of war. As regards reducing the number of nursing orderlies with a field ambulance, I do not think this would be advisable. The nursing orderlies are not only our best-trained men, they are our most intelligent and reliable men. From what
I have read of the medical history of the recent war in the Balkans, I gather that a great deal depends on the training and intelligence of those who first deal with the wounded. Not only must they know what to do, but what to refrain from doing. Inadequate medical aid at the front means an accumulation of septic cases in the hospitals towards the rear. Besides, after a big engagement there would be many men whose condition would forbid their transport to the rear, and who would require skilled attention. As regards wheeled stretchers, their use at the front would perhaps be impracticable on account of the space they would require in transport.

Captain F. W. G. Leland, Army Service Corps, said: As a mechanical transport officer there are one or two points which I should like to criticize. It has been stated that no reasons were given for the fact that the empty supply lorries of columns are not to take back wounded, sick, etc., to railhead. The experiment was tried on the last medical manoeuvres. The supply column was off-loaded by about 6.30 p.m., teas were served to the men, and the lorries left the refilling point shortly after 7.30 p.m. They proceeded to the camp and the wounded, etc., were loaded up; this took the best part of an hour. The column then went to the clearing hospital at Broadwater, where all details were taken down, and, wounded, etc., and a medical officer and staff put on board, and then the column set out for Woking, having to stop on the road to pick up some more wounded men at Milford; Woking being reached about midnight. The column returned to Aldershot after all wounded were loaded up on the hospital train, getting there about 3 a.m. Men got their breakfasts at 6 a.m. and the column left again for the previous night’s camp. The difficulties of a continuance of such work speak for themselves. On one occasion on the army manoeuvres, railhead was reached at 3.30 a.m. Moreover, in the future, it is more than likely that when a supply column is at the refilling point, the railhead for the next day’s delivery of supplies may not be known, and the supply column may have to park at the refilling point and await orders.

Major Travers Clarke stated that from what he saw on last year’s manoeuvres he did not consider there was a saving in road space by the introduction of mechanical transport. As first sight this seems true enough, as a wagon and four horses carrying 30 cwt. takes up a road space of 15 yards, including 4 yards’ interval, compared to a 3-ton mechanical transport lorry, length 22 feet approximately, and an interval of 50 yards behind. This certainly leaves the actual space covered, compared to loads, in favour of the horse-drawn vehicle, but this is hardly how one must look at it. We must take the time in which the mechanical transport vehicle would traverse a certain distance, i.e., the horse-drawn vehicle proceeds at three miles per hour and the motor-lorry at twelve miles per hour, so we get the saving, and this would be greater with the lighter and faster-moving lorry, capacity say
twenty-five hundredweight. The road space is lessened owing to the shorter time taken by the mechanical transport vehicles to do a certain journey.

It has also been stated that the supply of petrol would be a difficulty. With this I beg to differ. When mechanical transport was in its infancy from the internal combustion engine point of view, it was thought that for European warfare paraffin oil would be the fuel, as it was used by the inhabitants of all countries and thus would be easily obtainable, and so experimental machines were built to run on paraffin by means of special vaporizers. But these are practically out of date, and petrol has been adopted as a fuel, and will continue to be so adopted until a good substitute is provided. No difficulty has been experienced at present as regards the supply under peace conditions, and as under existing organization over a thousand lorries will be required on mobilization the few extra vehicles to be used as motor ambulance wagons would not be difficult to supply. One hundred and fifty gallons would suffice daily for the sixteen motor ambulance wagons. As regards the difficulty in parking motor-lorries, it is not always necessary to remain on roads. The First Divisional Supply Column on last year's manoeuvres always parked on grass plots, common land, etc., and experienced no difficulty in moving off the following morning, even after rain. I do not wish this, though, to be taken as the general rule, as, for instance, in wet winter weather it would be almost impossible for loaded lorries to be parked in fields, etc., although we hope in the future that the non-skids recently invented by one of our officers, and with which every lorry may be fitted, will make the regular parking of the mechanical transport vehicles possible.

The Chairman (Colonel S. Hickson, R.A.M.C.) said: The meeting is to be congratulated on the interesting and instructive discussion on Colonel Cree's lecture, and our thanks are due to the Staff and Army Service Corps officers for the part they have taken in the proceedings. Our present system of field ambulance organization has been freely criticized in the past. Many officers would like to see the bearer and tent divisions separated into distinct units, as was the case in former years, and others have expressed themselves in favour of brigade field ambulances; but as our whole system of organization is based on the division, our mobile medical units are necessarily divisional units.

I do not think there is anything to be gained by providing field ambulances with mechanical transport. It would be out of place so far in front, but would be desirable if coming from the rear, that is, from the clearing hospital to the assistance of the field ambulances. I do not agree with the proposal for the abolition of the tent divisions. No doubt it is one of our chief duties in the field to get the wounded to the rear with all possible expedition, but we must remember the needs of the wounded and the proper care and treatment of them prior to transport.
Some sort of hospital establishment is necessary before bundling the wounded into a wagon. It will probably be days before the wounded can be moved to the rear from the neighbourhood of a modern European battle-field, and they will have to be accommodated meanwhile either in houses or in a field ambulance.

Lieutenant-Colonel Cree, in reply, said: The criticisms on the whole have been very kind, and the paper seems to have fulfilled its purpose in provoking a most interesting series of opinions. I would, however, like to make some replies to remarks that have been made.

I did not intend to convey the idea that the duties of the assistant director of medical services in apportioning the work of the field ambulances are overwhelming; but that any measure that simplified the carrying out of any duty is an advantage. I understand that the abolition of the assistant director with the division has been thought of, and it is possible that the actual administration of the field ambulances in the field could be carried out by the assistant adjutant-general's branch; but there are other duties of the assistant director of medical services which could certainly not be done by a non-medical officer. As regards the capabilities of the suggested motor ambulance wagon to move across indifferent country and manœuvre in fields and rough land, it must be noted that the expression light ambulance wagon was used. At last year's manœuvres I was greatly struck with the capabilities of the ordinary London taxi-cab to cope with the varying conditions of road surface, and how they were able to go practically anywhere, and I intend that the chassis of this light motor-wagon shall not be more cumbersome than that of the usual taxi-cab. I never intended that the motor ambulance wagons should follow along the road behind marching troops, and I suggest the method of employing them on the march would be for the wagons to remain at the previous night's billet or bivouac and not move forward till the troops had arrived at their day's destination; they should then be sent forward to the fresh billets, the bearer section alone marching with the troops. The present method of collecting morning sick entails considerable journeys on the horse-drawn vehicle which would be of no consequence to a motor vehicle and simplify the whole procedure.

The greater reason for the rapid clearing of wounded is not so much for the benefit of the wounded themselves (though the moral effect of that on the troops would be great), but is that by so doing the mobility of the division would be greatly enhanced for either advancement or retirement, and the consideration of the safety of the wounded would not in any way hamper the plan of the general officer commanding.

It has been objected that motor-wagons will not be suitable in all countries, and that what might be valuable in England or civilized Europe will be of little worth in rough regions such as the Balkans. Has any transport yet been devised suitable for all countries, and is it not a fact that in South Africa our present ambulance wagons were...
found unsuitable? But for such service as the expeditionary force is likely to be called upon to undertake I do not think the motor-wagon will be found unsuitable.

It appears to be certain that the lorries of the supply column and the ammunition park will be seldom available for our purposes; we must never rely on them, but make our own arrangements. Anyhow, the fact remains that since the introduction of motor transport, that is for the last ten years, we have done little or nothing to adapt it to our service, and whether the motor vehicle should be with the field ambulance or clearing hospital is entirely a matter of opinion, but it behoves us to take advantage of this most valuable asset.

Translation.

LA GUERRE DES BALKANS. ORGANIZATION ET FONCTIONNEMENT DU SERVICE DE SANTÉ DES ARMÉES COALISÉES.

PAR M. COUSERGUE.

Médecin-Major de 1re Classe; Attaché au Secrétariat général du Ministère de la Guerre.

PRÉCIS BY COLONEL C. H. MELVILLE.

Royal Army Medical Corps.

The author, who is attached to the Ministry of War, was directed in December, 1912, to proceed to the Balkans to study the working of the medical departments of the Allied Armies. His interesting report opens with a study of the raw material, the soldiers in the ranks of the various armies. He points out that there is a marked difference between the Bulgarian and Serb on the one hand and the Greek on the other.

The Serbo-Bulgarian soldier is usually an agricultural labourer: officers and men all belong to the same class. This arises largely from the fact that in these new countries a middle class (bourgeoisie) has not yet had time to form; consequently there is much good fellowship between all ranks, but at the same time no relaxation of discipline. The men are well built and hardy, accustomed to simple fare and privations, and not readily susceptible to disease. Their bravery needs no comment, but it is interesting to note that M. Cousergue ascribes the desperate nature of their charges to experience gained in the opening encounters of the war. The men learnt that to delay an advance merely gave the hostile artillery time to set, and that a fearless onslaught was the truest road to safety. He recalls the heroism of the volunteers of 1792 and relates the story of a wounded Bulgarian who had gone to the front