

Original Articles.

SUGGESTIONS FOR OFFICERS IN CHARGE OF FIELD HOSPITALS.

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THE following notes will, it is hoped, be found useful by young medical officers when ordered on Field Service.

I.—Mobilization.

On being warned for Field Service, a medical officer should at once arrange for his last pay certificate, to be obtainable when he receives orders to join his Field Hospital.

The order warning him must be carefully kept, as horse allowance can be drawn from the time of its receipt, provided he can certify that a horse was kept during that period (A.R.I., Vol. I, page 1, 443^r). He should then carefully "re-read" his Field Service Department Code, and also renew his acquaintance with the Field Service Equipment Tables, which latter can usually be borrowed from the District P. M. O., or will be found in No. 11 box on arrival at his hospital.

This study will be found to save much time when checking the equipment.

He ought to overhaul his personal kit, about which a few remarks will be made later.

On arrival at the place of mobilisation, he must, of course, report himself personally to the S. M. O. of the station, and by letter or wire to the P. M. O. of the district, if the station is not a district head-quarters. He should then get to work as soon as possible and communicate with the heads of the departments from which the hospital is to be obtained. These are shown in para. 146, Field Service Departmental Code.

It is important to let the Post and Telegraph offices know of his arrival at once. He probably will find a pile of correspondence awaiting him. It is necessary to obtain from the P. M. O. or S. M. O. of the station and from the C. C. O. a copy of any orders which may have been issued concerning the hospital.

It is most important to start the hospital diary the first day and enter everything referring to the hospital fully and clearly. This cannot be done too carefully. The diary should be so kept that in case of a change of medical officers, the officer who takes over charge may be in a position to answer any questions that may arise after the campaign is over.

To start with, a nominal roll of the *personnel* should be entered in tabular form, showing stations from which

they will come, the date of arrival, the date up to which they have been paid and what advances, if any, have been taken. Also the number and date of the order posting them, and a list of their documents. This table can be filled in as the *personnel* arrive; mistakes and deficiencies will be noticed and can be attended to at once. It only takes a short time to write, and it will be found more convenient to look up references in a table like this, than to look up the original documents.

As the *personnel* arrive they should each be medically examined (para. 150, F. S. D. C.) and then told off to their respective sections, and instructed in their duties. It will be found useful to put the hospital assistants on to learn the contents of the various packages, and to examine them in this

The following is a list of documents required :—

- 1. Medical officers—
Last pay certificate duly countersigned,
Extract of orders posting the officer,
Medical certificate of fitness for Active Service.
- 2. Assistant Surgeons and Hospital Assistants—
Last pay certificate,
Extract of orders,
Medical certificate of fitness,
Confidential report and transfer return.
- 3. Regimental N. C. O.'s and men—
Last pay certificate,
Extract of orders,
Medical certificate of fitness,
Company defaulter sheet,
Medical history sheet.
- 4. Army Hospital Corps—
Last pay certificate,
Extract of orders,
Last clothing certificate,
Defaulter sheet,
List of necessaries in possession.

It should be noted whether Medical subordinates have their pocket cases, revolvers and ammunition. Some C. O.'s send receipt and delivery vouchers for the arms and accoutrements of the Havildars and Ward orderlies. These arms should be inspected occasionally to see that they are being kept clean.

Equipment.—The following stores comprise the equipment of a mobilised field hospital

Medical boxes, which are stored either in a medical store dépôt, or, more often, in the station or regimental hospitals.

Commissariat boxes and packages kept in the Commissariat godown.

Furniture, in the R. E. Barrack Master's possession.

Tents and Ordnance stores, which are to be got from the arsenal if there is one: if not, from the O. C. station. Detail of tents is given in adjoining table.

Petty supplies (App. 3, Chapter XVI, Field Service Departmental Code), purchased by the C. C. O. on requisition by the medical officer in charge. These should always be obtained during mobilisation. If they are overlooked there may be difficulty in getting them later.

Water gear, issued by the C. C. O. and consists of a pair of pakhals, a chursah and a dhol for each pakhali mule, and a new mussuck for each bhisti.

Clothing is done by the C. C. O. The scales of clothing are laid down in Field Service Manual, para. 340,* but are generally modified for the particular campaign on which the troops are ordered.

Log lines, fifteen feet for each man, are issued by the C. C. O. for tying up bundles.

First field dressings.—These are obtained from the Medical Store-keeper for the personal use of the medical officers, subordinates and fighting men. They are not issued to followers.

Dooly transport is obtained from the universal provider, the C. C. O. If receipts are given for doolies complete, the following articles constitute the "complete":—

* Table IV, Field Service Equipment Tables.

	Bags, Pole.	Bags, Peg.	Poles, Ridge.	Poles, Standing.	Ropes, with Toggles.	Salita.	Caps, Pole.	Discs.	Hammers.	Pins, iron, large.	Pins, iron, small.	Pins, iron, with discs.	Prins, iron, without discs.	Pins, wood, medium.	Pins, wood, small.	Ropes, guy.	Mallet, large.	Mallet, G. S.	Mallet, small.	Hammers, F.H.Tent.	Wall, Bags.	Bags, pin, B.P. Tent.	
Tents, 160 lb. G. S.	2				1	2	3																
Tents, 80 lb.	1	1	1	1	2	2																	
Tents, Field Hospital.																							
Sowar pattern, 45 lb.		1	...	1	...	1	1	1	1	14	14	6	30	18	4	1	1	1	1	1	1	1	
I.P., 40 lb.			1	2																			
I.P. Necessary																							
Walls right																							

Flags, D.I.P. Poles II, 9 ft. with 3 iron wire guys and 3 pins, iron, 9 inches.

1 small wrench.

10 small pegs.

2 wire guy ropes. These three items are contained in a canvas bag and are for use when the dooly is fixed up as a *tente d'abris*.

2 canvas slings for holding the sick man's rifle.

1 small net.

2 chagals.

When all of the above things have been obtained, the actual work begins. Everything must be checked carefully and noted to be in working order. There is no short way of doing this; but if, as previously advised, the Field Service Department Code and the Equipment Tables have been well learnt, there will be a great saving of time in references. The Field Service Department Code contains two lists of the equipment of a field hospital.

Appendix 3 gives the list of articles and, opposite each, the number of the package in which it is contained.

Appendix 6 gives the list of contents of each individual package. The first appendix is used to find out in which package an article should be; the second, to discover what deficiencies there may be in any particular package.

There are a few suggestions which will be found useful and "time-saving" in checking a field hospital equipment,—a pot of paint and a few brushes are necessary—blacking will serve.

When the haversacks and companions in Nos. 3 and 4 boxes are checked, a small number should be painted on each. If any of them have articles missing or requiring to be replaced, the one which was deficient can be found at once. This saves opening them all again, which would otherwise be necessary, as they are all alike outside. Further, when these haversacks and companions are distributed to medical subordinates and N.C.O.'s or ward orderlies (Field Service Department Code, para. 62), the number of the package issued to each man can be noted and he be made responsible for losses.

Great care is necessary in unpacking Nos. 6 and 7 boxes, as they are packed somewhat tightly, and when they are packed up again after examination, the splints are very liable to get broken when the lid is shut. The best plan is to lay the articles out in order as they are unpacked, and then to pack them up in the same order in which they were taken out. Note carefully how the different tents are packed by the ordnance and tie them up in the same way. It is a good thing to paint the description of the tent on each bundle of poles, as they are often all packed in the same kind of bundle, and if a particular kind of tent is wanted, it is hard to find the right poles unless some mark is made on the bundle. You may open ten bundles before coming to the one you want if this is not done.

While on the subject of equipment the following rules will be found useful:—

First.—After obtaining everything in the way of stores and equipment that is authorized, paint on all that is not already marked, the designation and number of the hospital. This will include lanterns, buckets, etc., but more important perhaps than anything else the clothing and blankets of the followers. One constantly has cases of alleged thefts of kit to inquire into, and the evidence is always very conflicting. This cannot happen if the kit is all marked with the owner's numbers. It can easily be done by the ward orderlies who have little or nothing to do during mobilisation. The waterproof sheet in which each follower's kit is wrapped up on the march should also have the hospital designation marked on it, so that it will be recognisable on the line of march and in camp.

Second.—Start an issue book from the first day, and enter in it the name of any person to whom articles may be issued, and the date of their being returned. This should be verified by a medical officer's initials and will save much heartburning later on when lost articles have to be paid for. For example, the tent lanterns and buckets are issued to the senior man in each tent, who is responsible then for their loss or damage. The cooking pots are issued to the head cook and the *mussucks* to the blistis.

At the monthly checking of the hospital equipment, the responsible persons should produce the articles which have been entrusted to them.

Third.—This, although most important, appears to be often neglected. Never send any articles of equipment out of the hospital without a temporary receipt, as even the best intentioned people sometimes forget to return things borrowed by them.

Personnel.—As the personnel arrive, attention should be paid to what has been said above about their documents, &c. As a rule there will be no trouble with the medical subordinates and fighting men. The followers, however, are different.

Enquiries should be made regarding the sweepers and the carpenter. Mistakes have occasionally been known to occur with sweepers and, after starting on the campaign, it has been discovered that they would not do all the work required on account of caste objections.

A good carpenter is most useful in a field hospital, therefore always reject at once a man who was a gharialwa or a shoemaker before joining. Even this has happened.

The dooly-bearers require a certain amount of training according as to whether they have been on active service before or not. They must first be taught the number of their field hospital and made to repeat it until they can bring it out automatically when questioned. This will always be found necessary. They should then be told off into sections. They must

be taught their sections in the same way as above stated for the hospital, and it is better to call the sections 1, 2, 3, and 4, or the equivalent in Hindustani, as the dooly-bearer's intelligence is not usually capable of grasping the subtleties of B, C, and D.

During the few days occupied in mobilizing, they should be handed over to the N.C.O.'s and taught the elements of drill. They must be able to fall in by sections; to form fours and to march in the latter formation. This is all that is required, but it is wonderful what a change on the side of order it makes. For instance, when men are sent on fatigues, it prevents straggling, which is an instinct with the dooly-bearer, it prevents his deserting or sneaking off into the bazaar and getting drunk on his three months' advance of pay, and it prevents the loss of the packages which are being moved. A medical officer who has his men taught this amount of drill will find that he can move his camp in half the time that he otherwise could have done.

Next, the doolies of each section should have consecutive numbers marked on their poles and then the dooly-bearers of each section should be told off into dooly crews. One crew of these will in future belong to each dooly. The reason for this will be found on the first march, if the arrangement has not been made. When carrying loaded doolies, four men carry, while the remaining two walk alongside as reliefs. If there are many doolies loaded it is impossible to supervise all of them, for, by the time the column has marched five miles the doolies will be straggling all along the line on account of the different weights of the loads and the different powers of the dooly-bearers. The medical officers can do no more than ride up and down the line exhorting the bearers. It will usually be found after a time that each dooly has still its four bearers who started carrying, but that the other two have disappeared. It is then very hard to bring the deserters to justice, as each man who is questioned will give the name of his own particular enemy as missing. If, however, each dooly has its own crew and the doolies are numbered, a reference to the list will show the missing men, and they can be dealt with in such a way as to make them prefer the labor of dooly-bearing in future to the trouble they may meet at the end of the march.

Lastly, another subdivision must be made, and this before leaving the station of mobilisation. The men should be arranged in messes, each mess having its own set of cooking pots; otherwise each man brings his own sets of cooking pots, and carries them on his head or in the empty doolies, or else he secretes them in his kit after the latter has been weighed for transport. All these are obviously objectionable. The follower is only allowed 10lbs. transport, and his kit will weigh that without his cooking pots, so he has to carry them himself.

The messing arrangement can be made by the sirdars and mates according to caste. It would be convenient if the dooly crews and messes could be made to correspond, though this can not always be done. The surplus cooking pots are then left at the men's own homes.

II.—On the March.

There are a few observations which will be useful to bear in mind regarding marching with a Field Hospital.

First, all loads that are not required in camp should be tied up in their slings overnight and arranged on the ground in pairs, so that mules may be marched up between them. In this way no time will be lost in loading. Experience will show how soon, before the hour of marching, the tents should be struck. The time required for this and for loading will, of course, decrease as the men become accustomed to the work. As soon as the tents have been struck and tied up, the loads should be arranged as above, in pairs, so that loading may be done as simultaneously as possible. Loaded mules must never be kept standing, they should

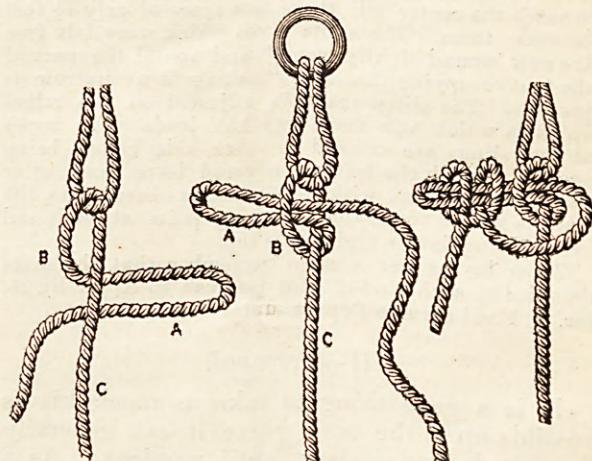
be marched to and fro until the column is ready to move off. Advantage should be taken of this, and of any other delays throughout the march, for medical officers to go down the line and inspect all the loads. If, on the march, a load comes loose or falls off, the mule must be taken off the path to reload and not allowed to block the way; the driver must be then instructed to cut in where he can, and not to try and trot the mule up to its original place. It may be borne in mind that it is the duty of the baggage guard to assist in replacing fallen or loose loads. (776, Part I, Field Service Manual.)

On arrival in camp, the baggage should be halted to one side of the camping ground so as not to defile the camp. All available followers should now be fallen in and told off, four to each mule, and unloading should be done simultaneously. If this be not done methodically there will be chaos, and much unnecessary delay. Dooly-bearers are apt to underrate their powers, and will crowd around the lightest loads. Two men are sufficient to lift off any hospital load, as it only weighs about a maund.

Both in unloading and loading, the men should be taught to work together. When loading, the four men should swing up the two loads as far as possible in one motion, and none of them should leave go until all of the rings are adjusted in the saddle hooks. A very fidgety mule can be kept quiet by holding up his foreleg.

Before starting on a march, everything should be packed and tied up before commencing to load. At first it will always be necessary to inspect the saddlery and see that it is properly fastened. Mules should be so tightly girthed as to prevent the loads from rolling, or girth galls will ensue. On the other hand they should not be pulled tightly enough to wrinkle the skin or to bruise the animal. (Girths are kept soft by hand rubbing.) Loads should ride high and not touch any part of the animal, and, as far as possible, only flat surfaces should rest against the saddle. They must be equal in weight; if not equal, the lighter load must be made to balance by the addition of stones. Small articles such as lamps and buckets should be tied on the top of loads and not allowed to hang loose. One medical officer ought always to see all transport out of the camp.

With each mule there is supplied a pair of rope slings for tying up loads. These are fastened as follows: The two ropes are laid on the ground side by side, at a distance apart corresponding to that of the pack saddle hooks. The load is now placed on them and the free



ends of the rope are brought over and passed through the leather-covered loops. A loop of the free end is then tucked under the standing rope. This is the so-called "transport loop" (fig. I.). A is the loop tucked under C, the standing rope. The portion of the rope between the transport loop and the leather-covered part (B, fig. I) is "pulled tight, and then the transport loop

is tucked in under B, fig. I, and caught. A couple of half hitches are now made with the free end of the rope over the transport loop, and the remaining slack of the two slings is then crossed over the top of the load and the ends are tied together with a reef knot. The accompanying diagram will make this description more clear. It will be borne in mind that the iron ring of the sling is only intended for hanging the load on the pack saddle hooks. The sling, tied in this way, can be easily undone, by untying the half hitches and pulling out the loop. In the case of hospital boxes slings are tied in such a way that the rings lie about half-way up the hinge side of the box. With soft loads, such as tents, the rings must lie about the centre of the flattest side. This will enable the load to sit well and high on the saddle.

There are five kinds of tents supplied to a field hospital. These are packed in the following manner for mule transport :—

First, 80lbs. double fly tents (F. S. Departmental Code, para. 140).—The tent is spread flat on the ground, outer fly under the inner. It is then pulled tight from the corners to make it lie quite flat, with no creases. The right half is now folded over on to the left, so that the doors correspond, and the corners are again pulled tight. The triangular doors are folded in so that the tent now lies square. The ropes are all turned up inside and the tent is folded by *lapping* over a third of it from one side; the remaining third being then lapped over this. The pegs and guy ropes are then put on the tent, and it is finally folded by lapping up twice from one end. It is now laid on the salita, which is tightly laced, and the slings are put on as above described.

80 lbs. single fly.—This is packed in the same way as the double fly tent, except that after the pegs and guy ropes have been placed on the tent, it is rolled up instead of being lapped, then placed in its salita, which is an open sack. The poles are now placed on the tent and the salita is laced tight over the poles.

40lbs. tent, same as above.

160 lbs. tent.—This tent makes one complete mule load. It is folded in the same manner as the other tents until the longitudinal laps have been made. It is then placed on its flat salita and the cords are loosely laced over it from either end towards the centre where the ends must be left free. The poles and pegs of the tent are now divided as far as possible into two equal bundles; one of these is placed on each end of the tent, which is now rolled up over the bundles. The two ends of the tent are rolled up simultaneously towards the centre till there is a space of only $1\frac{1}{2}$ feet between them. The salita cords which were left free are now wound tightly round and round the part of the tent occupying this space making it as narrow as possible. The slings are then adjusted on the rolled up parts which now make two half loads. The ropes of the slings are crossed on each side before being passed through the leather covered loops, and, after the transport loop, with its hitches, has been made, the slack is wound round the projecting poles at each end before being finally tied on the top.

When laying out a camp remember that the space occupied by each kind of tent is given in Appendix 15, sec. V, Field Service Departmental Code.

III—Personal.

It is a good thing to take as much kit as possible up to the base, where it can generally be stored, if necessary, until required. As a rule, one does not know until the base is reached whether the hospital is to form part of a moving column or to be stationary on the lines of communications. In the latter case books and extra clothes, which could not be carried with a Brigade, make a good deal of difference to one's

comfort. Time is apt to pass very slowly on such occasions. The morning convoy may or may not bring a lot of work; the rest of the day has to be got through somehow. A gun or fishing tackle will then help one out. Therefore the likelihood of being stationary at some period of the operations should always be thought of when packing up before leaving one's station to join a field force. If the hospital is to advance with a brigade, the scale of transport is published in orders and the amount of kit that can be carried will be that given in Table (I) of Field Service Equipment Tables, which model kit can be more or less adhered to.

The shortest experience of active service will impress on one's mind the soundness of the following advice.

Never start a march without a meal. Carry another in your haversack, as well as a feed for your horse on the saddle. You can never be certain that your baggage will arrive, or that you will arrive in your next camp the same day.

Never obstruct officially; everyone is working at high pressure, especially at the beginning of a campaign.

Never grumble. Everybody has enough discomfort and worry of his own without the addition of other peoples'.

Never believe camp rumour. This will save unnecessary elation or depression of spirits.

THE NEW THERAPEUTICS. RATIONAL THERAPEUTICS v. EMPIRICISM AND QUACKERY.

BY P. W. O'GORMAN, M.D., M.R.C.P., D.P.H.,
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I CRAVE permission to introduce to the profession in India a new method in the treatment of disease. And yet not new, except in contrast with the antique, although unknown and unpractised and, I hope to prove, strangely neglected by British Physicians. The claim for it, which should immediately engage the serious attention of all physicians, is that "it is an up-to-date method for the treatment of disease, whereby departures from physiologic equilibrium can be controlled *more quickly, safely, and pleasantly than by any other known method.*"

"Rational therapeutics," as Sir T. Lauder Brunton says, "is the highest branch of medicine. Its advance is necessarily slow, because it is based upon pathology on the one hand and pharmacology on the other, and both of these rest upon physiology, which in its turn rests upon physics and chemistry." And as chemistry is only a hundred years old, our advances have been many and rapid. But while we acknowledge this, we must recognise that our pharmacopoeias are very slow and very conservative to make immediate practical use of this acquired learning, and so do not reflect the highest or latest advances. It is the aim of this new method that I am advocating to press forward the claims of ad-