SOME POINTS ON BASE HOSPITAL ORGANIZATION (TENTED).

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CHOICE OF SITE.—This is a tactical problem and will be decided by the higher command, with due regard to transport routes such as waterways, railways, roads. The site should be away from military targets and, in the case of a Base Hospital on an island, should be away from any beach that would make a suitable landing for enemy troops, otherwise the Hospital may find itself in the front line. It should be at least 1,000 yards away from troop concentrations, dumps, etc. It should not be near an aerodrome, as the sick and wounded have probably come from areas where they have been harassed by air attack, and the proximity of an aerodrome would be most unsettling and would be a vitiating factor retarding recovery and in some cases probably precipitating, or at best worsening, neurosis.

PREPARATION OF SITE.—If orders are given to open up in a hurry, the digging down of a hospital is ruled out for the time being. The ground must be cleared of all stones and boulders and levelled off where necessary. If this is not done you will find that in a few days the tarpaulin floor coverings have been kicked through where inequalities exist. It is important at the earliest possible moment to dig slit trenches both for patients and Unit personnel. The slit trenches outside marquees are dug at each corner in “dog-leg” pattern with each portion not longer than 6 feet.

If, as is most unlikely, there is unlimited time to lay out the Hospital, all tents can be dug down. To dig down a hospital of any size complete will take about three months. It must also be borne in mind that the digging down of hospital tents is entirely conditioned by the rainfall. It is quite useless to attempt to dig-in tents where this is heavy.

DISTRIBUTION.—The distribution of ward tents and departmental tents is conditioned chiefly by the water supply. It will be frequently found that water is supplied by pipe line and as water pipe line is a scarce commodity a minimum length only will be available; probably about 300 yards for a 600 bedded hospital. It is then essential to lay along this pipe line those services which cannot be run without a near supply of water and these are—Operating Unit, X-ray Unit, Path, Lab. and P.M. Room, Dispensary, Hospital Kitchen, Unit Messes, Regimental Institutes: The wards will be distributed on each side of the Departments so as to facilitate water carriage.

The lighting plant or plants will be laid down where they will serve the load most effectively.

Secondary roads will be made to meet the requirements of the lay-out.

CAMOUFLAGE.—Strictly speaking it should be unnecessary to camouflage a hospital as there is growing evidence that the Red Cross, when seen,
respected and this, if available, should be laid down at the four corners of the site some 200 yards from the nearest tent. Where the tents issued are of the Hospital Extending Type, the drab colour of the majority of the tents fits in well with most surroundings. E.P.I.P. tents on the other hand are of a dazzling white and before erection should be wetted and plastered with mud or sand. There is a spraying apparatus for the camouflaging of tents but this should not be relied on as it seldom appears. Decorations outside tents should be discouraged as there is a tendency to make them with conspicuous articles which reflect sunlight.

Concreted Areas.—There are certain areas on the site which must be concreted and these are the Operating Unit, Path. Lab. and P.M. Room, stands 12 by 12 feet outside Dining Halls for washing up purposes, kitchens, ablution areas, swill stands, latrines, conservancy stances. With regard to the Operating Unit concreted area, a shallow channel 6 inches wide deepening to 1½ inches in the centre should be made so as to fall within the operating unit when the tent is pitched. The channel is “U” shaped with an outlet at the curve of the “U” leading to a soakpit some feet outside the concrete area. The floor should be gently sloped to this channel. This facilitates swilling down after operations. Whilst the concrete floor is being laid, the tent roof and side poles should be in position and the poles worked gently whilst the cement is hardening so that they do not become embedded. It is also important to introduce the pegs holding the side walls before the cement hardens and clear an area round each peg so as to permit of further driving in if required. This cement base should stretch three feet beyond the side walls and have a concrete path leading off to the sterilizing room and the theatre store room.

Conservancy stances are required if the method of disposal of conservancy is by contractor. There should be more than one for convenience of loading and each stance should be supplied with a water point. The object of these stances is that the lorry taking away the conservancy should be driven on to the stance and all loading of conservancy done on the stance. There should therefore be a wide margin of concrete clear of the actual lorry. When the loading has been done, the stance is swilled down and the resultant dilute sewage flows into a soak pit.

Semi-Permanent Buildings.—There are certain departments in a tented hospital which should be housed in semi-permanent buildings—these are the Operating Unit, X-ray Unit, Path. Unit, kitchens and Steward’s Store.

Tents or Semi-Permanent Buildings or Machinery Requiring Special Protection.—These are in order of urgency—Telephone Exchange, Theatre, X-ray Unit, Dynamos and Lighting Sets, Path. Unit. If possible the lighting sets should be in a sound-proof structure otherwise there is loss of sleep in nearby wards. The protection should be done by the Engineers as amateur work is dangerous.

Tent Pitching and Canvas Maintenance.—The type of ward unit will depend on the type and amount of canvas available.
Hospital Marquees, Extending.—The ideal construction is two sections of four in parallel with a connecting passage at one end, in the middle of which are two end sections acting as a clinical room, ward kitchen, Sister's Bunk, etc. This type of structure demands six ends for eight sections which is highly uneconomical: or in other words if you use ends in a prodigal fashion you will have none for other purposes such as Administrative Offices. The most practical lay-out is eight sections taking up two ends.

E.P.I.P.—With regard to E.P.I.P. tents there are two alternatives: one is a cruciform arrangement of tents, the other is end to end. The latter is probably the better but it must be remembered that tight lacing is essential. In addition it is best to get some spare canvas strips which are placed under the ends and not as channels to take away any rainwater which comes through.

The tents must be pitched end on to the prevailing wind and care must be taken that main guys are firmly anchored. In sand it must be realized that the wooden posts issued are useless and an early opportunity to draw long steel picketing posts from the Engineers must be taken. If these are not available, an alternative is to dig holes where the main guy stays will be, fill these with cement and before the cement sets a stout wire loop should be embedded. This will help you to ride out any storm, but it must be remembered that the guy ropes should be adequately protected from chafing.

Ward orderlies in tents are instructed that a frequent inspection of guy ropes is most essential and they should loosen and tighten as required, bearing in mind that a damp atmosphere will tighten the guy ropes and pull out the pegs. The ward orderlies should also be instructed that if in their view the situation is beyond their powers the Storm Party should be called out. This Storm Party should be as large as possible and should be organized before pitching is commenced.

There should be a routine tour of all tents one hour before dusk and minor faults can be remedied.

A suitable person, drawn from the Unit if possible, should be detailed for repair of canvas. Much repair work can be obviated by intelligent stowage of stores in tents, bearing in mind that any hard edge, boxes, etc., should be so far away from the walls that a sudden gust of wind will not belly the canvas and cause chafing. This should be particularly remembered when erecting racks in the Pack Store. The tops of the racks must clear the tent roof under any circumstances of storm and, to make doubly certain, any hard corner should be protected by old socks.

Ward Distribution.—The clinical units must be regarded as fluid. For convenience of supply there will be a clinical unit on each side of the water pipe line but this cannot be regarded as strictly medical on one side and strictly surgical on the other. The distribution of patients in these units is entirely subservient to the military situation and the disease or diseases that may be endemic or prevalent at the time.
Again, there must not be too much pre-allocation within the Divisions, i.e. it would be ideal to have on the medical side separate wards for malaria, dysentery, acute medical cases, diphtheria, tonsillitis, sandfly fevers, gastric cases, catarrhal jaundice, etc. It is only practical to cater for clinical groups such as malaria, dysentery, typhoid, isolation. Otherwise it would be found that on reception of a large convoy your maximum number of tents would be occupied by the minimum number of patients. The same applies to a lesser extent on the surgical side.

The various clinical sub-units on the medical side require separate consideration, e.g. the Dysentery unit requires fly-proof bedpan cabinets and a small incinerator for disposal of faeces and dysentery pads. The Typhoid unit requires separate utensils for each patient, a special technique for dealing with bedpans and soiled bed-linen and disposal of faeces. Malarial patients must sleep under nets.

On the surgical side a fracture ward should be near the X-ray Department. There should be a clean surgical unit, a septic surgical unit, a unit for desert sores and a unit for E.N.T. and Eyes. With regard to the latter two special departments, it must be realized that one Sister cannot do justice to both these departments, however small. It is a most unusual combination to have a Sister experienced in these two specialities.

CARE OF STORES AND EQUIPMENT.—This is a problem which requires the most minute attention from the time of formation of the Unit. Stores are apt to go astray in transit and provision must be made for guarding these stores, taking care that written instructions are given to the Officer in charge of the party. He should insist on being present at the loading and unloading of these stores and should check any tendency to careless handling. If the stores travel by a different train or ship, the O.C. should insist that a party accompany the stores, unless higher authority directs otherwise. When stores arrive on the site they must immediately be checked on opening the containers and it is at this stage that an eye must be kept on a future move, i.e. packing cases must be jealously guarded. This is done by careful opening and any unavoidable damage being repaired as soon as the case is empty. The cases are then stored and strict instructions are given that they must on no account be touched as there may be a tendency to use them for firewood. This cannot be too strongly stressed as, if the unit is ordered to move, the packing cases will be required to repack the stores. If the packing cases have been destroyed, your move will be completed at the expense of about 50 per cent of your stores.

There should be proper taking over of ward equipment by the Matron and she will see that it is properly taken over by sisters in charge of wards and departments, keeping an eagle eye on any subsequent handover when a Sister goes sick, goes on leave or is posted to another unit. The Quartermaster will make frequent inspections of equipment and see that the stocks held tally with those entered on the Inventory Boards. It should be borne in mind that Red Cross stores must also be accounted for and shown on a separate Inventory Board.
Borrowing.—In departments such as the theatre borrowing cannot be avoided. The Theatre Sister must keep a book in which the article borrowed is entered and a signature taken from the person borrowing.

Care of Breakable Items.—There are two items in a tented hospital which are particularly liable to be broken: thermometers and syringes. Thermometers should be carried on the person of the sister in charge of the ward and put in sterilizing fluid when not being used. Immediately they are used the sister takes charge of them again. If thermometers are kept in a jar the flapping of the tent sides in a breeze will upset the table on which they are standing and these thermometers will be written off!

With regard to Record syringes the chief delinquents are Medical Officers. They use the syringe for aspirating blood, pus, etc., and, as soon as they have withdrawn the fluid, the syringe is put on one side without removing the plunger. In a few minutes the plunger becomes irretrievably fixed, force is used to remove it and the syringe breaks. The excuse given—"faulty syringe!"

Much of this syringe breakage can be prevented at the outset by circulating to all concerned minute but simple instructions on the care of syringes on the following lines.

1. When you have used the syringe draw water through the needle and wash out.
2. Remove the plunger and needle and place in cold water.
3. Clean the syringe, remove all visible trace of pus or blood, wrap each part in lint or pieces of linen and boil.
4. Never boil a syringe with the piston in situ.
5. Never put a hot syringe into water to cool.
6. Store the syringe in a box, preferably on the ground. If syringes are left on tables these are sometimes blown over.

Breakage Forms.—You must insist that when an item is broken, the breakage form is submitted to the Quartermaster forthwith and to the C.O. within twenty-four hours. If the rendering of breakage forms is slack, it is found that on perusal the excuse is insufficient and, when asked to interview the individual, you are told that he or she has been posted to another unit, gone on leave, etc., and the mystery is never cleared up. A Court of Inquiry has to be held and there is a drain on unit funds.

With regard to non-occupied wards, the equipment should be withdrawn at once and in any case should not remain there overnight. If this is not done the equipment disappears.

All store tents must be slept in. If this is not done the stores disappear.

Sanitation.—The type of latrine adopted will depend on the nature of the soil. The ideal type would be the deep trench latrine and it will be found that these can be conveniently used by patients who are convalescent. Sanitary annexes must be provided for patients who cannot walk very far. These will be constructed a few yards away from the wards and will be of the bucket type. Whatever type is used must be fly-proof. In order to save
material the policy has been adopted that it is the bucket that should be fly-proof and not the whole annexe, except for departments where fly-borne diseases such as dysentery, typhoid and cholera are treated, where an effort must be made to attain complete fly-proofing.

In the absence of a contract for disposal of conservancy, incinerators must be provided. Close collaboration with the hygiene authority and the engineers should result in the construction of an efficient installation.

Swill.—All swill buckets should be on a concrete base which can be washed down and kept clean, the washings going into a soak pit. The ideal is a concrete base 14 by 8 feet, half of which has a semi-permanent building erected, open under the eaves for about 6 inches and there wire-netted. The other 7 feet should be enclosed entirely in wire netting and have a door. The swill buckets are housed inside the small building, swill proper on one side and dry refuse on the other, distinctly marked. The door should be self-closing. This prevents the swill area from being rifled by jackals and cats. If the wire netting is white-washed it acts as a deterrent to the passage of flies.

All soak pits should be fitted with covers and have a fly trap in the lid.

Bed-pan Stances.—All bed-pans, except those for fly-borne diseases, should be stored on the sunny side of the annexe. A pit two feet deep is dug along the annexe, filled with stones above ground level, the stone surface being slightly sloped away from the annexe. After cleaning, the bed-pans are laid on these stones and the heat of the sun bakes them and keeps them germ-free. (This of course would only apply to tropical and subtropical areas.)

Anti-Fly Measures.—It is best to appoint an officer to run an anti-fly campaign and to put a hut at his disposal for storing supplies such as Flit, Flit Guns, Tanglefoot, fly traps and material for repairing fly traps. Posters should be freely displayed and 100 per cent of fly swats should be issued to all ranks. This includes patients who are fit to use them. During the fly season it should be insisted that all ranks carry a fly swat when compatible with duty. Lectures should be given by this Officer on the conditions which favour the breeding of flies and how these conditions can to a large extent be eliminated. All precautions must be taken against your site becoming a breeding ground for mosquitoes.

Stoving of Bedding.—It is important that bedding requiring disinfection or disinfestation should be removed at once. Steps should be taken from the beginning to see that responsibility for removal is clearly allocated and understood. Disciplinary action should be taken on the slightest infringement.

Unit Matters.—Unit accommodation will usually be at the periphery of the Hospital. The Nursing Sisters should be accommodated in a protected enclosure. This is a very reassuring factor and is not advanced as a necessity.

Where Contractors are allowed, their goods, prices and contracts should
be rigidly scrutinized and they should be made to contribute to the Regimental funds. Their sanitary arrangements should be frequently looked into and their living tents also visited frequently. Unless this is done you find fly breeding is extensive in their vicinity.

It is essential to appoint a Sports Officer and to see that the men have sufficient recreation. Inter-unit fixtures should be arranged.

The Unit Padres will organize concerts, cinema shows and so forth.

**Operating Unit.**—If possible this should be a semi-permanent building and should comprise theatre proper, plaster room, sterilizing room and theatre storeroom. If the Unit is in a tent there should be an open space between the theatre itself and the plaster room. The plaster room should be used for minor and septic surgery.

The sterilizing room should be fireproof with sterilizer on one side and a fireproof bench on the other for boiling up sterile water and for housing a still for distilled water. Water should be laid on. A shelf can be made under the fireproof bench for storing drums, sufficient clearance being left underneath for swilling down.

With regard to lighting, a good operating light can be constructed from petrol tins used as reflectors and can be made almost shadowless by skilfully placed bulbs. There is an emergency lighting set composed of acetylene lamps.

Operation lists are issued to interested personnel, not forgetting the ward from which the patient is brought.

**Surgical Teams.**—You may be asked to arrange for a Surgical Team to be detailed and to proceed when and where required. You must find out if the team will be proceeding to all operation facilities or whether it is expected that all equipment should be taken with them, and arrange accordingly, bearing in mind that, if you are expected to supply instruments for such a team, you must indent for them so that they are in readiness. In this event you will also arrange for sterilized dressing to be constantly on hand and your officer in charge of Surgical Division will be responsible for keeping all equipment to the required scale, not forgetting that dressings will require to be periodically re-sterilized.

**Sterilizing.**—The field sterilizer is usually of the Manlove Alliot pattern and is shipped in a stout packing case. When the packing case is undone you will probably find that the retaining braces inside have been smashed and the sterilizer itself will probably require extensive repair, such as rewelding of shorn off cocks and reshaping of outer jacket. This will be done by the Engineers and the apparatus tested out by them to ensure safety. Before it can be used it will require a metal chimney to be fixed of a sufficient length to clear the roof of your sterilizing room.

You will require to organize times for sterilizing of drums bearing in mind that the capacity of your sterilizer is limited (two large drums and one small or five small drums). It must be insisted on that all drums have metal identity tallies cut out from old tins and symbols marked by nail indentations.
Adhesive plaster must on no account be used as it is wasteful, unsightly and ineffective.

Sterilizing Control.—The sterilizer must be tested weekly by plating dressings after sterilization. A sterilizing technique must be evolved to suit existing local conditions, e.g. flies and dust. The ideal, of course, would be a fly- and dust-proof operating theatre: this cannot be achieved.

The following series of experiments were carried out and on the findings a suitable technique can be laid down.

Experiment 1. Plating dressing straight from drum. Result—sterile. This proves the efficiency of your sterilizer.

2. Plating sterile dressing after standing uncovered for one hour. Result—growth of pathogenic organisms, proving air- or fly-borne contamination.

3. Dip a fly in ink, allow it to crawl over sterile dressing and plate the track. Result—growth of pathogenic organisms, proving that the fly is a contaminator.

4. Plating of same fly. Result—growth of same organisms as in last experiment. Proof as above.

5. Plating of dressing wrung out of 1:1,000 perchloride of mercury solution, after standing for one hour. Result—sterile. Proof that perchloride of mercury is an efficient germicide.

6. Plating of sterile dressing soaked in 1:1,000 perchloride of mercury after fly dipped in ink allowed to contaminate. Result—sterile. Proof as in Experiment 5.


8. Plating of sterile dressing after standing one hour, but covered with sterile towel. Result—sterile, proving that adequate protection excludes contamination.

Conclusions. It would seem that the covering of dressings is sufficient but it must be borne in mind that a certain time elapses between the extraction of a swab from under a sterile towel to the time the swab is placed on the wound. During that time it may be contaminated by pathogenic organisms which are dust-borne or fly-borne, therefore the added precaution of wringing the dressing out of 1:1,000 perchloride of mercury solution is essential and this technique was adopted with success during a period of seven months in a desert area. In spite of this it was decided never to open joints. These cases can be quite well dealt with in Hospitals that are housed in buildings where the staff can practise complete aseptic technique.

Out-Patient Department.—In a tented hospital that can be quite easily run by the Theatre Staff and should be in an adjacent tent. This is a saving in personnel and equipment.

Pathological Laboratory.—It is stressed that this should be in a semi-
permanent building and that the media room should, as far as possible, be rendered dust proof. Otherwise the impalpable dust in the air will find its way even into Petri dishes. There should be a fly-proof bedpan cabinet with a capacity of about 20 bedpans for a 600 bedded hospital. Stress should be laid on the proper wording of requests for examinations by Medical Officers.

**Massage Department.**—This should normally be attached to the X-ray building and in addition to the equipment laid down the Engineers should be asked to instal a rib stalls and pulley system for limb exercising. With regard to the staffing of this establishment, it is essential that the M.O. in charge should have a real interest as well as experience in the work. Otherwise the Department becomes a dead end; requests for massage by M.O.s are never intelligently challenged and the attendances become so numerous that cases actually requiring physio-therapeutic measures are by no means adequately dealt with.

Progress charts should be kept showing reactions of muscles and nerves and a column for remarks, noting general improvement or otherwise.

Depending on local facilities, occupational therapy may be practised and some form of this useful measure should always be visualized.

**Dispensary. Storage Inflammables.**—Ether and other inflammable material must not be stored in the Dispensary. A hole should be dug and suitably covered.

Ether must on no account be stored in wards, and an order to this effect should be incorporated in Standing Orders. If an operation requires to be done in a ward the Anaesthetist will bring his own apparatus.

Dispensary Books must be scrutinized once a week by the O.C. and apparent extravagances checked. The Dangerous Drug Book is similarly scrutinized.

The Dispenser on duty will be detailed daily to meet with necessary requirements at all times.

A weekly dressing expenditure is kept for all wards. This is checked weekly and any abnormal items investigated.

**Record Keeping. In the Divisional Offices.**—A Record Card Index System on 5 by 3 cards must be instituted at once. The method is as follows:

(a) **The Key Book.**—This is a book with consecutive numbers from 1 upwards. Against each number is placed the name of the admitted patient as he arrives. This number has nothing to do with the number in the A. & D. Book but is a sequential number of patients admitted to the Division.

(b) **The Record Card.**—This is made out by the Wardmaster on the admission of a patient and on the front of it is entered (i) the sequential number in the Key Book, (ii) Regimental Details. A space is left at the bottom for diagnosis. The card is completed on the discharge of the patient by the Officer in charge of Division entering (i) Disposal of the patient, (ii) Any relevant clinical details, with particular attention to noti-
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iable diseases and accidental injuries. These cards are filed in alphabetical order.

c) Disease Index.—An extract is made from "The Nomenclature of Diseases" of those diseases and injuries likely to be met with in war. This list is kept on loose leaf foolscap, taking care to space the diseases in such a manner that the commoner diseases and injuries will have an adequate blank space for use. On the discharge of a patient his Key Book number is entered under the disease from which he is suffering.

The advantages of this system are too obvious to require detailed explanation. Suffice it to say that any extra-hospital inquiry can be answered in a few minutes: you can tell at a glance at your Key Book your admissions to a certain date: by consulting your disease index you can at once see the nature of your work: you can provide useful clinical information by a study of the clinical findings on the record cards.

At the end of the year the whole system is parcelled up and the same system adopted for the following year.

In Special Departments.—Patients sent up for consultation should be recorded by the Specialist concerned on 7 by 5 cards.

Hospital Output.—The functions of a hospital are to receive sick and wounded and to return them as quickly as possible either fit to their unit, convalescent, boarded to another category, or invalided. The speed at which this is done must of course be commensurate with efficient treatment.

The output of a hospital can be materially speeded up only if the patient is conscientiously supervised. All patients who have been out of bed for one week should be seen by the O.C., the appropriate Specialist or Medical Officer being in attendance at the same time. By this means it can be seen whether the facilities of the hospital are being used to their full extent and it must be insisted on that the patients doing ward duties will also attend.

Board Procedure.—A well defined procedure must be laid down from the beginning. The following sequence is suggested:

(1) M.O. in charge of case reports to appropriate Specialist, suggesting Board:

(2) If Specialist concurs, the requisite board papers are prepared, the Specialist adding his report, and the papers, together with X-ray films, I.1220, and Path. Reports are submitted to Divisional Officer for perusal, approval and handing to Chief Clerk.

(3) The Chief Clerk prepares the requisite copies and the patient is brought before the next medical board.

If a Standing Medical Board is appointed to consider all cases, this should assemble at intervals of not more than one week at each Hospital. Longer periods are wasteful of Hospital beds as, in many cases, immediately the patient has appeared before the board he can be sent to a Convalescent Depot to await approval and subsequent evacuation.
A Register should be kept by the Chief Clerk in which the patients' details are entered as soon as the documents are first submitted, with the date. The headings should show date of Board, date of submission to Approving Authority, date of approval, disposal and remarks. A copy of this Register, showing only those cases awaiting Board, awaiting approval or awaiting evacuation in Hospital, should be prepared and kept up to date in the O.C.s Office.

A separate register should be kept of "Regradings" and "Evacuations" and the Regradings Register (including those placed in Category "C") should show the date of notification of Unit of the regrading and the exact disposal of the patient, as it is found that Units raise many queries on this point. Patients should not be brought before a board for regrading until they are fit for discharge to duty within the scope of their new grade, and the Chief Clerk should periodically look through the Register and by checking with the A. & D. Book mark all patients discharged. The attention of the Divisional Officer should be drawn to any who are not so discharged.

The fact that the C.O. sees all up-patients once a week is a double check to see that cases put up for board are boarded, as he can check the exact state from the register kept in his Office and take any action he thinks necessary if there is a hold-up.

If this is not done you will find that patients hang on interminably in hospital and any inquiries as to their fate will be fobbed off by the formula—"waiting for a board"!

Fire Discipline.—A Fire Officer should be appointed and his duties may well be associated with those of P.A.D. Officer. He should give frequent lectures and hold frequent fire drills. A Fire Picquet will be detailed. In wards there should be adequate and visible notices pointing out the dangers of carelessly thrown cigarette ends: it must be borne in mind that notices may have to be provided in appropriate languages. Ash trays should be provided on every locker. Night orderlies must be strictly warned that there must be no unattended lights in the tents: a sudden storm may blow up and a lamp being upset is likely to cause a fire.

In Stores—no smoking to be allowed.

In Personnel Lines—Officers are the chief offenders and a watch should be kept for unattended lights, particularly during the evening meal.

Telephone Distribution.—It is considered that twelve instruments are the irreducible minimum for a General Hospital, however small. These are based on essential Departments, the remainder supplying ward groups, the more acute wards acting as the centre of each group.

P.A.D.—A P.A.D. Officer will be appointed and should make close liaison with the Area P.A.D. Officer, so that his scheme fits in as closely as possible with Area requirements. He will see that slit trenches are made on an adequate scale for patients and personnel. During an air raid he will be in the command post which is usually the telephone exchange.
able places on the site are selected for spotting posts—these should be in communication with the Command Post by runners (two runners to each post). The O.C. should be in the Command Post, the Surgeon on duty in the theatre, Officer in charge Surgical Division is in touch with theatre, Surgical Wards and Command Post, and Officer in charge Medical Division is in touch with Medical Wards and Command Post.

Procedure at Night.—Personnel not on duty stay put unless the "fall in" sounds.

Procedure in Daylight.—Routine work not interfered with unless actually bombed. Provision should be made for the dispersion and protection of motor transport. Convenient hillocks can be partially dug out and the vehicles run in.

Security.—All natives employed on the site must have passes in order and all persons should be challenged and have their passes scrutinized. If you see a native carrying a bag, get him to open it—it usually contains items pilfered in the unit area. Unauthorized persons should be discouraged from passing through unit lines, otherwise items of equipment and personal belongings will be missing.

Secret Documents.—Greatest care must be taken of all such documents and it should be ensured that they are not left lying in officers' tents. A distribution book must be kept and it is the duty of the Chief Clerk to see that all such documents are under lock and key.

Money.—Money should not be allowed to accumulate but should be paid into the bank at frequent intervals. This applies to all Messes.

Standing Orders.—These should be compiled to meet the situation. A set of orders which may be excellent in one situation would be impracticable in another. Patients should be made to sign the appropriate section of Standing Orders as having read them, as soon as they are fit to do so.

Passes.—Other Rank patients are inspected by the Wardmaster before walking out to see that they are properly dressed.

Kitchen Discipline.—All ranks handling food should have a stool examination to exclude the dysenteries and any man handling food who is suffering from diarrhoea must report sick and be removed from duty until the condition is cleared up. Personnel suffering from V.D. are rigidly excluded. The N.C.O. in charge of the Cookhouse should examine the hands and finger nails of his personnel each morning. Nail brushes should be provided. Everyone in the Cookhouse should be fly conscious and all the methods of fly killing and prevention of fly breeding brought into use. All food must be protected. There should be a preparation room, thus preventing soiling of the ground outside with food debris, and one criterion of good kitchen discipline is complete absence of water slopped outside. Grease traps should be well looked after. Smoking is strictly prohibited. If this is not enforced, you will occasionally find a cigarette end embedded in the jam roll!

Dining Hall Discipline.—All cutlery should be inspected frequently.
and food adequately protected. There should be a liberal supply of tangle-foot and fly traps placed where necessary. Posters should be displayed showing that the fly contaminates food and causes dysentery. There should be adequate accommodation for cleaning knife, fork, spoon, plate and mug and if possible all feeding utensils should be scalded as a guard against the spread of diphtheria. All ranks should be made aware of the danger of scattering food on the ground.

**Salvage.**—An Officer or Warrant Officer should be appointed as Officer in charge of Salvage. He must give periodical lectures on what to collect and provide receptacles for the various articles. Each receptacle should have the name of the article collected. He should also point out that any useful articles found on the ground should be returned to the Q.M.’s Stores and on a tented hospital site stray pegs are the chief things one has in mind.

**Water Point Discipline.**—All water points should be picketed; convalescent patients are suitable for this purpose. The object is to prevent waste of water and to see that ablution benches are used only for that purpose.

**Points on Inspections.**—The inspection of a tented hospital should be divided up, doing a section each day, e.g. Medical Division, Surgical Division, Stores, Company Lines. With regard to Divisional inspections, the outside of the tents requires special attention. Slit trenches are scrutinized to see (1) that they are in proper repair and (2) that they are not used as rubbish dumps. *Inside wards*—see that mosquito nets are in proper repair, that all anti-fly precautions are being taken. Inquire into the facilities for keeping meals hot and see that all breakable items are stored in a safe place. *In Sanitary Annexes*—see that all latrine buckets are fly proof and that bed-pans are properly cared for. *Swill Stances*—see that swill buckets are not being interfered with and that debris is not strewn round about. The Sanitary N.C.O. should accompany the C.O. on these inspections. *Butcher’s Shop*—see that the meat is properly protected from flies and that the meat is of good quality.

With regard to unit inspection, a prize should be given for the best tent each week. This encourages orderliness. There should be a mosquito net inspection weekly, making an N.C.O. responsible for the inspection of the nets of groups of personnel.

**Reception of Convoys.**—See that a hot meal is provided and see that the kit of admissions is properly handled: that no more kit than is necessary accompanies the patient into the ward and that the remainder goes into the Pack Store, or to the Disinfector if required. The kit allowed into wards consists of one pair of boots, greatcoat, tin hat, respirator and small kit. If kit, other than this is allowed to find its way into the ward it tends to untidiness and articles of uniform will be put on and the patient will go out without a pass and find his way to the wet canteen.

W. 3118.—It is most important that this document be perused, not only when the patient comes in on convoy, but immediately his case is reviewed
by the M.O. in Charge. Otherwise important information may be overlooked to the detriment of the patient.

C.O.'s Office Routine.—The C.O.'s day starts with a perusal of the Night Report. He makes notes of any outstanding features. It is advisable that the C.O. should keep a book for making notes for reference to executive Officers, and stroking the items out as they are settled. The Q.M. is then interviewed and outstanding matters dealt with. Discharges should be seen early in the morning, as this prevents patients standing about in the heat of the day. There is a daily consultation with Officers in charge of Divisions and this should take place in the light of the night report and before the day's work starts. The Matron can be seen after she has held her Office.

Duties of Officers in charge of Divisions.—Very little is said on this subject in Regs. for the Medical Services of the Army. It is therefore clear that the intention is that each individual executive officer should formulate his own routine. He is responsible for the proper medical care of the patients in his Division and for discipline in the Division. It is essential that treatment is instituted at the earliest possible moment. This can be ensured by issuing clear instructions to ward staff to call the appropriate M.O. when admissions are received. As in the case of the O.C. the basis of his day is a perusal of the night report and in the light of this he should hold an early daily conference of his M.O.'s. This could profitably be done before the O.C.'s conference. The proper administration and discipline in his Division depends largely on the efficiency of his Wardmaster, and one of the chief factors in smooth running is a constant knowledge of the changing bed state. He should insist that reference be made to him before an internal consultation is requested. The Officer in charge Surg. Div. should be a competent surgeon capable of evaluating the work in his division, as he is responsible, as already pointed out, for the proper medical care of his division. He should be in constant touch with practical surgery as he may be called upon to do active work should his specialist staff be depleted, e.g. detachment of Surgical Team.

Finally.—Much important matter has not been discussed as the main intention has been to emphasize the ordinary spade work of moving in and getting snugged down. It is not claimed that any of the opinions put forward are the official view.