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THE GENERAL BOARD

United States Forces, European Theater

ORGANIZATION AND EQUIPMENT OF MEDICAL UNITS IN THE

EUROPEAN THEATER OF OPERATIONS

MISSION: Prepare Report and Recommendations on the Organization and Equipment of Medical Units Employed in the European Theater of Operations.

The General Board was established by General Orders 128, Headquarters European Theater of Operations, US Army, dated 17 June 1945, as amended by General Orders 182, dated 7 August 1945 and General Orders 317 dated 20 November 1945, Headquarters United States Forces, European Theater, to prepare a factual analysis of the strategy, tactics, and administration employed by the United States forces in the European Theater.

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THE GENERAL BOARD  
UNITED STATES FORCES, EUROPEAN THEATER  
APO 408

ORGANIZATION AND EQUIPMENT OF MEDICAL UNITS  
IN THE EUROPEAN THEATER OF OPERATIONS

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THE GENERAL BOARD  
UNITED STATES FORCES, EUROPEAN THEATER  
APO 408

ORGANIZATION AND EQUIPMENT OF MEDICAL UNITS IN THE  
EUROPEAN THEATER OF OPERATIONS

PART ONE

ORGANIZATION AND EQUIPMENT OF ARMY MEDICAL UNITS

CHAPTER 1

ORGANIZATION AND EQUIPMENT OF THE MEDICAL GROUP

SECTION 1

COMPARISON OF THE MEDICAL GROUP AND THE  
MEDICAL REGIMENT

1. The change-over from the medical regiment to the medical group with its separate battalion headquarters and separate collecting, ambulance and clearing companies, has had several definite disadvantages. The officers and men of the separate companies have not been imbued with "unit spirit" which is considered so important in organic battalions and regiments and which did so much to promote esprit de corps. Being a member of a numbered separate company has never seemed as important as belonging to a lettered company of a certain battalion or regiment. Separate companies did not have a distinctive insignia and since the flexibility of the present organization resulted in companies frequently being shifted from one army to another, the personnel concerned either did not bother to wear the army insignia or they were forced to change the insignia frequently. They never felt that they belonged to an important unit or organization. Ambitious enlisted men and officers frequently were denied a chance for advancement and promotion in the separate companies due to lack of a position vacancy in their particular company while in other separate companies, incompetent enlisted men and officers were promoted to fill position vacancies. This would not have occurred in a more rigid type of organization such as a battalion or regiment. Group and battalion commanders were unable to exercise the desired control over their companies in matters pertaining to training, administration and discipline because frequently a company would be transferred out of the battalion soon after deficiencies were noted in an inspection and prior to the time that these deficiencies could be corrected. Not only did the morale of the personnel in the separate companies suffer but the morale of the officers and men in the group and separate battalion headquarters was impaired by the realization that they were unable to build up their companies into a unit with the high standards they desired. Supervision of administration and the procuring and maintenance of supplies and equipment could not be controlled and supervised by the separate battalion and group headquarters but had to be decentralized to the

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separate companies. As a result these functions were not properly carried out in many instances. The personnel in battalion and group headquarters who could have performed these functions were not profitably occupied.

2. The medical group with separate battalion headquarters and separate companies has provided considerable flexibility. It has enabled battalion headquarters and separate companies to be transferred quickly and easily from one army to another and between the various sectors within an army. Medical groups with few attachments have been available for assignment to minor or special missions while groups with heavy attachments have been readily available for more important missions. The movement of battalion headquarters and separate companies for the sole purpose of keeping them attached to their initial group headquarters has been avoided. Most of the disadvantages enumerated in paragraph one could have been avoided and most of the advantages in this paragraph could have been obtained with organic battalions and by depending upon shifting whole battalions from group to group.

3. The flexibility provided by the group and separate company organization was indirectly the cause of many of the difficulties experienced. This was true in the training phase in the United States. In many instances separate companies were trained in camps where there was no battalion or group headquarters while other camps had an excessive number of battalion and group headquarters. Even in those cases where companies, battalion headquarters and group headquarters were located on the same post, they were never in the same stage of training and this made it difficult to carry out more than company problems. As a general rule, companies, battalion and group headquarters were shipped overseas separately and without regards to their attachments during their training phase. These difficulties could have been obviated and practically all the advantages maintained by having organic battalions.

### SECTION 2

#### ORGANIZATION AND EQUIPMENT OF THE HEADQUARTERS AND HEADQUARTERS DETACHMENT, MEDICAL GROUP

4. Organization. Table of Organization and Equipment 8-22 dated 5 March 1945 is in general satisfactory, but a medical corps officer is not required as executive officer; a major, medical administrative corps, can satisfactorily fill this position. The manner in which this headquarters operates makes it essential that the table of organization provide personnel for the operation of a mess.

#### 5. Equipment.

a. Ordnance. A truck 2-1/2 ton, cargo, should be substituted for the truck, 3/4-ton, weapons carrier. An additional trailer, one ton, should be provided. Four additional trailers, 1/4-ton, should be provided. There is a definite need for a second echelon tool set, number one.

b. Engineering. It has not been desirable to camouflage second and third echelon medical installations. Therefore, it is recommended that the camouflage nets be deleted from tables of equipment. Map templates have not been used by medical troops in the European Theater of Operations and should be deleted from tables

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of equipment. A three kilowatt liquid cooled electric generator complete with wiring and other necessary fixtures should be provided. It has been shown that the smaller air cooled generators are not serviceable enough for continuous operation over long periods of time.

c. Medical. Each individual entitled to wear the Geneva Convention brassard should be provided with two brassards. Each motor vehicle authorized a medical unit should be provided with a kit, first aid, motor vehicle.

d. Quartermaster. This unit should be provided with sufficient equipment to operate a mess. The latrine screen does not provide protection in inclement weather and a small wall tent should be substituted in lieu thereof. The commanding officer should be provided with a small wall tent. The gasoline lantern has proven entirely unsatisfactory and should be deleted.

### SECTION 3

#### ORGANIZATION AND EQUIPMENT OF THE HEADQUARTERS AND HEADQUARTERS DETACHMENT, MEDICAL BATTALION, SEPARATE

6. Organization. Table of Organization and Equipment 8-26 dated 30 April 1945 is considered satisfactory except that it is unnecessary to have a medical corps officer as executive officer. This position could be filled by a captain, medical administrative corps. It is recommended that a corps medical battalion be organized to consist of a headquarters and headquarters detachment, medical battalion; two medical collecting companies and one clearing company. It is further recommended that the separate organization of medical collecting companies, medical ambulance companies and medical clearing companies be abolished and that collecting battalions, ambulance battalions, and clearing battalions be organized. Such an organization would materially assist in the training of these units and in their movements to overseas theaters of operations. The only advantage provided by the separate company organization was its flexibility. This flexibility can be provided in the theater by detaching companies from battalions when necessary.

#### 7. Equipment.

a. Engineer. The camouflage nets and map templates have not been found to be necessary and should be deleted from tables of equipment.

b. Medical. Geneva Convention brassards should be provided on the basis of two per individual. A 12-unit motor vehicle first aid kit should be provided for each vehicle.

c. Ordnance. An additional one ton trailer and three 1/4-ton trailers should be provided.

d. Quartermaster. The tent fly provides such limited shelter in inclement weather that it should be deleted and a large wall tent substituted in its place. The latrine screen provides no shelter in inclement weather and should be replaced by a small wall tent. The one command post tent authorized is entirely inadequate and until a larger and more suitable command post tent is developed, two of these tents should be authorized.

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SECTION 4

ORGANIZATION AND EQUIPMENT OF THE  
MEDICAL COLLECTING COMPANY, SEPARATE

8. Organization. Table of Organization and Equipment 8-27 dated 16 May 1945 has proven satisfactory.

9. Equipment.

a. Ordnance. The 3/4-ton weapons carrier has not provided sufficient cargo space nor does it have the desired cross-country characteristics. The four weapons carriers should be replaced by trucks, 1-1/2 ton, 6 x 6. Ambulances should be equipped at the factory with a rack over the cab which will carry the equipment of the ambulance driver and ambulance orderly.

b. Chemical. The M-2 dust respirator is not required by ambulance drivers.

c. Engineer. The camouflage nets and map templates should be deleted. A liquid cooled, three kilowatt electric generator set should be provided.

d. Medical. Geneva Convention brassards should be provided on the basis of two per individual. Medical kits for officers, non-commissioned officers, and privates should be provided only for the personnel in the litter bearer platoon. The carrier, field, collapsible has not been used and should be deleted. A 12-unit motor vehicle first aid kit should be provided for each vehicle. The machine, imprinting should be deleted. An electric otoscope should be provided for the station platoon.

e. Quartermaster. The gasoline lantern should be deleted. A pyramidal tent should be substituted for the latrine screen. A non-portable typewriter should be substituted for the portable typewriter.

f. Signal. Ambulances should be plainly marked with the Geneva Cross and panel sets should not be authorized for or their use permitted on ambulances.

SECTION 5

ORGANIZATION AND EQUIPMENT OF THE

MEDICAL AMBULANCE COMPANY, MOTOR, SEPARATE

10. Organization. Table of Organization and Equipment 8-317 dated 5 December 1944 has proven to be adequate.

11. Equipment.

a. Chemical. The M-2 dust respirator is not required by ambulance drivers.

b. Engineer. The camouflage nets and map templates should be deleted. A three kilowatt liquid cooled electric generator and lighting equipment should be provided.

c. Medical. Geneva Convention brassards should be provided

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on the basis of two per individual. The medical kits for non-commissioned officers and privates should be deleted. A 12-unit motor vehicle kit should be provided for each vehicle .

d. Ordnance. A 2-1/2 ton cargo truck should be substituted for the 3/4-ton weapons carrier and a 250-gallon water trailer should be added.

e. Quartermaster. The gasoline lantern should be deleted. A pyramidal tent should be substituted for the latrine screen. Until a better tent is devised, a command post tent should be substituted for the small wall tent.

SECTION 6

ORGANIZATION AND EQUIPMENT OF THE

MEDICAL CLEARING COMPANY, SEPARATE

12. Organization. Table of Organization and Equipment 8-28 dated 4 September 1944 and Change 1 dated 2 October 1945 is satisfactory.

13. Equipment.

a. Engineer. One additional three KVA electric lighting equipment set number three should be authorized to provide lighting for each of the two platoons. The 1-1/2 kilowatt portable generator set should be deleted because it is not a satisfactory set and including it in the table of equipment serves only to complicate the spare parts requirements and to increase maintenance difficulties. The camouflage nets and map templates should be deleted.

b. Medical. Geneva Convention brassards should be provided on the basis of two per individual. In the European Theater of Operations there has been no occasion for the use of officers and privates dental kits or officers, non-commissioned officers and privates medical kits in clearing companies. The carrier, field, collapsible should be deleted. A 12-unit motor vehicle first aid kit should be provided on the basis of one per vehicle. The machine, imprinting should be deleted.

c. Ordnance. Two additional 1/4-ton trailers should be provided. The 3/4-ton weapons carrier should be replaced by a 2-1/2 ton cargo truck.

d. Quartermaster. The gasoline and kerosene lanterns should be deleted. Each of the latrine screens should be replaced by a pyramidal tent. The blacksmith's sledges should be replaced by a suitable wooden maul which will not destroy tent stakes. Until a better tent is devised, hospital ward tents should be substituted for the squad tents in the clearing platoon. The squad tents are not suitable for hospital wards. The two portable typewriters should be replaced by non-portable typewriters.

## CHAPTER 2

ORGANIZATION AND EQUIPMENT OF THE SURGICAL HOSPITAL

14. Requirement for a Mobile Surgical Hospital. Early combat experience in the North African Theater indicated the need for a mobile surgical hospital to care for severely wounded, non-transportable casualties in the vicinity of the division clearing station. The 48 Surgical Hospital was available in North Africa but this unit was not entirely suited to perform the type of service required. An attempt was made during the North African campaign to care for first priority surgical casualties in division clearing stations and in the treatment station of an armored division by attaching auxiliary surgical teams to the division medical battalion. This scheme was not satisfactory. During the Sicilian Campaign field hospital platoons were employed for the first time in the vicinity of division clearing stations to take care of first priority surgical casualties. The field hospital is not entirely suited for this mission but with minor modifications in the hospital and by the attachment of auxiliary surgical teams they were able to perform this function in an excellent manner. As a result of the experience gained in Sicily, the plans for the invasion of Italy and France included the use of the field hospital platoon as a first priority surgical hospital. The field hospital was neither designed nor intended to function in this capacity but it was used in the European Theater of Operations because there was no other medical unit available which could be adapted to perform this mission. It is universally agreed that there is a definite requirement for a mobile surgical hospital of fifty to seventy-five bed capacity to take care of first priority surgical casualties in the vicinity of the division clearing station.

15. Characteristics of the surgical hospital.

a. Mobility. The surgical hospital unit which is to operate in the vicinity of the division clearing station must be mobile. It is essential that its mobility be derived from its own organic transportation. If the unit is organized with an organic holding section, the minimum organic transportation required is that which will permit the hospital, less the holding section, to be moved without shuttling. A false sense of economy in transportation is obtained when the hospital unit is not completely mobile.

b. Professional qualifications of medical officers. It is not economical of surgical talent to staff the surgical hospital sufficiently to enable it to function at peak capacity with organic personnel. If an insufficient number of qualified surgeons are included in the organic personnel of the surgical hospital it will be necessary to reinforce the hospital with surgical teams. When this happens, there is a division of responsibility in regards to the surgical management of casualties. Personality clashes and the question of relative rank between the organic surgeon and the attached surgical team has occurred in many cases. It is the studied opinion of those who have had experience in this type of hospital that qualified surgeons should not be included in the organic personnel of the hospital but that the hospital should be staffed with administrative and general purpose officers only and the auxiliary surgical teams should be used for all surgery performed in the hospital and that the senior surgeon of the auxiliary teams should act as chief of surgical service for the commanding officer.

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16. Organization of the surgical hospital. Table of organization and Equipment 8-571 dated 23 August 1945 was not utilized in the European Theater of Operations. Experience indicates that this table of organization and equipment satisfies all the requirements for a mobile surgical hospital. However, the following changes are recommended.

a. Operating Section. It is believed that the operating section is unnecessary as an organic part of the hospital and that auxiliary surgical group teams could be employed to better advantage.

b. Equipment. Two five kilowatt electric lighting equipment sets are considered adequate. The addition of the three KVA set increases the spare parts requirements and adds to maintenance difficulties. The camouflage nets and map templates are considered unnecessary. The gasoline lanterns are unsatisfactory and are considered unnecessary. The latrine screen provides no shelter in inclement weather and should be replaced by a suitable tent. The blacksmith's sledge is unsatisfactory and should be replaced by a wooden maul which does not destroy tent stakes. The panel set, AP-50, is considered unnecessary.

17. Employment of the surgical hospital. The surgical hospital should be assigned to army. It may operate either directly under the control of the army surgeon or a headquarters and headquarters detachment, medical group may be given the responsibility of directing the employment of the hospital. In certain situations the army surgeon may attach a surgical hospital to corps and under certain unusual circumstances they may be attached to divisions.

18. Holding section in the surgical hospital. Experience has shown that there is a definite requirement for holding facilities in the first priority surgical hospital. It would be ideal to have sufficient hospitalization units to permit the hospitalization unit in its entirety to remain in place as a holding unit while another hospitalization unit is displaced forward in close support of the division. If insufficient hospitalization units are available to carry out this plan the unit must be so organized that sufficient equipment and personnel can be left behind in the holding unit to perform major surgery and to provide adequate post-operative care for the seriously wounded non-transportable surgical casualties remaining in the holding unit. Any attempt to accomplish a saving of personnel and equipment by reducing this holding section below these requirements only results in a false sense of economy because personnel and equipment will be obtained in the theater to accomplish this important mission.

CHAPTER 3

ORGANIZATION AND EQUIPMENT OF THE EVACUATION HOSPITAL,

SEMI-MOBILE (400 BED)

19. Requirements for the evacuation hospital, semi-mobile, 400-bed. This hospital has been one of the most useful and most popular types of hospitals available to the armies in the European Theater of Operations. It was designed to furnish mobile evacuation hospital facilities in close support of combat troops in rapidly moving situations. The usefulness of this unit would have been increased greatly had it been completely mobile instead of semi-mobile.

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(Actually the unit was only one-third mobile after the addition of personnel and equipment found necessary to permit effective operation in the European Theater of Operations.)

20. Organization of the evacuation hospital, semi-mobile, 400-bed. There have been few recommendations for major changes in Table of Organization and Equipment 8-581, dated 25 March 1944. The following have been universal and are considered imperative.

a. Litter bearers. Sufficient litter bearers must be provided for the transportation of patients within the unit. Adequate litter transportation of patients within the unit is the keystone to proper functioning of an evacuation hospital. The personnel assigned as litter bearers are not only necessary in the capacity of litter bearers when the hospital is functioning but they provide the only source of manpower available to the hospital commander for the erection of the hospital tentage or for preparing buildings as a hospital site. The minimum number required is 24 litter bearers when operating in tents and 40 when operating in buildings.

b. X-ray technicians. Sufficient x-ray technicians must be provided to permit the x-ray section to function in twelve-hour shifts, twenty-four hours a day.

c. Nurses. The nursing strength is insufficient for two twelve-hour shifts. The minimum number of nurses required is 48, four of which should be trained as anesthetists. One dietician should be authorized.

d. Clerks. Two additional clerks are required if the records maintained by the hospital are to be of any value as historical documents. The same applies to the records which are to accompany the casualty through the chain of evacuation. These records must be typed for legibility if they are to be of any value to the hospitals in rear of the evacuation hospital.

e. Mess personnel. An adequate and attractive mess is not a luxury but it is a necessity in an evacuation hospital. A minimum of six additional enlisted men are needed to properly operate the messes.

f. Medical administrative corps personnel. Good medical administrative corps officers have performed their duties in a manner far superior to anything that had been anticipated in the several assignments they have been given in the European Theater of Operations. The executive officer in the 400-bed evacuation hospital is no exception. There is no necessity for a medical corps officer as executive officer in this hospital.

21. Equipment of evacuation hospitals, semi-mobile, 400-bed. Early in operations it was found that the equipment of the evacuation hospital, semi-mobile, 400-bed, was in many instances inadequate and in some cases reduction or deletions in amounts were considered advisable. As a result of this knowledge, a conference of experienced hospital commanders, army surgeons, and supply officers was held 6-7 November 1944 at Headquarters, Communications Zone at which time recommended changes in the tables of equipment and equipment list of evacuation hospitals were submitted to the War Department. In every instance where this altered equipment list was employed, favorable comment was elicited and general satisfaction expressed. It is

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considered that the embodiment of the following recommendations which were arrived at and concurred in by experienced representatives would overcome the objections to Table of Organization and Equipment 8-581 dated 25 March 1944. It is strongly recommended that a sufficient number of the Wheary water-proof chests be authorized for functional packing of equipment and supplies.

a. Medical.

| <u>Item</u> | <u>Nomenclature</u>                               | <u>Present<br/>Authorization</u> | <u>Addition or<br/>Reduction</u> | <u>New<br/>Total</u> |
|-------------|---|----------------------------------|----------------------------------|----------------------|
| 3090000     | Case, trial lens, complete                        | 0                                | 1                                | 1                    |
| 3229000     | Forceps, hemostatic, mosquito                     | 84                               | 36                               | 120                  |
| 3269500     | Forceps, tissue, 4½"                              | 16                               | 14                               | 30                   |
| 3271000     | Forceps, tissue, Allis                            | 36                               | 44                               | 80                   |
| 3275000     | Forceps, towel, 3"                                | 98                               | -58                              | 40                   |
| 3276000     | Forceps, towel 5½"                                | 0                                | 120                              | 120                  |
| 3468000     | Scissors, bandage                                 | 18                               | 18                               | 36                   |
| 3532000     | Speculum, vaginal, weighted                       | 1                                | -1                               | 0                    |
| 3556000     | Tube, trachea, size 3, reduction                  | 3                                | -3                               | 0                    |
| 3557000     | Tube, trachea, size 4, reduction                  | 3                                | -3                               | 0                    |
| 3558000     | Tube, trachea, size 5                             | 0                                | 12                               | 12                   |
| 3610600     | Apparatus, drainage and suction                   | 6                                | 6                                | 12                   |
| 3870509     | Tube, duodenal                                    | 6                                | 18                               | 24                   |
| 5392009     | Loths, dental, electric                           | 0                                | 1                                | 1                    |
| 6012000     | Clip, photo                                       | 0                                | 100                              | 100                  |
| 6040000     | Illuminator, radiographic                         | 1                                | 1                                | 2                    |
| 6040500     | Illuminator, radiographic tube                    | 2                                | 2                                | 4                    |
| 7162800     | Pad, operating table                              | 0                                | 8                                | 8                    |
| 7171005     | Robe, bath, large                                 | 48                               | 37                               | 75                   |
| 7172010     | Robe, bath, medium                                | 60                               | 15                               | 75                   |
| 7711000     | Basin, hand                                       | 56                               | 44                               | 100                  |
| 7731000     | Bucket, enamel-ware and<br>corrosion-resist steel | 6                                | 4                                | 10                   |
| 7851700     | Machine, sewing                                   | 0                                | 1                                | 1                    |
| 7866000     | Padlock, small                                    | 0                                | 25                               | 25                   |
| 7914000     | Sterilizer Drum 14-inch                           | 0                                | 12                               | 12                   |
| 9364000     | Oxygen, therapy closed circuit                    | 3                                | -1                               | 2                    |
| 9364300     | Oxygen, therapy, w/mantlefold                     | 4                                | 4                                | 8                    |
| 9502600     | Chest 61  | 0                                | 1                                | 1                    |
| 9502700     | Chest 62  | 0                                | 1                                | 1                    |
| 9605500     | X-ray dryer loading bin                           | 0                                | 1                                | 1                    |
| 9745500     | Blanket set, large, complete                      | 66                               | 17                               | 83                   |
| 9781200     | Pillow-case set                                   | 3                                | 2                                | 5                    |
| 9781400     | Sheet set   | 12                               | 8                                | 20                   |
| 9784700     | Towel set, bath                                   | 12                               | 13                               | 25                   |
| 9784800     | Towel set, hand                                   | 12                               | 12                               | 24                   |
| 9920500     | Cot, folding, canvas                              | 400                              | 100                              | 500                  |
| 9921500     | Cup, enamelware                                   | 40                               | 110                              | 150                  |
| 9922000     | Cup, feeding, enamelware                          | 20                               | 20                               | 40                   |
| 9931500     | Lamp, operating, field                            | 6                                | -3                               | 3                    |
| 9937600     | Litter, straight, Steel                           | 90                               | 60                               | 150                  |
| 9950000     | Sterilizer, dressing and<br>utensil, horizontal   | 2                                | 1                                | 3                    |
| 9952300     | Sterilizer, instrument, 20-inch                   | 10                               | 2                                | 12                   |
| 9955000     | Stove, 1 burner                                   | 10                               | -10                              | 0                    |
| 9955500     | Stove, 2 burner                                   | 10                               | 10                               | 20                   |
| 9958000     | Table, operating, folding                         | 6                                | 1                                | 7                    |
| 9961700     | Washing machine, electric,<br>wringer type        | 0                                | 1                                | 1                    |

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| <u>Item</u>              | <u>Nomenclature</u>   | <u>Present<br/>Authorization</u> | <u>Addition or<br/>Reduction</u> | <u>New<br/>Total</u> |
|--------------------------|---|----------------------------------|----------------------------------|----------------------|
| NS7                      | Carrier, food, Navy type  | 8                                | -8                               | 0                    |
| NS9                      | Table, operating, folding,<br>British   | 0                                | 1                                | 1                    |
| b. <u>Ordnance.</u>      |   |                                  |                                  |                      |
|                          | Trailer, 1 ton, 2 wheel cargo   | 18                               | -2                               | 16                   |
|                          | Trailer, M7 (for 15 KW Generators)  | 0                                | 2                                | 2                    |
| c. <u>Quartermaster.</u> |   |                                  |                                  |                      |
|                          | Bag, canvas, water, sterilizing   | 7                                | 5                                | 12                   |
|                          | Container, food, with insert  | 0                                | 24                               | 24                   |
|                          | Marker, ground, Red Cross,<br>100 x 100 feet                                  | 0                                | 1                                | 1                    |
|                          | Marker, Red Cross, tent type,<br>12 x 24 feet                                 | 0                                | 20                               | 20                   |
|                          | Can, corrugated, 10-gallon  | 5                                | 3                                | 8                    |
|                          | 16-gallon   | 5                                | 3                                | 8                    |
|                          | 24-gallon   | 5                                | 3                                | 8                    |
|                          | 32-gallon   | 5                                | 7                                | 12                   |
|                          | Basket, wire type   | 0                                | 3                                | 3                    |
|                          | Burner, oil stove, tent M-1941  | 104                              | 26                               | 130                  |
|                          | Lantern, gasoline, 2 mantel   | 8                                | 4                                | 12                   |
|                          | Lantern, kerosene   | 20                               | -10                              | 10                   |
|                          | Range, field, 2-unit  | 1                                | -1                               | 0                    |
|                          | Range, field, 3-unit  | 3                                | 1                                | 4                    |
|                          | Sledge  | 36                               | -30                              | 6                    |
|                          | Maul, wooden  | 0                                | 30                               | 30                   |
|                          | Stapler   | 0                                | 2                                | 2                    |
|                          | Tent, stove   | 104                              | 26                               | 130                  |
|                          | Tent, hospital ward   | 33                               | 7                                | 40                   |
|                          | Tent, storage, large  | 0                                | 9                                | 9                    |
|                          | Tent, wall, large   | 0                                | 3                                | 3                    |
|                          | Kit, tent repair  | 0                                | 1                                | 1                    |
|                          | Typewriter, non-portable, 14"<br>carriage                                     | 5                                | 3                                | 8                    |
|                          | Typewriter, portables,<br>w/carrying case                                     | 5                                | -2                               | 3                    |
| d. <u>Signal.</u>        |   |                                  |                                  |                      |
|                          | Lantern, electric   | 0                                | 25                               | 25                   |
|                          | Switchboard, BD-71  | 0                                | 1                                | 1                    |
|                          | Switchboard, BD-72  | 0                                | 1                                | 1                    |
|                          | Batteries "B" No. R-30-F10B-3300  | 0                                | 25                               | 25                   |
|                          | Telephone, EES, field phone,<br>magneto                                       | 0                                | 18                               | 18                   |
|                          | Wire, W110B, field  | 0                                | 1 mile                           | 1 mile               |
|                          | Tool, equipment, TE33   | 0                                | 1                                | 1                    |
| e. <u>Engineer.</u>      |   |                                  |                                  |                      |
|                          | Generator, electric, portable,<br>Diesel, engine, driven, skid<br>mount, 15KW | 0                                | 2                                | 2                    |
|                          | Tank, water storage, canvas,<br>3000-gallon                                   | 0                                | 1                                | 1                    |
|                          | Pump, water, gasoline driven  | 0                                | 1                                | 1                    |

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| <u>Item</u> | <u>Nomenclature</u>   | <u>Present<br/>Authorization</u> | <u>Addition or<br/>Reduction</u> | <u>New<br/>Total</u> |
|-------------|---|----------------------------------|----------------------------------|----------------------|
|             | Bucket, fire  | 0                                | 150                              | 150                  |
|             | Pump, stirrup type  | 0                                | 50                               | 50                   |
|             | Luminous markers (cats eyes)                                  | 0                                | 200                              | 200                  |
|             | Generator set, portable, gasoline<br>driven, skid mount, 3 KW | 1                                | -1                               | 0                    |

CHAPTER 4

ORGANIZATION AND EQUIPMENT OF THE EVACUATION

HOSPITAL, 750-BED

22. Requirements for the evacuation hospital, 750-bed. This type unit was not utilized to the maximum extent in the European Theater of Operations. It was employed to the best advantage by the Seventh United States Army. The principle reason for the failure to utilize this splendid organization was its lack of transportation. There is a definite need for this hospital to be semi-mobile both in the field army and in the communications zone. In many instances a semi-mobile 750-bed evacuation hospital could have replaced two 400-bed evacuation hospitals. This unit is ideally used in close support of the initial phase of a major attack or offensive. It provides splendid facilities for absorbing the heavy load of casualties experienced in the initial attack and permits the army surgeon to hold his 400-bed hospitals in mobile reserve to be leap-frogged over the 750-bed evacuation hospitals as the attack progresses. If this unit had been semi-mobile it would have been ideal for use in the advance section of the communications zone to replace the general hospitals in close support of the advancing armies.

23. Organization of the evacuation hospital, 750-bed. Table of Organization and Equipment 8-580 dated 31 January 1945 was not received in the European Theater of Operations in time to permit reorganization of the 750-bed evacuation hospitals prior to the cessation of hostilities. This new table of organization and equipment provides for most of the changes that have been recommended by hospitals in this theater. The following additional changes should be made. The rank of the adjutant should be increased from first lieutenant to captain. The number of nurse anesthetists should be increased from one to six. The total number of nurses should be increased to 61. A barber and a carpenter should be added.

24. Equipment of the evacuation hospital, 750-bed. The following changes are recommended in the equipment provided for by Table of Organization and Equipment 8-580 dated 31 January 1945.

a. Engineer. The electric lighting equipment set number four, five kilowatt, should be deleted. Two 30-kilowatt diesel engine driven generator sets should be provided in lieu of the two 15-kilowatt generators. The camouflage nets should be deleted.

b. Ordnance. Sufficient transportation should be provided to make this unit semi-mobile. Three-quarter ton weapons carriers are not economical in a unit of this size and should be replaced

by 2-1/2 ton trucks.

c. Quartermaster. The number of 32-gallon corrugated cans should be increased from eight to 24. The number of company field desks should be increased from one to four. A kit for tentage repair should be authorized. The present type gasoline lantern is unserviceable and the procurement of kerosene is difficult or impossible. Electric lanterns should be substituted for the gasoline and kerosene lanterns. The number of large paulins should be increased from three to fifteen and the number of small paulins from five to eight. Twelve large pick-mattocks should be provided for digging latrines, soakage pits and drainage ditches. The latrine screens should be replaced by suitable tents. Sufficient tents of a suitable type should be provided for housing the officers and nurses. Folding mess tables and benches similar to the general service British stores item should be provided for the several messes; 71 folding chairs should be authorized. Sixty wooden mauls should be substituted for the blacksmith sledges. A sufficient number of water-proof heavy chests should be provided for the functional packing of the hospital equipment and supplies. A flag, national standard, should be provided.

## CHAPTER 5

### ORGANIZATION AND EQUIPMENT OF THE CONVALESCENT HOSPITAL

25. Requirements for a convalescent hospital. There is a requirement for convalescent facilities in the field army. It is the opinion of all the army surgeons and convalescent hospital commanders in the European Theater of Operations that the 3,000-bed convalescent hospital, Table of Organization and Equipment 8-590 does not meet these requirements. This unit is too large to be used in a rapidly moving situation. It is not mobile enough to permit close support in advancing armies.

26. Organization and equipment of the convalescent hospital. Several proposals have been made for an organization to meet the convalescent hospital requirements of a field army. Seventh United States Army has proposed the use of a convalescent company in close proximity to an evacuation hospital. A 2,000-bed convalescent hospital that is semi-mobile and can be split into two equal halves for the purpose of leap-frogging has been proposed. It is the consensus that the needs of a field army would best be satisfied by three 1,000-bed convalescent hospitals, semi-mobile. Again, it should be emphasized that immobilizing the 3,000-bed convalescent hospital has only resulted in a false sense of economy. As a result of this immobility the 3,000-bed convalescent hospital in the European Theater of Operations could never be depended upon to relieve the evacuation hospitals of convalescent casualties and therefore the requirements for evacuation hospital beds had to be made on the assumption that the convalescent hospital would not be available. It is agreed that the convalescent hospital should be so organized as to eliminate as far as possible the hospital atmosphere. It is suggested that the name of this organization be changed from convalescent hospital to convalescent battalion or some such name because it is in effect not a hospital. No female nurses should be included in the personnel. Full use should be made of battle experienced, branch immaterial, officers in staffing the unit, adequate operative and prosthetic dental facilities

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should be provided. Convalescent casualties in the evacuation hospital will require a certain amount of medical care. The statements made above relative to the elimination of the hospital atmosphere should not be construed as indicating that adequate means for providing this medical care can be eliminated. Female personnel similar to the Red Cross Doughnut Clubmobile are desirable. The annual report of the Second Convalescent Hospital for 1945 submitted to the Surgeon General by Colonel Otto L Churney, 018334, MG, presents in detail the opinions of the Theater General Board.

### CHAPTER 6

#### ORGANIZATION AND EQUIPMENT OF THE MEDICAL

##### HOLDING BATTALION

27. Requirements for a medical holding unit. Experience has demonstrated that some sort of a medical holding unit is vitally essential in mobile warfare. Army evacuation hospitals are seldom located on operative rail lines and these hospitals are not large enough to retain patients until a complete train load can be collected at any one hospital. Medical holding units are also required at airfields and they are essential on both the near and the far shore in an amphibious operation. The lack of any table of organization for a holding unit in the European Theater of Operations has led to the employment of various types of medical units for this purpose. This has resulted in considerable waste of highly specialized personnel and expensive equipment and has prevented the employment of many units by the Theater Surgeon in the performance of the mission for which they were intended. General hospitals have been employed for this purpose resulting in the misuse of many highly trained individuals and much expensive equipment. Convalescent hospitals have been used, thereby decreasing the number of convalescent beds available and adversely affecting the bed status in fixed and mobile hospitals. The diversion of convalescent hospitals from the performance of their primary mission has increased the evacuation of casualties which otherwise could have been quickly returned to duty. Medical gas treatment battalions have been used as holding units and should the enemy have resorted to chemical warfare this unit would not have been available. However, the medical gas treatment battalion probably provided the best type of improvised medical holding unit. Another very satisfactory and economical holding unit was formed by the combination of a medical collecting company, separate, and a medical clearing company, separate. The combination of a medical collecting company, separate, and elements of a field hospital likewise provided a very satisfactory medical holding unit but this was not economical in so far as equipment was concerned. In general, a medical holding unit should provide approximately 600 beds and should be capable of expanding in an emergency. It should be so organized that it can divide into two 300-bed units and permit leap-frogging of the unit in a rapidly moving situation. A doctor-to-patient ratio of about one to one hundred has proven satisfactory. In certain conditions the attachment of auxiliary surgical teams and nurses is considered desirable but it is not necessary to include this personnel organically in the unit. The number of surgical and medical technicians in a combined collecting and clearing company has worked out very satisfactorily.

28. Organization of a medical holding unit. Tables of Organization and Equipment 8-55, 8-56 and 8-57, dated 30 May

1945 were not employed in the European Theater of Operations. However, this organization in general appears to meet the requirements for a medical holding unit to be used in amphibious operations and for use by the advance sections of a communications zone or the armies at railheads and airfields. Such a unit as a medical holding battalion could also be adapted by armies to form provisional special purpose hospitals for the hospitalization of such cases as venereal disease, mild trench foot, combat exhaustion and recurrent malaria. The holding battalion does not have sufficient professional personnel or adequate equipment to serve as a "transit hospital" in the communications zone. However, it is believed that the holding battalion reinforced with auxiliary professional teams and/or platoons of a field hospital will meet the requirements of the communications zone for a medical holding unit. If a more elaborate "transit hospital" is desired by the communications zone this need can be met adequately by the employment of the 750-bed evacuation hospital.

29: Equipment of a medical holding battalion.

a. Engineer. The headquarters and headquarters detachment and each of the holding companies should each be authorized one, five KVA electric generator set. The camouflage nets and map templates are not necessary.

b. Medical. The carrier, field, collapsible, and the machine, imprinting have not been used in the European Theater of Operations. Each holding company should be authorized electric refrigerators sufficient for storing whole blood and penicillin.

c. Ordnance. The battalion should be authorized enough vehicles to make it semi-mobile. The 3/4 ton weapons carrier and the 1-1/2 ton truck are not economical in a unit of this size and should be replaced by 2-1/2 ton trucks. The dump truck meets a very definite requirement and should be retained.

d. Quartermaster. All nations except the United States engaged in the European war proudly displayed their national standard. It is recommended that this battalion and all other comparable units be authorized a flag, national standard. The gasoline lantern has proven unsatisfactory and should be deleted or replaced by a satisfactory emergency type light. The latrine screens should be replaced by suitable tents. The blacksmith sledges should be replaced by wooden mauls.

30. Employment of a medical holding unit. A medical holding unit with characteristics outlined above is required forward of the army rear boundary. Whether this unit should be controlled by the advance section of the communications zone or by army depends upon the situation and to a considerable extent upon the personalities of the army and advance section surgeons. In certain conditions there is a need for a holding unit in the intermediate and base sections of the communications zone. The unit designed for use in the army area should be organized with the thought in mind that one or two such units may be combined and reinforced with professional personnel and additional equipment to provide a holding unit for use in the intermediate or base sections of the communications zone.

ORGANIZATION AND EQUIPMENT OF THE MEDICAL DEPOT COMPANY

31. It is recommended that there be two types of medical depot companies, one for combat zone use and one for communications zone use, since the medical supply functions in the armies and the communications zone are so dissimilar. Communications zone medical depots always handle many times more tonnage than army depots, as well as a greater variety of items, which obviously increases labor requirements. In addition, stock control procedures and special supply functions of communications zone medical depots call for additional supply specialists. On the other hand, the advance platoons of army medical depot companies employed in fast-moving situations are not required by communications zone medical depots.

32. Organization of the medical depot company, combat zone, should be a compromise between medical depot company (Army or Com 2) Table of Organization and Equipment 8-661 and medical depot company, combat zone Table of Organization and Equipment 8-667, embodying the best features of both organizations. (Actually all army medical depot companies on the Continent were organized under Table of organization and Equipment 8-661, with a maintenance platoon similar to the Table of Organization and Equipment 8-667 organization added.) It should be composed of a headquarters, an issue platoon, and a maintenance platoon. The headquarters should be organized essentially as under Table of Organization and Equipment 8-667. The issue platoon should be composed of approximately three officers and 60 enlisted men and should include sufficient personnel and equipment to provide for storage and delivery of whole blood to the army. Each advance depot section should be composed of approximately two officers and 30 enlisted men, the same organization as in Table of Organization and Equipment 8-661, with one optical repairman deleted. Each advance depot section should include sufficient personnel and equipment to operate a mess. The maintenance platoon should be composed of a general repair section and an optical repair section as organized under Table of Organization and Equipment 8-667. The two mobile dental prosthetic repair teams should not be included in the new table of organization and equipment since experience in the European Theater of Operations has shown that separate dental prosthetic detachments are more suitable for use in the field army.

33. Equipment of the medical depot company, combat zone.

a. Engineer. Two five KVA electric generator sets should be provided in lieu of the one three KV. set. The camouflage nets and the map templates are not necessary.

b. Medical. The kerosene refrigerators should be replaced by electric refrigerators.

c. Ordnance. The 3/4-ton weapons carriers should be replaced by 2-1/2 ton trucks.

d. Quartermaster. Sufficient equipment should be authorized for the operation of a mess in both the base section and the advance section when the latter operates separately. A flag, national standard, should be authorized. The gasoline lanterns should be deleted or replaced by a suitable emergency light. The latrine screens should be replaced by suitable tents. Red Cross markers should be provided for tents and/or buildings.

e. Signal. The panel sets, AP-50-A, are not considered necessary.

## CHAPTER 8

### ORGANIZATION AND EQUIPMENT OF THE

#### MEDICAL LABORATORY

34. Employment of the army medical laboratory. Army medical laboratories were employed to perform the usual routine laboratory procedures within the army area. The commanding officer of the laboratory supervised the laboratory service in the several army hospitals. The laboratory normally operated as a single unit but on occasions was split to operate two identical units. The need for mobile sections was not realized, most investigations being done by an officer in a 1/4-ton truck who brought specimens back with him to the laboratory for further study. There was a need for the laboratory to perform complement fixation tests on spinal fluids to expedite the closing out of syphilitic registers. A detachment of one medical officer, two technicians and a clerk was utilized by the Third United States Army for the early diagnosis of venereal disease in the provisional venereal disease hospital. Numerous toxicological examinations were required in accidental deaths and other medico-legal cases. The army laboratory acted as a medical supply agency and performed maintenance on supplies and equipment peculiar to the laboratory service.

35. Organization and equipment of the army medical laboratory. It is recommended that the organization of the army medical laboratory, Table of Organization and Equipment 8-500, be changed by deleting the mobile sections and by making provisions for a unit which can operate as an entity or by splitting into two identical sections. Personnel and equipment to perform complement fixation tests should be provided and the unit must be prepared to do a large number of darkfield examinations. A toxicologist and the equipment that he will require should be made an integral part of the unit. Three additional clerks are required by a unit of this type. At least two technicians trained in the classification and maintenance of supplies and equipment peculiar to the laboratory service are necessary. The laboratory trucks which are currently authorized have not been available in this theater but it is thought they would fill a very definite need especially when buildings are not immediately available. Army laboratories in the European Theater of Operations have routinely operated separately from other medical installations and should be provided with their own messing facilities. Prefabricated buildings should be authorized in lieu of tents because satisfactory laboratory work can not be performed in tents.

## CHAPTER 9

### ORGANIZATION AND EQUIPMENT OF THE MEDICAL GAS

#### TREATMENT BATTALION

36. Experience in the European Theater of Operations. Due to the fact that the enemy did not resort to chemical warfare in the European Theater of Operations, no definite conclusions based upon experience can be reached. It is believed, however, that it would be more efficient and more economical to replace the medical gas

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treatment battalions by mobile medical gas treatment teams which may be attached to existing medical organizations for the purpose of organizing the system for and supervising the treatment of casualties produced by chemical agents.

### CHAPTER 10

#### ORGANIZATION AND EQUIPMENT OF THE AUXILIARY

##### SURGICAL GROUP

37. Requirements of the auxiliary surgical group. The auxiliary surgical group is required primarily for the augmentation of the hospitals and other medical installations in forward areas with surgical and allied surgical teams for the surgical care of severely wounded battle casualties. Three phases of this function may be described.

a. Reinforcement of clearing companies and/or first priority surgical hospitals in amphibious operations.

b. The responsibility for the surgical management of non-transportable wounded in the first priority surgical hospitals.

c. The augmentation of the surgical staffs of evacuation hospitals with surgical teams of all types, in particular, orthopedic and neuro-surgical teams.

d. Secondarily, the teams of the auxiliary surgical group are required for supplementing general hospitals with certain highly qualified surgical specialists especially thoracic and maxillo-facial teams.

38. Characteristics of the auxiliary surgical group. Experience indicates that the most efficient use of the auxiliary surgical group is attained when it is attached to and functions with an army. The type army of seven or more infantry divisions actively engaged requires the services of one auxiliary surgical group as organized under Table of Organization and Equipment 8-571 dated 13 July 1942. The following changes to this table of organization and equipment are recommended.

a. Orthopedic surgical teams. These teams should be organized on the same basis as other surgical teams and composed of the following personnel: One orthopedic surgeon, and one assistant surgeon, one anesthetist, one surgical operating room nurse, and two surgical technicians.

b. Gas teams. See paragraph 36, above.

c. Miscellaneous teams. Delete.

d. Maxillo-facial plastic teams. Authorize two instead of four.

e. Orthopedic surgical teams. Authorize three instead of six.

f. General surgical teams. Authorize 30 instead of 24.

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- g. Thoracic surgical teams. Authorize six instead of four.
- h. Anesthetists. Authorization for rank of major for 12 physician anesthetists.
- i. Medical administrative corps officers. Authorize three instead of one.
- j. Master sergeants. Authorize one. None authorized in Table of Organization and Equipment 8-571.
- k. Staff sergeants. Authorize two additional: one for a professional service section within the group headquarters and one for transportation.

39. Equipment for the auxiliary surgical group. Table of Organization and Equipment 8-571 dated 13 July 1942 is inadequate and the following additional equipment is required.

a. Ordnance.

- 20 - Trucks, 2½ ton, 6x6, cargo
- 12 - Trucks, 1½ ton, 6x6
- 15 - Trailers, 2-wheel, 1 ton
- 3 - Trailers, water, 2½ ton
- 2 - Trucks, 1/4 ton, 4x4

b. Quartermaster.

- 80 - Tent, pyramidal complete with poles and pins
- 10 - Tent, storage, complete with poles and pins
- 6 - Tent, wall, complete with poles and pins
- 4 - Tarpaulin, 12 x 17

c. Medical.

|         |   |      |    |
|---------|---|------|----|
| 3054500 | Bronchoscope, 8 mm x 40 cm, adult               | each | 24 |
| 3102300 | Ophthalmoscope, electric                        | each | 4  |
| 3441200 | Retractor, flexible, abdominal                  | set  | 28 |
| 3535000 | Spreader, rib                                   | each | 24 |
| 3493200 | Shears, rib, Bethune, 13½ in                    | each | 24 |
| 3548500 | Tube, aspirating, 50 cm                         | each | 24 |
| 3550800 | Tube, aspirating open and warning stop at 40 cm | each | 24 |
| 3558000 | Tube, aspirating, trachea, size 5               | each | 24 |
| 3621500 | Battery box                                     | each | 24 |
| 3670300 | Electrosurgical unit portable                   | each | 4  |
| 3774700 | Stop-cock, one way                              | each | 28 |
| 3775008 | Suction apparatus, portable electric            | each | 32 |
| 7099400 | Table, orthopedic, portable                     | each | 3  |
| 7751000 | Chest, tool, small                              | each | 1  |
| 7789000 | Cylinder, valve adapter, high pressure          | each | 42 |
| 7581505 | Machine, office, duplicating, hand operated     | each | 1  |
| 9350000 | Anesthesia, apparatus, portable                 | each | 42 |

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|         |   |      |    |
|---------|---|------|----|
| 9753500 | Chest, field plain                              | each | 60 |
| 9950000 | Sterilizer, dressing and<br>utensil, horizontal | each | 1  |

BIBLIOGRAPHY

PART ONE

In preparing Part One of this report, the Medical Section of the Theater General Board has studied the periodic reports submitted to the Surgeon General by commanders of medical units in the European Theater of Operations. The reports of the several corps and army surgeons and of the two army group surgeons have also been given due consideration and have been compared with the reports of the unit commanders. The conclusions reached represent a composite consensus of the unit commanders and the surgeons of the headquarters which employed the units.

PART TWO

ORGANIZATION AND EQUIPMENT OF COMMUNICATIONS ZONE

MEDICAL UNITS

SECTION 1

ORGANIZATION AND EQUIPMENT OF THE MEDICAL AIR

EVACUATION SQUADRON

40. Organization. Table of Organization and Equipment 8-447 dated 19 July 1944 and Changes One and Two provide an organization which has in general been satisfactory in the European Theater of Operations.

41. Equipment. The equipment in general has been satisfactory. The following changes are desirable.

- a. Engineer. There has been no need for the camouflage nets.
- b. Medical. The machine, imprinting has not been used.
- c. Quartermaster. The blacksmith sledges should be replaced by wooden mauls and the latrine screens should be replaced by suitable tents.

SECTION 2

ORGANIZATION AND EQUIPMENT OF THE HOSPITAL TRAIN

42. Organization. Table of Organization and Equipment 8-520 dated 12 February 1944 in general has been satisfactory. The long lines of communications, the damaged rail facilities and the congestion of rail traffic in the European Theater of Operations have

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resulted in casualties being aboard hospital trains for several days. Under such conditions it is desirable to have one additional medical corps officer to provide for better medical service for the casualties while they are en route.

43. Equipment. The equipment has been quite satisfactory but hospital train commanders have reported considerable difficulty in securing transportation for personnel and supplies when the hospital train organization was not aboard the train and/or when the hospital train was in communications zone rail terminals. It is recommended the provisions be made for having the Transportation Corps provide such transportation when it is needed.

SECTION 3

ORGANIZATION AND EQUIPMENT OF THE EVACUATION

HOSPITAL, 750-BED

44. Table of Organization and Equipment 8-580 dated 31 January 1945 with the changes recommended in paragraphs 23 and 24 of this report will provide a suitable organization for use in the communications zone.

SECTION 4

ORGANIZATION AND EQUIPMENT OF THE FIELD HOSPITAL

45. Many recommendations for changes in organization and equipment of the field hospital have been made and forwarded to the War Department. However, most of these recommendations were made as a result of the field hospital being utilized as a first priority surgical hospital in close support of divisions. Table of Organization and Equipment 8-510 dated 31 August 1944 and Changes One and Two provide for an organization which in general is quite adequate when the field hospital is utilized as a mobile station hospital. The following changes in equipment are desirable.

- a. Engineer. The camouflage nets are not necessary.
- b. Medical. The machine, imprinting has not been used.
- c. Ordnance. Sufficient transportation should be provided to move at least one hospitalization unit without shuttling.
- d. Quartermaster. A minimum of twelve 32-gallon corrugated cans should be provided to permit utilization of the immersion type heaters. A flag, national standard should be authorized. The kerosene and gasoline lanterns should be replaced by a suitable emergency light. The latrine screens should be replaced by suitable tents. The blacksmith sledges should be replaced by wooden mauls.

SECTION 5

ORGANIZATION AND EQUIPMENT OF THE STATION HOSPITAL

46. Requirements for station hospitals in the European Theater of Operations. In the European Theater of Operations the smallest station hospital that was employed was the 150-bed unit and the largest was the 750-bed unit. The 250-bed and the 500-bed units

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were used most frequently and to the best advantage. When the 750-bed hospital was used there was a tendency to employ it as a general hospital and it was not organized or equipped for such employment. The need for a 150 or 250-bed hospital could better have been satisfied by the employment of combinations of field hospital platoons. It is recommended that the field hospital replace the small station hospitals and that only the 500-bed station hospital organization be retained. It is also recommended that the large station hospital should not be employed as a general hospital.

47. Organization of the 500-bed station hospital. Table of Organization and Equipment 8-560 dated 28 October 1944 and Changes One, Two, Three and Four in general provide for a satisfactory 500-bed station hospital. The following changes are recommended.

a. Bacteriologist. The Table of Organization prescribes that the bacteriologist be a sanitary corps officer. Sufficient sanitary corps officers qualified as bacteriologists have not been available. It is recommended that the table of organization be changed to permit the utilization of sanitary corps, medical administrative corps or medical corps officers as bacteriologists.

b. Utilities Section. The number of men in the utilities section should be doubled and the table of organization should provide for a plumber and an electrician.

### SECTION 6

#### ORGANIZATION AND EQUIPMENT OF THE GENERAL HOSPITAL

48. The 1,000-bed hospital was the only general hospital that was received in the European Theater of Operations from the Zone of the Interior. A general hospital smaller than this was not needed. When larger hospitals were needed they were improvised by augmenting 1,000-bed hospitals or by a combination of two or more 1,000-bed general hospitals. It is recommended that only the 1,000-bed hospital be organized and trained in the Zone of the Interior but that the tables of organization and equipment for the 1500 and 2,000-bed hospitals be retained as a basis for organizing such hospitals in the theaters of operations when necessary.

49. Organization of the general hospital. Table of Organization and Equipment 8-550 dated 3 July 1944 and Changes One, Two, Three, Four and Five has not been entirely satisfactory and the following changes are recommended.

a. Cellular units. In theory the cellular unit concept is good but in actual practice it did not work. It is strongly recommended that the provision for cellular units be eliminated and that the table of organization of the general hospital include all such personnel organically in the hospital. The personnel should be trained by their respective branches prior to assignment to the hospital.

b. Personnel. There has been considerable dissatisfaction among the commanding officers of 1,500-bed hospitals due to the fact that the commanding officer, the chief of the medical service, the chief of the surgical service and the dental officer all have the rank of colonel. It is felt that the commanding officer should be

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one grade senior to the other officers in this hospital. Such a large portion of the work in general hospitals pertains to the orthopedic service that it is felt the orthopedic surgeon should be a lieutenant colonel in all three of the general hospitals. A medical background is necessary for the proper interpretation of laboratory studies and for this reason the bacteriologist should be a major, medical corps, instead of sanitary corps. Qualified bio-chemists are sometimes commissioned in the medical administrative corps and it is felt that the table of organization should provide that this officer may be either sanitary corps or medical administrative corps. The position of registrar requires one of the most capable officers in the hospital and his rank should be major instead of captain. Experience in the European Theater of Operations has not shown a need for more than two chaplains in a general hospital. There has been considerable dissatisfaction among medical corps officers due to the fact that the grade of lieutenant colonel is authorized for the chief nurse. It is felt that the lieutenant colonel and major, army nurse corps, should be replaced by a major and a captain respectively. The special service officer should be provided with at least three enlisted assistants. The heavy demand for clerks in the preparation of board reports necessitates a 40 percent increase in clerk-typists. Consideration should be given to replacing one-half of the technicians by female enlisted personnel.

50. Equipment of the general hospital.

a. Ordnance. The hospital commander should be provided with a five-passenger sedan.

b. Quartermaster. Adequate facilities for washing patients' eating utensils are not provided for in the present table of equipment and it is recommended that at least four automatic dishwashers and sterilizers be authorized. Suitable tents should be substituted for the latrine screens. The blacksmith sledges should be replaced by wooden mauls. The number of typewriters should be doubled and all but two of the portable typewriters should be replaced by non-portable typewriters.

c. Engineer. Due to the fact that local power facilities are so frequently inadequate or non-existent and also because the type of local power which may be available is likely to be different from the current for which the hospital electrical equipment was designed, 30-kilowatt generators should be authorized.

d. Signal. The authorized switchboards are too small and there are not enough telephones. The 1,000-bed hospital should be authorized 40 telephones, the 1,500-bed 50 telephones and the 2,000-bed 60 telephones, with adequate switchboards to service them.

SECTION 7

ORGANIZATION AND EQUIPMENT OF THE HOSPITAL CENTER

51. The table of organization given below has been proposed by the experienced hospital center commanders in the European Theater of Operations. The officers who proposed this organization have departed from the theater and it is impossible to discuss it with them. Therefore, The General Board simply submits it with these comments. The veterinarian is not required. All of the

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coordinators should be lieutenant colonels. The chief nurse should be a lieutenant colonel. The lieutenant colonel shown as chief of the professional service division should be designated as the personnel officer since the transfer of professional personnel will be his principle duty.

Proposed Table of Organization for a Hospital Center

| <u>Rank</u>                    | <u>S.S.N.</u> | <u>Number</u> |
|--------------------------------|---------------|---------------|
| Brigadier General              | 0002          | 1             |
| Colonel                        | 3501          | 1             |
| Executive Officer              |               | (1)           |
| Lieutenant Colonel, including: |               | 6             |
| Chief of Professional Services |               | (1)           |
| Dental coordinator             | 3178          | (1)           |
| Medical coordinator            | 3117          | (1)           |
| Surgical coordinator           | 3118          | (1)           |
| Medical inspector              | 3301          | (1)           |
| Nurse administrative           | 3430          | (1)           |
| Major, including:              |               | 5             |
| Laboratory coordinator         | 3303          | (1)           |
| Neuropsychiatric coordinator   | 3132          | (1)           |
| Sanitary engineer              | 7960          | (1)           |
| Receiving and evacuation       | 4010          | (1)           |
| Veterinarian                   | 3203          | (1)           |
| Captain, including:            |               | 2             |
| Adjutant                       | 2110          | (1)           |
| Supply Officer                 | 4000          | (1)           |
| 1st Lieutenant, including:     |               | 1             |
| Personnel Officer              |               | (1)           |
| Warrant Officer, including:    |               | 1             |
| Administrative assistant       | 2660          | (1)           |
| TOTAL 17                       |               |               |

| <u>Grade</u>                   | <u>Number</u> |
|--------------------------------|---------------|
| Master Sergeant, including:    | 2             |
| Sergeant major                 | (1)           |
| Personnel sergeant major       | (1)           |
| Technical Sergeant, including: | 3             |
| Chief Clerk                    | (1)           |
| Receiving and evacuation       | (1)           |
| Supply                         | (1)           |
| Staff Sergeant, including:     | 4             |
| Chief clerk, POW               | (1)           |
| Chief clerk, personnel         | (1)           |
| Chief clerk, dental            | (1)           |
| Chief clerk, evacuation        | (1)           |
| Sergeant, including:           | 4             |
| Medical supply                 | (1)           |
| Receiving and evacuation       | (1)           |
| Message center chief           | (1)           |
| Veterinarian                   | (1)           |
| Corporal, including:           | 2             |
| Clerk, general                 | (1)           |
| Clerk, typist                  | (1)           |

|                          |     |
|--------------------------|-----|
| Technician, grade 4      | 3   |
| Technician, grade 5      | 5   |
| Private, first class     | 3   |
| Private, including:      | 5   |
| Clerk, general           | (1) |
| Clerk, general           | (1) |
| Clerk, typist            | (2) |
| Clerk, typist            | (2) |
| Meat and dairy inspector | (1) |
| Orderly                  | (1) |
| Stenographer             | (2) |
| Stock clerk              | (1) |
| Truck driver, light      | (1) |
| Truck driver, light      | (2) |
| Basic                    | (2) |
| TOTAL                    | 40  |

SECTION 8ORGANIZATION AND EQUIPMENT OF THE GENERAL DISPENSARY

52. The general dispensary, Table of Organization and Equipment 8-500, dated 18 January 1945. It is considered that the general dispensary is organized and equipped to fulfill its mission. Any additional duties, over and above its assigned mission should be compensated for by the addition of personnel and equipment. The grades of officers are considered satisfactory. The addition of at least two nurses is absolutely essential.

SECTION 9ORGANIZATION AND EQUIPMENT OF THE MEDICAL DEPOT

53. The medical depot company for communications zone use should be a composite organization adapted to meet the requirements of the medical depot's mission. On the European continent, medical depot companies organized under Table of Organization and Equipment 8-661 were found to be inadequate in personnel and equipment to operate large Communications Zone medical depots. Augmentation of these companies with civilians and prisoners of war was always necessary. The Table of Organization and Equipment 8-667 would be even less suitable since it is considerably smaller. It would appear that in the future the provision of a suitable number of supply and maintenance teams organized under Table of Organization and Equipment 8-500 would best meet the requirements of communications zone medical depots. Provision would have to be made for whole blood delivery teams to service communications zone hospitals. Southern Lines of Communications used a composite medical supply battalion with success.

54. The medical base depot company, organized under Table of Organization and Equipment 8-187 and intended to provide personnel for the medical section of a general depot, is considered to be grossly inadequate in personnel. This unit calls for four officers and 40 enlisted men. The staffs on duty in medical sections of general depots in the United Kingdom usually included approximately five officers and 100 enlisted men.

BIBLIOGRAPHY

## PART TWO

The information contained in Part Two of this report has been obtained by studying the periodic reports submitted to the Surgeon General by the commanding officers of the medical units employed by the Communications Zone in the European Theater of Operations. Conclusions were drawn by evaluating the reports of the unit commanders after comparing their recommendations with the recommendations of the Office of the Chief Surgeon, European Theater of Operations, the Surgeon of the Advance Section, Communications Zone, and the Surgeon of the Continental Advance Section, Southern Lines of Communication.

PART THREECONCLUSIONS AND RECOMMENDATIONS

55. The change-over from the medical regiment to the medical group has been proven advantageous and the group organization should be retained.

56. The separate company organization has many disadvantages and the various types of medical companies should be organized into battalions.

57. There is a definite need for a corps medical battalion and this battalion should consist of a headquarters and a headquarters detachment, medical battalion; two medical collecting companies and one medical clearing company.

58. The executive officer in the headquarters medical group and the headquarters medical battalion should be a medical administrative corps officer.

59. The headquarters medical group should be authorized personnel and equipment to operate a mess.

60. The medical group and its subordinate units should be provided with sufficient transportation to render them mobile.

61. Medical units in rear of divisions should be provided with sufficient Red Cross markers to identify their respective installations and they should not be equipped with camouflage nets.

62. Map templates have not been found necessary in medical units in the European Theater of Operations.

63. Electric generators. Air cooled electric generators became unserviceable after continuous operation over long periods of time. Liquid cooled generators are much more satisfactory and should replace the air cooled generators. Diesel engines for generators were much more satisfactory than gasoline engines. Maintenance of electric generators is greatly simplified when only one type and size of generator is authorized for a hospital or other medical unit.

64. Geneva Convention brassards. Each individual authorized to wear the brassard should be provided with two brassards.

R E S T R I C T E D

65. Kit, first aid, motor vehicle. Each vehicle in a medical unit should be authorized a first aid motor vehicle kit.
66. Latrine screens provide no protection in inclement weather and as a result most units in the European Theater of Operations had obtained a tent in addition to the latrine screen. Latrine screens should be deleted from tables of equipment and a suitable tent substituted therefor.
67. Field grade unit commanders should be provided with a small wall tent for their living quarters in order that they may maintain the dignity of their position.
68. The Coleman lantern for loaded gasoline has been so unsatisfactory in regards to the fragility of the mantles and the maintenance of burners that it should be deleted from tables of equipment and replaced by a suitable battery-operated electric light.
69. The kerosene lantern has been the most dependable emergency light but the difficulty of obtaining kerosene makes it imperative that this lantern be replaced by some other suitable emergency light.
70. Tent flies alone do not provide adequate protection in inclement weather for personnel or supplies and they should be replaced by suitable tents.
71. The command post tent is not large enough for a command post of a headquarters larger than a company.
72. Ambulances should be equipped at the factory with a rack over the cab which will carry the equipment of the ambulance driver and the ambulance orderly.
73. Ambulance drivers, due to the protection of the ambulance cab, do not require dust respirators.
74. Second-echelon medical department personnel with the exception of litter bearers have no need for medical kits.
75. The carrier, field, collapsible has been used only on very rare occasions and should be deleted from tables of equipment.
76. Portable typewriters do not stand up under continued field usage and all portable typewriters except one in each unit should be replaced by standard non-portable typewriters.
77. Ambulances should be plainly marked with the Geneva Cross and panel sets should not be authorized.
78. Blacksmith's sledges cause the breakage of a great number of tent stakes and the sledge should be replaced by a suitable wooden maul.
79. A suitable hospital ward tent has not been available in the European Theater of Operations. A suitable tent should be devised which is not excessive in weight, has transparent windows, high side walls, an entrance which will permit ready access, a center aisle between the rows of litters and a suitable blackout entrance which will permit the passage of litters. This tent should be so designed that two or more tents can be joined together end to end or side to side.

R E S T R I C T E D

80. A mobile surgical hospital such as provided for in Table of Organization and Equipment 8-571 dated 23 August 1945 is required for close support of division clearing stations. An operating section is unnecessary as an organic part of this hospital but auxiliary surgical teams could be employed to better advantage. A holding section is necessary in this hospital.

81. The 400-bed evacuation hospital should be mobile, should have sufficient litter bearers for the transfer of patients within the hospital, sufficient x-ray technicians for two 12-hour shifts, the number of nurses should be increased to 48, a dietician should be added, two additional clerks are required and six enlisted men should be added to the mess section. Four of the additional nurses should be trained as anesthetists. Paragraph 21 gives in detail the additional equipment required by the 400-bed evacuation hospital.

82. The 750-bed evacuation hospital can be used to advantage both in the field army and in the advanced section of the communications zone. The tables of organization should be changed to provide the grade of captain for the adjutant, the total number of nurses should be increased to 61, six nurses should be trained as anesthetists and a barber and a carpenter should be added. Paragraph 24 gives in detail the additional equipment required by this hospital.

83. The 3,000-bed convalescent hospital is too cumbersome and unwieldy for use in the field army. A smaller and more mobile unit should be organized.

84. A medical holding unit such as provided for by Tables of Organization and Equipment 8-55, 8-56, and 8-57 is necessary in a field army.

85. Two types of medical depot companies are required, one for combat zone use and one for use by the communications zone.

86. Folding or knock-down mess tables and benches should be provided for hospitals.

87. The national flag should be authorized for every separate medical unit.

88. Kerosene refrigerators should be replaced by electric refrigerators.

89. The medical laboratory should be provided with additional personnel and equipment and should be authorized pre-fabricated buildings in lieu of tentage.

90. The medical gas treatment battalion should be replaced by medical gas teams.

91. The organization of the auxiliary surgical group should be retained with certain modifications.

92. The medical air evacuation squadron is essential and its present organization is in general satisfactory.

93. The hospital train performs a very important function and the personnel should be carefully selected and thoroughly trained.

R E S T R I C T E D

94. The field hospital is a very versatile unit and with minor modifications meets the requirements for a mobile station hospital.

95. The machine, imprinting has not been used in the European Theater of Operations and should be deleted from tables of equipment.

96. The 500-bed station hospital with minor modifications, and the field hospital have met all the requirements for station hospitals in the European Theater of Operations.

97. The 1,000-bed general hospital with certain modifications is the only general hospital that need be organized and trained in the Zone of the Interior.

98. The cellular unit concept was found to be impracticable and the organization of cellular units should be discontinued.

99. Hospital centers are necessary for the administration of groups of general hospitals and for the supervision of the receiving and evacuation of casualties. Hospital centers should operate directly under the theater chief surgeon.

100. General dispensaries should be provided with female nurses.