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AUTHORITY

AGO D/A ltr, 29 Apr 1980

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HEADQUARTERS
36TH EVACUATION HOSPITAL (SMBL)
APO 96291

INDEXED

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SUBJECT: Operational Report on Lessons Learned For Quarterly Period
Ending 31 July 1966 (RCS CSGPO-28(RI))

Significant Organizational Activities

HOSPITAL FACILITIES

1. On 10 March when Hospital construction started there were:
 - a. Twent five quonset type buildings including four partially completed latrines
 - b. One Mess Hall partially completed.
 - c. One Chapel/Theater.
2. By 25 March this unit was able to set up and operate a 30 bed facility in support of operation "Jackstay."
3. Construction completed by 31 July
 - a. Eighteen quonset type buildings connected.
 - b. Eleven new quonsets of varying sizes.
 - c. Two cement helipads with surrounding area blacktopped.
 - d. Troop housing area consisting of:
 - (1) Two administrative buildings
 - (2) Sixteen framed terra slabs
 - (3) Two latrines
 - (4) One Motor Maintenance building
 - (5) One wash rack
 - (6) One grease rack
 - (7) One laundry slab with roof
 - (8) Security fence around motor pool and laundry
 - (9) Surfacing of roadway leading to Motor Pool and main working

area.

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e. Air conditioning of pre-operative area, operating rooms, post-operative area, and x-ray.

f. Adequate water and sewage systems to:

- (1) Latrines
- (2) Operating Room
- (3) Triage Area
- (4) X-ray
- (5) Dental Clinic
- (6) Professional Service Building
- (7) Mess Hall
- (8) Morgue
- (9) Laundry
- (10) Motor Pool

g. Covered connected walkways with lights.

h. Adequate electrical power and power transmission system to all areas of hospital and troop areas.

4. On 1 July all Officers, male and female, moved to a permanent type BOQ.

HOSPITAL PROJECTS TO BE COMPLETED

1. Laundry - enclosing one end, 3 weeks.
2. Patients recreation area - two cement slabs, on work order, 1 month.
3. Emergency standby power, on work order.
4. Security fence and vault -- medical supply, on work order.
5. Two parking helipads, on work order.
6. Air conditioning -- Laboratory, one Medical Ward, Dental operating rooms, Pharmacy and CMS. Work order being submitted.
7. Partitioning of administrative area (Hosp Hq). On work order. Desirable but not essential to operate.

SELF HELP PROJECTS

1. Sandbagging of pre-operating area, operating rooms, post-operative area, and wards.
2. Painting of Hospital roofs.
3. Construction of storage area within wards.
4. Construction of adequate garbage racks.
5. Construction of outside benches for patients along each ward.

SURGICAL SERVICE

1. UNIT ACTIVITIES: An initial improvised operating suite consisting of two fully equipped operating tables was set up in the completed mess hall in mid March 1966. Only two operative procedures were performed in that area and by 1 April, two fully air conditioned suites were readied, with a total of six tables. Expansion to eight tables is now possible.

2. The surgical staff quickly learned the necessity of triage when fifteen or more patients arrived at the admitting room at one time. An SOP was established to facilitate the handling of heavy Dustoff loads and has proven on multiple occasions to work well. Patients were triaged at the admitting room door by the POD or SOD and immediately tagged as IMMEDIATE, DELAYED, or MINIMAL. The latter two categories are taken immediately to holding areas where assigned MC officers complete their pre-operative evaluation. IMMEDIATE category wounded do not leave the admitting area until adequately resuscitated, and venesections, airway, etc., are assured.

3. It has been found that portable x-rays in the preoperative area in the IMMEDIATE category patients are preferable to moving the patient to the x-ray suite. Quality of films has been adequate, and moving of the patient has been minimized. The category EXPECTANT has not been used in Dustoff situations, since they do not parallel mass nuclear disasters.

4. The maximum load arriving at one time in a Dustoff has been 28 patients. This patient load was handled more efficiently than smaller earlier loads, due to increasing physician experience and utilization of triage principles.

5. The initially constructed admitting area was a quonset measuring roughly 44 x 20 feet. This has been expanded to a structure 94 x 20 feet, which is quite adequate for expected patient loads, and which can accommodate 30 litters.

6. Well established principles of adequate debridement have been borne out in our experiences with hostile firewounds. The incidence of infection in IRHA wounds has varied from 3 to 5 percent. Infections have generally been minor and readily controlled. Delayed primary closures have been performed in suitable wounds. Our experience has been that the 5th day is the most

generally suitable time for closure in the average wound. After closure, patients have been held at least five days prior to evacuation. Evacuation channels have proven to be excellent.

1. ANESTHESIOLOGY SERVICE: Current complement of two MG Officers and two nurse anesthetists, giving a shift of three nurse anesthetists.

This service has given outstanding support to the overall mission of the unit. Personnel shortages will jeopardize the care of heavy casualties, however, and it is recommended that this be corrected whenever feasible.

2. Significant deficiencies exist in anesthesia equipment offered this type unit in the TO&E. Specifically, the current gas machine is inadequate, and also the suction machine. It is recommended that consideration be given towards changing this equipment (see "Lessons Learned" section).

3. STATISTICS:

	Major Cases	Minor Cases
May 66	103	73
June 66	118	120
July 66	68	65

Operative Deaths: 6

Australian: 1
 Vietnamese Civilian: 2
 US Military: 2
 ARVN - 1

Wound Infections	May	June	July
Major	1	1	2
Minor	0	5	5

Unusual Cases	May	June	July
Vascular	2	3	1
Anaebic liver abscess	0	1	2

4. Lessons Learned:

Item: A large cannula, fully self-contained, is necessary in resuscitation of the patient with severe blood volume deficiency.

Discussion: For rapid blood and fluid infusion in large veins (saphenous, cephalic) a pre-packaged sterile plastic extension tube with three-way stopcock has been found far superior to the other existing plastic cannulas. It is large bore, does not require a needle (which is frequently difficult to find), and has a stopcock which adds versatility. The large bore tube is sterile, and may be inserted directly into a large vein. Nomenclature: DA 6515-864-8864; Stopcock, Intravenous Therapy, Three-way, plastic, Disposable, 50's.

Observation: A new use, that is of great value in patient resuscitation, is proposed for a readily available standard item.

Item: Issue portable litter stands are fragile, unstable and not adjustable. A replacement is offered.

Discussion: For semi-permanent installations, a strong litter stand in the preoperative areas is far preferable to the standard item of issue, which is easily overturned, and could cause patient injury. We have fabricated from steel piping, racks which have proven far superior to the issue item, and which have the advantages of: structural stability; versatility (shock, or head up position); adaptability to castors.

Observation: Recommend similar devices be fabricated for installations with semi-permanent status. They may be easily manufactured of standard water piping or metal waste. (See inclosure #1 for gross measurements of proposed item)

Item: Anesthesia Gas Machines. Current issue gas machine FSN 6515-301-0430 has many deficiencies.

Discussion: This machine lacks certain safety features which may make the administration of general inhalation anesthesia hazardous.

1. The flowmeters are woefully inaccurate, namely, O₂ readings of 750cc may deliver only 200cc.

2. The CO₂ absorber cannister is small and requires frequent changing to minimize hypercarbia.

3. Without a high flow oxygen flush valve, conditions may occur in which the hazard of hypoxia is real and is difficult to resolve.

Observation: The above machine should be replaced with the "500 series" anesthesia gas machine, FSN 6515-301-0400.

Item: Suction machines. Current issue machine is inadequate. FSN 6515-299-8337.

Discussion: This machine does not generate adequate suction to clear the airway and the oropharynx of vomitus and secretions.

Observations: Consider replacement with FSN 6515-375-3100.

Item: Methoxyflurane (Penthrane). Excellent anesthetic agent, recommend for frequent usage.

Discussion: This is a versatile, non-flammable anesthetic agent which can be used safely and economically with the No 8 Heidbrink vaporizer.

Observation: This item be made more generally available.

Item: Hepatic abscesses are a not-infrequent serious complication of amebiasis in the combat zone.

Discussion: Three patients with amebiasis complicated by hepatic amebic abscesses have been treated at this installation, with one fatality. Two

patients presented with solitary abscess formation in the right lobe. These were managed successfully with open drainage in an extra-pleural, extra-peritoneal fashion. One patient presented with multifocal abscesses and severe ulcerative and granulomatous lesions of the colon. Despite open drainage and colostomy, the patient expired. All patients were treated with Emetine 65mgm daily, Cholorquin 300mgm intramuscularly daily, Diiodoquin 650mgm every 8 hours, and Tetrachcline 2 grms daily.

On the basis of our recent experience, the following conditions and observations were noted:

1. Hepatic amebic abscesses may be managed successfully with open drainage. The extrapleural, extraperitoneal approach is preferred. Liver abscesses may present with signs of extra-heptic biliary obstruction and inferior vena caval obstruction. Multifocal liver abscesses were present in one patient of our series. Signs of colon obstruction may be present secondary to ulcerative stenotic lesions as well as granulomatous lesions, necessitating proximal colostomy. The stenotic lesions and granulomatous are difficult to differentiate from carcinoma by palpation.

2. Barium enema is a valuable adjunct to the diagnosis and management of patients with evidence of colon obstruction secondary to amebiasis.

3. In the light of our experience, it would seem advisable to include Emetine in the therapeutic regimen of patients with amebic dysentery.

4. Our patients developed signs of hepatic abscesses despite presumable adequate intestinal amebicidal therapy of Tetracycline and Diiodoquin.

MEDICAL SERVICE

The Medical Service became functional on the 25th of March 1966. The primary mission of the department is to care for all non surgical patients in the hospital, to furnish consultant service to the surgical and other services, as specialist in problems and management of internal medical illness. In addition, the department operates the hospital dispensary and supervises the annual physical, separation physical, local pre and follow up employment physical for the Vietnamese employed at this hospital. The department also serves as medical consultant to the local dispensaries.

There are at present six medical officers assigned to the department:

Chief of the department - 1
Assistant Chief - 1
General Medical Officers - 4

At the present time, one General Medical Officer is on TDY for two months with the First Infantry Division.

There has been a total of 874 hospital admissions to the medical service from 25 March 1966 to 31 July 1966. A large percentage of the patients have been transfers, approximately 90% from the 85th Evac Hospital. The other transfers have come from the 93rd Evacuation Hospital. From 1 April to 31 July, we treated 326 malaria patients. We had one death from cerebral malaria, falciparum.

During the months of June and July 1966, we had a total of 167 cases of malaria and have treated them according to the USARV malaria investigation protocol. This is a program of drug therapy which all malaria cases received Daraprim 25mg every eight hours for three days, and Quinine, 650mg every eight hours for 14 days. A third drug, Dapsone 25mg daily for fourteen days is given to patients in addition to the Daraprim and Quinine if the last number in their service number ends in an uneven number, ie., 21, 23, 25 etc. These patients are kept in the hospital under medical observation 21 days after the Quinine has been discontinued.

The purpose is to see if there will be any difference in the relapse rate between the two control groups of patients. At the present time we have not seen any relapse in either group of patients, ie, those treated with Daraprim and Quinine and those treated with Daraprim, Quinine and Dapsone.

The next large group of medical diseases admitted have been Fever of Undetermined Origin followed by Gastroenteritis, acute diarrhea and infectious hepatitis, pneumonia and bronchitis.

The Fever of Undetermined Origin and gastroenteritis with diarrhea have presented a diagnostic problem with reference to laboratory support. We do not have facilities or trained personnel to do any bacteriological studies for the large number diarrheal disease we have. This same situation exists for serological examinations of the Fever of Undetermined Origin cases. No blood chemistries or electrolytes can be done here. These studies are so critical at time in management of our patients it is strongly recommended that this situation be corrected and be made a part of the TO&E of all Evacuation and Field Hospitals.

The following is a report and discussion of a case of Falciparum Malaria with cerebral involvement and residual changes after recovery.

Moore, Rodney R, Reg No 35434, Sergeant, RAA Hq, 1st Task Force P1/ 31 year old white male Australian referred from Australia 2nd Field Ambulance for evaluation and treatment of cerebral malaria. Patient had been in Vietnam for five weeks when he had the onset of chills, fever, anorexia, muscular rigidity and confusion. Patient had been stationed primarily in the Vung Tau area with Headquarters at 1st Task Force RAA, but had been to the Baria area of Vietnam for a short period on arrival in country and for the few days before his onset of symptoms. Had taken Paludrin Tablets, two per day without fail.

Past History/Non contributory.

Physical/BP 140/70 P 120 R 20 Temp 130°

General—White male 31 years old who was febrile, confused, complained of headache and stiff neck and who had slurring of speech.

EENT—Nuchal rigidity; bilateral conjunctivitis; positive Kernig and Brudzinski's sign. Pupils EOM movements and fundi normal. TM's and oropharynx were clear.

Lymph nodes—non palpated

Lungs—Clear to P and A

Heart—Sinus tachycardia, no cardiomegaly, no murmurs A₂ greater than P₂

Abdomen—No palpable liver or spleen, soft symmetrical, good bowel sound; no CVA pain or tenderness.

Rectal—Good sphincter tone, no masses

Extremities—no edema, bluing or cyanosis. The pulses were good.

Skin—no rash.

Neurological—Patient was semi-comatose but could be aroused with ease. He was confused at to time and place but aware of his person. Occasionally belligerent and had much slurring of speech.

Cranial nerves, tested 1-12 well within normal limits.

Reflexes (DTR) 2T generally. No Babinski or Hoffman signs. No pathological reflexes

Strength—normal

Lab/LP on admission

OP 220

208 Cells

Protien 30mg percent

WBC 5000 - 8000

EKG Sinus Tachycardia

CP 150

65% PMN 35% Lymph

Culture — sterile

HCT 40 - 45%

Hospital Course:

The diagnosis on admission was falciparum malaria with cerebral manifestations. However, because of the nuchal rigidity and the abnormal CSF with a high percentage of neutrophils it was felt necessary to also treat the patient as if he had a purulent meningitis. The treatment was begun with Quinine, 10gr by mouth per day for 14 days, Daraprine 25mg by mouth per day for 3 days on the 7th day 25mg by mouth per day continued until 21st day.

Due to his confused state and belligerence, the first several doses of quinine had to be administered intravenously. He was also started on Penicillin at 24,000,000 units per day in doses to be run IV at a rate of 1,000,000 unit per hour. This was continued for approximately 3 days at which the CSF culture were reported as being sterile. After a seven day stormy course with frequent febrile spikes to 105° his fever broke and from there on he proceeded to improve markedly. During the course of his initial therapy fluid intake had been restricted to 1200cc per day plus his output.

As the patient improved the slurring of speech improved as did the remainder of his problems with the exception of a residual weakness, cog wheel type of muscular rigidity in his extremities and a terminal intention tremor all of which persisted during the remainder of his hospital stay.

On the 35th day of hospitalization, he was transferred to the Australian hospital to be returned to Australia for physical rehabilitation.

Comments: Sgt Morre is one of several patients we have dealt with here at the 36th Evac Hosp who have presented with malaria, falciparum type, complicated by cerebral manifestations. The lumbar puncture on these patients have uniformly shown a mild cellular response usually less than 300 cells/mm with a predominance of polymorphonuclear lymphocytes. All of the other patients with cerebral malaria whom we have treated here have recovered completely without residual neurological damage except for Sgt Moore who seems to have severe residual damage to the cerebellar and extrapyramidal motor systems.

At about the same time that we were treating the above patient we had several cases of an undefined type of encephalitis in Australians stationed at Buria. All of the patients had similar CSF findings to those of Sgt Moore and all recovered completely without complication except for a personality change in one patient. It is possible that our patient, Sgt Moore, indeed had the same type of encephalitis as the rest of his fellow countrymen and that his neurological symptoms were related to that disease rather than to cerebral malaria.

LABORATORY SERVICE

1. Mission. To provide diagnostic and, in the form of hematological, chemical, and bacteriological determinations to the hospital, and to the area dispensaries, and allied forces medical units. In addition, histopathological specimens are received but cannot be processed. A blood bank supporting the same facilities is also maintained.

2. Staff:

1 Pathologist	C3325	10-3
1 NCOIC	92B40	E-6
1 Sr Technician	92B10	E-5
6 Technicians	92B20	E3,4

3. Statistics for the Quarter 1 May - 31 July 1966

	MAY			JUNE			JULY			Total
	Input	Output	Total	Input	Output	Total	Input	Output	Total	Total
Hematology	1496	81	1575	1807	56	1863	3405	114	3519	6912
Urinalysis	2787	261	3050	3312	280	3592	4742	89	4831	11472
Parasitology ¹	494	19	513	465	37	502	1040	25	1065	2080
Bacteriology	41	39	80	47	47	94	99	44	143	317
Serology	21	33	54	17	52	69	39	59	98	220
Chemistry	1	0	1	8	2	10	203	1	204	215
Blood Bank	383*	0	383	293	0	293	194	0	194	870
Misc	30	1	31	71	13	84	0	0	0	114
Processed for shipment ²	0	62	62	0	134	134	510	0	510	706

*Includes 72 units drawn from donors

¹Includes malaria smears

²An average of 3 determinations per specimen

Lessions Learned: This topic will be considered in detail below. In essence, it is that although the mission that this particular hospital performs as altered considerably from that which it was originally designed for, equipment and material support have not kept pace with the needs of the new mission.

Supplies and Instruments Needed: The laboratory is called upon to support the medical and surgical services with determinations it is incapable of performing. It is allowed only one spectrophotometer (this is currently non-operational due to lack of repair parts), but the increasing number of determinations now require in patient care renders this a bare minimum. When to this is added the requirements of various research studies (such as the present malaria study) it is inadequate. Although many patients with diarrhea, vomiting, and abdominal wounds are in electrolyte imbalance, the lack of a flame spectrophotometer makes adequate control of the patients difficult. Bacteriologic studies are hampered by a lack of supplies. Many items can be obtained only through the kindness of friends in CONUS installations. Personnel are also barely adequate in the face of this increasing work load. As the facilities of the hospital increase, by the addition of new equipment or supplies, the amount of work submitted rises steeply.

In the face of these difficulties, the support provided by the 406th Mobile Laboratory in terms of supplying blood and performing chemical determinations has been most gratifying.

Recommendations: In view of the role the laboratory plays in the medical care in this area, the following equipment and supplies are a minimum addition to the TO&E authorization:

1. A second Spectrophotometer
2. A flame photometer

3. Increased bacteriological supplies, especially a ready supply of sensitivity discs.
4. A floor model centrifuge
5. Increased personnel, including another senior technician with bacteriological training.
6. Tissue processing equipment.

X-RAY SERVICE

1. Statistics:

	<u>Inpatients</u>	<u>Outpatients</u>	<u>Total Exposures</u>
May	438	168	1,092
June	447	123	1,272
July	497	192	1,511
Total	1,382	483	3,875

2. Personnel: The TO&E of the X-Ray clinic calls for two (2) Radiologist. One (1) Major and one (1) Captain. One (1) E-6 NCOIC and five(5) X-ray Technicians, two (2) E-5's, three (3) E4's and one clerk typist. When we were first established in Vung Tau the TO&E was complete, except for a clerk typist. Late in May we lost one (1) E-5 technician because of his ETS.

3. Facilities: At present time we possess a portable X-ray machine of 50MA for use in OR and the surrounding areas. One (1) 100MA Radiographic fixed table X-ray machine, one (1) Fluoroscopic and Radiographic machine with tiltable table of 100MA but functioning only with 50MA due to a defective rectifier. Adequate dark room and reading facilities are available.

4. Progress: When we first started, we were established in a quonset building together with A&D, Pharmacy and the Laboratory. No radiation protection facilities were available except for portable screens for the technicians operating the X-ray machines. The dark room was the portable field unit. The rubber tight tent was exceedingly hot. The master tank has two tanks of five gallons for processing fluids which is completely inadequate for a 400 bed hospital in full operation. The first of May we were moved to another quonset building where walls of concrete one foot thick were built surrounding the exposure area. This protection is within the safety limits. The dark room consists of a 20 gallon tank for the processing fluids and a fifteen gallon tank for rinsing and a work bench.

Special by pass for processed films was built so the door of the dark room would not have to be opened continuously. This saved time and effort to the technicians in the darkroom. On the outside of the dark room a large (94 CM x 50 CM x 38 CM) tank with 4 viewing boxes overhead for

wet reading purposes. There are three viewing boxes over a table for dry reading purposes. The entire department is air conditioned.

5. **Lessons Learned:** A larger tank in the wet reading area will be a great help in mass casualty occasions. Stainless steel tanks should be used for the processing fluids when available. The fixer fluid container should be of a material that will not corrode by acids. Fixer fluids is a weak acid. Rubber or polyethylene coating can be use.

PHARMACY SERVICE

From 1 May 1966 to 31 July 1966, the number of items stocked by the Pharmacy service has grown to include more than six hundred different items. More than twenty-three hundred prescriptions were filled. Many of these were compounded. In May, seven hundred and sixty-one prescriptions were filled. Two hundred and sixty-four of these prescriptions were for outpatients and four hundred and ninety-seven of them were for inpatients and wards. Included in the number of prescriptions are the bulk drug orders for the wards, and although a bulk drug order may contain a large number of single items it is still only counted as one prescription. The average bulk drug order is written for about five different items. In June, eight hundred and seventy-two prescriptions were filled, of which three hundred nine were for outpatients and five hundred sixty-three were for wards and inpatients. Of the seven hundred eight prescriptions filled in July, three hundred and one were for outpatients and four hundred and seven were for wards and inpatients. It was noted in July that the number of items per bulk drug order from the wards increased. The type of items dispensed to the wards varied greatly from week to week and sometimes from day to day depending on the types of patients in the hospital. For example, large quantities of drugs used in the treatment of Malaria whenever the hospital received a large influx of Malaria patients were used, but when ever a large number of injured or wounded patients were admitted a different type of medications was expended. Presently the Pharmacy Service has an adequate stockage of items to cope with any type of situation. It is very seldom anymore that an item is ordered that isn't already stocked by the pharmacy.

DENTAL CLINIC

The Dental Clinic began seeing patients on 20 July 1966. Consisting of an oral surgeon, general dental officer, dental hygienist, and two dental assistants, the clinic can perform operative procedures in the following categories:

1. Oral Surgery
 - a. Extractions, both routine and surgical
 - b. Incision and drainage for dento-alvcolar abscesses

- c. Surgical removal of neoplasms and tissue hyperplasias
- d. Closed reduction of mandibula and maxillary fractures
- 2. Radiology - routine Dental roetgenograms
- 3. Resterative dentistry
 - Simple amalgam and silicate restorations
- 4. Periodontics and endodontics
 - a. Scaling and curettage
 - b. Periodontal surgical procedures
 - (1) Gingivectomy
 - (2) Fold extension procedures
 - (3) Resolvenent of infra-bony pockets
 - c. Routine root canal fillings
 - d. Apicoectomies and root end amalgams.

In addition the dental service maintains an operating room facility for the performance of surgical procedures consistent with the need required for the rehabilitation of combat casualties.

To date the following procedures have been performed:

Prophylaxix - 5
 Incision and drainage - 2
 Extractions - 32
 Closed reduction for Fracture mandible - 6
 Maxillary fracture - 3
 Maxillary cystectomy - 1
 X-rays - 55
 Tuberosity Reduction - 1
 Examinations - 10
 Periodontal Treatment - 2
 Silicate restorations - 2
 Amalgam class I - 7
 Amalgam class II - 8
 Intermediate bases - 12

The main responsibility of the dental clinic is to provide care for patients and the members of the hospital staff. Definitive type care can be performed for our permanent party. Below are recommendations which are necessary for the fulfillment of our mission:

1. Complete laboratory section. Space is available to accommodate a lab technical facility. It is felt that supplies and a technician could be utilized to perform the construction of fixed and removable prosthetic appliances.

2. Elimination of field type chairs and cabinets to be replaced by like items in standard equipment.

3. Gonco suction apparatus for performance of oral surgical procedures with greater facility

Items two and three have already been ordered.

NURSING SERVICE

1. Personnel;

ANC Officers:	Assigned	48	(Authorized 57)
	Gains	2	
	Losses	2	

Enlisted Men:	Assigned	90	(Authorized 101)
	Gains	9	
	Loses	17	

Promotions:	ANC Officers	18 from 2LT to 1LT
	Enlisted Men	15

2. Education and Training: The following classes were presented to selected Nursing Service personnel during the period 1 May thru 31 July 1966:

- Charting and Maintaining Nursing Service Records
- Nursing Care Plans
- Care of Tracheostomy
- Electro-Surgical Unit
- Duties and Coordination Between Circulator and Anesthesia Department
- Maintaining and Recording Patient Intake and Output
- Pre and Post Operative Procedures
- Types of shock--Signs and Symptoms and Treatment
- Allergic Reactions--Blood, Penicillin, Other Drugs and Foods
- Antiphylactic Tray
- Patient AM and PM Care
- Dealing with Convulsent Patients

Nursing Care Responsibilities

Ward Management
Fluid Balance (I&O)
Interpreting Vital Signs
Changing Surgical Dressings and Wound Care
Vital Signs--Importance and Recording
Cathertization and Care of Catheters
Ward Management and Supervision
Infectious Hepatitis
Ward Routine
Collecting and Handling Specimens
Admission and Discharge Routine
Operating and Care of Field Autoclaves
Drugs and Solutions Used in Operating Room
Positioning the Patient for Surgery
Emergency Airway
Equipment, Maintenance and Procedures in Eye Surgery
Care of and Use of Endoscopes
Medical and Surgical Terminology
Alcohol Sponges
Malaria
Combat Fatigue
Amebic Abscess of the Liver
Preparation of Patients for Surgery
Isolation Technique
Malaria and Complications
Malaria (Care of Patient)
Hepatitis
Nurse, Patient Relationship, Part I
Nurse, Patient Relationship, Part I contd
Nurse, Patient Relationship, Part II
Technique for Change of Dressings
Post Operative Care
Care of Patient with Naso Gastric Tube

In addition, the following Professional In-Service Program was conducted and attended by Officer Personnel:.....

Systemic Reaction to Injury and Trauma
Hospital Supply
Continuation of Hospital Supply Procedures

3. Innovations: In May and June 1966, metal beds were received to replace the canvas cots. 140 foam rubber mattresses were issued, the remainder of beds used air mattresses.

During the first 2 weeks of July, cotton mattresses were issued to replace the foam rubber and Air mattresses.

On 6 July, the following Medical Wards were opened to receive patients:

Ward 4 - 20 beds
 Ward 6 - 60 beds
 Ward 7 - 20 beds
 Ward 8 - 20 beds

The total bed capacity of the hospital is 390 beds. One Refrigerator per ward has been issued. Each ward has two 36inch floor fans and a minimum of two 16 inch fans. One each electrical water cooler has been installed on each ward. Improvising has been necessary; cabinets, carts, tables, chairs, book-cases and nurses stations have been built by the enlisted men assigned to Nursing Service. A standardization committee was appointed to study the requirement for standardizing all wards to include physical set up, supplies, equipment and procedures. The Nursing Service Office was moved from Hospital Headquarters to their own separate facility.

4. Patient Activities: During May, trucks (2½) ton were obtained to transport convalescent patients to the beach. Post Exchange privileges were established. Movies were obtained and are being shown six nights a week.

REGISTRAR DIVISION

During the quarter ending 31 July 1966, the following resume is submitted for the registrar division:

1. Medical Statistics:

a. Admissions: 1162

	<u>Dis</u>	<u>Inj</u>	<u>IRHA</u>	<u>Total</u>
(1) May	201	39	101	341
(2) June	265	47	117	429
(3) July	278	47	67	392

b. Dispositions: 1114

(1) May	242	28	46	316
(2) June	244	43	132	419
(3) July	231	50	98	379

c. Remaining: (End of Each Month)

(1) May	85	12	72	169
(2) June	106	16	57	179
(3) July	153	13	26	192

d. Deaths: 50

(1) May	0	3	22	25
(2) June	0	2	16	18
(3) July	0	2	5	7

2. Facilities: During the month of May, the office of the Registrar was moved from temporary quarters (currently ward 3) to a permanent building in the center of the hospital complex. It was immediately noted that the office was too far from the A&D office adjacent to the Helicopter pads, and construction was started to enlarge the combination A&D and baggage room to accommodate the registrar activities. On 23 July the registrar office was moved into its present quarters adjacent to the helicopter pads. Several times during the quarter, the helicopter pads were repainted, the last time the cross was painted with red day-glo paint rendering it more visible at a greater distance. Three CONEX containers have been installed outside the Registrar Division to accommodate the property exchange. This arrangement has proved very satisfactory. Continued improvements are to be made to the helicopter pads and the Registrar area.

PERSONNEL SECTION

Until July, the personnel section was functioning with its TO&E authorized strength but with inadequate space and filing (storage) facilities to perform in a smooth, efficient manner. None of the enlisted personnel had had previous experience handling officer records. From 1 May until 6 June, the personnel Officer position changed hands three times. During the month of May the blank form supply dwindled and progress was impeded because of command shortages. A supply linkage was established through the Japan publication center.

During June and July, an influx of personnel rotating to CONUS for ETS created a personnel shortage, which still exists--particularly in the Registrar section--six key positions being vacated in the clerical area with no replacements earmarked.

The morning report strength has maintained a relative stability with an average number of personnel action request processed. This headquarters has received an equitable number of promotion allocations and have promoted qualified personnel to occupy these positions.

On 25 July, the personnel section acquired additional facilities allowing the shop to establish a more efficient system. Based mainly on the prototype personnel system, the office was functionally established under the provisions of AR 600-8. A functional files system is presently being established, in addition to a feasible suspense system, SOP's drafted, and job assignments and descriptions affected. More recently, a change in the personnel staff NCO's position has increased the efficiency of the section.

In the realm of noted progress, the field 201 files, their related Officer and enlisted qualifications records (DA Form 66 and Form 20) have been updated and audited/reviewed where required. In the finance section, the UPO has assumed the duties of paying patient personnel without adequate defrayed expenses a monthly casual payment. This procedure will be incorporated into the sections's SOP. Charts and overlays are being prepared to reflect a daily strength report by MOS and grade.

SUPPLY AND SERVICES

The Supply and Service Branch during the period 1 May 1966 - 31 July 1966, accomplished the task of developing into a smoothly functioning operation.

Medical supply established an informal stock record account and is presently stocking approximately 1600 line items. Requisitioning objective is 35 days. The sections within the Hospital who order direct from the section are receiving one day service.

On 1 October 1966, the Medical Supply Section will start providing direct supply support to the 345th General Dispensary, for medical expendable items only. The most significant impact on supplies will be the increase of dental items. The Hospital has two Dental Officers presently assigned, where as the Dispensary will have four in the very near future. Initial stockage problems are anticipated but should be remedied within a matter of weeks.

Requests for nonexpendable items in excess of Medical Equipment Set Authorization have been approved for forty-one items; during this period. To date, only two items have been received--two each, bed, Orthopedic, Foster 6530-700-8500, and twenty-five pair, Support, Litter, Folding, 6530-660-0034.

Availability of medical expendables is considered adequate in view of the over-all supply situation. Nonavailability of items varies from Microscope, slides; to wire suture #32; to X-ray developer. Forecasting possible non-availability of items is impossible.

All medical supplies are requisitioned from the 1st Advance Platoon, 32nd Medical Depot in Saigon. Supplies are received at this installation either by air or boat. Transportation "bottle neck" occurs in Saigon and on several occasions supplies have had to be taken back to the Medical Depot from Tan Son Nhut because transportation was not available.

Medical Supply warehouse will undergo renovation so as to satisfy requirements of a security survey conducted by the CID. A vault will also be constructed within the warehouse for storage of narcotics and controlled items.

The Laundry Section has been averaging 38,000 pieces of linen per month. Eleven Vietnamese laborers work in this section.

The motor maintenance section moved to its permanent location in mid-July 1966. The facility provided is adequate in all respects with the exceptions of storage and work space. The latter problem should be eliminated with the erection of the unit maintenance tent.

Unit Supply now occupies a permanent structure located in the Unit Cantonment area. The major problem encountered is storage space. It is hoped that more conex containers will be made available to alleviate this problem.

FOOD SERVICE SECTION

The date for the mess to start feeding the assigned enlisted personnel and patients, was 16 May 1966. The mess had previously fed patients only. It was found the refrigeration was inadequate to store refrigerated items satisfactorily. The cooking area had only one gas operated stove. M-1937 field ranges was used to cook food items. The gas operated stove, griddle and coffee urn only operated one fourth of the time due to the insufficient supply of butane gas. Water supply had to be trucked in daily in tankers. There was not sufficient storage space for service utensils and cook-ware. The storage space for dry rations was not adequate for five to seven day issue. The walls in the cooking and dining area needed a new coat of paint. In addition to feeding in the dining hall, food had to be transported to five wards for patient feeding. There was not sufficient equipment to transport the food items to the ward. The source of supply of electrical power was not adequate to operate the electrical equipment. The mess personnel had very little experience in hospital food service. The Vietnamese employees that had been employed for kitchen police had no experience in this field. There were many problems that confronted the mess staff on opening day of the mess.

From May until July the food service section has made considerable progress in all of the problem areas. One 600 cubic foot refrigerator was received on loan from the Navy. The mess was issued one 150 cubic foot, three 65 cubic foot refrigerators and one small freezer on the day of operation. There was one 150 cubic foot refrigerator received in June and another in July. This has improved the refrigeration problem.

The mess procured and installed three gas operated stoves, one gas operated griddle and one gas operated coffee urn. There was one 500 gallon butane gas tank installed by the Esso Company for fuel supply. Butane gas is delivered once a week by the company to operate this equipment.

Water supply for the mess other than drinking is furnished by a central water system. This water supply is piped into the plumbing system of the mess. The supply of sufficient water made the hot water system operational. Water for drinking purpose has to be supplied by a potable water point, trucked in by water trailers.

Numerous items had to be designed and made, such as sinks, serving line, cooking and serving utensils racks, ice chest, pastry cabinets, cereal dispenser rack and table top racks. Numerous items were designed and made by mess personnel.

There was a building constructed 40 feet long and 20 feet wide for the storage of supplies for the mess. This made the storage adequate.

Blinds were designed and made to separate the serving area from the cooking area. The dining area and cooking area was repainted. The screened portion in the mess was replaced. This improved the appearance in these areas.

The mess has one electric food cart, two carts have been designed and made by mess personnel to improve the service to the wards.

Type "A" rations are being served. The need exists for a ten percent increase in these rations since a survey of patients reveals that most all would like more food. A request has been submitted for the ration increase.

There has been installed a central power plant which furnishes adequate supply of electrical power for the mess.

The Vietnamese employees have been trained in the proper procedures of kitchen police work. This was accomplished by mess personnel.

The highest average headcount was 490 personnel. The assigned enlisted personnel is 200. One third of our patient feeding is on the wards. The mess is presently capable of feeding 600 personnel.

The staff of the mess consist of one Warrant Officer, one mess steward, one assistant mess steward and eighteen cooks. The mess operates twenty-four hours daily, feeding four meals a day in the mess and three meals a day on eight wards. The Officers in charge of each ward request the diets. The food is transported and fed by personnel with the assistance of ward personnel.

UNIT HEADQUARTERS

During the month of May, the Enlisted Men lived in general purpose medium tents which were on large cement slabs. This created a problem whenever it rained because the water drained off the uncovered portion of the slab into the living area. The Orderly Room was also a general purpose medium tent on a large slab.

This tent area was approximately two miles from the hospital. That meant that the men had to be transported to and from the three work shifts at the hospital, brought in for eating, and a runner driven between the hospital and the Orderly Room when necessary because there wasn't any phone communication to the tent area. In addition, a pass truck shuttled men to town and back each night. Transportation and communication were critical problems which were only resolved when we moved to the new tent area adjacent to the hospital.

In the old area, the men used burn-out latrines, took showers outside, and shaved out of their steel helmets. The conditions were not harsh considering we were in Vietnam, but conditions were to improve when we moved.

The living area next to the hospital is general purpose large cement slabs with wooden side frames with the canvas tents erected and held up by center poles. In the middle of May, the tents were being set up in this new area, but the design of the frames proved unsatisfactory. During a severe wind and rain storm, the canvas blew off the frames and ripped beyond repair.

Several weeks later when the frames had been redesigned, to include the framework for a roof in addition to the sides, tents were again set up and have successfully withstood many storms. Each tent has an average strength of fourteen men.

Troop movement from the old area was accomplished between 1 June and 3 June. Florescent lights in this area replace the drop cord, two bulb per tent, style of the old area. As in the old area, each tent is sandbagged three feet per side to provide protection from mortar or air attack.

At the present, the men are using the latrines in the hospital area where there are flush toilets, showers, wash basins, and mirrors. Similar type latrines are being built in the company area and are scheduled for completion in early August.

RELIGIOUS ACTIVITIES

1. Set up offices in a quonset in the Hospital area.
2. Started a daily Catholic Mass in the Chapel.
3. Established regular bi-weekly visits to Hospital by the Jewish Chaplain.

4. Visitors:

Chaplain (Colonel) Theodore V Koephe, Staff Chaplain MACV
Chaplain (Colonel) Daniel O Wilson, Staff Chaplain USARV
Chaplain (LTC) John J Murph, Staff Chaplain, 1st Log Comd
Chaplain (LTC) Robert R Arms, USASCSGN
Chaplain (LTC) C T Boyd Jr, Brigade Chaplain, 44th Med Bde

5. Protestant services are held every Sunday in the hospital area at 1100 hrs with an average Sunday attendance of 110. Sunday evening services are held with an attendance of about 30. These services are given for all personnel at the Airfield, patients from the hospital and hospital personnel. The Chapel has a very excellent choir which sings at the 1000 hrs service. There are approximately fifteen to twenty men and women in the choir which practices Wednesday evenings immediately after the Bible Study class.

OFFICIAL VISITORS AND DISTINGUISHTE GUESTS

12 July

Woody Hayes, Football Coach, Ohio State

17 July

LT General J. E. Engler, DCG, USARV

Major General C. W. Eifler, CG, 1st Log Comd

Colonel E.P. Moshan, CO, Siagon Support Command

- Colonel C. R. Church, CO, VTSAC
LTC C. D. Butte, DCO, VTSAC
- 19 July
Colonel H. C. Slocum, OTSG Consultant
Dr R. W. Duffs, OTSG Consultant
- 30 July
LTC C. C. Pixley, CO, 68th Med GP
LTC R. W. Irvin, CO, 74th Med Bn
- 6 June
Colonel W. M. Kendrick, IG USARV
Major General W. B. Rosson, Hq MACV
Colonel F. W. Petilli, Hq, MACV
- 7 June
Colonel D. G. Eisner, MACV Surgeon
- 9 June
Colonel T. I. Koephe, MACV Chaplain
LTC P. B. Remark, MACV Chaplain
LTC G. J. Gefile, MACV Chaplain
- 16 June
Colonel R. L. Miller, CO, 44th Med Bde
Colonel T. P. Caito, XO, 44th Med Bde
- 28 June
LTC R. F. Barquist, CO, 68th Med Gp
- 4 July
Colonel L. J. Hempling, CO, VTSAC
- 15 July
LT General J. A. Heintges, DCG, MACV

BED CAPACITY

On 1. May the bed capacity of this hospital was 250 beds. As of 0001 hrs 10 May, the capacity was increased to 300 beds. On 7 July it was increased to 350 beds. As of 19 July the capacity was 390 beds. With the use of bunk adapters the bed capacity can be increased to 500 beds. Plans have been made to secure enough adapters to increase the bed capacity to 600 by utilizing designated tents in the Enlisted area. The expansion to 600 beds would be an emergency measure for a limited time only and provide austere medical treatment.

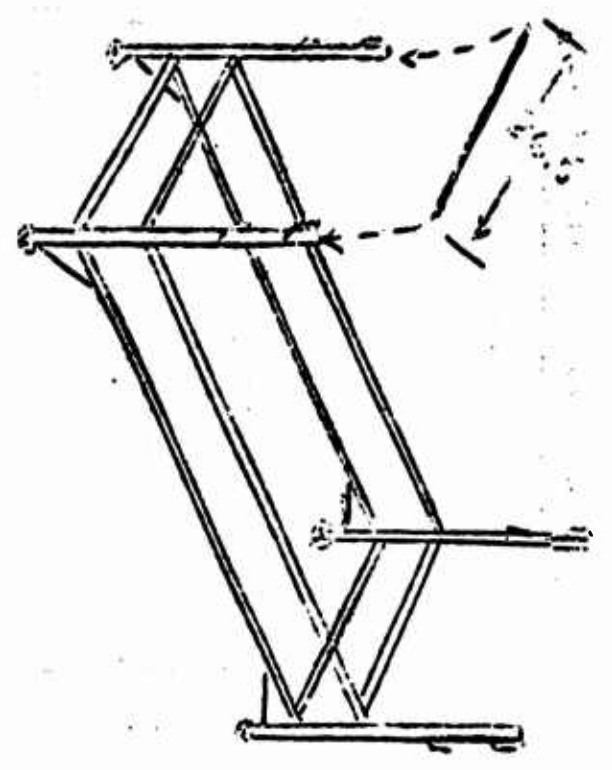
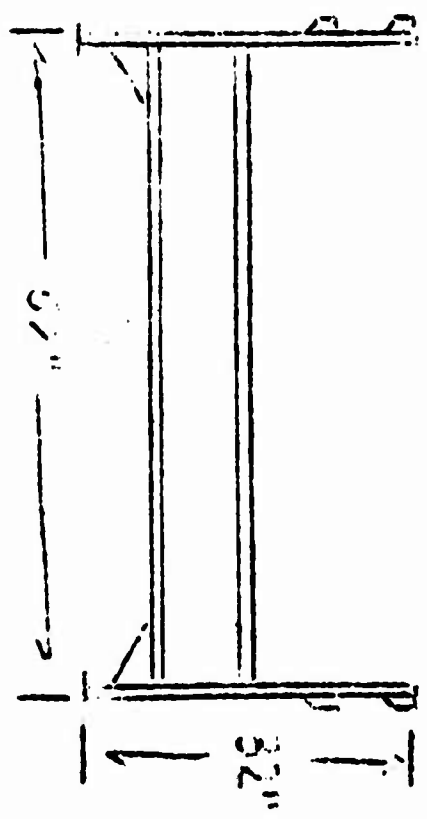
Louis E Harman Jr

1 Incl
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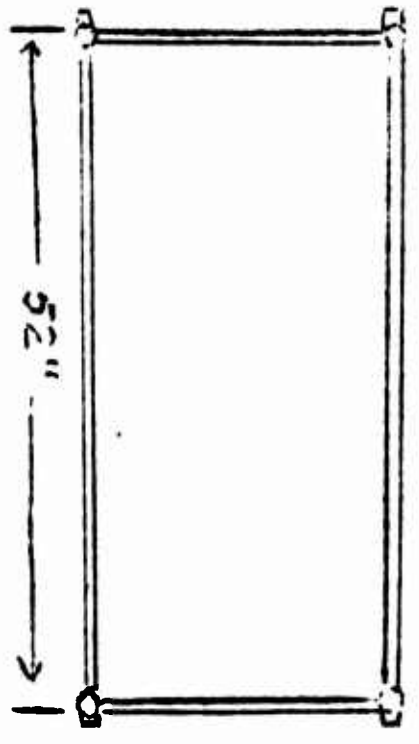
LOUIS E HARMAN JR
LTC, MC
Commanding

LITER STAND, TUBULAR STEEL

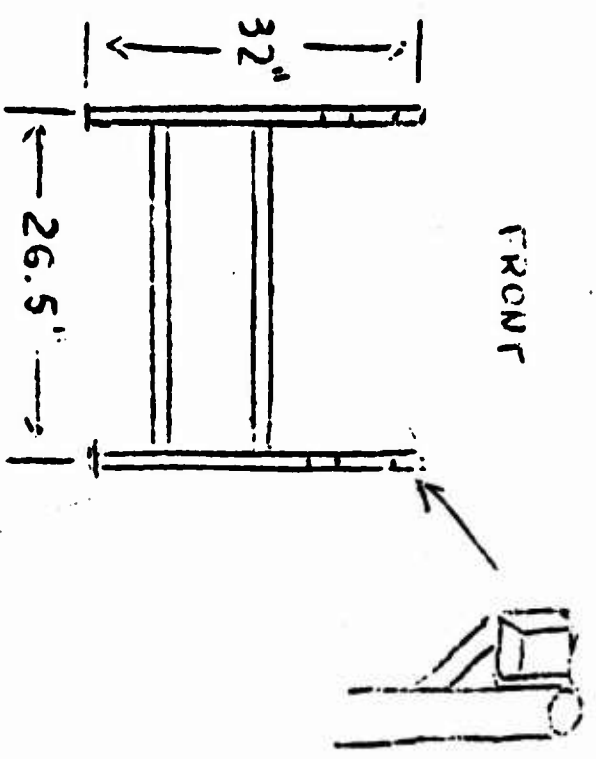
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Incl #1

AVCA 13-CD-PO (31 Jul 66)

1st Ind

SUBJECT: Operational Report or Lessons Learned for Quarterly Period
Ending 31 July 1966 (RCS CSOP-28 (I))

HEADQUARTERS, 68TH MEDICAL GROUP, APO 96491 22 August 1966

TO: Assistant Chief of Staff For Force Development, Department of the
Army, Washington, D. C. 20310
Commanding Officer, 44th Medical Brigade, APO 96307

1. The 36th Evacuation Hospital was operational in RVN for the entire period covered by this report.


2. Reference items on Anesthesia Gas Machines and Suction Machines mentioned on page 5 of basic report. The Anesthesia Machine, FSN 6515-301-0430 and Suction Machine FSN 6515-299-6337 are portable field equipment. These items are ideal to maintain mobility of the hospital and are less susceptible to damage by shipping. Consideration is being given to augmenting "fixed" hospitals in Viet Nam with the mobile type models of these items of equipment.

3. Reference item on Methoxyflurane (Penthrane) on page 5 of basic report. Penthrane is available as a non-standard item. As soon as demand data is recorded stock lead should build up to a point where the item is readily available.

4. Reference item on Supplies and Instruments needed on page 10 of the basic report. Units are permitted to request items in excess of authorized allowances to meet mission requirements. TOE's should not be changed where the item is not universally required. Sensitivity discs are difficult to stock because of short potency dating and erratic usage factors. Stockage problems will be discussed with the supporting Medical Depot.

5. Reference paragraphs 4, 5, and 6 on page 10 of basic report. Normal lead time for non-stocked items is 120-180 days which accounts for non-expendable and non-stocked expendable items. This headquarters is taking action on the problems of non-receipt of requisitioned items and transportation delays.

Long Binh 325/326


CHARLES C. PINLEY
LTC, Medical Corps
Commanding

1 Incl
as

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CO, 36th Evacuation Hospital

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