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AGO d/a ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ADJUTANT GENERAL  
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M)(11 July 68)FOR OT RD 682089

17 July 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 45th  
Surgical Hospital (MA), Period Ending 30 April 1968 (U)

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*WASH DC-20310*

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

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45th Surgical Hospital (MA)

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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 45TH SURGICAL HOSPITAL (HA)  
APO 96216

AVBJ GC-SB

30 April 1968

SUBJECT: Operational Report of 45th Surgical Hospital (HA) for  
Period Ending 30 April 1968, RCS CSFOR-65 (R1)

THRU: Commanding General  
44th Medical Brigade  
ATTN: AVBJ-PO  
APO 96384

TO: Assistant Chief of Staff for Force Development  
Department of the Army  
Washington, D.C. 20310

1. Section 1. Operations: Significant Activities.

The period 1 Feb - 30 Apr 68 has seen significant progress in the operations of the 45th Surgical Hospital. A substantial amount of new construction has been completed that has materially increased personnel safety and comfort. In the beginning of February, the unit was hampered by the unavailability of Vietnamese workers due to the post-Tet offensive curfew restrictions. Unit personnel were required to perform all of the duties normally performed by Vietnamese help and consequently, the unit was severely restricted in its ability to accomplish self-help projects. Our patient census remained fairly constant during the Tet offensive due to the comparatively low level of hostile actions in the Tay Ninh Province area. In fact, the 3d Field Hospital in Saigon evacuated several patients to this hospital for treatment because of a high surgical backlog at that location.

On 7 February Congressman Consolago of the Philippines and H.G. Tobias of the Philippine Civic Action Group, Vietnam, visited the hospital.

The 45th Surgical Hospital had been in-country 16 months in February, and many items of equipment were reaching their wear out points. In February it was necessary to replace many of the tents used as living quarters as they had been severely weakened by exposure to the elements during this time. Items of MUST equipment also needed replacement, including utility packs, inflatable shelters and the flooring of the expandable units.

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At 2335 hours 16 Feb 68, the hospital was subjected to a rocket attack which killed one doctor, wounded several corpsmen and inflicted extensive damage to the pre-op ward. Almost all of the casualties and damages were the result of the first few rounds that hit the area. Immediate response to warning signals and effective implementation of emergency SOP's precluded any addition casualties.

One round impacted approximately 15 meters from the operating room expandables, all of which were in operation at the time. Most of the fragments were absorbed by a double-tiered row of water barrels that had recently been erected in front of the OR section, and it is very probable that several lives were saved by this protective measure. The following day all available resources were diverted to reconstructing the water barrel barricade and erecting a new pre-operative inflatable in place of the one that had been riddled with rocket fragments. The protection that the water barrels provided amply demonstrated the necessity for extensive bunkering of all patient care and billeting areas. The hospital has elevated the bunkering around all these areas to a height of 6 feet. In addition, three large 30'x20' underground bunkers are planned for protection of unit personnel. One bunker has already been completed, and the second is 3/4 completed.

As a result of the rocket attack, the following personnel have been recommended for the Bronze Star for valorous service under enemy fire: MAJ James R. Bensco CPT James F. Sosnowski (posthumously) and SFC Henry L. Harvey. There were an additional five people recommended for Army Commendation Medals with "V" devices, and eight people received Purple Hearts for wounds received during the attack.

In preparation for the rainy season, the motor pool was resurfaced with lat-erite to avoid the mud difficulties experienced last year.

On 19 March the unit was visited by BG Glenn J. Collins, USARV Surgeon, and members of his staff.

Officers of the 45th were given arms familiarization on 16 and 17 April.

Mr Robert Jordan of National Geographic Magazine visited the hospital on 24 April on a photographic and information gathering tour. Mr Jordan is preparing an article on the US Army for publication in the National Geographic Magazine and wanted information on the MUST medical facility for inclusion in the article. Later the same day the hospital was given a surprise visit by USARV and MACV CG, General W.C. Westmoreland. General Westmoreland's visit was brief and consisted mainly of the presentation of several purple hearts to patients on the post-op ward.

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Period Ending 30 April 1968, RGS CSFOR-65 (R1)

2. Section 2. Lessons Learned: Commander's Observations, Evaluations  
and Recommendations.

a. Personnel - None

b. Operations

(1) Incomplete Hemolysis of Blood Agar Plates

(a) OBSERVATION. Hemolysis on blood agar plates prepared with whole human blood was consistently incomplete or totally absent.

(b) EVALUATION. Bacteriocidal and bacteriostatic plasma factors were suspected as the inhibitory agents. Red blood cells were separated from whole human blood, washed and resuspended in normal saline to make a 50% solution. 5% of this solution to 95% of peptone agar was used in preparing blood agar plates, and the hemolytic reactions from these plates were equal to those expected for defibrinated sheep RBC's.

(c) RECOMMENDATIONS. An equal volume of washed RBC's and normal saline should be used for preparation of blood agar plates when only human blood is available.

(2) Frequent Malfunction of Galvanometer and Flame Photometer

(a) OBSERVATION. Flame photometer and galvanometer over a long period of time were operational only on a part time basis. Periodic turn-ins to repair facilities disclosed no correctable mechanical malfunction.

(b) EVALUATION. Both the galvanometer and flame photometer are precise and delicate instruments affected by small changes in temperature, humidity, pressure and atmospheric contamination. Since our galvanometer and flame photometer are stored and operated inside our laboratory expandable, temperature and air contamination are held to a low level by the air conditioning system. Small amounts of atmospheric dust are kept from affecting these instruments by dust covers and periodic cleaning. A slight pressure differential existed because of the air conditioning system, but this was equalized by the MUST maintenance team. Humidity was probably the biggest offender, but it was found that if the equipment was left on, the heat generated protected the mechanism from humidity and made possible more consistent results.

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(c) RECOMMENDATION. Lab personnel must evaluate the effect of the natural variables of heat, pressure, humidity, etc, on the delicate mechanism of this type of equipment. Keeping the temperature s constant as possible and the humidity reduced by continuous running of the machines substantially improves results and reduces downtime.

(3) Baby Bed-

(a) OBSERVATION. No bed has been designed in the MUST hospital for prolonged treatment of infants.

(b) EVALUATION. The recent necessity for prolonged hospitalization of a small child demonstrated the need for a specially designed pediatric bed for small children (less than 1½ years). The regular MUST bed is too large in size and contains no accessories for correctly securing an active young child. After consideration of the requirements for such a bed, the medical officers constructed from plywood a bed that sloped upward to permit the baby's head to be higher than the feet and extended the sides approximately 6" high to form a barrier to keep the child from falling out. The addition of straps insured that even the most active child could be left unattended for short periods while the nurse could perform other duties on the ward.

(c) RECOMMENDATION. A collapsible and adjustable pediatric bed for this purpose should be designed as standard equipment for MUST hospitals that treat civilian war casualties and can expect children as patients.

(4) Bearing Failure in MUST Dual Pad Drive Assemblies

(a) OBSERVATION. Excessive number of failures of dual pad drive assemblies in the MUST utility pack.

(b) EVALUATION. It was observed that the bearing which was consistently at fault was a factory sealed bearing with no lubrication jets. 32d Medical Depot was advised of this problem, and they requested an EIR be submitted.

(c) RECOMMENDATION. Garrett Corporation has issued a modification kit that allows lubrication on a regular schedule. These modification kits have only recently been installed, and a sufficient time has not yet passed for objective evaluation; but they are expected to extend the longevity of the bearing pad assemblies.

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Period Ending 30 April 1968, RGS CSFOR-65 (R1)

(5) Nebulizer

(a) OBSERVATION. A heated nebulizer or similar apparatus is unavailable for the moisturization of tracheal secretions in patients who are breathing spontaneously through tracheostomy tubes.

(b) EVALUATION. A substitute must be devised that can be coupled to an oxygen source and, at the same time, inundate the trachea with moisturized air to prevent drying of the tracheal secretions.

(c) RECOMMENDATION. The nebulizer from a Bird Mark 8 ventilator can be removed and provided with an oxygen source (oxygen tank with combination reducing valve flowmeter) and a continuous flow of sterile normal saline (slow drip from an intravenous bottle with standard IV tubing). This nebulizer fits directly onto the adapter of the tracheostomy tube and has been effective in maintaining an improved state of hydration of tracheal secretions.

c. Training

(1) MUST Sump Pumps

(a) OBSERVATION. The MUST sump pumps in each of the operating room sinks have repeatedly clogged.

(b) EVALUATION. The usual cleaning technique of brushing the screen and inner surface of the trap contributed to pump failure by loose bristles becoming engaged in the pump rotors.

(c) RECOMMENDATION. A brush should not be used for the weekly cleaning of the sump pump trap and filter screen. Cleaning with cotton cloth and vacuum cleaner has been substituted with elimination of the above problem.

(2) Failure of Operating Room Table Hydraulic System

(a) OBSERVATION. Two of our three operating tables, Model 1080-M1, have repeatedly failed in the operation of the hydraulic system for raising and lowering the tables. Each was disassembled and found to have small fragments of rubber gasket material interfering with the check valve mechanism.

(b) EVALUATION. During manufacture or during continued use, fragments of gasket material fractured and entered the hydraulic system as foreign bodies.



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(c) RECOMMENDATION. A preventive maintenance system has been established for the inspection and cleaning of the check valve mechanism of these tables at intervals of four months.

d. Logistics

(1) Cotton Blood Pressure Cuff

(a) OBSERVATION. The cotton blood pressure cuff used in pre-op is susceptible to permanent staining from blood and other soiling agents.

(b) EVALUATION. The cotton blood pressure cuffs in pre-op are used on patients coming directly in from the field and consequently, the cuffs become soiled with absorbed blood and dirt. These cuffs, because they are cotton and absorb blood, are impossible to clean completely and, after a period of use, become unsightly and odorous.

(c) RECOMMENDATION. The non-conductive blood pressure cuffs used in surgery are non-absorbant and impervious to dirt and can be completely cleaned by rinsing in cold water. They are easily maintained and remain serviceable for long periods of time.

(2) Canvas MUST Bed Covers

(a) OBSERVATION. The canvas covers on the MUST hospital beds are easily soiled and difficult to clean.

(b) EVALUATION. The MUST hospital beds on pre-op, especially, are often exposed to contact with large amounts of blood and spilled medical solutions such as methiolate, etc. These canvas covers absorb these fluids and must be scrubbed thoroughly for 15 to 20 minutes to render them suitable for service. In addition, they can never be completely cleaned and after a period of use, become unsightly.

(c) RECOMMENDATION. Rubber sheeting can be used to protect these covers. A two inch overlap on all sides is recommended. The rubber sheet can then be quickly and effectively washed and preserves the serviceability of the canvas mattress cover.

(3) MUST Bed Overhead Traction Frame

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Period Ending 30 April 1968, RCS CSFOR-65 (R1)

(a) OBSERVATION. Present traction frame designed for use on MUST beds is unsatisfactory. The looseness of the mechanical clamps and overall instability is intolerable in practical usage, preventing the use of balanced skeletal traction.

(b) EVALUATION. The frame clamps do not fasten securely enough on the bed frame to support the weight of the orthopedic frame, and an adequate overhead frame is unavailable.

(c) RECOMMENDATION. The orthopedic traction frame for MUST beds should be redesigned to provide an adequate, stable frame for the use of balanced skeletal traction.

#### (4) Loss of Litter Straps and Blankets on Air Evacuation

(a) OBSERVATION. Litter straps and blankets are not being adequately replaced during patient evacuation.

(b) EVALUATION. Patients being evacuated by air are often required to have litter straps plus two or three blankets for comfort of the head and extremities. Air evacuation helicopters do not carry litter straps or sufficient blankets for direct property exchange.

(c) RECOMMENDATION. The pre-op wards will maintain a list of blankets and litter straps evacuated with patients during a period of one month. Coordination has been made with 68th Medical Group and 45th Air Ambulance Company to recover these items at specified intervals and investigate the use of direct litter strap exchange.

#### (5) Fringe Items

(a) OBSERVATION. One time usage items cause excessive fringe item stockage in medical supplies.

(b) EVALUATION. Hospital sections order many items, especially non-standard items which are eligible for fringe stockage due to the criteria of one demand in 180 days. Many of these items may not be ordered again for a period of a year but must remain on the fringe file.

(c) RECOMMENDATION. Section chiefs of the hospital are required to periodically examine the fringe file and determine the probable usage factor of the item they have requested. The low turn-over items are retired and placed in the inactive file, and items for which repeated usage is anticipated are converted to requisitioning objective file so that reorder points may be determined.

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e. Organization

(1) Single Side Band Radio

(a) OBSERVATION. The AM single side band radio used by this hospital is not an authorized item of equipment.

(b) EVALUATION. The existing telephone system does not provide the reliable, flexible, rapid communication necessary between this hospital and our controlling group headquarters. Emergency situations, patient regulating and emergency supply requests must be relayed quickly and legibly, a capability which is not within the current capability of the land line system.

(c) RECOMMENDATION. A single side band radio (AM) such as is currently used by this hospital should be authorized by letter or by MTOE as it is a proven, rapid and reliable means of communication.

  
JAMES R. BENSON  
LTC, MC  
Commanding

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AVBJ GD-PO (30 Apr 68) 1st Ind  
SUBJECT: Operational Report of 45th Surgical Hospital (MA) for Period  
Ending 30 April 1968, RCS CSFOR-65 (RI)

HEADQUARTERS, 68TH MEDICAL GROUP, APO 96491

10 May 1968

THRU: Commanding General, 44th Medical Brigade, ATTN: AVBJ PO, APO 96384

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D.C. 20310

1. This headquarters has reviewed the Operational Report for the period ending 30 April 1968 from Headquarters, 45th Surgical Hospital.
2. Concur in all recommendations on pages 3 thru 8, except as indicated in paragraph 3, below.
3. Reference recommendation 2b (3) (c). Non-concur. A field expedient is considered satisfactory.

*Leonard Maldonado*

LEONARD MALDONADO  
Colonel, Medical Corps  
Commanding

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AVBJ-PO (30 Apr 68) 2d Ind  
SUBJECT: Operational Report-Lessons Learned for Quarterly Period Ending  
30 April 1968 (RCS CSFOR-65) (RL) (45th Surgical Hospital)

HEADQUARTERS, 44th Medical Brigade APO 96384 28 May 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST  
APO 96375

1. The contents of the basic report and first indorsement have been reviewed.
2. The following comments pertaining to observations, evaluations and recommendations in Section 2 of the basic report are submitted:
  - a. Reference paragraphs 2b (1) and (5), 2d (1) and (3). These recommendations concern technical professional matters and should be considered by appropriate consultants to the USARV Surgeon and The Surgeon General.
  - b. Reference paragraph 2b (2). Concur.
  - c. Reference paragraph 2b (3). Non-concur. The design of a pediatric bed for exclusive use by MUST hospitals is not indicated.
  - d. Reference paragraphs 2b (4), 2c (1) and (2), 2d (2), (4) and (5). Concur.
  - e. Reference paragraph 2e (1). Concur. Authority for the SSB AN/FRC 93 radios has been established by DA message 843191, dated 8 Dec 1967. Action has been taken to include these radios in appropriate MTOE's.

TEL: LHM 2909/2494

  
GLENN J. COLLINS  
Brigadier General, MC  
Commanding

cc: 45th Surgical Hospital

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AVHGC-DST (30 Apr 68) 3d Ind CPT Arnold/ms/LBN 4485  
SUBJECT: Operational Report of 45th Surgical Hospital (MA) for  
Period Ending 30 April 1968, RCS CSFOR-65 (R1)

HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375 17 JUN 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,  
APO 96558

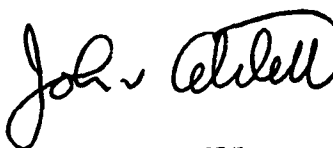
1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 30 April 1968 from Headquarters, 45th Surgical Hospital (MA).

2. Comments follow:

a. Reference item concerning incomplete hemolysis of blood agar plates, page 3, paragraph 2b(1). Nonconcur until further tests can be made by the 9th Medical Laboratory, Saigon. Results of tests will be announced when available.

b. Reference item concerning nebulizer, page 5, paragraph 2b(5); item concerning MUST bed overhead traction frame, page 6, paragraph 2d(3); and item concerning cotton blood pressure cuff, page 6, paragraph 2d(1): Concur. This information will be disseminated by the Surgical Consultant in the course of his professional liaison visits.

FOR THE COMMANDER:

  
JOHN V. GETCHELL  
Captain, AGC  
Assistant Adjutant General

Copies furnished:  
HQ, 44th Med Bde  
HQ, 45th Surg Hosp (MA)

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GPOF-DT (30 Apr 68) 4th Ind  
SUBJECT: Operational Report of HQ, 45th Surg Hosp for Period Ending  
30 April 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96358 29 JUN 1968

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-  
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

*C.L. Shortt*  
C.L. SHORTT  
CPT, AGC  
Asst AG

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