

ICU/RECOVERY WARDS
STANDARD OPERATING PROCEDURE
500 BED FLEET HOSPITAL

TABLE OF CONTENTS

	<u>TOPIC</u>	<u>PAGE</u>
A.	MISSION	3
B.	FUNCTIONS	3
C.	PHYSICAL DESCRIPTION OF FUNCTIONAL AREA	3
D.	SPECIAL CONSIDERATIONS / HAZARDS	3
E.	DEPARTMENT ORGANIZATIONAL CHART	4
F.	JOB DESCRIPTIONS	6
	1. Ward Medical Officer (WMO)	6
	2. Critical Care Nursing Department Head (CC NURS DH)	6
	3. Critical Care Nursing Division Officer (CC NURS DO)	6
	4. Critical Care Staff Nurse	6
	5. Leading Petty Officer/Senior Corpsman	7
	6. Staff Corpsman	7
G.	WORKLOAD	7
H.	TASKS	7
	1. Clinical	7
	2. Electrical hazards / Power Shedding	9
	3. Personal Protective Equipment (PPE)	10
	4. Security	10
	5. Biological/Hazardous Materials	10
	6. Communication	11
I.	RESPONSE TO DEPLOYMENT HAZARDS	11
J.	PATIENT PROCEDURES FOR HANDLING ENEMY PRISONERS OF WAR	14

500 BED FLEET HOSPITAL
STANDARD OPERATING PROCEDURES

ICU WARDS

A. **MISSION:** To provide intensive care to patients who have life threatening or complicated injuries through a full spectrum of contingency operations: (1) acts of armed aggression; (2) humanitarian operations; and (3) natural disasters. To provide Post Anesthesia Care to surgical patients.

B. **FUNCTIONS:**

1. Provide high acuity/intensive medical and nursing care to hemodynamically unstable patients.
2. Provide post anesthesia care to surgical patients.

C. **PHYSICAL DESCRIPTION OF FUNCTIONAL AREA:**

1. Location within the compound.
 - a. There are four (4) 21-bed Intensive Care Units (ICU) in a 500-bed fleet hospital. The four ICUs are each constructed off the main passageway with the first ICU following the Surgical Suite.

2. Sheltering/type/quantity.

- a. Type: TEMPER Tent
- b. Quantity: Four (4), 14 section wings

D. **SPECIAL CONSIDERATIONS / HAZARDS:**

1. Each twenty (21) bed unit is self-sufficient and the same in design and equipment.
 - a. High tech medical equipment is limited. There are 8 vital signs monitors and 4 ventilators for every 21-bed ICU.
 - b. The nurses' station is placed in the center of each 21-bed unit to maximize visualization and accessibility to patients.
 - c. If feasible, the most critical patients are placed in beds closest to the nurses' station.

- d. The medication locker and CSR cart are placed near the nurses' station for ease of access to supplies. The linen cart and biohazard waste bins are placed at the far end of the ward, near the exterior exit.
- e. Patients' personal gear is placed directly under the beds, so as to not impede foot traffic around the bed. In theaters of aggression, personal protective gear (i.e. gas masks) is strapped to the bed frames to allow access by patients in times of alert status.
- f. In the event of peak flow, patient admission to the ICU ward is prioritized by level of acuity, need for intensive care monitoring and therapy, and severity of illness or injury. Patients may be admitted to the ICU without an in-depth medical work-up due to a peak flow condition or overload in Casualty Receiving. The Ward Medical Officer (WMO) is then responsible to complete the admission work-up upon arrival to the ICU.

2. Each ICU unit is equipped with two crash carts to support cardiopulmonary resuscitation.

3. The designated population for each ICU ward may be changed as different operations dictate. Surgical units or burn unit would convert to medical wards as needed. The plan for acts of aggression operation would be as follows:

- a. ICU One will be designated as the burn unit.
- b. ICU Two and Four will be designated as the surgical/trauma intensive care units.
- c. ICU Three will be designated as a medical/cardiac intensive care unit.
- d. During humanitarian/natural disaster operations, the majority of hospital would be dedicated to international patients. Consideration should be given to a female only care area with appropriate staffing to accommodate local customs.

E. DEPARTMENT ORGANIZATIONAL CHART: May vary with different concepts of operations and numbers of personnel assigned to designated areas. Assignments to ICU billets are made by Billet Sequence Number. Other assignment considerations are by demonstration of professional knowledge, skills, education and demonstrated competency in designated functional area. However, it is important to remember, the closer to the OR core of the hospital any ward is placed, the more critical the need for manning becomes.

1. Staffing:

Nurse Corps (Critical Care Subspecialty 1960):

CDR	1960	1
LCDR	1960	4
LT/LTJG/ENS	1960	46

Medical Corps:

Internal Medicine – Critical Care

LCDR		2
LT		2

Internal Medicine – Cardiology

CDR		1
LCDR		1

Hospital Corpsmen

HMC	0000	1
HM1	0000	1
HM2	0000	4
HM3	0000	15
HN	0000	56

CardioPulmonary Technicians

HM2	8408	2
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Respiratory Technicians

HM1	8541	1
HM2	8541	3
HM3	8541	4

- a. WMOs stand watches as dictated by the number of providers available for providing care in the ICU units and as conditions of the operational mission dictate. Depending on the theater of operations, the Ward Medical Officer (WMO) may be assigned to two ICU wards.
- b. One Nurse Corps officer & one Corpsman are assigned per four or five patients as operation and staffing allow. Shifts could be either twelve or eight hour shifts, depending on the type of operational mission and available staffing. For prolonged deployments, eight-hour shifts are recommended whenever circumstances allow, to minimize staff fatigue. Watchbills need to reflect flexibility in meeting the mission with the available personnel resources.

- c. At least one respiratory technician should be assigned per shift to the ICU units to assist in managing complicated airway problems and mechanically ventilated patients. The respiratory technicians and cardiopulmonary technicians report, clinically, to the Ward Medical Officer on duty. Administratively, these technicians report to the Internal Medicine Department Head.
- d. Enlisted personnel may stand extra duty with security or other details, as dictated by the demands of the command and type of contingency operations.

F. JOB DESCRIPTIONS:

1. The Ward Medical Officer (WMO) is responsible for the medical care of patients. He/she reports to the Director of Surgical Services (DSS) for combat-related operations, but to the Director of Medical Services (DMS) for most humanitarian missions. The WMO should have Critical Care experience and be familiar with the management of mechanically ventilated and hemodynamically unstable patients.

2. The Critical Care Department Head (CC Nurs DH) is the senior Critical Care Nurse assigned to the Fleet Hospital and the department head for Critical Care Nursing. He/she reports to the Director of Nursing Services (DNS) and has administrative responsibility over all Nurse Corps Officers and Corpsmen assigned to the four Intensive Care Units. The Dept Head ensures all the units are managed and staffed appropriately for the operational mission and patient care needs. The CC Nurs DH should have critical care experience and maintain the Subspecialty Code 1960.

3. The Critical Care Division Officer (CC Nurs DO) is the senior Nurse Corps Officer assigned to the ICU and has administrative responsibility for the operations of the ward. There are three (3) Critical Care Division Officers assigned to the 500-bed fleet hospital and one (1) Critical Care Clinical Nurse Specialist. All four personnel are assigned as division officers of the four ICUs. The CC Nurs DO should be fully qualified in critical care nursing with a minimum of three years critical care experience. It is recommended that this individual have the Subspecialty Code 1960, at a minimum. The CC Nurs DO reports to the Critical Care Nursing Department Head (CC Nurs DH) within the Nursing Services Directorate. The CC Nurs DO receives guidance from the WMO for direction of the medical care of the patients. Staff nurses report to the CC Nurs DO.

4. The Critical Care staff nurse is a junior officer (O-1, O-2, O-3) and is responsible for the daily care of the ICU patients and the supervision of the staff Corpsmen. The nurse in charge on each shift should have the Subspecialty Code 1960 and a minimum of 1-2 years of Critical Care experience. It is

recommended that all staff nurses, at a minimum, have some critical care experience if not the Subspecialty Code 1960.

5. Each ward has a designated Leading Petty Officer (LPO) who is the senior Corpsman and oversees the enlisted functions on the ward to include daily staffing, teaching, counseling and supervision. The LPO is directly responsible for the maintenance of the administrative and medical supply levels and the monthly watchbill. He/she must have critical care experience. The LPO reports to the CC Nurs DO.

6. Staff Corpsmen are responsible in providing nursing care under the supervision and guidance of the staff nurses. They report to the Nurse Corps officer in charge of their shift, via the chain of command through their LPO. It is recommended that the staff Corpsmen have critical care experience.

G. **WORKLOAD** (May be unpredictable due to contingency activity):

1. There are up to 4 ICU Units with 21 beds each for a total of 84 critical care beds.

2. Definition of patient flow status:

- a. Steady state = 80 admissions a day to the hospital, with 24 going to the ICUs.
- b. Peak state = 120 admissions a day to the hospital, with 36 going to the ICUs.

H. **TASKS:**

1. CLINICAL:

- a. The staff assigned will provide inpatient intensive/critical care as dictated by the theater of operations, available resources and acuity of the casualties. Ensure all staff exhibits competence in caring for patients who require high-acuity level care, to include recovery of post-anesthesia patients.
- b. Intensive/critical care practice, procedures and protocols shall be rendered in compliance with standard American Association of Critical Care Nurses (AACN) procedures manuals and nursing procedures manuals adopted in the Navy Medical Treatment Facility (MTF) Intensive Care Units. These references should be followed as a guide for providing critical care in the Fleet Hospital but thoughtful modifications may be required in the field setting due to the environment, limited equipment, supplies and personnel.

- c. All personnel will follow the current guidelines for cardiopulmonary resuscitation as established by the American Heart Association Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS) training certification programs.
- d. Two crash carts will be maintained in each ICU to support the above resuscitation procedures. This maintenance will include stocking, inventory and replacement of expended or expired items.
- e. The assigned staff will recognize the need to improvise due to the types and numbers of patients received and limitation in high tech equipment, supplies and personnel available. There is a strong need to adapt to ever changing conditions and circumstances.
- f. The CC Nurs DO will ensure that all personnel are oriented to and exhibit competence in the safe operation of the medical and structural equipment found in the Fleet Hospital to include all high tech equipment, field beds and wheeled litter cart.
- g. The assigned staff needs to recognize that equipment repairs and replacement of consumable supplies are not always possible in field conditions. Responsible maintenance of all ward equipment is required and Biomedical Repair should be contacted for repair of high tech medical equipment. Assigned personnel must plan repair/replacement strategy in advance, whenever possible, and adapt to ever-changing circumstances.
- h. The CC Nurse DH and Critical Care Nursing Division Officers must establish an aeromedical evacuation staffing plan and watchbill to accommodate the possibility of having to release various staff personnel to aerovac duties. These duties may remove these personnel, as well as some high tech gear and medical consumables, from the ICUs in the Fleet Hospital for an uncertain amount of time. This may impact the clinical capabilities of the Fleet Hospital and should be planned for when the aeromedical evacuation staffing plan and watchbill is generated.
- i. The assigned staff must recognize that environmental factors may prohibit sterility or desired level of cleanliness for treatments. Prioritization and limited use of sterile supplies, rationing of clean linens, etc. as dictated by operation and conditions encountered should be enforced throughout these areas.

- j. Diets and meals for ICU patients will be ordered from the galley per procedure instructions established for the given theater of operations. Availability of special diets will be non-existent or extremely limited.
- k. All schedule II & III drugs as identified by pharmacy policy (narcotics & controlled drugs) will be stored in a medication locker with a lock. The keys to the medication locker will be in the custody of a Nurse Corps Officer and he/she will be responsible for logging out the medication for all patients. When only a portion of the drug is used, the unused portion will be discarded with a witness present and recorded on the narcotic log out form. All narcotics and schedule III drugs will be verified by two nurses each shift: one reporting on duty and one reporting off duty.
- l. The pharmacy will have a limited formulary in a given theater of operations. Conditions may also limit replenishment of supplies to the command as the operation continues. The staff needs to conserve resources as indicated. While outdated medications may have less effectiveness, in a field situation, they may need to be used if no replacements are available. Consult with the Pharmacy Officer regarding the safety of the use of expired items.
- m. The laboratory will have limitations in testing capabilities. Each command and operation will clarify what testing capability are available based available equipment, supplies and personnel. Specimen collection procedures may need to be modified, per command instructions.
- n. The assigned staff should consult with the Patient Administration Department for appropriate and command-specific guidelines for interhospital transfers, aeromedical evacuation, discharges and decedent affairs procedures.

2. ELECTRICAL HAZARDS / POWER SHEDDING:

- a. Secure, utilize and stow all equipment in accordance to electrical safety guidelines, per Public Works policy.
- b. Assure all personnel are properly trained on the use of electric equipment in area.
- c. Keep alternate light supplies (flashlights, batteries, etc.)

in the event of a power outage. Prioritize and conserve the use of batteries. Ensure that an AMBU bag is available at the bedside of all mechanically ventilated patients.

3. PERSONAL PROTECTIVE EQUIPMENT (PPE):

- a. Patients admitted with PPE should have the gear placed where they can reach it in times of alert/alarm status. Strap the gas mask holders to the exterior frame of the patients' beds and place additional personal items on the floor beneath each patient's bed.
- b. For patients arriving to the ward without PPE, call the place of origin (i.e. Casualty Receiving) to see if they still have the patient's gear. If none is available, call Supply to attempt to obtain a replacement for the patient. If unable to supply the patient with PPE, he/she will have to go without.
- c. Staff personnel must utilize their own PPE in case of attack in order to provide optimum support to those injured.
- d. The policy regarding the donning of PPE for patients who are mechanically ventilated, have open surgical wounds or other life-threatening conditions should be established prior to operations commencing in theater.

4. SECURITY:

- a. Muster all staff personnel at changes of shifts and adhere to command policies regarding security conditions, compound restrictions and liberty. Ensure that all berthing areas assigned to staff personnel from each ICU are recorded and available in their functional area.

5. BIOLOGICAL/HAZARDOUS MATERIALS:

- a. Ensure that BIOHAZARD materials containers, especially contaminated sharps containers, are available in various areas of each ICU with a central collecting area secured from high traffic. Environmental Health/Preventive Medicine will be responsible for the final disposal of the BIOHAZARD and infectious waste.
- b. For any other hazardous materials handling questions, consult Public Works.

6. COMMUNICATION:

- a. During acts of aggression, be aware of which phone lines are secure and which are not. Do not discuss any sensitive information over unsecured phone lines.
- b. Orient all staff/patients to the compound alert signal system and the appropriate responses to each situation. Ensure that an alternative form of communication is available to notify all staff members of the condition.
- c. Report bed status, via the 24-hour Nursing Report, to the Nursing Service Directorate at the end of each shift and periodically, as required, during periods of Peak flow. The report should focus on the numbers and categories of patients rather than the names and details of each case and include the following:
 - i. Number of current inpatient census
 - ii. Number of admissions since last report
 - iii. Number of currently available beds
 - iv. Number of discharges/deaths/transfers out of hospital since last report
 - v. Number of anticipated changes in bed availability over the next shift or day
 - vi. Command Interest should be kept to a minimum but include high-level command of joint forces, host nations and high-level operational units.
 - vii. Unique disease/infection with risk potential for the command

I. RESPONSE TO DEPLOYMENT HAZARDS:

1. FIRE PROCEDURES

- **Initially, attempt to extinguish a fire with a portable fire extinguisher ONLY IF THE FIRE IS CONTAINED.**
- Simultaneously, the Functional Area (FA) needs to IMMEDIATELY contact ADMIN either by phone or runner/messenger. ADMIN WILL SOUND THE ALARM FOR FIRE.
- Smoke boundaries need to be set by the FA staff by dropping the TEMPER liner flaps leading to the FA and vestibules(s). All flaps throughout the hospital need to be dropped to control the possible flow of smoke.

- The FA Leader will decide to evacuate the space if the fire is determined to be out of control.
- All O2 cylinders (on a cart) positioned in each appropriate FA need to be removed when the space is evacuated.
- A FA staff member should be assigned in each area to secure the electrical (C-panel) and HVAC units.
- A muster of all staff and patients within the affected FA needs to be taken immediately and sent to ADMIN by runner.
- The FA Leader needs to wait at the FA access point for the Fire Marshall and Fire Team to arrive in order to report: type of fire, volatile items in the space (O2 cylinders, HAZMAT) and any casualties known to be in the space.
- When assessing the intensity of the fire, the Fire Marshall WILL DECIDE WHETHER OR NOT THE ADJACENT FUNCTIONAL AREA (S) WILL EVACUATE. Therefore, the FA on either side of the area of fire will wait for the word from the Fire Marshall before evacuating.
- Once the fire is out, there will be an inspection of the damaged area by the Fire Marshall, FA Leader and other key personnel.
- The Fire Marshall will give an assessment report to the Commanding Officer describing damages sustained by the FA. Depending on the outcome of the fire, the FA may need to relocate somewhere else until it is fully functional again. The FA Leader needs to await orders from the Command Staff before reentering the FA and returning to duty.

2. CHEMICAL/ BIOLOGICAL ATTACK

- The hospital ADMIN department will notify the hospital compound, via 1MC, if there is a possibility of a biological/chemical attack.
- All areas of the compound must respond appropriately
- Once the alarm has been sounded for biological/chemical attack, **THE INITIAL ACTION TAKEN IS TO DON AND CLEAR YOUR GAS MASK.** Since the fleet hospital is operational, sleeves should always be down. **The donning and clearing of the gas mask should be accomplished in a total of 8 seconds.**

- If a MOPP level is required, the ADMIN department will announce that accordingly and everyone will proceed to MOPP Level 4. **This task must be accomplished within 8 minutes.**
- Once Personal MOPP gear is on, place gas masks on your patients.
- One person from each FA should be assigned to secure the HVAC unit (to prevent gas from entering FA). **DO NOT DROP THE FLAPS IN THE HOSPITAL!** The designated person should NOT reenter the hospital but should proceed to the EOD/Decontamination bunker.
- **A muster of all FA staff and patients needs to be taken immediately and sent to ADMIN.**
- **Drink water!! Hydration, hydration, hydration.**
- The ALL CLEAR will be announced by ADMIN over the 1MC.

3. AIR RAID PROCEDURES

- Once the alarm has been sounded for air attack, **THE INITIAL ACTION TAKEN IS TO EVACUATE ALL FA STAFF AND PATIENTS TO THE BUNKERS.** The entire compound must evacuate to appropriate bunkers including living spaces/GPL's and the COMMZ
- **Conduct an accurate muster of all staff personnel and patients immediately and submit it to the ADMIN bunker.**
- Be sure to bring all gear including canteens since mustering may require everyone to be standing outside for long periods of time.
- It's not necessary to secure C-panel or HVAC during an air raid drill. Evacuate to bunkers ASAP.
- When announced over the 1MC, each FA must send in two junior personnel to search and sweep high, medium and low on both sides of the FA to check for bombs. All other personnel will stay outside in bunkers until area is cleared. The All Clear will be announced over the 1MC.

4. MISCELLANEOUS ITEMS

- Each FA should denote a supply petty officer that is responsible for equipment inventory/high-tech gear checkout. If supplies are needed, submit a request to the student SK's/supply department for issue. The student SK's will request supplies from FHOTC supply if NIS.

- If trouble arises with HVAC or C-panel (electrical power), submit a work request to the student Public Works department. Both the HVAC and C-panel operations remain off-limits to students other than Seabees.
- Rear doors to FA are to be used only as evacuation routes or for patient flow during peak flow ONLY. There are only two ways to enter the hospital...either on foot by the ADMIN temper or through CAS REC via litter.
- Each FA needs to have a logbook or similar system in order to keep track of all staff and patients within the compound. Each time a staff member or patient leaves the FA, he/she must be logged out (time, location) and then logged back in when he/she returns. This will assist with accuracy when conducting musters.

J. **PATIENT PROCEDURES FOR HANDLING ENEMY PRISONERS OF WAR**

PURPOSE: To detail patient handling procedures for enemy prisoners of war within the fleet hospital.

DEFINTION: Enemy prisoners of war (EPW) – those who require treatment who are prisoners of U.S. or allied combat forces.

EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:

1. Restraints (theater command military police or hospital issue).
2. Others as specified in admission procedures (all forms will be marked with the words “Prisoner of War” or “EPW”).

STEPS:

1. Upon presentation of EPW to functional area, notify the Security Department and Patient Admin.
2. Upon admission to Casualty Receiving, Security will be responsible for the following notifications:
 - (a) Theater command military police (MP) headquarters.
 - (b) Executive Officer.
 - (c) Director of Nursing.
 - (d) Director of Administration.

3. Perform essential life saving care.
4. Inform MP that hospital staff will not assume custody of patient, and that MP will retain custody of EPW until relieved by appropriate MP headquarters staff or patient is transferred to EPW holding center (external to hospital).
5. After treatment, have corpsman or litter bearer escort MP and EPW to next functional area charge nurse. A correctly annotated admissions packet will be delivered by hand to the charge nurse.
6. During course of treatment, patient will be guarded by MP and/or restrained until treatment is terminated.
7. Movement to another functional area will be reported to Security.
8. EPW's will be fed either on the ward or in the general mess. If allowed to eat in the general mess, EPWs will be accompanied by MP guards.

RESPONSIBILITY:

CMAA/Security.