

# Medical Operations Handbook



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## **FEBRUARY 2001 VERSION**

**This handbook is a compilation of information I have acquired over the years. If some of it looks familiar, you probably saw it in a unit's SOP, from course handouts, in a CALL newsletter, in a battle book, or maybe even in an FM. Whenever I found something that looked like it would be wise to know, I added it into the book. I have tried to keep it concise, so I know there are many other pieces of information out there that would be great to add. The beauty of this book is that it is made to fit into a standard Army Aviation Checklist book so you can add or delete as you see fit. This handbook is not intended to substitute current directives, instructions, or doctrinal publications and there is no official endorsement by any Department of Defense or Department of Army personnel.**

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**Remember, this book is just a collection of information I liked...it is not to be taken as gospel, only FM's have that distinction. Hope you find it helpful.**

**CPT Michael W. Smith**

**70H**

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# **MEDICAL OPERATIONS**

The object of war is not to die  
for your country but to make  
the other bastard die for his.

**George Patton**

Joint Echelons of Care in the Theater Combat Medical System

**ARMY**

**AIR FORCE**

ECHELON  
I

Self/Buddy Aid

Combat Lifesaver

Combat Medic

Bn Aid Station

Self/Buddy Aid

ECHELON  
II

FSMC

ASMB

FST

Squadron Med Element/  
Air Transportable Clinic

Air Transportable  
Hospital

ECHELON  
III

CSH

Contingency  
Hospital

Air Transportable  
Hospital

ECHELON  
IV

Field Hospital

General Hospital

Contingency  
Hospital

ECHELON  
V

Military Hospitals

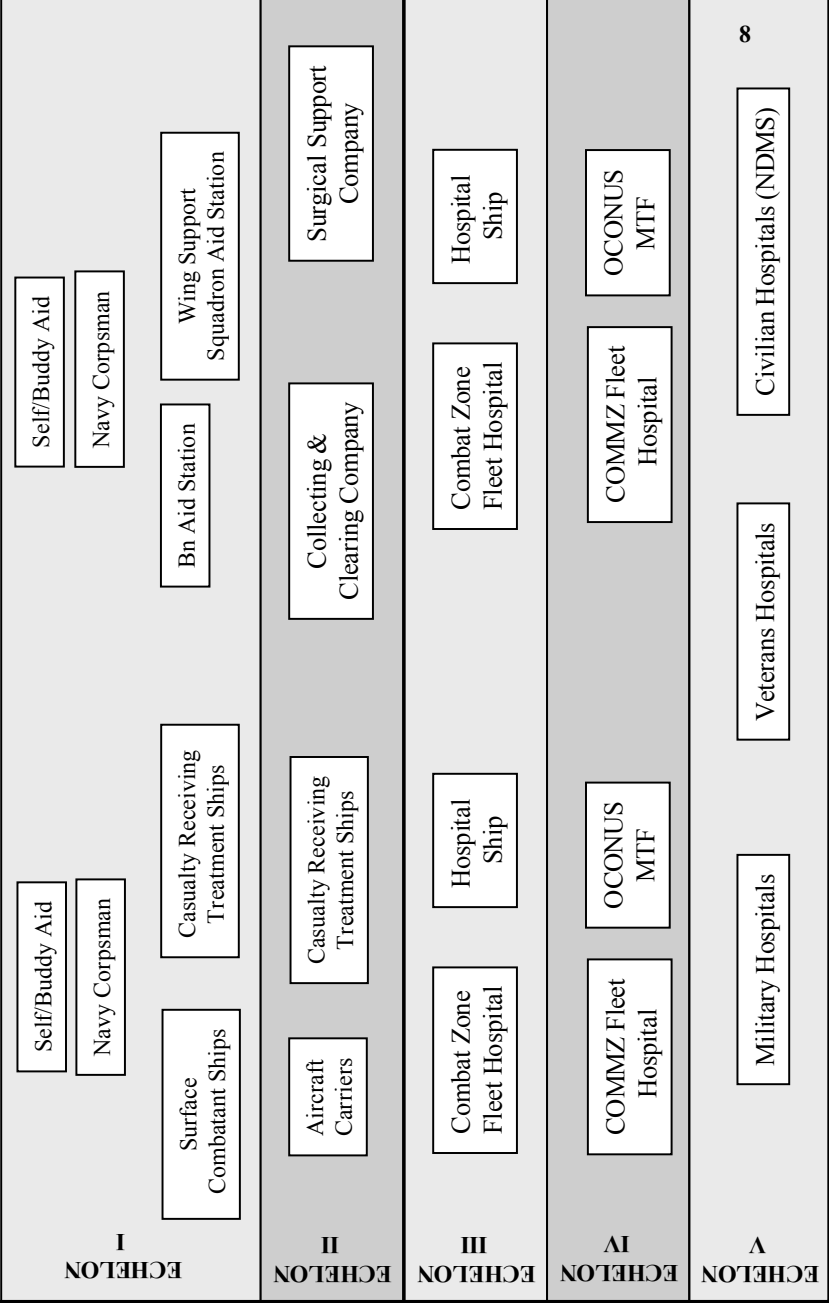
Veterans Hospitals

Civilian Hospitals (NDMS)

Joint Echelons of Care in the Theater Combat Medical System

NAVY

USMC





**Echelons of Health Care:**

Echelon I: Immediate lifesaving measures, disease and non-battle injury prevention, combat stress control preventive measures, casualty collection, evacuation from supported units to supporting medical treatment, treatment provided by designated individuals or treatment squad.

Echelon II: Care is administered at an HSS organization by a team of physicians or physician assistants, supported by appropriate medical technical or nursing staff.

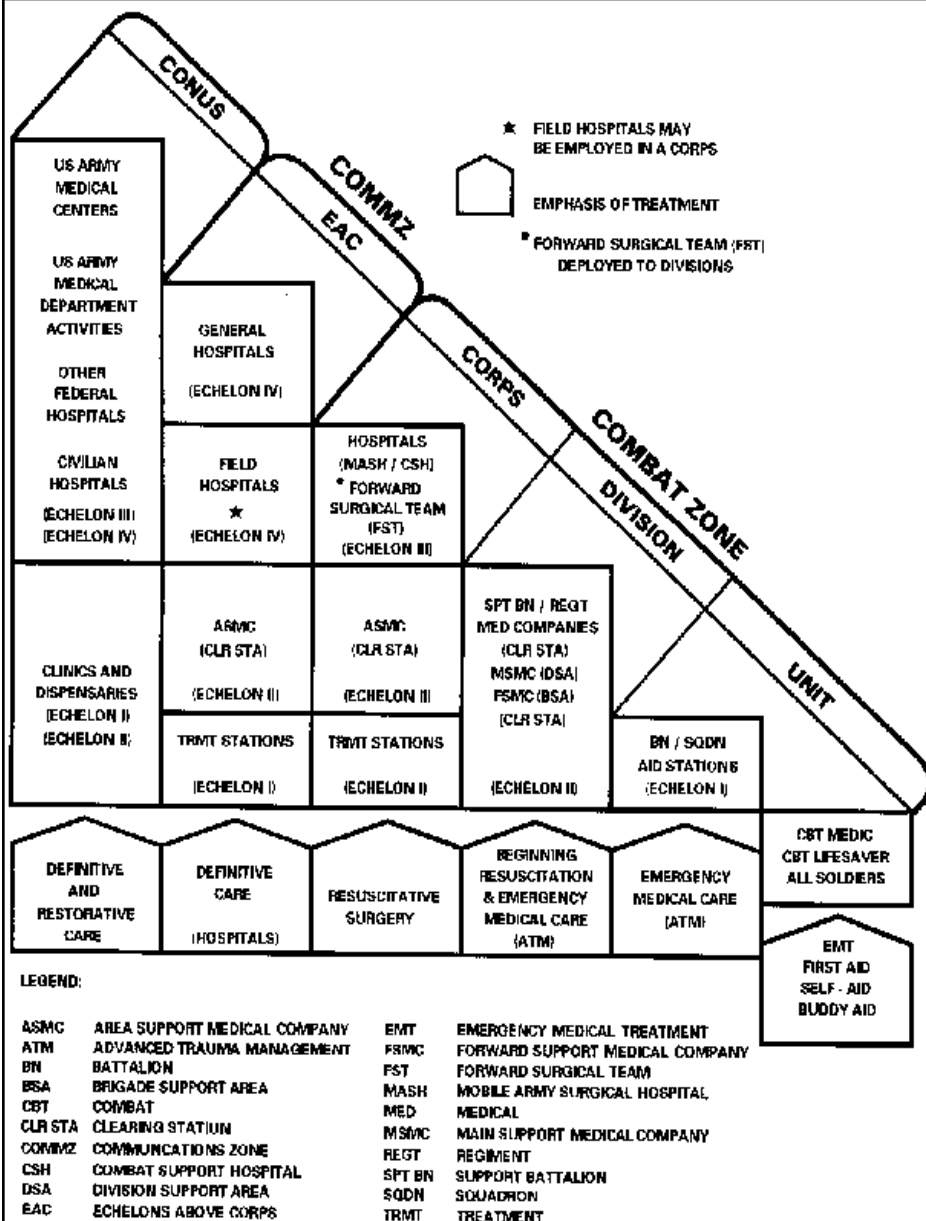
Echelon III: Care administered requires clinical capabilities normally found in a medical treatment facility (MTF).

Echelon IV: Care is not only a surgical capability as provided in Echelon III, but also further definitive therapy for patients in the recovery phase.

Echelon V: Care is convalescent, restorative, and rehabilitative and is normally provided by military, Department of Veterans Affairs, or civilian hospitals in CONUS.

**HEALTH CARE PRINCIPLES****Conformity****Mobility****Proximity****Continuity****Coordination****Flexibility**

# ARMY HOSPITALIZATION<sup>10</sup>



# **MEDICAL BATTLEFIELD OPERATING SYSTEMS**

11

**Command Control and Communication**

**Hospitalization and Surgery**

**Preventive Medicine**

**Veterinary Services**

**Laboratory**

**Blood**

**Dental Services**

**Health Service Logistics**

**Combat Stress Control**

**Patient Evacuation and Regulation**

**Area Medical Support**

# Medical Brigade

12

**Personnel:** 64 (HHD only)  
**Mobility:** 50%  
**BOA:** One Per Corps  
**Components:** CSH/ASMB/EVAC Bn/FSTs/CSC Det/Med Co  
(DS)/Med Det (VS)/PM Dets

**MISSION:** Provides command and control for assigned or attached Corps level medical units.

## **CAPABILITIES:**

1. Tasks organizes medical assets on the battlefield.
2. Plans HSS operations
3. Oversees logistical operations for the group's units
4. Serves as radio control net for group units
5. Performs medical regulation between group units
6. Coordinates external support for group units

## **COMPONENTS:**

HHD	Internal Admin/Supply/Maint Support
S-1	Group Personnel Actions
S-2/3	Ops, Planning, NBC, MRO, Security, Intell, Training, TOC Operations
S-4	Property Accountability, Group Supply Operations, Medical Resupply,
	Transportation Support, Maintenance
	Tracking, ALOC Operations
S-6	Group Communications
CN	Nursing Education, Professional Svcs
Chap	Unit Ministry Team Operations

# Combat Support Hospital

13

**Personnel:** 606  
**Mobility:** 15% (without patients)  
**BOA:** 100% of projected beds in CZ  
**Components:** 1 Hospital Unit Base (HUB)  
1 Hospital Unit Surgical (HUS)

**MISSION:** Provide hospitalization, resuscitative surgery, and acute care to all categories of patients within the combat zone.

**CAPACITY:** 296 Beds

*BREAKDOWN OF BEDS:*

<u>Type of Ward</u>	<u>#</u>	<u>Beds</u>
Intensive Nursing Care	8	96
Intermed Nursing Care	7	140
Neuro-Psych Care	1	20
Minimal Care	1	40

**SURGICAL CAPABILITIES:**

<u>MODULE</u>	<u># O/R TABLES</u>	<u>SURG HOURS PER DAY</u>
HUB	4	48
HUS	4	96

**ADDITIONAL CAPABILITIES:**

Pharmacy, Laboratory, Blood Bank, Radiology, Nutrition Care Services, Physical Therapy, Dental Treatment to Staff and Patients, Oral Surgery Support on Area Basis

**TERRAIN REQUIREMENTS:** 450m x 300m

Near MSR, Well-drained Terrain, Helipad  
< 10% Grade in Terrain

# Field Hospital

14

**Personnel:** 428  
**Mobility:** 35% (without patients)  
**BOA:** Two per division  
**Components:** 1 Hospital Unit Base (HUB)  
1 Hospital Unit Holding (HUH)

**MISSION:** Provides hospitalization for general classes of patients for reconditioning and rehabilitating services for those patients who can return to duty within the theater evacuation policy.

**CAPACITY:** 504 Beds

*BREAKDOWN OF BEDS:*

Type of Ward	#	Beds
Intensive Nursing Care	2	24
Intermed Nursing Care	7	140
Neuro-Psych Care	1	20
Minimal Care	2	40
Patient Spt Sections	7	280

**SURGICAL CAPABILITIES:**

<u>MODULE</u>	<u># O/R TABLES</u>	<u>SURG HOURS PER DAY</u>
HUB	2	24

**ADDITIONAL CAPABILITIES:**

Pharmacy, Laboratory, Blood Bank, Radiology, Nutrition Care  
Services, Physical & Occupational Therapy, Dental Treatment to  
Staff and Patients, Oral Surgery Support on Area Basis

**TERRAIN REQUIREMENTS:** 375m x 375m (20acres)  
Near MSR, Well-drained Terrain, Helipad  
< 10% Grade in Terrain

# Mobile Army Surgical Hospital<sup>15</sup>

**Personnel:** 131  
**Mobility:** 100% (without patients)  
**BOA:** 2 per Corps  
**Components:** 1 Hospital Unit, Surgical Main Base (HUSM)  
1 Hospital Unit, Surgical Forward (HUSF)

**MISSION:** Provides hospitalization for patients requiring resuscitative surgical care and stabilization for further evacuation to other hospitals. evacuation policy.

**CAPACITY:** 30 Beds

*BREAKDOWN OF BEDS:*

<u>Type of Ward</u>	<u>#Beds</u>
HUSM (Acute Nursing Care)	20
HUSF (Acute Nursing Care)	10

**SURGICAL CAPABILITIES:**

<u>MODULE</u>	<u># O/R TABLES</u>	<u>SURG HOURS PER DAY</u>
HUSM	2	40
HUSF	1	20

**ADDITIONAL CAPABILITIES:**

Pharmacy, Laboratory, Radiology, Blood, Central Material Services, Nutrition Care Services

**TERRAIN REQUIREMENTS:** 250m x 150m

Near MSR, Well-drained Terrain, Helipad  
< 10% Grade in Terrain

# Medical Battalion (Evacuation)<sup>16</sup>

**Personnel:** 47  
**Mobility:** 80%  
**BOA:** One Bn per every 3 to 7 evac companies  
**Components:** Headquarters and Headquarters Detachment  
3 x Air Ambulance Companies (15 x UH-60)  
1 x Ground Ambulance Company (40 x M997)

**MISSION:** Provides command and control of all air and ground medevac units within the TO.

## **CAPABILITIES:**

1. C2 of operations, training, and administration of all ground and air ambulance companies
2. Staff and technical supervision of aviation operation, safety, unit maintenance with the air ambulance companies
3. Coordination of medevac operations and communication functions on a 24 hour, two-shift basis
4. Medical supply support to attached units
5. Level I CHS and aviation medicine



# Medical Company (Ground Amb<sup>17</sup>)

**Personnel:** 117  
**Mobility:** 85%  
**BOA:** One per division supported in CZ  
**Components:** Headquarters Platoon  
4 x Ground Ambulance Platoons

**MISSION:** Provides ground evacuation of patients within the theater of operations.

## **CAPABILITIES:**

1. Provides 40 HMMWV 4xLitter ambulances with a single lift capability of 160 litter or 320 ambulatory patients.
2. Conducts ground evacuation from divisional medical companies to combat zone hospitals.
3. Reinforces/reconstitutes/replaces forward deployed medical evacuation assets.
4. Transfers patients among hospitals, MASFs, railheads, seaports in both Corps AO and COMMZ.
5. Provides emergency transportation of medical personnel/equipment/supplies.

## **KEY EQUIPMENT:**

40 x M998 HMMWV Ambulances (4 x Litter)

# Medical Company (Air Amb)<sup>18</sup>

**Personnel:** 130  
**Mobility:** 100% (without patients)  
**BOA:** One per division supported

**MISSION:** Provides aeromedical evacuation and support within the theater of operations. ground evacuation of patients within the theater of operations.

## **CAPABILITIES:**

1. Provides movement of patients between hospitals, ASF's, hospital ships and casualty receiving/treatment ships, seaports, and railheads within the Corps and Communications Zone.
2. Emergency movement of medical personnel/equipment/supplies.
3. Combat search and rescue operations as directed.
4. Air crash rescue support.
5. Provides enroute medical care for patients.

## **KEY EQUIPMENT:**

15 x UH-60 Air Ambulances

# Area Support Medical Battalion<sup>19</sup>

**Personnel:** 345  
**Mobility:** 100%  
**BOA:** .018 per 1,000 non divisional troops  
**Components:** Headquarters and Support Company  
3 Area Support Medical Companies; consisting of  
a treatment platoon and evacuation platoon with 8  
ground ambulances

**MISSION:** To provide Level I and II CHS in its area of operations.

**CAPACITY:** Each company maintains a 40 bed minimal care  
patient holding ward for up to 72 hours.

## **ADDITIONAL CAPABILITIES:**

Reinforce/reconstitute Level I & II elements, provide ground  
ambulance evacuation, provide Class VIII support and med  
maint support, provide PLX support at level II, provide  
emergency dental support, provide limited mental health spt,  
provide PM consultation, provide level I support to units in AO  
without organic med assets, provide daily sick call.

# Medical Company (DS)

20

**Personnel:** 59  
**Mobility:** 50%  
**BOA:** One unit per every 20,000 troops supported  
**Assigned To:** Medical Battalion (DS)

**MISSION:** Emergency, sustaining, and maintaining dental service.

## **DENTAL CAPABILITIES:**

1. Base dental treatment providing maintaining care for 20,000 troops on an area basis or sustaining care for 30,000 troops on an area basis.
2. Dental modules to reinforce or reconstitute Level II dental modules.
3. Augment advanced trauma management during MASCAL situations.

# Medical Detachment (VS)

21

**Personnel:** 48  
**Mobility:** 100%  
**BOA:** One unit per every 70,000 troops in CZ  
**Assigned To:** Medical Group

**MISSION:** Provide veterinary services for all branches of the uniformed services throughout the TO.

## **VETERINARY CAPABILITIES:**

1. Provide C2 of all vet functions within the AOC.
2. Provide six 100% mobile vet service support squads which can operate independently.
3. Provide inspection services for commercial food sources and all government food facilities.
4. Monitor and evaluate environmental and zoonotic diseases and food safety data.
5. Provide limited vet care for government owned animals and civic-action programs.
6. Coordinate vet support with host nation public health officials.

# Medical Detachment (PM)

22

**Personnel:** 11  
**Mobility:** 100%  
**BOA:** One unit per every 22,500 troops  
**Assigned To:** Medical Group

**MISSION:** Provide preventive medical support and consultation in the areas of disease and disease nonbattle injury prevention, field sanitation, sanitary engineering, and epidemiology.

## **DETACHMENT CAPABILITIES:**

1. Can divide detachment into three (3) forward deployable teams.
2. Provides services and consultation to minimize the effects of vector-borne diseases, enteric diseases, environmental injuries.

## **KEY EQUIPMENT:**

Medical Laboratory Set  
Entomological Collecting Field Kit  
Industrial Hygiene Survey Set  
Water Quality and Analysis Set, Purification  
Water Quality Analysis Set, PM  
Water Testing Set, Bacteriological  
Backpack Sprayer (3 each)  
Sprayer Insecticide, Manual, 2 Gallon (3 each)  
Sprayer Insecticide, DC (3 each)

# Medical Detachment (CSC)

23

**Personnel:** 24  
**Mobility:** 100%  
**BOA:** One unit per division  
**Assigned To:** Medical Group

**MISSION:** Provide combat stress control services, to include consultation, reconstitution, neuropsychiatric triage, stabilization, and restoration.

## **DETACHMENT CAPABILITIES:**

1. Provides command consultation and outreach briefings, to include unit command climate surveys and critical event debriefings.
2. Provides mental health support for the integration of a newly reconstituted unit or the reconstitution of combat stress casualties in their unit.
3. Provide outpatient mental health services.
4. Provide intensive treatment for combat stress casualties not requiring medical evacuation, but not responding to prevention team treatment at unit level.

## **TEAM CONFIGURATION:**

Detachments deploy three (3) prevention and one (1) restoration teams forward to the supported division.

# Forward Surgical Team

24

**Personnel:** 20  
**Mobility:** 100%  
**BOA:** One unit per maneuver brigade/armored cav regiment  
**Assigned To:** Medical Group

**MISSION:** Provide a rapidly deployable, resuscitative surgical service within the division area of operations.

## **FST CAPABILITIES:**

1. Provide life and limb saving surgery far forward on the battlefield.
2. Uses minimal strategic lift.
3. Task organize for echeloned moves.
4. Self sustaining for power generation.
5. Interface to other CHS modules.
6. Provide augmentation to CSH surgical capabilities when not deployed forward.

## **PERSONNEL:**

- |            |                          |
|------------|--------------------------|
| 1. 3x61J   | General Surgeon          |
| 2. 1x61M   | Ortho Surgeon            |
| 3. 1x66H8A | Critical Care Nurse      |
| 4. 2x66F   | Nurse Anesthetist        |
| 5. 1x66E   | OR Nurse                 |
| 6. 1x66H   | Med-Surg Nurse           |
| 7. 1x70B   | Health Svc Administrator |
| 8. 4x91B   | EMT NCO                  |
| 9. 3x91C3  | Practical Nurse          |
| 10. 3x91D  | OR NCO                   |



# Medical Logistics Battalion (FWD)

**Personnel:** 226  
**Mobility:** HHD: 63%/Log Spt Co: 53%/Dist Co 88%/Med Det 75%  
**BOA:** One per corps or three division sized elements.  
**Assigned To:** Medical Brigade

**MISSION:** Provides class VIII supplies, optical fabrication, medical equipment maintenance support, and blood storage and distribution to divisional units operating in the supported corps.

## **MED LOG BN CAPABILITIES:**

1. Provides class VIII supply, optical fabrication, med equip maint to a maximum force of 160,252 soldiers.
3. Log Spt Co receives, classifies, issues 148.6 STON of Class VIII daily, stores up to 1,486 STON of Class VIII, provides DS med maint, coordinates Class VIII distribution, coordinate emergency Class VIII resupply using aeromedical and ground evacuation assets.
4. Distribution Co receives, classifies, issues 103.2 STON of Class VIII daily, can provide support forward with two organic forward support platoons, provides mobile support teams capable of delivering unit-level med maint, provides DS med maint, coordinates Class VIII resupply.
5. Med Log Spt Det augments the unit with Class VIII, optical fabrication, and med maint spt. Receives, classifies, and issues Class VIII.

## **KEY EQUIPMENT:**

- 7 x 4,000lb forklifts
- 7 x 6,000lb forklifts
- 4 x 10,000lb forklifts

# Main Support Medical Company<sup>26</sup>

**Personnel:** 114  
**Mobility:** 100%  
**BOA:** One per division, operates in DSA  
**Assigned To:** Forward Support Battalion, DISCOM

**MISSION:** Provide Echelon I & II HSS to units operating in the division support area (DSA) and to provide reinforcement/reconstitution of supported FSMC elements.

## **MSMC CAPABILITIES:**

1. Provide triage, initial resuscitation, and stabilization.
2. Prepares sick/injured/wounded patients for further evacuation.
3. Performs emergency/sustaining dental care and limited preventive dentistry.
4. Provides limited medical laboratory and radiology services.
5. Provides patient holding, up to 40 patients who will return to duty with 72 hours.
6. Reconstitutes/Reinforces FSMC's.
7. Provides ground ambulance support to units within the DSA.
8. Provides mental health support (limited psychiatric care) to combat stress casualties, evaluates effects of battle fatigue, operates the division mental health program.
9. Provides preventive medicine services to division units.
10. Provides optometry support, to include routine eye examinations, emergency treatment for eye injuries, and fabricates/repairs single-vision lens devices.
11. Operates the Division Medical Supply Office (DMSO), procuring/storing/distributing medical supplies for the division and performs maintenance on biomedical equipment.

# Forward Support Medical Company

**Personnel:** 64  
**Mobility:** 100%  
**BOA:** One per FSB, operates in BSA  
**Assigned To:** Forward Support Battalion, DISCOM

**MISSION:** Provide Echelon II HSS for organic and attached brigade elements and other units operating in the Brigade Support Area.

## **FSMC CAPABILITIES:**

1. Provide triage, initial resuscitation, and stabilization.
2. Prepares sick/injured/wounded patients for evacuation.
3. Performs emergency/sustaining dental care and limited preventive dentistry.
4. Provides limited medical laboratory and radiology services.
5. Provides patient holding, up to 40 patients who will return to duty with 72 hours.
6. Provides ground ambulance support from BAS to FSMC and to units within the BSA.
7. Reconstitutes/Reinforces Battalion Aid Stations.

## **ORGANIZATION:**

Company HQ

Treatment Platoon

Plt HQ

Treatment Squad x 2

Area Support Section (Area Treatment/Pt Holding/Area Support)

Ambulance Platoon

Platoon HQ

Wheeled Ambulance Sqd

Tracked Ambulance Sqd (Heavy/Cav Division Only)

# Battalion Aid Station

28

**Personnel:** 40  
**Mobility:** 100%  
**BOA:** One unit per maneuver battalion  
**Assigned To:** Battalion

**MISSION:** Provide Echelon 1 HSS to assigned battalion and attached sliceelements.

## **BAS CAPABILITIES:**

1. Prevention of disease and illness through applied preventive medicine programs.
2. Acquisition and immediate treatment of the sick/injured/wounded.
3. Clinical stabilization of the critically injured or wounded.
4. Provision of routine medical care (sick call) and the immediate return to duty of soldiers fit to fight.

## **ORGANIZATION:**

Headquarters Section  
Treatment Squad (A & B)  
Ambulance Section  
Combat Medic Section (Line Medics)

Mechanized Infantry/Armor: 8 x M113 Armored Ambulances  
Light Infantry/Airborne: 8 x M997/998 HMMWV Ambulances

# MEDCOM SMART Teams

29

**Personnel:** Mission Driven

**Mobility:** 100%

**Assigned To:** US Army Medical Command, Each Regional Medical Command sponsors selected teams.

**MISSION:** Provide short duration, medical augmentation to regional domestic, Federal and Defense agencies responding to disaster, civil-military cooperative action, humanitarian and emergency incidents.

## **SMART TM CAPABILITIES:**

1. Deploys within 12 hours of receipt of Warning Order
2. Provides technical assistance in area of specialty
3. Assists in determining follow on support requirements
4. Assists in transition of operations to follow on units or local civil authorities

## **COMPONENTS:**

SMART-TCC (Trauma/Critical Care)

SMART-NBC (Nuclear/Chemical/Biological)

SMART-SM (Stress Management)

SMART-MC3T (Med Command/Control/Comms/Telemedicine)

SMART-PM (Preventive Medicine/Surveillance)

SMART-B (Burn)

SMART-V (Veterinary)

SMART-HS (Health Systems Assessment and Assistance)

# USAF Command and Control<sup>30</sup>

## **Aeromedical Evacuation Coordination Center**

**MISSION:** Serves as the operations center where overall planning, coordinating, and directing of AE operations are accomplished.

**CAPABILITIES:**

1. Advises the senior airlift commander on AE issues
  2. Coordinates the selection and scheduling of theater airlift aircraft allocated for AE mission
  3. Monitors AE crews
  4. Coordinates special medical equipment/supplies
  5. Maintains statistical data/provides reports
  6. Monitors resupply for subordinate AE units
  7. Monitors field equipment maintenance
  8. Serves as the HF radio net control station
- 1 x Flight Surgeon on 100% Tactical/ 80% Strategic  
2 x Nurses  
3 x Aeromedical Technicians

## **Aeromedical Evacuation Control Element**

**MISSION:** Serves as the functional manager for AE operations at a specific airfield.

**CAPABILITIES:**

1. Supervises ground handling and on/off loading of patients
2. Manages special equipment requirement tracking
3. Arranges for casualty in-flight feeding
4. Coordinates mission prep, to include aircraft configuration.
5. Maintains comms between AECC, ASF, and MTFs

## Aeromedical Evacuation Teams

**Personnel:** 5                      **Mobility:** 100%  
**Assigned To:** USAF Aeromedical Evacuation Squadron  
**Mission:** Provide in-flight supportive nursing care, 1 per 50 patients.  
Ensures aircraft is properly configured and loaded for aeromedical evacuation.  
**Personnel:** 1 x Flight Surgeon on 100% Tactical/ 80% Strategic  
2 x Nurses  
3 x Aeromedical Technicians

## Critical Care Transport Teams

**Personnel:** 3                      **Mobility:** 100%  
**Assigned To:** USAF Medical Group  
**Mission:** Augments the traditional aeromedical evacuation team.  
Enhances in-flight capability without depleting forward medical resources.  
**Personnel:** 1 x Critical Care Physician  
1 x Critical Care Nurse  
1 x Respiratory Technician

## Small Portable Expeditionary Aeromedical Rapid Response (SPEAR)

**Personnel:** 10                      **Mobility:** 100%  
**Assigned To:** USAF Medical Group  
**Mission:** Enhance global health by providing force health protection for up to 500 contingency/disaster support personnel or a 500 population at risk for initial period of 5 to 7 days.  
**Scope of Care:** Initial disaster medical assessment, public health/preventive medicine, emergency/flight/primary medicine, emergency surgery/critical care, patient transport preparation, communications

# USAF Liaison Teams/Clinic<sup>32</sup>

## Aeromedical Evacuation Liaison Team

**MISSION:** Provides a direct HF radio communications link and immediate coordination between the user service requesting aeromedical evacuation and the AECC.

**CAPABILITIES:**

1. Coordinates casualty movement requests and movement activities between the AECC and the user service.
2. Determines the time factors involved for the user service to transport patients to the designated staging facility.
3. Determines requirements for special equipment and/or medical attendants to accompany casualties during flight.

**PERSONNEL:**

- 2 x MSC's
- 1 x Nurse
- 3 x RTO's

## Air Transportable Clinic

**Mobility:** 100%, 1 463L Pallet, 2.1 short tons

**Assigned To:** Line Squadron

**MISSION:** Provides Echelon II outpatient medical support and ATLS support for 300-500 personnel assigned to line squadron.

**PERSONNEL:**

- 1 x Flight Surgeon
- 1 x General Practitioner
- 3 x Aeromedical Technicians



## Aeromedical Staging Facility

**Mobility:** Non-Mobile, Fixed Facility

**Location:** Located on or near an enplaning/deplaning airbase or airstrip. Strategic Aeromedical Evacuation.

### **CAPABILITIES:**

1. 50 to 250 bed holding facility
2. Has physicians assigned.
3. Can hold patients for up to 24 hours.
4. Provides patient reception, administrative processing, ground transportation, feeding, and limited medical care for patients entering, en route to, or departing the aeromedical evacuation system.

## Mobile Aeromedical Staging Facility

**Assigned To:** OPCON to AECC or AECE

**Mobility:** Mobile and Tactical

**Location:** Near runways/taxiways of forward airfields or operating bases. Tactical Aeromedical Evacuation.

### **CAPABILITIES:**

1. 25-50 beds, 4-6 hour holding capability
2. Staffed by flight nurses/AE technicians, and RTOs
3. Notifies AECC when AE aircraft has departed.
4. Prepares patient manifests
5. Assist in configuring aircraft for patients.

***USAF Elements Do Not Exchange Blankets and Litters!***

# USAF Air Transportable Assets<sup>24</sup>

## Air Transportable Hospital

**MISSION:** Provides triage, trauma/DNBI casualty management, resuscitative, pharmacy, lab, x-ray, general and ortho surgical stabilization, medical/dental in and out patient care, basic psychiatric services, and evacuation preparation for forward locations.

### **PACKAGES:**

#### 1st Increment (Coronet Bandage)

Personnel: 9xMC/9xNC/2xMS/17xMed Techs

Operating Rooms: 1                      Beds: 1xICU/2xIntermediate/7xMinimal

Mobility: 0%, No organic lift

Transportation Requirements: 2xC-141 or 2 x C17

Set Up Time: 24hrs                      Site Requirements: 26,000sq feet

#### 2nd Increment

Personnel: 12xMC/16xNC/2xMS/21xMed Techs

Operating Rooms: 2                      Beds: 2xICU/3xIntermediate/20xMinimal

Mobility: 0%, No organic lift

Transportation Requirements: 6xC-141 or 5 x C17 (8 for total package)

Set Up Time: 24hrs                      Site Requirements: 40,000sq feet

#### 3rd Increment

Personnel: 12xMC/21xNC/2xMS/33xMed Techs

Operating Rooms: 4                      Beds: 4xICU/6xIntermediate/40xMinimal

Mobility: 0%, No organic lift

Transportation Requirements: 2xC-141 or 6 x C17 (10 for total package)

Set Up Time: 24hrs                      Site Requirements: 50,000sq feet

### **AUGMENTATION PACKAGES:**

Patient Retrieval Team: 4xAmbulances/13 Medical Technicians

Patient Decon Team: 19 x Medical Technicians

Remember, packages above can deploy in increments or as an entire entity.

## Navy Fleet Hospital

### 500 Bed Combat Zone

**Mission:** Provide full resuscitation and emergency surgery for acutely wounded patients in the rear of a combat zone.

**Operating Rooms:** 3                      **Beds:** 80xICU/420xAcute Care

**Personnel:** 62xMC/156xNC/28xMS/477xCorpsmen/4xDC/10xDental  
Techs/232xNon-Med Enlisted

**Set Up Time:** 8-10 Days              **Land Requirements:** 28 Acres

**Ancillary Capabilities:** Lab, X-ray, Pharmacy

### 500 Bed Combat Zone, MPF (E)

**Mission:** Provides a capability prepositioned for full resuscitation and emergency surgery for acutely wounded patients in rear of combat zone.

**Operating Rooms:** 3 (6 tables) **Beds:** 80xICU

**Personnel:** 62xMC/156xNC/28xMS/477xCorpsmen/4xDC/10xDental  
Techs/232xNon-Med Enlisted

**Set Up Time:** 8-10 Days              **Land Requirements:** 28 Acres

**Ancillary Capabilities:** Lab, X-ray, Pharmacy

These units are embarked on MPS shipping, forward deployed and configured for immediate use in contingency.

### Naval Expeditionary Medical Support System (NEMSS)

**Mission:** Provide full resuscitation and emergency surgery for acutely wounded patients in the rear of a combat zone.

**Operating Rooms:** 1                      **Beds:** 5-20xICU/0-96xWard

**Personnel:** 23xMC/33xNC/12xMS/135xCorpsmen/2xDC/2xDental  
Techs/49xNon-Med Enlisted

**Set Up Time:** 2 Days                      **Land Requirements:** 2 Acres

## Hospital Ships (T-AHs)

**Mission:** Provide a mobile and flexible, rapidly responsive, acute care medical capability in support of amphibious and naval forces, disaster, and humanitarian relief operations.

**Operating Rooms:** 12    **Beds:** 100xICU/400xInt.Care/500xMin Care

**Personnel:** 66xMC/168xNC/20xMS/687xCorpsmen/4xDC/11xDental Techs/244xNon-Med Enlisted

**Inventory:** 2\*    **Land Requirements:** 28 Acres

**Ancillary Capabilities:** Lab, X-ray, Pharmacy, CAT Scanner, Blood Storage

\*USNS MERCY (T-AH-19)    USNS COMFORT (T-AH-20)

## Naval Environmental & Preventive Medicine Unit

**Mission:** Provide specialized consultation, advice, recommendations, and technical services in matters of environmental health, preventive medicine, an occupational safety to Navy and Marine Corps shore activities and units of the operational forces in designated area of responsibility.

**Services:** Entomology, Environmental Health, Epidemiology, Industrial Hygiene, Consolidated Industrial Hygiene Laboratory

### **Unit Locations:**

NEPMU-2 (Norfolk, VA)

NEPMU-5 (San Diego, CA)

NEPMU-6 (Pearl Harbor, HI)

NEPMU-7 (Sigonella, Italy)

DVECC (Jacksonville, FL)

DVECC (Bangor, WA)

## **Fleet Surgical Team**

**Mission:** Provide Echelon II level surgical support to amphibious operations.

**Inventory:** 9

**Composition:**

1 x OIC/Cdr, Amphib Task Force Surgeon

1 x General Surgeon

1 x FP/IM/ER/PED

1 x Anesthetist/CRNA

1 x Perioperative Nurse

1 x Charge Nurse

1 x Medical Regulator/AO

1 x General Duty HM

4 x OR Techs

2 x Advanced Lab Tech

1 x Respiratory Therapy Tech

## **Mobile Medical Augmentation Readiness Teams (MMART)**

Provide rapid short term (less than 180 days) medical augmentation for peacetime contingency operations and lesser regional conflicts.

### **Surgical Support Team:**

Surgical Unit: 1xGenSurg, 1xAnes.Provider, 1xPerioperative Nurse, 1x OR Tech, 1xAdvanced Hospital Corpsman

Surgical Support Unit: 1xMedOfficer, 1xMed/Surg Nurse, 4xGenSvc Corpsman

Ancillary Support Unit: 1xMedTech, 2xAdvanced Lab Tech, 1x Advanced X-ray Tech, 1x Respiratory Tech

### **Specialist Support Team:**

1xNeurosurgeon, 1xNeurologist, 1xOrthoSurg, 1xOrthoTech,  
1xOtolaryngologist, 1xOtolaryngealTech, 1xThoracicSurg,  
1xOphthalmologist, 1xOcularTech, 1xOralSurg, 1xDental Tech

### **Humanitarian Support Team (HST):**

1xObstetrician, 1xPediatrician, 1xFamily Practitioner, 1xFamily Nurse Practitioner, 1xMed/Surg Nurse, 1xMatern/Child Health Nurse, 1xStaff Nurse (Med/Surg), 1xStaff Nurse (Amb. Care), 1xIndependant Duty Corpsman, 8xGen Svc Corpsman

### **Medical Regulating Team:**

1xMed Reg Officer, 1 x Chief Hospital Corpsman, 2xGen Svc Corpsman

### **Preventive Medicine Team:**

1xEpidemiologist, 1xEnv Health Off, 1xEntomologist, 1xMicrobiologist, 1xIndustrial Hygiene Off, 1xLabTech, 1xPM Tech

### **Special Psychiatric Rapid Intervention Team (SPRINT):**

1xPsychiatrist, 1xPsychologist, 1xPsych Nurse, 1xPsych Tech, 1xChaplain, 1xSocial Worker

**Personnel:** 214 Officers/757 Enlisted  
**Mobility:** 100%  
**BOA:** One per Force Service Support Group  
**Assigned To:** Force Service Support Group

**MISSION:** Provide Echelon II medical support to a Marine Expeditionary Force (MEF).

## **COMMAND AND CONTROL:**

Commanding officer reports to the Commanding General of the Force Service Support Group.

## **ORGANIZATION:**

1 x Headquarters and Service Company  
3 x Surgical Companies

## **CHARACTERISTICS:**

Operating Rooms:	9
Laboratories	6
X-ray:	6
Pharmacy:	6
Flow-through Cots:	260
Shock Trauma Platoons:	8
Erect Time:	6 hrs.
Maximum Patient Holding Time:	72 hrs.

**Personnel:** 76 Officers/160 Enlisted  
**Mobility:** 100%  
**BOA:** One unit per maneuver battalion  
**Assigned To:** Force Service Support Group

**MISSION:** Provides Echelon II dental support to a Marine Expeditionary Force (MEF).

## **COMMAND & CONTROL:**

Dental battalion Commanding Officer reports to the Commanding General of the Force Service Support Group and is assigned the additional duty as the MEF Dental Officer.

## **ORGANIZATION:**

Headquarters and Service Company  
Three x Dental Companies

## **COMPANY ORGANIZATION:**

Headquarters Section  
2 x Dental Officers  
4 x Dental Technicians  
Clinical Section  
17 x General Dentists  
1 x Comprehensive Dentist  
1 x Periodontist  
1 x Endodontist  
1 x Oral Surgeon  
1 x Prosthodontist  
44 x Dental Technicians



# JOINT MEDICAL PLANNING CHECKLIST <sup>41</sup>

- WHO IS THE JOINT TASK FORCE SURGEON?
- WHAT IS THE JTF SURG'S REQUIREMENTS OF THE FOLLOWING?
  - JTF DEPUTY SURGEON
  - HEALTH SERVICE SUPPORT OPERATIONS
  - SERVICE LOGISTICS TO INCLUDE JOINT BLOOD PROGRAM
  - ADMINISTRATION
  - HEALTH SERVICES PLANNING
  - DUTY-HOUR COVERAGE
  - HEALTH
- WHAT ARE THE SECURITY CLASSIFICATION REQUIREMENTS?
- WHO WILL COMPRISE THE JOINT SURGEON'S STAFF?
- WILL THE COMPOSITION OF THE JTF SURG STAFF FACILITATE OPTIMUM EMPLOYMENT AND SYNERGY OF EFFORT FOR THE JOINT MEDICAL FORCES IN THIS OPERATION?
- HAVE PROVISIONS BEEN MADE FOR ADQUATE OFFICE EQUIPMENT SUCH AS COMPUTERS, FACSIMILE (FAX) MACHINES, AND COMPATIBLE SOFTWARE FOR JOINT OPERATIONS AT THE JOINT OPERATING HEADQUARTERS?
- WHAT IS THE ORGANIC HSS CAPABILITY FOR THE DEPLOYING FORCES?
  - PATIENT EVACUATION AND MEDICAL REGULATION (STRAT/TAC)
  - HOSPITALIZATION
  - HEALTH SERVICE LOGISTICS, TO INCLUDE BLOOD MANAGEMENT
  - MEDICAL LABORATORY SERVICES
  - DENTAL SERVICES
  - VETERINARY SERVICES
  - PREVENTIVE MEDICINE SERVICES
  - COMBAT STRESS CONTROL SERVICES
  - AREA MEDICAL SUPPORT
  - COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, INTELLIGENCE
  - OTHER?
- WHAT ARE THE HSS REQUIREMENTS TO ADEQUATELY SUPPORT THE DEPLOYING FORCES (COMMANDER'S CONCEPT OF OPERATIONS) IN THE FOLLOWING AREAS?
  - PATIENT EVACUATION AND MEDICAL REGULATION (STRAT/TAC)
  - HOSPITALIZATION
  - HEALTH SERVICE LOGISTICS, TO INCLUDE BLOOD MANAGEMENT
  - MEDICAL LABORATORY SERVICES
  - DENTAL SERVICES
  - VETERINARY SERVICES
  - PREVENTIVE MEDICINE SERVICES
  - COMBAT STRESS CONTROL SERVICES
  - AREA MEDICAL SUPPORT
  - COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, INTELLIGENCE
  - OTHER?
- AFTER COMPARING HSS CAPABILITIES OF DEPLOYING FORCES AND HSS REQUIREMENTS, WHAT ARE THE REMAINING SHORTFALLS IN HSS?
- HAVE THESE SHORTFALLS BEEN IDENTIFIED THROUGH CHANNELS TO THE APPROPRIATE HEADQUARTERS, UNIFIED COMMAND?



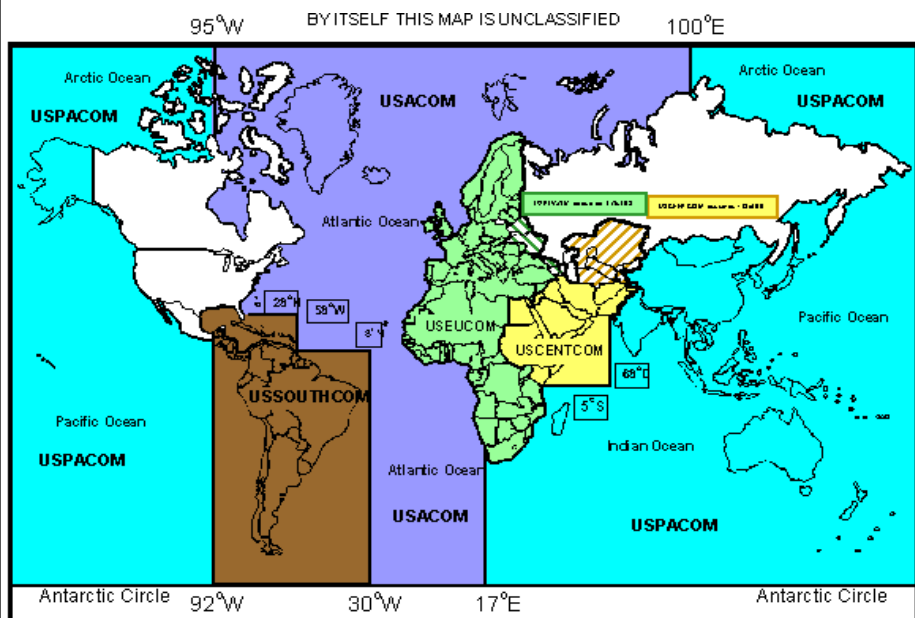
# JOINT MEDICAL PLANNING CHECKLIST <sup>42</sup>

- WHAT ARE THE INDIGENOUS/HOST NATION HSS CAPABILITIES?
- AS HSS UNITS ARE IDENTIFIED FOR DEPLOYMENT, ARE THE CRITICAL TRANSPORTATION COSTS SUCH AS THE NUMBER OF PASSENGERS, WEIGHT, CUBE, AND 463L PALLETS BEING IDENTIFIED AND COORDINATED WITH THE J4?
- DOES THE JTF SURG HAVE A COPY OF JOINT PUB 4-02
- HS THE CINC/JTF SURG COORDINATED WITH THE CIVIL AFFAIRS STAFFS, NGO'S, AND RELIEF ORGANIZATIONS FOR THE MANAGEMENT OF REFUGEES?
- CAN THE MEDICAL COMMAND AND CONTROL ELEMENTS COMMUNICATE WITH ALL CRITICAL PARTIES VERTICALLY AND Laterally? IF NOT, IS THERE A COMMUNICATIONS HARDWARE FIX?
- IS THE JOINT MEDICAL REGULATING SYSTEM/THEATER PATIENT MOVEMENT CENTER AND ATTENDANT COMMUNICATIONS EQUIPMENT IN PLACE?
- DOES THE CONTEMPLATED OPERATION FALL UNDER THE PURVIEW OF AN EXISTING OPLAN OF THE APPROPRIATE UNIFIED COMMAND?
- DOES THE HSS PORTION OF THE OPLAN REQUIRE REFINEMENT WHEN REVEIUED IN CONTEXT OF THE ABOVE FACTORS?
- DOES THE COTEMPLATED OPORD FOR THE JOINT FORCES ADDRESS ON CALL NON-MEDICAL TRANSPORTATION AUGMENTATION, AS REQUIRED, TO ACCOMMODATE SURGES IN MEDICAL EVACUATION MISSIONS?
- DOES THE JOINT SURGEON AND STAFF HAVE MEDICAL INTELLIGENCE ABOUT THE AOR TO INCLUDE BUT NOT LIMITED TO:
  - ENDEMIC/EPIDEMIC DISEASES
  - MEDICAL INFRASTRUCTURE
    - PUBLIC HEALTH STANDARDS AND CAPABILITIES
    - QUALITY OF HEALTH SERVICES
  - COMMUNICABLE ZOOONOTIC DISEASES
  - ADEQUACY OF LOCAL FOOD SUPPLIES
  - NBC THREAT OF OPPOSING FORCES
  - DIRECTED ENERGY CAPABILITIES OF OPPOSING FORCES
  - ENVIRONMENTAL DATA (WEATHER, ALTITUDE, TOPOGRAPHY)
  - POISONOUS FLORA AND FAUNA OF THE AOR
  - SORUCE OF LOCAL BLOOD DONORS AND QUALITY OF BLOOD TESTING
- WHAT ARE THE IMMUNIZATIONS/CHEMOPROPHYLLAXIS REQUIREMENTS FOR THE AOR?
- ARE SPECIAL OPERATIONS FORCES INVOLVED?
  - WHERE WILL THEY BE OPERATING
  - DOES THE OPORD INCLUDE SUFFICIENT HSS TO COMPLEMENT SOF MEDICAL PACKAGES
- WHAT IS THE HSS CONCEPT OF OPERATIONS FOR THE MANAGEMENT OF EPW'S?
- HAVE THE CINC'S STRATEGIC/ENDSTATE GOALS BEEN IDENTIFIED AND CONSIDERED WITHIN THE PLANNING ISSUES?



# CINC AORs

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**Joint Forces Command (JFCOM), Norfolk, Virginia**<http://137.246.33.240:8000/98surgeon.nfs>

Command Surgeon	757-836-5515	DSN: 836-XXXX
Deputy Surgeon	757-836-6371/6380	
Chief, Operations	757-836-6383	

**Central Command (CENTCOM), Tampa, Florida**<http://www.centcom.mil/organizations/surgeon/Current/index.htm>

Command Surgeon	813-828-6397	DSN: 968-XXXX
Deputy Surgeon	813-828-5801/5802	
Chief, Operations	813-828-6402	

**European Command (EUCOM), Vaihingen, Germany**<http://www.eucom.mil/hq/ecj4/ecj4-mr/>

Command Surgeon	49-711-680-5374	DSN: 430-XXXX
Deputy Surgeon	49-711-680-8374	
Chief, Operations	49-711-680-7166	

**Pacific Command (PACOM), Smith Barracks, Hawaii**<http://www.pacom.mil>

Command Surgeon	808-477-6181	DSN: 477-XXXX
Deputy Surgeon	808-477-1021	
Chief, Operations	808-477-1024	

**Southern Command (SOUTHCOM), Miami, Florida**<http://www.southcom.mil>

Command Surgeon	305-437-1327	DSN: 567-XXXX
Deputy Surgeon	305-437-1331	
Chief, Operations	305-437-1330	

**Special Operations Command (SOCOM), Tampa, Florida**<http://www.socom.mil>

Command Surgeon	813-828-6347	DSN: 968-XXXX
Deputy Surgeon	813-828-7651	
Chief, Operations	813-828-2719	

**Transportation Command (TRANSCOM), Scott AFB, Indiana**<http://214.3.17.158/missions/tcsg.html>

Command Surgeon	618-256-3231	DSN: 576-XXXX
Deputy Surgeon	618-256-2895	
Chief, Operations	618-256-2895	

# CASUALTY EVACUATION CHECKLIST 45

S1, MED CO CDR, MED PLT LDR PREPARE CASEVAC OPLAN THAT IS COORDINATED WITH CO XO/ISG'S

ANTICIPATE CASUALTIES, PRIORITIZE ASSETS, MOVE BN ASSETS TO MAIN EFFORT

USE NON-STANDARD GROUND EVAC (NOT MED VEHs) FOR LIGHTLY WOUNDED

LOCATE BAS & TX TMS AS FAR FWD AS METT-T ALLOWS (CONSIDER EN ARTY/MTR'S)

MAINTAIN MOBILITY OF BAS

USE STANDARDIZED CHECKPOINT SYSTEM ON OVERLAYS. LET THEM SERVE AS ON ORDER CCP'S - MUST BE KNOWN TO SQUAD LDR LEVEL

MUST STOCK ENOUGH CLASS VIII FOR WORSE CASE SCENARIO (MASCAL)

TASK ORG & ALLOCATE CASEVAC ASSETS BASED ON PROJ CAS'S, DELIBERATE ATK, ATTACH ADDITIONAL ASSETS TO MAIN EFFORT TO AUGMENT CASEVAC

REQUEST ADDTL CASEVAC & TREATMENT SPT FROM FWD SPT MED CO

PLAN & USE AMBULANCE EXCHANGE POINTS (AXP) WHEN EVAC ROUTE TAKES LONGER THAN 30 MINS

USE APPROPRIATE GRND/AIR EVAC BASED ON PATIENT CATEGORIES (URGENT/PRIORITY/ROUTINE) & METT-T

MAKE MAX USE OF TACTICAL AND LOG VEHICLES FOR CASEVAC (BACK HAUL)

USE MEDICAL SUPPORT MATRIX TO MANAGE ASSETS

TOC AND TAC MUST KNOW AID STATION LOCATION AT ALL TIMES

ATTEMPT TO MOVE AMBULANCES WITH CONVOYS

ISSUE LITTERS AND ADDTL CL VIII TO MANEUVER UNITS TO ASSIST IN CASEVAC. HAVE EACH SQUAD CARRY A POLELESS LITTER (NSN 6530-00-783-7510)

FOLLOW & SUPPORT WITH JUMP AID STATIONS. DESIGNATE CHECKPOINTS IN OPORD FOR AID STATIONS TO JUMP ON ORDER AS REQUIRED

MUST HAVE REDUNDANT COMMO PLAN

USE COLOR CODED TRIAGE SOP: COLORED SIGNS DURING DAY, CHEM LIGHTS AT NIGHT

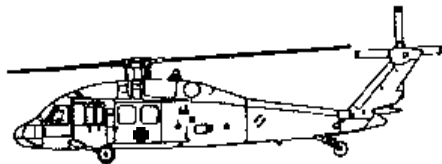
AMBULANCES MUST DO RECONS

MED PLT LDR MUST GO FWD TO XO/ISG CP'S & COORDINATE CONTINGENCIES

MUST DESIGNATE, TRAIN SQD COMBAT LIFESAVERS, & PROVIDE EQUIP. 2 CBT LIFESAVERS PERS SQD. CARRY EXTRA RINGERS SOLUTION AND IV KITS

USE BATTLE ROSTER SYSTEM FOR REPORTING AND MANAGING CASUALTIES

ENSURE USE OF 1155/1156



## **DETERMINING REQUIREMENTS**

- o US Service Personnel
- o Allied Service Personnel
- o Enemy POWs
- o US Civilians
- o Allied Civilians
- o Indigenous Personnel

## **EVACUATION FACTORS**

- o Bn/TF plan for employment of combat troops
- o Expected areas of patient density
- o Evacuation resources available
- o Location/type of medical treatment facilities available
- o Terrain and road networks
- o Weather conditions
- o Locations of CCPs/AXPs
- o Primary/alternate evacuation routes
- o Lines of patient drift

## **EVACUATION CATEGORIES**

- o **URGENT:** Should be evacuated as soon as possible and within a maximum of two hours in order to save life, limb, or eyesight
- o **URGENT SURGICAL:** Must receive far forward surgical intervention to save life and stabilize for further evacuation
- o **PRIORITY:** Sick or wounded requiring prompt medical care within a maximum of 4 hours
- o **ROUTINE:** Sick or wounded requiring prompt medical care within a maximum of 24 hours (psychiatric patients included in this category)
- o **CONVENIENCE:** Patient for whom evacuation is a matter of medical convenience rather than necessity

## **LANDING SITE CRITERIA**

- o Helicopter LZ and approach zone free of obstructions
- o Sufficient space for hovering and maneuvering during landing/take-off
- o Approach zones should permit the helo to land/take-off into the prevailing winds
- o Allows helo opportunity to make shallow approaches
- o Definite measurements for LZs cannot be prescribed due to variance in temperature, altitude, wind, terrain, loading conditions, and individual helo characteristics
- o Minimum requirement for light helo LZs is 30m x 30m in diameter with an approach/departure zone clear of obstructions

## Time Factors

### o Litter Squads

-Average Terrain: 4 person squad - 900 meters and return in 1 hour

-Mountainous Terrain: 6 person squad - 350 meters and return in 1 hour

### o Ambulance (Wheeled/Tracked): In division area - 8 kilometers and return in 1 hour

### o Aircraft

-Helicopter: 150 kilometers one-way in 1 hour (UH-1 capacity)

-Transport: 360 kilometers one-way in 2 hours (1.5hr flight time/30min load time)

-Army Airplane: 200 kilometers one-way in 1 hour(U-21 aircraft, includes patient load time)

## Requirement Calculations

### o Time Required

$$T = \frac{N \times t}{U \times n}$$

$$U \times n$$

N = Total number of patients to be evacuated

n = Number that can be transported in one load

T = Total time

t = Time required for one trip

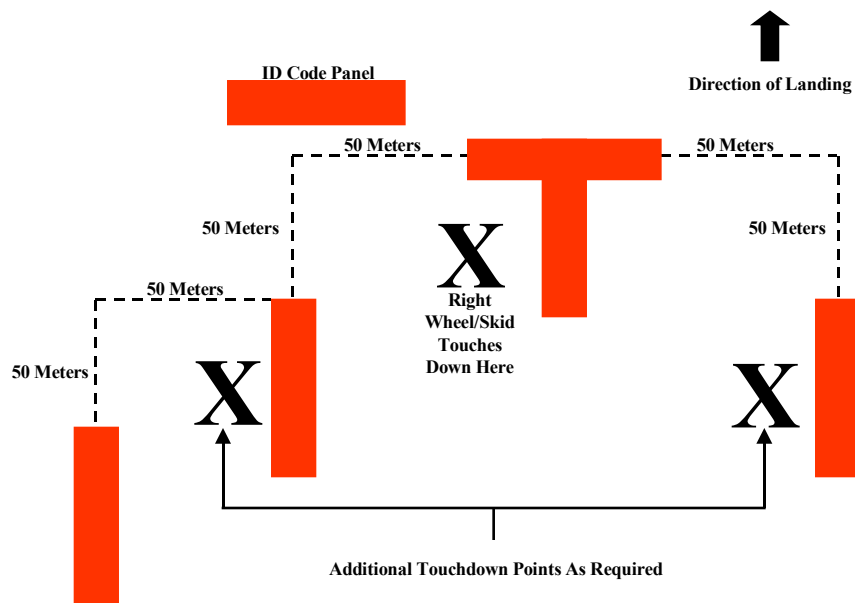
U = Number of units of transport  
(litter/ambulance/aircraft)

### o Units Required

$$U = \frac{N \times t}{T \times n}$$

$$T \times n$$

## Field Expedient Landing Zone



# EVACUATION CAPABILITIES

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## Litter

## Ambulatory

### USAF

C-130	70	85	
C-9A	40	40	(15 Litter + 24 Amb)
C-141	103	147	
C-5		70	
C-17	48	44	

### USArmy

M113	4	10
M996	2	6
M997	4	8
LMTV	12	16
C12		8
C21	3	10
CH-47	24	33
UH-60A/Q	6+1Amb	7
UH-1H/V	6	9

### US Navy

Mercy	1000	1000	
Comfort	1000	1000	
LHD	604	604	Amphib Assault Ship
LHA	367	367	GP Assault Ship
LPH	222	222	Helicopter Assault Ship
LPD	14	14	Amphib Transport Dock
LSD	108	108	Dock Landing Ship
LKA	12	12	Amphib Cargo Ship
LCC	24	24	Amphib Command Ship
CH-46	15	25	
CH-53D	24	55	
V22	12	24	Osprey



# MEDEVAC REQUEST

49

LINE 1 - Location of Pickup Site (8 Digit Grid Coordinate)

LINE 2 - Radio Frequency, Call Sign, and Suffix

LINE 3 - Number of Patients by Precedence

- A. URGENT
- B. URGENT - SURG
- C. PRIORITY
- D. ROUTINE
- E. CONVENIENCE

LINE 4 - Special Equipment Needed

- |                      |                |
|----------------------|----------------|
| A - None             | B - Hoist      |
| C - Extraction Equip | D - Ventilator |

LINE 5 - Number of Patients by Type

- Litter - L + # of patients
- Ambulatory - A + # of patients

LINE 6 - Security of Pick Up Site (Wartime Only)

- N - No enemy troops in area
- P - Possible enemy troops in area (use caution)
- E - Enemy troops in area (use caution)

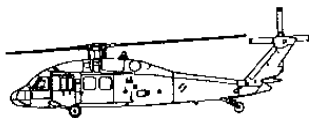
LINE 7 - Method of Marking Pick Up Site

- |            |                        |
|------------|------------------------|
| A - Panels | B - Pyrotechnic Signal |
| C - Smoke  | D - None               |
| E - Other  |                        |

LINE 8 - Patient's Nationality and Status

- |                     |                     |
|---------------------|---------------------|
| A - US Military     | B - US Civilian     |
| C - Non US Military | D - Non US Civilian |
| E - EPW             |                     |

LINE 9 - Terrain Description (Peacetime)



## CONUS

GPMRC, Scott AFB

DSN 576-6362/6161 Commercial: 1-800-874-8966

23d Med Gp, Pope AFB

DSN 424-2182, ext 2650

375th AES, Scott AFB

DSN: 576-5837

## EUCOM

Ramstein, Joint Medical Regulating Office

DSN 480-8042/43

Landstuhl, Aeromedical Staging Facility

DSN 486-7374

86th AES, Ramstein Air Base

DSN: 480-2264/2643

## PACOM

Yokota, Joint Medical Regulating Office

DSN 225-6675

Yokota, Aeromedical Staging Facility

DSN 225-3581/82/83

374th AES, Yokota

DSN: 225-4700/4707

## SOUTHCOM

Joint Rescue Coordination Center, Howard Air Force Base, Panama

DSN 284-3545

ACOM works through EUCOM, SOUTHCOM, or GPMRC

CENTCOM works through EUCOM (peacetime) and TPMRC CENTCOM Surgeon (wartime)

# HEALTH SERVICE SUPPORT ESTIMATE 51

## CLASSIFICATION

Copy \_\_\_\_ of \_\_\_\_ Copies  
Issuing Headquarters  
Place of Issue  
DTG of Signature  
Message Reference Number

Health Service Support Estimate of the Situation

### References:

1. MISSION: (Statement of the Overall HSS Mission)

## 2. SITUATION AND CONSIDERATIONS

### A. Enemy Situation.

- (1) Strength and Disposition
- (2) Combat Efficiency
- (3) Capabilities
- (4) Logistic Situation
- (5) State of Health
- (6) Weapons

### B. Friendly Situation.

- (1) Strength and Disposition
- (2) Combat Efficiency
- (3) Present and Projected Operations
- (4) Logistic Situation
- (5) Rear Area Protection Plan
- (6) Weapons

### C. Characteristics of the Area of Operations.

- (1) Terrain
- (2) Weather and Climate
- (3) Dislocated Civilian Population and EPWs
- (4) Flora and Fauna
- (5) Disease
- (6) Local Resources
- (7) Nuclear, Biological, and Chemical and DE Weapons

### D. Strengths to Be Supported.

- (1) United States Uniformed Services
  - (a) US Army
  - (b) US Navy
  - (c) US Marines
  - (d) US Air Force
  - (e) US Coast Guard

CLASSIFICATION

*Continued*

## CLASSIFICATION

- (2) Department of Defense Civilians
- (3) Allied Forces
- (4) Coalition Forces
- (5) Enemy Prisoners of War
- (6) United States National Contract Personnel
- (7) Indigenous Civilians and Third Country Personnel
- (8) Detainees
- (9) Internees
- (10) Others

### E. Health of the Command

- (1) Acclimation of Troops
- (2) Presence of Disease
- (3) Status of Immunizations
- (4) Status of Nutrition
- (5) Clothing and Equipment
- (6) Fatigue
- (7) Morale
- (8) Status of Training
- (9) Other, as Appropriate

### F. Assumptions.

G. Special Factors (*Mention items of special importance in the particular operation to be supported such as unique conditions to be encountered in NBC/DE warfare or the impact of patients suffering from combat stress will have on the HSS system*).

## 3. HEALTH SERVICE SUPPORT ANALYSIS

### A. Patient Estimates (Indicate rates and numbers by type unit/division)

- (1) Number of Patients Anticipated
- (2) Distribution Within the AO
- (3) Distribution in Time During the Operation (Evacuation Time)
- (4) Areas of Patient Density
- (5) Possible Mass Casualty
- (6) Lines of Patient Drift and Evacuation

### B. Support Requirements

- (1) Patient Evacuation and Medical Regulation
- (2) Hospitalization
- (3) Health Service Logistics, to Include Blood Management
- (4) Medical Laboratory Services
- (5) Dental Services
- (6) Veterinary Services
- (7) Preventive Medicine Services

CLASSIFICATION

*Continued*

## CLASSIFICATION

- (8) Combat Stress Control Services
- (9) Area Medical Support
- (10) Command, Control, Communications, Computers, & Intelligence
- (11) Others, as Appropriate

### C. Resources Available

- (1) Organic Medical Units and Personnel
- (2) Attached Medical Units and Personnel
- (3) Supporting Medical Units
- (4) Civil Public Health Capabilities and Resources
- (5) Enemy Prisoner of War Medical Personnel
- (6) Health Service Logistics
- (7) Medical Troop Ceiling

D. Courses of Action *(As a result of the above considerations and analysis, determine and list all logical, COA which will support the commander's OPLAN and accomplish the HSS mission. Consider all SOPs, policies, and procedures in effect. Courses of action are expressed in terms of what, when, where, how, and why).*

## 4. EVALUATION AND COMPARISON OF COURSES OF ACTION

A. Compare the probable outcome of each COA to determine which one offers the best chance of success. This may be done in two stages:

- (1) Determine and state those anticipated difficulties or difficulty patterns which will have a different effect on the COA listed.
- (2) Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each.

B. Compare all COA listed in terms of of significant advantages and disadvantages, or in terms of major considerations that emerged during the above evaluation.

## 5. CONCLUSIONS

- A. Indicate whether the mission set forth in paragraph 1 can/cannot be supported.
- B. Indicate which COA can best be supported from the HSS standpoint.
- C. List the limitations and deficiencies in the preferred COA that must be brought to the commander's attention.
- D. List factors adversely affecting the health of the command.

/s/ \_\_\_\_\_  
Surgeon (Command)

Annexes: (As Required)

Distribution:

## **PREDEPLOYMENT**

### Country Survey

- HN Medical Assets/Capabilities in Country
- Infrastructure in Area of Operations (Roads, Airports, Medical Facilities, Ports)
- Chemoprophylaxis Requirements
- Medical Threat in Area of Operations
- Climate for Area of Operations

### Mission of Supported Units

### Type of Unit/Size of Unit Supported

### Requirements for Operations Other Than War (Humanitarian Assistance/Refugees)

### Critical Medical MOS Fill for Deploying Units

### Medical Soldier Readiness Checks/Preparation for Overseas Movement

### Medical Support for Deployment Sites (Airheads/Railheads/Ports)

## **DEPLOYMENT**

### Allied Medical Assets/Capabilities in Theater (Location and POCs)

### Joint Service Medical Assets/Capabilities in Theater (Location and POCs)

### Availability of STRATEVAC Out of Theater

### Evacuation Routes (Air/Ground) to Include Security, Travel Times, Distances, Pre-Planned Convoys

### Landing Zone Identification and Preparation

### Class VII Resupply Procedures, to Include Availability of Blood

### Communication Systems in Place

### Security Forces Available for Medical Assets/Convoys

### Geographical Footprint of Supported Forces

### Supported Unit's Organic Medical Capabilities

### Field Sanitation Requirements

### Theater Evacuation Policy

### Medical Rules of Engagement

### Theater Policy on Displaying Red Cross

### Medical Rules of Engagement (Allies/Civilians/EPWs)

### Casualty Estimates

### Special Operating Forces in Theater Requiring Combat Health Support

### Address All Medical Battlefield Operating Systems

## **REDEPLOYMENT**

### Medical Support for Redeployment Sites (Airheads/Railheads/Ports)

### Medical Surveillance of Returning Personnel

### Post-Deployment Chemoprophylaxis Requirements

### Medical Lessons Learned/After Action Reports

## CHS SYNCH MATRIX

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[illegible]

## **ASPECTS OF MEDICAL INTELLIGENCE**

Endemic and epidemic diseases, public health standards and capabilities, and the quality/availability of health services

Medical supplies and blood products, health service facilities, and the number of trained medical personnel

Location, specific diseases, strains of bacteria, lice, mushrooms, snakes, fungus, spores, and other harmful organisms

Foreign animal and plant diseases, especially those diseases transmittable to humans

Health problems relating to the use of local food and water supplies

Medical effects of radiation and prophylaxis for chem/bio weapons

Possible casualties from newly developed foreign weapons systems

The health and fitness of the enemy's force and special use of antidotes

Areas of operations such as altitude, heat, cold, swamps that may affect the health of troops

## **MEDICAL PRIORITY INTELLIGENCE REQUIREMENTS**

Conditions concerning people or animals

Epidemiological information, flora, fauna, and sanitary conditions

Enemy's field medical delivery system

New weapons systems or employment methods that could alter CHS planning factors

Medical aspects of the employment, weapon fills, and contamination from NBC weapons

The enemy's state of health

## **POST-DEPLOYMENT**

Outbrief to AFMIC Personnel (Provide photos, patient census, SITREPS, daily log)

Conduct thorough After Action Review (Invite all players, to include rear det)

Provide all information to historian for documentation

Provide all information to Center for Army Lessons Learned

Adjust FSOPs based on lessons learned



## HEALTH SERVICE SUPPORT TO SPECIAL OPERATIONS FORCES

- o Population at Risk (PAR)
- o Operating in Remote Locations
- o Under Austere Conditions
- o Cross Cultural Clash
- o Often Clandestine
- o Operating in Extended LOCs

## SOF LEVELS OF HEALTH SERVICE SUPPORT

### o LEVEL I:

Special Forces: 18D (SFMS), PA/Physician, 18 Series Trained Combat Lifesavers (CLS)

Ranger/SOCOM/SOAR: 91A/B (A/SOCM), PA/Physician, CLS

SEAL: Independent Duty Corpsman, Physician (Group level only)

### o LEVEL II:

Special Forces: 18D, Physician

Ranger/SOCOM/SOAR: Limited aid station capabilities

SEAL: None

### o LEVEL III and IV: None

## SOF MEDICAL CONSIDERATIONS

- o SOF personnel are immunized far beyond their conventional counterparts
- o SOF CL VIII demands are minimal...no unique CL VIII requirements
- o CL VIII demands will be beyond normal Echelon I and II requirements
- o Anticipate CL VIII resupply in terms of “eaches” vs. bulk/short tons
- o Medical regulation is a unique challenge
- o Look at extended evac policy for SOF
- o SOF evac is usually accomplished through preplanned team extraction or CSAR
- o Don’t plan/anticipate cross-FLOT requests for medevac
- o Special evac requests for indigenous personnel may be required; coordinate with J-5 for verification
- o Segregate SOF casualties from conventional patient population by patient category when possible

## SOF MEDICAL CHALLENGES

### o PROVIDE CLASSIC FUNCTIONS AND QUALITY OF CONVENTIONAL CHS:

Without traditional pillars/levels of care

Under conditions of uncertainty

In regions of higher medical threat

Without adequate build-up time

In immature regions

With existing theater resources

In forward areas of operations

# **COMBAT HEALTH SUPPORT TO NONCOMBATANT EVACUATION OPS**

58

How many of the noncombatants are known to require medical care?

Where are these noncombatants and is there a published plan addressing their collection prior to evacuation?

Is a permissive or non-permissive NEO anticipated, and how best can it be medically supported?

Are there any civilian casualty projections for the NEO?

What is the medical evacuation policy for NEO casualties?

Has the Department of State authorized pets to accompany NEO evacuees?

Are any animals prohibited from entry into the United States by the Food and Drug Administration (FDA) or other agency?

What will be done with pets brought to evacuation control points?

If any humanitarian, civil, or security assistance (SA) medical requests have been made by foreign governments, how can they be supported?

Are there any medically significant treaties, or legal, host nation, or status-of-forces agreements between the United States and involved foreign governments?

Are there any OPLANs or conceptual OPLANs (CONPLAN) for the area or situation?

What type of foreign military or civilian medical infrastructure is established within the JOA? What and where are its key elements?

## **MEDICAL SUPPORT TO SASO**

Primary focus is supporting deployed US Forces

Nature of operations may require supporting coalition forces and host nation support (Detained Personnel/Civilians)

Environmental threat

Special medical equipment/immunization requirements

Combat Stress Control personnel to debrief US Forces

Preventive medicine issues

Cultural differences

Force protection

Transition from peacekeeping to peace enforcement to war

## **Immunizations**

### **Health Threat Briefing**

**-Endemic Diseases**

**-Water and Food Consumption**

**-Field Sanitation**

**-Personal Protective Measures**

**-Personal Hygiene**

**-Environment Exposure Hazards/Ecological Changes Caused by Disaster**

**-Plants/Animals**

**-Disruption of Public Utilities and Public Health Services**

### **Infectious Diseases of Concern and Changes of Pre-existent Disease Levels**

**-Acute Diarrheal Disease**

**-Sexually Transmitted Diseases**

**-Insect/Arthropod Transmitted Diseases**

**-Others**

## **Injuries**

**-Recreational/Sports**

**-Motor Vehicle Accidents**

**-Training**

## **Pets/Mascots Policy**

## **DNBI and Environmental Surveillance Program**

## **Communications Requirements**

## **Linkage to Line Organizations**

## **Special Instructions**

**-DNA Collection**

**-HIV Screening**

**-TB Screening**

**-Deployment Health Assessments**

# CORPS LEVEL MEDICAL UNIT DAILY SUPPLY USAGE

Class	UI	CSH	FH	DS	VS	PM	EVAC	AA	GA	FST	CSC
I	lbs	2700	1716	238	194	44	188	159	1641	132	96.7
Water	gal	23830	27390	602	532	85	376	1040	1413	327	177
II	lbs	2217	1455	217	176	37	173	477	1365	74	88
III (B)	gal	2112	1711	396	161	88	376	1040	19976	19	161
III (P)	lbs	308	220	34	28	5.6	27	66	219.5	10	14
IV	lbs	5412	3638	501	408	94	400	1105	3162	80	204
V (M16)	rds	23220	17496	1936	1560	504	1848	13020	6440	672	836
V (M9)	rds	2625	1560	45	90	30	210	2040	30	120	15
VI	lbs	1244	877	188	154	35	150	416	1190	64	77
VII	lbs	9075	6390	885	720	165	705	1950	5580	300	360
VIII	lbs	936.2	308	156	208	14	57	158	453.8	30	29.8
Blood	un	113								61	
IX	lbs	1512	1065	148	120	27	117	325	930	50	60

FOR PLANNING PURPOSES ONLY

## o BLOOD REPORT

- Line 1: Day time group of blood report
- Line 2: Name, designator code of reporting unit
- Line 3: Reporting unit's activity brevity code letter
- Line 4: Unit location in latitude/longitude (LAT/LONG), universe Mercator (grid), or place name
- Line 5: Naval Vessels Only: Projected location in LAT/LONG or place name for delivery of blood products
- Line 6: Naval Vessels Only: Estimate time of arrival (day, time, time zone, month, year at projected location)
- Line 7: Name or designator code of the unit/activity reporting the status of blood supplies if other than message originator
- Line 8: Reporting unit's activity brevity code letter if other than message originator
- Line 9: Number and code of each blood product on hand
- Line 10: Number and code of each blood product required.
- Line 11: estimate of total number of blood products by group to expire in next 7 days
- Line 12: Estimate of total number of blood groups required for resupply in the next 7 days
- Line 13: Narrative: Number of units received, transfused, shipped, destroyed, and expired in last 24hrs
- Line 14: Message hour-minute-zone when required
- Line 15: Authentication IAW JTF procedures

## o BLOOD SHIPMENT REPORT

- Line 1: ASOFDTG (Day Time Group of the Blood Shipment)
- Line 2: Name, designator code, and activity brevity code of reporting unit
- Line 3: Location of reporting unit
- Line 4: Blood product codes/number of units shipped/total number of units shipped
- Line 5: Blood shipment or air bill control numbers/aircraft flight number/estimated time of arrival at destination/number of boxes shipped
- Line 6: Contact name from shipping location (rank, phone number, location)
- Line 7: Additional closing comments (CLOSTEXT) such as when the blood will require icing
- Line 8: Message downgrading instructions

BLOOD COMPONENT	STORAGE TEMPERATURE	STORAGE SHELF LIFE
RBC (LIQUID)	1 to 6° C	35 Days
RBC (FROZEN)	065° C or Colder	21 Years
FFP	-18° C or Colder	12 Months
PLATELETS	-10 to 24° C	5 Days

# COMBAT LIFESAVER BAG PACKING LIST<sup>62</sup>

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>
6505010171625	Acetaminophen tablets	2 BT
6510009268882	Adhesive tape, surgical, porous, woven	1 SP
6515003002900	Airway pharyngeal, large adult	1
6515013652076	Airway pharyngeal, small adult	1
6505009269083	Atropine injection aqueous type	5
6510009137909	Bandage adhesive 3/4 X 3 inches flesh	18
6510011642694	Bandage gauze elastic, 5 yd X 2 in	4
6510002011755	Bandage muslin compressed brown	4
6545009129870	Case medical instrument and supply	1
6515012824878	Catheter & needle unit, d12 I.V.	2
6505012740951	Diazepam injection USP,	5
6510001594883	Dressing first aid field camouflaged	4
6515001817449	Gloves, patient exam med-lrg (latex)	3
6515001150032	Intravenous inj set, 7 comp	2
6510010100307	Pad povidone-iodine impre,	12
6505001187096	Povidone-iodine oint USP 10 %	8
6505001490098	Pseudoephedrine hydrochloride tablets	1 CO
6505011549922	Ringer's injection lactate USP 500ml plastic bag 2	
6515009357138	Scissors bandage 1.5" Cut lg 7.25" O/a lg both blades blunt crs	1
6515012254681	Splint universal 36 X 4.5" malleable alum radiolucent ltwt	1
6515011467794	Tourniquets nonpneumatic adult 14 X 1 blood taking dsgn rubber	2

## **Federal Response Plan (FRP)**

Establishes a process and structure for the systematic, coordinated, and effective delivery of Federal assistance to address the consequences of any major disaster or emergency declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended.

## **Emergency Support Functions (Lead Federal Agency)**

- o ESF1: Transportation (Department of Transportation)
- o ESF2: Communications (National Communications System)
- o ESF3: Public Works and Engineering (Corps of Engineers)
- o ESF4: Firefighting (Department of Agriculture, Forest Service)
- o ESF5: Information and Planning (FEMA)
- o ESF6: Mass Care (American Red Cross)
- o ESF7: Resource Support (General Services Administration)
- o ESF8: Health and Medical Services (Department of Health and Human Services)
- o ESF9: Urban Search and Rescue (FEMA)
- o ESF10: Hazardous Material (Environmental Protection Agency)
- o ESF11: Food (Department of Agriculture, Food and Nutrition Service)
- o ESF12: Energy (Department of Energy)

## **ESF 8 RESPONSIBILITIES**

- o Assessment of Health/Medical Needs
- o Health Surveillance
- o Medical Care Personnel
- o Health Medical Equipment and Supplies
- o Patient Evacuation
- o In-Hospital Care
- o Food/Drug Medical Device Safety
- o Worker Health/Safety
- o Radiological/Chemical/Biological Hazards
- o Mental Health
- o Public Health Information
- o Potable Water/Waste Water and Solid Waste Disposal
- o Vector Control
- o Victim Identification/Mortuary Services

# OFFICE OF FOREIGN DISASTER ASSISTANCE

## DISASTER ASSISTANCE RESPONSE TEAM

- o Rapid response management team made up of disaster relief specialist
- o Assist the Ambassador/Chief of Mission
- o Identifies and prioritizes overall relief needs
- o Recommends relief activities which can best be addressed by the US Government
- o Reviews and funds NGO/IO/UN proposals for relief activities, monitors funded activities
- o Provides daily sitreps
- o Provides advice on disaster relief and humanitarian assistance activities

## DART Characteristics

- o Rapid response - mobile, portable
- o Self-sustaining (Comms, Vehicles)
- o Flexible staffing depending on situation
- o Decentralized authority
- o Field funding capability (grants, contracts, quick response fund)

## OFDA STOCKPILE SYSTEM LOCATIONS

- o Anderson AFB, Guam
- o Soto Cano, Honduras
- o Leghorn Army Depot, Italy
- o New Windsor, Maryland
- o Bangkok, Thailand
- o Djibouti, US Embassy (Water Purification)

## DISASTER ASSESSMENTS

1. Situation Assessment
2. Needs Analysis
3. Specific (Sectoral/Target Population/Client)
4. Resource
5. Epidemiological Surveillance

## ASSESSMENT PURPOSE

1. Develop Program Planning Information
2. Ascertain Level of Response (Host Nation/International Community/NGO-PVO-IO-UN)
3. Determine Future Assessment Requirements
4. Identify Other Concerns



# OFDA EMERGENCY INDICATORS

## MALNUTRITION EMERGENCY INDICATORS

- o 10% of <5 age group moderately malnourished with nutritional diseases
- o Severe malnutrition for <5 age group
  - MUAC > 11.0cm      WFH/WFL < 70%      Z-Score < -3
- o Moderate malnutrition for <5 age group
  - MUAC > 11.0 and < 13.5cm      WFH/WFL > 70% and < 80%      Z-Score > -3 & < -2
  - MUAC = Middle Upper Arm Circumference; WFH/WFL = Weight for Height/Length

## MORTALITY RATE EMERGENCY INDICATORS

- o Crude Mortality Rate (CMR): Single most important indicator of serious stress in DPs
- o CMR = Deaths/10,000/day: Emergency Phase
  - < 1 = Under control
  - > 1 = Serious condition
  - > 2 = Out of control
  - > 4 = Major catastrophe
- o Mortality Rate for < 5 Age Group
  - 1 = Normal in a Developing Country
  - < 2 = Emergency phase, under control
  - > 2 = Emergency phase, in serious trouble
  - > 4 = Emergency phase, out of control

## MINIMUM WATER REQUIREMENTS

- o Minimum maintenance = 15 - 20 liters/person/day
- o Feeding center = 20 - 30 liters/person/day
- o Health center = 40 - 60 liters/person/day
- o 1 tap stand/200 people not > 100m from users
- o A large quantity of reasonably safe water is preferable to small amount of pure water

## MINIMUM FOOD REQUIREMENTS

Minimum maintenance = 2100 Kcals/person/day

## MINIMUM SHELTER/SPACE REQUIREMENTS

- o Minimum shelter space = 3.5 m<sup>2</sup>/person
- o Minimum total site area = 30 m<sup>2</sup>/person

## MINIMUM SANITATION REQUIREMENTS

- o At least 1 toilet for every 20 persons
- o Maximum of 1 minute walk from dwelling to toilet

# MEDICAL MOS

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Branch	AOC	Title	Branch	AOC	Title	
Medical	60F	Pulmonary Disease	Medical	61E	Clinical Pharmacologist	
Medical	60G	Gastroenterologist	Medical	61F	Internist	
Medical	60H	Cardiologist	Medical	61G	Infectious Disease	
Medical	60J	Obstetrician/Gynecologist	Medical	61H	Family Practice	
Medical	60K	Urologist	Medical	61J	General Surgeon	
Medical	60L	Dermatologist	Medical	61K	Thoracic Surgeon	
Medical	60M	Allergist, Clinical Immunolog	Medical	61L	Plastic Surgeon	
Medical	60N	Anesthesiologist	Medical	61M	Orthopedic Surgeon	
Medical	60P	Pediatrician	Medical	61N	Flight Surgeon	
Medical	60Q	Pediatric Cardiologist	Medical	61P	Physiatrist	
Medical	60R	Child Neurologist	Medical	61Q	Therapeutic Radiologist	
Medical	60S	Ophthalmologist	Medical	61R	Diagnostic Radiologist	
Medical	60T	Otolaryngologist	Medical	61U	Pathologist	
Medical	60U	Child Psychiatrist	Medical	61W	Peripheral Vascular Surgeon	
Medical	60V	Neurologist	Medical	61Z	Neurosurgeon	
Medical	60W	Psychiatrist	Medical	62A	Emergency Room	
			Medical	62B	Field Surgeon	
Branch	AOC	Title	Branch	AOC	Title	
Dental	63A	General Dentist	Specialist	65A	Occupational Therapist	
Dental	63B	Comprehensive Dentist	Specialist	65B	Physical Therapist	
Dental	63D	Periodontist	Specialist	65C	Dietitian	
Dental	63E	Endodontist	Specialist	65D	Physician Assistant	
Dental	63F	Prosthodontist				
Dental	63H	Public Health Dentist				
Dental	63K	Pediatric Dentist				
Dental	63M	Orthodontist				
Dental	63N	Oral and Maxillofacial Surgeon				
Dental	63P	Oral Pathologist				
Dental	63R	Executive Dentist (IM)				
			Branch	ASI	Title	
Nurse	66A	Administrator	Nurse	7T	Clinical Nurse	
Nurse	66C	Psychiatric/Mental Health N	Nurse	8A	Critical Care Nurse	
Nurse	66E	Perioperative Nurse	Nurse	8D	Midwife	
Nurse	66F	Anesthetist	Nurse	8E	Nurse Practitioner	
Nurse	66H	Medical-Surgical Nurse	Nurse	8G	Obstetric/Gynecology Nurse	
Nurse	66N	Generalist Nurse	Nurse	8J	Infection Control Nurse	
			Nurse	M5	Emergency Room Nurse	

# MEDICAL MOS

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Branch	AOC	Title	Branch	AOC	Title
Service	70A	Health Care Administration	Service	71A	Microbiology
Service	70B	Health Services Administration	Service	71B	Biochemistry
Service	70C	Comptroller	Service	71E	Clinical Laboratory
Service	70D	Health Services Systems Mgt	Service	71F	Research Laboratory
Service	70E	Patient Administration	Service	67C	Preventive Medicine (IM)
Service	70F	Human Resources Mgt	Service	72A	Nuclear Medical Science
Service	70H	Plans, Ops, Intel, Sec & Tng	Service	72B	Entomology
Service	70K	Material Mgt	Service	72C	Audiology
Service	67E	Pharmacy	Service	72D	Environmental Science
Service	67F	Optometry	Service	72E	Sanitary Engineer
Service	67G	Podiatry	Service	67D	Behavioral Sciences (IM)
Service	67J	Aeromedical Evacuation	Service	73A	Social Worker
Service	670A	Maintenance Technician	Service	73B	Clinical Psychology
Veterinary	64A	Senior Veterinarian (IM)	Warrant	153DB	Avn Safety Officer
Veterinary	75A	Field Veterinarian	Warrant	153DC	Instructor Pilot
Veterinary	75B	Veterinary Preventive Medicine	Warrant	153DF	Flight Examiner
Veterinary	75C	Veterinary Laboratory Medicine	Warrant	153DG	Maintenance Pilot
Veterinary	75D	Veterinary Pathologist	Warrant	153DI	Operations Officer
Veterinary	75E	Veterinary Comparative Medicine	Warrant	151A	Avn Maint Tech
Veterinary	75F	Veterinary Clinical Medicine	Warrant	640A	Vet Svc Tech
Veterinary	640A	Veterinary Services Officer	Warrant	670A	Health Svc Tech
			Warrant	918E	Maint Warrant Officer

## ENLISTED

Branch	MOS	Title	MOS	ASI	Title
AMEDD	42E	Optical Laboratory Specialist	91B	N3	Occupational Therapy
AMEDD	71G	Patient Administration		N9	Physical Therapy
AMEDD	76J	Medical Supply Specialist		P1	Orthopedic Specialty
AMEDD	91A	Medical Equipment Repairer		P2	Ear, nose and throat
AMEDD	91B	Medical Specialist		P3	Eye
AMEDD	91C	Practical Nurse		Y6	Cardiac Catheterization
AMEDD	91D	Operating Room Specialist			
AMEDD	91E	Dental Specialist	91C	M3	Dialysis
AMEDD	91K	Medical Laboratory Specialist			
AMEDD	91M	Hospital Food Service	91E	N5	Dental Laboratory
AMEDD	91P	Radiology Specialist		X2	Preventive Dentistry
AMEDD	91Q	Pharmacy Specialist			
AMEDD	91R	Veterinary Food Inspection	91K	M2	Cytology
AMEDD	91S	Preventive Medicined		M4	Blood Donor Center Ops
AMEDD	91T	Animal Care		P9	Biological Sciences Assist.
AMEDD	91V	Respiratory Therapy			
AMEDD	91X	Mental Health	91P	M5	Nuclear Medicine
AMEDD	91W	Health Care Specialist	91Q	Y7	Sterile Pharmacy
	91J	Medical Logistics Specialist	91S	N4	Health Physics
	18D	Special Forces Medical Sgt	91X	M8	Drug/Alcohol Counselor

# STAFF OPERATIONS

Be convinced that to be happy means to be free and that to be free means to be brave.

Therefore do not take lightly the perils of war.

**Thucydides**

1. **MISSION.** Restated mission resulting from the mission analysis.

2. **SITUATION AND CONSIDERATIONS.**

A. Characteristics of area of operations.

(1) Weather. How will different military aspects of weather affect specific staff area of concern and resources?

(2) Terrain. How will aspects of the terrain affect specific staff areas of concern and resources?

(3) Other Pertinent Facts. Analyses of political, economic, sociological, psychological, and environmental infrastructure, as they relate to the area.

B. Enemy Forces. Enemy dispositions, composition, strength, capabilities, and COAs as they affect specific staff area of concern.

C. Friendly Forces.

(1) Friendly courses of action.

(2) Current status of resources within staff area of responsibility.

(3) Current status of other resources that affect staff area of responsibility.

(4) Comparison of requirements versus capabilities and recommended solutions.

(5) Key considerations (evaluation criteria) for COA supportability.

D. Assumptions.

3. **ANALYSIS.** Analyze each COA using key considerations (evaluation criteria) to determine advantages and disadvantages.

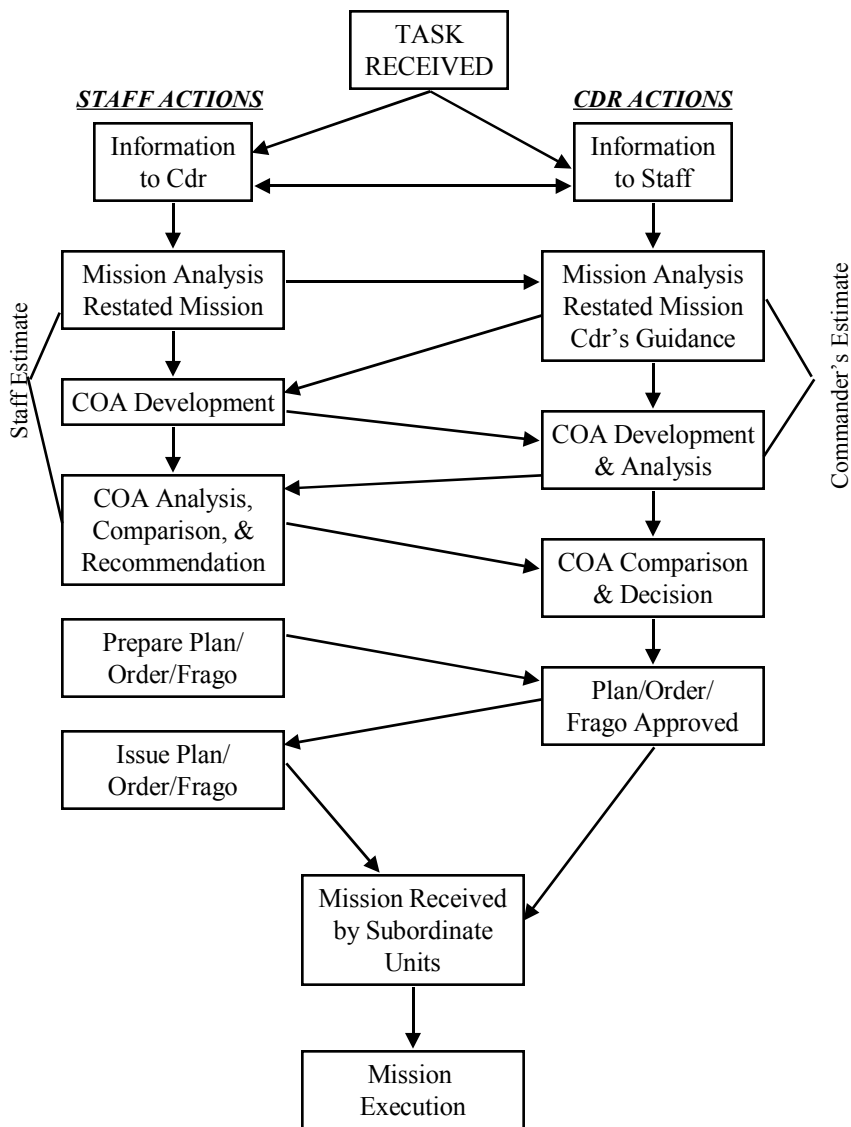
4. **COMPARISON.** Compare COAs using key considerations (evaluation criteria). Rank order COAs for each key consideration. Comparison should be visually supported by a decision matrix.

5. **RECOMMENDATIONS AND CONCLUSIONS.**

A. Recommended COA based on the comparison (most supportable from specific staff perspective).

B. Issues, deficiencies, and risks with recommendations to reduce their impacts.

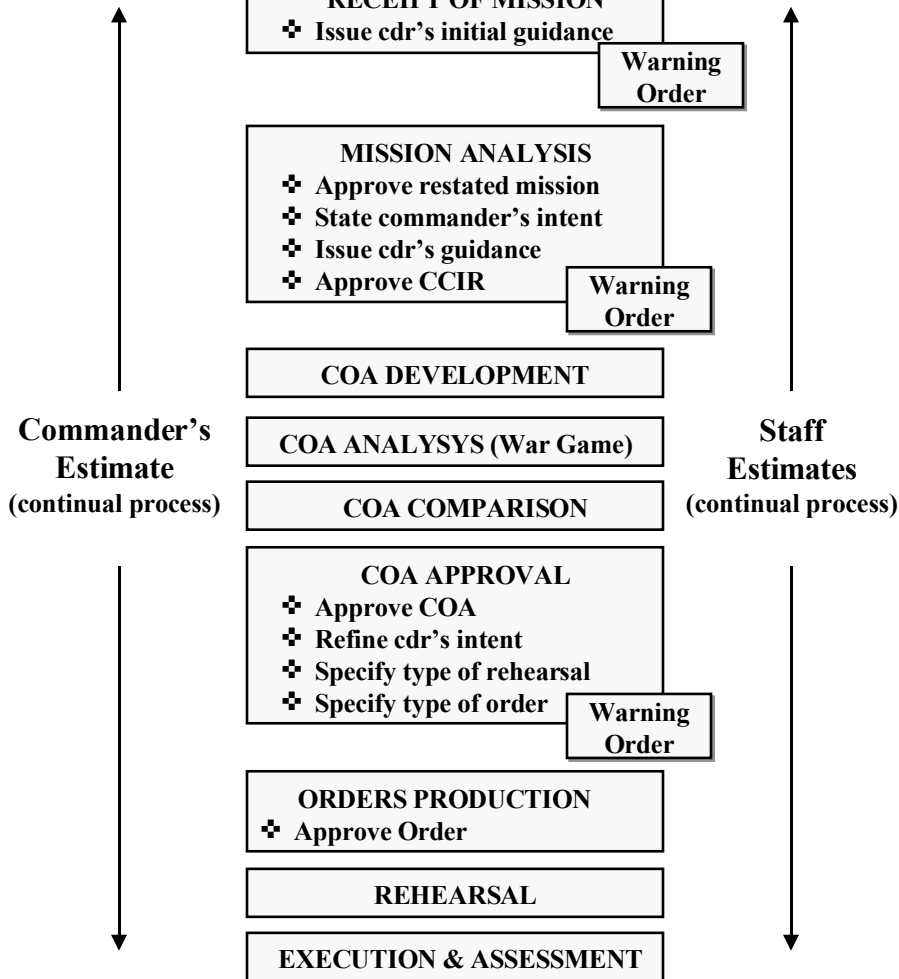
# DELIBERATE DECISION MAKING PROCESS



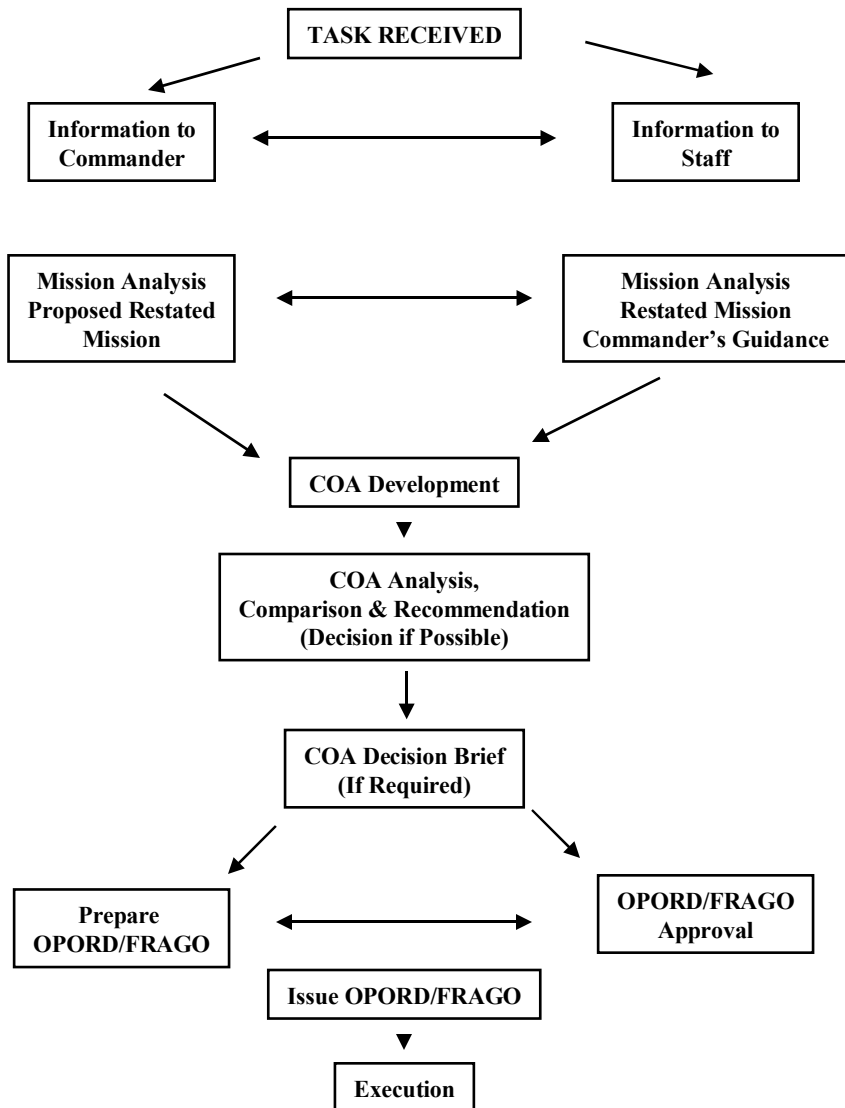
# MILITARY DECISION-MAKING PROCESS<sup>71</sup>

Commander May Conduct  
Phases Independently or in  
Conjunction with Staff

Staff Coordination is  
Continual, Up and Down



# ABBREVIATED DECISION MAKING PROCESS





1. Consists of 2 Briefings - The wargame brief & decision brief.

2. **WARGAME BRIEF:**

- A. Prior to wargaming, the staff must know -
  - The terrain analysis for the area of operation
  - Enemy situation and capabilities
  - The friendly & enemy COA to wargame
  - The friendly forces available
  - What combat multipliers are available
  - The assumptions used
  - The list of critical events
  - The wargame technique to be used
  - The recording model
- B. The briefing should include the -
  - Intent of higher headquarters
  - Updated intell estimate
  - Enemy COA wargamed
  - Assumptions
  - Visualization of the entire operation

3. **DECISION BRIEF:**

- A. Briefer should be familiar with and have available -
  - The assumptions
  - The COA sketches and statements
  - Staff estimates
- B. The decision briefing format includes -
  - The intent of higher headquarters
  - The restated mission (S3)
  - The status of own forces (S3)
  - The updated intell estimate (S2)
  - Own courses of action, including:
    - Assumptions used in planning
    - Results of staff estimates
    - Recommended COA

## **ANALYSIS OF COURSES OF ACTION**

1. Exploits enemy weaknesses
2. Takes weather into account
3. Uses best avenue of approach
4. Provides enough maneuver space
5. Provides fields of observation and fire
6. Provides cover and concealment
7. Support scheme of maneuver
8. Helps command and control
9. Forces provide mutual support
10. Responds to maneuver elements and reserve
11. Considers obstacles and key terrain
12. Helps speed of execution
13. Logistically supportable

## **WARGAMING SEQUENCE**

1. Gather Tools
2. List All Friendly Forces
3. List the Assumptions
4. List Known Critical Events and Decision Points
5. Select the Wargaming Method
6. Select a Technique to Record and Display Results
7. Wargame the Battle and Assess the Results

# METT-T CHECKLIST

## MISSION

Specified Tasks  
 Implied Tasks  
 Essential Tasks  
 Restated Mission  
 Constraints

## ENEMY

Type  
 Location  
 Organization  
 Identification  
 Strength  
 Morale  
 Capabilities  
 Likely Courses of Action  
 Intentions

## TERRAIN AND WEATHER

Observation/Fields of Fire  
 Avenues of Approach  
 Key Terrain  
 Obstacles  
 Cover/Concealment  
 Trafficability  
 Visibility  
 Weather Forecast  
 Effect on Soldiers  
 Effect on Equipment

## TROOPS

Number and Type  
 Task Organization  
 State of Training/Discipline  
 Strength-Personnel  
 Strength-Material  
 Morale  
 Past Performance  
 Location and Disposition  
 State of Maintenance and Supply  
 CSS Available  
 Effect of Leadership

## TIME

Planning and Preparation  
 Rehearse  
 Line of Departure  
 Movement  
 Start/Critical/Release Points  
 Secure or Seize Key Terrain  
 Enemy Reaction

**ORGANIC:** A unit that forms an essential part of an army unit and is listed in its table of organization and equipment or its table of distribution and allowances.

**ASSIGNED:** A unit that is placed in an organization on a permanent basis and is controlled and administered by the organization to which it is assigned for its primary function or the greater portion of its functions.

**ATTACHED:** A unit that is placed in an organization on a temporary basis, subject to limitation specified in the attachment order.

**OPERATIONAL CONTROL (OPCON):** A unit that has been provided to another commander to accomplish specific missions or tasks that are usually limited by function, time, or location. The commander may deploy the unit concerned and retain tactical control or he may assign tactical control of the unit to the subordinate commander. OPCON does not include administrative and logistic responsibility, discipline, internal organization, and unit training.

## SUPPORT RELATIONSHIPS

**DIRECT SUPPORT:** A unit in DS of a specific unit is required to give priority of support to that unit. The supporting unit will take support request directly from the supported unit. A unit in DS has no command relationship with the supported unit and therefore cannot be suballocated, reassigned, or reorganized by the supported force.

**GENERAL SUPPORT:** A unit in GS will provide support to the total force and not to any particular subdivision of the supported force. Subdivisions and/or subordinate units may request support through the supported force headquarters, but only the supported force headquarters can determine the priorities and can assign missions to GS units.

**GENERAL SUPPORT-REINFORCING:** GSR is used primarily with arty units. The GSR arty unit is required to support the force as a whole and to provide reinforcing fires to another arty unit as a second priority.

**REINFORCING:** Reinforcing is also used primarily with artillery units. The reinforcing unit is required to give the priority of support to another artillery unit.

## **PLANNING PHASE**

- o Specified, implied, and mission-essential tasks
- o Higher headquarters mission statement and intent
- o Weather data
- o Constraints and limitations
- o Critical facts and assumptions
- o Time line, to include expected enemy events
- o Restated mission
- o Task organization
- o Commander's guidance
- o COA development sketch
- o Synchronization matrix
- o Wargame worksheet
- o CCIR
- o COA comparison
- o Decision support matrix

## **BATTLE PREPARATION PHASE**

### *OFFENSIVE OPERATIONS*

- o CL III/V status
- o Subordinate units order issue and rehearsal status
- o PCI tracking
- o Task organization completion status
- o Maintenance status
- o Combat power
- o Status of breach assets and rehearsals

## **BATTLE PREPARATION PHASE**

### *DEFENSIVE OPERATIONS*

- o CL III/IV/V status
- o Obstacle completion status
- o Combat power
- o Survivability status
- o Engagement area (EA) and repositioning rehearsals
- o Target reference point (TRP) emplacement
- o Subordinate units order issue and rehearsal status

## **EXECUTION PHASE**

- o Combat power
- o Unit locations and activities
- o CL III/V status
- o Enemy contacts, locations, and movements
- o Enemy BDA
- o Main and forward aid station locations
- o Brigade or division assets in sector (GSR, MPs, etc)
- o Status of adjacent units

## **POST BATTLE PHASE**

- o Unit equipment readiness
- o Unit personnel strength
- o Resupply status of CL III/IV/V
- o Unit locations
- o Consolidations and reorganization status
- o Maintenance and casualty collection status

# **LIAISON OFFICER/NCO RESPONSIBILITIES**

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1. **GENERAL:** When required, the battalion will send liaison teams with vehicles and radios to the Bde TOC, flank TF TOCs, and forward covering force TF TOC. The XO will designate and control liaison parties.
2. **LNO Packet:** Each liaison party will have the following minimum essential items prior to departure:
  - a. SOI
  - b. KY-13 with CNV loaded
  - c. Maps of area of operation
  - d. Bn/TF SOP
  - e. Complete OPLAN with all overlays
  - f. Updated Cdr's SITREPS to Co/Tm level
3. **LNO Duties:**
  - a. Maintain a continuous exchange of information between the two HQ's
  - b. Insure XO's at both HQ know LNO whereabouts at all times
  - c. Keep informed on locations, dispositions, and plans of own unit and make this information available to the visited HQ
  - d. Answer all requests for information in a timely manner
  - e. Maintain a journal and situation map
  - f. Be aggressive in seeking out information
  - g. Stay available to visited HQ's
  - h. Stay in communications with own TOC on the TF Cmd Net

# LIAISON OFFICER CHECKLIST

80

## **Prior to Departing from Assigned Unit:**

Clearly understand the mission and duties expected of you as LNO.

Know the current situation of your assigned unit, including concept of operations, unit locations, combat power status, and status of critical supplies.

Possess current graphics.

Obtain information and liaison requirements from each staff section.

## **Upon Arrival at Supported Headquarters:**

Report to the Commander or XO, be prepared to brief unit situation.

Establish communications with assigned unit.

Visit each staff section and exchange information as required.

## **During Liaison Tour:**

Keep abreast of the situation of assigned unit and provide updated to supported Headquarters.

Monitor and assist in the planning process of supported unit. This includes:

- Advise staff on how to best employ assets of assigned units
- Record all critical information and pass to unit as soon as possible. Include specified/implied tasks, mission-essential tasks, constraints/limitations
- Receive and pass all enemy SITEMPs and other intelligence products as soon as possible

Conduct adjacent unit coordination as appropriate.

## **Upon Return to Assigned Headquarters:**

Immediately brief Commander/XO/S-3 on information received.

Exchange information with appropriate staff sections.

Assist unit in conducting the TDMP.

Be prepared to respond to additional liaison responsibilities.



# REHEARSAL CHECKLIST

81

**TYPE REHEARSALS** (Note: Planning process MUST allow time for rehearsals)

- |               |              |              |
|---------------|--------------|--------------|
| o Briefbacks  | o Map        | o TEWT       |
| o Radio/Commo | o Sand Table | o Full Dress |

## **PURPOSE OF REHEARSALS**

- o REINFORCE CONCEPT OF OPERATION
- o IMPROVE UNDERSTANDING, SYNCHRONIZATION
- o IDENTIFY CONTINGENCIES
- o VERIFY RESPONSIBILITIES & TIMING OF ACTIONS
- o CLARIFY BACK UP PROCEDURES
- o REFINE PLAN, DEVELOP/IMPROVE SYNCH MATRIX

## **REHEARSALS SEQUENCE**

- o HAVE PREPARED REHEARSAL KIT
- o GET KEY BOS LEADERS TOGETHER, CDR MUST LEAD
- o ESTABLISH RECORDER TO UPDATE/DEVELOP SYNCH MATRIX
- o ALWAYS PREP BLOW UP SKETCH OF OBJ, DEPICTING CONTROL MEASURES
- o FSO PASSES OUT FIRE SPT EXECUTION MATRIX (TO PLT LEVEL), ENSURES ALL KNOW FS PLAN & CONTINGENCIES
- o S2 REFERS TO DST, PLAYS THE ENEMY & VERBALIZES EN ACTIONS & REACTIONS
- o CHALK TALK/WALK THROUGH
- o FOCUS ON OBJECTIVE FIRST, THEN OTHER KEY EVENTS & TIMING
- o LDRS STATE WHAT THEY DO DURING EACH CRITICAL EVENT
- o COUNTER ACTION TO EACH ENEMY ACTION IS IDENTIFIED
- o CONTINGENCIES ARE IDENTIFIED
- o REFINED PLAN MUST BE COMMUNICATED TO ALL KEY PLAYERS ASAP
- o REHEARSE FROM VANTAGE POINT DURING DEFENSE
- o QUICK LDR, FSO, EN BACKBRIEF IN ASSAULT POSITION, PRIOR TO ATK

**XO**

1. Special Topics
2. Status of Reports
3. Critical Tasks Next 12 Hrs
4. Time Schedule Next 24 Hrs

**S-2**

1. Weather Report & Effect on Ops
2. Terrain
3. Enemy Activity
4. Humint Collected from EPW/PT's

**S-3**

1. Mission/Intent of Higher
2. Summary of Past Ops in AO
3. Current Ops/Unit Mission & Intent
4. Projected Future Ops
5. Status of OPLANS & FRAGOS
6. Security/Fire Support Available
7. Task Organization
8. Recommendations to Cdr

**NBC**

1. Current MOPP Level
2. CW Threat/Enemy Capability
3. NBC Equip Shortages
4. Status of CDM

**MRO**

1. Bed Status of All Units
2. Location/Status of USAF Assets
3. Casualties Last 24 Hours

**S-4**

1. Equip Status
2. Maint Status w/ 2406
3. Supply Status (Red/Amber/Green)
4. Resupply/Services Schedule
5. Recommendations to Cdr

**S-1**

1. Unit Strengths
2. Projected Gains by MOS
3. Personnel Services
4. Religious Support Plan
5. Critical MOS Shortages
6. Projected Casualties
7. Cdr's Calendar

**S-5**

1. Host Nation Support Avail
2. COB Plan
3. CMO Activities Planned Next 24hrs
4. Displace Persons Requirements
5. Planned NEO Operations

**S-6**

1. Commo Status (All Systems)
2. Current SOI in Effect
3. Challenge/Password
4. Retrans Requirements

**Slice Elements**

1. Dental/PM/Vet/CSC Ops
2. MOS Shortages
3. Workload Status
4. Recommendations to Cdr

**HHD Commander**

1. Ration Cycle
2. Base Camp Security

**Information is Power  
Don't Keep It to Yourself!**

**CLASSIFICATION**

Copy \_\_\_\_ of \_\_\_\_ Copies  
Issuing Headquarters  
Place of Issue  
DTG of Signature  
Message Reference Number

OPERATION PLAN/ORDER NUMBER (Code Name)

References:

Time Zone Used Throughout Order:

Task Organization:

1. SITUATION

- A. Enemy Forces.
- B. Friendly Forces.
- C. Attachments and Detachments.
- D. Assumptions (OPLAN Only).

2. MISSION

3. EXECUTION

A. Concept of Operations.

- (1) Maneuver
- (2) Fires
- (3) Reconnaissance and Surveillance
- (4) Intelligence
- (5) Engineer
- (6) Air Defense
- (7) Information Operations

B. Tasks to Maneuver Units.

C. Tasks to Combat Support Units.

- (1) Intelligence
- (2) Engineer
- (3) Fire Support
- (4) Air Defense
- (5) Signal
- (6) NBC
- (7) Provost Marshal/MP
- (8) PSYOP
- (9) Civil Military

## CLASSIFICATION

### D. Coordinating Instructions.

- (1) Time or Condition When a Plan/Order Becomes Effective
- (2) CCIR
- (3) Risk Reduction Control Measures
- (4) Rules of Engagement
- (5) Environmental Conditions
- (6) Force Protection

### 4. SERVICE SUPPORT

- A. Support Concept.
- B. Materiel and Services.
- C. Medical Evacuation and Hospitalization.
- D. Personnel.
- E. Civil Military.

### 5. COMMAND AND SIGNAL

- A. Command.
- B. Signal

ACKNOWLEDGE:

Name (Commander's Last Name)  
Rank (Commander's Rank)

OFFICIAL:

Name  
Position

ANNEXES:

Annex A	Task Organization
Annex B	Intelligence
Appendix 1	Initial IPB
Tab A	Modified Combined Obstacle Overlay (MCOO)
Tab B	Enemy Situation Template
Tab C	Analysis of AO
Appendix 2	Collection Management
Annex C	Operation Overlay
Annex D	Fire Support
Appendix 1	Air Support
Appendix 2	Field Artillery Support
Appendix 3	Naval Gunfire Support
Annex E	Rules of Engagement
Annex F	Engineer
Appendix 1	Engineer Overlay
Appendix 2	Environmental Considerations
Annex G	Air Defense
Annex H	Signal
Annex I	Service Support
Appendix 1	Service Support Overlay
Appendix 2	Traffic Circulation and Control
Tab A	Traffic Circulation Overlay
Tab B	Road Movement Table
Tab C	Highway Regulations
Appendix 3	Personnel
Appendix 4	Legal
Appendix 5	Religious Support
Annex J	Nuclear, Biological, and Chemical (NBC) Operations
Annex K	Provost Marshal
Annex L	Reconnaissance and Surveillance Operations
Annex M	Deep Operations
Annex N	Rear Operations
Annex O	Airspace Command and Control (AC2)
Annex P	Command and Control Warfare (C2W)
Annex Q	Operations Security (OPSEC)
Annex R	PSYOP
Annex S	Deception
Annex T	Electronic Warfare (EW)
Annex U	Civil-Military Operations (CMO)
Annex V	Public Affairs

# BATTLEFIELD OPERATING SYSTEMS

People sleep peaceably in their beds at night only because rough men stand ready to do violence on their behalf.

**George Orwell**

MANEUVER  
FIRE SUPPORT  
AIR DEFENSE  
INTELLIGENCE  
MOBILITY AND SURVIVABILITY  
COMBAT SERVICE SUPPORT  
COMMAND AND CONTROL

## **ELEMENTS OF OFFENSIVE OPERATIONS**

DEEP OPERATIONS  
RECONNAISSANCE AND SECURITY OPERATIONS  
MAIN AND SUPPORTING ATTACKS  
RESERVE OPERATIONS  
REAR OPERATIONS

## **ELEMENTS OF DEFENSIVE OPERATIONS**

DEEP OPERATIONS  
SECURITY FORCE OPERATIONS  
MAIN BATTLE AREA  
RESERVE OPERATIONS  
REAR OPERATIONS

**Establish “Get Set” time with arty, ammo, and FO’s in place**

**Targeting based on thorough IPB (use S-2’s situational template)**

**FSO must determine trigger points**

**Send FO’s with Scouts on infiltration attack and defense**

**Use AC-130, must have rehearsed commo plan**

**Detailed clearance of fires procedures**

**Company FS execution matrix must be based on company scheme of maneuver**

**Bn and company mortars must be used: Bn FSO C2 81mm MTRS from TOC**

**Use Q36 radar to protect BSA and AVN TF**

**Use dedicated FSO for BSA and Convoy FS plan**

**ADAM (AP)/RAAM Plan**

**FA S-2 and Bde FSO must exchange info with Bde S-2**

**FSO must briefback cdr’s mission and intent**

**After initial wargame, recon, then wargame again**

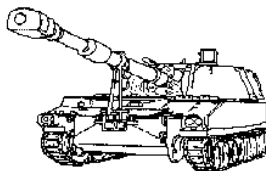
**Use “top down” planning and “bottom up” refinement**

**FS execution matrix must be event driven, not time driven**

**FSO must coordinate airspace with USAF LNO, AVN TF S-3, and S-3 Air**

**Redundant observers required on top priority targets**

**Rehearsal of fire support plan critical to mission accomplishment**

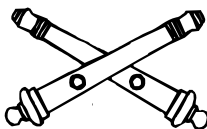




1. **Identification** - Call Sign of Observer
2. **Method of Fire** - “Adjust Fire” or “Fire for Effect”
3. **Target Location** - Shift from a known point or 6 digit grid coordinate
4. **Target Description** - Troops, tanks, trucks, etc. and type of cover (in bunkers, in trenches, in the open, etc.)
5. **Method of Engagement** - Use “Danger Close” if target within 600m of friendly troops and type of ammunition (HE, Delay, VT, WP)
6. **Method of Control** - “At my command” “When Ready” or “TOT”

Arty Freq: \_\_\_\_\_

Arty Call Sign: \_\_\_\_\_



<b>TARGET LIST</b>	<b>90</b>
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<b>TARGET LIST</b>	<b>90</b>
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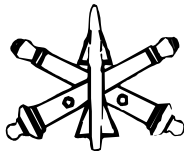
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Enemy Weapon Systems Range			91
Type	Description	Range	
D-30	122mm Howitzer	15,300m	
M-46	130mm Field Gun	27,490m	
M-1938	107mm Rocket System	6300m	
Type 59-1	130mm Field Gun	27,490m	
M65/G5	155mm Howitzer	14,995m	
M59	155mm Gun	23,500m	
D20	152mm Gun Howitzer	17,410m	
APR40	132mm MLRS	20,400m	
BM21	120mm MLRS	20,400m	
2S9	122mm SP Howitzer	7,000-12,000m	
2S3	152mm SP Howitzer	17,230m	
BM 21	122mm MRL	20,500m	
FROG 7	Arty Rocket System	70,000m	
SS-1C	Scud-B	180-300km	
2B14-1	82mm Mortar	4,000m	
SS40	Astros Rocket Launcher	35,000m	
2A65	152mm Gun	30,000m	
2B9	82mm Auto Mortar	5,000m	

RED	Attack is <b>IMMINENT</b> or <b>IN PROGRESS</b>
YELLOW	Attack is <b>PROBABLE</b>
WHITE	Attack is <b>IMPROBABLE</b>
<b>WEAPONS CONTROL STATUS</b>	
Wpns FREE	Fire at any aircraft not identified as friendly
Wpns TIGHT	Fire only at aircraft positively identified as Hostile
Wpns HOLD	Fire only in self defense

## Passive Air Defense

1. Use covered and concealed routes and stationary positions
2. Cover glass and camouflage vehicles; do not skyline or outline
3. Maintain COMSEC and air guards
4. Specify visual and audible air warning signals in unit SOP
5. Enforce noise, light, litter discipline



CDR MUST GIVE GUIDANCE, DEVELOP, SYNC, AND APPROVE RECON PLAN

INTEL PREP OF BATTLEFIELD & INTEL COLLECTION MUST FOCUS ON MISSION

FOCUS ASSETS ON OBJECTIVE

COUNTERRECON REQUIRES CENTRALIZED C2

MUST GET ACCURATE 6 DIGIT GRID ON ENEMY W/ OBSERVED FIRE

SOP: IF SCT PLT LDR CAN'T TALK TO CDR, HE MUST MOVE

SCTS MUST BE EXPERTS AT COMMO, MUST USE DIRECTIONAL ANTENNAS

SCOUTS/RECON UNITS MUST HAVE REDUNDANT COMMO

CDRS, S2, AND S3 MUST FOCUS ON ENEMY TACTICS, WEAKNESSES OR BATTLE DRILLS & HOW TO COUNTER THEM

IF POSSIBLE, HAVE MOBILITY FOR SCOUTS

REDUNDANT EYES ON OBJECTIVE/ CONTINGENCY PLAN FOR COMPROMISE

AGGRESSIVELY SEEK ALL AVAILABLE INFO: ARTY, S2, FSO, AC-130, ADA, CIVILIANS, PATIENTS, HIGHER HQ'S

MUST HAVE PATROL PLAN

SHOW ENEMY DECISION POINTS ON DST. HAVE PLAN TO COUNTER THEM

S2 INTERVIEWS ALL PATIENTS FOR INTEL

ID CHOKE POINTS IN BATTLE AREA TO DETERMINE HIGH CASUALTY AREAS

MONITOR AVIATION NET FOR INTELL ON BATTLE

ANALYZE TERRAIN FOR EVAC ROUTES, AFFORDING HIGH COVER AND CONCEALMENT AND TRAFFICABILITY

KNOW THE ENEMY TEMPLATE



# INTELLIGENCE PREPARATION of the BATTLEFIELD TEMPLATES

94

## Doctrinal

Description: Enemy doctrinal deployment for various types of operations without constraints imposed by the weather and terrain. Composition, formations, frontages, depths, equipment numbers and ratios, and HVTs are types of information displayed.

Purpose: Provides the basis for integrating enemy doctrine with terrain and weather data.

When Prepared: Threat Evaluation

## Situation

Description: Depicts how the enemy might deploy and operate within the constraints imposed by the weather and terrain.

Purpose: Used to identify critical enemy activities and locations. Provides a basis for situation and target development and HVT analysis.

When Prepared: Threat Integration.

## Event

Description: Depicts locations where critical events and activities are expected to occur and where critical targets will appear.

Purpose: Used to predict time-related events within critical areas. Provides a basis for collection operations, predicting enemy intentions, and locating/tracking HVT.

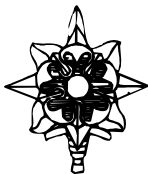
When Prepared: Threat Integration.

## Decision Support

Description: Depicts decision points and target areas of interest keyed to significant events and activities. The intelligence estimate is in graphic form.

Purpose: Used to provide a guide as to when tactical decisions are required relative to a battlefield event.

When Prepared: Threat Integration.



## **Commander's Critical Information Requirements (CCIR)**

Information the commander requires that directly affects his/her decisions and dictates the successful execution of operations.

- Situation dependent
- Events or activities that are predictable
- Specified by the commander for each operations
- Time sensitive information that must be immediately reported to the commander, staff, and subordinate commanders
- Always included in an OPORD or OPLAN
- Transmitted by a communications system specified in the SOP

## **Priority Intelligence Requirements (PIR)**

Information the commander needs to know about the enemy and terrain.

## **Friendly Forces Information Requirements (FFIR)**

What the commander needs to know about the combat capabilities of his/her or adjacent units (both tangible and intangible capabilities).

## **Essential Elements of Friendly Information (EEFI)**

What the commander needs to know to determine how he must protect the force from the enemy's information gathering systems.

## **Information Display**

- Display symbols, graphics, and terminology consistent with FM 101-5-1
- Display essential information.
- Display information clearly and understandably.
- Display information accurately, reliably, and in a timely manner.
- Be able to be changed promptly and easily as the information is update.
- Be easily distributed to higher, lower, and adjacent units.

# NBC CHECKLIST

96

ENSURE NBC EQUIPMENT IS FUNCTIONAL FOR OPERATION/ALL MTOE EQUIP OH

UNITS TRAINED ON CHEM CAS CARE/MES'S OH

ID ALL TRAINED DECON TMS IN TF

ALL SM'S HAVE IPE OH PRIOR TO DEPLOYMENT

RAD/BIO/CHEM DETECTION TM TRAINED AND ID'D

SMALL UNIT LEADERS NBC KNOWLEDGE IS THE KEY TO SUCCESS

SEPARATE CASUALITIES/HAVE PLANS FOR NBC CASEVAC

MONITOR MOPP STATUS CLOSELY

COORDINATE DECON/SMOKE OPERATION AT BDE/BN/CO/PLT LEVEL

ENSURE SUBORDINATE UNITS ARE ALERTED FOR POSSIBLE ATTACK

ENSURE CHEMICAL DEFENSE EQUIPMENT IS DISTRIBUTED & OPERATIONAL

CONDUCT MOPP ANALYSIS & ESTABLISH MINIMAL MOPP LEVEL. DISSEMINATE TO SUBORDINATE UNITS.

ALERT NBC TEAMS (M8 ALARM OPERATORS, M256 DETECTION TMS, NBC MARKING TMS) TO PREPARE EQUIP

ALERT UNIT TO CONDUCT AUTOMATIC MASKING UPON RECEIVING ARTY ATK

RECON FOR POSSIBLE DECON SITE & ALERT SUPPORTING DECON SITE

ESTABLISH A PLAN FOR NBC CASEVAC, NOTIFY BAS AND RTOC

COVER EXPOSED EQUIPMENT AND SUPPLIES

DISPERSE, DIG IN AND MAKE MAX USE OF OVERHEAD COVER

<b>MOPP LEVEL</b>	<b>BDO</b>	<b>BOOTS</b>	<b>MASK</b>	<b>GLOVES</b>
0	CARRIED	CARRIED	CARRIED	CARRIED
1	WORN	CARRIED	CARRIED	CARRIED
2	WORN	WORN	CARRIED	CARRIED
3	WORN	WORN	WORN	CARRIED
4	WORN	WORN	WORN	WORN



LINE	ITEM
B	Position of Observer
C	Direction of Attack from Observer
D	DTG of Detonation
E	Location of Attack
H	Type of Burst/Agent (Air/Surface)

## UNMASKING PROCEDURES

### ***With Detection Kit***

1. If no chem agent detected, have 2 soldiers unmask in shade for 5 mins, remask for 10 mins
2. Check for symptoms; if none, others may unmask; remain alert for symptoms

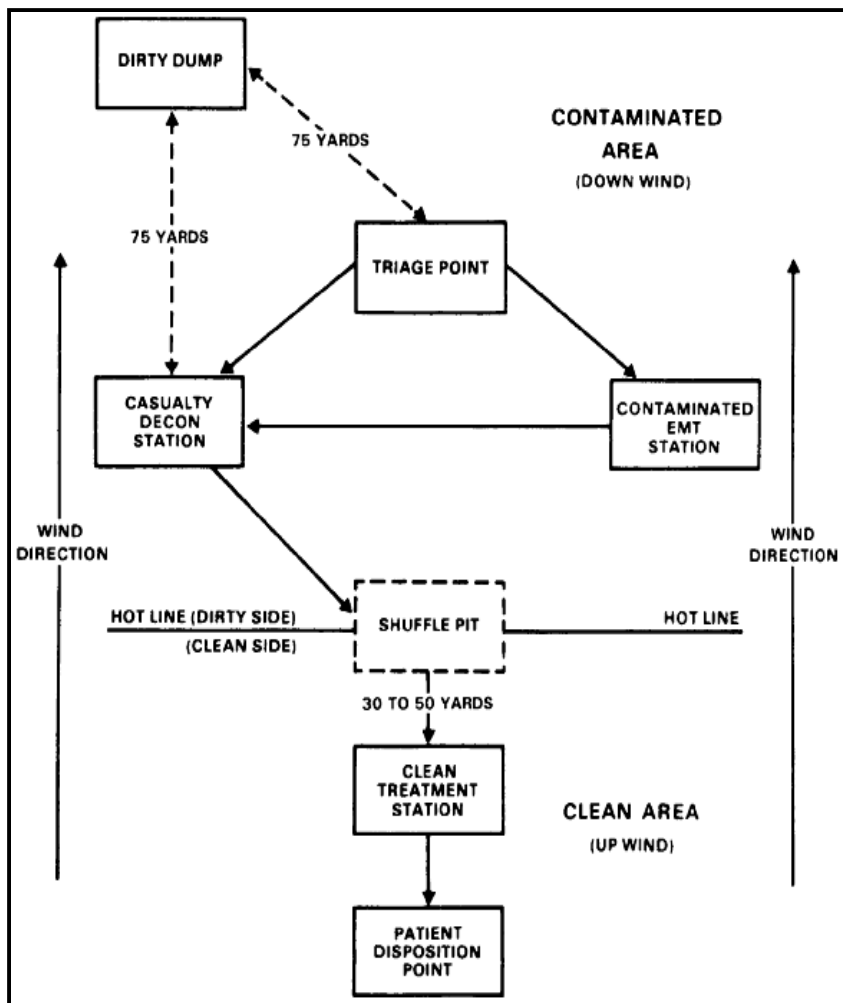
### ***Without Detection Kit***

1. Have 2 soldiers hold breath and break seal of mask for 15 seconds, eyes open
2. Reseal, clear and check masks, wait 10 mins
3. Check for symptoms; if none, break seal of mask, take 2-3 breaths, repeat step 2
4. If no symptoms, have soldiers unmask for 5 mins, remask for 10 mins
5. Check for symptoms; if none, others may unmask; remain alert for symptoms



# PATIENT DECON/TREATMENT SITE

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Return fire with aimed fire.

Anticipate attack.

Measure the amount of force that you use, if time and circumstances permit.

Protect with deadly force only human life, and property designated by cdr.

## **RULES OF ENGAGEMENT CONDITIONS**

### **ROECON GREEN**

- Applies when no discernable threat of hostility exists.
- Places force in a routine security posture.
- Involves minimal arming, and protection only of the force and key facilities.

### **ROECON AMBER**

- Applies when there is a discernible threat of hostile activity, but not enough of a threat to justify ROECON RED.
- Does not generally apply where higher HQ has formally identified a hostile force.
- Provides for arming additional key personnel, establishment of roadblocks and barriers, security patrols, and increased availability of ordnance.

### **ROECON RED**

- Applies when an actual attack on US forces occurs, a threat of imminent attack exists, or higher HQ has formally identified a hostile force in theater.
- Directs the force to continue the protection measures detailed in the lower ROECONs, while arming all levels of approval authority on select weapon systems.
- Group will supplement the soldier's RAMP by providing specific hostility criteria to assist in implementing the "A - Anticipate" attack principles.

# ADVON/QUARTERING PARTY OPERATIONS<sup>00</sup>

**MISSION:** To establish operations base camp and integrate all subordinate units into the base defense plan. Command and control for the advanced/quartering party will be provided by the XO and S-3.

## **PRIORITY OF WORK:**

1. Establish Security
2. Establish Comms with TF Main
3. Establish Initial Defense
4. Stake Ground for Hospital
5. Determine Locations for Follow on Elements
6. Act as Guides for Main Body Arrival

## **ORGANIZATION:**

Advance Party Command and Control:

- (a) Operations OIC and NCOIC
- (b) Radio Operator

Team Security: Minimum of 8 personnel

Hospital Staking Team:

- (a) Team Leader
- (b) Minimum of 9 personnel (3 PLX, 5 Med Co, 1 S-4)
- (c) Equipment: Tape measure/550 cord/markings equip

Quartering Party

- (a) TF XO
- (b) TF personnel as determined by mission requirements

NBC Team

- (a) TF NBC NCO
- (b) 1 x NBC equipment operator
- (c) Equip: AN/PRD27, IM93, IM174, M8, M256, Markers

Mine Clearing Force

- (a) NCOIC
- (b) 2 personnel (1 operator, 1 marker)
- (c) Equip: Mine detector, markers, non-metallic probe

# ADVON/QUARTERING PARTY CHECKLIST

## PERSONNEL

- A. Full accountability of personnel
- B. Mission briefing completed
- C. Soldiers backbrief OIC
- D. Packing list checked

## INTELLIGENCE

- A. All maps posted
- B. Soldiers Know Challenge/Password
- C. Leaders have list of sensitive items
- D. Vehicle bumper numbers are covered

## NBC

- A. MOPP gear serviceable
- B. Soldiers know MOPP level and alert procedures
- C. NBC NCO has team briefed and equipment on hand

## COMMUNICATIONS

- A. ANCD has been filled
- B. Radio checks completed on all radios
- C. Personnel know call signs

## VEHICLES AND EQUIPMENT

- A. Weapons clean, ammo on hand
- B. Load plans verified
- C. Water and fuel cans filled
- D. Tow bar on hand
- E. Vehicles dispatched/drivers licensed
- F. PMCS completed on all vehicles
- G. Rations provided to all personnel

**REHEARSE, REHEARSE, REHEARSE!**

**OIC establishes fire support plan for route**

**Party departs NLT 12hrs prior to main body movement**

**Party travels on prescribed route as outlined in opord**

**Upon arrival at assembly area, party halts, establishes local security**

**Security, NBC, and mine detector teams move forward and secure location**

**Upon receiving all clear, remainder of team moves into area**

**Comms established with TF Main**

**Perimeter security is overseen by S-3**

**Security force mans LP/OPs**

**Staking team begins laying out hospital**

## **TROOP LEADING PROCEDURES**

**Receive mission**

**Issue warning order**

**Make tentative plan**

**Start needed movement**

**Recon**

**Complete plan**

**Issue orders**

**Supervise, refine, and rehearse**

## 1. Planning and Administration

Warning order issued to subordinate commanders

Route reconnaissance accomplished and reported

Quartermaster party dispatched

Quartermaster party report for units with communications capability

March table, march order, graph, and strip map prepared

Additional transportation requested to move unit (if required)

Load plans checked

Personnel and equipment inspection completed

Serial/convoy commanders/leaders identified

Personnel briefed on the operation

Preparatory maintenance completed

Weight markings on all vehicles

Situational awareness of individual soldiers

Communications checked

Weapons checked

First and last vehicles of convoy properly marked

Area secured during planning

Safety briefing conducted

Strip maps issued

Convoy numbers issued

Vehicle fuel tanks filled

Compliance with readiness requirements of higher HQs for unit deployment

**2. Convoy Training Procedures**

Entrucking

Assembling of column

Cross the start point (SP) on schedule

Control of column and communications

Halts (timing and location)

Security during march and halts

Maintenance plan enroute and at halts

Guides and route markings established

Rate of march

Adherence to local traffic regulations

Accident reporting

Passive defense measures during march and halts

Proper distance between vehicles

Cross release point (RP) on schedule

**3. Occupation and Organization for Defense**

Action of quartering party at bivouac site

Smoothness and discipline of operation

Dispersion of personnel and vehicles

Detrucking

Initial security outpostting

Organization and coordination for ground fire plan

**Continued**



Rapidity of operation, interior arrangements: supply, mess, command post, latrines, and slice elements

Adequacy of defense and warning systems

Use of natural cover and concealment

Communication and control within the perimeter

Maintenance undertaken on arrival in operational areas

Vehicles refueled

Vehicles tactically parked

Unit SOP or prearranged plan for occupying field location

Active defense measures including password/challenge

Passive defense measures

#### **4. Tactical Road March**

Dissemination of situational information to subordinate leaders

Entrucking/detrucking of personnel

Proper loading of cargo carriers

Timely clearance of area

March safety precautions

Proper formation of columns

Light and noise discipline

Adequacy of prearranged plans and/or SOP

Guides and/or route markers posted

Driver proficiency

Coordination and control of columns

Security of march column

**Continued**

Adherence to march column  
Knowledge of situation by individual soldiers  
Selection of SP, critical points, and RP  
Passive defense measures during march and at halts  
Proper distance between vehicles in columns  
Reports properly prepared and submitted  
Unit's capability to perform mission after march

## **5. Roadblocks**

Personnel react IAW convoy SOP  
Dismounting of personnel  
Dispersion of vehicles  
Organization for reaction to roadblock  
Movement and deployment of squads  
Roadblock and vicinity checked for mines and booby traps  
Mines and booby traps cleared correctly  
Disposition of removed mines and booby traps  
Emergency treatment of assessed casualties  
Reporting of casualties, equipment damage, and SITREP to higher HQs  
Reorganization and continuation of march

## **6. Occupation and Organization for Tactical Operations**

Action of quartering party handling of incoming column

**CONTINUED**

Smoothness and speed of complexing for technical operations

Suitability of location for control, coordination, and supervision of assigned units

Interior arrangements: CP, supply, latrines, mess, and others

Local communications installation

Use of natural concealment features (passive defense)

Organization and control of ground fire plans

Coordination with adjacent units on area defense plans

Adequacy of perimeter defense and warning system

Vehicle dispersion and maintenance operations

Vehicles refueled

Vehicles tactically parked

Unit SOP for prearranged plan for occupying field location

Unit SOP for patient security during attack

Unit SOP for unloading ground/air evacuation vehicles

Handling of wounded enemy prisoners of war

Handling of contaminated patients

Handling of psychiatric patients

Handling of patients requiring quarantine

# **COMBAT SERVICE SUPPORT CHECKLIST<sup>108</sup>**

**CASUALTY EVACUATION - HAVE AN OPLAN THAT INCLUDES BOS SYNCHRONIZATION**

**SUPPLY OF CLASS IV REQUIRES DETAILED C2 AT DISTRIBUTION**

**XO OR 1SG MUST KEEP TRACK OF CLASSES OF SUPPLY & ALL PERSONNEL MEDEVAC'D**

**AVOID PEICEMEALING DEDICATED TRANS ASSETS OUT TO MANEUVER COs**

**STANDARDIZE SUPPORT TO ALL ATTACHMENTS - HAVE SOP SPT PKGS**

**HAVE A PLAN TO RESUPPLY SQD/PLTS W/ REPLACEMENTS SENT FWD**

**DRIVERS TRAINING PROGRAMS MUST INCLUDE SELF/LIKE RECOVERY**

**STAFF JOURNAL MAINTAINED**

**ROAD CLEARANCES REQUESTED FOR ALL CONVOYS**

**PARKING PLAN ESTABLISHED**

**CASUALTY LOG ESTABLISHED & MAINTAINED (USE TACCS)**

**A/L ESTABLISHED AS NCS. NET DISCIPLINE ENFORCED**

**FIELD SANITATION/TRASH DISCIPLINE/DISPOSAL PLAN**

**PREWRITTEN ORDER FORMATS FOR ADVON/QTR PARTY/CONVOYS**

**CSS COORD W/ FWD/ADJACENT/REARWARD/INTERNAL UNITS**

**MP MISSIONS PRIORITIZED**

**CSS FOCUSED ON MAIN EFFORT**

**MAXIMIZE AIR RESUPPLY**

**RACO: BOS PLAN (FIRE SPT/ADA SPT/REACTION FORCE/ENGINEER PLAN)**

**S1 MUST HAVE DETAILED CMO PLAN: CLUSTER POINTS/EVAC PLAN/USE OF CA TEAMS/PLAN FOR HUMINT**

**ALL CONVOYS MUST BE BOS SYNCHRONIZED**

**ALL CP VEHICLES MUST CARRY CL IV AS PART OF THEIR BASIC LOAD**

**BN RPTS MUST MATCH BDE RPTS IN CONTENT & AS OF TIMES**

Class I	Subsistence
Class II	General Supplies and Equipment
Class III	POL
Class IV	Construction
Class V	Ammo
Class VI	Personal Demands
Class VII	Major End Items
Class VIII	Medical Material
Class IX	Repair Parts
Class X	Non Military Items

## GROUND EQUIPMENT RECORDS

SF 91	Operator Report on Motor Vehicle Accidents
DD 314	Preventive Maintenance Schedule and Record
DA 2401	Organizational Control Record for Equipment
DA 2404	Equipment Inspection & Maintenance Worksheet
DA 2405	Maintenance Request Register
DA 2407	Maintenance Request
DA 2408-4	Weapon Record Data
DA 2408-20	Oil Analysis Log



1. Request convoy clearance and SP time
2. Verify route security with S-3
3. Recon route from AA to SP
4. Conduct convoy brief
5. PMCS vehicles, top off, conduct commo checks
6. Rehearse actions on ambush and occupation of new AA
7. Link up with MP escort if available

## CONVOY BRIEF

1. Convoy route, speed, and interval between vehicles
2. Actions on ambush
3. Location of leaders within convoy
4. Issue map overlays or strip maps, ID checkpoints, RP
5. Identify air guards
6. Assumption of command if convoy splits
7. Enemy threat (NBC markings)
8. Rules of engagement
9. Civilian traffic on route
10. Priority of work upon arrival in new AA

**REQUEST CLEARANCE FROM S-3 PRIOR TO CROSSING  
LINE OF DEPARTURE. CALL IN ALL CHECKPOINTS.  
REHEARSE, REHEARSE, REHEARSE!**



# **COMMAND, CONTROL AND COMMUNICATIONS CHECKLIST**

111

**KEEP STAFF & SLICE TOGETHER UNTIL PLAN IS COMPLETE, S-4  
COMES TO TOC**

**RIGIDLY ENFORCE TIME SCHEDULE. MUST MAKE TIME FOR  
BACK BRIEFS & REHEARSALS**

**WARGAME CDR'S COA & DEVELOP DST & SYNCH MATRIX**

**BOS BRIEFBACK: MISSION, INTENT, INITIAL CONCEPT  
IMMEDIATELY AFTER OPORD**

**INTEGRATE C2 MEASURES, MANEUVER, OBSTACLES, AND FIRES  
IN DETAIL DURING REHEARSALS**

**USE OPSKEDS**

**DROP TO INTERNAL NETS IF UNITS DO NOT ANSWER**

**KEEP RADIO ON OLD FREQUENCY TO POLICE UP UNITS WHO DID  
NOT CHANGE**

**CROSS TALK BETWEEN COMPANY CDRS IS A PREREQUISITE FOR  
SUCCESS**

**KNOW ANTI-JAMMING CODEWORD & SOP**

**KNOW SOI, VINSON COMPROMISE CODEWORD & SOP**

**OPERATION ON O/I OR OTHER NET & CHANGE TO CMD FREQ 2  
HRS BEFORE MISSION EXECUTION IN CASE EN HAS LOCKED ONTO  
YOUR FREQUENCY**

**PRECOMBAT INSPECTION REQUIREMENTS IN OPORDS**

**HAVE "FILL IN THE BLANK" WARNING ORDERS, FRAGOS,  
OPORDS ON FILE**

**TAC ROE IN OPORD**

**FACE TO FACE COORD WITH LDRS, ADJACENT UNITS WHENEVER  
POSSIBLE**

**TOC DESTRUCTION SOP**

**MAKE ALOC MONITOR THE BATTLE: C2 REDUNDANCY**

# **CIVIL MILITARY OPERATIONS CENTER CHECKLIST**

112

**Screen, validate, and prioritize UN/PVO/NGO/IO military support request.**

**Act as intermediary, facilitator, and coordinator between JTF/TF elements and UN/PVO/NGO/IO.**

**Explain JTF/TF policies to UN/PVO/NGO/IO and conversely explain UN/PVO/NGO/IO policies to JTF/TF.**

**Screen and validate UN/PVO/NGO/IO requests for available passenger airlift space.**

**Administer and issue identification cards (for access into military-controlled areas).**

**Convene ad hoc mission planning groups when complex military support or numerous military units and POV/NGO/IO are involved.**

**Provide JTF/TF operations and general security information to UN/PVO/NGO/IO as required.**

**Facilitate or coordinate activities such as airlift and sealift to avoid duplication and inefficiency of efforts and to increase safety.**

**Assist in the creation and organization of food logistics systems when requested.**

**Provide liaison between JTF/TF and other humanitarian coordination groups or centers.**

**Exchange information.**



1. Check frequency setting
2. Check battery
3. Check antenna
4. Check ALL connections from battery to antenna
5. Check ALL power and positions switches
6. Replace CVC or handset
7. Check position for terrain mask
8. Check antenna top section; repair if needed

## **DEVELOP COMMO PLAN**

1. Conforms to format IAW FM 101-5
2. Supports the commo requirements of all specified and implied missions of the command
3. Is consistent with unit capabilities
4. Provides for maintenance support
5. Provides for interface with higher, lower, and adjacent units
6. Provides for COMSEC
7. Anticipates electronic warfare threat
8. Ensures that all signal/commo policies are followed as directed in SOI and OPLAN



# TOC OPERATIONS

Hard pressed on my right. My center is yielding. Impossible to maneuver. Situation excellent. I am attacking.

**Ferdinand Foch**

Battle of the Marne

## **RECEIVE INFORMATION**

- Receive Messages, Reports, and Orders from Subordinate Units and Higher Headquarters.
- Monitor Tactical Situation.
- Maintain a Journal of All Significant Activities and Reports.
- Maintain and Update Unit Locations and Activities.
- Maintain a Status of Critical Classes of Supplies.

## **DISTRIBUTE INFORMATION**

- Submit Reports to Higher Headquarters.
- Serve as a Communications Relay Between Units.
- Publish Orders and Instructions.
- Process and Distribute Information to Appropriate Units or Staff Sections.

## **ANALYZE INFORMATION**

- Consolidate Reports.
- Anticipate Events and Activities, Taking Appropriate Action as Required.
- Conduct Predictive Analysis Based on the Tactical Situation.
- Identify Information Relating to the Commander's Critical Information Requirements (CCIRs).
- Conduct the Tactical Decision Making Process.
- Identify the Need to Execute Contingency Plans Based on the Current Situation.

## **RECOMMEND**

- Submit Recommendations to the Commander Based on the Information Available and Analysis Conducted.

## **INTEGRATE RESOURCES**

- Coordinate the Integration of Combat Multipliers.

## **SYNCHRONIZE RESOURCES**

- Coordinate the Synchronization of Combat Multipliers.

**EXECUTIVE OFFICER**

- Supervising and Coordinating the Staff During the TDMP.
- Supervising the Analysis and Assessment of All Information and Submitting Recommendations to the Commander Accordingly.
- Supervising and Ensuring Proper Information Flow within the TOC.
- Anticipating and Synchronizing Operations from the TOC.

**BATTLE CAPTAIN**

- Supervising the Efforts of Staff NCOs within the S3 Section.
- Conducting Analysis and Assessment of Available Information.
- Assisting in the Review and Dissemination of Information within the TOC.
- Assisting in Monitoring the Location and Activities of Friendly Units.
- Serving as the TOC OIC During the Absence of Field Grade Officers.
- Assisting the S3 During the TDMP.

**OPERATIONS NCO/SHIFT NCO**

- Ensuring Reports and Messages are Distributed Properly.
- Updating Unit Statuses on Maps and Charts.
- Supervising the Publication of Orders and Graphics.
- Supervising the Setting Up and Dismantling of the TOC.
- Supervising All Enlisted Personnel Assigned to the S3 Section.
- Managing Guard Rosters, Sleep Plans, and Shift Schedules.
- Assisting in Developing and Wargaming COAs During the TDMP.
- Serving as a Recorder During the TDMP.

**RTO/CLERK**

- Monitoring the Radio.
- Receiving and Recording Reports.
- Updating Status Charts as Necessary.
- Assisting in the Publications of Orders and Graphics.
- Assisting in Setting Up and Dismantling the TOC.
- Serving as Recorders During the TDMP.
- Cleaning and Preparing Charts and Overlays for the TDMP.

- |                                 |                                     |
|---------------------------------|-------------------------------------|
| o Current Graphics Posted       | o Staff Journal Updated             |
| o Fire Support Overlay O/H      | o Map Symbols O/H                   |
| o CSS Overlay O/H               | o Freqs for CAS                     |
| o A2C2 Overlay O/H              | o Sector Sketch Posted              |
| o Large Grid Designators Posted | o Brief Sequence /Times Posted      |
| o Wind Direction Arrow          | o Pwr Gen Maint Posted              |
| o Map Posted w/                 | o Remotes Labeled                   |
| -All TOC/TAC Locations          | o Field Desks Restocked             |
| -Subordinate Units              | o Charts Standardized               |
| -BSA/DSA/CSA/MSR's              | o Wall Clocks Posted                |
| o S-2                           | o Weather Update Posted             |
| -Enemy Situation Template       | o Light Data Posted                 |
| -Enemy Arty Ranges              | o A/C Mission Chart                 |
| -Timelines                      | o Report Suspense Updated           |
| o Sync Matrix Posted            | o Commo Checks Completed            |
| o LD/LC/FLOT Posted             | o Key Personnel Sleep Plan/Location |
| o Bde Status Chart Updated      | o Classified Waste Destroyed        |
| o All OPORDERs O/H              | o TOC Clean Up Plan                 |
| o Current FRAGO O/H             | o Fresh Coffee O/H                  |
| o Current INSUM O/H             | o TA 3-12 Lines Checked             |
| o Threatcon Level Posted        | o Fax/MSRT/MCS/DNVT Up              |
| o Alert Warnings Posted         | o Briefing Tent Organized/Clean     |
| o MOPP Level Posted             | o TOC Cleaned up                    |
| o ADA Condition/Status Posted   | o Chow Times/Ration Cycle           |
| o Current CDM Posted            | o Weapon Accountability             |
| o Task Organization Posted      | o Correct Uniform In TOC            |
| o Cdr's Intent Posted           | o Vehicle PMCS Completed            |
| o Call Signs/Freq Verified      | o Keep It In Perspective            |

- o Inspect Fighting Positions
- o Enforce Sleep Plan
- o Coordinate LogPac/Resupply
- o Enforce Soldier Standards
  - PMCS Equipment
  - Hygiene
  - Correct Uniform
- o Enforce Noise/Light Discipline
- o SM/Equip Accountability
- o Coordinate Local Security
- o Post Locations of Key Units
- o Track BDA
- o Post Maint Status
- o Post Supply Status
- o Post Enemy Activities
- o Enforce TOC Rules
- o Rehearse Immediate Actions
- o Supervise Freq Changes
- o Coordinate Shift Change
- o Ensure Reports Are Submitted
- o Conduct TOC Site Recon
- o Conduct PCIs Prior to Movement
- o Distribute Strip Maps
- o Designate Fighting Positions
- o Ensure Convoy Security
- o Control TOC Access
- o Tie In Security With Units In AO
- o Lead JUMP TOC

- o Generators Sandbagged
- o Vehicles/Gen Refueled
- o Constant Area Improvement
- o KEEP THE BATTLE CAPTAIN OUT OF TROUBLE!**
- OPERATION PLANNING DUTIES**
- o Assist in COA Formulation
- o Prep Materials For Briefings
- o Assist In Briefings
- o Distribute OPORDS To Units
- o Publish Plans, Orders, And Reports
- o Develop Target List
- o Develop Obstacle Plan
- o Coordinate Rehearsals
- o Prepare Order Briefs
- o Coordinate Casualty Evacuation
- o Consolidate Orders Input
- o Establish Deception Plan
- o Plan Hasty Dislocation
- o Coordinate IPB
- o Maintain Publications
- o Monitor Computer/Disk Use
- o Oversee OPSEC In TOC
- o Control Map Board
- o Radios Operational & Manned
- o Fighting Positions Designated
- o TOC Duty Shifts Established
- o Prepare Area For Rehearsals

4 TOC SYSTEMS IN PLACE: RULES, REFERENCES & BACKGROUND DATA,  
STATUS BOARDS, TOC  
JOURNAL

TOC RULES: SHIFT CHANGEOVER BRIEFS, SHIFT HOT WASHES (LESSONS LEARNED  
PASSED TO NEXT SHIFT), OIC/NCOIC STAYS OFF RADIO AND LETS RTO DO HIS JOB, BN  
TRACKING, PLT LOCATIONS & CBT EFFECTIVENESS, TOC JUMP SOP, SOP FOR CHEM  
LIGHTS (NO GENERATOR), FIRE EXTINGUISHERS O/H/ DAILY CDR'S UPDATES, NO  
EATING, SMOKING, SLEEPING IN TOC

OPS, FIRE SPT, S2 MAP NEXT TO EACH OTHER

STANDARDIZED OVERLAYS WITH STANDARDIZED GRID REFERENCE MARKS

NCOIC/OIC/TOC SHIFT CHART (W/ DESIGNATED SLEEP PLAN & SLEEP LOCS)

FIELD FOOT LOCKER W/ SOP PACKING LIST POSTED AND UPDATED

LESSONS LEARNED CHART

FILL IN THE BLANK OPORDER FORMS ON HAND

WEAPONS LIMITATION AND BASIC DATA CHART FOR PLANNING

MEDEVAC PROCEDURES CHART POSTED ABOVE RTO'S DESK

FIRE ESCAPE PLAN

FORMS FILE

ALPHA ROSTER/BATTLE ROSTER/EQUIPMENT MATRIX CHART

RTO CHEAT SHEETS PREPARED AND UPDATED

FREQUENCY CHANGE OVER PLAN W/ ONE RADIO ON OLD FREQ TO POLICE UP NET

SOI COMPROMISE/ANTI-JAMMING SOP

NBC TEAMS IDENTIFIED, TRAINED, AND USING EQUIPMENT

DEFENSIVE SECTOR SKETCH WITH RANGE CARDS

AUTOMATIC WPNS ON HIGH SPEED AVENUES OF APPROACH

WEATHER POSTED & ANALYZED W/ FRIENDLY & EN EFFECTS OUT TO 72 HRS

LOCATIONS CHARTS ON HAND & UPDATED

MANDATORY REPORTS CHART ON HAND & UPDATED BY TOC OIC/NCOIC

COMMO STATUS CHART ON HAND & UPDATED BY SIGO

CONTINUITY BOOK ON HAND & UPDATED (TOC LAYOUT, LOAD PLANS, JOB DESCRIPTIONS, RECURRING ACTIONS)

ARTEP/MTP & OTHER REQ'D REFERENCE DATA ON HAND

COMBAT STATUS CHARTS ON HAND & UPDATED: EQUIPMENT, MISSIONS, MOS & PROJECTED SHORTFALLS/GAINS WITHIN 72 HRS, CBT EFFECTIVENESS CIRCLE CODE CHARTS (PERSONNEL/LOGISTICS/EQUIPMENT/COMMO)

TOC JOURNAL

- o 3 PART FOLDER: CURRENT LOG, JT MESSAGE FORM, PAST JOURNAL LOG
- o UPDATED & CORRECTLY COMPLETED BY NCO
- o MSG FROM (DD173) INITIALED BY TOC OIC TO INDICATE ACTION WAS CORRECT, INFO POSTED & DISTRIBUTED BY PERSONNEL
- o ACTION TAKEN - **NEVER USE THE WORD LOGGED!**

PASSIVE AIR DEFENSE MEASURES (CAMO, LIGHT DISCIPLINE, OPSEC)

RADIOS TURNED DOWN, EVERYONE TALKS IN LOW VOICE

TOC REACTION DRILLS

- o ARTY ATTACK
- o AIR ATTACK
- o NBC ATTACK
- o ENEMY ATTACK
- o CASEVAC



1. Insure all commo is operational to include fax. Have SIGO update commo status chart
2. Work with the Ops SGM to establish TOC shifts - fill in the charts, estab sleep plan, know where everyone is sleeping, nigh shift recons sleeping areas to find key pax if necessary.
3. Monitor reports hourly.
4. Insure TOC shifts are organized as follows: Current ops, future ops, SLICE OIC, and TOC NCOIC.
5. Current Ops should consist of TOC Officer, TOC NCOIC, FSO, S2 Officer, Slice
  - (1) Update current Ops maps (map NCO)
  - (2) Update Intel map (S-2)
  - (3) Update FSO and Engineer map (FSO & Engineer)
6. NCOIC: Handles all message traffic, run TOC log, insure all RTO's are monitoring all nets, supervise map NCOs, insure reports are timely, all charts updated, area kept clean, develop sleep plan for shifts, coordinates with HHC Cdr for TOC security to include OPSEC, TOC battle drills, and TOC reaction force.
7. SLICE OIC: Backbrief TOC officer on current status of special staff, as required
8. FUTURE OPS OFFICER: Insure a planning map is updated and planning area is kept neat and orderly. Immediately begin to build shell orders based on assumptions for future ops.
9. TOC officer is the orchestrate, not the worker bee. Should be seated in the ops center. Has following people report to him: SLICE, NCOIC, S2, and future ops officer. NOTE: The TOC officer is not an RTO. He lets the RTO's do the talking, with the OPS SGM supervising the RTO's.
10. TOC officer must learn and execute the commander's intent.
11. Overlays must be standardized.
12. Make sure the SIGO has the multichannel phonebook acetated and posted and the RTO cheat sheets are updated. This includes instructions for MEDEVAC, to include call sign and frequency.
13. Monitor battery changes for the remotes. Insure DTG of batter change is logged on each radio.
14. TOC officer should personally draft the CDR's SITREP and have it approved by the XO, S3, or Commander.
15. TOC officer insures the engineer overlay and the FS overlay are integrated.
16. TOC officer insure NCOIC wakes everyone who is involved in the CDR's daily staff briefs.
17. TOC OIC personally reads all message traffic, insures correct action is taken, and initials the message form indicating he has done this.

# **BATTLE CAPTAIN RUCK PACKING LIST<sup>122</sup>**

Medical Operations Handbook

Alcohol Markers

Alcohol Wipes

Grease Pencils

Pens/Mechanical Pencils

Notebook

Required Maps

Map Protractor

Compass

GPS

Computer with CD Drive

Selected FMs on CD

Digital Camera

Satellite Phone

Short-wave Radio

Mini-Mag Flashlight

Additional AAA Batteries

550 Cord

100mph Tape

VS-17 Panel

Strobe Light

Signal Mirror

Chem Lights

Waterproof Matches

Water Purification System

MRE

Extra Socks

Work Gloves

Hygiene Kit

Passports (Official/Tourist)

Yellow Shot Record

Host Country Phrase Book

## **INDIRECT FIRE ATTACK**

***SIGNAL: "INCOMING!"***

- STEP 1 - Mask (if chemical rounds are indicated)
- STEP 2 - Assume a prone position and get under cover
- STEP 3 - Disperse
- STEP 4 - Seek cover in established survivability positions
- STEP 5 - Report/Treat/Evacuate Casualties
- STEP 6 - Remain under cover until given all clear

## **AIR ATTACK**

***SIGNAL: "DYNAMITE, DYNAMITE, DYNAMITE"***

- STEP 1 - Clear tents and vehicles, move to survivability positions
- STEP 2 - Man fighting positions
- STEP 3 - Return massed fire if aircraft is firing at hospital
- STEP 4 - Report/Treat/Evacuate Casualties
- STEP 5 - Report battle damage to S-4/Redistribute ammo

## **CIVILIAN ON BATTLEFIELD**

***SIGNAL: "VERBAL ALERT"***

- STEP 1 - Take positive control of persons, check ID card, verify with S-2
- STEP 2 - Detain (blindfold/flexicuff if hostile), keep outside of wire
- STEP 3 - Notify the TOC
- STEP 4 - Guard until QRF/TOC personnel arrive
- STEP 5 - Do not discuss anything with persons
- STEP 6 - TOC personnel take control, notify higher S-2 and local authorities

## **GROUND ATTACK**

***SIGNAL: "CIRCLE THE WAGONS"***

- STEP 1 - All personnel man fighting positions
- STEP 2 - Positively identify enemy
- STEP 3 - Engage IAW Rules of Engagement
- STEP 4 - Report/Treat/Evacuate Casualties
- STEP 5 - Remain in positions until given all clear

## **CHEMICAL ATTACK**

***SIGNAL: "VERBAL, M8, HAND SIGNALS"***

- STEP 1 - Mask
- STEP 2 - Go to MOPP4
- STEP 3 - NBC NCO sends NBC1 report to higher
- STEP 4 - Detect contamination, determine type of agent, mark area
- STEP 5 - Conduct hasty decon following determined priority
- STEP 6 - Conduct MOPP gear exchange as needed
- STEP 7 - Unmask only when directed by appropriate authority

## **SNIPER**

***SIGNAL: "SNIPER!"***

- STEP 1 - Take cover
- STEP 2 - Report to TOC on CMD Net (provide direction of fire)
- STEP 3 - Return fire IAW Rules of Engagement
- STEP 4 - Remain under cover until all clear given

# GRAPHIC REFERENCES

Every man thinks meanly of himself for not having been a soldier.

**Samuel Johnson**

1. Complete prepare to fire weapons checks
2. Complete preoperations PMCS; resolve problems
3. Load vehicles/rucks per load plans
4. Clean/function check individual & crew served weapons
5. Top off vehicles
6. Stow basic load of Class I and V
7. Fill canteens, water & oil cans as needed
8. Index battlesights
9. Check radio freqs and operation
10. Check speech security equip
11. Check personnel; brief mission
12. Rehearse

## Crew Checklist

### PERSONNEL

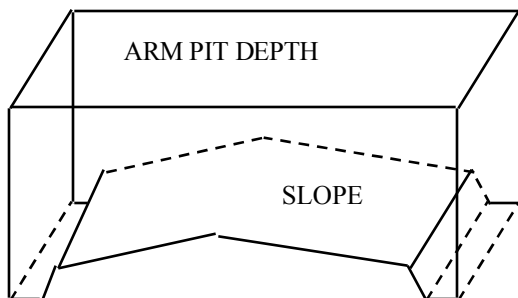
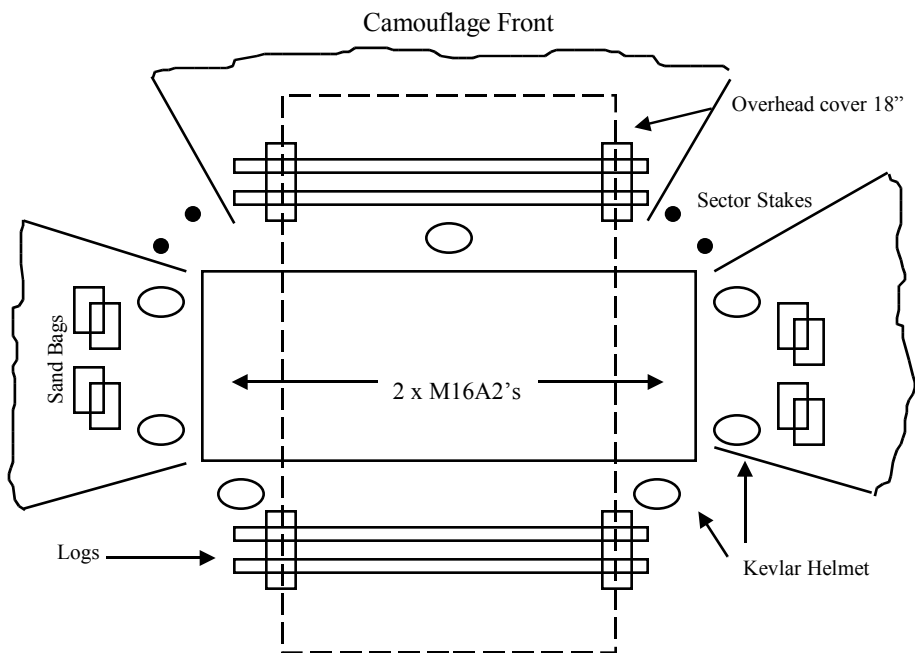
- o Soldiers briefed on mission, know checkpoints and rally points
- o Morale of section
- o Full staff O/H

### PERSONAL EQUIPMENT

- o Dog tags present and O/H
- o ID Card O/H, Geneva Convention Card O/H, Red Cross Armband
- o Proper field uniform
- o Weapons cleaned and secured, ammunition issued
- o SQD leader has listing of all serial numbers for weapons and sensitive items
- o NBC equipment O/H

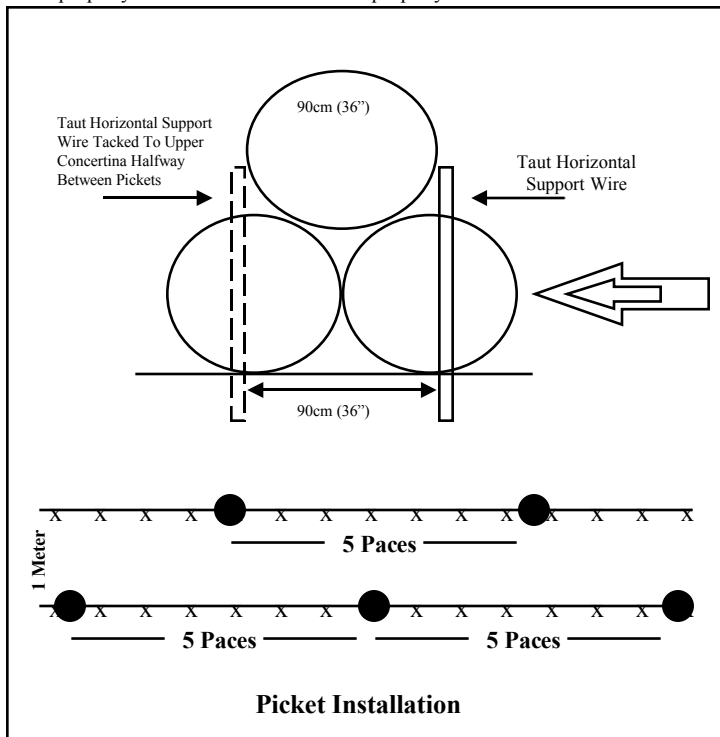
### INTELLIGENCE

- o All overlays/map updates O/H
- o All soldiers know sign/countersign
- o Soldiers have strip maps
- o Threat brief/rules of engagement brief received



GRENAD SUMP ONE  
E-TOOL WIDE AND DEEP

- Ensure job site security
- Organize work into three crews
- First crew lays pickets
- Second crew lays out wire. Place one roll on enemy side at every third picket and two rolls on enemy side at every third picket
- Third crew installs all pickets
- Reorganize party into four soldier crews
- Install wire
- Ensure wire is properly tied and all horizontal wire properly installed





# RANGE CARD

129

SQD \_\_\_\_\_  
PLT \_\_\_\_\_  
CO \_\_\_\_\_

May be used for all types of direct fire weapons

MAGNETIC  
NORTH

| | | | | | |

## DATA SECTION

Position Identification

Date

Weapon

Each Mark Equals \_\_\_\_\_ Meters

No.

Direction/  
Reflection

Elevation

Range

Ammo

Description

Remarks:

# SECTOR SKETCH

130


Magnetic  
North

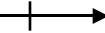


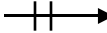
OUTPOST 


CHEM ALARM 


LIKELY AVE OF APPROACH 

M16 


M60 

M2 

M203   
M203

M19   
M19

TRIP WIRE 

FLARE  F

TRP 

ROAD BLOCK **XX**

DEAD SPACE/TREES



UNIT:

# RISK ASSESSMENT

131

Length	Routine	Complex LT/HVY/ABN	Dangerous Live Fire/Water/Halo
72 HRS	3	4	5
48 HRS	2	3	5
24 HRS	1	2	4

## UNIT EXPERIENCE - NATURE OF TASK

TASK	UNIT EXPERIENCE		
	Qualified & Experienced	Familiar, Not Experienced	Unfamiliar & Inexperienced
Dangerous	2	4	5
Complex	1	3	4
Routine	0	2	3

## Temperature vs. Conditions

TEMP	VISIBILITY/MOISTURE		
	GOOD Clear/Dry	DEGRADED Night/Haze/Drizzle	POOR Night/Rain/Snow/Ice
Very Cold	3	4	5
Moderate	0	2	3
Very Hot	4	2	3

## EQUIPMENT AGE VS CONDITION

AGE	Well Maintained	Poorly Maintained	Short Key Equipment
Old	2	4	4
Average	1	3	4
New	0	2	4

## C2 Relationship vs Mission

132

Unit Configuration	MISSION		
	Day	Night	Special Hazard
Ad Hoc	2	3	4
Attached Elements	1	2	3
Organic	0	1	2

## Leaders Rest vs Prep Time

Leaders Rest	Time for Mission Prep		
	Extensive	Adequate	Minimal
Less 4 Hrs	2	3	4
6 Hrs	1	2	3
8 Hrs	0	1	2

## Soldier Condition vs Terrain

Terrain	VISIBILITY/MOISTURE		
	GOOD 8 Hrs	ADEQUATE 6 Hrs	Minimal 3 Hrs
Dangerous	2	3	6
Challenging	1	2	4
Normal	0	1	8

## RISK ASSESSMENT

LOW		MODERATE		HIGH	
1	11	12	23	24	31

\*What are your risk reduction actions?

\*Cdr must approve **HIGH** risk operations.

# AIRCRAFT INFORMATION<sup>133</sup>

## **C-130**

### **Usable Dimensions:**

102" High  
115" Wide w/out dual rails  
105" Wide w/ dual rails

### **Axle Limitations:**

Station 257-337 = 6,000lbs  
Station 682-742 = 6,000lbs  
Station 337-683 = 13,000lbs  
Ramp = 3,500lbs single axle or 2,500lbs each axle

### **Aisleway:**

Pallets 3 - 4 = over 36" requires 6" aisleway  
Pallet 6 = 18" aisleway

**Planning ACL** = 25,000lbs

### **Pallet Limitations:**

Pallet 1: 10,355lbs @ 76"  
Pallet 2-4: 10,355 @ 96"  
Pallet 5: 8,500lbs @ 96"  
Pallet 6: 4,664lbs @ 76"

### **Pax:**

90 Maximum/74 Over Water  
Cargo widths up to 76" allows pax on both sides of aircraft  
Cargo widths 76"-96" allows pax on one side of aircraft  
Cargo widths over 96" allows no pax on either side of aircraft

**Runway Requirements:** 3,000 ft

**Range:** 2,356 miles

**Crew:** 5

# AIRCRAFT INFORMATION<sup>134</sup>

## C-5

### **Usable Dimensions:**

Front: 150" High  
Front: 144" Wide  
Aft: 106" High  
Aft: 214" Wide

### **Axle Limitations:**

Station 517-724 = 20,000lbs in any 40" length  
Station 1884-1971 = 20,000lbs in any 40" length  
Station 724-1458 = 36,000lbs in any 40" length  
Station 1458-1884 = 36,000lbs in any 40" length  
Station 1458-1518 = 25,000lbs per axle  
Ramp = 3,600lbs in any 20" length

### **Aisleway:**

Pallets 1,2, 35, & 36 requires 14" aisleway

**Planning ACL** = 130,000lbs

### **Pallet Limitations:**

Pallet 1-2: 7,500lbs @ 96"  
Pallet 3-34: 10,355 @ 96"  
Pallet 35-36: 7,500lbs @ 70"

### **Pax:**

73 permanent seats, 267 Airbus for total of 340 pax

**Runway Requirements:** 5,000 ft

**Range:** 3,434 miles

**Crew:** 5+

# AIRCRAFT INFORMATION<sup>135</sup>

## C-141

### **Usable Dimensions:**

103" High

117" Wide

### **Axle Limitations:**

Station 322-678 = 10,000lbs

Station 682-742 = 10,000lbs

Station 678-998 = 20,000lbs

Ramp = 7,500lbs single axle or 5,000lbs per individual wheel

**Aisleway:** None

**Planning ACL** = 90,000lbs

### **Pallet Limitations:**

Pallet 1: 10,355lbs @ 76"

Pallet 2 - 12: 10,355lbs @ 96"

Pallet 13: 7,500lbs @ 76"

### **Pax:**

200 Maximum, 153 Over Water

Cargo widths up to 80" allows pax on both sides

Cargo widths 80"-96" allows pax on one side only

Cargo widths over 96" allows no pax on either side

**Runway Requirements:** 5,000 ft

**Range:** 2,800 miles

**Crew:** 4

# AIRCRAFT INFORMATION<sup>136</sup>

## C-17

### **Usable Dimensions:**

142" High

210" Wide

### **Axle Limitations:**

Station 347-577 = 27,000lbs

Station 1037-1165 = 27,000lbs

Station 577-1037 = 36,000lbs

Ramp = 27,000lbs

**Aisleway:** None

**Planning ACL** = 90,000lbs

### **Pallet Limitations:**

All pallets: 10,355lbs at 96"

### **Pax:**

112 Maximum, 102 Over Water

**Runway Requirements:** 3,000 ft

**Range:** 2,760 miles

**Crew:** 3



# CONVERSIONS

137

<u>To Convert</u>	<u>Multiply by</u>	<u>Equals</u>
<b>Velocity</b>		
Km/hr to MPH	0.62137	MPH
Km/hr to Knotts	0.539957	Knotts
MPH to KM/hr	1.60934	Km/hr
MPH to Knotts	0.868976	Knotts
Knotts to MPH	1.15078	MPH
Knotts to KM/hr	1.852	KM/hr
<b>Area</b>		
Acre to Hectare	0.404687	Hectares (ha)
Acre to Sq Ft	43560.2	Sq Ft (ft <sup>2</sup> )
Acre to Sq KM	0.00404687	Sq Km (km <sup>2</sup> )
Acre to Sq Meters	4046.87	Sq M (m <sup>2</sup> )
Acre to Sq Mile	0.00156251	Sq Mi (mi <sup>2</sup> )
Sq Km to Hectare	100	Hectares (ha)
Sq Mile to Hectares	258.9988	Hectares (ha)
Sq Ft to Hectares	9.290304E-06	Hectares (ha)
Hectares to Acres	2.4710437	Acres (a)
Hectares to Sq Km	0.01	Sq Km (km <sup>2</sup> )
Hectares to Sq Mi	0.003861022	Sq Mi (mi <sup>2</sup> )
Sq Ft to Acre	2.29567 E-005	Acres (a)
Sq Km to Acre	247.104	Acres (a)
Sq Meters to Acre	0.000247104	Acres (a)
Sq Mi to Acre	639.997	Acres (a)
Sq Ft to Sq Meters	0.092903	Sq M (m <sup>2</sup> )
Sq Meter to Sq Ft	10.7639	Sq Ft (ft <sup>2</sup> )

<u>To Convert</u>	<u>Multiply by</u>	<u>Equals</u>
<b>Length</b>		
Foot to Km	0.0003048	Km
Foot to Meter	0.3048	Meter
Foot to Mile (statute)	0.00018939	Miles (mi)
Foot to Mile (nautical)	0.00016458	Miles (nmi)
Mile (mi) to Foot	5280	Foot
Mile (mi) to Meter	1609.35	Meters
Mile (mi) to Km	1.60935	Km
Mile (nmi) to Foot	6076.12	Foot
Mile (nmi) to Meter	1852	Meters
Mile (nmi) to Km	1.852	Km
Km to Foot	3280.84	Foot
Km to Mile (statue)	0.62137	Miles (mi)
Km to Mile (nautical)	0.539957	Miles (nmi)
<b>Volume</b>		
Gallons (US) to Liters	3.78541	Liters
Gallons (US) to Pints	8	Pints
Gallons (US) to Quarts	4	Quarts
Gallons (US) to Ounces	128.002	Ounces
Liters to Gallons (US)	0.264172	Gallons
Liters to Pints	2.11338	Pints
Liters to Quarts	1.05669	Quarts
Quarts to Liters	0.946353	Liters
Pints to Liters	0.473177	Liters
Ounce to Liters	0.029573	Liters
Ounce to Quarts	0.0312495	Quarts
Ounce to Gallons	0.00781237	Gallons

# **Key References:**

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Center for Army Lessons Learned

AMEDD Lessons Learned Division