

Medical Operations Handbook



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NOVEMBER 2001

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.

I would like to thank the following individuals for their support in putting this book together:

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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.

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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

I
ECHELON

Self/Buddy Aid

Combat Lifesaver

Combat Medic

Bn Aid Station

Self/Buddy Aid

II
ECHELON

FSMC

ASMB

FST

Squadron Med Element/
Air Transportable Clinic

Air Transportable
Hospital

III
ECHELON

CSH

Contingency
Hospital

Air Transportable
Hospital

IV
ECHELON

Field Hospital

General Hospital

Contingency
Hospital

V
ECHELON

Military Hospitals

Veterans Hospitals

Civilian Hospitals (NDMS)

Joint Echelons of Care in the Theater Combat Medical System

NAVY

Self/Buddy Aid

Navy Corpsman

Surface
Combatant Ships

Casualty Receiving
Treatment Ships

Bn Aid Station

Wing Support
Squadron Aid Station

Self/Buddy Aid

Navy Corpsman

Aircraft
Carriers

Casualty Receiving
Treatment Ships

Collecting &
Clearing Company

Surgical Support
Company

Combat Zone
Fleet Hospital

Hospital
Ship

Combat Zone
Fleet Hospital

Hospital
Ship

COMMZ Fleet
Hospital

OCONUS
MTF

COMMZ Fleet
Hospital

OCONUS
MTF

Military Hospitals

Veterans Hospitals

Civilian Hospitals (NDMS)

ECHELON
I

ECHELON
II

ECHELON
III

ECHELON
IV

ECHELON
V

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

Conformity with the combatant commander's plan.

MOBILITY

Mobility comparable to supported units.

RESPONSIVENESS

Speed with which medical treatment is initiated.

CONTINUITY

Continuous, uninterrupted care to the supported units.

COORDINATION

Efficient employment and effective use to support the planned operation.

FLEXIBILITY

Ability to redistribute or relocate HSS assets to support shifts in tactical ops.

MEDICAL BATTLEFIELD OPERATING SYSTEMS

Command Control & 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 COMMAND

12

PERSONNEL	149
MOBILITY	20% on Single Lift
BOA	One Per Theater
Components	Medical Brigade; Med Bn Log (Rear); TAML; TMMC, Dental Bn

MISSION: Provide command, control, administrative assistance, technical supervision, and consultation services for assigned and attached units in the theater of operations. Maintains 24 hour sustained operations as necessary, to conduct dual based operations.

CAPABILITIES:

1. Command and Control of units providing HSS in theater of operations.
2. Task organization for all theater of operations medical assets to meet the patient work load.
3. Advice to senior commanders on the medical aspect of operations.
4. Command, control, staff planning, supervision of operations, and administration of assigned/attached units.
5. Medical regulating and evacuation scheduling for the patient movement to and between assigned MTFs, to include coordination between Echelon III MROs and the theater JMRO.
6. Consultation services and technical advice in PrevMed, Environmental Health, Medical Entomology, Radiological Health, Sanitary Engineering, Nursing, Dentistry, Veterinary Services, Social Work, Surgery, Dietetics, Optometry, Pharmacy, Epidemiology, and Neuropsychiatry to supported units.
7. Advise/assist in facility site selection and preparation.
8. Unit level maintenance (vehicles/commo/weapons/Pwr Gen).
9. Food service personnel support.

MEDICAL BRIGADE

13

PERSONNEL	102
MOBILITY	Corps – 35%, COMMZ – 20% In Single Lift
BOA	Corps – One Per Corps; COMMZ – One Per 3 to 7 Corps Medical Units
Components	CZ – Vet, Med Gp, Med Bn Log (FWD), Med Co (CSC), ASMB, CSH, MASH, EVAC Bn, Dent Bn, PM Dets, Specialty Tms CMMZ – ASMB, CSH, EVAC Bn, Med Dets

MISSION: Provide command, control, administrative assistance, and technical supervision of assigned and attached medical units. Maintains 24 hour sustained operations as necessary, to conduct dual based operations

CAPABILITIES:

1. Command and control of all medical units in its area of operations.
2. Task organization of medical assets to meet the patient work load demands.
3. Advice to senior leaders on the medical aspects of their operations.
4. Coordinating with MEDCOM and JMRO for medical regulating from Bde to supporting COMMZ MTFs or CONUS.
5. Advice and assistance in facility site selection and preparation.
6. Control and supervision of Class VIII supply/resupply movement.
7. Consultation services and technical advice in PrevMed, Environmental Health, Medical Entomology, Radiological Health, Sanitary Engineering, Nursing, Dentistry, Veterinary Services, Social Work, Epidemiology, and Neuropsychiatry to supported units.

COMBAT SUPPORT HOSPITAL 14

PERSONNEL	606
MOBILITY	15% (without patients)
BOA	100% of Projected Beds in Combat Zone
COMPONENTS	1 x Hospital Unit Base 1 x Hospital Unit Surgical

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

CAPACITY: 296 Beds

Type of Ward	#	Beds
Intensive Nursing Care	8	96
Intermediate Nursing Care	7	140
Neuro-Psych Care	1	20
Minimal Care	1	40

SURGICAL CAPABILITIES:

MODULE	OR Tables	Surg Hrs Per Day
HUB	4	48
HUS	4	95

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

MRI CSH

15

PERSONNEL	520 at Corps 461 at EAC
MOBILITY	84 Bed Piece – 35% 164 Bed Piece – 0%
BOA	75% Corps Bed Reqs/50% EAC Bed Reqs
COMPONENTS	84 Bed Med Company & 164 Bed Med Company

MISSION: Provide hospitalization and outpatient services for all classes of patients within the theater.

CAPACITY: 248 Beds

Type	84 Bed	164 Bed
ICU Beds	24	24
ICW Beds	60	140
OR Tables	2	4

CAPABILITIES: Emergency treatment to receive, triage, and resuscitate casualties; command & control; consultation services for inpatients and outpatients; pharmacy; psychiatry; community health services; clinical lab; blood banking; radiology; physical therapy; nutrition care services; medical administrative and logistical services. *No Laundry Services.*

EARLY ENTRY MODULE: 32 bed first echelon deployable slice.

Beds	12 Intensive Care and 20 Intermediate Care
OR Tables	2 x OR Tables, 12 Surgical Cases Per Day
Components	CMS, Lab, 100 Unit Blood Bank, Radiology, Pharmacy, UMT
Support	3 DOS, Organic Transportation (20 x 5 Tons/2 x HMMWV)
Site Requirements	2.6 Acres
BOA	One Per Division (-) in SSC/Light Combat Operations
Lift Requirements	11 x C-130 and 6 x C-17 Aircraft for Single Lift

AMEDD SPECIALTY TEAMS

16

TEAM	MISSION
Head & Neck	<p>Provide ear, nose, and throat surgery, neurosurgery, and eye surgery augmentation in support of theater hospitals, and consultant services as required.</p> <p>CAPABILITIES:</p> <ol style="list-style-type: none">1. Initial and secondary ear, nose, throat, neurosurgery, and eye surgery and consultation2. Augmentation of the hospital or surgical and nursing services
Special Care	<p>Augment MTFs with the necessary health personnel and equipment to provide CHS to other military operations.</p> <p>CAPABILITIES:</p> <ol style="list-style-type: none">1. Pediatric inpatient, consultation, and nurse practitioner services2. OB/GYN and specialty nursing services3. Preventive Medicine services4. Community Health services5. MES-Humanitarian Augmentation to support civilian populace
Pathology	<p>Provide pathology augmentation in support of theater hospitals and consultant services as required.</p> <p>CAPABILITIES:</p> <ol style="list-style-type: none">1. Provide theater hospitals with additional and enhanced pathology capability2. Anatomic pathology (histology, cytology, and postmortem examination)3. Enhanced chemistry (toxicology, immunochemistry, and therapeutic drug monitoring)4. Enhanced microbiology

HOSPITAL MEDICAL TEAMS

Infectious Disease	<p>Provide medical augmentation to Corps and EAC hospitals</p> <p>CAPABILITIES:</p> <p>Infectious disease investigative and consultative services</p>
Renal Hemodialysis	<p>Provide medical augmentation to Corps and EAC hospitals</p> <p>CAPABILITIES:</p> <p>Care for patients with acute renal failure and consultation services (area support)</p>
Medical Augmentation Tms	<p>120 Minimal Care Beds; Rehabilitative and reconditioning for RTD Patients; Physical and Occupational Therapy; Nursing Augmentation</p>

FIELD HOSPITAL

17

PERSONNEL	428
MOBILITY	35% without Patients
BOA	Two Per Division
COMPONENTS	1 x Hospital Unit Base (HUB) 1 x Hospital Unit Holding (HUH)

MISSION: Provide 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

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

SURGICAL CAPABILITIES:

Module	OR Tables	Surg Hrs Per Day
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 HOSPITAL¹⁸

PERSONNEL	131
MOBILITY	100%without Patients
BOA	Two Per Corps
COMPONENTS	1 x Hospital Unit Surgical Main (HUSM) 1 x 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

Type of Ward	# of Beds
HUSM (Acute Nursing Care)	20
HUSF (Acute Nursing Care)	10

SURGICAL CAPABILITIES:

Module	OR Tables	Surg Hrs Per Day
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)

PERSONNEL	47
MOBILITY	80%
BOA	One Per Every 3 to 7 Evac Companies
COMPONENTS	3 x Air Ambulance Companies (15 x UH-60 1 x Ground Ambulance Company (40 x M997)

MISSION: Provide 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)

PERSONNEL	117
MOBILITY	85%
BOA	One Per Division Supported in Combat Zone
COMPONENTS	HQ 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) ²¹

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 ²²

PERSONNEL	345
MOBILITY	100%
BOA	.018 per 1,000 Non Divisional Troops
COMPONENTS	HHC 4 x Area Support Medical Companies

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)

23

PERSONNEL	59
MOBILITY	50%
BOA	One Unit Per Every 20,000 Troops Supported
ASSIGNED TO	Medical Battalion (DS) or Medical Cmd/Bde

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)

24

PERSONNEL	48
MOBILITY	100%
BOA	One Unit Per Every 70,000 Troops in Combat Zone
ASSIGNED TO	Medical Command or Medical Brigade

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)

25

PERSONNEL	11
MOBILITY	100%
BOA	One Unit Per Every 22,500 Troops Supported
ASSIGNED TO	Medical Command or Medical Brigade

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)

26

PERSONNEL	25
MOBILITY	100%
BOA	One Unit Per Division
ASSIGNED TO	Medical Command or Medical Brigade

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

27

PERSONNEL	20
MOBILITY	100%
BOA	One Per Maneuver Brigade/ACR
ASSIGNED TO	Division or Medical Command or Medical Brigade

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) ²⁸

PERSONNEL	226
MOBILITY	HHD 63%, Log Spt Co 53%, Distr Co 88%, Med Det 75%
BOA	One Per Corps or Three Division Sized Elements
ASSIGNED TO	Medical Command or 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.
2. 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.
3. 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.
4. 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

THEATER ARMY MEDICAL LAB (TAML)

29

PERSONNEL	75
MOBILITY	100%
BOA	One Per Theater
ASSIGNED TO	Medical Command

MISSION: Provide medical laboratory procedures and data for the evaluation of environmental issues, including health of soldiers within the theater of operations.

TAML CAPABILITIES:

1. Provide investigative biochemical and toxicological analyses; microbiological identification and characterization; serological testing related to disease diagnosis and prevention; analysis of food items suspected of contamination; detection and diagnosis of zoonotic diseases; entomological analysis and limited pesticide adequacy assessments; epidemiological analysis and evaluation of environmental and clinical samples for NBC contamination.
2. Deploy specialty teams forward into the Corps area to analyze chemical/biological agents to assist in development of definitive treatment protocols and to assist Veterinary and PrevMed personnel in identifying NBC agents through the sampling of food, water, and other environmental samples and animal specimens.

COMPONENTS:

HQ Section
Biochemistry Section
Anatomical Section
Microbiology Section
Veterinary Laboratory Section
Entomology Section
Epidemiology Section

MAIN SUPPORT MEDICAL COMPANY

PERSONNEL	114
MOBILITY	100%without Patients
BOA	One Per Division, Operates in DSA
COMPONENTS	Main 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 within 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 within 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)

BRIGADE SUPPORT MEDICAL COMPANY

PERSONNEL	90
MOBILITY	100%
BOA	One Per IBCT
ASSIGNED TO	Brigade Support Battalion

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

BSMC CAPABILITIES:

Level I Area Support to BSA Elements

- Advance Trauma Management
- Routine Primary Care (Sick Call)

Level II CHS to All Element of the Brigade

- Dental Services – Emergency and Maintenance
- Clinical Laboratory and Routine Blood Support
- Medical Logistics Services
- Enhanced Radiological Services – Digital Imaging
- Medical Force Protection
- Combat Stress Control – Intervention and Prevention
- Patient Holding Capability – 20 Cots

Forward Surgery – 30 Surgical Cases over 72 Hour Period

Telemedicine Reachback Capability

Integrated Evacuation

Reconstitute Forward

EQUIPMENT

6 x TRK, CGO, MTV

13 x TRK, UTIL, HMMWV

14 x TRK, AMB, HMMWV

4 x TRL, CGO, MTV

21 x TRL, CGO, HMMWV

1 x TRL, WATER, 400 GAL

BATTALION AID STATION

33

PERSONNEL	40
MOBILITY	100%
BOA	One 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

34

PERSONNEL	Mission Dependent
MOBILITY	100%35% without Patients
BOA	As Required by MEDCOM/RMC Commander
COMPONENTS	USA Medical Command or Regional Medical Commands

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/Biological/Chemical)
SMART-PC (Pastoral Care)
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)
SMART-AIT (Aeromedical Isolation)

USAF COMMAND AND CONTROL

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

USAF TRANSPORT TEAMS

36

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 (SPEARR)

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

EMEDS Basic

Personnel: 25 **Mobility:** 100%

Mission: Provides 24-hour sick call and emergency medical care, plus medical C2, preventive medicine, trauma resuscitation and stabilization, limited general and orthopedic surgery, critical care, primary care, aeromedical evacuation coordination, aerospace medicine, urgent care, dental care, and limited ancillary services.

Beds: 4 (Holding Only)

Scope of Care: 500 - 2000 population at risk.

Support Requirements: 6K Forklift, 3 x 463L Pallets, and 15,000ft², 1 x C130 for lift.

EMEDS + 10 AFTH

Personnel: 56 **Mobility:** 100%

Mission: Same as EMEDS Basic with addition of 10 inpatient beds, resulting in increased capacity and diagnostic capability. Fully operational within 24 hours of arrival on scene.

Scope of Care: 2000 - 3000 population at risk.

Beds: 10

Support Requirements: 13K Forklift, 13 x 463L Pallets, 1 x flatbed truck, and 26,000ft², 1 x C17.

EMEDS + 25 AFTH

Personnel: 86 **Mobility:** 100%

Mission: Same as EMEDS Basic with addition of 25 inpatient beds, resulting in increased capacity and diagnostic capability. Fully operational within 24 hours of arrival on scene.

Scope of Care: 3000 - 5000 population at risk.

Beds: 25

Support Requirements: 13K Forklift, 26 x 463L Pallets, 1 x flatbed truck, and 40,000ft², 1 x C17.

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.
- Personnel:** 40 PAX/50 Beds; 25 Bed/16 PAX Increments to 250 Beds.

CAPABILITIES:

1. 50 to 250 bed holding facility (No Overnight).
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.
- Mission:** Tactical Aeromedical Evacuation.
- Personnel:** 11 PAX/25 Beds; 18 PAX/50 Bed

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 AIR TRANSPORTABLE ASSETS

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/400xIntCare/500xMin Care

Personnel:

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

Inventory: 2*

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

West Coast:

East Coast:

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

Amphibious Assault Ships

	LHA	LHD	LPH	LCC
ORs	4	4	1 Major 1 Minor	1 Minor
ICU Beds	15	15	2-3	
Ward Beds	45	45	14	20
Overflow Beds	360	540	180	
Ancillary Support	Lab, X-ray, Blood	Lab, X-ray, Pharm, Blood		

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, 1xOphthamologist, 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

USMC MEDICAL BATTALION

45

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:

OR Tables	9
Laboratories	6
X-ray	6
Pharmacy	6
Flow-Through Cots	260
Shock Trauma Platoons	8
Erect Time	6 Hours
Max Patient Holding Time	72 Hours

USMC DENTAL BATTALION

46

PERSONNEL	76 Officers/160 Enlisted
MOBILITY	100%
BOA	One Unit Per Force Service Support Group
ASSIGNED TO	1 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

WEAPONS OF MASS DESTRUCTION – CIVIL SUPPORT TEAMS

PERSONNEL	22
MOBILITY	100%
ASSIGNED TO	State National Guard

MISSION: Rapid response unit to respond to a terrorist attacks involving weapons of mass destruction, as well as other disasters and catastrophic events, both natural and manmade.

WMD-CST OPERATIONS:

1. Assess a suspected nuclear, biological, chemical, or radiological event in support of the local incident commanders.
2. Advise civilian responders regarding appropriate action.
3. Facilitate requests for assistance to expedite arrival of additional state and DoD assets to help save lives, prevent human suffering, and mitigate great property damage.

KEY EQUIPMENT:

1. HF/UHF/VHC/SATCOM Secure Communications
2. Secure Fax/Telecomputer/Printer Capability
3. Matilda Unmanned Ground Vehicle (Recon/Sampling)
4. Biosafety Level III Glovebox
5. Handheld Bioassays (10 BW agents in 15 minutes)
6. Olympus BX-40 Fluorescent Microscope
7. HAPSITE Gas Chromatograph and Mass Spectrometer (125k Volatile Organic Substances in 5 – 25 minutes)
8. Modeling Software

JOINT MEDICAL PLANNING CHECKLIST

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- WHO IS THE JOINT TASK FORCE SURGEON?
- WHAT IS THE JTF SURG'S REQUIREMENTS OF THE FOLLOWING?
 - JTF DEPUTY SURGEON
 - HEALTH SERVICE SUPPORT OPERATIONS
 - HEALTH SERVICE LOGISTICS TO INCLUDE JOINT BLOOD PROGRAM ADMINISTRATION
 - HEALTH SERVICES PLANNING
 - DUTY-HOUR COVERAGE
- 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

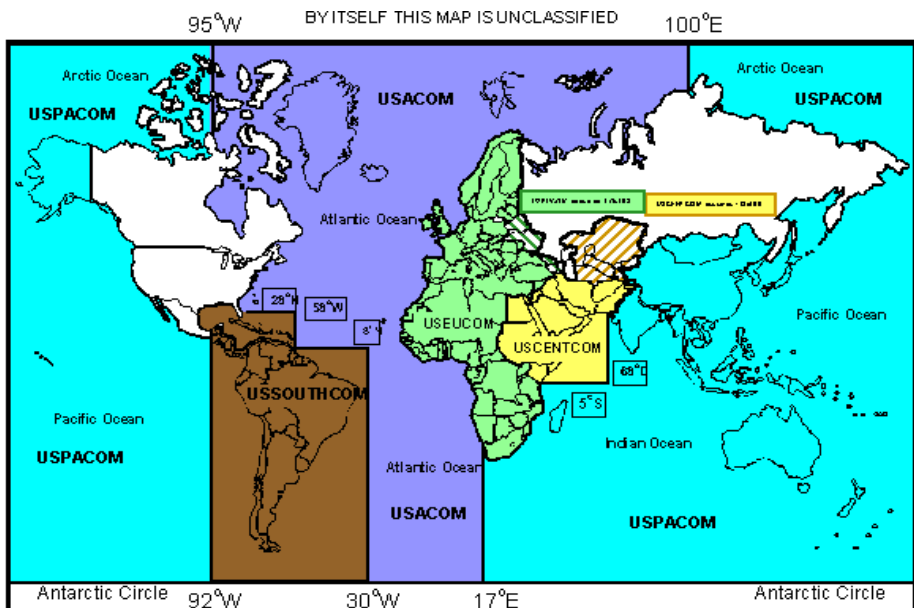
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- WHAT ARE THE INDIGENOUS/HOST NATION HSS CAPABILITIES?
- AS HSS UNITS ARE IDENTIFIED FOR DEPLOYMENT, ARE THE CRITICAL TRANSPORTATION COSTS SUCH AS THE NUMBER OF PASSENGERS, WEIGHT, CUBE, AND 463L PALLETS BEING IDENTIFIED AND COORDINATED WITH THE J4?
- 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 REVIEWED 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 ZOO NOTIC 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/CHEMOPROPHYLAXIS 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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CENTCOM

US Central Command, Tampa, Florida

PACOM

US Pacific Command, Smith Barracks, Hawaii

SOUTHCOM

US Southern Command, Miami, Florida

SOCOM

US Special Operations Command, McDill AFB, Florida

JFCOM

US Joint Forces Command, Norfolk, Virginia

EUCOM

US European Command, Stuttgart, Germany

TRANSCOM

US Transportation Command, Scott AFB, Indiana

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 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/tcsq.html>

Command Surgeon 618-256-3231 DSN: 576-XXXX

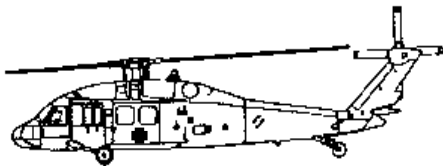
Deputy Surgeon 618-256-2895

Chief, Operations 618-256-2895

CASUALTY EVACUATION CHECKLIST

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- S1, MED CO CDR, MED PLT LDR PREPARE CASEVAC OPLAN THAT IS COORDINATED WITH CO XO/1SG'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 ADDT'L 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/1SG 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

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

EVACUATION FACTORS

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

EVACUATION CATEGORIES

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

LANDING SITE CRITERIA

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

Time Factors

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

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

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

Time Required

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

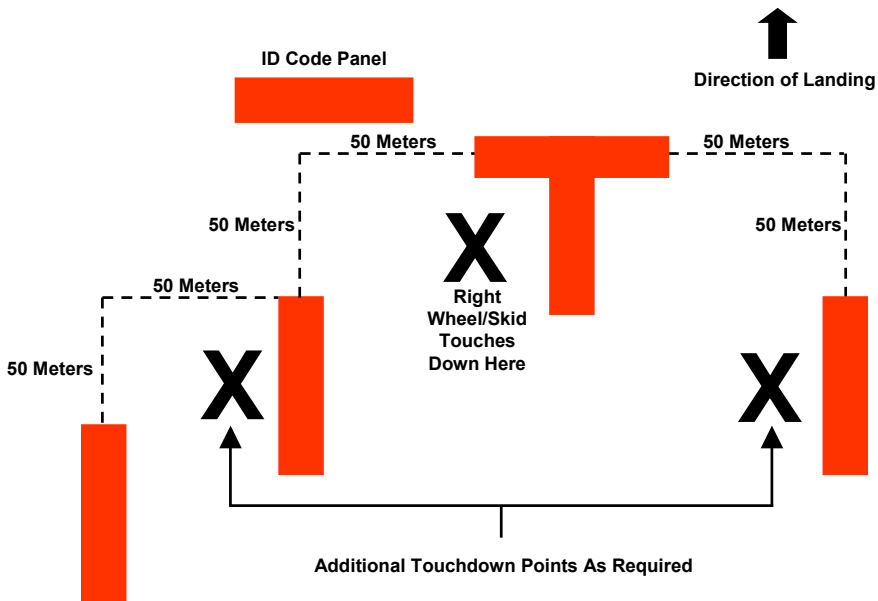
N = Total number of patients to be evacuated
 n = Number that can be transported in one load
 T = Total time
 t = Time required for one trip

Units Required

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

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

Field Expedient Landing Zone



EVACUATION CAPABILITIES

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USAF

Litter

Ambulatory

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

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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)

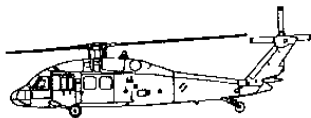
LINE 7 - Method of Marking Pick Up Site

- 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

JFCOM works through EUCOM, SOUTHCOM, or GPMRC

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

HEALTH SERVICE SUPPORT ESTIMATE

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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

- (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:

CLASSIFICATION

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

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 AFMIC Personnel (Photos, patient census, SITREPS, daily log)
- Conduct thorough AAR (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

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

SOF LEVELS OF HEALTH SERVICE SUPPORT

- 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)
- LEVEL II:
Special Forces: 18D, Physician
Ranger/SOCOM/SOAR: Limited aid station capabilities
SEAL: None
- LEVEL III and IV: None

SOF MEDICAL CONSIDERATIONS

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

SOF MEDICAL CHALLENGES

- PROVIDE CLASSIC FUNCTIONS AND QUALITY OF CONVENTIONAL CHS:

Without traditional pillars/levels of care

In regions of higher medical threat

In immature regions

In forward areas of operations

Under conditions of uncertainty

Without adequate build-up time

With existing theater resources

COMBAT HEALTH SUPPORT TO NONCOMBATANT EVACUATION OPS

- 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

- Where are the refugees originally from?
 - What is the size of the original population?
 - What is the size of the area and population that the village services in the surrounding countryside?
 - What is the size of the refugee population?
 - Why did they come here?
 - What is the relationship of the village with the surrounding villages?
 - Are they related?
 - Do they support each other?
 - Are they hostile towards each other?
 - Is any portion of the village population discriminated against?
- What is the food and water status of the village?
 - Where do they get their food?
 - What other means of subsistence is available?
 - Are the villagers farmers or herders?
 - What is the status of their crops/herds?
 - What is the quality of the water source?
- What is the medical status of the village?
 - What services are available in the village?
 - What is the location of the nearest medical facility?
 - Is there evidence of illness and/or starvation?
 - What portion of the population is affected?
 - What is the death rate?
 - What diseases are reported in the village?
- What civilian organization exist in the village?
 - Who are their leaders?
- What civil/military organizations exist in the village?

REFUGEE SUPPORT CHECKLIST

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- Who are their leaders?
- What organization/leadership element does general population support/trust most?
 - Which organization seems to have the most control in the village?
- What UN relief agencies operate in the village?
 - Who are their representatives?
 - What services do they provide?
 - What portion of the population do they service?
 - Do they have an outreach program for the surrounding countryside?
- What is the security situation in the village?
 - What element(s) is the source of the problems?
 - What types and quantities of weapons are in the village?
 - What are the locations of minefields?
- What commercial or business activities are present in the village?
 - What services or products do they produce?
- Determine the groups in the village that are in the most in need.
 - What are their numbers?
 - Where did they come from?
 - How long have they been there?
 - What are their specific needs?
- What civic employment projects would the village leaders like to see started?
- Determine the number of families in the village.
 - What are their names (family)?
 - How many in each family?
- What food items are available in the local market?
 - What are the cost of these items?
 - Are relief supplies being sold in the market?
 - If so, what items, what is their source, and what is the price?
- What skilled labor or services are available in the village (non HRA)?
- What is the size of any transient population in the village?
- Where did they come from and how long have they been there?

- 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

HOSPITAL LOGISTICS

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	MASH	CSH	FH	GH
Weight (stons)		933	687	931
Cube	61767	373576	167070	289279
Site in Sq Meters	11,570	32193	75810	72325
Transportation				
C17		21	16	21
C5	2	11	5	7
C141	9	15	14	29
Railcars	23	38	28	46
Trailers		138	118	168
Roll On/Roll Off		.176	.125	.168
Support				
Water Requirements	4130	24000	25400	33500
Water Storage (gal)	3400	16300	16700	16700
MOGAS	130	730	713	1124
Diesel	514	1384	997	1624
Petro Storage (gal)	1800	4200	4200	4200
Inf Waste (lbs/day)	90	888	1512	1428

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

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)	0 to 6° C or Colder	10 Years
FFP	-18° C or Colder	12 Months
PLATELETS	-10 to 24° C	5 Days

BLOOD PLANNING FACTORS

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Blood Planning Factors	WIA	DNBI	Burn
Packed Red Blood Cells	4 units	4 units	.04 units
Fresh Frozen Plasma	.8 units	.8 units	
Platelets	.04 units		
Crystalloid IV	3-4 liters	3-4 liters	

BLOOD TRANSPORTATION

Type	Weight	Cube	# of Units	# of Boxes	Internal	External
Collins Box	45	3.4ft	30			
463L Pallet	5280	360ft	3600	120		
UH-60					50 boxes	48 boxes
UH-1					30 boxes	40 boxes

BLOOD MIX (%)

Product	O	A	B	AB
Liquid RBC	100			
FZ Degyle RBC	50	40	10	
FFP	50	25		25
Platelets	50	50		

COMBAT LIFESAVER BAG PACKING LIST 73

NSN	NOMENCLATURE	QTY
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)

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

ESF 8 RESPONSIBILITIES

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

ESF 8 POINTS OF CONTACT

- Office of Emergency Preparedness 1-800-873-6367

OFFICE OF FOREIGN DISASTER ASSISTANCE ⁷⁵

DISASTER ASSISTANCE RESPONSE TEAM

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

DART Characteristics

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

OFDA STOCKPILE SYSTEM LOCATIONS

- Anderson AFB, Guam
- Soto Cano, Honduras
- Leghorn Army Depot, Italy
- New Windsor, Maryland
- Bangkok, Thailand
- 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

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

- Minimum maintenance = 15 - 20 liters/person/day
- Feeding center = 20 - 30 liters/person/day
- Health center = 40 - 60 liters/person/day
- 1 tap stand/200 people not > 100m from users
- 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

- Minimum shelter space = 3.5 m²/person
- Minimum total site area = 30 m²/person

MINIMUM SANITATION REQUIREMENTS

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

MEDICAL MOS

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

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 Suppy Specialist		P1	Orthopedic Specialty
AMEDD	91A	Medical Equipment Repairer		P2	Ear, nose and throat
AMEDD				P3	Eye
AMEDD				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

Humanitarian Assistance/Refugee Operations

www.usaid.gov

US Agency for International Development

www.ofda.gov

Office of Foreign Disaster Assistance

www.unhcr.ch

UN High Commission on Refugees

www.un.org

United Nations

www.who.int

World Health Organization

NGO/PVOs

www.redcross.org

American Red Cross

www.care.org

CARE Relief Agency

www.catholicrelief-crs.org

Catholic Relief Organization

www.uia.org

Union of International Associations

US Government Organizations

www.cia.gov

US Central Intelligence Agency

www.fema.gov

Federal Emergency Management Agency

www.cdc.gov

Centers for Disease Control and Prevention

www.oep-ndms.dhhs.gov

US Office of Emergency Preparedness

US Military Medical Organizations

www.armymedicine.army.mil

Army Surgeon General

www.cs.amedd.army.mil

AMEDD Center and School

www.navymedicine.navy.mil

Navy Surgeon General

www.nomi.navy.mil

Navy Operational Medicine Institute

www.afms.mil/sq

Air Force Surgeon General

www.nbc-med.org

Army Medical NBC

www.anthrax.osd.mil

Anthrax Vaccination Immunization Program

News Organizations

www.foxnews.com

FOX News Network

www.cnn.com

Cable News Network

www.msnbc.com

NBC News

www.bbc.co.uk

British Broadcasting Organization

www.weather.com

The Weather Channel

Medical Planning

www.vnh.org

Virtual Naval Hospital

www.geocities.com/CapitolHill/7533

Medical Planners Resource Center

www.s2company.com

S2 Planners Web Page

www.txdirect.net/users/jeturner/

The Well Diggers Workstation (PrevMed)

www.dmrti.army.mil

Defense Medical Readiness Training Institute

www.dtic.mil/jcs/j4/divisions/mrd

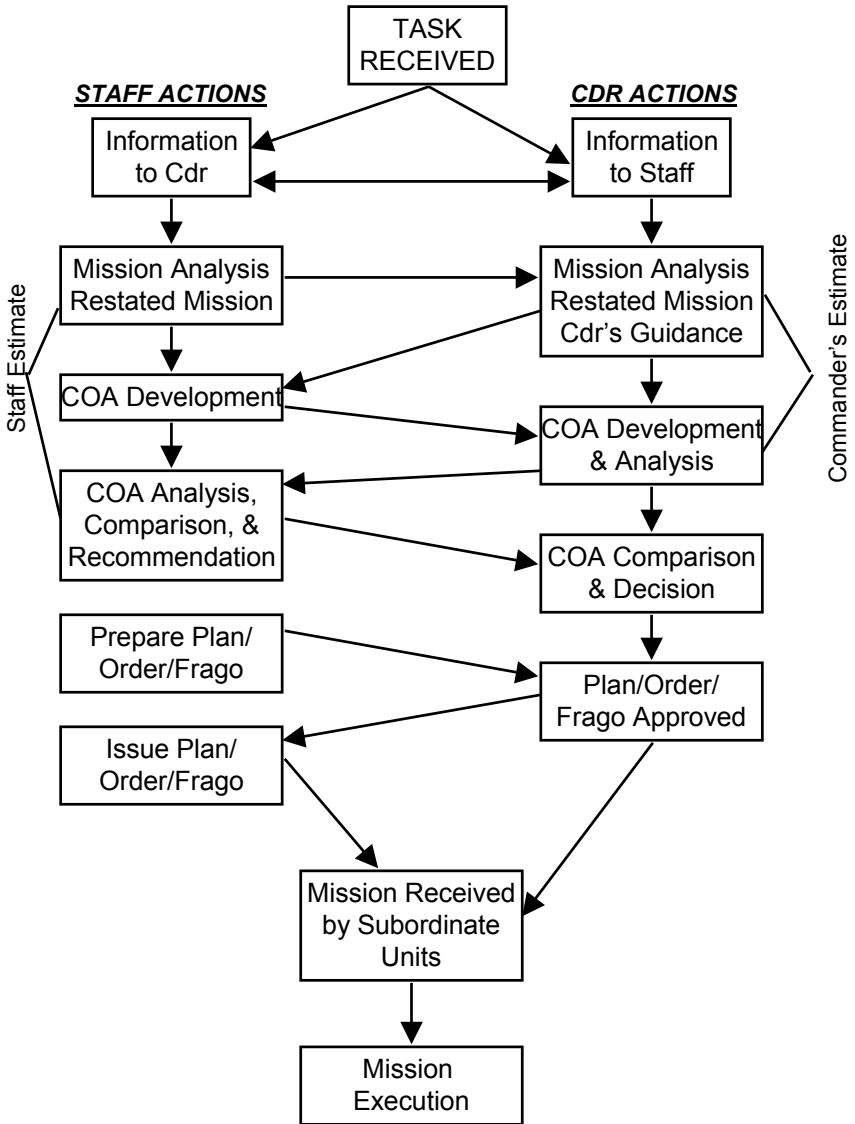
Joint Staff Medical Readiness Division

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.



Commander May Conduct Phases Independently or in Conjunction with Staff

Staff Coordination is Continual, Up and Down

RECEIPT OF MISSION
 ➤ Issue cdr's initial guidance

Warning Order

MISSION ANALYSIS
 ➤ Approve restated mission
 ➤ State commander's intent
 ➤ Issue cdr's guidance
 ➤ Approve CCIR

Warning Order

COA DEVELOPMENT

COA ANALYSYS (War Game)

COA COMPARISON

COA APPROVAL
 ➤ Approve COA
 ➤ Refine cdr's intent
 ➤ Specify type of rehearsal
 ➤ Specify type of order

Warning Order

ORDERS PRODUCTION
 ➤ Approve Order

REHEARSAL

EXECUTION & ASSESSMENT

Commander's Estimate
 (continual process)

Staff Estimates
 (continual process)

➤ **Commander's Responsibility**

MISSION ANALYSIS

<p style="text-align: center;">COMPONENT STEPS</p>	<ol style="list-style-type: none"> 1. Analyze higher order 2. IPB <ul style="list-style-type: none"> -Define Battlefield -Describe Battlefield Effects -Evaluate the Threat -Develop Threat COAs 3. Specified/Implied/Essential Tasks 4. Review Available Assets 5. Determine Constraints 6. Identify Critical Tasks and Assumptions 7. Conduct Risk Assessment 8. Determine Initial CCIR PIRs/EEFIs/FFIRs 9. Prepare Initial Recon Annex 10. Plan Use of Available Time 11. Write the Restated Mission 12. Mission Analysis Briefing 13. Restated Mission Approved 14. Commander's Intent 15. Commander's Guidance 16. Issue Warning Order 17. Review Facts and Assumptions
<p style="text-align: center;">BRIEFING FORMAT</p>	<ol style="list-style-type: none"> 1. Mission and Intent Two Levels Up 2. Mission, Intent, and Concept of Higher 3. Commander's Guidance 4. IPB Products 5. Specified/Implied/Essential Tasks 6. Constraints 7. Forces Available 8. Hazards and Their Risks 9. Recommended Initial CCIR 10. Recommended Timeline 11. Proposed Restated Mission
<p style="text-align: center;">PRODUCTS</p>	<ol style="list-style-type: none"> 1. SITEMP/Event Template 2. Restated Mission 3. Commander's Intent 4. Commander's Guidance <ul style="list-style-type: none"> -Friendly/Enemy COA -CCIR -Recon Guidance & Deception -CS/CSS Priorities 5. Warning Order <ul style="list-style-type: none"> -Mission, Intent, CCIR, Timeline, Movement -Priorities, OPORD, Rehearsal

COA DEVELOPMENT

<p>COMPONENT STEPS</p>	<ol style="list-style-type: none"> 1. Analyze Relative Combat Power 2. Generate Options <ul style="list-style-type: none"> -Suitable -Feasible -Acceptable -Distinguishable -Complete 3. Array Forces 4. Develop Scheme of Maneuver <ul style="list-style-type: none"> -Purpose -Risk -Critical Events -Purpose of Main Effort -Purpose of Supporting Effort -Purpose of Reserve -Deep, Close, Rear Battle -Responsibilities, Graphics 5. Assign Headquarters 6. Prepare COA Statement & Sketch
<p>BRIEFING FORMAT</p>	<ol style="list-style-type: none"> 1. IPB Update 2. SITEmps 3. Restated Mission 4. Mission & Intent Two Levels Up 5. COA Statements & Sketches 6. COA Rationale
<p>PRODUCTS</p>	<ol style="list-style-type: none"> 1. COA Statements & Sketches 2. SITEmps

COA ANALYSIS

<p>COMPONENT STEPS</p>	<ol style="list-style-type: none"> 1. Gather the Tools 2. List Friendly Forces 3. Assumptions 4. Critical Events & Decision Points 5. Evaluation Criteria 6. Select Wargame Method <ul style="list-style-type: none"> -Avenue -Belt -Box 7. Select Recording Method <ul style="list-style-type: none"> -Narrative -Sketch -Sync Matrix -Execution Checklist 8. Wargame 9. Assess Results
<p>BRIEFING FORMAT</p>	<ol style="list-style-type: none"> 1. Higher's Mission, Intent, & Deception 2. Updated IPB 3. COAs Wargamed 4. Assumptions 5. Techniques Used 6. For Each COA: <ul style="list-style-type: none"> -Critical Events -Actions/Reactions -Pros & Cons
<p>PRODUCTS</p>	<ol style="list-style-type: none"> 1. Refined/Detailed COA & Synch Matrix 2. Location & Timing of Combat Power at Decisive Point 3. Detailed Task Organization 4. Refined Event Template 5. CCIR & Collection Plan 6. Concepts for Fires, Engineer, & Support 7. Subordinate Tasks 8. Deception 9. Risk

COA COMPARISON

<p>COMPONENT STEPS</p>	<ol style="list-style-type: none"> 1. Post Criteria Matrix 2. Weight Criteria 3. Evaluate COA Strengths & Weaknesses 4. Consider Estimates <p>STAFF ESTIMATES</p> <ol style="list-style-type: none"> 1. Mission 2. Situation & Considerations 3. COA Analysis <ul style="list-style-type: none"> -Requirements -Capabilities -Shortfalls -Recommendations 4. Comparison 5. Conclusions & Recommendations
<p>BRIEFING FORMAT</p>	<ol style="list-style-type: none"> 1. Higher's Mission & Intent Two Levels Up 2. Restated Mission 3. Status of Forces 4. Updated IPB 5. Each COA <ul style="list-style-type: none"> -Assumptions -Effects on Staff Estimates -Advantages/Disadvantages -Risk 6. Recommended COA
<p>PRODUCTS</p>	<ol style="list-style-type: none"> 1. Complete Staff Estimates

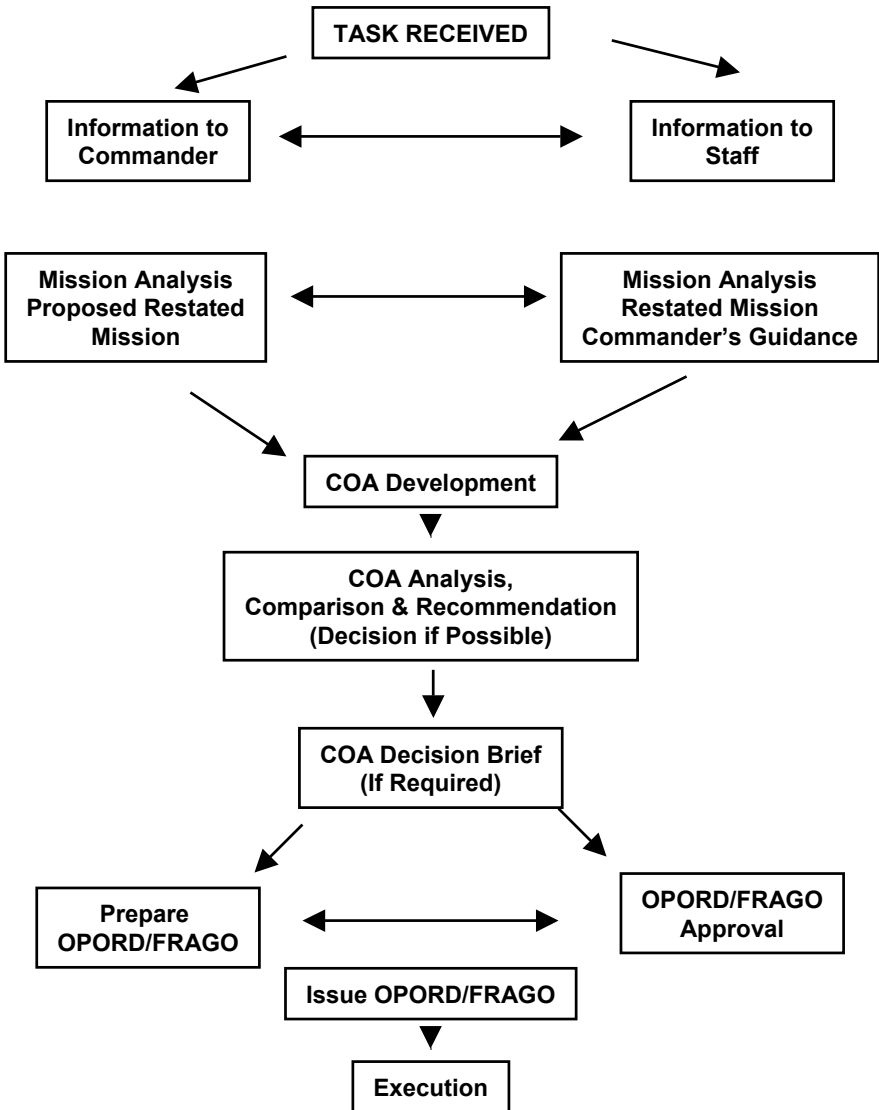
COA APPROVAL

<p>PRODUCTS</p>	<ol style="list-style-type: none"> 1. Complete Staff Estimates
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PRODUCE ORDERS

<p>PRODUCTS</p>	<ol style="list-style-type: none"> 1. 5 Paragraph OPORD w/ Annexes
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ABBREVIATED DECISION MAKING PROCESS



1. **Consists of 2 Briefings** - 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-TC 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

CIVILIAN CONSIDERATIONS

- Civilian Populations & Culture
- Civilian Organizations & Leadership
- Cultural Sites

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

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

BATTLE PREPARATION PHASE*OFFENSIVE OPERATIONS*

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

BATTLE PREPARATION PHASE*DEFENSIVE OPERATIONS*

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

EXECUTION PHASE

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

POST BATTLE PHASE

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

LIAISON OFFICER/NCO RESPONSIBILITIES

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 communication with own TOC on the TF Cmd Net

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. 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

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

- | | | |
|--------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Briefbacks | <input type="checkbox"/> Map | <input type="checkbox"/> TEWT |
| <input type="checkbox"/> Radio/Commo | <input type="checkbox"/> Sand Table | <input type="checkbox"/> Full Dress |

PURPOSE OF REHEARSALS

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

REHEARSALS SEQUENCE

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

DAILY COMMANDER'S UPDATE

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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. Cur 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 (R/A/G)
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 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

MATRIX OPOD

CALL SIGN _____()	BN MORTARS NET _____ BDE NET _____	ATTACHMENTS/DETACHMENTS
CDR _____ S-3 _____	FSO _____ CMED _____ CHAP _____	
XO _____ S-3A _____	BMO _____ SCOUTS _____ FSB S-3 _____	
S-2 _____ S4 _____	S-1 _____ ADA _____ MP _____	

UNIT/STATUS	TM _____	TM _____	TM _____	TM _____	TM _____	TM _____	TM _____
CALL SIGN FREQ							
TASK ORG							

MISSION

CDRS INTENT

/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/

OBSTACLES							
CASUALTY COLLECTION POINTS							
AMBULANCE EXCHANGE POINTS							
DESIGNATED LEVEL III							

WARNING ORDER FORMAT

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CLASSIFICATION

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

WARNING ORDER _____

References: *Refer to higher HQs OPLAN/OPORD, and identify map sheet for operation.*

Time Zone Used Throughout Order: *(Optional)*

Task Organization: *(Optional) (See Paragraph 1c)*

1. SITUATION

A. Enemy Forces. *Include significant changes in enemy composition dispositions and courses of action. Information not available for inclusion in the original WARNO can be included in subsequent warning orders.*

B. Friendly Forces. *(Optional) Only address if essential to the WARNO*

(1) Higher Commander's Mission

(2) Higher Commander's Intent

C. Attachments and Detachments. *Initial task organization, only address major unit changes*

2. MISSION. *Issuing HQs mission at the time of the WARNO. This is nothing more than a higher HQs restated mission or commander's decisions during MDMP.*

3. EXECUTION

Intent:

a. Concept of Operations. *Provide as much information as available, this may be done during the initial WARNO.*

b. Tasks to Maneuver Units. *Any information on tasks to units for execution, movement to initiate, reconnaissance to initiate, or security to emplace.*

c. Tasks to Combat Support Units. *See paragraph 3b.*

CLASSIFICATION**Continued**

WARNING ORDER FORMAT

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d. Coordinating Instructions. *Include any information available at the time of issuance of the WARNO. It may include the following:*

- CCIR
- Risk Guidance
- Deception Guidance
- Specific Priorities, in Order of Completion
- Time Line
- Guidance on Orders and Rehearsals
- Orders Group Meeting (Attendees/Location/Time)
- Earliest Movement Time and Degree of Notice

4. SERVICE SUPPORT. *(Optional) Include any known logistics preparation for the operation.*

a. Special Equipment. *Identifying requirements and coordinating transfer to using units.*

b. Transportation. *Identifying requirements, and coordinating for pre-position of assets.*

5. COMMAND AND SIGNAL *(Optional)*

a. Command. *State the chain of command if different from unit SOP.*

b. Signal. *Identify current SOI edition, and pre-position signal assets to support operation.*

ACKNOWLEDGE:

Name (Commander's Last Name)

Rank (Commander's Rank)

OFFICIAL:

Name

Position

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

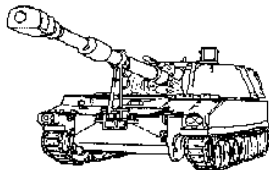
ELEMENTS OF OFFENSIVE OPERATIONS

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

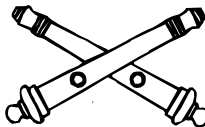
- Establish "Get Set" time with arty, ammo, and FO's in place
- Targeting based on thorough IPB (use S-2's situational template)
- FSO must determine trigger points
- Send FO's with Scouts on infiltration attack and defense
- Use AC-130, must have rehearsed commo plan
- Detailed clearance of fires procedures
- 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: _____



ENEMY WEAPON SYSTEMS RANGE

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Type	Descriptions	Range
D-30	122mm Howitzer	15,300m
M-46	1300mm 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
D-20	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 – 300kms
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 IMMINENT or IN PROGRESS
-----	---

YELLOW	Attack is PROBABLE
--------	---------------------------

WHITE	Attack is IMPROBABLE
-------	-----------------------------

WEAPONS CONTROL STATUS

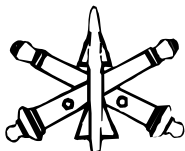
Wpns FREE	Fire at any aircraft not identified as friendly
-----------	---

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



SPOT REPORT/SALUTE FORMAT

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LINE	ITEM
1	Size
2	Activity
3	Location
4	Unit/Uniform
5	Time Observed
6	Equipment

INTELLIGENCE PREPARATION of the BATTLEFIELD TEMPLATES

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.

- ❑ **OBSERVATION:** Consider the ground that allows observation of the enemy throughout the area of operation. Considers fields of fire in terms of the characteristics of the weapons available to the unit; e.g. maximum effective range, requirement for grazing fire, arming range and time of flight for anti-armor weapons.
- ❑ **COVER AND CONCEALMENT:** Look for terrain that will protect unit from direct and indirect fires (cover) and from aerial and ground observation (concealment).
- ❑ **OBSTACLES:** In the attack, consider the effect of restrictive terrain on the unit's ability to maneuver. In the defense, consider the advantage of tying obstacles to the terrain to disrupt, turn, fix, or block an enemy force and protect your unit from enemy assault.
- ❑ **KEY TERRAIN:** Key terrain is any locality or area whose seizure or retention affords a marked advantage to either combatant. Consider key terrain in your selection of objectives, support positions, and routes in the offense, and on the positioning of your unit in the defense.
- ❑ **AVENUES OF APPROACH:** An air or ground route of an attacking force or a given size leading to its' objective or key terrain in its' path. In the offense, identify the avenue approach that affords the greatest protection and place the unit at the enemy's most vulnerable spot. In the defense, position key weapons along avenue of approach most likely to be used by the enemy.

ITEM	FIRST DAY	NEXT DAY
BMNT/EENT		
Sun Rise		
Sun Set		
Moon Rise		
% Illumination		
Moon Set		
NVG Hours		
Temp High/Low		
Winds		
Precipitation		

Effects of Light and Weather:

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

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- ENSURE NBC EQUIPMENT IS FUNCTIONAL FOR OPERATION/ALL MTOE EQUIP OH
- UNITS TRAINED ON CHEM GAS 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 CASUALITES/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

MOPP LEVEL	BDO	BOOTS	MASK	GLOVES
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

NBC-1 REPORT

119

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

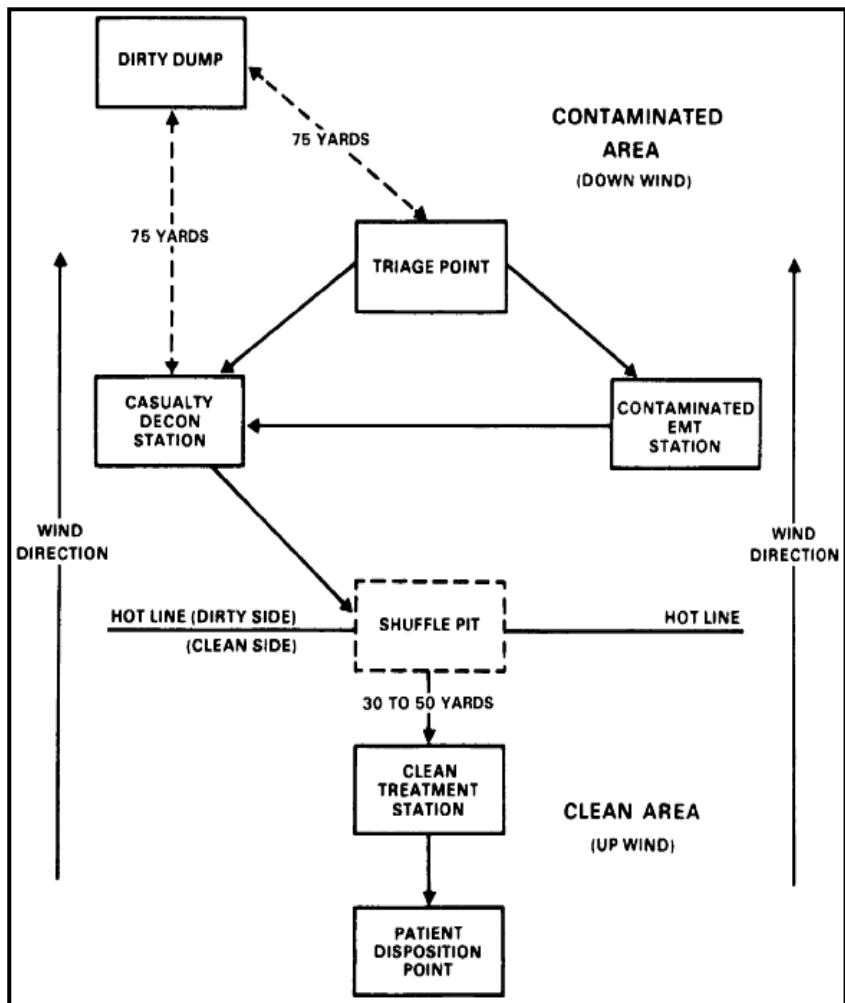
1. If no chem agent detected, have 2 soldiers unmask in shade for 5 mins, remask for 10 mins
2. Check for symptoms; if none, others may unmask; remain alert for symptoms

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



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 commander

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.

* **This checklist supplements Fort Bragg Regulation 350-41, Chapter 22.**

- All US/NATO ammunition and weapons are lawful; do not alter.
- Do not fake surrender, use enemy uniforms, booby trap personnel, or use medical symbols to deceive.
- Attack only combat targets, using only mission essential firepower, avoiding needless destruction and unnecessary suffering.
- Non-combat targets include: surrendering personnel, captives, sick or wounded personnel, medical personnel, medical vehicles and buildings, undefended civilian buildings, and monuments.
- Provide for the humane treatment and protection of all captives and non-combatants.
- Disposition of property: Tag and turn in captured or abandoned military property; safeguard valuable abandoned private property; do not loot.
- Adherence to the Law of War supports tactical and strategic mission goals. Identify and report all violations.

HANDLING PRISONERS OF WAR

- SEARCH** Remove, tag, & mark weapons, documents; return personal items, helmet, and NBC gear
- SEGREGATE** By rank, sex, military, civilian
- SILENCE** No talking
- SPEED** From the battle area
- SAFEGUARD** To prevent harm or escape

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

PERSONNEL

- Full accountability of personnel
- Mission briefing completed
- Soldiers backbrief OIC
- Packing list checked

INTELLIGENCE

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

NBC

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

COMMUNICATIONS

- ANCD filled
- Radio checks completed on all radios
- Personnel know call signs

VEHICLES AND EQUIPMENT

- Weapons clean, ammo on hand
- Load plans verified
- Water and fuel cans filled
- Tow bar on hand
- Vehicles dispatched/drivers licensed
- PMCS completed on all vehicles
- Rations provided to all personnel

REHEARSE, REHEARSE, REHEARSE!

ADVON/QUARTERING PARTY ACTIONS

125

- 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
- Quartering party dispatched
- Quartering 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 outposting
- 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

- 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

- Unit/Task Force Name
- Deployment Operational Designation
- Unit/Task Force Mission Statement
- Predeployment Training Conducted
- Copies of OPLAN/OPORD/FRAGOs/Overlays, to include higher headquarters
- Equipment structure (additional equip required/OH to accomplish mission)
- Unit/Task Force Organization
- Joint/Coalition Organizations Supporting
- Key Leader Information and Interviews
- Changes of Command and Key Staff Positions
- Daily Unit Strengths (PERSTAT), AUTH/REQ/OH, to include WIA/KIA
- Deployment Timeline and Milestones
- Photos of Area of Operations
- Awards and Honors (Unit and Individual)
- Unit Newsletters (Family Support Group and Deployed Forces)
- Information from Unit Web Page
- Accident Reports
- Copies of Daily Operational Updates
- Press Releases/Media Coverage

COMBAT SERVICE SUPPORT CHECKLIST 132

- 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

- Locations of Current and Proposed Support Areas**
- Boundaries for CSS Responsibilities**
- MSRs (Primary/Alternate)**
- Locations of Major HQs**
- Locations of CSS Units and Bases**
- Locations of Critical Resources**

BRIGADE CSS OVERLAY MUST INCLUDE:

- BSA Location and CSS Units Within**
- Locations of Alternate/Proposed BSAs**
- MSR from the DSA to the BSA**

DIVISION CSS OVERLAY MUST INCLUDE:

- DSA Location and CSS Units Within**
- Locations of Alternate/Proposed DSAs**
- MSRs from CORPS Rear Area to DSA and from DSA to Each BSA**

LOGISTICS PREP OF THE BATTLEFIELD

- Identification and assessment of factors which facilitate, inhibit, or deny support to the combat forces**
- Requires logisticians to understand the mission, the tactical plan, and time/space implications for support**
- Requires the tacticians to understand data needed by logisticians to plan and provide effective support**

MANNING

- Personnel Status and Replacement Operations (WSRO)
- Projected Casualties and Their Effect on Readiness

SUSTAINING

- Personnel Services
- Medical Support Priorities
- Locations of Treatment Facilities
- Evacuation Procedures for KIA/WIA
- EPW Procedures
- Reconstitution
- Refugees

ARMING

- Basic Load Status
- RSR vs. CSR
- Ammunition Prestocking Agreements
- ATP, ASP, CSA Locations
- Distribution Methods
- CCLs
- Emergency Resupply Procedures

FUELING

- Current Status
- Anticipated Requirements
- ROM
- FAARP Operations
- Fuel Allocations
- Displacement of Assets

FIXING

- Maintenance Priorities
- Projected Battle Damage
- BDAR Procedures
- Controlled Substitutions or Cannibalization Procedures
- WSRO Procedures
- Distribution Plan for CL VII, IX
- Evac Procedures

MOVING

- Movement and Route Use Priorities
- Traffic Control
- Throughput Operations
- Trailer Transfer Agreements
- Alternate Modes of Transportation
- LOC Security
- Backhaul Priorities

CLASSES OF SUPPLY

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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	Equip Inspection & Maintenance Worksheet
DA 2405	Maintenance Request Register
DA 2407	Maintenance Request
DA 2408-4	Weapon Record Data
DA 2408-20	Oil Analysis Log

SUPPLY STOCKAGES

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CLASS	DS	GS
I	3	7
II	3	7
III (P)	3	7
III (B)	1	3
IV	2	4
V	3	7
VI	3	7
VII	1 Day Battle Loss	
VIII	3	10
IX	15	30

CLASS III HAULING CAPABILITIES

TPU w/ Trailer (3 x 600 gal Pods)	1800 GAL
HEMMT	2500 GAL
Semitrailers	5000 and 7500 GAL
Rail Cars	10500 or 15800 GAL
C-130 Aerial Bulk Fuel Delivery System	6000 GAL
Collapsible Drum	500 GAL
PLS Tanker Flatrack	3500 GAL
MTV Tanker	1500 GAL

COMBAT CONSUMPTION RATES

GAL PER HOUR

Vehicle	Idle	Cross Country	Road
M1A1	10.8	56.6	44.64
M2/3	2.0	26.58	18.79
M113	6.4	18.00	8.6
M157	60-100	(Fog Oil)	
M88A1	2.00	36.76	25.54
ACE	1.42	12.35	9.26
D7F	6.00	N/A	N/A

RAW CLASS III DATA

Vehicle	Fuel Capacity	Range
HMMWV (998)	25 GAL	542kms
HMMWV (996)	25 GAL	483kms
HMMWV (966)	25 GAL	515kms
M2/3	175 GAL	483kms
M113	95 GAL	365miles
M1A1	504 GAL	440-480kms
SP Vulcan	95 GAL	443kms

RATIONS

STANDARD CHARACTERISTICS

Item	Contents Per Case	Weight Per Case (lbs)	Volume Per Case (cu ft)	Weight Per Meal	Calories
Meal Ready to Eat	12 Meals	21	.83	1.47	1,300
Food Packet, Long Range Patrol	40 Packets	36	1.84	.9	1,100
Food Packet, Survival	24 Packets	20	.43	.83	870
Ration Supplement, Aid Station	1 Packet	16	1.01		

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 & 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!**



TRANSPORTATION CAPABILITIES

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ITEM	LENGTH	HEIGHT	WIDTH	463L PALLET	4 x 4 PALLET	CDS BUNDLES	PAX
M923 (5 Ton)	168	60	88	1	3	3	16
LMTV	147	52	88	1	3	3	15
FMTV	168	59	88	1	3	3	17
M977/985 HEMMT	216	67	90	2	4	4	2
PLS Flatrack	227	67	90	2	4	4	2
M871 30ft S&P	350	55	88	3	7	7	2
M872 40ft S&P	485	58	93	4	10	10	2
M172 Lowboy	192	39	115	2	8	8	2
HET Trailer	403	43	120	4	18	18	5
C-130	480	102	107	6	6	6	90
C-141	1090	103	111	13	13	13	200
C-17	772	142	204	18	18	18	102
C-5	1454	156	144	36	36	36	73

COMMAND, CONTROL AND COMMUNICATIONS CHECKLIST

- 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

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- 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.

TOC OIC CHECKLIST

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

TOC NCOIC CHECKLIST

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- Inspect Fighting Positions
 - Enforce Sleep Plan
 - Coordinate LogPac/Resupply
 - Enforce Soldier Standards
 - PMCS Equipment
 - Hygiene
 - Correct Uniform
 - Enforce Noise/Light Discipline
 - SM/Equip Accountability
 - Coordinate Local Security
 - Post Locations of Key Units
 - Track BDA
 - Post Maint Status
 - Post Supply Status
 - Post Enemy Activities
 - Enforce TOC Rules
 - Rehearse Immediate Actions
 - Supervise Freq Changes
 - Coordinate Shift Change
 - Ensure Reports Are Submitted
 - Conduct TOC Site Recon
 - Conduct PCIs Prior to Movement
 - Distribute Strip Maps
 - Designate Fighting Positions
 - Ensure Convoy Security
 - Control TOC Access
 - Tie In Security With Units In AO
 - Lead JUMP TOC
- Generators Sandbagged
 - Vehicles/Gen Refueled
 - Constant Area Improvement
 - KEEP THE BATTLE CAPTAIN OUT OF TROUBLE!**
 - OPERATION PLANNING DUTIES**
 - Assist in COA Formulation
 - Prep Materials For Briefings
 - Assist In Briefings
 - Distribute OPORDS To Units
 - Publish Plans, Orders, And Reports
 - Develop Target List
 - Develop Obstacle Plan
 - Coordinate Rehearsals
 - Prepare Order Briefs
 - Coordinate Casualty Evacuation
 - Consolidate Orders Input
 - Establish Deception Plan
 - Plan Hasty Dislocation
 - Coordinate IPB
 - Maintain Publications
 - Monitor Computer/Disk Use
 - Oversee OPSEC In TOC
 - Control Map Board
 - Radios Operational & Manned
 - Fighting Positions Designated
 - TOC Duty Shifts Established
 - Prepare Area For Rehearsals

TOC CHECKLIST

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- 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
- FREQ 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.

- 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

- Complete prepare to fire weapons checks
- Complete preoperations PMCS; resolve problems
- Load vehicles/rucks per load plans
- Clean/function check individual & crew served weapons
- Top off vehicles
- Stow basic load of Class I and V
- Fill canteens, water & oil cans as needed
- Index battlesights
- Check radio freqs and operation
- Check speech security equip
- Check personnel; brief mission
- Rehearse

CREW CHECKLIST

PERSONNEL

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

PERSONAL EQUIPMENT

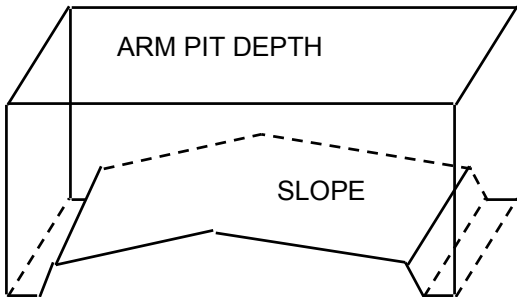
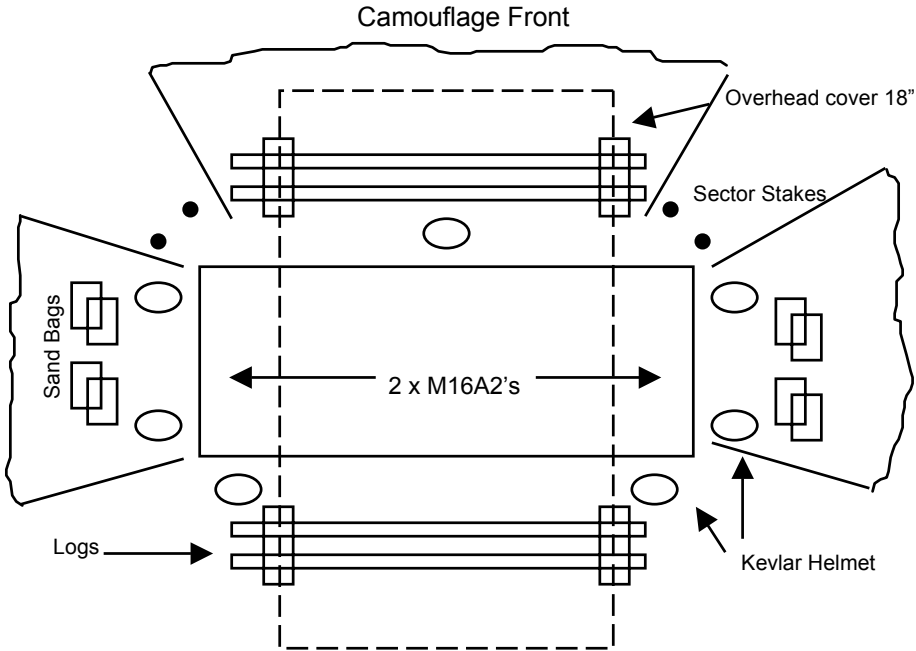
- Dog tags present and O/H
- ID Card O/H, Geneva Convention Card O/H, Red Cross Armband
- Proper field uniform
- Weapons cleaned and secured, ammunition issued
- SQD leader has listing of all serial numbers for weapons and sensitive items
- NBC equipment O/H

INTELLIGENCE

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

TWO PERSON FIGHTING POSITION

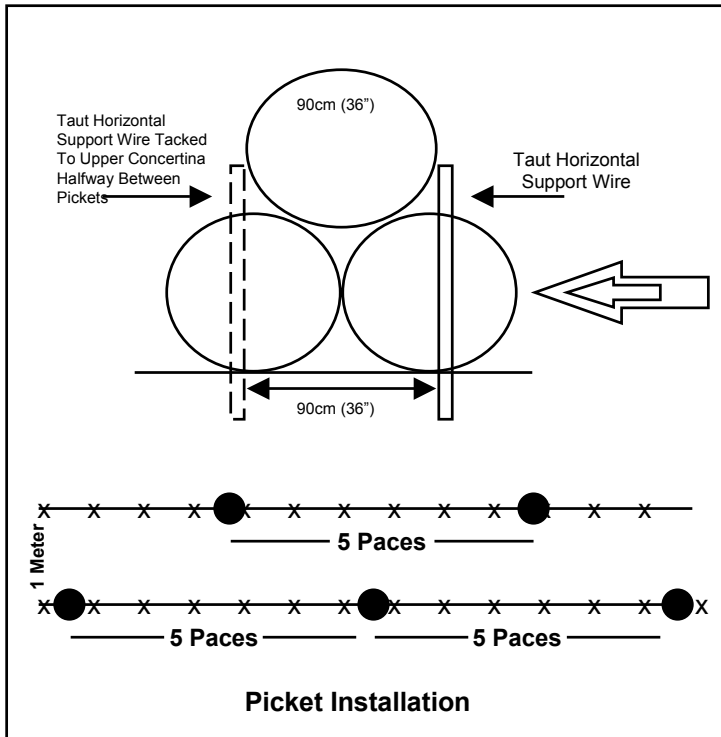
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GRENADE SUMP ONE
E-TOOL WIDE AND DEEP

TRIPLE STRAND CONCERTINA

- 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

159

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


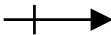
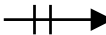
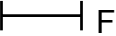
Ammo

Description

Remarks:

SECTOR SKETCH

160

Magnetic
NorthOUTPOST CHEM ALARM LIKELY AVE OF APPROACH M16 M60 M2 M203 M19 TRIP WIRE FLARE TRP ROAD BLOCK **XX**

DEAD SPACE/TREES



UNIT:

RISK ASSESSMENT

161

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

162

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.

HEAT CATEGORY	WATER INTAKE	WORK/REST CYCLE (mins)
1	½ Qt/Hr	Continuous
2	½ Qt/Hr	50 Work/10 Rest
3	1 Qt/Hr	45 Work/15 Rest
4	1 ½ Qt/Hr	30 Work/30 Rest
5	2 Qt/Hr	20 Work/40 Rest

NOTE: MOPP Gear or Body Armor increases effects of heat. Watch closely for dehydration.

Model	Nomen	Length (inches)	Width (inches)	# of Pallets	Wgt (STons)
M989A1	HEMMT Trl	216	90	8	11
M977 M985	HEMMT Truck	216	90	8	11
PLS	PLS Flat Rack	240	96	10	11
M871	22.5t Trailer	348	90	14	22.5
M872	¾t Trailer	484	90	18	34

CARGO AIRCRAFT CAPABILITIES & DIMENSIONS

	Length	Height	Width	# of Pallets	Fuel	CDS Bundle	Pax
C-130	492in	108in	120in	6	6k	16	90
C141 B	1120	110	123	13	9k	40	200
C-17	986	162	216	18	N/A	40	102
C-5A	1452	162	228	36	N/A	N/A	73
KC- 10	1508	96	218	25	N/A	N/A	69

Sling Load Operations

Type	Max Load	# of Hooks	Usable Length	Usable Width	Usable Height
UH-1	4000lb	1	39in	50in	50in
UH-60	8000lb	1	110in	72in	54in
CH-47	10-26k	3	366in	90in	78in

Rotary Wing Characteristics

Type	Ext Load	Rescue Hoist	Troop Seats	Litters	Cruising Speed
UH-1	4000	600	8	6	100 knots
UH-60A	8000	600	13	4	135 knots
UH-60L	9000	600	13	6	135 knots
CH-47D	28000	600	33	24	140 knots

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

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+

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

169

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

<u>To Convert</u>	<u>Multiply by</u>	<u>Equals</u>
Velocity		
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
Area		
Acre to Hectare	0.404687	Hectares (ha)
Acre to Sq Ft	43560.2	Sq Ft (ft ²)
Acre to Sq KM	0.00404687	Sq Km (km ²)
Acre to Sq Meters	4046.87	Sq M (m ²)
Acre to Sq Mile	0.00156251	Sq Mi (mi ²)
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 ²)
Hectares to Sq Mi	0.003861022	Sq Mi (mi ²)
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 ²)
Sq Meter to Sq Ft	10.7639	Sq Ft (ft ²)

<u>To Convert</u>	<u>Multiply by</u>	<u>Equals</u>
Length		
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)
Volume		
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

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Center for Army Lessons Learned

AMEDD Lessons Learned Division