# **CHAPTER 3**

# COMMAND AND CONTROL

# Section I. PREPARATION FOR COMBAT HEALTH SUPPORT

#### 3-1. Plans

*a. Mission Analysis.* Planning starts with mission analysis. The battalion begins mission analysis when the brigade provides a warning order (WARNO). The mission analysis is Step 1 of the military decision-making process (MDMP). See FM 101-5 for further discussion on the MDMP. For guidance on military decision making in abbreviated planning for a time-constrained situation, see FM 101-5. The battalion headquarters conducts concurrent planning with the brigade headquarters or after the brigade plan is developed. The battalion staff may receive additional information from the brigade staff elements to assist them with the planning process. This information is normally transmitted in a force text e-mail message via the tactical local area network (LAN). As part of the mission analysis and based on the battalion operations. An understanding of the battalion's time lines or battle rhythm will assist the battalion \$1, to the battalion \$1 for mission analysis input. See Chapter 5 and Appendix H of FM 101-5 for additional information on WARNOs. Mission analysis includes—

- Assessing CHS capabilities (organic and attached assets with current status and location).
- Assessing limitations (specify reason that CHS assets are not available).
- Identifying specified, implied, and essential CHS tasks in the brigade OPORD.

The following are examples of subject areas that should be addressed during mission analysis:

- Treatment (to include surgical requirements).
- Emergency dental treatment.
- Combat stress control.
- Preventive medicine.

• Medical evacuation support by air and ground ambulances (and nonmedical evacuation platforms, if necessary).

- Class VIII resupply.
- Medical maintenance.
- Nuclear, biological, and chemical operations.

- Threat to treatment and evacuation assets that is capable of causing CHS failure.
- Casualty estimates (number and types of casualties).
- Terrain effects on location, acquisition, and evacuation of casualties.
- Current medical status of battalion personnel.

Battalion Course of Actions. Battalion COAs development/analysis and wargaming are h. accomplished after mission analysis. Course of action development and wargaming result in the production of the OPORD and the CHS annex. During wargaming, the evacuation and treatment facets of the medical plan are synchronized with the overall battalion plan. The S1 will provide the overall casualty figures by battalion and, possibly, company. The questions of how many casualties, at what point in the fight (when), where they will occur, and how they are produced (direct fire, artillery, chemical, and so forth) can be forecasted based on input from the S1. During the wargaming, the S2 will portray enemy capabilities and likely actions. The S3 will focus on friendly actions. The medical platoon leader needs to pay careful attention to this exchange. This will be the best predictor of what, when, where, how, who, and other information that will be useful in adjusting the CHS plan. This information allows the medical platoon leader and field medical assistant options to select preplanned locations for positioning ambulances or treatment teams. Locating the treatment teams in the appropriate locations is of the utmost importance. The published movement planning factors for inside the division AO for wheeled and tracked vehicles in good terrain and weather are 8 kilometers and return in 1 hour (or 16 kilometers per hour). See FM 8-55 for additional planning guidance. The trauma specialist's goal is to get the casualty to ATM within 30 minutes. For an ambulance to leave the BAS and pick up a patient and return within 30 minutes, it must be within 4 kilometers of the soldier's point of injury. Keep in mind that this is under favorable conditions. Limited visibility, difficult or unfamiliar terrain, obstacles (friendly and enemy), and enemy actions will make the evacuation mission longer. If the BAS is farther than 4 kilometers away, it starts out as an impossibility. The METT-TC will govern specific solutions. Supporting the fight and maintaining a good support distance becomes a definite challenge because most of your evacuation routes can potentially be covered by enemy weapons and direct and indirect fire. For example, Russian manufactured AT-5 spandrel antitank-guided missiles have a 4-kilometer direct fire range. The medical platoon plan must take this threat into account. Information obtained from the S2 and S3 will also provide the triggers that will allow medical elements to occupy these positions at appropriate times and in a manner that reduces the risk from threat actions. This information is incorporated into the CHS plan and is published in the battalion order. The following are examples of key areas that will be analyzed during this process; they include-

• Casualty estimates broken down to the lowest level possible, by TF, by phase line, and

so forth.

• Battalion- or brigade-directed actions as part of the squadron or brigade CHS plan.

• Current medical platoon equipment status (maintenance status on all the platoon's key items of equipment, both medical and nonmedical).

#### **3-2.** Operation Order

Once the battalion receives the brigade WARNO, it begins mission analysis and determines its tactical plan. This process continues until the full brigade OPORD is issued. Part of the mission analysis is to assess the brigade CHS plan for its adequacy of support to the battalion. If the medical platoon leader finds a problem, he briefs this to the battalion commander. The mission analysis brief will be after the staff has analyzed the full OPORD. Another part of the analysis is determining the employment and emplacement of medical treatment elements (BAS/treatment team) based on the brigade plan. This information is provided to the battalion S3 and he updates the battalion plan. This is normally accomplished prior to the brigade combined arms rehearsal. When the battalion commander approves the OPLAN, it becomes the OPORD. The OPLAN and OPORD are developed by the S3 section using input from each of the staff elements with the S1 being the staff coordinating element for CHS. The battalion OPORD is revised or updated based on mission changes. Table 3-1 is an example of an OPORD/OPLAN outline format.

a. Matrix Operation Order. A matrix OPORD may be used as an alternative to the standard fiveparagraph OPORD. The purpose of the matrix OPORD is to cut orders production time and to provide subordinates more time for RECON, preparation, and rehearsal. There is no standard format for a matrix OPORD. Matrix orders expand on the execution matrix found on many operations overlays. The singlepage format may include all signal information for the day of the operation and it can be placed in the corner of a map case for easy reference. Matrix orders are usually issued with standard operations, intelligence, and fire support overlays. Rather than a five-paragraph order outline format as seen in Table 3-1, the medical platoon leader is more likely to see and work with a matrix OPORD. Figure 3-1 is an example of a matrix OPORD.

*b. Medical Support Matrix.* The medical support matrix should be integrated with the tactical overlay. Figure 3-2 is a sample format for a medical support matrix. If deviation from the matrix occurs, the BAS location must be known at all times. The BAS should remain on location as long as practical. Extra first aid medical supplies can be issued to maneuver elements for resupply of CLS.

Table 3-1. Sample Outline Format for an Operation Order/Plan

#### (CLASSIFICATION)

#### TIME ZONE USED THROUGHOUT THE PLAN (ORDER)

#### **REFERENCES:**

#### **TASK ORGANIZATION:**

#### 1. SITUATION

- A. ENEMY FORCE B. FRIENDLY FORCE
- ATTACHMENT AND DETACHMENTS С.
- D. ASSUMPTION (OPLAN ONLY)

#### 2. MISSION

- 3. EXECUTION
  - INTENT: A. CONCEPT OF OPERATION (1) MANEUVERS
    - (1)
    - FIRES
    - (2) (3) (4) RECONNAISSANCE AND SURVEILLANCE
    - INTELLIGENCE
    - (5) (6) ENGINEER
    - AIR DEFENSE
    - INFORMATION OPERATIONS
  - Β. TÁSK TO MANEUVER UNITS
    - ENGINEER (1)
    - AIR DEFENSE (2)
  - (3) FIELD ARTILLERY TASKS TO COMBAT SUPPORT UNITS C.
    - INTELLIGENCE FIRE SUPPORT (1)

    - (2) (3) (4) SIGNAL
    - NBC **PROVOST MARSHAL**
    - (5) (6) PSYOP
    - CIVIL MILITARY (7)
    - AS REQUIRED
  - (8) AS REQUIRED COORDINATING INSTRUCTIONS D.
    - TIME OR CONDITION WHEN A PLAN OR ORDER BECOMES EFFECTIVE (1)
    - COMMANDER'S CRITICAL INFORMATION RISK REDUCTION CONTROL MEASURES RULES OF ENGAGEMENT (2) (3) (4)

    - ENVIRONMENTAL CONSIDERATIONS FORCE PROTECTION AS REQUIRED (5) (6) (7)
    - AS REQUIRED

#### 4. SERVICE SUPPORT

- SUPPORT CONCEPT MATERIEL AND SERVICE Α.
- Β. MEDICAL EVACUATION AND HOSPITALIZATION
- С. PERSONNEL D.
- CIVIL MILITARY, AS REQUIRED Ε.
- AS REQUIRED F

#### 5. COMMAND AND SIGNAL

- A. COMMAND B. SIGNAL

ACKNOWLEDGE: NAME (COMMANDER'S LAST NAME) RANK (COMMANDER'S RANK) OFFICIAL: NAME AND POSITION

ANNEXES

#### (CLASSIFICATION)

SEE FM 101-5 FOR DEFINITIVE INFORMATION ON OPERATION PLANS/ORDERS. ADDITIONAL INFORMATION IS PROVIDED IN APPENDIX 3 (PERSONNEL) OF ANNEX I, OR IN A SEPARATE APPENDIX FOR CHS.

# FM 4-02.4

TF 2-69 ARMOF	R DEFEN	SIVE MATRIX	OPORD #1-8	8 DTG 011	000A JAN	88 COPY 21	of 25 COPIES		
IF CALL SIGN (42.10) CDR <u>16</u> S3 <u>91</u> FSO <u>07</u> MAIN <u>76</u> XO <u>34</u> S3A 23 FAC <u>37</u> PLDR 12		BN MORTAR/FS NET (52.40) BDE FS NET (38.55)		ATTACHMENTS/DETACHMENTS <del>A/1-58</del>					
S2 39 S4	AA BHO 22	ADA115	(42.00) AJ2 (	45.00)					
UNIT/STATUS	TM MECH G	TM TANK G	CoC G	Co D G	SCOUTS G	T2 ENGR G	MORTARS G		
CALL SIGN/FREQ	IIM (40.25)	V6D (52.65)	NBY (50.10)	M9U (512.25)	D41 (142.89)	T5V (52.50)	ABE (52.40)		
TASK ORG		$\frac{1}{3}$	$\frac{1}{20}$				BLUE { FDC		
	2 🕅	3/4	30	111 4	3/D		RED { EDC		
		<sup>2</sup>	3		° —				
LIE MISSION: TE2-69 defends in sector 020600 lan 88 from coords to coords and coords to coords to destroy MRR.									
CDRS INTENT: C	Occupy deception p	positions along PL	DOG; NLT 020400	move to prepared	positions along PL	CAT; destroy en			
in EA LION (Ave 1	I) or EA TIGER (A	ve 2) allowing no p	enetration of PL M	OUSE.					
(5)SP		011400			011000		PRI TO TM TANK		
ORDER(3)	6	2	4	7	1	3	5		
	BP 2	BP 3	BP 1	BP 4	SCREEN IF	PREPARE	(COORDS) PRI		
(DECEPTION) ORIENT					PL BEAR	ALONG PL CAT	INIT TO SCOUTS		
O PL CAT	PB6	BP 7	BP 5	BP 8		CONTINUE OBSTACLE	NU213562		
(BALANCED ATK)	EA LION	EA TIGER	BA LION	EA TIGER		SURVIVABILITY POSITION WORK	when EN crosses PL DOG		
<b>(</b>		0/0 BP 11		BP 9	Screen if right	PRI effort to BP 11			
Ave 1 (2)		Ave 1		EA LION			тм месн		
8	0/0 BB 12	BP 7	BP 10	BP 8	Screen if left flank	PRI effort to BP 12			
Ave 2 0	Ave 2	EA TIGER	EA TIGER	EA TIGER			PRI TM TANK		
FIRES 2 to FA	DECEPTION	SKYLINE VC	OF TANKS ON				DISPLACE		
PRI to 2-69 PRI Init sets	·OCC BP 6	·OCC BP 7	OCC BP 5	OCC BP 8	·Clear TF Section NLT		BY SECTION		
·FPFs: ARTY: TM Mech	·Conserve MIN	OBSV MA 12	OBSV NA 11	·OBSV NA 122	011400 ·3/D OPCON				
MORT: TM Tank	·Fire IGTS: AB 4004	·Fire TGTS AB 4005			until 020500				
in AB 4004, 5, 6, 7	AB 4006	AB 4007	TO BB 10 at		· Fire Tgts				
FASCAM planned	field		night; RPT	020500	AB 4003				
o/o Bde Cdr	AB 4006 after secure		Time		Observe NAT 12				
	pass								
	Mar Calif	Minofield	Miro Obstl	Wire Obstl		Minefield			
OBSTACLES	AB 4006	AB 4007	#1	#2		1-AB 4006 2-AB 4007			
FIGHTING POSN	#1(4) BP 6	#2(10) BP 7	#3(8) BP 5	#4(8) BP 8		#7(6) BP 5			
PRI (No.) LOC			#5(4) BP 10	#6(4) BP 9		#8(6) BP 8			
CDR	S3		CBT TNS	UMCP	FLD TNS BSA (CP 10)	LRP A CP 12	LRP B		
вь е	вр /								
ADA Yellow Tight	MOPP 2	OEG 50 cGy	SOI KTV 1062T	PYRO Main Atk AV 01 Red Star AV 02	AJ CODEWORD Sprint	PIR (1) EN (2) ALOC	0600 Daily		

Figure 3-1. Matrix operation order.

UNITS	CROSS	CROSS	CROSS	ON OBJ
	LD	PL RED	PL BLUE	DALLAS
CO A	TT 1	TT 1	TT 1	TT 1
AND	(NB 583492)	(NB 585501)	(NB 587507	(NB 591510)
CO B (-)	(TOM)	(JIM)	(BILL)	(GREG)
CO C	TT 2	TT 2	TT 2	TT 2
AND	(NB 581489)	(NB 583499)	(NB 585505)	(NB 589508)
RESERVE	(VICKY)	(BETH)	(JANET)	(JOY)
RM 1: USE RO RM 2: USE RO	UTE STEVEN DUTE ANNA			

## Figure 3-2. Medical support matrix.

c. Implementation of Combat Health Support Annex. For successful implementation of the CHS annex of the battalion plan, the CHS plan must be coordinated and synchronized with the battalion plan so that CHS requirements are met. The medical platoon leader may receive additional coordinating instructions from the BSS as the CHS annex is developed. This additional information permits the medical platoon leader to make informed decisions as he develops the CHS annex and affords some additional time for better development of good initial plans. For successful implementation of the CHS annex of the battalion's/ squadron's plan, the CHS plan must be coordinated and synchronized with the overall plan. To achieve optimal synchronization, the battalion CHS plan is rehearsed as an integral part of the combined arms plan at the combined arms rehearsal. The CHS rehearsal by itself is a technique that will increase understanding and synchronization, but is not as effective as when it is integrated into the combined arms rehearsal. The rehearsal of the CHS plan will allow battalion medical elements and leaders to analyze the tactical CHS plan to ascertain its feasibility, its common sense, and the adequacy of its C2 measures prior to execution.

## 3-3. Rehearsal

To achieve optimal synchronization, the battalion CHS plan is rehearsed as an integral part of the combined arms plan at the combined arms rehearsal. Medical platoon leaders and field medical assistants provide input to the battalion plan and develop the concept for the battalion CHS plan. During the decision-making/ orders process, they identify critical events and synchronize the CHS plans. In addition to medical locations on the CSS overlay, these plans indicate the triggers for CHS events. At the battalion rehearsal, battalion leaders practice their synchronized plans that include CHS. The sequence of events for the CHS portion of the battalion rehearsal includes—

• Ambulance teams practicing execution of triggers for area medical support responsibilities and triggers for movement of supporting FSMC ambulances.

• The medical platoon SGT detailing the concept and procedures for MEDEVAC (both ground and air ambulances) in the battalion.

• The battalion XO or S4 explaining triggers for BAS/treatment team movement and ensuring that the battalion HHC and maneuver companies understand when and where the BAS/treatment teams are located.

• The medical elements providing projected triggers and times they will be at projected locations.

The CSS/CHS annex of the battalion OPORD that includes map overlays is the conclusion of the medical planning efforts; the rehearsal is the culmination of the preparation phase for an operation. The medical platoon leader has the responsibility for rehearsing CHS operations. Rehearsals are done to achieve a common understanding and a picture of how the plan will be implemented.

• All plans must be completed prior to the battalion rehearsal.

• The CHS portion of the battalion rehearsals should focus on the events that are critical to mission accomplishment. A successful rehearsal ensures explicit understanding by subordinate medical personnel of their individual missions; how their missions relate to each other; and how each mission relates to the commander's plan. It is important for all medical echelons to see the total CHS concept.

• Rehearsing key CHS actions allows participants to become familiar with the operation and to visualize the "triggers" which identify the circumstances and timing for friendly actions. This visual impression helps them understand both their environment and their relationship to other units during the operation. The repetition of critical medical tasks during the rehearsal helps leaders remember the sequence of key actions within the operation and when they are executed.

• The battalion OPORD is then issued through effective troop leading procedures.

# Section II. TROOP-LEADING PROCEDURES

# **3-4.** Eight Steps of Troop Leading

The commander makes most tactical decisions. He then announces them in the form of orders that include his intent and concept of the operation. Based on these orders, the medical platoon leader uses troop-leading procedures to organize his time during planning and preparation and to translate the operation into instructions his soldiers can understand. He can then lead the platoon more effectively in the execution of the mission. Troop leading is a dynamic process that begins when the unit receives a new mission or is notified by a WARNO that a new mission is imminent. Whenever possible, troop-leading procedures are integrated and accomplished concurrently rather than sequentially. Time management is the key. The medical platoon leader normally uses one-third of the available time to plan, prepare, and issue the order; his field medical assistant, platoon SGT, ambulance squad leaders, and treatment team leaders then have the remaining two-thirds of the time available to prepare their ambulances and MES to support the operation. The following discussion focuses on the eight steps of troop leading procedures:

• Receive and analyze the mission.

- Issue a WARNO.
- Make a tentative plan.
- Initiate movement.
- Conduct RECON and coordination.
- Complete the plan.
- Issue the order.
- Supervise and refine.

a. Receive and Analyze the Mission. The medical platoon leader normally receives his orders as an oral OPORD or as a fragmentary order (FRAGO) updating a previously issued OPORD. Graphics may be copied from the S3's overlay or sent by digital transmission. Initial coordination within the battalion S1, medical platoon personnel, and with the supporting FSMC should be accomplished upon receipt of the mission.

#### NOTE

Before the OPORD or FRAGO arrives, the medical platoon leader may receive a series of WARNOs from the battalion S3 providing advance notice of an impending operation. The medical platoon leader should disseminate all pertinent information contained in the WARNO as quickly as possible after they are received. The battalion S4 may be the one who issues orders to the medical platoon since he has tactical control of the combat trains.

(1) Upon receipt of the WARNO, the medical platoon leader's first task is to extract the CHS mission based on the battalion commander's guidance and intent. The key to understanding the medical platoon CHS mission, as part of the battalion team, lies in two elements of the plan—the commander's intent and the purpose he envisions for the battalion and each company.

(2) The medical platoon leader's knowledge of the intent and purpose allows him to use his initiative and to be proactive and exploit battlefield opportunities to accomplish the CHS mission. If the medical platoon leader does not understand the intent or purpose, he should ask the commander for clarification.

(3) The medical platoon leader analyzes the mission using the factors of METT-TC. These factors allow the platoon leader to identify the platoon's purpose; the specified, implied, and essential tasks it must perform; and the time line by which the platoon will accomplish those tasks. The following outline

of METT-TC factors will assist the medical platoon leader in analyzing the mission and creating a time line. The medical platoon leaders need the answers to the questions pertaining to METT-TC.

- (a) Mission.
  - What is the battalion commander's intent?
  - What are the current capabilities (organic and attached assets with current

status and locations)?

brigade OPORD?

- What are the specified, implied, and essential CHS tasks in the battalion and
- What are the limitations (CHS assets that are not available, specify reason)?

• What other tasks must be accomplished to ensure mission success (implied tasks)? Implied tasks are those that are not specified in the OPORD but that must be done to complete the mission. They do not include tasks that are covered in the unit SOP. The medical platoon leader identifies implied tasks by analyzing the enemy, the terrain, friendly troops available, and the operational graphics.

- What is the current patient status (for example, awaiting evacuation)?
- Are patient evacuation vehicles required to use contaminated routes?
- Are patient decontamination stations required?

• Where are the locations of the treatment team and of BAS or other MTF providing area medical support? (Current/projected?)

- What are the area medical support responsibilities?
- (b) Enemy.
  - What have been the enemy's recent activities?
  - What is the composition of the enemy's forces?
  - What are the capabilities of his weapons?
  - What is the location of current and probable enemy positions?
  - What is the enemy's most probable COA?

Enemy information is included in paragraph 1 of the OPORD. It is important that the medical platoon leader analyze this information in terms of how the medical platoon supports the operation. For example,

the threat the enemy imposes on the battalion will influence how CHS operations are conducted based on the projected number of casualties the enemy will inflict on the battalion.

(c) Terrain (and weather). The medical platoon leader analyzes the terrain using the factors of OAKOC (obstacles; avenues of approach; key terrain; observation and fields of fire; and cover and concealment). Elements of this analysis include the following:

• Obstacles.

• Where are natural and existing obstacles located, and how can they affect medical treatment and evacuation?

affect maneuver?

- Where are likely areas for enemy-emplaced obstacles, and how can they
- Are there bypasses, or must obstacles be breached?

• *Avenues of approach*. Where are the best avenues of approach (mounted and dismounted) for enemy and friendly forces? These are considerations for determining evacuation routes and in planning for future locations for the BAS.

- Key terrain.
  - Where is the key terrain? Will FM communications be affected?
  - How can key terrain be used to support the mission?
- Observation and fields of fire.
  - Are these influenced by the key terrain that dominates avenues of

approach?

• Where can the enemy observe and engage battalion personnel (danger

areas)?

• Where are the natural firing positions that medical platoon personnel can use to defend against enemy attack?

• Cover and concealment.

• What routes within the AO offer cover and concealment for placement of the BAS or a treatment team?

• Do the natural firing positions in the AO offer cover and concealment for the platoon or enemy?

#### 3-10

Weather. The medical platoon leader can use these questions as he analyzes the impact of weather on the mission:

What are the light conditions (including percentage of night illumination) and visibility?

What are the times for beginning of morning nautical twilight (BMNT), sunrise, sunset, end of evening nautical twilight (EENT), moonrise, and moonset?

How has recent weather affected the AO?

How will fog, rain, dust, heat, snow, wind, or blowing sand affect the men and equipment during the mission?

#### NOTE

The effects of weather on smoke or NBC weapons/operations should also be considered.

Troop. (d)

What is the supply status of ammunition, fuel, and other necessary items including Class VIII?

- - What is the present physical condition of the soldiers, as well as of vehicles •

Does the platoon need any additional assets to support or accomplish its

and equipment?

- What is the training status of the platoon?
- What is the state of morale?
- How much sleep have the men had?
- How much sleep will they be able to get before the operation begins?

mission?

- What attachments are available to help the platoon accomplish its mission? What is the task organization in the WARNO or OPORD?
  - *Time available. (e)*

What times were specified by the commander in the OPORD for such activities as movement, RECON, rehearsals, and LOGPAC operations?

• What priorities of work can the platoon accomplish (examples include security, maintenance, resupply, coordination, rehearsals, inspections, and sleep)?

#### NOTE

The medical platoon leader conducts reverse planning to ensure that all specified, implied, and essential tasks can be accomplished in the time available. He develops a reverse planning schedule (time line) beginning with actions on the objective and working backward through each step of the operation and preparation to the present time. This process also helps the platoon in making efficient use of planning and preparation time. Once the METT-TC analysis is complete, the medical platoon leader can then write the platoon mission statement based on the battalion CHS plan and answer the questions of WHO, WHAT, WHEN, WHERE, and WHY. This is a clear, concise statement of the purpose of the operation and the essential task(s) that will be crucial to its success. The essential tasks (the WHAT) should be stated in terms that relate to enemy forces, friendly forces, and/or the terrain (for example, "ESTABLISH BAS (-) ONE OR TWO TERRAIN FEATURES FROM THE MAIN BATTLE AREA"; **"ESTABLISH THE BAS 1 TO 3 KILOMETERS FROM THE MAIN** BATTLE AREA"; or "BE PREPARED FOR RAPID FORWARD DEPLOYMENT OF A TREATMENT TEAM IN SUPPORT OF COMPANY A"). The purpose (the WHY) explains how the platoon mission supports the commander's intent. The elements of WHO, WHERE, and WHEN add clarity to the mission statement.

#### NOTE

Simultaneous planning and preparation are key factors in effective time management during the troop-leading procedures. The next five steps (issue a WARNO; make a tentative plan; initiate movement; conduct RECON and coordination; and complete the plan) may occur simultaneously and/or in a different order. There may be multiple WARNOs.

b. Issue a Warning Order. The medical platoon leader alerts his platoon to the upcoming operation by issuing a WARNO that follows the five-paragraph OPORD format (see Table 3-1).

## NOTE

The medical platoon leader will often do this from the battalion TOC during mission analysis.

3-12

Warning orders maximize subordinates' planning and preparation time by providing essential details of the impending operation and detailing major time line events that will support mission execution. The amount of detail included in a WARNO depends on the available time, the platoon's communications capability, and the information subordinates need to initiate proper planning and preparation. The WARNO may include the following information:

• Changes to task organization.

• Updated graphics (platoons equipped with intervehicular information systems or appliqué digital systems send new overlays).

- Enemy situation.
- Battalion mission.
- Commander's intent (if available).
- Combat health support mission.
- A tentative time line, to include the following:
  - Earliest time of movement.
  - Readiness condition and vehicle preparation schedule.
  - Reconnaissance.
  - Training/rehearsal schedule.

## NOTE

Some individual and collective training may be initiated by the medical platoon leader before he issues the OPORD; this technique maximizes preparation time and allows the platoon to focus on tasks that will support the anticipated operations. For example, a medical platoon may train on treatment of different types of wounds or injuries that may be seen during the operations.

• Time and location at the battalion OPORD will be issued, plus the platoon OPORD will also be briefed.

• Service support instructions (if not included in the time line).

As critical information is received or updated, the medical platoon leader should issue subsequent or updated WARNOs to keep the platoon informed.

*c.* Make a Tentative Plan. The medical platoon leader begins developing his CHS plan when the battalion receives its first WARNO from the brigade. Based on the commander's intent, guidance, and the results of his mission analysis, the medical platoon leader develops a tentative plan that addresses all specified, implied, and essential tasks using the OPORD format. The tentative plan also covers RECON and coordination requirements between the platoon and adjacent and supporting units. The field medical assistant and the medical platoon SGT are excellent sources of ideas concerning the battalion CHS plan. The medical platoon leader can develop his COA and OPORD almost simultaneously with the battalion OPORD. Since the medical platoon is a battalion asset, most of their specified tasks will be developed during the battalion MDMP. The medical platoon leader can issue a WARNO from the battalion TOC during his participation in the MDMP. By the time the OPORD is given, he should have most of his platoon order prepared. The development of the platoon time line from backward planning should be his priority as soon as the battalion OPORD is prepared.

*d.* Initiate Movement. Many of the battalion-level operations require movement to forward assembly areas and to battle positions during the planning phase of an operation. This means that elements of the medical platoon will also move to these locations in support of the battalion units. Medical platoon elements move with the supported units according to the battalion plan. As often as possible, within the restraints of OPSEC, medical task organization should be done during hours of daylight, or as early as possible. In spite of multiple "own the night technologies," executing movements required by task organization is still more efficiently accomplished in daylight. Activities may include ensuring CHS for the company quartering party or beginning priorities of work.

Conduct Reconnaissance and Coordination. Effective RECON takes into account the factors ρ of METT-TC and OAKOC from both friendly and enemy perspectives. As a minimum, the field medical assistant or the platoon SGT conducts a detailed map RECON to identify primary and alternate routes of MEDEVAC and preplanned sites for locating the BAS or a BAS (-). If time and security considerations permit and authorization is obtained from higher headquarters, an on-site ground RECON is the best way to survey the AO. In addition, the medical platoon leader should check with the S2 for an intelligence update. The medical platoon leader should take as many ambulance squad leaders as possible on his RECON. For offensive operations, the medical platoon leader should attempt to find a vantage point that will permit rapid accessibility to supported units while making use of natural terrain features to afford as much protection as possible for the BAS. Ground RECON for offensive operations usually is limited to checking routes to the start point (SP), the line of departure (LD), and the axis just beyond the LD. For defensive operations, the medical platoon leader should conduct a RECON of the unit position and the MEDEVAC routes to be used. Whenever tactically feasible, the platoon should make provisions to mark routes and locations for day and night operations during the RECON. See Chapter 4 for TTP on marking routes and positions. During the RECON (or during battalion-level rehearsals), the medical platoon leader or his representative should coordinate evacuation routes with supported companies.

*f.* Complete the Plan. The medical platoon leader refines the plan based on the results of the wargame, RECON, and coordination with the BSS' FSMC and supported battalion units. He then completes the plan using these results and any new information from his commander. He should keep the plan as simple as possible, at the same time ensuring that the CHS plan supports the commander's intent.

Issue the Order. Prior to the order, the platoon NCO should ensure that all subordinate g. elements have copies of the overlays correctly posted to the maps and a copy of any matrices from the battalion OPORD that covers key CHS actions. All platoon members receiving the OPORD verbally should be prepared to copy these instructions in the five-paragraph OPORD format. They should ask for explanations of any terminology or actions that they do not understand. If possible, the medical platoon leader issues the order from a vantage point overlooking the terrain on which the platoon will support the maneuver units. If not, he uses a terrain model, sand table, sketches, or his map to orient the platoon. He can also build a model of the AO using a briefing kit that contains such items as engineer tape, colored yarn, 3- by-5-inch index cards, and "micro" vehicle models. When time and security permit, the medical platoon leader issues the order to as many members of the platoon as possible. As a minimum, he assembles the treatment teams and ambulance squads, and combat medic section. He briefs the platoon using the fiveparagraph OPORD format. He should then send the ambulance emergency care SGT to brief the trauma specialist assigned to each of the maneuver companies. To ensure complete understanding of the operation, the medical platoon leader and medical platoon personnel conduct confirmation briefings immediately after the OPORD is issued. The treatment team and ambulance team leaders brief the medical platoon leader to confirm their understanding of his intent, the specific tasks their team must perform, and the relationship between their tasks and those of other medical units/elements in the operation. If time permits, the medical platoon leader should lead the medical platoon in a walk-through using a sand table.

*h.* Supervise and Refine. Flexibility is the key to effective operations. The medical platoon leader must be able to refine his plan whenever new information becomes available. If he adjusts the plan, he must inform the platoon and supervise implementation of the changes. Once the operation has begun, the medical platoon leader must be able to direct his platoon in response to new situations and new orders. Platoon orders, back-briefs, rehearsals, and inspections are essential elements of the supervision process as the platoon prepares for the mission. The following paragraphs discuss these procedures in detail:

(1) *Team orders*. The medical platoon leader, the field medical assistant, and the platoon SGT make sure all ambulance team members have been briefed by squad leaders (heavy battalion and mechanized infantry medical platoons have track commanders [TC] for their M113 and M557 armored ambulance and treatment vehicles) and understand the platoon mission and concept of the operation.

(2) *Back-briefs*. The back-brief is, in effect, a reverse briefing process; those who receive an OPORD confirm their understanding of the order by repeating and explaining details of the operation for their leader or commander. In the medical platoon, the medical platoon leader should conduct back-briefs after the TC/team leaders have had a chance to review the OPORD but before the platoon rehearsal begins. The TC/team leaders brief the medical platoon leader on **how** their teams will accomplish the specific tasks assigned to them in the order.

#### NOTE

Although the back-brief is an effective means of clarifying the specifics of the plan, it does not require medical platoon personnel to practice or perform their assigned tasks. By itself, therefore, it is not an ideal rehearsal technique. (3) *Rehearsals*. A rehearsal is a practice session conducted to prepare units for an upcoming operation or event. The medical platoon leader should never underestimate the value of rehearsals. Many units, in fact, consider rehearsals as a separate step (ninth) of troop-leading procedures. The medical platoon leader uses well-planned, efficiently run rehearsals to accomplish the following:

- Reinforce training and increase proficiency in critical tasks.
- Reveal weaknesses or problems in the plan.
- Synchronize the actions of subordinate elements.
- Confirm coordination requirements between the platoon and supporting medical

units/elements.

• Improve each soldier's understanding of the concept of the operation, the direct fire plan, anticipated contingencies, and possible actions and reactions for various situations that may arise during the operation.

Effective rehearsals require personnel to perform required tasks, ideally under conditions that are as close as possible to those expected for the actual operation. Participants maneuver their actual vehicles or use vehicle models or simulations while interactively verbalizing their elements' actions. In a platoon-level rehearsal, the medical platoon leader will select the tasks to be practiced and will control execution of the rehearsal. The platoon can prepare for operations using reduced-force rehearsals and/or full-force rehearsals. The medical platoon leader conducts reduced-force rehearsals when time is limited or the tactical situation does not permit everyone to attend. Platoon members, who can take part, practice their actions on mock-ups, sand tables, or actual terrain (usually over a smaller area than in the actual operation). The full-force rehearsal is the most effective, but consumes the most time and resources. It involves every soldier who will participate in the operation. If possible, it should be conducted under the same conditions (such as weather, time of day, and terrain) that the platoon expects to encounter during actual operations. The medical platoon leader can choose among several techniques in conducting rehearsals, which should follow the crawl-walk-run training methodology to prepare the platoon for increasingly difficult conditions. Rehearsal techniques include the following:

• *Special rehearsal*. Individual and/or team tasks that will be critical to the success of the operation are rehearsed as necessary. The medical platoon leader may initiate special rehearsals when he issues the WARNO.

• *Map rehearsal.* This is usually conducted as part of a back-brief involving the TC or a complete ambulance team. The leader uses the map and overlay to guide participants as they back-brief their role in the operation. If necessary, he can use a sketch map.

• *Communications rehearsal.* This reduced-force or full-force rehearsal is conducted when the situation does not allow the platoon to gather at one location. Crewmen check their vehicles' communications systems and rehearse key elements of the platoon fire plan.

• *Key leader rehearsal.* Usually conducted as part of a larger force, this rehearsal involves leaders moving over the key terrain in wheeled vehicles while discussing the mission.

• Sand table or terrain model. The reduced-force or full-force technique employs a small-scale table or model that depicts graphic control measures and important terrain features for reference and orientation. Participants walk or move "micro" vehicles around the table or model to practice the actions of their own vehicles in relation to other members of the platoon.

• *Force on force.* This is used during a full-force rehearsal. The platoon may rehearse with sections or individual tanks going "force on force" against each other. Platoons should first rehearse with good visibility over open terrain. Rehearsals become increasingly realistic until they approximate those expected in the AO.

(4) *Inspections*. Inspections allow the medical platoon leader to check the platoon's operational readiness. The key goal is to ensure that soldiers and vehicles are fully prepared to execute the upcoming mission. Inspections also contribute to improved morale. It is essential that all leaders in the medical platoon know how to conduct precombat checks according to the platoon SOP. Procedures for a comprehensive inspection include the following:

• Perform before-operation maintenance checks and report or repair deficiencies.

• Upload vehicles according to platoon SOP. The standardization of load plans allows the medical platoon leader, the field medical assistant, and the platoon SGT to quickly check accountability of equipment. It also ensures standard locations of equipment in each vehicle; this can be an important advantage if the soldiers are forced to switch to a different vehicle during an operation.

• Review the supply status of rations, water, fuel, oil, ammunition, MES, first-aid kits, and batteries (for such items as flashlights, night vision devices, and NBC alarms). Direct resupply operations as necessary.

• Ensure vehicles are correctly camouflaged so they match the AO.

The medical platoon leader, the field medical assistant, and/or the platoon SGT should observe treatment and ambulance teams during preparation for CHS operations. They should conduct the inspection once the TC/squad or team leader report that their team(s) and vehicles are prepared. The precombat inspection must be a "hands on, show me that it works" event. This is the only way to ensure the platoon is properly prepared. If trauma specialists and/or ambulance teams cannot return to the platoon, then someone goes to inspect them.

## **3-5.** Abbreviated Troop-Leading Procedures

When there is not enough time to conduct all eight troop-leading steps in detail, such as when a change of mission occurs after an operation is in progress, the medical platoon leader must understand how to trim the procedures to save time. Most steps of these abbreviated troop-leading procedures are done mentally, but

the medical platoon leader skips none of the steps. Once the order is received, the medical platoon leader conducts a quick map RECON, analyzes the mission using the factors of METT-TC, and sends for the TC and team leaders. He makes sure they post the minimum required control measures on their maps and issues a FRAGO, covering the key elements of the enemy and friendly situations, the platoon mission, and the concept of the operation. The medical platoon leader and TC may also conduct a quick walk-through rehearsal of critical elements of the CHS plan using a hastily prepared terrain model or sand table. In some cases, there may not be enough time even for these shortened procedures. The platoon may have to move out and receive FRAGO by radio or at the next scheduled halt. It then becomes critical for the medical platoon leader to send FRAGO of his own to the TC and team leaders explaining the platoon's requirements and objectives in supporting the battalion maneuver plan. Digital and Global Positioning Systems (GPS) are valuable tools when the platoon is forced to use abbreviated troop-leading procedures and FRAGO. They allow the medical platoon leader to designate way points to assist in navigation and identifying evacuation routes. Other keys to success when abbreviated procedures are in effect include a well-trained platoon; clearly developed, thoroughly understood SOP; and an understanding by all members of the platoon of the current tactical situation (situational understanding). The medical platoon leader, the field medical assistant, and the platoon SGT must keep the platoon informed of the ever-changing enemy and friendly situations. They accomplish this by monitoring the battalion net and issuing frequent updates to the other platoon members using the radio and digital information systems. Whenever time is available, however, there is no substitute for effective, thorough troop-leading procedures. The odds of success increase still further when detailed planning and rehearsals are conducted prior to an operation, even if time is limited. Successful medical platoon leaders make the most of every available minute. Specified delegation of tasks will also speed this process up.

# Section III. COMPUTERS, INFORMATION, DIGITIZATION, AND COMMUNICATIONS

# 3-6. Medical Standard Army Management Information System

The MC4 system when fielded will be a theater, automated CHS system, which links commanders, health care providers, and supporting elements, at all echelons, with integrated medical information. The MC4 system when developed and fielded will receive, store, process, transmit, and report medical C2, medical surveillance, casualty movement/tracking, medical treatment, medical situational understanding, and MEDLOG data across all levels of care. This will be achieved through the integration of a suite of medical information systems linked through the Army data telecommunications architecture. The MC4 system begins with the individual soldier and continues throughout the health care continuum. The best way to visualize the future MC4 system capability is as a piece of the Army digital computer network where all ten CHS functional areas have been digitized and CHS information on AMEDD functional areas. When fully developed, not only will the MC4 system provide Army commanders with CHS information, but will provide them with a seamless transition to the joint CHS environment. The MC4 system will consist of three basic components: software, hardware, and telecommunications systems.

## a. Software capability.

(1) The joint TMIP will provide government off-the-shelf (GOTS)/commercial off-the-shelf (COTS) software and interoperability standards to support joint theater operations. The software provides an integrated medical information capability that will support all echelons of care in a theater of operations with links to the sustaining base. Medical capabilities provided by the software to support commanders in the theater will address medical C2 (including medical capability assessment, sustainability analysis, and MI); MEDLOG (including blood product management and medical maintenance management); casualty evacuation; and health care delivery.

(2) The MC4 system will support Army-unique requirements and any software needed to interface with Army information systems such as CSSCS, Global Combat Support System-Army (GCSS-A), FBCB2, Warrior Programs, and the Movement Tracking System. These systems will also be used in the medical platoons of the new IBCT. For additional IBCT medical platoon information, see Appendix D.

*b. Hardware Systems*. The hardware will consist of COTS automation equipment supporting the above software capabilities. Examples include, but are not limited to, computers, printers, networking devices, a digital patient record, and personal information carriers (PIC) that contain medical information.

*c. Telecommunications Systems*. The MC4 system will rely on current and proposed Army solutions for tactical, operational, and strategic telecommunications systems to transmit and receive digitized medical information throughout the theater and back to the sustaining base. There will be no separate AMEDD communication system. Telecommunications at brigade and below will be accomplished through the tactical internet; above brigade level, telecommunications will be accomplished through the Warfighter Information Network (WIN) architecture. The MC4 system will include hardware or software required to interface with current and emerging technologies supporting manual, wired, and wireless data transmission. At end-state, the MC4 system users will exchange data electronically via the WIN architecture. In the interim, commercial satellite and/or high frequency radios will be fielded to selected medical units (for example, Medical Detachment-Telemedicine [MDT], and so forth) receiving the MC4 system to support high bandwidth requirements until the WIN architecture is fully fielded. Personnel operating satellite assets are resourced in the MDT TOE and will be located with the MDT.

*d.* Patient Treatment Recording System. In the future under the MC4 system, medical information about each soldier of the maneuver battalion will be entered into a local database maintained at the supporting BAS or troop medical clinic. This information will include the soldier's immunization status, medical deployability status, and dental deployability status. Until a digital patient record and the PIC are fully functional and fielded, and in accordance with AR 40-66, a field medical record jacket (DD Form 2766) and its accompanying records will be maintained by the soldier's primary care provider. See Appendix B for definitive information on management of the individual health record in the field.

## **3-7.** Information and Communications

a. The Medical Platoon Communications and Information Systems. Information and communications assets available to the BSS include those identified in Table 3-2. In the digitized medical platoon, each vehicle will have a FBCB2/position/navigation system (1 each). The FBCB2 system aids the medical platoon with maintaining real-time situational understanding of what is happening on the battlefield. The medical platoon exchanges information with forward deployed medical platoon elements, the FSMC, and the BSS.

b. Combat Health Support Functions on Force XXI Battle Command Brigade and Below System. The FBCB2 system is a hardware/software suite that digitizes C2 at brigade and below level. This system provides a seamless battle command capability for performance of missions throughout the operational continuum at the tactical level. The FBCB2 system is the implementation of information technology to provide increased battlefield operational capabilities. The system is positioned on specified platforms and will perform combat, CS and CSS functions for the planning and execution of operations. This system gives the medical platoon a CRP of the current CHS situation at BASs, AXPs, and the FSMC. For the first time, the medical organizations and elements are digitally linked to the platforms and organizations they support. The current CSS functionality on FBCB2 system gives the combatant a common relevant picture of the current CSS situation at his level of command and at subordinate levels. It also provides the personnel and logistics leaders situational understanding of CSS operations throughout their battle space. It provides an enhanced capability to synchronize support to customer units. Combat service support functionally on FBCB2 includes the following:

- Logistical Situational Report (LOGSITREP).
- Personnel Situational Report.
- Medical Situational Report (MEDSITREP).
- Situational understanding.
- Logistics call for support.
- Logistics task order.

Currently, the FBCB2 system also permits information to be entered using free text such as comments and other pertinent CSS information. This common battle space picture will enable CHS providers to maintain the operational tempo set by the maneuver commander. There are three medical screens incorporated into the CSS FBCB2 function. They are the medical functionality in the LOGSITREP, the MEDSITREP, and the MEDEVAC request. It is important that units use standard message and report formats to eliminate confusion. As the system is further developed and additional CHS screens are added, there will be less space for using free text. Figure 3-3 is the medical screen as seen on the CSS function of FBCB2. Descriptions of each screen are provided below.

(1) *Medical functionality in the logistical situational report*. This message provides visibility of selected Class VIII items at the BAS and FSMC stock levels, date and time group of the most recent report, and location of medical units. Recipients of the report are the FSC, the FSB support operations (HSSO), the BSS, and the DSS. This report is entered into the CSSCS by the BSS.



## Figure 3-3. Sample of medical screen incorporated into the combat service support Force XXI Battle Command Brigade and Below function.

(2) *Medical Situational Report*. The FSMC and BAS prepare and submit this report. The recipients of the report are maneuver commanders and their S1, the FSC, the FSB support operations (HSSO), the BSS, and the DSS. The BSS and FSMC receive roll up from the BASs. The DSS receives a roll up of the FSMC reports. Adjacent units can receive information copies of the MEDSITREP. This message reports the following information:

(a) Current location and proposed next location with estimated time of arrival.

(b) Number of patients seen and classified as wounded in action, DNBI, dental, and combat stress. The field will also show the number of patients evacuated and the number RTD.

(c) Patient(s) awaiting MEDEVAC.

(d) The Class VIII status of the element/unit, the number of ambulances that are mission capable, and the number of units of blood and type on hand, if required.

(e) There will be a free text field for critical Class VIII or other supply shortages and commander's comments.

(3) *Medical evacuation request.* This request is currently embedded into FBCB2 and is a digitized standard 9-line MEDEVAC request. The current messaging is from the requestor to the medical platoon leader (with an information copy to the maneuver battalion commander). The medical platoon leader either responds or forwards the request to the FSMC commander who dispatches the appropriate MEDEVAC asset. Information copies of all MEDEVAC requests are sent to the BSS so they can maintain real-time situational understanding on the volume of requests. The FSMC commander sends an information copy to the BSS with after-action information that includes destination of evacuated patient(s).

## 3-8. Radio Nets

*a.* Battalion Communications. Battalion communications are sent over a variety of radio nets. Primary battalion communications nets are—

(1) *Command net*. A secure command net is used for C2 of the TF. All organic and attached units, including the FSO, forward air controller, and leaders of supporting elements, enter the battalion command net. Primarily, during the execution of the mission, only commanders transmit; all others monitor and transmit only essential information. The command operations net (see Figure 3-4) is controlled by the battalion main CP.

(2) *Operation and intelligence net*. The operations and intelligence (O&I) net is a secure net established to provide a mechanism for the battalion TF to accept routine items of information concerning O&I reporting without cluttering or interfering with the battalion command net.

(3) *Administrative/logistics net*. The administrative/logistics net is a tactical net, controlled by the combat train command post (CTCP), used to communicate the administrative and logistical requirements of the TF. All organic and attached units normally operate in this net.

#### (4) Special radio nets.

(a) The scout platoon net or a designated frequency may function as a surveillance net when required. The S2 and elements assigned surveillance missions operate on this net. Other elements enter or leave the net to pass information as required.

(b) The FSE and company fire support teams operate in the supporting FA command fire direction net and a designated fire direction net to coordinate FA fires for the battalion. The TACP operates in USAF tactical air-request and air-ground nets to control air strikes.

(c) Supporting air defense units monitor the early warning net. In the absence of collocated air defense support, the main CP will also monitor the division early warning net.

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(d) Attached or OPCON support assets may operate in their parent unit nets, but they must also monitor the command net at all times.



Figure 3-4. Example of a battalion command operations net.

*b.* Administrative/Logistics Radio Net. The administrative/logistics radio net (see Figure 3-5) is used for most CSS traffic. However, at battalion level, CSS communications can be via any combination of FM radio, mobile subscriber equipment (MSE), courier, computer, or wire. Lengthy reports should be sent by messenger, wire, computer, or tactical facsimile (FAX).

(1) The CTCP is the NCS for the administrative/logistics net. The S4, S1, HHC commander, battalion maintenance team (less light), support platoon leader, medical platoon leader, company XO or 1SG, and others (as required) operate in the battalion administrative/logistics net. The CTCP also operates in the brigade administrative/logistics net and in the battalion command net.

(2) The main CP and CTCP should be positioned, when wire is available and circumstances permit, so wire can be used as the main means of communication between them. Wire allows a constant flow of information between the CP. It also enhances the ability of the CTCP to stay abreast of the tactical situation and thus to provide better support. Wire communications produce no electronic signature and, therefore, are more secure than radio. When MSE is fielded, wire is needed only as a backup means of communications.

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\* WHEN NOT USED IN RETRANSMISSION ROLE.

Figure 3-5. Example of an administrative/logistics net.

*c. Medical Platoon Internal Operations Net.* The platoon has access to the maneuver battalion HHC wire communications network for communications with all major elements of the battalion. Wireless communications for this section consists of a tactical FM radio mounted in the platoon headquarters vehicle. The medical platoon employs an FM radio network for CHS operations. The platoon headquarters section serves as the NCS for the platoon (see Figure 3-6). Table 3-2 lists the information and communications assets available to the Force XXI medical platoon.



Figure 3-6. Example of the medical platoon internal operations net.

#### Table 3-2. Information and Communications Assets Available to the Force XXI Battalion Medical Platoon

RADIO SETS							
AN/VRC-89F AN/VRC-88F AN/VRC-90F	PLATOON HEADQUARTERS VEHICLE AND TREATMENT TEAM ALPHA (SURGEON) VEHICLE (1 EACH) TREATMENT TEAM BRAVO PLATOON AMBULANCE (1 EACH)						
ROUTERS	COMPUTER SYSTEMS						
TACTICAL LAN	MC4 LAPTOPS FOR EACH TREATMENT AND AMBULANCE VEHICLE						
LANKOUTER	FBCB2, 1 IN EACH VEHICLE ASSIGNED TO THE MEDICAL PLATOON						
OTHER SYSTEMS							
FBCB2 GPS EPLRS BCIS DVE	MEDICAL PLATOON VEHICLE (1 EACH) MEDICAL PLATOON VEHICLE (1 EACH) MEDICAL PLATOON VEHICLE (1 EACH) MEDICAL PLATOON VEHICLE (1 EACH) MEDICAL PLATOON VEHICLE (1 EACH)						

*d.* Brigade Medical Operations Net. The brigade medical operations net under Army of Excellence units is the FSMC's command net. For Force XXI brigades and brigades with surgeon's sections assigned to the brigade, the brigade headquarters will maintain communications with medical elements supporting the brigade through its FM medical net. Single-channel ground and airborne radio system (SINCGARS) components provide the BSS with an AN/VRC-89 series radio set (FM) which has a receiver/transmitter (RT) capable of using two FM nets for reception and transmission. This permits the BSS to communicate with CHS elements via the administrative/logistic net (FM). The AN/VRC-89 series has two RTs (and one power amplifier). Two RTs allow the BSS to participate in two FM nets. These nets include the brigade administrative/logistics net and one each of the three medical platoons operations nets. The BSS also communicates using amplitude modulated (AM)-improved high frequency radios (IHFR) with its AN/GRC-213 or AN/GRC-193A radio. Another technique is to use the FSMC command net for brigadewide medical communications while using the administrative/logistics net for other CSS integration (see Figure 3-7). Situational understanding is monitored using the FBCB2 system and by face-to-face contact with other brigade staff members in the brigade TOC.

e. Mobile Subscriber Equipment. Mobile subscriber equipment will allow the BSS to communicate throughout the battlefield in either a mobile or static situation. As the Army continues to digitize the battlefield and modernize the force, the use of automation continues to develop. The MSE packet switching network gives units the ability to connect to division and corps LAN or wide area networks (WAN). A WAN is similar to the LAN but covers a larger distance. This allows units/CP to connect computer systems such as the CSSCS, maneuver control system, and FBCB2 system to an ethernet cable (coaxial) and send and receive information in an extremely efficient manner. Because of the limitations of a network constructed with coaxial cable, a WAN uses a combination of the MSE packet switch network and radio networks to distribute the data where necessary through the system. Packet switching does not use or take up existing telephone lines. Instead, telephone lines are freed up even more because information is being sent over a network on computers and related equipment. Using the common hardware/software facilitates the interface and exchange of information between the BSS and the medical platoons operating BAS, the FSMC, the DSS, the corps, and the division medical elements. See FM 63-2-2 for information concerning automated data processing continuity of the operations plan.



Figure 3-7. Medical company/troop command FM net/brigade medical operations net.



Figure 3-8. Dedicated medical evacuation FM net.