



## DoD SPACE PLANNING CRITERIA

### CHAPTER 350: EMERGENCY AND AMBULANCE SERVICES JULY 1, 2017

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**Originating Component:** Defense Health Agency Facilities Division

**Effective:** July 1, 2017

**Releasability:** No Restrictions

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**Purpose:** This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for DoD Military Health System (MHS) facilities.

# ***SUMMARY of CHANGE***

This revision, dated July 1, 2017 includes the following:

- On page 14, section 4.5. FA5: TREATMENT, room 27, Scanning Room, CT (XCTS1), changed the stated net square footage from 380 NSF to 360 NSF to align with SEPS.
- On page 15, section 4.6. FA6: TRAUMA / RESUSCITATION, room 7, Storage, Trauma / Resuscitation Room (Level III / IV) (SRSE1), changed the stated net square footage from 90 NSF to 1200 NSF; changed the increment of growth in the criteria statement to read “greater than two”.
- On page 17, section 4.7. FA7: SUPPORT, deleted room 18, Scrubs Distribution Room (LCCL4).

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## **SECTION 1: PURPOSE AND SCOPE**

### **1.1.**

This chapter outlines space planning criteria for services and programs provided in Emergency and Ambulance Services within the Military Health System (MHS).

- A. Space in this chapter is provided for, but is not limited to, the following:
  - 1. Emergency Medicine and Ambulance Services, as well as space for the Ambulance Garage and Ambulance Shelter.
  - 2. Triage. Space is included adjacent to the main Emergency Department for medical screening and patient intake.
  - 3. Emergency Department Treatment Spaces. The minimum sized Emergency Department will include the following six (6) Treatment Rooms:
    - a. Two ED Treatment Rooms
    - b. One ED Airborne Infection Isolation (AII) Treatment Room
    - c. One ED Bariatric Treatment Room
    - d. Two Trauma / Resuscitation Rooms (Level I / II) or (Level III / IV)
  - 4. Clinical Decision / Observation Unit. Includes a functional area for this unit if one is required by the Concept of Operations. This unit is for patients requiring observation for up to 24 hours (e.g., a Clinical Decision Unit or Chest Pain Center). It may be located in the Emergency Department or elsewhere in the hospital. It requires dedicated space, equipment, supplies and appropriate staffing. The planner must consult with other departments to ensure that the spaces within this functional area are not duplicated.
- B. The importance of Military Treatment Facility (MTF) leadership and staff input (i.e., provider, nurse, paramedic) on specific ED facility planning efforts can help identify those locations where the standard benchmark of 1,800 annual visits per ED Treatment Room may not work, or to ensure the mix of rooms listed above is appropriate for that MTF.
- C. Some medical facilities within the MHS will serve as receiving, triage and initial treatment centers in the event of infectious disease outbreaks; natural or man-made disasters; or nuclear, biological or chemical (NBC) exposures. The planner must ensure that an area is designated for Mass Casualty Decontamination, as this function is not located within the confines of the Emergency Department and thus not in this chapter.

- D. The space planning criteria in this chapter apply to all MTFs and are based on current DoD policies and directives, established and/or anticipated best practices, industry guidelines and standards, and input from DoD Subject Matter Experts (SME) and Defense Health Agency (DHA) Service contacts. As directed by the DHA, these space criteria are primarily workload driven; additional drivers are staffing and mission. Room Codes (RC's) in this document are based on the latest version of DoD UFC 4-510-01, Appendix B.

## **SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA**

### **2.1.**

- A. Workload projections and planned services / modalities for a specific MHS facility project shall be sought by the planner in order to develop a project based on these Criteria. Healthcare and clinical planners working on military hospitals, medical centers and clinics shall utilize and apply the workload based criteria set forth herein for identified services and modalities to determine space requirements for the project.
- B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for the Emergency and Ambulance Services and its relationship with other services of a medical facility. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for Service Members and their dependents.
- C. These criteria are subject to modification relative to equipment, medical practice, vendor requirements, and subsequent planning and design. The final selection of the size and type of medical equipment is determined during the design process.
- D. Calculation of the number and -in some cases- the area (NSF) of rooms is performed in one of the following methods:
1. Directly workload-driven
  2. Indirectly workload-driven
  3. Mission or Staffing-driven

The directly workload-driven rooms are based on workload projections entered in response to the Workload Input Data Statements (IDSs) included in Section 3. The directly workload driven room in this chapter is the ED Treatment Room.

The indirectly workload-driven rooms are derived from the preceding group. They are typically in the Reception and Support Functional Areas. Examples are Waiting, or the number of clean or soiled utility rooms.

The mission / staffing-driven rooms are created based on Boolean ‘yes/no’ or numeric responses to the Mission and Staffing Input Data Statements (IDSs).

- E. The Net Square Feet (NSF) and Room Code (RC) for each room in Section 4: Space Planning Criteria of this chapter was provided by or approved by the Defense Health Agency (DHA) Template Board.
- F. For a projected annual workload of 10,800 ED visits or less, the number of ED Beds generated in a project is six; they are allocated as follows.

**TABLE 1: BASELINE BED ALLOCATION**

<b>MINIMUM BASELINE BED ALLOCATION</b>		
<b>Bed Number</b>	<b>Allocated in...</b>	<b>Condition to generate</b>
1	ED Treatment Room (Min)	Projected annual ED visits equal to or less than 10,800
2	ED Treatment Room (Min)	
3	ED Airborne Infection Isolation (All) Treatment Room (Min)	
4	ED Bariatric Treatment Room (Min)	
5	Trauma / Resuscitation Room (Level I / II) (Min)	Projected annual ED visits equal to or less than 10,800 <u>and</u> Level I / II authorized
	Trauma / Resuscitation Room (Level III / IV) (Min)	Projected annual ED visits equal to or less than 10,800 <u>and</u> Level III / IV authorized
6	Trauma / Resuscitation Room (Level I / II) (Min)	Projected annual ED visits equal to or less than 10,800 <u>and</u> Level I / II authorized
	Trauma / Resuscitation Room (Level III / IV) (Min)	Projected annual ED visits equal to or less than 10,800 <u>and</u> Level III / IV authorized

- H. For a projected annual workload of greater than 10,800 ED visits, the total number of ED Beds is calculated by dividing the projected workload greater than 10,800 by 1,800.

Formula 1: Calculation of the number of ED Beds, greater than six, when projected annual workload is greater than 10,800.

$$\frac{(\text{Projected Number of Annual ED Visits} - 10,800)}{1,800}$$

The resulting numbers of ED Beds are in addition to the six ED Beds in Table 1 and shall be generated in the priority order in Table 2.

**TABLE 2: PROJECTED ANNUAL ED VISITS GREATER THAN 10,800**

<b>NUMBER OF ED TREATMENT BEDS / ROOMS</b>		
<b>ED Bed Assignment Priority</b>	<b>Allocated in...</b>	<b>Condition to generate an ED Bed:</b> Provide one for every increment of 1,800 projected ED annual visits greater than 10,800 <b>AND...</b>
1	ED Airborne Infection Isolation (All) Treatment Room (*)	per each ED Airborne Infection Isolation (All) Treatment Room greater than one authorized per the MTF's Infection Control Risk Assessment (ICRA)
2	ED ENT Treatment Room	if an ED ENT room is authorized
3	ED SANE Room	if an ED SANE room is authorized
4	ED OB / GYN Room	if an ED OB / GYN room is authorized
5	ED Multi-Station Treatment Room	If an ED Multi-Station Treatment Room is authorized, provide three ED beds minimum
6		
7		
8		Provide an additional 60 NSF per each ED bed station greater than three authorized for the ED Multi-Station Treatment Room (max 360 NSF)
9	Trauma / Resuscitation Room (Level I / II)	if an additional Trauma / Resuscitation Room is authorized <u>and</u> if a Level I or Level II Trauma Center is authorized
10	Trauma / Resuscitation Room (Level III / IV)	if an additional Trauma / Resuscitation Room is authorized <u>and</u> if a Level III or Level VI Trauma Center is authorized
11...	ED Treatment Room	per each increment of 1,800 projected annual ED visits remaining

(\*) More than one possible

- I. The Room Names in Table 1 have (Min) appended at the end of the name to indicate that they correspond to the minimum sized ED project generated when the projected number of annual ED visits is 10,800 or less. If the projected workload is greater than 10,800 annual ED visits, additional rooms are generated based on every increment of 1,800 annual ED visits and the conditions indicated for each room. When a PFD is developed using SEPS, the PFD Report will indicate the quantities for room names with (MIN) and the same room names without (Min) in the report.

**TABLE 3: ROOM NAMING CONVENTION**

<b>ROOM NAME / ROOM CODE</b>		
<b>Room Code</b>	<b>Room Name</b>	
	<b>Projected annual ED visits equal or less than 10,800 (Table 1)</b>	<b>Projected annual ED visits greater than 10,800 (Table 2)</b>
EXER1	ED Treatment Room (Min)	ED Treatment Room
EXER2	ED Airborne Infection Isolation (All) Treatment Room (Min)	ED Airborne Infection Isolation (All) Treatment Room
EXEB1	Treatment Room, ED Bariatric (Min)	Not provided
TRET3	Trauma / Resuscitation Room (Level I / II) (Min)	Trauma / Resuscitation Room (Level I / II)
TRET4	Trauma / Resuscitation Room (Level III / IV) (Min)	Trauma / Resuscitation Room (Level III / IV)

- J. Calculation of the number of indirectly workload-driven rooms are derived from the total number of ED Beds / Rooms generated based on Tables 1 & 2. These rooms are mostly in the following Functional Areas:
- a. FA 3: ED Reception
  - b. FA 4: Triage
  - c. FA 5: ED Treatment
  - d. FA 6: Trauma / Resuscitation
  - e. FA 7: ED Support

Mission and Staffing driven rooms are generated based on answers to specific Input Data Statements.



## **SECTION 3: PROGRAM DATA REQUIRED**

**3.1. INPUT DATA STATEMENTS.** Input Data Statements are based on questions about Workload (W), Mission (M), Staffing (S) and Miscellaneous (Misc) information.

1. How many Emergency Department (ED) annual visits are projected? (W)
2. Is an On-Call Room for Ambulance Service authorized? (M)
3. How many ED Airborne Infection Isolation (AII) Treatment Rooms are authorized per the MTF's Infection Control Risk Assessment (ICRA)? (Misc)
4. Is an ED ENT Treatment Room authorized? (M)
5. Is an ED SANE Treatment Room authorized? (M)
6. Is a second ED Behavioral Health Patient Secure Holding Room authorized? (Misc)
7. Is an ED Behavioral Health Nurse Station authorized? (M)
8. Is an ED OB / GYN Treatment Room authorized? (M)
9. Is an ED Multi-Station Treatment Room authorized? (M)
  - a. How many ED Stations, greater than three, are authorized? (Misc)
10. Is a Procedure Room authorized? (Misc)
11. Is an ED Orthopedics Cast Room authorized? (M)
12. Is a Results Sub-Waiting Room authorized? (M)
13. Is a General Radiology Room authorized? (M)
14. Is a CT Scanning Room authorized? (M)
15. Is a Level I / II Trauma Center authorized? (M)
  - a. Is an additional Trauma / Resuscitation Room (Level I / II), greater than two, authorized? (Misc)
16. Is a Level III / IV Trauma Center authorized? (M)
  - a. Is an additional Trauma / Resuscitation Room (Level III / IV), greater than two, authorized? (Misc)
17. Is a Body Viewing area authorized? (M)
18. Is a Satellite Pharmacy authorized? (M)
19. Is a Satellite Laboratory authorized? (M)
20. Is a Mass Casualty Storage Room in the Emergency Services Area authorized? (M)
  - a. How much additional Mass Casualty Storage NSF, greater than 120 NSF, is authorized? (Misc)
21. Is a Sub-Waiting for the Staff and Administration authorized? (Misc)
22. How many Emergency Medicine FTE positions are authorized? (S)
  - a. How many Emergency Medicine and Ambulance Services FTE positions are authorized to have a private office? (Misc)
  - b. How many Emergency Medicine and Ambulance Services FTE positions are authorized to have a shared office? (Misc)
  - c. How many Emergency Medicine and Ambulance Services FTE positions are authorized to have a cubicle? (Misc)
  - d. How many Emergency Medicine and Ambulance Services Male FTEs will work on peak shift? (Misc)

- e. How many Emergency Medicine and Ambulance Services Female FTEs will work on peak shift? (Misc)
- f. How many Ambulance Service FTE positions are authorized? (S)
- g. How many Receptionist FTE positions, greater than two, are authorized? (S)
- h. How many Quick Triage FTE positions are authorized? (S)
- 23. Is an On-Call Room authorized in the Emergency Department? (M)
- 24. Is a Scrubs Distribution Room for Staff and Administration authorized? (Misc)
- 25. Is an Emergency Medicine Graduate Medical Education (GME) program authorized? (M)
  - a. How many Resident / Student FTE positions are authorized for the Graduate Medical Education Program? (S)
- 26. Is a Clinical Decision / Observation Unit authorized? (M)
  - a. How many additional Single-Station Treatment / Observation Rooms, greater than four, are authorized? (Misc)
  - b. How many Clinical Decision / Observation Unit FTE positions will work on peak shift? (Misc)
  - c. Is a Portable Imaging Alcove for the Clinical Decision / Observation Unit authorized? (Misc).

## **SECTION 4: SPACE PLANNING CRITERIA**

For calculation of the number of Vending Machine areas, Public Toilets, Communication Closets, and Janitor Closets for this Chapter, please refer to DoD Space Planning Criteria Chapter 610: Common Areas.

### **4.1. FA1: ED BED CALCULATION.**

- |           |  |              |
|-----------|--|--------------|
| <b>1.</b> | <b>Number of ED Beds (CALC1)</b>   | <b>0 NSF</b> |
|           | Minimum six; provide an additional one for every increment of 1,800 Emergency Department (ED) annual visits greater than 10,800. |              |

### **4.2. FA2: AMBULANCE SERVICE.**

- |           |  |                |
|-----------|--|----------------|
| <b>1.</b> | <b>Vestibule, Ambulance Entry (LOB05)</b>  | <b>120 NSF</b> |
|           | Provide one for Ambulance Service.   |                |
| <b>2.</b> | <b>Alcove, Wheelchair (SRLW1)</b>  | <b>30 NSF</b>  |
|           | Provide one for Ambulance Service.   |                |
| <b>3.</b> | <b>Alcove, Stretcher (SRLW2)</b>   | <b>60 NSF</b>  |
|           | Provide one for Ambulance Service.   |                |
| <b>4.</b> | <b>Workroom, Ambulance Service (WRCH1)</b>   | <b>120 NSF</b> |
|           | Provide one; provide an additional 60 NSF per each Ambulance Service FTE position authorized greater than two. |                |

- |  |                |
|--|----------------|
| 5. <b>Storage, Ambulance Equipment (SRSE1)</b>   | <b>120 NSF</b> |
| Minimum NSF; provide an additional 30 NSF for every increment of two Ambulances authorized greater than two. |                |
| 6. <b>On-Call Room, Ambulance Service (DUTY1)</b>  | <b>120 NSF</b> |
| Provide one if an On-Call Room for Ambulance Service is authorized.  |                |
| 7. <b>Toilet / Shower, On-Call Ambulance Service (TLTS1)</b>   | <b>60 NSF</b>  |
| Provide one if an On-Call Room for Ambulance Service is authorized.  |                |

#### **4.3. FA3: RECEPTION.**

- |   |                |
|---|----------------|
| 1. <b>Vestibule, Emergency Department (LOB05)</b>   | <b>120 NSF</b> |
| Provide one for ED Reception.   |                |
| Locate at the walk-in entrance.   |                |
| 2. <b>Waiting (WRC01)</b>   | <b>120 NSF</b> |
| Minimum NSF; provide an additional 60 NSF for every increment of two ED Treatment Rooms, of any type, greater than four.                                    |                |
| 3. <b>Playroom (PLAY1)</b>  | <b>120 NSF</b> |
| Provide one for ED Reception.   |                |
| This space is provided to accommodate children's play activities, may be an open or enclosed area, and should be included within or adjacent to Waiting.    |                |
| 4. <b>Reception (RECP1)</b>   | <b>120 NSF</b> |
| Minimum NSF, provide an additional 60 NSF per each Receptionist FTE position authorized greater than two and per each Quick Triage FTE position authorized. |                |
| Minimum allocated NSF accommodates two FTEs.  |                |
| 5. <b>Security / Control Station (NSTA5)</b>  | <b>60 NSF</b>  |
| Provide one for ED Reception.   |                |
| 6. <b>Kiosk, Patient Check-in (CLSC1)</b>   | <b>30 NSF</b>  |
| Provide one for ED Reception.   |                |
| 7. <b>Alcove, Wheelchair (SRLW1)</b>  | <b>30 NSF</b>  |
| Provide one for ED Reception  |                |

#### **4.4. FA4: TRIAGE.**

1. **Screening Room, Triage (EXRG4)** **120 NSF**  
Minimum two; provide an additional one for every increment of ten ED Treatment Rooms greater than twenty; maximum six.
2. **Toilet, Patient (TLTU1)** **60 NSF**  
Provide one for Triage.

#### **4.5. FA5: TREATMENT.**

1. **Anteroom, Decontamination Shower (NBCD3)** **120 NSF**  
Provide one for ED Treatment.  
  
This secured external entrance leads into the Decontamination Shower Room.
2. **Decontamination Shower Room (NBCD2)** **120 NSF**  
Provide one for ED Treatment.  
  
Patient will access via the Anteroom; Decontamination Shower will have direct access to ED Treatment area.
3. **Treatment Room, ED (Min) (EXER1)** **150 NSF**  
Provide two for ED Treatment if the projected number of annual ED visits is 10,800 or less; refer to Table 1.
4. **Treatment Room, ED Airborne Infection Isolation (AII) (Min) (EXER2)** **180 NSF**  
Provide one for ED Treatment if the projected number of annual ED visits is 10,800 or less; refer to Table 1.
5. **Treatment Room, ED Bariatric (Min) (EXEB1)** **180 NSF**  
Provide one for ED Treatment if the projected number of annual ED visits is 10,800 or less; refer to Table 1.
6. **Toilet, Bariatric Patient (TLTB1)** **75 NSF**  
Provide one for ED Treatment.
7. **Treatment Room, ED Airborne Infection Isolation (AII) (EXER2)** **180 NSF**  
Provide one per each ED Airborne Infection Isolation (AII) Treatment Room authorized by the MTF's Infection Control Risk Assessment (ICRA), greater than one, if the projected number of annual ED visits is greater than 10,800; refer to Table

This room is part of the total number of workload driven exam rooms.

8. **Toilet, ED Airborne Infection Isolation (AII) Patient (TLTU1)**      **60 NSF**  
Provide one per each ED Airborne Infection Isolation (AII) Treatment Room.
  
9. **Treatment Room, ED ENT (EXEN2)**      **120 NSF**  
Provide one if an ED ENT Treatment Room is authorized and if the projected number of annual ED visits is greater than 10,800; refer to Table 2.
  
10. **Treatment Room, ED SANE (EXRG9)**      **180 NSF**  
Provide one if an ED SANE Treatment Room is authorized and if the projected number of annual ED visits is greater than 10,800; refer to Table 2.  
  
This room is part of a specialty suite with direct access from this room to a Toilet / Shower, Exam / Consult Room and Forensic Evidence Storage Room.
  
11. **Toilet / Shower, ED SANE (TLTS1)**      **60 NSF**  
Provide one if an ED SANE Treatment Room is generated.
  
12. **Exam / Consult Room, ED SANE (EXR10)**      **120 NSF**  
Provide one if an ED SANE Treatment Room is generated.
  
13. **Storage, ED SANE Forensic Evidence (SSFE1)**      **60 NSF**  
Provide one if an ED SANE Treatment Room is generated.
  
14. **Anteroom, Secure Holding (BRNP6)**      **60 NSF**  
Provide one for ED Treatment.
  
15. **Secure Holding (OPMH4)**      **120 NSF**  
Minimum one; provide an additional one if a second ED Behavioral Health Patient Secure Holding Room is authorized.
  
16. **Toilet, Secure Holding Patient (TLTP2)**      **40 NSF**  
Provide one for ED Treatment.
  
17. **Nurse Station, ED Behavioral Health (NSTA4)**      **60 NSF**  
Provide one if an ED Behavioral Health Nurse Station is authorized.
  
18. **Treatment Room, ED OB / GYN (EXRG8)**      **150 NSF**  
Provide one if an ED OB / GYN Treatment Room is authorized and if the projected number of annual ED visits is greater than 10,800; refer to Table 2.
  
19. **Treatment Room, ED Multi-Station (TRET5)**      **180 NSF**  
Minimum NSF if an ED Multi-Station Treatment Room is authorized and if the projected number of annual ED visits is greater than 10,800; refer to Table 2; provide an additional 60 NSF per each ED bed greater than three authorized for the ED Multi-Station Treatment Room, maximum 360 NSF.

This room is a place to care for the lower acuity, easy-to-treat patients (e.g. Fast Track patients) who would be placed in sitting-only patient treatment stations or cubicles, collocated in a room.

20. **Treatment Room, ED (EXER1)** **150 NSF**  
Provide one for every increment of 1,800 projected annual ED visits greater than 10,800 and per priority order in Table 2.
21. **Toilet, Patient (TLTU1)** **60 NSF**  
Minimum one; provide an additional one for every increment of twelve ED Treatment Rooms, of all types, greater than twelve. Deduct one for the Bariatric Toilet from the total count of patient toilets.
22. **Procedure Room (TRGM1)** **180 NSF**  
Provide one if a Procedure Room is authorized.
23. **Cast Room, ED Orthopedics (OPCR1)** **180 NSF**  
Provide one if an ED Orthopedics Cast Room is authorized.
24. **Family Consult Room (OFDC2)** **120 NSF**  
Provide one for ED Treatment.
25. **Sub-Waiting, Results (WRC03)** **120 NSF**  
Minimum NSF if a Results Sub-Waiting is authorized; provide an additional 60 NSF for every increment of ten ED Exam / Treatment Rooms, of all types, greater than ten.
- This is an area for the observation of patients awaiting test results and / or discharge. Located in or adjacent to Triage it may be shared with the Main ED, depending on the Concept of Operations.
26. **General Radiology (XDR01)** **300 NSF**  
Provide one if a General Radiology Room is authorized.
- The operator control space is included in the NSF.
27. **Scanning Room, CT (XCTS1)** **360 NSF**  
Provide one if a CT Scanning Room is authorized.
28. **Control Room, CT (XCTC1)** **120 NSF**  
Provide one if a CT Scanning Room is authorized.
29. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01)** **120 NSF**  
Provide one if a General Radiology or a CT Scanning Room is authorized.

#### **4.6. FA6: TRAUMA / RESUSCITATION.**

1. **Trauma / Resuscitation Room (Level I / II) (Min) (TRET3) 420 NSF**  
Provide two if the projected number of annual ED visits is 10,800 or less and if a Level I / II Trauma Center is authorized; refer to Table 1.
2. **Trauma / Resuscitation Room (Level III / IV) (Min) (TRET4) 360 NSF**  
Provide two if the projected number of annual ED visits is 10,800 or less and if a Level III / IV Trauma Center is authorized; refer to Table 1.
3. **Trauma / Resuscitation Room (Level I / II) (TRET3) 420 NSF**  
Provide one if the projected number of annual ED visits is greater than 10,800 (refer to Table 2) and if an additional Trauma / Resuscitation Room is authorized and if a Level I / II Trauma Center is authorized.
4. **Trauma / Resuscitation Room (Level III / IV) (TRET4) 360 NSF**  
Provide one if the projected number of annual ED visits is greater than 10,800 (refer to Table 2) and if an additional Trauma / Resuscitation Room is authorized and if a Level III / IV Trauma Center is authorized.
5. **Scrub Area (ORSA1) 60 NSF**  
Provide one if a Level I / II or a Level III / IV Trauma Center is authorized.
6. **Storage, Trauma / Resuscitation Room (Level I / II) (SRSE1) 180 NSF**  
Minimum NSF if a Level I / II Trauma Center is authorized; provide an additional 90 NSF per each Level I / II Trauma / Resuscitation Room generated greater than two.
7. **Storage, Trauma / Resuscitation Room (Level III / IV) (SRSE1) 120 NSF**  
Minimum NSF if a Level III / IV Trauma Center is authorized; provide an additional 30 NSF per each Level III / IV Trauma / Resuscitation Room generated greater than two.
8. **Body Viewing Room (LBBV1) 150 NSF**  
Provide one if a Body viewing area is authorized.

Locate near the Trauma / Resuscitation Room.

#### **4.7. FA7: SUPPORT.**

1. **Nurse Station (NSTA1) 120 NSF**  
Minimum NSF; provide an additional 60 NSF for every increment of six ED Treatment Rooms, of all types, greater than six.

It may be centralized or decentralized per individual project design.

2. **Dispatch, Ambulance (COM02)** **90 NSF**  
Provide one for Emergency Medicine and Ambulance Services.
3. **Medication Room (MEDP1)** **120 NSF**  
Minimum one; provide an additional one for every increment of twenty-four ED Treatment Rooms, of all types, greater than twenty-four.
4. **Pharmacy, Satellite (PHDS3)** **240 NSF**  
Provide one if a Satellite Pharmacy is authorized.
5. **Alcove, Nourishment (NCWD4)** **60 NSF**  
Minimum one; provide an additional one for every increment twenty-four ED Treatment Rooms, of all types, greater than twenty-four.
6. **Laboratory, Satellite (LBSP1)** **120 NSF**  
Provide one if a Satellite Laboratory is authorized.
7. **Laboratory, Point of Care (LBPC1)** **60 NSF**  
Provide one if a Satellite Laboratory is not authorized.
8. **Utility Room, Clean (UCCL1)** **120 NSF**  
Minimum one; provide an additional one for every increment twelve ED Treatment Rooms, of all types, greater than twelve.
9. **Utility Room, Soiled (USCL1)** **90 NSF**  
Minimum one; provide an additional one for every increment twelve ED Treatment Rooms, of all types, greater than twelve.
10. **Storage, Equipment (SRSE1)** **120 NSF**  
Minimum NSF; provide an additional 30 NSF for every increment twelve ED Treatment Rooms, of all types, greater than twelve.
11. **Alcove, Crash Cart (RCA01)** **30 NSF**  
Minimum one; provide an additional one if the total number of ED Treatment Rooms, of all types, is greater than twenty-four.
12. **Alcove, Portable Imaging (XRM01)** **30 NSF**  
Provide one for Emergency Medicine and Ambulance Services.
13. **Alcove, Blanket Warmer (RCA04)** **30 NSF**  
Minimum one; provide an additional one if the total number of ED Treatment Rooms, of all types, is greater than twenty- four.
14. **Storage, Gas Cylinder (SRGC2)** **60 NSF**  
Provide one for Emergency Medicine and Ambulance Services.



15. **Storage, Medical Supplies (SRS01)** **120 NSF**  
Minimum NSF; provide an additional 30 NSF for every increment of six ED Treatment Rooms, of all types, greater than twelve.
16. **Alcove, Clean Linen (LCCL3)** **30 NSF**  
Provide one for Emergency Medicine and Ambulance Services.
17. **Storage, Mass Casualty (SRS01)** **120 NSF**  
Minimum NSF if a Mass Casualty Storage Room is authorized; provide additional Mass Casualty Storage NSF if authorized, maximum 360 NSF.

#### **4.8. FA8: STAFF AND ADMINISTRATION.**

1. **Office, Department / Clinic Chief (OFA04)** **120 NSF**  
Provide one for Emergency Medicine and Ambulance Services.
2. **Sub-Waiting (WRC03)** **60 NSF**  
Provide one if a Sub-Waiting for Staff and Administration is authorized.
3. **Office, NCOIC / LCPO / LPO (OFA04)** **120 NSF**  
Provide one for Emergency Medicine and Ambulance Services.
4. **Team Collaboration Room (WRCH1)** **120 NSF**  
Minimum one; provide an additional one for every increment of twelve ED Treatment Rooms, of all types, greater than twelve.
5. **Office, Private (OFA04)** **120 NSF**  
Provide one per each Emergency Medicine and Ambulance Services FTE position authorized to have a private office.
6. **Office, Shared (OFA05)** **120 NSF**  
Provide one for every increment of two Emergency Medicine and Ambulance Services FTE positions authorized to have a shared office.
7. **Cubicle (OFA03)** **60 NSF**  
Provide one per each Emergency Medicine and Ambulance Services FTE position authorized to have a cubicle.

These cubicles may be collocated in a shared space or dispersed as required.

8. **Conference Room (CRA01)** **240 NSF**  
Minimum NSF; provide an additional 60 NSF if the total number of Emergency Medicine and Ambulance Services FTE positions authorized is greater than ten.

Planner must determine adequacy and availability of existing Conference Room space and the ability to optimize resources by sharing Conference Room space with other departments.

- |     |   |                |
|-----|---|----------------|
| 9.  | <b>Copy / Office Supply (RPR01)</b><br>Provide one for Emergency Medicine and Ambulance Services.   | <b>120 NSF</b> |
| 10. | <b>Lounge, Staff (SL001)</b><br>Minimum NSF; provide an additional 60 NSF for every increment of five Emergency Medicine and Ambulance Services FTEs working on peak shift greater than ten; maximum 360 NSF.                         | <b>120 NSF</b> |
| 11. | <b>Toilet, Staff (TLTU1)</b><br>Minimum one; provide an additional one for every increment of fifteen Emergency Medicine and Ambulance Services FTE positions working on peak shift greater than fifteen.                             | <b>60 NSF</b>  |
| 12. | <b>Locker / Changing Room, Male Staff (LR002)</b><br>Minimum NSF; provide an additional 10 NSF for every increment of two Emergency Medicine and Ambulance Services Male FTE positions working on peak shift greater than twelve.     | <b>120 NSF</b> |
| 13. | <b>Locker / Changing Room, Female Staff (LR002)</b><br>Minimum NSF; provide an additional 10 NSF for every increment of two Emergency Medicine and Ambulance Services Female FTE positions working on peak shift greater than twelve. | <b>120 NSF</b> |
| 14. | <b>Toilet / Shower, Staff (TLTS1)</b><br>Provide two for Emergency Medicine and Ambulance Services.   | <b>60 NSF</b>  |
| 15. | <b>On-Call Room (DUTY1)</b><br>Provide one if an On-Call Room is authorized.  | <b>120 NSF</b> |
| 16. | <b>Toilet / Shower, On-Call (TLTS1)</b><br>Provide one if an On-Call Room is authorized.  | <b>60 NSF</b>  |
| 17. | <b>Scrubs Distribution Room (LCCL4)</b><br>Provide one for Emergency Medicine and Ambulance Services Staff and Administration if authorized.  | <b>120 NSF</b> |

**4.9. FA9: GME / TRAINING.**

- |    |  |                |
|----|--|----------------|
| 1. | <b>Office, Residency Program Director (OFA04)</b><br>Provide one if an Emergency Medicine GME program is authorized. | <b>120 NSF</b> |
|----|--|----------------|

2. **Resident Collaboration Room (WKTU1)** **240 NSF**  
Minimum NSF if an Emergency Medicine GME program is authorized; provide an additional 60 NSF per each Resident / Student FTE position authorized greater than two.

Minimum NSF accommodates two residents, and a collaboration / reference area.

3. **Conference /Classroom (CRA01)** **240 NSF**  
Provide one if an Emergency Medicine GME program is authorized and if the total number of Resident / Student FTE positions is greater than five.

#### **4.10. FA10: CLINICAL DECISION / OBSERVATION UNIT.**

1. **Observation / Treatment (OOTR1)** **180 NSF**  
Minimum four if Clinical Decision / Observation Unit is authorized; provide an additional one per each Single-Station Observation / Treatment Room authorized greater than four.

For patients requiring observation for up to 23 hours 59 minutes.

2. **Toilet, Patient (TLTU1)** **60 NSF**  
Provide one; provide an additional one for every increment of eight Observation / Treatment Rooms greater than four if Clinical Decision / Observation Unit is authorized.

3. **Nurse Station (NSTA1)** **120 NSF**  
Provide one Clinical Decision / Observation Unit is authorized.

4. **Team Collaboration Room (WRCH1)** **120 NSF**  
Provide one if Clinical Decision / Observation Unit is authorized.

5. **Medication Room (MEDP1)** **120 NSF**  
Provide one if Clinical Decision / Observation Unit is authorized.

6. **Toilet, Staff (TLTU1)** **60 NSF**  
Minimum one; provide an additional one for every increment of fifteen Clinical Decision / Observation Unit FTEs on peak shift greater than fifteen if a Clinical Decision / Observation Unit is authorized.

7. **Alcove, Nourishment (NCWD4)** **60 NSF**  
Provide one if Clinical Decision / Observation Unit is authorized.

8. **Utility Room, Clean (UCCL1)** **120 NSF**  
Provide one if Clinical Decision / Observation Unit is authorized.

- |   |                |
|---|----------------|
| 9. <b>Utility Room, Soiled (USCL1)</b><br>Provide one if Clinical Decision / Observation Unit is authorized.  | <b>90 NSF</b>  |
| 10. <b>Storage, Equipment (SRSE1)</b><br>Provide one if Clinical Decision / Observation Unit is authorized.   | <b>120 NSF</b> |
| 11. <b>Alcove, Crash Cart (RCA01)</b><br>Provide one if Clinical Decision / Observation Unit is authorized.   | <b>30 NSF</b>  |
| 12. <b>Alcove, Blanket Warmer (RCA04)</b><br>Provide one if Clinical Decision / Observation Unit is authorized.   | <b>30 NSF</b>  |
| 13. <b>Alcove, Portable Imaging (XRM01)</b><br>Provide one if Clinical Decision / Observation Unit and if a Portable Imaging Alcove for the Clinical Decision / Observation Unit is authorized. | <b>30 NSF</b>  |

## **SECTION 5: PLANNING AND DESIGN CONSIDERATIONS**

The following design considerations are intended to provide planners and designers with guidance on world-class and evidence-based design strategies for new healthcare facilities and renovation of existing ones. Please refer to the World Class Checklist (<https://facilities.health.mil/home/>). Also refer to the “Diagnostic and Treatment Areas” in the Common Elements for Hospitals and the “Specific Requirements for Freestanding Emergency Departments” in the FGI Guidelines for Design and Construction of Hospitals and Outpatient Facilities by the Facility Guidelines Institute (FGI Guidelines) for additional information.

### **5.1. NET-TO-DEPARTMENT GROSS FACTOR.**

- a. The net-to-department gross factor (NTDG) for the Emergency and Ambulance Services is 1.45. This number, when multiplied by the programmed net square foot (NSF) area, determines the departmental gross square feet. This factor accounts for the space occupied by internal department circulation and interior partitions as well as other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, Section 2-3.4.2.2 and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

### **5.2. RECEPTION.**

- a. Waiting shall be open and easily observed from Reception.
- b. Ensure Waiting is easily accessible to vending machines and restrooms.
- c. Waiting should be broken into small clusters. This allows more private spaces so that families and loved ones aren't uncomfortably close to one another during what could be a difficult time. Consider zoning with quiet areas and a television area.

- d. Consideration should be given to special needs of specific patient groups in a shared / general waiting area. For example, adolescent and geriatric patients may require different seating options and environments. Consider the needs of bariatric patients.
  - e. Seating within Waiting should be comfortable with adequate space for patients with wheelchairs and walking aids.
  - f. Security personnel should be located to maximize visibility of the treatment areas, waiting areas, and key entrance sites. May be located next to Reception.
  - g. Reception and greeter functions are located in the walk-in entrance. Patient is greeted and, as soon as possible, brought to the Triage Area or directly to a Treatment Room. Depending on Concept of Operations, the reception desk may accommodate a provider to perform “quick triage”.
  - h. After the patient is assessed in the Triage Area, they are then taken to another area of the department. Patient may also wait in Results Sub-Waiting. Some patients will bypass Triage altogether and move straight to the appropriate part of the department. If patient’s condition is very minor and can be treated quickly, they may finish their treatment at this triage stage. Each facility will have a different Concept of Operations.
  - i. Both the ambulance and walk-in entrances should direct the patient flow towards the Reception and Triage Area.
  - j. The Reception and Triage Area should have clear vision to the waiting room.
  - k. Visual and auditory privacy must be provided in the Triage Area, where patient information is exchanged.
  - l. Bedside registration in the ED is widely considered best practice in order to improve patient throughput. As a result, hospitals are eliminating the registration desk in the ED waiting room and carving out space for the registrars with laptops or other handheld devices at the nursing station.
- 5.3. PATIENT EXAM & TREATMENT.**
- a. Fast Track is a process, and an area for this process can be integrated into the ED to accommodate overflow. In other words, some ED Treatment Rooms may be designated as “Fast Track” Rooms. By identifying the less complicated and easy-to-treat patients in Triage, it allows the ED to treat them more quickly. In some instances, the Fast Track is being replaced with a Rapid Assessment Zone (RAZ), Rapid Medical Exam (RME) area or a dedicated Rapid Admission Unit. This is where non-urgent, ED acuity level 4 and 5 patients can be seen quickly by a provider and sent home (i.e., “See and Treat” or “Treat and Release”) This could be a 2 – 3 bed unit in or near Triage with point-of-use supplies, well-orchestrated provider activities (Intake Team with MD), and a Results Sub-Waiting area. Inclusion of a Fast Track depends on the Concept of Operations.
  - b. Provide dedicated patient, provider, and family zones.

- c. Provide same-handed rooms where appropriate. This means that the working arrangement and features are all situated in the same place in all rooms.
- d. Provide acoustic privacy by controlling sound transmission between rooms and wherever else patient information is exchanged.
- e. Consider use of multi-purpose beds and specialty carts as much as possible in order to offer maximum flexibility.
- f. Provisions for bariatric patients should be included where applicable.
- g. Maximize non-institutional design features in order to provide a more therapeutic healing environment.
- h. Consider natural light and dimmable light fixtures. Soft light reduces glare and produces a soothing atmosphere.
- i. Views of nature photography and art will provide positive distraction and may alleviate patient pain, stress and anxiety.
- j. Provide access to technology, television, internet access, communication with RN.

#### **5.4. SANE SUITE.**

- a. This suite should be specifically designed for interviewing, examining, treating, counseling and comforting victims of rape and sexual assault. The Sexual Assault Nurse Examiner (SANE) also collects forensic evidence that can be used in the prosecution of the offender. Ability to maintain “chain of custody” of evidence includes a locked storage area if police are not immediately available to pick up the evidence.
- b. The suite has a consult room for victims to meet with advocates. That room should lead to a private bathroom and an examination room. The layout should allow victims to complete the entire process, from checking in to arranging transportation to a safe place, in complete privacy.
- c. Locate suite in a quiet / private area of the ED; patient should not have to walk a long distance through the department.
- d. Complete visual privacy and control of sound transmission is a critical design consideration.
- e. Consider natural light and dimmable light fixtures. Soft light reduces glare and produces a soothing atmosphere.
- f. Orient the bed so that patient is not facing door during exam in order to help mitigate the feeling of being exposed to the public area. Sideways orientation offers option of

additional privacy-barrier between patient and public area while sitting with nurse/counselor advocate.

- g. Provide secure place for patient's possessions.
- h. Eliminate mirrors except for one; located in SANE bathroom. Locate small single mirror on the back of bathroom door (for patient privacy).

### **5.5. SECURE HOLDING.**

- a. Careful consideration must be given to the ED's provision of space for the behavioral health patient. The most severe psychiatric conditions that are dealt with in emergency settings, those in which patients are acutely dangerous to themselves or others are considered, "emergency medical conditions".
- b. The Secure Holding Room is not meant for prolonged observation of patients. The main purpose is to provide a safe and appropriate space for crisis intervention and stabilization.
- c. The Secure Holding Room and the Secure Holding Anteroom shall be arranged together as a suite. Locate adjacent to patient toilet.
- d. Locate room to allow for discreet staff observation and monitoring of patients, either by direct observation through a view panel or window or via video monitoring.
- e. Locate room so that enough separation from adjacent patient care areas to provide both privacy for the patient in the room and protection of other patients from potential disturbance or violence.
- f. Consider locating a dedicated decentralized nurse station within view of the room if it is not already in direct view of the nurse station.
- g. Provide both acoustic and visual separation from adjacent clinical areas, but ready access for staff in case of need for intervention.
- h. Provide panic hardware and other technology (e.g., telecommunications / video recorder with remote capability) in this room to promote a safe environment.
- i. Design with safety features to prevent injury to patients.

## **5.6. BEHAVIORAL HEALTH TREATMENT.**

- a. Some EDs will have dedicated behavioral health treatment rooms designed to provide a non-threatening, soothing environment for individuals seeking assessment or treatment for behavioral health emergencies. This room is designed to be flexible for use of all patients when not in use by a behavioral health patient.
- b. Consider locating the Behavioral Health Treatment Room(s) in a more secluded, secure area. May co-locate with the Secure Holding Room.
- c. Design with locked doors, beds secured to the floor, metal gates that shield medical equipment from patients, and cameras which allow nurses treating the patients to see them at all times.

## **5.7. CLINICAL DECISION / OBSERVATION UNIT.**

- a. It is imperative that the planner determine if the Clinical Decision Unit / Observation will be adjacent to the emergency department. If required by the Concept of Operations, planner must understand that it requires dedicated space, equipment, supplies and appropriate staffing. The planner must consult with other adjacent departments to ensure that the spaces to support the operation of the CDU are provided without duplication.

## **5.8. TRAUMA / RESUSCITATION PATIENT AREA.**

- a. Locate the Trauma / Resuscitation Room next to the ambulance entrance.
- b. Scrub stations, located outside and adjacent to the Trauma / Resuscitation Rooms, shall be located in an alcove out of main traffic areas.
- c. Locate the Family Consult Room, functions also as a grieving room, so that it is accessible from both the emergency treatment corridor and the emergency waiting area. This room should be comfortable enough to provide respite to the bereaved family and provide control of sound transmission.

## **5.9. SUPPORT.**

- a. If dedicated imaging rooms are not planned to support the ED, consideration must be given to providing a path of travel from the ED to Imaging so that it is as clear and direct as possible. Adequate storage should be provided for portable imaging machines within the ED.
- b. The Decontamination Shower Room has a vestibule or anteroom that is a separate, independent, secured external entrance adjacent to the ambulance entrance. The patient showers and then proceeds to a Treatment Room. Must have at least two hand-held shower heads, temperature-controlled; curtains or other devices to allow patient privacy, to the extent possible.



- c. The Cast Room may have a storage room for plaster, cast material, and other orthopedic equipment. It may have a special sink with a plaster trap. Orthopedic casting and splinting supplies can alternatively be kept on a cart to cast or splint a patient in any room. The dedicated storage for orthopedic supplies (i.e., splints, crutches, and walkers), should be located adjacent to a cast room.
- d. Optimize staff efficiency and performance by providing decentralized support spaces. For example, providing decentralized charting spaces, medication rooms and nourishment rooms will help keep staff travel distances to a minimum.
- e. In all equipment storage rooms, assure adequate power is provided for all equipment housed within these rooms.
- f. The medication preparation areas should be enclosed to minimize distractions. A glass wall or window may be provided to permit observation of patients and ED activities.
- g. The design of the emergency department must consider the pharmaceutical delivery process. Whether the ED relies on the central inpatient pharmacy or a satellite pharmacy within or near the ED, pharmacy services should be readily accessible, available 24/7, and provide all medications needed. Space in the ED should be designated for point-of-care pharmacist activity and may include a dedicated computer terminal and work station. Pneumatic tube systems may be used to transport medications to and from the main pharmacy. Satellite pharmacies within or near ED can allow for immediate access to medications prepared by a pharmacist, decreasing medication delivery time. These spaces may also be sized for larger equipment. If a satellite pharmacy serves the unit, medication prep and storage may be less extensive than for units that rely on the inpatient or central pharmacy of the hospital.
- h. Emergency departments must have access to 24-hr clinical laboratory services. These can be provided by (1) the main laboratory in the hospital, (2) a decentralized “satellite” laboratory within or near the ED, or (3) smaller point-of-care-testing alcoves or stations appropriately placed within the ED. Pneumatic tube systems may be used for rapid transport of specimens to and from the laboratory.
- i. Consideration should be given to decentralizing nourishment alcoves in proximity to patient Treatment Rooms.
- j. Careful consideration should be given to both the type of hand-washing station that is installed and its placement. Hand washing sinks and alcohol-based hand-rub dispensers must be visible and accessible in patient rooms and treatment areas.
- k. Team collaboration rooms and staff areas should be located so staff members may have conversations regarding patients and clinical matters without being heard by patients or visitors.

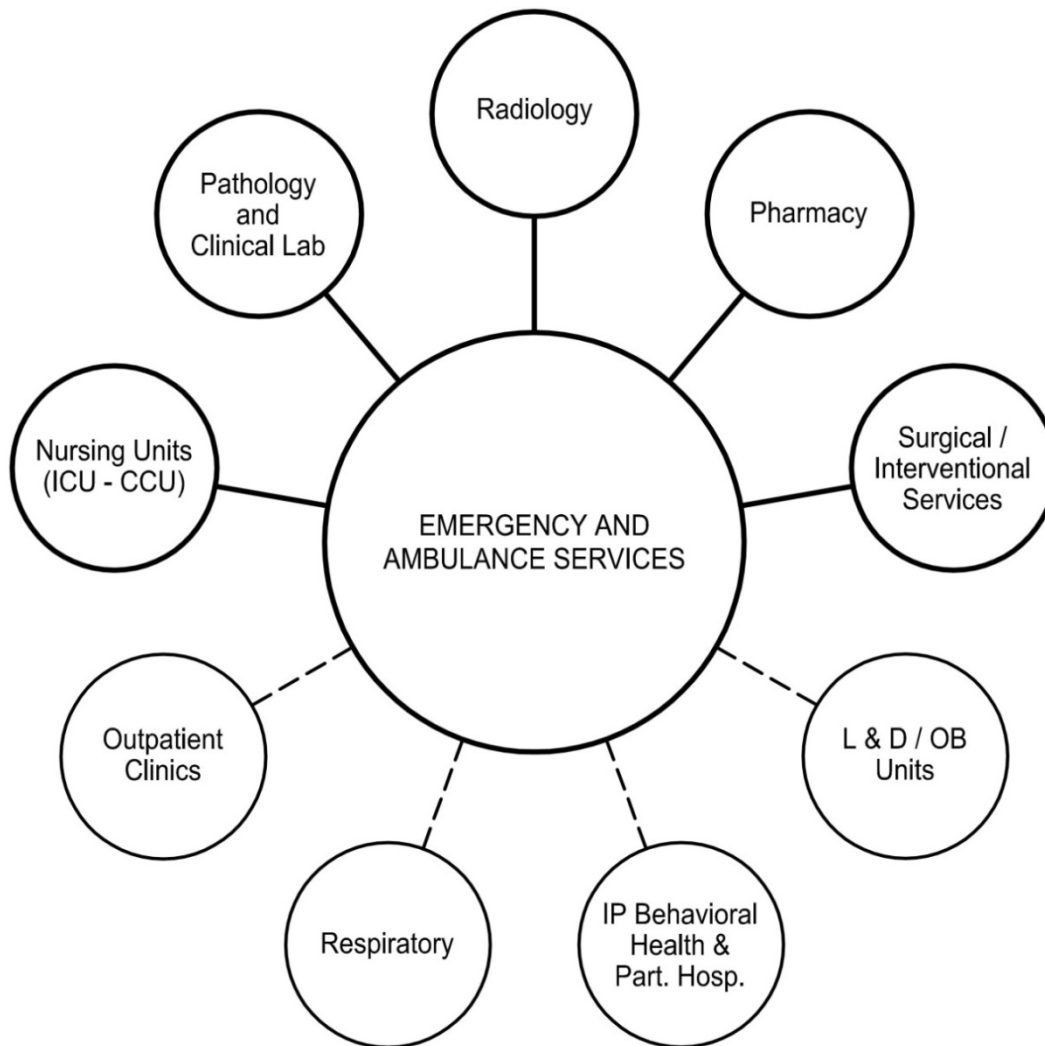
- l. Clearly define patient flows and facilitate wayfinding. For additional guidance, refer to UFC 4-510-01 Chapter 18: Wayfinding.
- m. A separate flow should be created between patients and staff (“on stage” and “off stage”) to provide privacy, safety and patient/staff satisfaction.
- n. Consider security requirements early on in design. This would include determination of dedicated security personnel, controlled access points and entrances, video monitoring in strategic locations throughout the department, installation of silent alarms, panic buttons and physical barriers such as doors to patient entry areas.

#### **5.10. HELIPAD.**

- a. Although not part of this chapter, the planner must consider the location of the Helicopter landing area, if applicable, in relationship to the emergency department. It should be located as close to the ambulance entrance as possible considering all regulations and obstacles. If there is rooftop access, elevator access for efficient transport of injured patients to the emergency department must be considered. Federal (FAA regulations) and state regulations as the authority having jurisdiction must be complied with.

## SECTION 6: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL)

**6.1. FUNCTIONAL RELATIONSHIPS.** The Emergency and Ambulance Services will rely on a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.

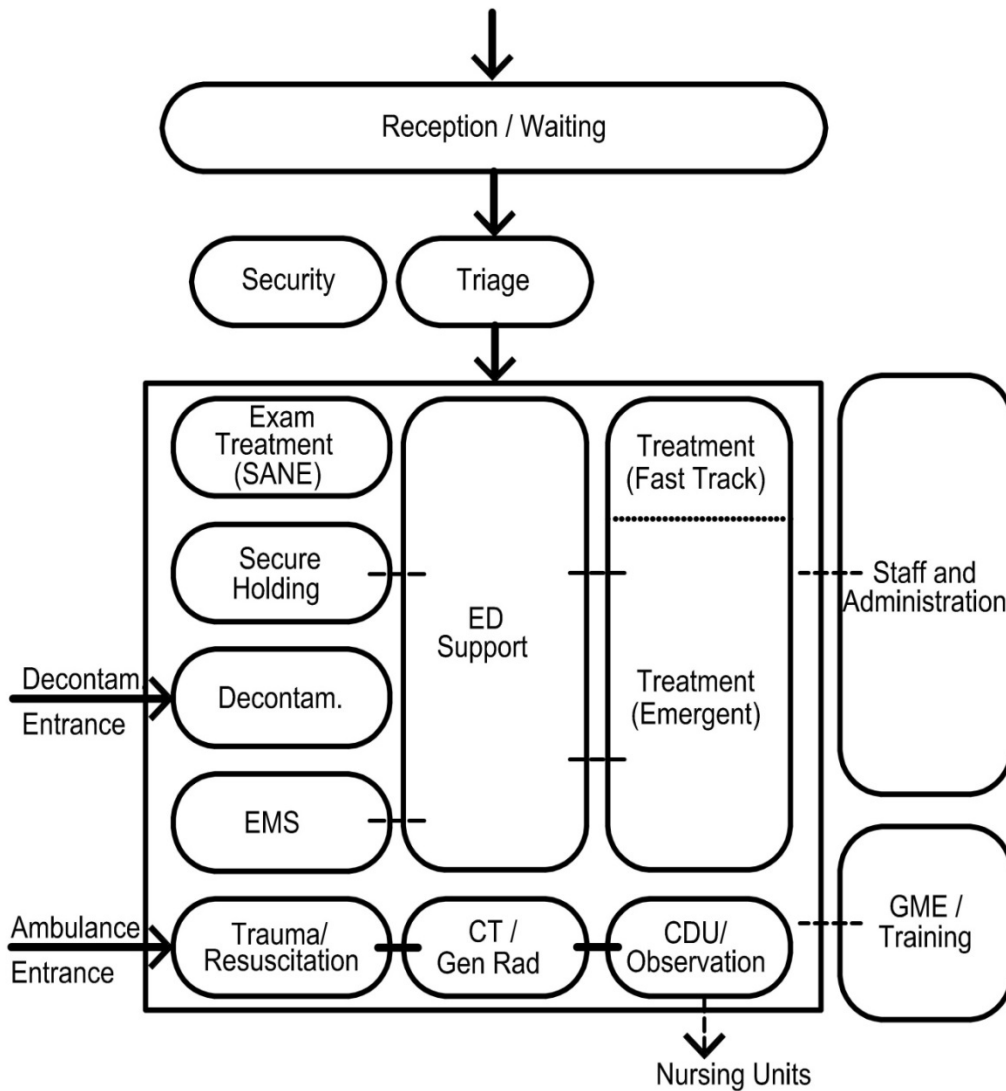


### LEGEND

- Most Critical Adjacency
- - - - - Less Critical Adjacency

## SECTION 7: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL)

**7.1. FUNCTIONAL DIAGRAM.** The diagram below illustrates intradepartmental relationships among key areas / spaces within the Emergency and Ambulance Services. The diagram is necessarily generic. The planner shall use this as a basis for design only and shall consider project-specific requirements for each Military Treatment Facility.



## **GLOSSARY**

### **G.1. DEFINITIONS**

Airborne Infection Isolation (AII) Room: Formerly called negative pressure isolation room, an AII Room is a single-occupancy patient-care room used to isolate persons with certain suspected or confirmed infections. Examples are tuberculosis, measles, and chicken pox. Environmental factors are controlled in AII Rooms to minimize the transmission of infectious agents that are usually spread from person-to-person by droplet nuclei associated with coughing or aerosolization of contaminated fluids.

Ambulance Dispatch: Supports all Emergency Department radio communications, grid maps of base / post and the area supported by the regional emergency response network.

Ambulance Service: A type of an emergency service dedicated to responding to emergency calls on a military installation, to associated military family housing areas, and to other designated locations; it is usually established in conjunction with the Emergency Department. Generally, a 24-hour ambulance service is established to support Levels I, II, and III care, while Level IV care facilities may have either 24-hour, limited hours, or no ambulance service. Typically, the ambulance service is also used to transport patients to referral facilities for more definitive care and for selected treatments or diagnostic procedures. The ambulance service may also have specific responsibilities associated with regional emergency response plans. Ambulance services are staffed by specially trained emergency care medical technicians that may also be required to assist with provision of emergency care in the MTF when not actively participating in an ambulance emergency response / transport.

Authorized: This document uses the term “authorized” to indicate that during a project’s space plan development a planner shall seek approval from the appropriate official in the chain of command to activate certain spaces or certain groups of spaces. Typical components that may require authorization are certain programs or services that activate Functional Areas (e.g., GME); office spaces (e.g., FTE position); specialized rooms (e.g., Hybrid OR) or other spaces (e.g., On-Call Room). Typically, Mission, Staffing and Miscellaneous Input Data Statements require authorization, while directly and indirectly workload driven rooms / spaces do not.

Bariatrics: Bariatrics is the branch of medicine that deals with the causes, prevention, and treatment of obesity. A bariatric patient is one that is severely obese, overweight by 100 to 200 lbs., or having a body weight of greater than 300 lbs. A Body Mass Index (BMI) of greater than 40 is considered bariatric.

Bariatric Patient Treatment Room: This room is sized and equipped to accommodate the bariatric patient and their family member(s). It is sized for easier access, with door width and turning radius to accommodate bariatric wheelchairs. Room also accommodates patient lift and transport whether by an overhead lifting system or a portable lifting assist. When provided, these rooms should be located towards the front (main entrance) of the ED.

Bariatric Patient Toilet: This space is the bathroom for the bariatric patient. Planner should refer to the FGI Guidelines for the preferred bariatric design solutions for this room. This bathroom should be located proximate to the Bariatric Patient Treatment Room; however, it is not solely dedicated to the bariatric patient. It may be used by other patients for added flexibility.

Behavioral Health Treatment Room: This is a specialty room for the Behavioral Health Patient (in addition to the Secure Holding Room). This room is built with safety and security in mind, e.g., safety glass, hardened ceilings, and no protruding medical equipment. Medical gas outlets will be covered with panels that are lockable or are attached with tamper-resistant screws. This room is intended to be flexible enough to be used by any ED patient when not in use by the behavioral health patient.

Body Viewing Room: Space for family in the emergency department to view the deceased, typically in a private place away from the treatment area.

Caregiver Workstation: Workstation for nursing unit personnel. Workstations can be “centralized” or “decentralized”. An example of “centralized” is the central nursing station that serves as the information hub of the unit and contains workspace for all caregivers. An example of the “decentralized” workstation are caregiver workstations that are distributed throughout the nursing unit, often located outside each patient room or between every two patient rooms to allow a caregiver to work efficiently while observing and caring for patients. Additionally, decentralized “teaming” workstations or substations can be provided for several caregivers to collaborate about the patient’s care.

Cast Room: The emergency department may have a separate room for applying orthopedic casts. Orthopedic casting and splinting supplies can alternatively be kept on a cart to cast or splint a patient in any room. If a Cast Room is authorized, collocate with the Orthopedic Supplies Storage (i.e., splints, crutches, and walkers).

Clean Utility Room: This room is used for the storage and holding of clean and sterile supplies. Clean linen may be stored in a designated area in the clean utility room if space is not provided in a separate room or in an alcove.

Clinical Decision / Observation Unit: A designated area within a hospital, often located in close proximity to the emergency department, that provides an alternative to discharge or hospital inpatient admission for the emergency department patient who may benefit from an extended observation period (23 hours and 59 minutes).

Computed Tomography (CT): Sometimes called CAT scan, special x-ray equipment used to obtain image data from different angles around the body then uses computer processing of the information to show a cross-section of body tissues and organs.

Cubicle: A cubicle is a partially enclosed workspace, separated from neighboring workspaces by partitions. Managers and other staff with no supervisory responsibilities as well as part-time, seasonal, and job-sharing staff may qualify for a cubicle.

Decontamination Shower Room: This room is used to decontaminate, prior to treatment, a patient who has been exposed to chemical or biological hazardous substances as a result of an industrial or other accident.

Emergency Department (ED): An emergency department is generally part of a hospital or medical center. It specializes in the acute care of patients who arrive unscheduled and is typically open 24 hours a day, 7 days a week, 365 days a year.

Emergency Services: Healthcare services provided to evaluate and treat medical conditions of recent onset and severity that would lead a prudent layperson, possessing an average knowledge of medicine and health, to believe that urgent and/or unscheduled medical care is required.

Emergency Services Levels of Care: Emergency departments (EDs) are categorized into four levels of care with Level I being the highest and Level IV being the lowest. All emergency departments must be able to provide for the initial evaluation and stabilizing treatment of trauma patients.

Level I Care: “A Level I emergency department or service offers comprehensive emergency care 24 hours a day, with at least one physician experienced in emergency care on duty in the emergency care area. There must be in-hospital physician coverage by members of the medical staff or by senior-level residents for at least medical, surgical, orthopedic, obstetric, gynecological, pediatric, and anesthesiology services. When such coverage can be demonstrated to be met suitably through another mechanism, an equivalency will be considered to exist for purposes of compliance with the requirement. Other specialty consultation must be available within approximately 30 minutes. Initial consultation through two-way voice communication is acceptable (from DoD 6015.1-M).”

Level II Care: “A Level II emergency department or service offers emergency care 24 hours a day, with at least one physician experienced in emergency care on duty in the emergency care area. There must be specialty consultation available within approximately 30 minutes by members of the medical staff or by senior-level residents. Initial consultation through two-way voice communication is acceptable. The hospital’s scope of services must include in-house capabilities for managing physical and related emotional problems, with provision for patient transfer to another facility when needed (DoD 6015.1-M).”

Level III Care: “A Level III emergency department or service offers emergency care 24 hours a day, with at least one physician available to the emergency care area from within the hospital, who is available immediately through two-way voice communication and in person within approximately 30 minutes through a medical staff call roster. Specialty consultation must be available by request of the attending medical staff member or by transfer to a designated hospital where definitive care can be provided (DoD 6015.1-M).”

Level IV Care: “A Level IV emergency department or service offers reasonable care in determining whether an emergency exists, renders lifesaving first aid, and makes appropriate referral to the nearest organizations that are capable of providing needed services, with at least

one physician available immediately through two-way voice communication and in person within 30 minutes through a medical staff call roster. A Level IV emergency service may not necessarily operate 24 hours a day, and may not have a dedicated ambulance service supporting it. A Level IV facility may also operate as a walk-in acute care clinic.”

Additionally, an emergency department may be part of a trauma system with a Level I–IV designation. Trauma system level designations are awarded based on the services provided by the hospital. The American College of Surgeons (ACS) provides detailed descriptions of Level I–Level IV trauma centers. The ACS will rank hospitals as Level 1 – IV but does not officially designate hospitals as trauma centers. Most states have legislation which determines the process for designation of Trauma Centers within their state.

Family Consult Room: A private, quiet room where a patient’s family will meet with the provider(s) to discuss sensitive information. Sudden unexpected death occurs more frequently in the emergency department than in any other part of the hospital, and this room is a place where providers can deliver the difficult message and provide support to the grieving family. Additionally, information may be needed from family members, such as the patient's wishes or their wishes with regard to organ donation or autopsy.

Fast Track: Fast Track is a process or approach to moving easy-to-treat, lower acuity patients, who require few resources, through the system efficiently. In some emergency departments, the Fast Track patients may be located in a dedicated area or sub-unit in or next to the emergency department.

Forensic Evidence Storage: Temporary and secure evidence storage for biological evidence such as bodily fluids or DNA, for example, in secure lockers with automatic locking systems to prevent the need for keys or locks. A Sexual Assault Nurse Examiner (SANE) or other qualified medical provider performs the forensic evidence collection exam and turns over the sealed forensic evidence collection kit and all physical evidence to the law enforcement agency with jurisdiction.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose total time commitment equals that of a full-time employee. One FTE equals a 40-hour per week workload. The FTE measure may also be used for specific workload staffing parameters such as a clinical FTE; the amount of time assigned to an employee providing clinical care. For example, a 0.5 clinical FTE for a healthcare worker would indicate that the healthcare worker provides clinical care half of the time during a 40-hour work week.

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas are Reception Area, Patient Area, Support Area, Staff and Administrative Area, and Education Area.

Graduate Medical Education (GME): All internship and residency years fall under the umbrella of GME. After physicians complete 4 years of medical school, they must then complete an internship (also called PGY-1 or Post Graduate Year 1) and then a post-internship residency



(termed PGY-2, PGY-3, etc.). An internship typically lasts one year, and a residency may last from two to seven years depending on the specialty.

Hours of Operation per Day: These are the hours of operation within a department. For example, a hospital nursing unit and an emergency department will operate 24 hours per day; whereas a clinic may be operational 8 hours or more, depending on the clinic.

Infection Control Risk Assessment (ICRA): An ICRA is a multidisciplinary, organizational, documented process that considers the medical facility's patient population and mission to reduce the risk of infection based on knowledge about infection, infectious agents, and the care environment, permitting the facility to anticipate potential impact.

Input Data Statement: A set of questions designed to elicit information about the healthcare project in order to create a Program for Design (PFD) (see definition below); based on the space criteria parameters (refer to Section 4) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Mass Casualty Decontamination: The decontamination of large numbers of people in the event of contamination by a harmful substance. It is carried out to stop further injury to victims caused by contaminants, to stop the spread of contaminants, to prevent injury to rescuers and First Receivers, and to keep medical facilities free of contamination. It is also needed to protect other civilians and emergency personnel from being cross-contaminated and to help prevent contamination of ambulances and hospitals. If medical facilities become contaminated, they risk being closed. It is important that all patients be decontaminated before they are admitted into an uncontaminated area.

Net Square Feet (NSF): The area of a room or space derived by multiplying measurements of the room or space taken from the inside surface of one wall to the inside surface of the opposite wall.

Net-to-Department Gross Factor (NTDG): A parameter used to calculate the Department Gross Square Foot (DGSF) area based on the programmed Net Square Foot (NSF) area. Refer to DoD Chapter 130 for the NTDG factors for all Space Planning Criteria chapters.

Office, Private: A single occupancy office provided for confidential communication.

Office, Shared: An office that accommodates two workstations.

Operating Days per Year: The number of days per calendar year a facility is operational for patient care (refer to Section 3).

Program for Design (PFD): A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 3) and the space planning criteria outlined in this document (Section 4) in SEPS. The list is organized by Functional Area and includes the Room Quantity, Room Code, Room Name and generated Net Square Feet (NSF), Construction Phase and Construction Type.

**Project Room Contents (PRC):** A listing of the assigned contents (medical equipment, FF&E, etc.) for each room in a PFD generated by SEPS.

**Provider:** A medical professional, such as a physician, nurse practitioner, or physician assistant, who examines, diagnoses, treats, prescribes medications, and manages the care of patients within the scope of their practice as established by the governing body of a healthcare organization.

**Quick Triage:** A form of patient triage known by various names such as “abbreviated triage process”, “quick triage”, “see and treat”, and “rapid assessment”. Typically, the intake process is shortened to 90 seconds or less and information collection is simplified (single phrase chief complaint, allergies, pain scale, vital signs). Usually high volume, these patients (some ESI 3s, 4s and 5s) are not acutely ill nor require a stretcher. This system can have a positive effect on the time to see the physician and initiation of diagnostic tests and treatment that impact upon patient satisfaction. Hospitals often use this system at peak times of day only.

**Resident Collaboration Room:** This room is provided for the Residents. It will contain one cubicle per Resident, a table with chairs for collaboration space and bookcases.

**Results Waiting:** Typically a visible space near Triage and Fast Track where patients can wait for Radiology and Lab results without using ED Treatment Rooms.

**SANE:** Sexual Assault Nurse Examiner. SANE nurses are specially trained to provide care for sexual assault victims and collect evidence for law enforcement.

**SANE Room:** This private treatment room is flexible to provide care for the victim of sexual assault. It is part of a suite that provides a larger and more comforting environment, including a private bathroom /shower and consult room.

**Satellite Laboratory:** A laboratory that is located permanently away from the central laboratory, with one or several analyzers operated by either laboratory or non-laboratory personnel. The objective of creating a satellite laboratory in the ED is to provide rapid point-of-care tests and improve turnaround time for critical tests in emergency situations.

**Satellite Pharmacy:** A smaller decentralized pharmacy within the hospital, staffed by at least one pharmacist and technician, which provides specialized services. It is dependent upon the centrally located pharmacy for administrative control, staffing and drug procurement. In the ED, a satellite pharmacy with compounding ability will provide prompt preparation of medications. While a sterile room for preparation of intravenous medications may not be a possibility for most EDs, a laminar flow hood would aid in the preparation of most intravenous medication requests.

**Secure Holding:** This room is for the short-term observation and assessment of the patient who is actively at risk for injuring himself or others. This room provides physical separation of the patient from the rest of the emergency department until a reasonable assessment can be made regarding the patient’s potential for physical harm or disruption from behaviors resulting from the patient’s condition, including but not limited to behavioral health issues and substance abuse.

This room should provide ease of staff observation and monitoring, preventing unauthorized patient elopement, and safety of the patient. It is part of a suite that consists of a psychiatric anteroom and a patient toilet.

Security / Control Station: This space provides a secure entry / control point into the Emergency department.

Space and Equipment Planning System (SEPS): A digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents list (PRC) for a DoD healthcare project based on approved Space Planning Criteria, the chapter and specific project-related Mission, Workload and Staffing information entered in response to the Program Data Required - Input Data Statements (IDSs).

Soiled Utility Room: This space provides an area for cleanup of medical equipment and instruments, and for disposal of medical waste material. It provides temporary holding for material that will be picked up by Central Sterile or similar service. It should be readily accessible to staff.

Team Collaboration Room: This space provides staff with an environment conducive to collaboration. Room contains computer workstations for documentation and a table with chairs to hold meetings.

Triage: A process of identifying incoming patients who cannot wait to be seen. The triage nurse performs a brief, focused assessment and assigns the patient a triage acuity level, which is a proxy measure of how long an individual patient can safely wait for a medical screening examination and treatment. Depending upon the concept of operations, the patient will initially be assessed in the Triage Area and then taken to another area of the department. In a streamlined process, a nurse or provider could conduct a quick assessment and the patient could move straight to a Treatment Room in the Main Emergency department for treatment. Some patients may complete their treatment in the Triage Area if the condition is very minor and can be treated quickly. Each facility will have a different concept of operations.

Trauma / Resuscitation Room: This room in the emergency department is for the highest acuity patient and is located next to the ambulance entrance. It is shielded to accommodate overhead radiographic capability; includes surgical lights, integrated imaging as appropriate, monitors, medical gases and automated medication dispensing stations.

Utilization Factor: Also known as capacity utilization rate, this factor provides flexibility in the utilization of a room to account for patient delays, scheduling conflicts and equipment maintenance. A room with an 80% utilization factor provides a buffer to assume that this room would be available 20% of the time beyond the planned operational practices for this room.

Workload: Space Planning Criteria per DHA Policy shall be workload driven. Workload projections divided by the throughput determined in this document for each workload driven room determines the quantity of rooms needed to satisfy the projected workload demand.