DoD Space Planning Criteria

Chapter 316: Cardiology, Pulmonary, and Sleep Disorders Services
April 6, 2022

Originating Component:	Defense Health Agency Facilities Enterprise
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Purpose: This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for military Medical Treatment Facilities (MTFs) that fall under the authority of the Defense Health Agency (DHA).

SUMMARY *of* CHANGE

This revision, dated April 6, 2022 includes the following:

- o Converted to SEPS compatible format.

- o Sections renamed and numbered: design considerations moved to the front of the document.

- o Reduced the NSF on select clinical and administrative spaces throughout the chapter.

- o Removed workload driven formula example; now located in Chapter 110.

- o Workload driven defaults are now fixed values for this chapter.

- o The following spaces have been moved to Chapter 610 Common Areas: staff toilets, lockers, lounges, and conference rooms.

- o Moved Graduate Medical Education resident administrative spaces to Chapter 230 Education and Training.

- o Added new definition of Room Utilization Factor and Office, Private in Glossary.

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SECTION 1: PURPOSE AND SCOPE

This chapter outlines space planning criteria as it applies to all eligible beneficiaries / populations receiving Cardiology, Pulmonary, or Sleep Disorders services. All of these services, or a select number of them, may be located inside or immediately adjacent to an MTF that may include inpatient care, tertiary specialty services, or full scope ancillary departments.

Cardiology and Pulmonary services are typically found in an inpatient MTF. Where both services are provided, the planner should assume that they will be collocated to support sharing of support spaces and improve staff efficiency.

This chapter includes space planning criteria for non-invasive diagnostic testing for Cardiology and Pulmonary Services.

The planner should refer to Chapter 440: Surgical, Interventional Services and Ambulatory Surgical Center for space planning criteria related to invasive diagnostic testing such as Bronchoscopy, Cardiac Catheterization, and Transesophageal Echocardiogram (TEE). The TEE may be performed in the ambulatory care or the inpatient setting; therefore, the planner must coordinate with Cardiology Services to determine the optimal location to support sharing of support spaces and improve staff efficiency.

Space planning criteria for Cardiopulmonary Rehabilitation is also included in this chapter. Prior to planning and programming a Cardiopulmonary Rehab program, the planner must conduct a thorough healthcare requirements analysis. Optimally, this program should be programmed in a MTF that supports Cardiology or Pulmonary Graduate Medical Education programs, a Cardiopulmonary Center of Excellence, or the MTF's total rehabilitation program.

Space planning criteria for the Sleep Disorders services is also included this chapter. It is comprehensive in nature and incorporates both clinic spaces and laboratory sleep study space. It may accommodate both children and adults. A Nigh Time Sleep Lab will be only programmed in an MTF when the annual workload supports a minimum of 2 sleep study beds.

The space planning criteria in this chapter apply to all DHA MTFs and are based on current DHA policies and directives, established and/or anticipated best practices, industry guidelines and standards, and input from MHS Subject Matter Experts (SME) and DHA Directorates. As directed by the DHA, these space criteria are primarily workload driven; additional drivers are staffing and mission. Room Codes (RCs) in this document are based on the latest version of UFC 4-510-01, Design: Military Medical Facilities, Appendix B, Architectural and Engineering Design Requirements.

SECTION 2: PLANNING AND PROGRAMMING REQUIREMENTS

1. Planners will consider local workload projections, staffing, and anticipated services to develop a project based on these criteria. The staffing projections used by planners to program requirements must be validated and aligned with the authorized manning document for the project. When no official guidance, policy or directive exists to validate space or program requirements, the planner will consult with their supervisor, and at their supervisor's discretion, the issue(s) may be elevated to senior leadership for the determination of the final project requirements.

2. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for Cardiology, Pulmonary, and Sleep Disorders Services and their 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.

3. One dedicated telehealth exam room (EXTH1) is provided as part of the workload generated exam room count. If additional telehealth exams will be programmed based on the Functional Program requirements, deduct the total number of EXTH1 exam rooms from the total number of workload driven EXRG1 exam room count.

4. To enhance patient safety, provide a Medication Safety Zone for Cardiology, Pulmonary, and Sleep Disorders Services area. It can be a medication preparation room (MEDP1), or an area in the treatment/procedure room, as well as a self-contained medication dispensing unit, an automated medication dispensing station, or another system located in the clean utility (UCCL1). The planner should determine whether medications are prepared in the ancillary pharmacy, and then administered to the patient by Cardiology or Pulmonary Services staff in single, unit doses. In this instance, no medication prep room is required in the Cardiology, Pulmonary, and Sleep Disorders support area. If the Cardiology or Pulmonary Services staff are calculating dosages, preparing the medication and administering it to the patient, an enclosed Medication Preparation Room (MEDP1) will be programmed in the Cardiology, Pulmonary, and Sleep Disorders support area.

5. For calculation of the number of building support spaces (Vestibules, Lobbies, Multi-fixture Public and Staff Toilets, Staff Lounges and Locker Rooms, Conference Rooms, Communication Closets, and Janitor Closets), please refer to Chapter 610: Common Areas.

6. For space criteria requirements to support Graduate Medical Education in the MTF, refer to Chapter 230: Education and Training.

7. The range of exam room throughput is based upon a calculation that first quantifies the full capacity of that fixed space, then estimates how many annual encounters it should support, based on other variable resources such as availability of providers, support staff, and patients.

Room Default Parameters:

a) Operating Days per Year SEPS default: 240 days

b) Hours of Operation per Day SEPS default: 8 hours

c) Average Length of Encounter (ALOE) SEPS default: *Please refer to Table 1, see Glossary for definition of ALOE.*

d) Room Utilization Factor SEPS default: 80%

Calculation of directly workload-driven room types is implemented in SEPS based on the following table and answers to the Input Data Statements:

TABLE 1: WORKLOAD PARAMETER CALCULATION

316: CARDIOLOGY, PULMONARY, AND SLEEP DISORDERS SERVICES				
CLINICAL ENCOUNTERS / PROCEDURES	AVERAGE LENGTH OF CLINIC ENCOUNTER (minutes)	ROOM UTILIZATION FACTOR	ANNUAL WORKLOAD PER EXAM / PROCEDURE ROOM (*)	MINIMUM ANNUAL WORKLOAD TO GENERATE ONE ROOM (20%)
Cardiology & Pulmonary Exam	30	80%	3,072	614
Echocardiograph	40	80%	2,304	461
Stress Echocardiograph	75	80%	1,229	246
Ultrasound	30	80%	3,072	614
Cardiology Treadmill Room	60	80%	1,536	307
Pulmonary Function Treadmill Room	60	80%	1,536	307
Sleep Disorders Exam	30	80%	3,072	614
Night Time Sleep Study Bed	480	80	240	192

See Chapter 110: General for an example calculation.

SECTION 3: DESIGN CONSIDERATIONS

The following design considerations are intended to provide planners and designers with guidance on how to follow world-class and evidence-based design strategies for new and renovation of existing healthcare facilities. For a more comprehensive list, refer to the latest version of the World Class Checklist (https://facilities.health.mil/home/). Also refer to the Facility Guidelines Institute (FGI) Guidelines for Design and Construction of Hospitals and Guidelines for Design and Construction of Outpatient Facilities for additional information.

3.1. NET-TO-DEPARTMENT GROSS FACTOR.

The net-to-department gross (NTDG) factor for the Cardiology, Pulmonary, and Sleep Disorders Services is **1.35**. 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 and other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

3.2. GENERAL DESIGN CONSIDERATIONS.

1. Consider technology requirements early on in design. Technology can be leveraged for safety and efficiency.

2. Consider space (temporary or fixed) and IM/IT capabilities for all team members to be able to accomplish their required documentation.

3. The clinic design shall be zoned for patient, visitor, support and staff areas to improve efficiency. A separate flow will be created between patients and visitors (on stage) and staff (off stage) to optimize privacy, safety and overall satisfaction. "On Stage" is defined as the Public / Reception Zone and the Patient Care / Treatment Zone. "Off Stage" is defined as the Staff / Administration Zone, the Clinic Support Zone and staff/service corridors.

4. Provide a separate staff/delivery entrance in the off-stage area of the clinic. This will be utilized for patient transport to a higher level of care in the event of an emergency, and it will accommodate an ambulance gurney and delivery carts.

3.3. RECEPTION.

1. Seating in the waiting area should be comfortable with adequate space for patients with wheelchairs and walking aids. Consider arranging seats into separate, small clusters to accommodate social distancing and enhance physical separation of patients.

2. To maximize speech privacy for patients at Reception, provide open, clear floor area between the waiting seats and Reception.

3. Consider flexible seating options that can accommodate greater demands during peak service hours.

4. Utilize the Infection Control Risk Assessment to determine if a separate airborne infection isolation waiting area (WRC02) is required to support Pulmonary patients.

3.4. PATIENT AREA.

1. General Exam Rooms: No general exam room (EXRG1) is intended to be dedicated to any specific provider or specialty; rather all general exam rooms can be used at all times. The use of a cart stocked with various equipment to support each specialty may be considered for immediate functional use as needed, and to provide greater versatility of the general exam room. The planner must assess the requirement for a Bariatric Exam room (EXB01) based on the population served at the MTF. If a Bariatric Exam room is programmed, it will be included as one of the total number of calculated general exam rooms (EXRG1s). Also program a Bariatric Toilet (TLTB1) to replace one Patient Toilet in the Exam Patient Area.

2. Team Workroom: Each specialty care team will be collocated in a Team Workroom rather than in individual offices. This promotes improved collaboration and coordination of care through increased communication and staff efficiency. Team Workrooms and staff areas should be located so staff members may have private conversations regarding patients and clinical matters without being heard by patients or visitors.

3.5. CARDIOLOGY & PULMONARY PATIENT AREA.

1. When possible locate Cardiology in the outpatient clinic directly linked to the hospital for access to ICU/CCU, Cath Lab/EP Lab, Radiology, ED, and Nuclear Medicine.

2. When Cardiology is located within a freestanding outpatient clinic, locate near radiology and the laboratory.

3. For a small Cardiology Clinic (4 providers or less), consider collocating with primary care or other specialty medicine providers.

3.6. CARDIOPULMONARY REHABILITATION.

1. Consider collocating the Cardiopulmonary Rehab area with other services that utilize a gym or open exercise area such as Physical Therapy, to reduce redundancy, facilitate sharing of spaces, and to support staff efficiency and patient convenience.

2. The size of the Exercise Area is heavily dependent on the number and type of equipment that will be used. The planner must work closely with the cardiopulmonary rehab staff to determine equipment needs early on in planning.

3. The gym and exercise areas should be adjacent to and in line of sight of the Team Workroom, the physiological monitoring station, and the rehab tech workstations.

4. Consider providing mobile rehab tech workstations so that they can be moved around within the gym and exercise areas to provide maximum visibility of the patients.

5. Coordinate the location of electrical outlets and data drops to support connectivity of the mobile rehab tech workstations within the gym and exercise areas.

3.7. SLEEP DISORDERS.

1. Sleep Disorders services are primarily an outpatient clinical function. The Sleep Lab component conducts overnight studies and is best located in an inpatient area of the MTF that is supported by 24/7 operations. There is a growing trend to conduct sleep studies in the home setting to mimic normal patient bedtime and sleep routines, and thus produce more accurate testing results when the patient is sleeping in a familiar and comfortable environment.

2. Sleep Study Bedrooms:

   a) Typically each sleep technician will monitor one or two sleep beds. Each bed will have its own monitoring station in the tech workroom.

   b) There will be no windows in the bedroom. This will be a quiet, dark room to mimic the home sleeping environment. Consider hotel-like amenities, and soothing music.

   c) There will be a two-way communication system between the patient bedroom and technician.

   d) There will be a mechanism for visual monitoring and video recording of patients during testing.

   e) A toilet and shower will be accessible from within each bedroom.

3.8. CLINIC SUPPORT.

1. Optimize staff efficiency and performance by providing decentralized support spaces (e.g. supplies, medications and equipment). Keep staff travel distances to a minimum.

2. In all equipment storage rooms, assure adequate power is provided for all equipment housed within these rooms.

3. The location and number of recessed or semi-recessed Automatic External Defibrillator (AED) cabinets will be determined during project design. The Designer of Record (DOR) is responsible to ensure quantity, placement and all appropriate markings (signage) are shown in the final design solution. The DOR will coordinate with the design and construction Agent and clinical representative to ensure adequate placement and facility coverage.

4. In cases where a resuscitation cart with associated equipment and medical supplies is warranted, the planner should determine whether placement is appropriate in an alcove (RCA01) near a patient treatment zone, or if they can be added in a treatment space as part of the room code equipment contents.

3.9. STAFF AND ADMINISTRATION.

1. Determine whether administrative spaces such as the Clinic Supervisor or OIC should be located towards the front of the patient care area for ease of access, or be located in the off stage administrative area.

SECTION 4: PROGRAM DATA REQUIRED: CARDIOLOGY, PULMONARY, AND SLEEP DISORDERS SERVICES

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

1. How many annual in person Cardiology encounters are projected? (W)
2. How many annual Echocardiograph encounters are projected? (W)
3. How many annual Stress Echocardiograph encounters are projected? (W)
4. How many annual Ultrasound encounters are projected? (W)
5. How many annual Cardiology Treadmill encounters are projected? (W)
6. How many annual in person Pulmonary encounters are projected? (W)
7. Is a Pulmonary Function Lab projected to support Pulmonary services? (M)
8. How many annual Pulmonary Function Treadmill encounters are projected? (W)
9. Is a Point of Care Lab within Cardiology services projected to provide rapid point-of-care testing? (M)
10. Will the Cardiology or Pulmonary staff be calculating medication dosages, preparing the medication and administering it to the patient? (M)
11. How many annual in person Sleep Disorders encounters are projected? (W)
12. Is a Sleep Lab projected to support in person night time sleep studies? (M)

    12.1. How many annual in person night time sleep studies are projected? (W)

13. How many hard copy records are projected to be stored in Cardiology, Pulmonary and Sleep Disorders Services? (Misc)

4.2. INPUT DATA STATEMENTS: CARDIOPULMONARY REHABILITATION.

1. Is a Cardiopulmonary Rehabilitation program projected to support Cardiology and Pulmonary services? (M)

    1.1. How many Cardiopulmonary Rehabilitation Technician FTE positions are authorized per the official manning document? (S)

    1.2. How many hard copy records are projected to be stored in Cardiopulmonary Rehabilitation? (Misc)

4.3. COMPUTED STATEMENTS.

1. Room Utilization Factor (Computed) (Default: 80%)
2. Hours per day (Computed) (Default: 8)
3. Days per year (Computed) (Default: 240)
4. Patient care hours per year (Computed) (Default: [Hours per day] x [Days per year])
5. Cardiology Exam Average Length of Encounter (ALOE) in Hours (Computed) (Default: .5)
6. Echocardiograph Average Length of Encounter (ALOE) in Hours (Computed) (Default: .67)
7. Stress Echocardiograph Average Length of Encounter (ALOE) in Hours (Computed) (Default: 1.25)
8. Ultrasound Average Length of Encounter (ALOE) in Hours (Computed) (Default: .5)

9. Cardiology Treadmill Average Length of Encounter (ALOE) in Hours (Computed) (Default: 1.0)
10. Pulmonary Exam Average Length of Encounter (ALOE) in Hours (Computed) (Default: .5)
11. Pulmonary Function Treadmill Average Length of Encounter (ALOE) in Hours (Computed) (Default: 1.0)
12. Sleep Disorders Exam Average Length of Encounter (ALOE) in Hours (Computed) (Default: .5)
13. Night Time Sleep Study Average Length of Encounter (ALOE) in Hours (Computed) (Default: 8)
14. Cardiology Exam Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Cardiology Exam Average Length of Encounter (ALOE) in Hours])
15. Calculated number of Cardiology Exam rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual in person Cardiology encounters are projected?] / [Cardiology Exam Workload Capacity]))
16. Echocardiograph Room Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Echocardiograph Average Length of Encounter (ALOE) in Hours])
17. Calculated number of Echocardiograph rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual Echocardiograph encounters are projected?] / [Echocardiograph Room Workload Capacity]))
18. Stress Echocardiograph Room Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Stress Echocardiograph Average Length of Encounter (ALOE) in Hours])
19. Calculated number of Stress Echocardiograph rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual Stress Echocardiograph encounters are projected?] / [Stress Echocardiograph Room Workload Capacity]))
20. Ultrasound Room Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Ultrasound Average Length of Encounter (ALOE) in Hours])
21. Calculated number of Ultrasound rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual Ultrasound encounters are projected?] / [Ultrasound Room Workload Capacity]))
22. Cardiology Treadmill Room Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Cardiology Treadmill Average Length of Encounter (ALOE) in Hours])
23. Calculated number of Cardiology Treadmill rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual Cardiology Treadmill encounters are projected?] / [Cardiology Treadmill Room Workload Capacity]))
24. Pulmonary Exam Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Pulmonary Exam Average Length of Encounter (ALOE) in Hours])
25. Calculated number of Pulmonary Exam rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual in person Pulmonary encounters are projected?] / [Pulmonary Exam Workload Capacity]))

26. Pulmonary Function Treadmill Room Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Pulmonary Function Treadmill Average Length of Encounter (ALOE) in Hours])

27. Calculated number of Pulmonary Function Treadmill rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual Pulmonary Function Treadmill encounters are projected?] / [Pulmonary Function Treadmill Room Workload Capacity]))

28. Sleep Disorders Exam Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Sleep Disorders Exam Average Length of Encounter (ALOE) in Hours])

29. Calculated number of Sleep Disorders Exam rooms based on workload (Computed) (Default: Round Up From (.5, [How many annual in person Sleep Disorders encounters are projected?] / [Sleep Disorders Exam Workload Capacity]))

30. Night Time Sleep Study Bed Workload Capacity (Computed) (Default: ([Room Utilization Factor] x [Patient care hours per year]) / [Night Time Sleep Study Average Length of Encounter (ALOE) in Hours])

31. Calculated number of Night Time Sleep Study beds based on workload (Computed) (Default: Round Up From (.5, [How many annual in person nighttime sleep studies are projected?] / [Night Time Sleep Study Bed Workload Capacity]))

32. Total number of Cardiology Diagnostic and Testing Rooms (Computed) (Default: [EKG Room (OPEC1)], [Echocardiograph Room (OPPE1)], [Stress Echocardiograph (OPPE2)], [Ultrasound Room (XDUS1)], [Tilt Table Testing (OPTM2)], [Pacemaker, ICD Interrogation (OPPM1)], [Treadmill, Cardiology (OPTM1)], [Holter Monitor Room (OPHM1)])

33. Total number of Cardiology and Pulmonary Exam Rooms (Computed) (Default: [Exam Room, Cardiology (EXRG1)], [Exam, Cardiology Airborne Infection Isolation (AII) (EXRG6)], [Exam, Cardiology Telehealth (EXTH1)], [Exam Room, Pulmonary (EXRG1)], [Exam, Pulmonary Airborne Infection Isolation (AII) (EXRG6)], [Exam, Pulmonary Telehealth (EXTH1)])

34. Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms (Computed) (Default: [Exam Room, Cardiology (EXRG1)], [Exam, Cardiology Airborne Infection Isolation (AII) (EXRG6)], [Exam, Cardiology Telehealth (EXTH1)], [Exam Room, Pulmonary (EXRG1)], [Exam, Pulmonary Airborne Infection Isolation (AII) (EXRG6)], [Exam, Pulmonary Telehealth (EXTH1)], [Exam Room, Sleep Disorders (EXRG1)], [Exam, Sleep Disorders Telehealth (EXTH1)])

4.4. SHORTCUTS.

1. number of Cardiology Exam rooms: [Calculated number of Cardiology Exam rooms based on workload]

2. number of Echocardiograph rooms: [Calculated number of Echocardiograph rooms based on workload]

3. number of Stress Echocardiograph rooms: [Calculated number of Stress Echocardiograph rooms based on workload]

4. number of Ultrasound rooms: [Calculated number of Ultrasound rooms based on workload]

5. number of Cardiology Treadmill rooms: [Calculated number of Cardiology Treadmill rooms based on workload]

6. number of Pulmonary Exam rooms: [Calculated number of Pulmonary Exam rooms based on workload]

7. number of Pulmonary Function Treadmill rooms: [Calculated number of Pulmonary Function Treadmill rooms based on workload]

8. number of Sleep Disorders Exam rooms: [Calculated number of Sleep Disorders Exam rooms based on workload]

9. number of Night Time Sleep Study beds: [Calculated number of Night Time Sleep Study beds based on workload]

SECTION 5: SPACE PLANNING CRITERIA

For calculation of the number of building support spaces (Vestibules, Lobbies, Vending Machine areas, Multi-fixture Public and Staff Toilets, Staff Lounges and Locker Rooms, Conference Rooms, Security Services, Communication Closets, and Janitor Closets), please refer to Chapter 610: Common Areas.

5.1. FA1: CARDIOLOGY, PULMONARY, AND SLEEP DISORDERS RECEPTION.

Where Cardiology, Pulmonary, and Sleep Disorders services are not collocated, the planner will have to program separate reception areas for each service.

1. Waiting (WRC01)   **120 NSF**

  a. Provide one
  b. Provide an additional 64 NSF for every increment of two [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than four

The minimum NSF accommodates 6 chairs at 16 NSF and 1 chair at 25 NSF.

2. Kiosk, Patient Check-in (CLSC1)   **15 NSF**

  a. Provide one
  b. Provide an additional one for every increment of eight [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than sixteen

3. Reception (RECP1)   **100 NSF**

  a. Provide one
  b. Provide an additional 50 NSF for every increment of eight [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than sixteen

Minimum allocated NSF accommodates two FTEs.

5.2. FA2: CARDIOLOGY PATIENT EXAM AREA.

1. Alcove, Height / Weight (EXR11)   **30 NSF**

  a. Provide one
  b. Provide an additional one for every increment of eight [number of Cardiology Exam rooms] greater than eight

The alcove supports height and weight measurements before moving the patient to the exam room for obtaining vital signs and other health information. Where infant and pediatric care is provided in the clinic, the planner should consider an EXRG4 Screening Room in lieu of the EXR11 Alcove, Height / Weight, or programming a combination of both types of spaces.

2. Exam Room, Cardiology (EXRG1)   **120 NSF**

  a. Provide one per each [number of Cardiology Exam rooms]

b. Deduct the total number of [Exam, Cardiology Airborne Infection Isolation (AII) (EXRG6)], [Exam, Cardiology Telehealth (EXTH1)]

The planner must assess the requirement for a Bariatric Exam room (EXB01) based on the population served at the MTF. If a Bariatric Exam room is programmed, it will be included as one of the total number of calculated Cardiology exam rooms (EXRG1s). Also program a Bariatric Toilet (TLTB1) to replace one Unisex Toilet in the Cardiology Patient Area.

3. Exam, Cardiology Airborne Infection Isolation (AII) (EXRG6)   **140 NSF**

    a. Provide one
    b. Provide an additional one for every increment of sixteen [number of Cardiology Exam rooms] greater than sixteen

The number of Airborne Infection Isolation (AII) Exam Rooms shall be determined by the Infection Control Risk Assessment (ICRA), which shall be conducted during the early planning phase of the project. This room is part of the total number of workload driven Cardiology exam rooms.

4. Toilet, Airborne Infection Isolation (AII) Patient (TLTU1)   **60 NSF**

    a. Provide one per each [Exam, Cardiology Airborne Infection Isolation (AII) (EXRG6)]

5. Exam, Cardiology Telehealth (EXTH1)   **120 NSF**

    a. Provide one

This room is equipped as a general exam with video/camera equipment to be used for the transmission of patient information and images to a remote location where a provider will receive the information and conduct a virtual encounter. This room is part of the total number of workload driven Cardiology exam rooms.

6. General Treatment Room, Cardiology (TRGM1)   **175 NSF**

    a. Provide one
    b. Provide an additional one for every increment of eight [number of Cardiology Exam rooms] greater than sixteen

7. Toilet, Unisex (TLTU1)   **60 NSF**

    a. Provide one
    b. Provide an additional one for every increment of eight [number of Cardiology Exam rooms] greater than eight

8. Phlebotomy Station (LBVP1)   **120 NSF**

    a. Provide one if [Is a Point of Care Lab within Cardiology services projected to provide rapid point-of-care testing?]

Locate proximate to the main waiting area as patients often require lab tests prior to their clinic encounter and will return to the main waiting area pending lab results.

5.3. FA3: CARDIOLOGY DIAGNOSTIC / TESTING.

1. Sub-waiting, Diagnostic / Testing (WRC03)   **60 NSF**

    a. Provide one if [Total number of Cardiology Diagnostic and Testing Rooms] is at least four

2. EKG Room (OPEC1)   **120 NSF**

    a. Provide one
    b. Provide an additional one for every increment of eight [number of Cardiology Exam rooms] greater than eight

    EKGs may also be performed in Exam Rooms.

3. Echocardiograph Room (OPPE1)   **120 NSF**

    a. Provide one per each [number of Echocardiograph rooms]

4. Stress Echocardiograph (OPPE2)   **240 NSF**

    a. Provide one per each [number of Stress Echocardiograph rooms]

5. Ultrasound Room (XDUS1)   **150 NSF**

    a. Provide one per each [number of Ultrasound rooms]

6. Tilt Table Testing (OPTM2)   **120 NSF**

    a. Provide one

7. Pacemaker, ICD Interrogation (OPPM1)   **120 NSF**

    a. Provide one

8. Treadmill, Cardiology (OPTM1)   **175 NSF**

    a. Provide one per each [number of Cardiology Treadmill rooms]

    Accommodates stress testing conducted without the administration of a radioisotope agent (i.e., Thallium) or the use of any special imaging modality (i.e., gamma camera). Refer to Chapter 540: Radiology, Nuclear Medicine and Radiation Oncology for the space requirements associated with this test that is conducted in Nuclear Medicine.

9. Holter Monitor Room (OPHM1)   **120 NSF**

    a. Provide one

5.4. FA4: PULMONARY EXAM PATIENT AREA.

1. Alcove, Height / Weight (EXR11)   **30 NSF**

    a. Provide one
    b. Provide an additional one for every increment of eight [number of Pulmonary Exam rooms] greater than eight

The alcove supports height and weight measurements before moving the patient to the exam room for obtaining vital signs and other health information. Where infant and pediatric care is provided in the clinic, the planner should consider an EXRG4 Screening Room in lieu of the EXR11 Alcove, Height / Weight, or programming a combination of both types of spaces.

2. Exam Room, Pulmonary (EXRG1)   **120 NSF**

   a. Provide one per each [number of Pulmonary Exam rooms]
   b. Deduct the total number of [Exam, Pulmonary Airborne Infection Isolation (AII) (EXRG6)], [Exam, Pulmonary Telehealth (EXTH1)]

The planner must assess the requirement for a Bariatric Exam room (EXB01) based on the population served at the MTF. If a Bariatric Exam room is programmed, it will be included as one of the total number of calculated Pulmonary exam rooms (EXRG1s). Also program a Bariatric Toilet (TLTB1) to replace one Patient Toilet in the Exam Patient Area.

3. Exam, Pulmonary Airborne Infection Isolation (AII) (EXRG6)   **140 NSF**

   a. Provide one
   b. Provide an additional one for every increment of sixteen [number of Pulmonary Exam rooms] greater than sixteen

The number of Airborne Infection Isolation (AII) Exam Rooms shall be determined by the Infection Control Risk Assessment (ICRA), which shall be conducted during the early planning phase of the project. This room is part of the total number of workload driven exam rooms.

4. Toilet, Airborne Infection Isolation (AII) Patient (TLTU1)   **60 NSF**

   a. Provide one per each [Exam, Pulmonary Airborne Infection Isolation (AII) (EXRG6)]

5. Exam, Pulmonary Telehealth (EXTH1)   **120 NSF**

   a. Provide one

This room is equipped as a general exam with video/camera equipment to be used for the transmission of patient information and images to a remote location where a provider will receive the information and conduct a virtual encounter. This room is part of the total number of workload driven Pulmonary exam rooms.

6. General Treatment Room, Pulmonary (TRGM1)   **175 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Pulmonary Exam rooms] greater than sixteen

7. Toilet, Unisex (TLTU1)   **60 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Pulmonary Exam rooms] greater than eight

5.5. FA5: PULMONARY FUNCTION LAB.

FA Condition: [Is a Pulmonary Function Lab projected to support Pulmonary services?]

The Pulmonary Function Lab supports both inpatient and outpatient testing. Where this function is not located proximate to inpatient nursing units, the planner may need to duplicate all, or some of the spaces in this functional area to support inpatients prior to discharge.

1. **Screening, Pulmonary Function (OPPF1)** **120 NSF**

   a. Provide one

2. **Testing Room, Pulmonary Function (OPPF4)** **120 NSF**

   a. Provide one
   b. Provide an additional 60 NSF for every increment of three [number of Pulmonary Exam rooms] greater than six

3. **Pulmonary Function Treadmill Room (OPPF5)** **150 NSF**

   a. Provide one per each [number of Pulmonary Function Treadmill rooms]

4. **Storage, Gas Cylinders (SRGC2)** **40 NSF**

   a. Provide one

5. **Storage, Equipment (SRE01)** **100 NSF**

   a. Provide one

6. **Respiratory Equipment, Soiled (OPRS1)** **120 NSF**

   a. Provide one

   Provide a separation for Dirty and Clean workflow within this room. This room is used to clean and dry the pulmonary function lab equipment.

5.6. FA6: SLEEP DISORDERS EXAM PATIENT AREA.

1. **Alcove, Height / Weight (EXR11)** **30 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Sleep Disorders Exam rooms] greater than eight

   The alcove supports height and weight measurements before moving the patient to the exam room for obtaining vital signs and other health information. Where infant and pediatric care is provided in the clinic, the planner should consider an EXRG4 Screening Room in lieu of the EXR11 Alcove, Height / Weight, or programming a combination of both types of spaces.

2. **Exam Room, Sleep Disorders (EXRG1)** **120 NSF**

   a. Provide one per each [number of Sleep Disorders Exam rooms]
   b. Deduct the total number of [Exam, Sleep Disorders Telehealth (EXTH1)]

3. Exam, Sleep Disorders Telehealth (EXTH1)　　　　　　120 NSF

    a.　Provide one

This room is equipped as a general exam with video/camera equipment to be used for the transmission of patient information and images to a remote location where a provider will receive the information and conduct a virtual encounter. This room is part of the total number of workload driven exam rooms.

5.7. FA7: CARDIOLOGY, PULMONARY SERVICES AND SLEEP DISORDERS SUPPORT.

Where Cardiology, Pulmonary and Sleep Disorders are not collocated, the planner will have to program separate support areas as applicable for each service.

1. Medication Room (MEDP1)　　　　　　100 NSF

    a.　Provide one if [Will the Cardiology or Pulmonary staff be calculating medication dosages, preparing the medication and administering it to the patient?]
    b.　Provide an additional one for every increment of sixteen [Total number of Cardiology and Pulmonary Exam Rooms] greater than sixteen

2. Point of Care Laboratory (LBPC1)　　　　　　100 NSF

    a.　Provide one if [Is a Point of Care Lab within Cardiology services projected to provide rapid point-of-care testing?]

This lab will also support a Coumadin clinic within Cardiology services.

3. Utility Room, Clean (UCCL1)　　　　　　100 NSF

    a.　Provide one
    b.　Provide an additional one for every increment of eight [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than eight

4. Utility Room, Soiled (USCL1)　　　　　　90 NSF

    a.　Provide one
    b.　Provide an additional one for every increment of sixteen [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than sixteen

5. Storage, Equipment (SRE01)　　　　　　100 NSF

    a.　Provide one
    b.　Provide an additional 50 NSF for every increment of eight [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than eight

6. Alcove, Wheelchair (SRLW1)　　　　　　15 NSF

    a.　Provide one
    b.　Provide an additional one for every increment of sixteen [Total number of Cardiology, Pulmonary and Sleep Disorders Exam Rooms] greater than sixteen

5.8. FA8: CARDIOLOGY, PULMONARY SERVICES AND SLEEP DISORDERS SERVICES STAFF AND ADMINISTRATION.

If additional administrative spaces other than those listed in this Functional Area are required to support patient care, consider adding shared offices or cubicles, and include comments with justification in the PFD. Refer to Chapter 210: General Administration for administrative space criteria.

1. **Office, Cardiology Supervisor (OFA04)**   **100 NSF**

   a. Provide one

2. **Team Workroom Cardiology (WKTM1)**   **380 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Cardiology Exam rooms] greater than eight

   Accommodates two providers and one RN work spaces at 50 NSF each, four LPN work spaces and two shared hot desks for techs/medics at 30 NSF each, and a collaboration area. Adjust the size based on the number of providers and support staff on the team. The planner must determine whether each type of specialty will have a dedicated team workroom or if specialties with fewer staff members can be combined in one team workroom with other specialty staff.

3. **Office, Pulmonary Supervisor (OFA04)**   **100 NSF**

   a. Provide one

4. **Team Workroom Pulmonary (WKTM1)**   **380 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Pulmonary Exam rooms] greater than eight

   Accommodates two providers and one RN work spaces at 50 NSF each, four LPN work spaces and two shared hot desks for techs/medics at 30 NSF each, and a collaboration area. Adjust the size based on the number of providers and support staff on the team.

5. **Office, Sleep Disorders Supervisor (OFA04)**   **100 NSF**

   a. Provide one

6. **Team Workroom Sleep Disorders (WKTM1)**   **380 NSF**

   a. Provide one
   b. Provide an additional one for every increment of eight [number of Sleep Disorders Exam rooms] greater than eight

   Accommodates two providers and one RN work spaces at 50 NSF each, four LPN work spaces and two shared hot desks for techs/medics at 30 NSF each, and a collaboration area. Adjust the size based on the number of providers and support staff on the team.

7. **Storage, Patient Records (FILE1)** **100 NSF**

   a. Provide one if [How many hard copy records are projected to be stored in Cardiology, Pulmonary and Sleep Disorders Services?] is at least 3804

   b. Provide an additional 8 NSF for every increment of 317 [How many hard copy records are projected to be stored in Cardiology, Pulmonary and Sleep Disorders Services?] greater than 3804

8. **Copy / Office Supply (RPR01)** **50 NSF**

   a. Provide one

   Planner must determine the availability and the volume of use of each Copy /Office Supply space within the specific service or the facility in order to share the function and optimize the space requirement for copy areas.

5.9. FA9: CARDIOPULMONARY REHABILITATION.

FA Condition: [Is a Cardiopulmonary Rehabilitation program projected to support Cardiology and Pulmonary services?]

1. **Waiting (WRC01)** **120 NSF**

   a. Provide one

2. **Reception (RECP3)** **50 NSF**

   a. Provide one

3. **Kiosk, Patient Check-in (CLSC1)** **15 NSF**

   a. Provide one

4. **Alcove, Wheelchair (SRLW1)** **15 NSF**

   a. Provide one

5. **Exam / EKG Room (OPEC1)** **120 NSF**

   a. Provide one

6. **Consult Room (OFDC2)** **120 NSF**

   a. Provide one

7. **Monitoring Station, Physiological (NSTA3)** **30 NSF**

   a. Provide one

   This station supports line of sight to monitored patients in the exercise area.

8. **Open Gym Area (PTEA1)** **360 NSF**

   a. Provide one

For warm up, stretching, structured group exercise classes such as Aerobics, Yoga, Tai Chi, Flexibility Training.

9. **Exercise Area (PTES1)**   **420 NSF**

   a. Provide one

This is an open area that includes space to accommodate exercise machines and open floor area. The allocated NSF accommodates the following equipment: one cart with free weights (20 NSF), one stair climber (80 NSF), one stair master (40 NSF), one staircase, convertible (40 NSF), one standard treadmill (40 NSF), two exercise bicycles (40 NSF), one floor mat (45 NSF), and one mat platform (90 NSF). The planner must adjust the NSF according to the number and type of equipment items required by the Functional Program and/or PRC List (Refer to Chapter 390: Physical Therapy, Table 2 Physical Therapy Exercise Area Calculation for equipment modality NSF allocation).

10. **Toilet, Unisex (TLTU1)**   **60 NSF**

    a. Provide one

11. **Workstation, Rehab Technician (PTCW1)**   **15 NSF**

    a. Provide one
    b. Provide an additional one for every increment of three [How many Cardiopulmonary Rehabilitation Technician FTE positions are authorized per the official manning document?] greater than one

This space is for the technician who supports the cardiopulmonary rehabilitation area located in line of sight to exercise area.

12. **Storage, Gym Equipment (SRE01)**   **100 NSF**

    a. Provide one

13. **Locker / Changing Room, Male Patient (LR002)**   **100 NSF**

    a. Provide one

14. **Locker / Changing Room, Female Patient (LR002)**   **100 NSF**

    a. Provide one

15. **Toilet / Shower, Male Patient (TLTS2)**   **60 NSF**

    a. Provide one

16. **Toilet / Shower, Female Patient (TLTS2)**   **60 NSF**

    a. Provide one

17. **Alcove, Clean Linen (LCCL3)**   **15 NSF**

    a. Provide one

18. **Alcove, Soiled Linen (LCSL3)** **15 NSF**

   a. Provide one

19. **Alcove, Crash Cart (RCA01)** **15 NSF**

   a. Provide one

20. **Office, Supervisor Cardiopulmonary Rehab (OFA04)** **100 NSF**

   a. Provide one

21. **Team Workroom Cardiopulmonary Rehab (WKTM1)** **270 NSF**

   a. Provide one

   Accommodates one provider and one RN work spaces at 50 NSF each, two LPN work spaces and two shared hot desks for techs/medics at 30 NSF each, and a collaboration area. Adjust the size based on the number of providers and support staff on the team.

22. **Storage, Patient Records (FILE1)** **100 NSF**

   a. Provide one if [How many hard copy records are projected to be stored in Cardiopulmonary Rehabilitation?] is at least 3804
   b. Provide an additional 8 NSF for every increment of 317 [How many hard copy records are projected to be stored in Cardiopulmonary Rehabilitation?] greater than 3804

23. **Copy / Office Supply (RPR01)** **100 NSF**

   a. Provide one

   Planner must determine the availability and the volume of use of each Copy /Office Supply space within the specific service or the facility in order to share the function and optimize the space requirement for copy areas.

5.10. FA10: SLEEP LAB.

FA Condition: [Is a Sleep Lab projected to support in person night time sleep studies?] and [How many annual in person night time sleep studies are projected?] is at least 332

1. **Night Time Sleep Study Bed (OPPF6)** **180 NSF**

   a. Provide one per each [number of Night Time Sleep Study beds]
   b. Provide an additional one for every increment of 240 [How many annual in person night time sleep studies are projected?] greater than 480

2. **Toilet / Shower, Sleep Lab (TLTS2)** **60 NSF**

   a. Provide one per each [number of Night Time Sleep Study beds]
   b. Provide an additional one for every increment of one [number of Night Time Sleep Study beds] greater than two

3. **Sleep Study, Monitoring (OPPF7)** **100 NSF**

   a. Provide one if [number of Night Time Sleep Study beds] is at least two

b. Provide an additional 30 NSF for every increment of two [number of Night Time Sleep Study beds] greater than six

This is a central control room, minimum NSF can accommodate up to three tech monitoring stations. One tech monitors two sleep study beds and each patient's sleep and general condition.

4. Storage, Equipment / Supplies (SRE01)   **100 NSF**

a. Provide one if [number of Night Time Sleep Study beds] is at least two

SECTION 6: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): CARDIOLOGY, PULMONARY AND SLEEP DISORDERS SERVICES

Cardiology, Pulmonary and Sleep Disorders Services will rely on a number of other services in the MTF for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.
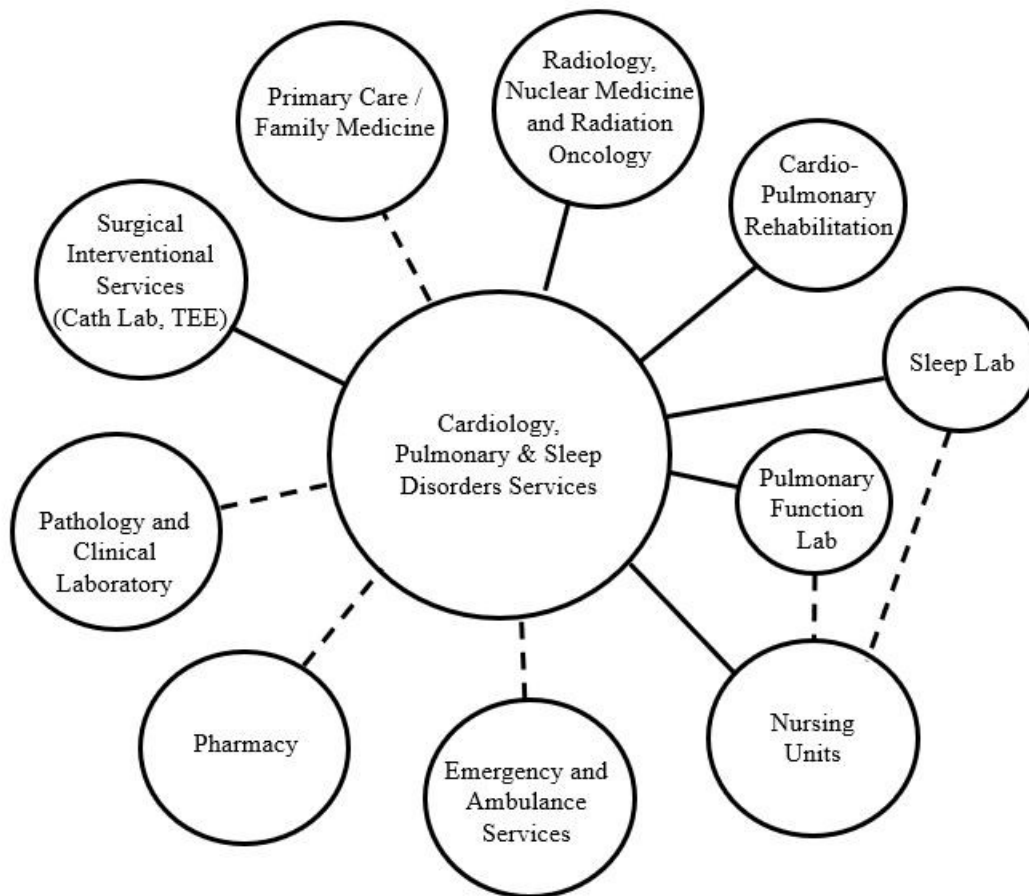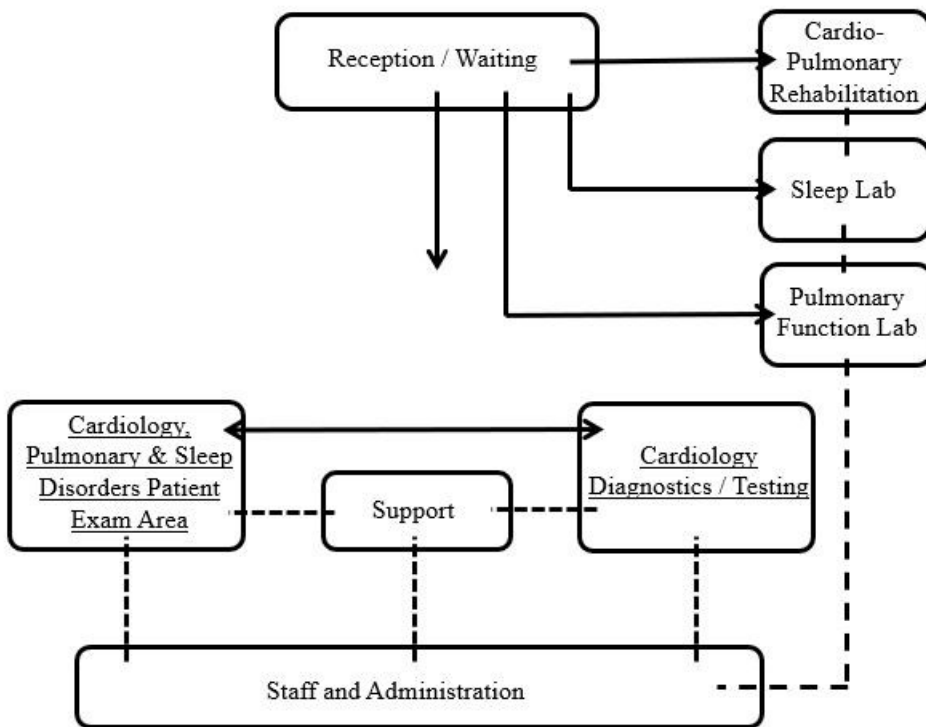

LEGEND

— Most Critical Adjacency

- - - - Less Critical Adjacency

CARDIOLOGY, PULMONARY & SLEEP DISORDERS SERVICES

SECTION 7: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL): CARDIOLOGY, PULMONARY AND SLEEP DISORDERS SERVICES

The diagram below illustrates intradepartmental relationships among key areas / spaces within Cardiology, Pulmonary and Sleep Disorders 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 MTF.

CARDIOLOGY, PULMONARY & SLEEP DISORDERS SERVICES

LEGEND

→ Patient Circulation

----- Staff Circulation

GLOSSARY

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.

Ambulatory Care Center: A Medical Treatment Facility (MTF) providing outpatient care services in both a freestanding building, as well as within or directly adjacent to an MTF that provides inpatient care services.

Average Length of Encounter (ALOE): In these space criteria, an encounter is defined as a face-to-face professional contact between a patient and a provider vested with responsibility for diagnosing, evaluating, and treating the patient's condition. The Length of Encounter is the time between set-up and clean-up of the Exam / Treatment Room. The Average Length of Encounter is used to capture variations in Length of Encounter among similar clinical encounters that will take place in an Exam Room.

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 Exam Room: This room is sized and equipped to accommodate the bariatric patient and their family member(s). It is sized for easier access. Minimum door width should be 4' to accommodate bariatric wheelchairs, and a minimum of a 6' turning radius should be provided. When provided, these rooms should be located towards the front (entrance) of the Patient Exam and Treatment areas.

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 Exam / Treatment Room; however, it is not solely dedicated to the bariatric patient. It may be used by other patients for added flexibility.

Cardiopulmonary Rehabilitation: A service that provides a comprehensive approach to cardiac and pulmonary rehabilitation. It consists of exercise and education designed to improve the health and quality of life of people who have heart, lung and vascular disease. It is important for the planner to be aware that Cardiac Rehabilitation and Pulmonary Rehabilitation may be collocated as part of a more comprehensive multidisciplinary rehabilitation clinic or they may exist separately. As well, Cardiopulmonary Rehabilitation may be located together with Physical Therapy. Space planning criteria for Physical Therapy is provided in Chapter 390.

Cardiac Rehabilitation: Designed to help a patient recover from a heart attack, other forms of heart disease or surgery to treat heart disease. Cardiac Rehabilitation is often divided into the following four phases that involve monitored exercise, nutritional counseling, emotional support, and support and education about lifestyle changes to reduce your risks of heart problems:

Phase I: Begins in the hospital as an inpatient.

Phase II: The initial outpatient phase of the program. All patients in Phase II are monitored on telemetry monitors for the duration of their individual program. Phase II includes exercise sessions as well as group and individual education about the cardiovascular risk factors.

Phase III: Also called the maintenance program. This is a supervised but non-monitored program that also takes place within the Cardiac Rehabilitation department. When patients complete Phase III, they are given home exercise guidelines to follow.

Phase IV: The final phase of cardiac rehabilitation is the patient's own independent and ongoing conditioning.

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.

Echocardiograph Room: This is a room where the echocardiogram or "echo" test is performed. The echo is a type of ultrasound test that uses high-pitched sound waves sent through a transducer. The transducer picks-up generated echoes that are turned into moving pictures of the heart and can be displayed on a video screen. There are different types of echoes, e.g., stress echocardiograms, transesophageal echocardiograms (TEE), and 3-D echocardiograms.

EKG Room: This is the room where the Electrocardiogram (EKG) is performed. EKG is a test that records the electrical activity of the heart, shows abnormal rhythms (arrhythmias or dysrhythmias), and detects heart muscle damage.

Encounter: A contact between an eligible beneficiary and a credentialed provider. An encounter may consist of examination, diagnosis, treatment, evaluation, consultation or counseling or a combination of the above. The encounter may take place in a clinic, by telephone, computer, or in other treatment or observation areas. Encounter volume used to generate exam room requirements should not include telephone encounters.

Exam / Consult Room: This room is intended to support one on one consults with a staff member and patient; it is outfitted with comfortable chairs, but it is also equipped with a sink or capped plumbing to facilitate easy conversion to an exam room. This room is located in the patient care zone, proximate to the exam rooms and not in the public zone or waiting room.

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 a 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 per 40-hour work week.

Functional Area (FA): The grouping of rooms and spaces based on their function within a service. Typical Functional Areas in clinical services are Reception, Patient Exam and Treatment Area, Clinic Support, Staff and Administration.

Holter Monitor Room: A space used to issue to and receive the Holter Monitor from the patient. This device measures the heart rhythm during a 24-hour period while the patient records their symptoms and activities in a diary. A small portable EKG device is worn by the patient. After the test is complete, a correlation is made between the symptoms (or activities) recorded and the EKG pattern that was obtained simultaneously.

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

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 5) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Laboratory, Point Of Care: 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 this laboratory is to provide rapid point-of-care tests and improve turnaround time for critical tests.

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 Section 3.

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.

Office, Private: A single occupancy office provided for an FTE Tier 1 Supervisor who per DHA guidance, typically oversees 7-10 staff members and performs supervisory functions at least 50% of the time, or other FTE positions that directly interacts with patients for 50% or more of their work day, or require a private room for confidentiality based on their job duties. Union documents must specifically state that a specific FTE is required to have a private space.

Operating Days per Year: The number of days per calendar year a facility is operational for patient care.

Program for Design (PFD):   A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 4) and the space planning criteria outlined in this document (Section 5) 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.

Pacemaker, ICD Interrogation: Room where the pacemaker representative or physician will perform a device evaluation called an "interrogation". This device interrogation will assess if the pacemaker lead wires going into the heart are functioning normally, that the battery level is okay, and will assess if there have been any abnormal heart rhythms detected by the pacemaker.

Pulmonary Function Testing Room: A room that accommodates pulmonary function testing.

Pulmonary Functiom Test (PFT): Pulmonary Function Tests (PFTs) measure how well the lungs inhale and exhale air, and how well they transfer oxygen into the blood. PFTs include a range of tests.

Pulmonary Function Treadmill Room: In this room, the patient will exercise on a treadmill to see if it causes trouble breathing. Numerous spirometry measurements will be made after exercise.

Pulmonary Rehabilitation: A program of exercises and education that helps improve the well-being of people who have chronic breathing problems.

Room Utilization Factor: The percentage of time that a room is in use to the time it could be in use over the course of a year. This factor provides flexibility to accommodate variability caused by other resources and processes involved in patient encounters. Smaller clinics should assume a lower utilization factor than larger clinics, because operational issues like provider and support staff absences and seasonal demand fluctuations have more significant impacts on patient scheduling

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 is to provide rapid point-of-care tests and improve turnaround time for critical tests.

Screening Room: After patients are checked in at reception they may proceed to the screening room for weights and vital signs prior to going to an exam room. However, activities such as screening, medical history, vitals, height and weight can also be conducted in the Exam Room.

Shortcuts: Shortcuts can be used by criteria managers to make the space criteria document more readable. They are used to replace any part of a condition with more readable text.

Sleep Disorders Services: Provides a comprehensive program specifically designed to evaluate and treat all types of sleep-related disorders. The American Academy of Sleep Medicine (AASM) developed Standards for Accreditation that includes space standards.

Sleep Study: A sleep study, known as a polysomnogram, is a non-invasive, overnight test in which a number of bodily activities are simultaneously recorded during sleep to help determine the cause of a sleeping problem. The sleep technician will apply sensors to the patient's scalp, face, chest and legs. These sensors will record brainwave activity (to assess sleep stage), eye movements, muscle activity, heart rhythm, body movements, nasal/oral airflow, respiratory effort and oxygenation. In addition, the patient's body position will be observed on video camera.

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 Sterile Processing or Environmental Services.

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 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).

Stress Echocardiograph Room: This is the room where the stress echocardiogram or stress "echo" test is performed. The echo is done both before and after the heart is stressed either by exercise on a treadmill or by injecting a medicine that makes the heart beat harder and faster. A stress echo is usually done to find out if there is decreased blood flow to the heart. This test takes about 1½ hours.

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

Telehealth: The use of technology, such as computers and mobile devices, to manage healthcare remotely. It includes a variety of health care services, including but not limited to online support groups, online health information and self-management tools, email and online communication with health care providers, remote monitoring of vital signs, video or online doctor visits. Usually, the telehealth room should be equipped as an exam room or as a consult room with mobile video / camera capability to support transmission of patient information to a remote receiving location.

Tilt Table Testing: A test which involves placing the patient on a table with a foot-support. The table is tilted in various directions and the blood pressure and pulse are measured and symptoms are recorded with the patient in diverse positions.

Treadmill Room: This is where the exercise stress test, also called a stress test, exercise electrocardiogram, treadmill test, graded exercise test, or stress EKG, is used to provide information about how the heart responds to exertion. It usually involves walking on a treadmill or pedaling a stationary bike at increasing levels of difficulty, while the electrocardiogram (EKG), heart rate, and blood pressure are monitored. It usually takes approximately 30 minutes, including 6-9 minutes of treadmill walking. Electrodes are placed on the chest so that the EKG is monitored during the entire test, while the physician monitors the patient's blood pressure.

Ultrasound Room: This room is for the Vascular Ultrasound, a diagnostic test sometimes referred to as Venous, Arterial or Carotid Doppler study. This test utilizes sound-waves to image the blood vessels in the arms, legs and neck. Patient will lie on a table to be scanned. A transducer will be moved back and forth across the area of interest, and a series of images will be made of the area in question.

Unit Dose: A medication that is purchased or re-packaged in unit-of-use format, typically utilizing barcode technology to facilitate medication management. Unit dose medications can be dispensed directly to patients.

Workload: Space Planning Criteria per DHA Policy takes projected workload into account. In-person patient encounter projections divided by the throughput range included in this document for each exam room assists planners with estimating the quantity of rooms needed to satisfy the projected workload demand.