

DoD Space Planning Criteria for Health Facilities

Cardiology/Pulmonary Services

FUNCTION	Room Code	AUTHORIZED		PLANNING RANGE/COMMENTS
		m ²	nsf	

3.16.1. PURPOSE AND SCOPE:

This Chapter provides guidance for space planning criteria for the Cardiology/Pulmonary Services in military health care facilities. These services are typically for inpatients and outpatients.

3.16.2. DEFINITIONS:

Administrative Personnel: Administrative personnel are all personnel who do not counsel, diagnosis, examine or treat patients, but who do work that is essential for the accomplishment of the missions of a medical treatment facility. This does include military (assigned and borrowed), contract and civilian personnel. It does not include volunteers.

Cardiology: The study of the heart and its functions.

Clinic Visit: A visit is a contact between an eligible beneficiary and a medical care provider. A visit consists of examination, diagnosis, treatment, evaluation, consultation, counseling, or medical advice in a clinic or treatment/observation in quarters. (Source: DoD 6015-M, Glossary of Healthcare Terminology 1999)

Full-Time Equivalent (FTE): A work force equivalent to one individual working full time for a specific period, which may be made up of several part-time individuals or one full-time individual. This will include everyone working in the facility; military, civilian and contractor personnel.

Office: A private office is an enclosed room outfitted with either standard furniture (Room Code OFA01) or systems furniture (Room Code OFA02). An administrative cubicle is within an open room and is constructed out of system furniture (Room Code OFA03).

Preceptor/ Consult Room: A location is required for residents in training to be able to discuss cases in private with supervising faculty physicians (preceptors). These discussions occur during the course of a patient visit, requiring proximity to exam room areas. In clinic configurations with staff physician offices clustered near exam rooms, precepting may be feasible from the faculty physician's own office and not from a dedicated central preceptor room. Note that any space provided for precepting must afford privacy from eavesdropping patients and passers-by ... hence an open area accessible by non-staff is NOT acceptable."

Provider: An individual, who examines, diagnoses, treats, prescribes medication and manages the care of patients within his or her scope of practice as established by the governing body of a healthcare organization. General providers are physicians, physician's assistants and clinical nurse practitioners. The term 'staff physician' in relation to a Residency Program, does not include physician assistants, nurse practitioners or residents.

Pulmonology: The science concerned with the anatomy, physiology, and the pathology of the lungs.

3.16.3. POLICIES:

Clinic Composition: A separate cardiology/pulmonary clinic will not be programmed if the number of provider FTEs is 2 or less. When staffing does not support a separate clinic, the service may be combined with internal medicine. Cardiology and pulmonary clinics may be separate clinics at larger facilities.

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3.16.3. POLICIES: Continued

Offices, Private: With the exception of the office provided for “Key Personnel,” all other private offices will be 120 net square feet as stated in Chapter 2.1 (General Administration), paragraph 2.1.5. Private offices will be provided to following personnel:

- a) Staff who must meet with patients/customers on a regular basis and hold private consultations/discussion.
- b) The senior officer and enlisted member of a department.
- c) Staff who supervise others and must hold frequent, private counseling sessions with their junior staff. This does not include staff who supervise a very small number of people, and who would only occasionally need private counseling space. These staff can use available conference rooms or other private areas for their infrequent counseling needs
- d) Any personnel who interview or counsel patients with patient privacy concerns.

Office, Non-Private or Shared Space: Personnel, who require office space, but not a private office, will be provided space in a shared office. Non-private or shared office space will be programmed at 60 net square feet per occupant

Providers’ Examination Rooms: Each provider will be provided with two examination rooms.

Providers’ Offices: Generally, each provider (physician, physician's assistant, clinical nurse practitioner, and allied scientist) on the staff will be provided a private office (excluded offices are provided under other criteria, such as Radiologists, Pathologists, Anesthesiologists, Commanders, etc.). However, shared office space is encouraged and is an option if it is within the Clinic Concept of Operations.

Public Toilets, Staff Lounges and Locker Areas: The criteria for public toilets, staff lounges and locker rooms are provided in Chapter 6.1 (Common Areas).

Residents’ Cubicle Space: Private office space will not be programmed for GME residents. GME residents will be provided with shared office space at 60 nsf per resident for Navy/Air Force and 40 nsf for Army. An office for a rotating resident may be programmed in the clinic for residents who see patients.

Resident’s Office/Examination Rooms: Additional office and examination room space may be programmed into a clinic to provide space for “rotating residents” to see patients. A resident during his or her rotation in the clinic will use this space when seeing patients as walk-ins or by appointment. One office and two examination rooms may be programmed for each resident FTE projected to be in the clinic seeing patients. Note: These residents are not necessarily cardiologist residents only; family practice and internal medicine residents may require a rotation in the cardiology/pulmonary clinic.

3.16.4. PROGRAM DATA REQUIRED:

- Will Cardiac Services be provided?
- How many FTE Cardiology technicians are projected?
- How many FTE Cardiologists are projected?
- How many FTE nurse managers are projected?
- How many FTE nursing staff are projected? **Note:** This information is used to calculate the size of the Nurse Workroom. Do not include nurse managers or advice nurses.
- How many NCOIC/LCPO/LPO are projected?
- How many EKG tests are projected weekly?

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3.16.4. PROGRAM DATA REQUIRED: Continued

- Will Echocardiographs be stored on CD or video format?
- Will Transesophageal Echocardiography be performed in the clinic?
- Will Pediatric Services be provided?
- Will Stress Echocardiography be performed in the clinic?
- How many Echocardiographs are projected annually?
- Will Ultrasound Services be provided in the Cardiology/Pulmonary Clinic?
- Will Pulmonary Services be provided?
 - How many FTE Pulmonary technicians are projected?
 - How many inhalation treatments are projected weekly?
 - How many FTE Pulmonologists are projected?
 - How many FTE Home Care Coordinators are projected?
- Will Bronchoscopy procedures be performed in the clinic?
- How many FTEs on peak shift? **Note:** This information is used to calculate the number of Staff Toilets and the size of the Staff Lounge.
- How many staff will require a locker? **Note:** Do not include staff with offices or cubicles.
- How many FTE staff will require a dedicated cubicle? **Note:** Do not include providers or nursing staff
- How many FTE staff will require a private office? **Note:** Do not count providers, nurse managers, advice nurses, or NCOIC/LCPO/LPOs.
- How many officers or officer equivalents are projected? **Note:** This information is used to calculate the size of the Conference Room. See Chapter 2.1 (General Administration), paragraph 2.1.2 for Personnel Equivalents Chart.
- Will there be vending machines in the staff lounge?
- How many Stress EKGs will be performed annually?
- Will a Sleep Studies Suite be required in the Pulmonary Clinic?
- Will there be a Residency Program?
 - Will there be a Residency Program Director?
 - Will there be a Residency Program Secretary?
 - How many Residents are projected?
 - How many Residency Staff require a private administrative office?
 - How many Residency Administrative Staff cubicles are required?
 - How many staff physicians are projected?

NOTE: GP indicates that a guideplate exists for that particular Room Code.

3.16.5 SPACE CRITERIA:

RECEPTION AREAS				
Clinic Waiting	WRC01	5.57	60	Minimum. Provide five seats for each projected FTE provider. Provide 16 nsf for 95% of the seats and 25 nsf for 5% of the seats (handicapped waiting).
Reception (GP)	RECP1	13.01	140	Provide 140 nsf for the first eight providers. Increase 60 nsf for each increment of four providers over the initial eight providers

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RECEPTION AREAS - Continued

Patient Education Kiosk/Alcove	CLSC1	2.78	30	Minimum of one kiosk/alcove per clinic.
Patient Education Cubicle	CLSC2	2.78	30	Provide if in Clinic Concept of Operations. Includes a computer workstation for patient self-assessment, printing educational brochures, etc.
Public Toilet	NA	NA	NA	Space will be provided in Chapter 6.1 (Common Areas).

CARDIOLOGY CLINIC - Must have a minimum of two FTE cardiologists projected.

PATIENT AREAS – CARDIOLOGY CLINIC

Adult Screening Room (GP)	EXRG4	7.43	80	One per every four providers.
Pediatric Screening Room	EXRG5	11.15	120	One per clinic.
Patient Education Room	LIBV1	11.15	120	One per clinic.
Cardiology Exam Rooms (GP)	EXRG1	11.15	120	Army - Two per projected FTE provider. Do not count residents as providers. Resident's exam rooms are included in the Residency Functional Area.
	EXRG2			Navy. (See above Planning Range/Comments.)
	EXRG3			Air Force. (See above Planning Range/Comments.)
EKG Testing (GP)	OPEC1	11.15	120	Minimum. Total number of rooms may be more. See formula in paragraph 3.16.6 below.
EKG Work Area and Records	OPEC2	11.15	120	Minimum. One per clinic, add 10 nsf for each EKG room in excess of one.
Stress Echocardiograph Room	OPPE2	20.44	220	One, if in Clinic Concept of Operations.
Echocardiograph Room	OPPE1	13.01	140	One room per every 1000 echoecardiographs performed annually.
Echocardiograph Viewing Room	XVC01	11.15	120	One room per Cardiology Clinic.
Echocardiograph Records Storage Room	MRS01	9.29	100	One per clinic. Provide an additional 40 nsf if records are not maintained on CD or video format.
Transesophageal Echocardiograph Room	OPPE1	20.44	220	One per clinic if in Clinic Concept of Operations. May be co-located with Cardiac Cathertization Area.
Recovery Area (GP)	RRSS3	11.15	120	Minimum. Provide additional 60 nsf for each Transesophageal Echocardiograph room greater than one.
Scope Wash Room (GP)	USCL2	11.15	120	One per two Transesophageal Echocardiograph room.
Ultrasound (GP)	XDUS1	15.33	165	One, if in Clinic Concept of Operations.
Tilt Table Testing (GP)	OPTM2	11.15	120	One per clinic.
Pacemaker, ICD Interrogation	OPPM1	11.15	120	One per clinic.

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PATIENT AREAS – CARDIOLOGY CLINIC Continued

Pacemaker Equipment Storage	SRE01	5.57	60	One per Pacemaker room.
Stress EKG Treadmill (GP)	OPTM1	20.44	220	Minimum. Provide second room when more than 1,000 Stress EKGs are performed annually.
Toilet with Shower	TLTS2	5.57	60	One for every two Echocardiography Room and EKG Treadmill room
Dressing Room/Cubicle (GP)	DR001	4.65	60	One cubicle for every two Echocardiography Room and EKG Treadmill room.
Holter Monitor Room	OPHM1	11.15	120	One per clinic
Holter Monitor Equipment Room	SRE01	9.29	100	One per Holter Monitor Room.
Patient Toilet (GP)	TLTU1	4.65	50	One if number of projected FTE providers is between three and eight. Provide two toilets if number of projected FTE providers are between nine and fifteen. Provide three toilets if number of projected FTE providers is sixteen or more with a maximum of three toilets.

CARDIAC CATHETERIZATION (CATH) LAB (Cath Lab can be located in Radiology Department)

Cardiac Cath Exposure Room (GP)	XCCE1	54.81	590	Per room authorized.
Patient Prep/Recovery Cubicle (GP)	ORPP1	11.15	120	Two per Cardiac Cath room.
Nurse Station, Minimal	OFA01	5.57	60	Minimum if four or less beds
Nurse Station (GP)	NSTA4	11.15	120	If greater than four beds
Scrub Area (GP)	ORSA1	5.57	70	For two scrub sinks
Control Room (GP)	XCCC1	22.30	240	Minimum. Add 80 nsf per exposure room over one.
Viewing Room	XVC01	9.29	100	One per two exposure rooms
Equipment Storage	SRS01	12.54	135	Minimum one per two exposure rooms
Sterile Supply	ORCW1	9.29	100	One per two exposure rooms
Cardiac Cath Instrument Room	XCCII	9.29	100	One per exposure room
Cardiac Cath System Component Room (GP)	XCCA1	12.54	135	One room for two exposure rooms.
Equipment Cleanup	ORDA1	7.43	80	Minimum, One per two cardiac catheterization rooms

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PULMONARY CLINIC

PULMONARY FUNCTION LAB

Pulmonary Screening Room(GP)	OPPS1	11.15	120	One per Lab.
Pulmonary Function Testing Area	OPPF1	11.15	120	One per Lab.
Pulmonary Function Analyzer Room	OPPF4	11.15	120	One per Lab. Includes a Body Box.
Respiratory Inhalation Cubicle (GP)	OPRT1	6.97	75	Minimum of two cubicles per Lab. See formula in paragraph 3.16.6.
Respiratory Cleaning Room	OPRC1	13.94	150	Minimum; plus 10 nsf per treatment cubicle. Maximum: 200. One per clinic.
Treadmill Room	OPPF5	23.23	250	One per pulmonary function lab.
Equipment Storage	SRE01	9.29	100	Per cubicle. One per respiratory treatment area.
Gas Cylinders Storage	SRGC2	2.78	30	One per clinic.
Ventilator Storage	SRE01 SRE01	9.29 9.29	100 100	Minimum of 10 nsf per ventilator. Minimum of 10 nsf per ventilator.
Equipment Storage	SRE01	13.94	150	Minimum; plus 10 nsf per treatment cubicle.

SLEEP STUDIES SUITE

Verify if required.

Sleep Studies Room	OPPF6	13.01	140	One per FTE pulmonologist.
Monitoring Room	OPEE2	11.15	120	One per sleep studies suite. For equipment.
Sleep Studies Toilet (GP)	TLTU1	4.65	50	One per sleep studies room. See Chapter 6.1 (Common Areas).

BRONCHOSCOPY SUITE

Verify if procedures performed in OR. Do not locate in both areas.

Bronchoscopy Procedure Room	TRPE2	13.94	150	One per clinic if FTE pulmonologist. projected.
Recovery Room (GP)	RRSS3	11.15	120	One per suite.
Recovery Room Toilet (GP)	TLTU1	4.65	50	One per suite.
Control/Observation Area	OFA03	5.57	60	One per suite. (System Furniture, cubicle)
Scope Wash Room (GP)	USCL2	9.29	100	One per suite.

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STAFF AND ADMINISTRATIVE AREAS

Provider Office (GP)	OFD01	11.15	120	Army - One per projected FTE cardiologist/pulmonologist. (See also Residency Program Functional Area.)
	OFD02			Navy - One per projected FTE cardiologist/pulmonologist. (See also Residency Program Functional Area.)
	OFD03			Air Force - One per projected FTE cardiologist/pulmonologist. (See also Residency Program Functional Area.)
Nurse Manager Office	OFA01	11.15	120	Private office, Standard Furniture. One per FTE Nurse Manager.
	OFA02			Private office, System Furniture. One per Nurse Manager.
Home Care Coordinator Office	OFA01	11.15	120	One per projected FTE Home Care Coordinator.. Standard Furniture.
	OFA02			One per projected FTE Home Care Coordinator. System Furniture.
NCOIC/LCPO/LPO Office	OFA01	11.15	120	One per clinic. Standard Furniture.
	OFA02			One per clinic. System Furniture.
Private Office	OFA01	11.15	120	One per projected FTE requiring a private office. Refer to Chapter 2.1 (General Administration). Some examples are Group Practice Manager, Nurse Educator, Health Care Integrator, any staff who interviews or counsels patients.
	OFA02			
Respiratory Therapist Cubicle	OFA03	5.57	60	Per projected FTE, see Chapter 2.1 (General Administration). Provide 60 nsf for each FTE who requires office space.
Administrative Cubicle	OFA03	5.57	60	System Furniture cubicle. Per projected FTE, see Chapter 2.1 (General Administration). Provide 60 nsf for each full time person who requires office space.
Records Area	FILE1	5.57	60	Minimum. See Chapter 2.5 (Medical Administration) for increased sizing
Copy room	RPR01	9.29	100	For Copier/Fax/Mailbox distribution.
Forms/Literature Storage	SRS01	7.43	80	One per clinic
Conference Room (GP)	CRA01	23.23	250	Minimum use CRA01. One per Department with eight to twelve officers or officer equivalents. See Chapter 2.1 (General Administration), paragraph 2.1.2 for Personnel Equivalent Chart.
	CRA02	27.87	300	One per Department with thirteen to sixteen officers or officer equivalents.
	CRA03	37.16	400	One per Department with greater than sixteen officers or officer equivalents.

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Staff Lounge (GP)	SL001	13.01	140	Minimum. See Chapter 6.1 (Common Areas).
Personal Property Lockers (GP)	LR001	1.86	20	For staff without a dedicated office/cubicle space. See Chapter 6.1 (Common Areas) for increase in size or for Changing Locker Room criteria.
STAFF AND ADMINISTRATIVE AREAS Continued				

Staff Toilets (GP)	TLTU1	4.65	50	Minimum for total clinic staff of at least ten. See Chapter 6.1 (Common Areas) for increase in size and for male/female breakdown.
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CLINIC SUPPORT AREAS

Clean Utility	UCCL1	9.29	100	One per clinic..
Soiled Utility (GP)	USCL1	8.36	90	For up to 6 projected FTE providers.
		11.15	120	For 7 - 12 projected FTE providers.
		13.94	150	For more than 12 projected FTE providers.
Litter/Wheelchair Storage	SRLW1	5.57	60	One per clinic.
Crash Cart Alcove	RCA01	1.86	20	One per clinic. Can be shared between several clinics if fully accessible to all.
Equipment Storage	SRE01	9.29	100	One per clinic.

Functions which are required for Residency Education in Cardio/Pulmonary:

The following areas must be programmed if there is a Cardiology or Pulmonary Residency Program. These areas are in addition to those listed under common areas above.

RESIDENCY PROGRAM

Residency Program Director (GP)	OFD01	11.15	120	Army - One per director of residency program.
	OFD02			Navy - One per director of residency program.
	OFD03			Air Force - One per director of residency program.
Secretary with visitor waiting.	SEC01	11.15	120	One per Director of a Residency Program, if there is a projected FTE secretary position.
Private Office	OFA01	11.15	120	One per projected FTE that requires a private office
	OFA02			
Administrative Cubicle	OFA03	5.57	60	Provide 60 nsf per projected FTE position.
Resident Cubicle	OFA03	5.57	60	Minimum. 60 nsf per projected resident.
Residency Library	LIBB1	13.01	140	One per Residency Program.
Conference Room (GP)	CRA01	23.23	250	Minimum, one per Residency Program. For increased sizing see Chapter 2.1 (General Administration).

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Resident Exam Room (GP)	EXRG1	11.15	120	Army. One per projected resident. Minus the two monitored exam rooms.
	EXRG2			Navy.
	EXRG3			Air Force.
RESIDENCY PROGRAM Continued				
Monitored Exam Room – Subject & Observer Room (GP)	EXRG1	11.15	120	Army – provide two exam rooms per residency program, and one CMP02.
	EXRG2			Navy.
	EXRG3			Air Force
	CMP02			This room uses cameras and videotapes.
Preceptor/Consult Room (GP)	OFDC1	11.15	120	One per residency program.

3.16.6. FORMULAS:**EKG Room Requirements:**

EKG Rooms = $\frac{\text{EKG tests/week}}{2 \text{ tests per hour} \times 35 \text{ hours per week}}$

Inhalation Cubicle Requirements:

Cubicles = $\frac{\text{Treatments per week}}{2 \text{ treatments per hour} \times 35 \text{ hour per week}}$