CHAPTER 100: VETERANS HEALTH ADMINISTRATION MEDICAL / SURGICAL INPATIENT UNITS

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1 PURPOSE AND SCOPE

This document outlines Space Planning Criteria for Chapter 100: Medical / Surgical Inpatient Units. It applies to all medical facilities in Veterans Affairs (VA).

Services which are accommodated in the units listed above include, but are not limited to, those focused on Cardiac, Cardiac Step Down, Neurological, and Orthopedic patients. See Table 1 for a full list of Medicine and Surgery inpatient units.

Refer to the following chapters for additional programming data:

1. Chapter 102 – Intensive Care Nursing Units

2 DEFINITIONS

- A. <u>Full-Time Equivalent (FTE)</u>: 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 40 hours per week.
- B. <u>Functional Area</u>: The grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas within VA Space Criteria are: Reception Area, Patient Area, Support Area, Staff and Administrative Area, and Education Area.
- C. <u>Inpatient Care Unit:</u> A dedicated unit for inpatient accommodations, providing direct health care, support facilities, and institutional services. The minimum number of beds, of all types, to generate one Inpatient Unit is seventeen (17), and the maximum number of beds allowed on one Inpatient Unit is thirty-three (33).
- D. <u>Input Data Statements</u>: A set of questions designed to elicit information about the healthcare project in order to create a Program For Design (PFD) based on the criteria parameters set forth in this document. Input Data Statements could be Mission, Workload, or Staffing related, based on projections and data provided by the VHA or the VISN about the estimated model of operation for the facility. This information is processed through mathematical and logical operations in VA-SEPS.
- E. <u>Medical Patient Care Unit:</u> This unit provides for the care of patients with medical (non-surgical) disease or illness.
- F. <u>Neurological Inpatient Care Unit</u>: This unit provides for the care of patients whose primary treatment is for the injury or dysfunction of the brain, spinal cord, and/or nervous system.
- G. Orthopedic Inpatient Care Unit: This unit provides for care to the surgical and/or medical orthopedic patients, allowing consolidation of all specialized orthopedic equipment (beds, frames, crutches, etc.) on one unit.

- H. <u>Picture Archiving and Communication System (PACS)</u>: The digital capture, transfer, and storage of diagnostic images. A PACS system consists of: workstations for interpretation, image/data producing modalities, a web server for distribution, printers for file records, image servers for information transfer and holding, and an archive of off-line information. A computer network is needed to support digital imaging devices.
- I. <u>Program For Design (PFD)</u>: A space program generated either manually or by VA-SEPS based on criteria set forth in this document and specific information entered about mission, workload projections, and staffing levels authorized.
- J. <u>Provider:</u> 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.
- K. <u>SEPS (VA-SEPS)</u>: Acronym for Space and Equipment Planning System, a digital tool developed by the Department of Defense (DOD) and the Department of Veterans Affairs to generate a Program For Design (PFD) and an Equipment List for a VA healthcare project based on specific information entered in response to Input Data Questions. VA-SEPS incorporates the propositions set forth in all VA space planning criteria chapters. VA-SEPS has been designed to aid healthcare planners in creating a space plan based on a standardized set of criteria parameters.
- L. <u>Step Down Patient:</u> A general medical, surgical, or coronary care unit can provide care to those patients discharged from an intensive care unit who require more care than that provided on a general Inpatient Care unit. Step Down patients require telemetry monitoring.
- M. <u>Surgical Patient Care Unit:</u> This unit provides for the care of patients whose primary treatment was an invasive procedure.
- N. <u>Telemetry Unit:</u> See Step-Down Patient Care Unit
- O. <u>Workload</u>: Workload is the anticipated number of clinic stops that is processed through a department/service area. The total workload applied to departmental operational assumptions will determine overall room requirements by modality.

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3 OPERATING RATIONALE AND BASIS OF CRITERIA

- A. Utilization projections or planned services/modalities for a specific VA project are provided by the VA Office of Policy and Planning and the VISN Support Services Center (VSSC). These utilization projections are generated by a methodology based upon the expected veteran population in the respective market/service area. Healthcare planners working on VA projects will utilize and apply the workload based criteria set forth herein for identified services and modalities to determine room requirements for each facility.
- B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas of the Medical / Surgical Inpatient Units 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 veterans.
- C. These criteria are subject to modification relative to developments in equipment, medical practice, vendor requirements, and planning and design. The selection of the size and type of Medical / Surgical Inpatient Unit equipment is determined by anticipated medical needs.
- D. All patient beds are to reside in single-occupancy rooms, with direct access to an attached toilet / shower room.

TABLE 1: STRATEGIC PLANNING GROUP
ACUTE INPATIENT MEDICINE and ACUTE INPATIENT SURGERY*

| ACUTE INPATIENT MEDICINE and ACUTE INPATIENT SURGERY* | | | | |
|---|------------------------|--|--|--|
| ACUTE INPATIENT MEDICINE | | | | |
| BED SECTION NUMBER | BED SECTION NAME | | | |
| 1 | ALLERGY | | | |
| 2 | CARDIOLOGY | | | |
| 3 | PULMONARY TB | | | |
| 4 | PULM NON-TB | | | |
| 5 | GERONTOLOGY | | | |
| 6 | DERMATOLOGY | | | |
| 7 | ENDOCRINOLOGY | | | |
| 8 | GASTROENTEROLOGY | | | |
| 9 | HEMATOLOGY/ONCOLOGY | | | |
| 10 | NEUROLOGY | | | |
| 11 | EPILEPSY CENTER | | | |
| 14 | METABOLIC | | | |
| 15 | GEN(ACUTE) MED | | | |
| 16 | CARDIAC STEP DOWN UNIT | | | |
| 18 | NEUROLOGY OBS | | | |
| 19 | STROKE | | | |
| 20 | REHAB MEDICINE | | | |
| 24 | MEDICAL OBSERVATION | | | |
| 31 | GEN ACUTE MEDICINE | | | |
| 34 | GEN NEUROLOGY | | | |
| 35 | GEN REHAB | | | |
| 41 | REHAB MEDICINE OBS | | | |
| ACUTE INPATIENT SURGER | RY | | | |
| BED SECTION NUMBER | BED SECTION NAME | | | |
| 50 | SURGERY (GEN) | | | |
| 51 | GYNECOLOGY | | | |
| 52 | NEUROSURGERY | | | |
| 53 | OPHTHALMOLOGY | | | |
| 54 | ORTHOPEDIC | | | |
| 55 | EAR,NOSE&THROAT | | | |
| 56 | PLASTIC SURGERY | | | |
| 57 | PROCTOLOGY | | | |
| 58 | THORACIC SURGERY | | | |
| 59 | UROLOGY | | | |
| 60 | ORAL SURGERY | | | |
| 61 | PODIATRY | | | |
| 62 | PERIPHERAL VASCULAR | | | |
| 65 | SURGICAL OBS | | | |

Note: Patient bed projections use only the Bed Sections numbers shown in Table 1: Strategic Planning Group Acute Inpatient Medicine and Acute Inpatient Surgery.

4 PROGRAM DATA REQUIRED (Input Data Statements)

A. Mission Input Data Statements

- 1. Is a Recreation Dayroom for each Medical / Surgical Inpatient Unit authorized?
- 2. Is a Patient Discharge Lounge authorized?
- 3. Is a Team Workroom for each Medical / Surgical Inpatient Unit authorized?
- 4. Is a Clean Materials Handling Terminal for each Medical / Surgical Inpatient Unit authorized?
- 5. Is a Soiled Materials Handling Terminal for each Medical / Surgical Inpatient Unit authorized?
- 6. Is a Waste Disposal Chute Room for each Medical / Surgical Inpatient Unit authorized?
- 7. Is a Recycling Room for each Medical / Surgical Inpatient Unit authorized?
- 8. Is a Medical Gas Storage for each Medical / Surgical Inpatient Unit authorized?
- 9. Is a Multipurpose / Specialty Storage for each Medical / Surgical Inpatient Unit authorized? Is a Patient Records Storage for each Medical / Surgical Inpatient Unit authorized?
- 10. Is a Copier / Printer Room for each Medical / Surgical Inpatient Unit authorized?
- 11. Is a Medical / Surgical Inpatient Unit Residency Program Director authorized?
- 12. Is a Medical / Surgical Inpatient Unit Provider Resource Center Library for the Education Area authorized?
- 13. Is a Medical / Surgical Inpatient Unit Conference / Classroom for the Education Area authorized?

B. Workload Input Data Statements

- 1. How many Acute Inpatient MEDICINE patient beds are projected?
- 2. How many Acute Inpatient SURGERY patient beds are projected?

C. Staffing Input Data Statements

- 1. How many Physician FTE positions are authorized?
- 2. How many Physician Assistant FTE positions are authorized?
- 3. How many Dietician FTE positions are authorized?
- 4. How many Clinical Pharmacist FTE positions are authorized?
- 5. How many Translational Researcher FTE positions are authorized?
- 6. How many Nurse Manager FTE positions are authorized?
- 7. How many Nurse Supervisor FTE positions are authorized?
- 8. How many Consultant FTE positions are authorized?
- 9. How many Nurse Clinician FTE positions are authorized?
- 10. How many Clinical Researcher FTE positions are authorized?
- 11. How many Social Worker FTE positions are authorized?
- 12. How many Ward Clerk FTE positions are authorized?
- 13. How many Administrative Clerk FTE positions are authorized?
- 14. How many Intern FTE positions are authorized?
- 15. How many Resident FTE positions are authorized?

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- 16. How many Fellow FTE positions are authorized?
- 17. How many Patient Care Instructor FTE positions are authorized?
- 18. How many FTEs will work on peak shift?

D. <u>Miscellaneous Input Data Statements</u>

1. How many Medical / Surgical Inpatient Protective Environment Patient Rooms are authorized?

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5 SPACE CRITERIA

The minimum number of patient beds, of all types, to generate one Medical / Surgical Inpatient Unit is seventeen; the maximum is thirty-three.

For functional descriptions of key spaces refer to the Design Guide for Medical / Surgical Inpatient Units.

A. FA 1: Reception Area:

This space can be aggregated with Waiting space required for other similar adjacent units to serve all of the resulting Medical / Surgical Inpatient Units adequately.

This room provides privacy for grieving or counseling. Provide access from both Waiting and an adjacent corridor.

Consider combining the Family Lounge with the Family Pantry as appropriate. Consider sharing family services with an adjacent Medical / Surgical Inpatient Unit.

Consider combining the Family Pantry with the Family Lounge as appropriate. Consider sharing family services with an adjacent Medical / Surgical Inpatient Unit if possible.

Patient Education/Resource Kiosk to be used for private patient education needs and also as a medical information resource, which may include electronic and hard copy material, for patients and visitors. Locate accessible to Waiting.

B. FA 2: Patient Area:

- 3. Patient Room, Airborne Infection Isolation (BRIT1)....... 240 NSF (20.0 NSM) Provide one (per each bed) for ten percent of the total projected beds.
- 4. Anteroom, Airborne Infection Isolation (BRAR1)...... 65 NSF (6.0 NSM) Provide one per each Airborne Infection Isolation Patient Room.
- 5. Patient Room, Protective Environment (BRIT2) 240 NSF (20.0 NSM)

 Provide one per each Protective Environment Patient Room authorized.
- 6. Anteroom, Protective Environment (BRAR2) 65 NSF (6.0 NSM)

 Provide one per each Protective Environment Patient Room.

This room to be used for veteran socialization outside the patient room and can be used for group education for clinical issues such as medications, hypertension, diabetes, nutrition, mental health, and detoxification.

C. FA 3: Support Area:

Minimum NSF; provide one per each Medical / Surgical Inpatient Unit; provide an additional 80 NSF if the total number of Patient Rooms. Airborne Infection Isolation Patient Rooms, Protective Environment Patient Rooms, and Bariatric Patient Rooms in each Medical / Surgical Inpatient Unit is greater than twentyfour. Allocated NSF can be decentralized to promote delivery of safe and efficient patient care. 2. Alcove, Telemetry Monitoring (TEMO2) 80 NSF (7.4 NSM) Minimum NSF; provide one per each Medical / Surgical Inpatient Unit if authorized: provide an additional 20 NSF if the total number of Patient Rooms. Airborne Infection Isolation Patient Rooms, Protective Environment Patient Rooms, and Bariatric Patient Rooms in each Medical / Surgical Inpatient Unit is greater than twenty-four. 3. Medication Room (MEDP1).......100 NSF (9.3 NSM) Minimum NSF; provide one per each Medical / Surgical Inpatient Unit; provide an additional 20 NSF if the total number of Patient Rooms, Airborne Infection Isolation Patient Rooms, Protective Environment Patient Rooms, and Bariatric Patient Rooms in each Medical / Surgical Inpatient Unit is greater than twentyfour. Allocated NSF can be decentralized to promote delivery of safe and efficient patient care. 4. Nourishment Station (NCWD2)...... 80 NSF (7.4 NSM) Minimum NSF; provide one per each Medical / Surgical Inpatient Unit; provide an additional 20 NSF if the total number of Patient Rooms, Airborne Infection Isolation Patient Rooms, Protective Environment Patient Rooms, and Bariatric Patient Rooms in each Medical / Surgical Inpatient Unit is greater than twentyfour. Allocated NSF can be decentralized to promote delivery of safe and efficient patient care. Provide one per each Medical / Surgical Inpatient Unit if authorized. 6. Workroom, Team (WRCH1)...... 60 NSF (5.6 NSM) Provide one per each Medical / Surgical Inpatient Unit; minimum NSF; provide an additional 30 NSF per each Physician, Physician Assistant, Dietician, Clinical Pharmacist, and Translational Researcher FTE position authorized.

additional 60 NSF if the total number of Patient Rooms, Airborne Infection Isolation Patient Rooms, Protective Environment Patient Rooms, and Bariatric

Patient Rooms in each Medical / Surgical Inpatient Unit is greater than twentyfour.

This room is used for storage of sterile and non-sterile medical supplies. Allocated NSF can be decentralized to promote delivery of safe and efficient patient care.

This room provides an area for pre-cleaning of medical equipment, instruments, and for disposal of waste material.

Allocated NSF can be decentralized to reduce travel distances for staff.

This room is used for storage of clean linen.

Allocated NSF can be decentralized to reduce travel distances for staff

10. Materials Handling Terminal, Clean (MMRP2) 80 NSF (7.4 NSM) Provide one per each Medical / Surgical Inpatient Unit if authorized.

Space designated for access to the Clean Materials lift.

11. Materials Handling Terminal, Soiled (MMRP3) 80 NSF (7.4 NSM) Provide one per each Medical / Surgical Inpatient Unit if authorized.

Space designated for access to the Soiled Materials lift.

Allocated NSF can be decentralized to reduce travel distances for staff.

| 14 | . Storage, Medical Gas (SRGC2) 50 NSF (4.6 NSM) Provide two per each Medical / Surgical Inpatient Unit; if authorized. |
|--------------|---|
| | This room is for storage of medical gas cylinders. |
| 15 | . Storage, Multipurpose / Specialty (SRE01) |
| 16 | . Alcove, Crash Cart (RCA01) |
| 17 | . Alcove, Mobile X-Ray Machine (XRM01) 40 NSF (3.7 NSM) Provide one per each Medical / Surgical Inpatient Unit. |
| 18 | . Alcove, Wheelchair / Stretcher (SRLW1) |
| 19 | . Housekeeping Aides Closet - HAC (JANC1) |
| 20 | Storage, Environmental Management Service (SRS01) 60 NSF (5.6 NSM) Minimum NSF; provide an additional 60 NSF for every increment of two Medical / Surgical Inpatient Units. |
| | This space provided for storing bulk supplies and large equipment used by Environmental Management Services. |
| D. <u>FA</u> | 4: Staff and Administrative Area: |
| 1. | Office, Nurse Manager (OFA01) |
| | Locate the Nurse Manager office in close proximity to the Nurse Station. |
| 2. | Office, Nurse Supervisor (OFA01) |
| 3. | Office, Physician (OFD04) |
| 4. | Office, Consultant (OFD04) |
| 5. | Office, Nurse Clinician (OFD04) |
| 6. | Office, Clinical Researcher (OFD04) |

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7. Office, Physician Assistant (OFD04) 120 NSF (11.1 NSM) Provide one per each Physician Assistant FTE position authorized. 8. Office, Social Worker (OFA01 / OFA02)...... 120 NSF (11.1 NSM) Provide one per each Social Worker FTE position authorized; provide OFA01 if standard furniture is authorized or OFA02 if systems furniture is authorized. Provide one per each Dietician FTE position authorized; provide OFA01 if standard furniture is authorized or OFA02 if systems furniture is authorized. 10. Office, Clinical Pharmacist (OFA01 / OFA02)...... 120 NSF (11.1 NSM) Provide one per each Clinical Pharmacist FTE position authorized; provide OFA01 if standard furniture is authorized or OFA02 if systems furniture is authorized. Provide one per each Ward Clerk FTE position authorized. 12. Cubicle, Administration (OFA03) 60 NSF (5.6 NSM) Provide one per each Administration FTE position authorized. 13. Copier / Printer Room (RPR01) 80 NSF (7.4 NSM) Provide one per each Medical / Surgical Inpatient Unit if authorized. Provide one per each Medical / Surgical Inpatient Unit if authorized. 15. Lounge, Staff (SL001)...... 100 NSF (9.3 NSM) Minimum NSF; provide an additional 15 NSF per each FTE position working on peak shift greater than ten. Minimum NSF; provide an additional 10 NSF per each FTE position working on peak shift greater than ten. Minimum one; provide an additional one for every increment of ten FTE positions authorized greater than ten. E. FA 5: Education Area: Spaces listed in this heading are to be authorized. Spaces should be reviewed for coordination with SPC Chapter 402 - Educational Facilities. 1. Office, Residency Program Director (OFD03)............................... 120 NSF (11.1 NSM) Provide one for Medical / Surgical Inpatient Units Service if authorized.

2. Cubicle, Intern / Resident / Fellow (OFA03) 60 NSF (5.6 NSM)

Provide one per each Intern, Resident, and Fellow FTE position authorized.

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| 3. | Office, Patient Care Instructor (OFA01 / OFA02) |
|----|--|
| 4. | Library (LIBB1) |
| | Consider combining with Conference / Classroom (CRA02). |
| 5. | Conference / Classroom (CLR01) |
| | Consider combining with Library, provider Resource Center (LIBR1). |

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6 DESIGN CONSIDERATIONS

- A. Net-to-department gross factor (NTDG) for Patient Care Unit is **1.65**. This number, when multiplied by the programmed Net Square Foot (NSF) area determines the Departmental Gross Square Feet (DGSF).
- B. Separation of patient, visitor, and support traffic should be considered to the greatest extent possible, and should be considered in the placement of the bed tower and in connections to ancillary services.
- C. Standardization of rooms and modular design should be considered to allow flexibility to adapt to new technologies and respond to changes in patient volumes.
- D. Design should accommodate patient privacy and confidentiality in all areas, and in reception and patient care areas in particular. This includes visual and auditory considerations.
- E. Where possible, the department should be configured to limit the mix of patient and service functions, and to maintain clear separation of clean and dirty functions to avoid cross contamination.
- F. Corridors should be designed to a minimum of 8 feet clear width to accommodate passage of equipment or beds and two stretchers and/or wheelchairs.
- G. Administration and support areas should be located and designed to maximize staff and space efficiency, and reduce staff travel distances.
- H. Refer to Department of Veterans Affairs (VA) Office of Construction and Facilities Management Technical Information Library (<u>www.cfm.va.gov/til/</u>) for additional technical criteria.
- I. Refer to Design Guide for Medical/Surgical Inpatient Units for a detailed discussion of functional and design considerations.

7 FUNCTIONAL RELATIONSHIPS

Relationship of Medical / Surgical Inpatient Units to services listed below:

TABLE 2: FUNCTIONAL RELATIONSHIP MATRIX

| SERVICES | RELATIONSHIP | REASON |
|-------------------------------------|--------------|------------|
| ICU | 3 | G, H |
| Patient Prep and Recovery | 4 | G |
| Emergency Department | 4 | C. G |
| Main Entrance | 4 | Н |
| Surgery | 3 | C, G |
| Cardiovascular Labs | 3 | C, G |
| Endoscopy | 3 | C, G |
| Ambulatory Surgery/ Minor Procedure | N | |
| Radiology | 3 | C, G |
| Diagnostic Testing | 3 | C, G |
| Pulmonary Clinic / Testing | 3 | C, G |
| Cardiology Clinic / Testing | 3 | C, G |
| Digestive Disease Clinic/Testing | 3 | C, G |
| Neurology Clinic/Testing | 3 | C, G |
| Ventilator Storage | 3 | B, G |
| Respiratory Therapy | 3 | G |
| Pharmacy | 5 | B, C, G, I |
| Laboratory | 5 | B, C, G, I |
| Social Work / Case Management | 1 | Н |
| PT/OT | 2, 3 | Н |
| Food Service / Kitchen | 5 | E |
| Sterile Processing Department (SPD) | 5 | В |
| Staff On-Call Rooms | 4 | G |
| Linen Storage | 5 | В |
| Waste Management | 5, X | B, E, F |
| Loading Dock | 5 | B, D |

| | LEGEND | | | | | | |
|--|--|--|---|--|--|--|--|
| Relationship: | | Reasons: (Use as many as appropriate) | | | | | |
| 1. 2. 3. 4. 5. N. X. | Adjacent Close / Same Floor Close / Different Floor Acceptable Limited Traffic Connection Needed Not Applicable Separation Desirable | A. B. C. D. E. G. H. | Common use of resources Accessibility of supplies Urgency of contact Noise or vibration Presence of odors or fumes Contamination hazard Sequence of work Patient's convenience Frequent contact | | | | |
| | | J. K. | Need for security Closeness inappropriate | | | | |
| | | L. | Interference | | | | |

8 FUNCTIONAL DIAGRAM

