DoD Space Planning Criteria

Chapter 550: Pharmacy (Inpatient And Outpatient)
July 1, 2017

Originating Component: Defense Health Agency Facilities Division

Effective: July 1, 2017

Releasability: No Restrictions

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

SUMMARY of CHANGE

This revision, dated 1 July 2017 includes the following:

- On page 13, section 6.2. FA2: OP PHARMACY room 7 Vault Storage, Controlled Storage (SSV01) corrected first portion of criteria statement to read “Minimum NSF if a Vault Storage Controlled Substance is authorized”.

- On page 14, section 6.2. FA2: OP PHARMACY room 27 Clean Room, Compounded Sterile Preparations (PHIV1), changed the stated room size to “120 NSF”.

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SECTION 1: PURPOSE AND SCOPE

1.1. PURPOSE AND SCOPE This chapter outlines space planning criteria for all inpatient and outpatient pharmacies that are located within the Military Health System (MHS). It provides space planning guidelines for inpatient hospital pharmacy services and outpatient pharmacy services associated with a hospital based clinic or a freestanding ambulatory facility.

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

SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA

2.1. OPERATING RATIONALE AND BASIS OF CRITERIA.

A. Workload projections and planned services / modalities for a specific MHS facility project shall be sought by the planner in order to develop a project based on these Criteria. Healthcare and clinical planners working on military hospitals, medical centers and clinics shall utilize and apply the workload-based criteria set forth herein for identified services and modalities to determine space requirements for the project.

B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for Pharmacy and its relationship with other services of a medical facility. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for service members and their dependents.

C. These criteria are subject to modification relative to equipment, medical practice, vendor requirements, and subsequent planning and design. The final selection of the size and type of medical equipment is determined during the design process.

D. The area for each Room (NSF) in this chapter has been provided by the Military Health System (MHS) Space Template Board.

E. Calculation of the Inpatient Pharmacy (IP) Receiving, Storage and Work Areas in Functional Area 2: IP Pharmacy Work Area is derived from workload projections expressed in the number of patient beds in the MTF that the Pharmacy is expected to serve via the workload Input Data Statements as outlined below. Most of the remaining rooms in this functional area and in Functional Area 1: IP Pharmacy Reception Area and Functional Area 3: IP Pharmacy Support Area are determined based on the number and NSF of the spaces in Functional Area 2, generated from workload inputs. Mission, Staffing and Miscellaneous Input Data Questions drive the rest of the spaces in Inpatient Pharmacy component of this chapter.

F. Calculation of the Outpatient Pharmacy (OP) Receiving, Storage and Work Areas in Functional Area 2: OP Pharmacy Work Area is derived from workload projections expressed in the projected number of prescriptions dispensed via the workload Input Data Statements as outlined below. Most of the remaining rooms in this functional area and in Functional Area 1: OP Pharmacy Reception Area and Functional Area 3: OP Pharmacy Support Area are determined based on the number and NSF of the spaces in Functional Area 2, generated from workload inputs. Mission, Staffing and Miscellaneous Input Data Questions drive the rest of the spaces in Inpatient Pharmacy component of this chapter.

G. Section 3: Input Data Questions and Section 4: Space Planning Criteria have been implemented and tested in SEPS.

SECTION 3: PROGRAM DATA REQUIRED

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

1. Is an Inpatient Pharmacy authorized? (M)
    a. How many Medical / Surgical patient beds are projected for this facility? (W)
    b. How many ICU / CCU patient beds are projected for this facility? (W)
    c. How many Pediatrics patient beds are projected for this facility? (W)
    d. How many LDR / LDRP / Antepartum / Postpartum patient beds are projected for this facility? (W)
    e. How many Behavioral Health patient beds are projected for this facility? (W)
2. Is a Vault Secure Storage for Inpatient Pharmacy authorized? (M)
3. Is sterile compounding authorized? (M)
    a. How many Inpatient Pharmacy Laminar Flow Hoods, greater than one, are authorized? (Misc)
4. Is the Inpatient Pharmacy authorized to conduct Clinical Trials? (M)
5. Is a Robotics system for the Inpatient Pharmacy authorized? (M)
6. Is a Pneumatic Tube Transport System for the Inpatient Pharmacy authorized? (M)
7. Is compounding of chemotherapeutics in the Inpatient Pharmacy authorized? (M)
8. How many Inpatient Pharmacy FTEs will work on peak shift? (Misc)
9. How many unit dose, medication transfer or crash carts are authorized to be held / staged in the Inpatient Pharmacy? (Misc)
10. How many Biological Safety Cabinets for the Inpatient Pharmacy are authorized? (Misc)
11. How many Inpatient Pharmacy Automated Dispensing Units (ADUs) are authorized? (Misc)
12. Is a Inpatient Pharmacy Patient Records Storage Room authorized? (Misc)
13. Is Storage of Bulk Non-Injectables in the Inpatient Pharmacy Support authorized? (Misc)
14. Is Storage of Bulk IV Fluids / Supplies in the Inpatient Pharmacy Support authorized? (Misc).

SECTION 4: SPACE PLANNING CRITERIA: INPATIENT PHARMACY (IP)

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

4.1. FA1: IP PHARMACY RECEPTION.

1. **Vestibule (PHVS1)** **60 NSF**
   Provide one per Inpatient Pharmacy Reception.

2. **Medication Pick-Up Window (PHOD1)** **30 NSF**
   Minimum one; provide an additional one if the total number of patient beds, of all types, is greater than 250.

4.2. FA 2: IP PHARMACY.

1. **Receiving, Breakdown Room (PHBS1)** **120 NSF**
   Minimum NSF if the total number of beds, of all types, is between 25 and 200; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 200.

2. **Receiving, Documentation Station (PHEV1)** **30 NSF**
   Provide one for Inpatient Pharmacy.

3. **Receiving, Trash Holding (UTC01)** **90 NSF**
   Provide one for Inpatient Pharmacy.

4. **Working Inventory, Non-Injectable (PHBS1)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of 100 patient beds, of all types, greater than 200.

5. **Working Inventory, IV Fluids / Supplies (PHBS1)** **120 NSF**
   Minimum NSF if the total number of patient beds, of all types, is between ten and 100; provide an additional 120 NSF if the total number of patient beds, of all types, is between 101 and 200; provide an additional 240 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 380 if the total number of patient beds, of all types, is greater than 300.

6. **Safe, Secure Storage (SSS01)** **30 NSF**
   Provide one for Inpatient Pharmacy if a Secure Storage Vault is not authorized.

7. **Vault, Secure Storage (SSV01)** **120 NSF**
   Provide one for Inpatient Pharmacy if a Secure Storage Vault is authorized.

8. **Storage, Investigational Drugs / Research (PHBS1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 300 and if the Inpatient MTF is authorized to conduct Clinical Trials.

9. **Storage, Flammable (SRHM1) 90 NSF**
   Provide one for Inpatient Pharmacy.

10. **Preparation Work Area, Repackaging (PHMP1) 120 NSF**
    Minimum NSF; provide an additional 30 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 300.

11. **Preparation Work Area, Extemporaneous Compounding (PHIV1) 60 NSF**
    Minimum NSF; provide an additional 30 NSF if the total number of patient beds, of all types, is greater than 300.

12. **Workstation, Pharmacy (PHEV1) 30 NSF**
    Minimum two; provide an additional one for every increment of twenty patient beds, of all types, greater than twenty.

13. **Prescription Assembly Area, Manual Pick Station (PHUD1) 60 NSF**
    Minimum NSF; provide an additional 30 NSF for every increment of 100 patient beds, of all types, greater than 80.

    This space can be combined with STAT / Special Orders.

14. **Prescription Assembly Area, STAT / Special Orders (PHUD1) 60 NSF**
    Provide one for Inpatient Pharmacy.

    Function maybe combined with Manual Pick Station.

15. **Prescription Assembly Area, Robotics / Automation (PHR01) 120 NSF**
    Provide one if a Robotics system for the Inpatient Pharmacy is authorized.

16. **Workstation, Prescription Validation / Check (PHEV1) 30 NSF**
    Minimum one; provide an additional one for every increment of 100 patient beds greater than 200.

17. **Dispensing Area, Cart Holding / Staging (MMCR2) 30 NSF**
    Minimum NSF; provide an additional 30 NSF per each increment of three unit dose, medication transfer or crash carts authorized to be held / staged in the Inpatient Pharmacy greater than three.

18. **Pneumatic Tube Transport Station (NT001) 30 NSF**
Minimum NSF; provide an additional 30 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 300 and if a Tube Transport System for the Inpatient Pharmacy is authorized.

19. **Anteroom, Chemotherapeutics Compounding Area (PHAR1) 120 NSF**
Minimum NSF; provide an additional 60 NSF if two Biological Safety Cabinets are authorized and if compounding of chemotherapeutic in the Inpatient Pharmacy is authorized.

    Physically isolated and separate from the clean room, the anteroom provides an environment for non-sterile compounding activities such as hand washing, storage and measuring / weighing / mixing of non-sterile substances. It also includes a zone for staff to don personal protective equipment and hand wash.

20. **Clean Room, Chemotherapeutics Compounding Area (PHC01) 120 NSF**
Minimum NSF; provide an additional 60 NSF per each Biological Safety Cabinet authorized if compounding of chemotherapeutic in the Inpatient Pharmacy is authorized.

    This is the Clean Room for the sterile compounding or preparation of Chemotherapeutics. It accommodates storage of drugs and supplies under appropriate conditions of temperature, light, moisture, sanitation, ventilation and security.

21. **Anteroom, Compounded Sterile Preparations (CSP) Clean Room (PHAR1) 120 NSF**
Provide one for Inpatient Pharmacy if sterile compounding is authorized; provide an additional 60 NSF per each Laminar Flow Hood authorized greater than one.

    Physically isolated and separate from the clean room, the anteroom provides an environment for non-sterile compounding activities such as hand washing, storage and measuring / weighing / mixing of non-sterile substances. It also includes a zone for staff to don personal protective equipment and hand wash.

22. **Clean Room, Compounded Sterile Preparations (CSP) (PHIV1) 120 NSF**
Provide one for Inpatient Pharmacy if sterile compounding is authorized; provide an additional 60 NSF per each Laminar Flow Hood authorized greater than one.

    Designated area for preparing compounded sterile preparations (CSPs). The Clean Room accommodates storage of drugs and supplies under appropriate conditions of temperature, light, moisture, sanitation, ventilation and security.

23. **Storage, Hazardous Material (SRHM1) 90 NSF**
Provide one for Inpatient Pharmacy.

24. **Storage, Patient Records (FILE1)** **120 NSF**
Minimum NSF if Patient Records Storage is authorized; provide an additional 30 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 300.

25. **Storage, General (SRS01)** **120 NSF**
Minimum NSF; provide an additional 120 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 240 NSF if the total number of patient beds, of all types, is greater than 300.

26. **Cart, Holding (CHC01)** **120 NSF**
Minimum NSF; provide an additional 30 NSF if the total number of patient beds, of all types, is between 201 and 300; provide an additional 60 NSF if the total number of patient beds, of all types, is greater than 300.

27. **Janitor Closet (JANC1)** **60 NSF**
Provide one for Inpatient Pharmacy.

28. **Toilet, Staff (TLTU1)** **60 NSF**
Minimum one; provide an additional one for every increment of fifteen Inpatient Pharmacy FTE positions working on peak shift greater than fifteen.

4.3. FA 3: IP PHARMACY SUPPORT.

The rooms in this Functional Areas should be co-located with the Pharmacy Work Area; please refer to the Concept of Operations for your Project

1. **Storage, Bulk Non-Injectable (PHBS1)** **200 NSF**
Provide one if Storage of Bulk Non-Injectables in the Pharmacy Support Area is authorized.

2. **Storage Bulk, IV Fluids / Supplies (PHBS1)** **200 NSF**
Provide one if the Inpatient Pharmacy is authorized to store Bulk IV Fluids / Supplies in the Pharmacy Support Area.

3. **Storage, Refrigerated (SRR02)** **60 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of 100 patient beds, of all types, greater than 100.

4. **Storage, Freezer (SRF02)** **60 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of 100 patient beds, of all types, greater than 300.

5. **Hazardous Waste Holding (SRHM1)** **60 NSF**
Provide one for Inpatient Pharmacy.

6. **Automated Dispensing Unit, Set-up and Maintenance Area (PHUD1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF if the total number of Automated Dispensing Units (ADUs) is greater than four.

7. **Automated Dispensing Unit Control Center, PC/Printer (PHUD1) 60 NSF**
   Provide one for Inpatient Pharmacy.

SECTION 5: PROGRAM DATA REQUIRED

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

1. Is an Outpatient Pharmacy authorized? (M)
   a. How many Outpatient Pharmacy annual prescriptions are projected? (W)
2. Is Outpatient Pharmacy IV Fluids / Supplies daily replenishment authorized? (M)
3. Is a Vault Secure Storage for Outpatient Pharmacy authorized? (M)
4. Is the Outpatient Pharmacy authorized to conduct Clinical Trials? (M)
5. Is Outpatient Pharmacy sterile compounding authorized? (M)
6. Is a Pneumatic Tube Transport System for the Outpatient Pharmacy authorized? (M)
7. Is a Robotics system for the Outpatient Pharmacy authorized? (M)
   a. How many Outpatient Pharmacy robotic prescription preparation units, greater than one, are authorized? (Misc)
8. Is compounding of chemotherapeutics in the Outpatient Pharmacy authorized? (M)
   a. How many Outpatient Pharmacy Laminar Flowhoods, greater than one, are authorized? (Misc)
9. How many Outpatient Pharmacist FTE positions are authorized? (S)
10. How many Outpatient Pharmacy Technician FTE positions are authorized? (S)
11. How many Outpatient Pharmacy FTEs will work on peak shift? (Misc)
12. How many Outpatient Pharmacy Biological Safety Cabinets are authorized? (Misc)
13. Is Medications and OTC Bulk Storage in the Outpatient Pharmacy authorized? (Misc)
14. Is IV Fluids / Supplies Bulk Storage in the Outpatient Pharmacy authorized? (Misc)
15. Is Walk-in Refrigerator Bulk Storage in the Outpatient Pharmacy authorized? (Misc)
16. Is Walk-in Freezer Bulk Storage in the Outpatient Pharmacy authorized? (Misc)
17. Are Outpatient Pharmacy Automated Dispensing Units (ADUs) authorized? (Misc)
18. How many Outpatient Pharmacy Automated Dispensing Units (ADUs) are authorized? (Misc)

SECTION 6: SPACE PLANNING CRITERIA: OUTPATIENT PHARMACY (OP)

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

6.1. FA1: OP PHARMACY RECEPTION.

1. **Waiting (WRC01)** **190 NSF**

   Minimum NSF; provide an additional 60 NSF per each Dispensing Window greater than two.

2. **Playroom (PLAY1)** **120 NSF**
   Provide one for Outpatient Pharmacy.

   This space is provided to accommodate children's play activities, may be an open or enclosed area, and should be included within or adjacent to Waiting.

3. **Concierge (RECP3)** **60 NSF**
   Minimum NSF; provide an additional 30 NSF for every dispensing window greater than twelve.

4. **Kiosk, Patient Check-in (CLSC1)** **30 NSF**
   Provide one for Outpatient Pharmacy.

5. **Cubicle, Patient Education (CLSC2)** **30 NSF**
   Provide one for Outpatient Pharmacy.

6.2. FA2: OP PHARMACY.

1. **Receiving, Breakdown Room (PHBS1)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

2. **Receiving, Documentation Station (PHEV1)** **30 NSF**
   Provide one for Outpatient Pharmacy.

3. **Receiving, Trash Holding (UTC01)** **90 NSF**
   Provide one for Outpatient Pharmacy.

4. **Storage, Non-Injectables (PHBS1)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of 200,000 annual prescriptions dispensed greater than 200,000.

5. **Storage, IV Fluids / Supplies (PHBS1) 120 NSF**
   Minimum NSF; provide an additional 120 NSF if daily replenishment from Bulk Storage is not authorized.

6. **Safe, Secure Storage, (SSS01) 30 NSF**
   Provide one for Outpatient Pharmacy if a Vault Secure Storage is not authorized.

7. **Vault Storage, Controlled Substance (SSV01) 120 NSF**
   Minimum NSF if a Controlled Substance Vault Storage is authorized; provide an additional 60 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

8. **Storage, Investigational Drugs / Research (PHBS1) 120 NSF**
   Provide one if the Outpatient MTF is authorized to conduct Clinical Trials.

9. **Storage, Refrigerated (SRR02) 60 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

10. **Storage, Freezer (SRF02) 60 NSF**
    Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

11. **Storage, Flammable (SRHM1) 60 NSF**
    Provide one for Outpatient Pharmacy.

12. **Preparation Work Area, Repackaging (PHMP1) 120 NSF**
    Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

13. **Preparation Work Area, Extemporaneous Compounding (PHIV1) 60 NSF**
    Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

14. **Workstation, Order Entry and Validation (PHOD1) 30 NSF**
    Minimum one; provide an additional one for every increment of six dispensing windows greater than six.

15. **Workstation, Pharmacist (PHOD1) 30 NSF**
    Provide one per each Pharmacist FTE position authorized.

16. **Workstation, Pharmacy Technician (PHEV1) 30 NSF**
    Provide one per each Pharmacy Technician FTE position authorized.

17. **Prescription Assembly Area, Manual Pick Station (PHUD1) 60 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

18. **Robot, Prescription Preparation (PHR01) 120 NSF**
Minimum NSF; provide an additional 120 NSF per each robotic prescription preparation unit.

19. **Prescription Order Collation Area, Robotics/Automation (PHR01)120 NSF**
Provide one if a Robotics system for the Outpatient Pharmacy is authorized.

20. **Prescription Consultation (OFDC2) 120 NSF**
Provide one for Outpatient Pharmacy.

21. **Dispensing Window (PHOD1) 30 NSF**
Minimum two; provide an additional one for every increment of 50,000 projected annual prescriptions dispensed greater than 50,000.

22. **Dispensing Area, Prescription Holding and Staging (PHOD1) 30 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000.

23. **Pneumatic Tube Station (NT001) 30 NSF**
Provide one if a Tube Transport System for the Outpatient Pharmacy is authorized.

24. **Anteroom, Chemotherapeutics Compounding Area (PHAR1) 120 NSF**
Minimum NSF; provide an additional 60 NSF if two Biological Safety Cabinets are authorized and if compounding of chemotherapeutics is authorized for the Outpatient Pharmacy.

25. **Clean Room, Chemotherapeutics Compounding Area (PHC01) 120 NSF**
Minimum NSF; provide an additional 60 NSF per each Biological Safety Cabinet authorized and if compounding of chemotherapeutics is authorized for the Outpatient Pharmacy.

26. **Anteroom, Compounded Sterile Preparations (CSP) Clean Room (PHAR1) 120 NSF**
Provide one for Outpatient Pharmacy if sterile compounding is authorized; provide an additional 60 NSF per each Laminar Flow Hood authorized greater than one.

27. **Clean Room, Compounded Sterile Preparations (CSP) (PHIV1) 120 NSF**
Provide one for Outpatient Pharmacy if sterile compounding is authorized; provide an additional 60 NSF per each Laminar Flow Hood authorized greater than one.

28. **Janitor Closet (JANC1)** **60 NSF**
    Provide one for the Outpatient Pharmacy Work Area.

29. **Toilet, Staff (TLTU1)** **60 NSF**
    Minimum one; provide an additional one for every increment of fifteen Outpatient Pharmacy FTE positions working on peak shift greater than fifteen.

6.3. FA 3: OP PHARMACY SUPPORT.

The rooms in this Functional Areas should be co-located with the Pharmacy Work Area; please refer to the Concept of Operations for your Project

1. **Storage Bulk, Medications and OTC (PHBS1)** **120 NSF**
   Minimum NSF; provide an additional 120 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000 if Medications and OTC Bulk Storage is authorized.

2. **Storage Bulk, IV Fluids / Supplies (PHBS1)** **120 NSF**
   Minimum NSF; provide an additional 120 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000 if IV Fluids / Supplies Bulk Storage is authorized.

3. **Storage Bulk, Walk-In Refrigerator (SRR01)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000 if Walk-in Refrigerator Bulk Storage is authorized.

4. **Storage Bulk, Walk-In Freezer (SRF01)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of 100,000 annual prescriptions dispensed greater than 100,000 if Walk-in Freezer Bulk Storage is authorized.

5. **Storage, Hazardous Waste Holding (SRHM1)** **90 NSF**
   Provide one for Outpatient Pharmacy.

6. **Automated Dispensing Unit, Set-up and Maintenance Area (PHUD1)** **60 NSF**
   Minimum NSF; provide an additional 30 NSF if use of Automated Dispensing Units (ADUs) is authorized and the total number of Automated Dispensing Units (ADUs) is greater than four.

7. **Automated Dispensing Unit Control Center, PC/Printer (PHUD1)** **60 NSF**
   Provide one for Outpatient Pharmacy if use of Automated Dispensing Units (ADUs) is authorized.

SECTION 7: PROGRAM DATA REQUIRED

7.1. INPUT DATA STATEMENTS: PHARMACY STAFF AND ADMINISTRATION.

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

1. How many Pharmacy FTE positions are authorized? (S)
    a. How many Pharmacy FTE positions are authorized to have a private office? (Misc)
    b. How many Outpatient Pharmacy FTE positions are authorized to have a shared office? (Misc)
    c. How many Outpatient Pharmacy FTE positions are authorized to have a cubicle? (Misc)
2. Is Sub-Waiting in the Pharmacy Staff and Administrative authorized? (Misc)
3. Is a Graduate Medical Education program for Pharmacy authorized (M)
4. How many Pharmacy Resident / Student FTE positions are authorized? (S)

SECTION 8: SPACE PLANNING CRITERIA: PHARMACY STAFF AND ADMINISTRATION

8.1. FA1: PHARMACY STAFF AND ADMINISTRATION.

1. **Office, Department / Clinic Chief (OFA04)** **120 NSF**
   Provide one if an Inpatient or Outpatient Pharmacy is authorized.

2. **Sub-Waiting (WRC03)** **60 NSF**
   Provide one if a Sub-Waiting in the Pharmacy Staff and Administration is authorized.

3. **Office, NCOIC / LCPO / LPO (OFA04)** **120 NSF**
   Provide one if an Inpatient or Outpatient Pharmacy is authorized.

4. **Office, Private (OFA04)** **120 NSF**
   Provide one per each Pharmacy FTE position authorized to have a private office.

5. **Office, Shared (OFA05)** **120 NSF**
   Provide one for every increment of two Pharmacy FTE positions authorized to have a shared office.

6. **Cubicle (OFA03)** **60 NSF**
   Provide one per each Pharmacy FTE position authorized to have a cubicle.

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

7. **Conference Room (CRA01)** **240 NSF**
   Minimum NSF; provide an additional 60 NSF if the total number of FTE positions authorized is greater than ten.

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

8. **Copy / Office Supply (RPR01)** **120 NSF**
   Provide one if an Inpatient or Outpatient Pharmacy is authorized.

9. **Storage, Financial Documentation** **60 NSF**
   Provide one if an Inpatient or Outpatient Pharmacy is authorized.

10. **Lounge, Staff (SL001)** **120 NSF**
    Minimum NSF if the number of Pharmacy FTEs working on peak shift is ten; provide an additional 60 NSF for every increment of five Pharmacy FTEs working on peak shift greater than ten; maximum 360 NSF.

11. **Lockers, Personal Property (LR001)** **30 NSF**
    Minimum NSF; provide an additional 30 NSF for every increment of four FTE positions not assigned a private office, a shared office or a cubicle greater than eight.

8.2. FA2: PHARMACY GME / TRAINING.

1. **Office, Residency Program Director (OFA04)** **120 NSF**
   Provide one if a Pharmacy Graduate Medical Education program is authorized.

2. **Resident Collaboration Room (WKTM1)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF per each Pharmacy Resident / Student FTE position authorized greater than two if an Pharmacy Graduate Medical Education program is authorized.

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

3. **Conference / Classroom (CRA01)** **240 NSF**
   Provide one if the total number of Pharmacy Resident / Student FTE positions is greater than five if a Pharmacy Graduate Medical Education program is authorized.

SECTION 5: PLANNING AND DESIGN CONSIDERATIONS

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

5.1. NET-TO-DEPARTMENT GROSS FACTOR. The Net-to-department gross factor (NTDG) for Pharmacy is 1.25 this number, when multiplied by the programmed net square foot (NSF) area, determines the departmental gross square feet. This factor accounts for the space occupied by internal department circulation and interior partitions as well as other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, Section 2-3.4.2.2 and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

5.2. GENERAL DESIGN CONSIDERATIONS.

The Pharmacy will administer comprehensive pharmaceutical care and cognitive clinical services. The pharmacy program will ensure that the principles of: "right drug, right dose, right route, right time, and right patient" can be achieved consistently across all clinical areas. Consider the following services and recommendations:

1. Automated drug packaging, storage, dispensing and distribution system
2. Centralized IV admixture, chemotherapy preparation; and TPN service, performed in a compliant USP 797 environment
3. Management of clinical trials
4. Sterile product preparation
5. Extemporaneous compounding/prepackaging
6. Stock medications to specialized areas
7. Purchasing/inventory of all pharmaceuticals
8. Drug use evaluation (DUE) service
9. Drug information service; (computer-based)
10. Clinical services/pharmaceutical care at the point of care
11. Outpatient dispensing, preparation and mail-out services for medications and select patient care supplies
12. Pharmacy system computer support

13. Patient / student / resident education service

14. Outpatient waiting environment designed to support calm and comfortable seating arrangements.

15. IP Pharmacy should be located in close proximity to the nursing units, emergency department, and the procedures/interventional suite in order to optimize support and minimize the requirement for satellite pharmacies

16. The OP Pharmacy should be in an easily accessible area that is directly adjacent to the outpatient clinics.

17. When possible, the preferred arrangement would be to co-locate the IP and OP pharmacies to drive operational and inventory efficiencies.

18. Consider the following environmental design principles that can enhance safety in the pharmacy:

    a. Reduce noise with utilization of materials (e.g., flooring, ceilings and systems furniture) that are acoustically absorbent and readily maintainable.

    b. Design so that pharmacists entering orders are shielded from surrounding noise and interruptions, while maintaining a sightline to the order fill and check areas.

    c. Provide adequate illumination to improve accuracy and efficiency.

    d. Create medication safety zones: Organize areas so that everything needed is within arm's reach. Consider standardization of spaces as much as possible.

    e. Incorporate ergonomic principles: Consider appropriate heights for work counters and use of adjustable fixtures. Counter and shelf heights affect visibility and clutter.

19. An open floor design is best suited for the department. Most fixtures will be of modular design; thus enabling easy movement and reconfiguration as the needs change.

20. Order entry stations will have a private work surface space, with access to resource information and to the department's pneumatic tube system station. All workstations need to be well lit and have sufficient panels or sound attenuation to allow a pharmacist or technician to enter medication orders in an uninterrupted manner.

21. Adequate pick stations to supplement automated picking technology will be used to fill patient drug orders. The pick stations should be configured to support multiple functions in addition to refills, individual and STAT medication orders, etc. Space should be provided for a label printer within the large pick station.

22. The pick stations should have close access to bulk storage, including freezer(s) and refrigerator(s).

23. Counter space should be provided for packaging tablet and liquid medications, manufacturing extemporaneous solutions, ointments, creams and some packaging of unit dose medications. Work surfaces will also be required for labeling pre-packaged purchased medications.

24. A sink is required for cleaning glassware, bottles and other manufacturing equipment.

25. Ample work surfaces and casework storage for supplies and packaging materials should be provided within the area.

26. The sterile compounding area must be in a separate, but easily accessed area of the Pharmacy and be designed to meet all aspects of the current USP 797 guidelines.

27. An anteroom is required with a hand wash sink and gowning area, with storage for gowns/scrub suits, a workstation with computer terminal and printer, staging/storage area for a cart with IV solutions and supply and waste receptacles. A separate vestibule may be provided to facilitate the transition of staff into the anteroom.

28. The sterile preparation room will require laminar flow hoods. The hood area will have adjacent work surfaces to accommodate production into and out of the hoods. A pass-thru design will support forward workflow so that products will move efficiently from sterile compounding to dispensing, while maintaining good workflow and traffic separation.

29. A space for purchasing and receiving should be located in the same area as inventory storage and near the rear entrance / exit to the Pharmacy. Inventory will be stored on mobile / high-density shelving.

30. A vault room will be provided to supplement an automated safe for narcotics and clinical trial drugs. Clinical trials storage should be physically separate from all other medications.

31. Security measures such as surveillance cameras will be required to monitor entry to the department. The controlled substance storage must conform to regulations for security levels.

32. Two primary entrances are required, a front entrance to serve as the main reception to the department and for medication window pick-ups. Adjacent to the front entrance will be administrative offices conference room, and the resource drug information room.

33. The OP Pharmacy shall have confidential prescription consultation room adjacent to the dispensing window(s).

34. Dispensing positions in the OP Pharmacy should be designed open to allow for direct communication of staff with patients without compromising necessary security provisions (as opposed to the traditional bank teller design). All counseling positions should be visually accessible, but physically separated from each other and the reception area for patient privacy.

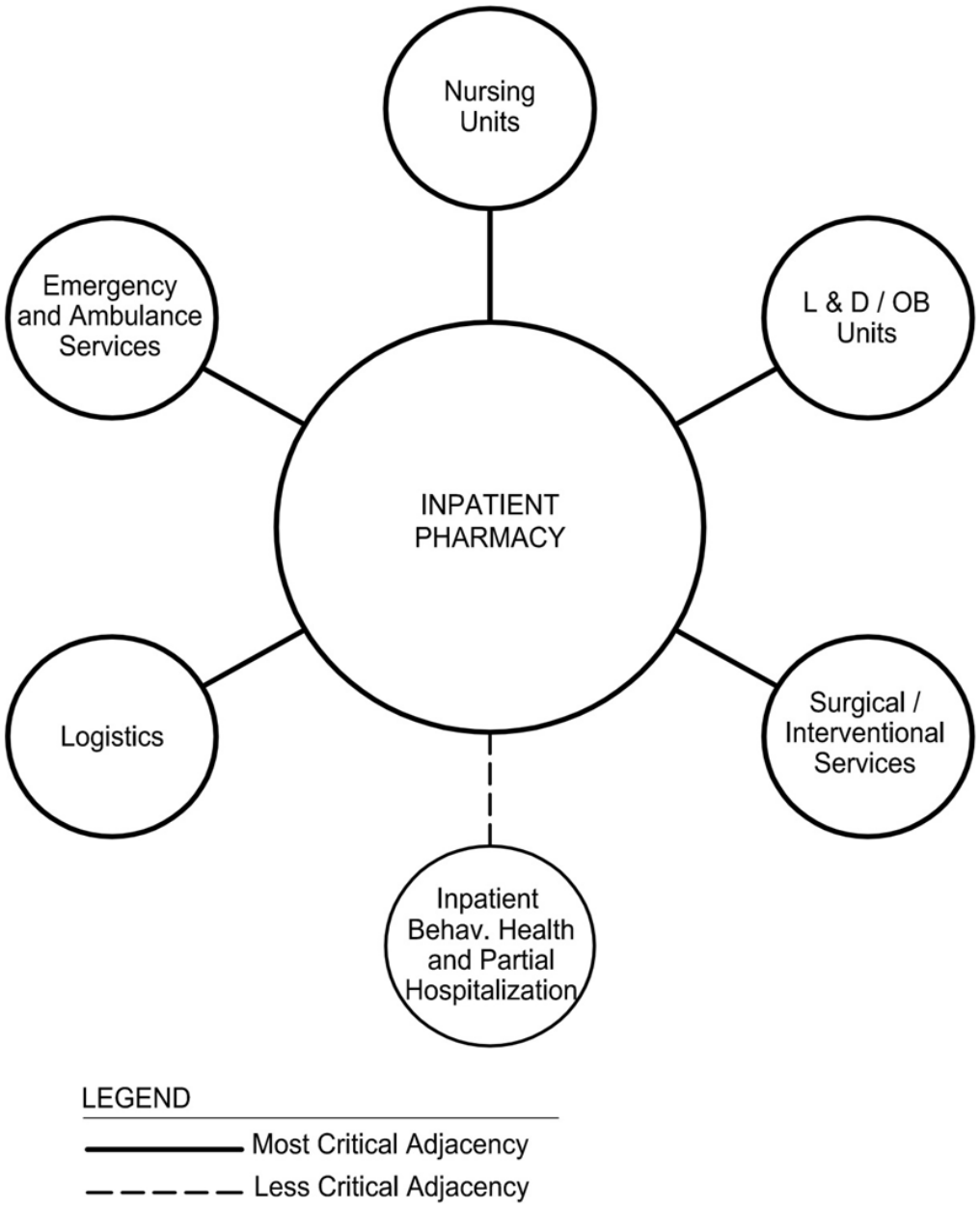
35. A secondary entrance will serve as a material handling portal for staff circulation, cart distribution, receiving vendor orders and for the pickup of trash and packaging materials.

36. Consider creation of a continuous circular workflow path from receiving, storage, distribution, assembly, and checking through to direct dispensing, automated dispensing, holding, and mail-out programs, resulting in minimized traffic paths and reduced staff fatigue.

37. Ensure that clinical staff can have access to pharmacy staff and dispensing without intruding on patient-focused activities.

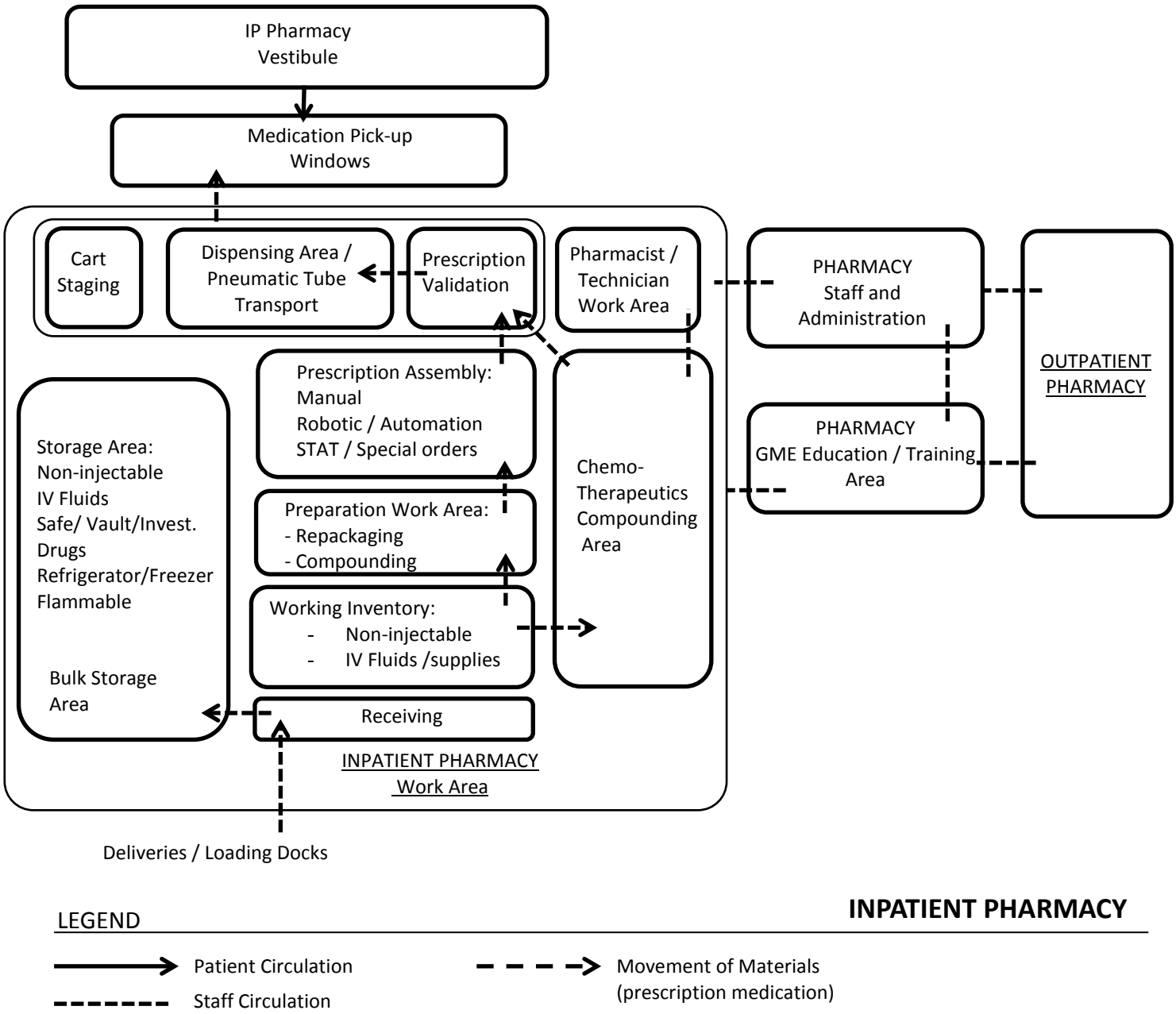
SECTION 6: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): INPATIENT PHARMACY (IP)

6.1. FUNCTIONAL RELATIONSHIPS. Inpatient Pharmacy provides services to a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.



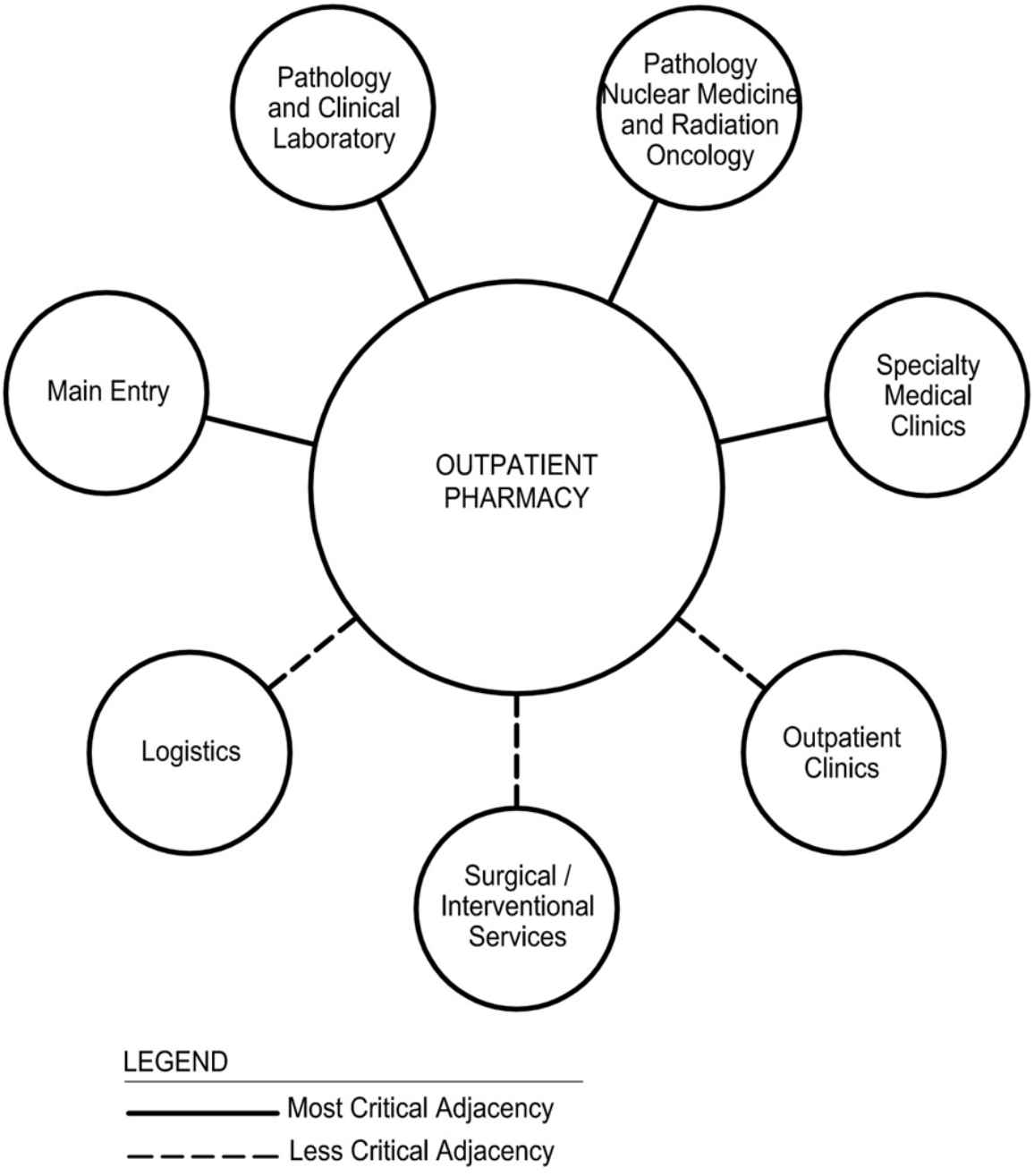
SECTION 7: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL): INPATIENT PHARMACY (IP)

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



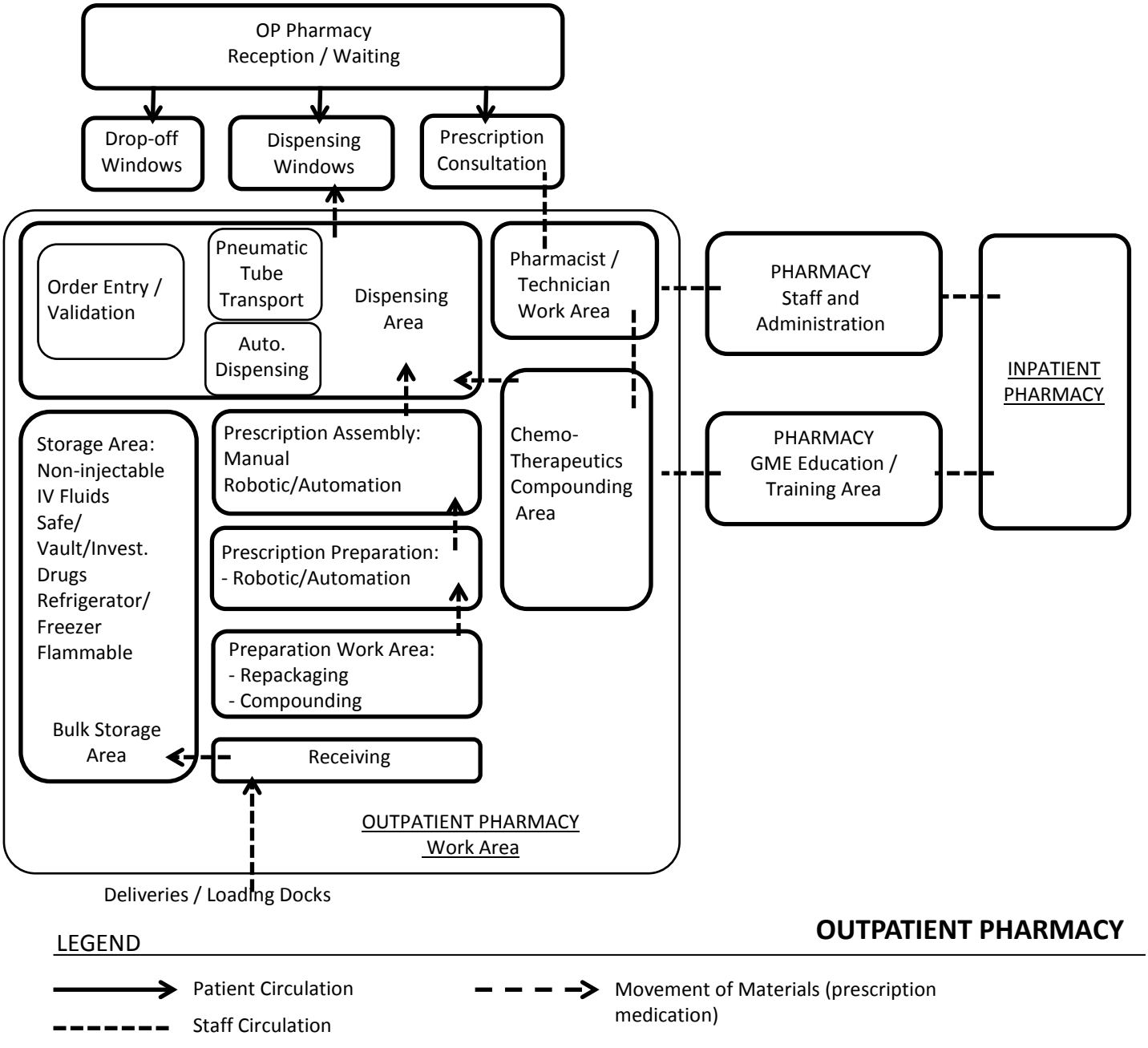
SECTION 8: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): OUTPATIENT PHARMACY (OP)

8.1. FUNCTIONAL RELATIONSHIPS: Outpatient Pharmacy provides services to a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.



SECTION 9: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL): OUTPATIENT PHARMACY (OP)

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



GLOSSARY

G.1. DEFINITIONS.

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

Automated Dispensing Units (ADU): A device designed for the secure and accurate dispensing of oral medications. The technology provides inventory control, security, accountability and effective patient medication management. ADUs are deployed within medication rooms in a variety of patient care settings, including inpatient nursing units, emergency department, surgical services, clinics, and other departments as determined by the MTF.

Automated Queuing System: An integrated system provided in Outpatient Pharmacies that ensures the patient does not have to stand in line (or queue) at reception. With this system, the patient arrives and gets a number or ticket at a self-service kiosk. This system can provide estimated waiting time and improve the patient experience. It also provides tracking capabilities. The Pharmacy staff can see how many appointments are in the queue and who is next.

Biological Safety Cabinet (BSC): A containment unit suitable for the preparation of low to moderate risk agents when there is a need for personnel and environmental protection, according to ISO 14644-1.

Compounded Sterile Preparations (CSPs): The mixing of one or more sterile products using aseptic technique; subject to extensive USP <797> guidelines for determining the risk levels and appropriate procedures related to their preparation. The risk levels are designated as low, medium and high.

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

Cytotoxic: A pharmaceutical that has the capability of killing living cells. These agents shall include, but are not limited to, agents classified as cancer chemotherapeutic, carcinogenic, mutagenic and antineoplastic.

Bank-Teller Dispensing Method: Patients receive a priority number based on military status, the type of prescription, and whether their case is urgent; when a patient's number is announced, an attendant fills prescriptions for that patient.

Assembly-Line (In and Out) Dispensing Method: A pharmacy staff member notes the prescription to be filled for the patient, gives the patient a ticket, and sends the prescription to a separate filling station.

Batch-Fill Dispensing Method: The pharmacy periodically prints all outstanding electronic prescription orders and fills them; patients pick up their prescriptions on a first-come, first-served basis.

Drug Information Service: Documentation in hard copy or digital formats that offers complete drug information, upon request, to physicians and other medical staff members. This function may be facilitated through subscribing to an authorized drug information service, and disseminated electronically via computer terminals, hand-held devices, or written text.

Extemporaneous Compounding: The art or science of assembling individual chemical components into a usable drug. Typically, this is done by an individual physician seeking a drug that is otherwise unavailable from commercial pharmaceutical manufacturers.

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

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

Inpatient Beds: Defined as all hospital beds including acute care medical, acute care surgical, intensive care, labor and delivery, obstetrics, behavioral health, short-stay observation and other beds that may be authorized for the MTF.

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

Laminar Airflow Hood: An apparatus designed to provide a Class 5, 6 or 7 environment, as spelled out in ISO 14644-1 for preparation of sterile products using air circulation in a defined direction that passes through a HEPA filter to remove the initial particles and particles generated within the controlled environment.

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

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

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

Office, Shared: An office that accommodates two workstations.

Open Concept Pharmacy Design: An open design concept which minimizes fixed walls, provides good lines of sight, and optimizes travel between functional areas and achieves flexibility. Flexibility is a critical design aspect for the Pharmacy which requires an open floor plan and flexible systems which can adapt to changes in technology and workflows.

Personal Property Lockers: This is a small-sized locker, commonly called purse or cell phone locker, and is generally used to secure purses and smaller valuables. Staff members who do not have an office or cubicle space where they can safely store belongings will be assigned these lockers.

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

Robotics: Mechanical devices that perform programmed, complex, and repetitive manipulations which mimic human behavior without continuous input from an operator. Increasingly, more pharmacies are becoming automated, using robotic technology and electronics to prepare and track medications with the goal of improving patient safety. Examples of types of robots are medication dispensing robots, IV robotics and delivery robots. For instance, robotics systems will pick, package, and dispense individual doses of pills. As well, they can compound sterile preparations of chemotherapy and non-chemotherapy doses and fill IV syringes or bags with the medications. Planner must carefully consider space requirements based on types of automation / robotics selected.

Satellite Pharmacy: Decentralized pharmacy locations that supplement and support the main inpatient and/or outpatient pharmacies, by placing appropriate resources closer to critical patient care area that requires a higher level of service, thereby facilitating improved work flow and ultimately better patient care.

Space and Equipment Planning System (SEPS): A digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents list (PRC) for a DoD healthcare project based on approved Space

Planning Criteria, the chapter and specific project-related Mission, Workload and Staffing information entered in response to the Program Data Required - Input Data Statements (IDSs).

Sterile Preparations Compounding: Also called sterile compounding, it involves the dilution, mixing, and injection of various medication products using aseptic technique.

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

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 in an ambulatory setting, or to inpatients via a unit dose cassette system, and/or using ADU technology.

USP 797: Chapter <797> of the United States Pharmacopeia, more commonly known as USP 797, sets practice standards regarding the preparation of sterile compounds.

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