DoD Space Planning Criteria for Health Facilities
Pharmacy

(Chapter 5.5)5.5.1 PURPOSE AND SCOPE

This document provides space planning criteria for pharmacy activities in DoD medical facilities. These criteria will be used to plan low volume, medium volume, and high volume pharmacies in hospitals and ambulatory clinics as well as medium and high volume outpatient and off-site pharmacies. However, these criteria should not be used for the following functional areas that are included in other space planning criteria sections:

- Medication preparation rooms, satellite pharmacies, and automated medication dispensing devices located in inpatient nursing units (Section 4.1 — Nursing Units), emergency departments (Section 5.5 — Emergency Rooms), surgery suites (Section 4.4 — Surgery), and various other inpatient and outpatient clinical areas of the hospital.
- Hematology/oncology (Section 3.15 — Specialty Medical Clinics).
- Radiopharmaceuticals (Section 5.4 — Radiology).

These criteria will need to be modified if extensive automation and/or a customized robotic system is planned (e.g., integrated medication storage, retrieval, unit-dose packaging, bar coding, and delivery/dispensing of patient medications).

5.5.2 DEFINITIONS

Admixture room: A specific area within the pharmacy for the purpose of mixing sterile pharmaceutical products. The requirements for this space — room size, location, HVAC, air exchanges, and room pressure — are dependent upon the complexities and scope of services provided by the pharmacy. May also be called "pharmaceutical compounding room."

Ampoule: A small bottle that contains a drug (especially a sealed sterile container for injection by needle).

Automated medication dispensing device (AMDD): A drug storage device or cabinet that electronically dispenses medications in a controlled fashion and tracks medication use.

Automated medication dispensing system (AMDS): Mechanical or electronic systems that perform operations or activities relative to the storing, packaging, compounding, labeling, dispensing, administering, or distributing of medications and which collect, control, and maintain all transaction information.

Barcode: A code, consisting of a group of printed and variously patterned bars and spaces and sometimes numerals, that is designed to be scanned and read into computer memory as identification for the object it labels.

Barrier isolator: An alternative to a clean room, a self-enclosed environment designed to protect the preparation (from the environment) and/or the operator (from toxic or potent compounds).

Centralized unit dose AMDS: An AMDS located in the pharmacy where automated technology is utilized in the dispensing of patient-specific unit dose medications.

Clean room: A room in which the concentration of airborne particles is controlled, and which is constructed and used in a manner to minimize the introduction, generation, and retention of particulates inside the room, and in which other relevant parameters, e.g., temperature, humidity, pressure, are controlled as necessary (International Organization for Standardization).

Clinical pharmacy: The area of pharmacy concerned with the science and practice of rational medication use.

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Clinical Pharmacist: A pharmacist with additional training, education, experience, and knowledge in drug therapy. These specialized pharmacists have extensive knowledge of a wide variety of diseases, medications, and drug protocols. They consult with physicians to assist them in determining the optimal dosage regimen and overall medication therapy plan for each patient to improve the efficacy of drug therapy and reduce drug-related costs.

Compounded sterile preparation (CSP): A compounded sterile preparation (CSP) is a dosage unit that is: prepared according to the manufacturer's labeled instructions; contains nonsterile ingredients or uses nonsterile components or devices that need to be sterilized before use; or is a biologic, diagnostic, drug, nutrient, or pharmaceutical that matches either of these characteristics.

Controlled substance: A drug or chemical substance whose possession and use are controlled by law.

Crash cart: A mobile cart containing pharmaceuticals and equipment needed by physicians and nurses in the event of a cardiac or respiratory arrest.

Drug information service: A pharmacy service that provides complete drug information, upon request, to medical officers, and other staff members. This function may be facilitated by subscribing to the Iowa Drug Information Service which includes drug literature from over 150 medical and pharmacology journals, supplemented with selected text books and other references.

Emergency medications: Medications critical for patient care such as medications requiring administration within minutes or within less time than the pharmacy can be practically expected to respond.

Floor stock medications: Medications consisting of emergency medications and controlled substances which are routinely maintained on inpatient units and accessible by nursing staff for patient administration.

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. For space planning purposes, the actual "head count" on the peak (most active) daily work shift is used and includes military, civilian, and contractor personnel.

ISO: International Organization for Standardization (ISO).

Intravenous (IV) solution: A sterile solution to be delivered to the patient within a vein.

Intravenous (IV) admixture: A pharmaceutical product which requires the measured addition of a medication to a bag or bottle of IV solution.

Medication preparation room: A room used to stage, store, and prepare medications delivered to the nursing unit by the pharmacy according to the needs of the patients being cared for on the unit; a sink, cabinetry and/or mobile carts, and locked storage for controlled substances is required.

Mobile isolator chamber (MIC): A type of barrier isolator that provides a mobile, self-contained, positive-pressure work area using glove-box technology.

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

Outpatient AMDS: An AMDS where automated technology is utilized in the dispensing of prescriptions for ambulatory patients.

Parenteral: Taken into the body or administered in a manner other than through the digestive tract, as by intravenous or intramuscular injection.

Pharmacist: A health professional who practices pharmacy. Although pharmacists typically take an order for medicines from a physician in the form of a medical prescription and dispense the medication to the patient, they perform various roles to ensure optimal health outcomes for their patients.

Pharmacokinetics: The study of the metabolism and action of drugs with particular emphasis on the time required for absorption, duration of action, distribution in the body, and method excretion.

Pharmacy: The profession of compounding and dispensing medication. More recently, the term has come to include other services related to patient care including clinical practice, medication review, drug information, etc.

Pharmacy services: The functions performed by a pharmacist in insuring the optimal use of medications to achieve specific outcomes that improve a patient's quality of life.

Point-of-care (POC): Activities performed at or near the site of patient care rather than within the physical facilities of the central pharmacy area.

Prescription: A written order, by a provider, for the preparation and administration of a medicine or other treatment.

Provider: An individual 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.

prn: Abbreviation meaning "when necessary" from the Latin "pro re nata" for an occasion that has arisen, as circumstances require, as needed.

Satellite pharmacy: Additional pharmacy locations (inpatient and/or outpatient) that supplement and support the central inpatient and/or outpatient pharmacies by diverting a portion of the workload to another dispensing area to facilitate efficient workflow and patient responsiveness.

Script: Frequently used medical term for "prescription."

Stat: Medical term used to indicate "immediately" based on the Latin word "statim."

Total parenteral nutrition (TPN): Intravenous feeding that provides a patient with all of the fluid and the essential nutrients they need when they are unable to feed themselves by mouth.

USP 797: Issued by U.S. Pharmacopeia (USP) and endorsed by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), a regulation that governs any pharmacy that prepares compounded sterile preparations (CSPs) including centralized and satellite hospital-based pharmacies and outpatient pharmacies, as well as off-site pharmacies.

5.5.3 POLICIES

Scope and configuration of pharmacy services. The role of the pharmacy and scope of services will vary depending on the patient population to be served, location, and workload. Key components include:

- Inpatient pharmacy. Medical facilities with more than 50 beds may have a separate inpatient pharmacy. Depending on the level of technology deployed, a delivery system capable of transporting emergency medications, first doses, IV solutions, and hard copy physician orders between the inpatient pharmacy and nursing units may be required.
- Offsite satellite pharmacy. Satellite pharmacies (outpatient) may be planned outside the hospital if authorized based on workload, base location and patient access, and the specific beneficiary population. However, pharmacy services and staff should be consolidated into a single location to the extent possible to minimize the number of supervisory staff.

- Outpatient pharmacy/employee dispensing. The outpatient dispensing activity should be conducted in conjunction with other ambulatory care services. If sufficient outpatient activity exists, a separate outpatient pharmacy may be planned.

Although the primary role of the pharmacy unit is the dispensing of medications to patients in response to physician orders or prescriptions, other services provided by the pharmacy may include:

- Clinical pharmacy program. Clinical pharmacists consult with physicians to assist them in determining the optimal dosage regimen and overall medication therapy plan for each patient to improve the efficacy of drug therapy and reduce drug-related costs. Additional space may be required within the central pharmacy to accommodate this function. Space should be provided for clinical pharmacists in outpatient clinics (particularly hypertension, anticoagulation, lipids, asthma, etc.).
- Drug information services. Some pharmacies maintain extensive drug information databases to respond to healthcare provider questions regarding all facets of drugs and their uses. Services range from providing general reference information and furnishing advanced poison control and toxicology services to the public, to providing specialized drug information for emergency/trauma services and other patient care areas. The drug information service should be located adjacent to the pharmacy administrative space.

Compliance with USP 797. If the pharmacy being planned will be compounding sterile preparations, it must be categorized into one of the following classifications in order to determine the facility requirement as part of compliance with USP 797:

- Low-risk level of compounding, including single transfers of sterile dosage forms from ampoules, bottles, bags, and vials using sterile syringes with sterile needles, other administration devices, and other sterile containers, and manually measuring and mixing no more than three manufactured products to compound drug admixtures.
- Medium-risk level of compounding, including the compounding of total parenteral nutrition fluids using manual or automated devices, filling of reservoirs of injection and infusion devices with multiple sterile drug products or volumes of sterile drug solutions, and transfer of volumes from multiple ampoules or vials into a single final sterile container or product.
- High-risk level of compounding, including dissolving nonsterile bulk drug and nutrient powders to make solutions which will be terminally sterilized, measuring and mixing sterile ingredients in nonsterile devices before sterilization is performed, and where sterile ingredients, components, devices, and mixtures have been exposed to air quality inferior to ISO Class 5 (maximum of 100 particles per cubic foot).

USP 797 requires the creation of two physical zones:

- Buffer room where the sterile compounding is performed
- Anteroom where nonsterile compounding activities occur such as hand washing, storage, and measuring/ weighing/mixing of nonsterile substances; an anteroom is required only for high-risk level compounding.

The configuration of the buffer room and anteroom are different in low- and medium-risk environments (buffer and anteroom can be in one shared room if separated by a visible line or physical barrier) than in a high-risk environment (buffer and anteroom must be separated by a wall with a door). USP 797 provides specific direction on the cleanliness or purity of the air in the buffer room. Compounding of sterile substances must be done in a laminar airflow workbench or a biological safety cabinet which, in turn, must be located in the buffer room. Detailed guidelines for architectural finishes in the buffer room are also specified and the minimum amount of furniture, equipment, and supplies should be brought into this room. Pharmacy staff must scrub their hands and gown in the anteroom before entering the buffer room.

As an alternative to a clean room, particularly for a smaller facility with minimal compounding, USP 797 specifically allows the use of mobile isolator chambers (MIC). MICs can take the place of a clean room by providing clean room conditions within a contained workspace. Pharmacy staff access the work area via sealed gloves and do not have to fully gown before they begin work. However, barrier isolators should still be located in an environment that is as clean and sterile as possible. When compared with a clean room, they are more economical to install and operate, require less space, and are less costly to maintain.

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Point-of- care pharmacy services. To enhance pharmacy responsiveness, automated medication dispensing devices (AMDDs) and/or satellite pharmacies may be located remote from the central pharmacy. Automated (point-of-care) medication dispensing devices for commonly used floor stock medications, including controlled substances, may be located on the nursing units as well as other clinical areas (e.g., emergency room, surgery suite, outpatient clinics). AMDDs may also be located in outpatient clinics.

AMDDs are drug storage devices or cabinets that electronically dispense medications in a controlled fashion and track medication use. Typically interfaced with the pharmacy computer system, they allow more medications to be stocked than in a traditional floor stock system, eliminate manual inventory processes, provide efficient re-stocking, quick access to first doses for stat medication orders, and enhanced security. Their principal advantage lies in permitting nurses to obtain medications for inpatients at the point-of-care (POC). Most systems require user identifiers and passwords, and internal electronic devices track nurses accessing the system, track the patients for whom medications are administered, and provide usage data for inventorying and accounting purposes. These automated medication dispensing devices can be stocked by centralized or decentralized pharmacies. Centralized pharmacies prepare and distribute medications from a central location within the hospital. Decentralized (satellite) pharmacies reside on nursing units, with a single decentralized pharmacy often serving several nursing units or an entire inpatient floor. They usually receive their medication stock and supplies from the hospital's central pharmacy. More advanced systems provide additional information support aimed at enhancing patient safety through integration into other external systems, databases, and the Internet. Machine-readable barcodes are increasingly used for medication dispensing and administration.

Use of automation and information technology. In addition to the use of AMDDs, the automation of routine tasks within the central pharmacy, as well as at the point-of-care, is becoming increasingly common in the private sector. Barcodes may be used for scanning the drug container and the wrist band of the patient, which is encoded with the patient's prescription and medical record. If any of the data fail to match up, the nurse or doctor is notified. Implementing a barcode system can prevent medication errors and improve operational efficiency, particularly when integrated with other automated processes within the central pharmacy. These may include automated counting and dispensing devices, syringe-filling devices, and automated compounding for adding ingredients to parenteral-based solutions.

The use of information systems to process, store, and categorize information related to patient drug therapy is increasing with the sophistication of technology and growth in the demand for this information. With the development of advanced computer software and computer networks, features such as patient medication profiles, drug-drug and drug-food interactions, dosage screening, drug compatibility, and pharmacokinetic calculations are now readily available.

As pharmacies improve internal processes and adopt new technology, the type, size, and location of space will all be affected which may require the modification of the space criteria defined in this document:

- Type of space. The type of space traditionally planned within the central pharmacy is changing due to new technologies that include barcodes, automated counting and dispensing machines, and robotics, as well as AMDDs. Pharmacist workstations in the central pharmacy, and on the nursing units, may need to be reconfigured to handle the electronic verification of medication orders rather than the receipt of hardcopies of orders. Over time, manual processes for transporting the hardcopies of physician orders to the pharmacist may no longer be needed (e.g., human transport, fax machines, pneumatic tube systems), resulting in significant redesign of the space traditionally used. In addition, a number of tasks may no longer be necessary, such as pharmacist order entry from the hardcopy, label generation, medication filling, medication checking, delivery to nursing units, nurses searching for medications, and nurses administering the medication from a manual medication administration record. Space for these activities can be shifted to support new technologies, and in some cases, eliminated. However, contingency plans must be considered in the event that computer systems become disabled.
- Size of space. Pharmacies traditionally used large wheeled carts to deliver 24-hour supplies of scheduled medications and as needed or "prn" medications to the nursing units. The pharmacy technician and pharmacist traditionally used "fill lists" to fill and check the medication carts that demanded large amounts of floor space and a

large work area within the central pharmacy. With the use of automated medication dispensing devices (AMDDs), 24-hour cart exchange will be greatly diminished. Space will still be required to select medications needed for replacement into the AMDDs. However, since this process is no longer a patient-name driven process, cart size and fill areas may be reduced. The size and shape of IV rooms may change as some pharmacies commit to the use of outsourcing of TPNs and other large volume parenterals, particularly with the more stringent requirements of USP 797. Improved inventory practices such as just in time delivery, multi-day delivery, and direct delivery to AMDDs will reduce inventory storage requirements and may shift some of the current inventories to a central warehouse offsite.

- Location of space. As many pharmacy distribution processes are automated, some pharmacist hours may be directed to more clinical duties. These clinical duties may reduce the need for space in the central (distribution) pharmacy and allow these clinical professionals to spend more time on the nursing units or in outpatient clinics. Space on the nursing units should include workstations for the pharmacists, thereby including the pharmacist into a physician/nurse/pharmacist patient care team. Pharmacists are also becoming integral to specific outpatient clinics such as hypertension, anticoagulation, lipid, and asthma clinics.

Materials management. Pharmacy services may be centralized or decentralized depending on the use of satellite pharmacies and automated medication dispensing devices. The location of the central, hospital-based pharmacy is not critical as long as appropriate access to AMDDs and outpatient dispensing areas is provided. An additional or backup system for delivering "stat" drugs, first doses, and missing medications to nursing units not equipped with AMDDs should also be provided (e.g., satellite pharmacy or pneumatic tube system). Access to service elevators for pharmacy staff, to facilitate the receipt of drugs delivered from the a regional warehouse or drug wholesaler, is desirable. The storage of bulk IV solutions can be decentralized to more cost-effective space such as the hospital's logistics area. However, storage areas for bulk medications and narcotics should remain centralized within the pharmacy to provide appropriate security and quality control.

Provision of administrative offices and workstations. Private and non-private administrative offices and workstations will be provided as follows:

- Offices, private. With the exception of the offices provided for "Key Personnel," all other private offices will be 100 net square feet as stated in Section 2.1 (General Administration). Private offices will be provided for the following personnel:
  - Staff who must meet with patients/customers on a regular basis and hold private consultations/discussions.
  - The senior officer and enlisted member of a department.
  - 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.
  - Any personnel who interview or counsel patients with patient privacy concerns.

- Offices, 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.

5.5.4 PROGRAM DATA REQUIRED

The following program data is required to plan an individual pharmacy:

- How many monthly prescriptions are projected?
- Is a Low Risk Compound Sterile Preparation Area required?
- Is a Medium Risk Compound Sterile Preparation Area required?
- Is a High Risk Compound Sterile Preparation Area required?
- Is a Mobile Isolation Chamber projected?
- Is an Off Site Satellite Pharmacy projected

- Is a FTE Director projected?
- How many FTE staff will require a private office? **Note:** Do not count the Director or the secretary.
- Is a FTE Secretary projected?
- How many FTE staff will require a dedicated cubicle?
- How many FTE Pharmacists are projected? **Note:** This information is used to determine the size of the conference room.
- How many FTEs are projected on peak shift? **Note:** This information is used to calculate the Staff Lounge, Staff Lockers and Staff Toilet.
- Will vending machines be provided in the Staff Lounge?

5.5.5 SPACE CRITERIA

The spaces listed on the following pages are typically required for pharmacies. It is not intended that planners include all functional areas listed herein unless there is a valid requirement at the installation under consideration. The programming of a low, medium, or high-volume pharmacy should be based on the projected number of scripts to be prepared by the pharmacy per month.

FUNCTION	Room Code	AUTHORIZED m^2	AUTHORIZED nsf	PLANNING RANGE/COMMENTS
LOW VOLUME PHARMACY (Based on 12,000 Scripts/month)				
Waiting Area	WRC01	37.16	400	400 minimum for low volume pharmacy; eight seats per dispensing station at 16 nsf per seat.

FUNCTION	Room Code	AUTHORIZED m^2	AUTHORIZED nsf	PLANNING RANGE/COMMENTS
LOW VOLUME PHARMACY (Based on 12,000 Scripts/month) Continued				

Storage/Dispensing, Low Volume (GP)	PHOD1	86.40	930	Includes consultation room/cubicle (100 nsf), three dispensing windows (60 nsf each), 10 computers, four printers, three label printers, 16 pill counters/dispensers (floor-mounted), two pill counter (table-top), water demineralizer (floor-mounted), and sink.
Manufacturing/Prepack, Low Volume (GP)	PHMP1	7.43	80	One workstation; flammable safety storage cabinet (floor-mounted), automated pill counter/dispenser (table-top), mixer (table-top), computer, and sink.
IV Admixture (GP)				*See Compound Sterile Preparation.*
Compound Sterile Preparation (Low-Risk)	PHIV1	16.72	180	Depending on concept of operations; buffer room with laminar flow hood (100 nsf) and anteroom area with computer, printer, label printer, gowning area, supplies, and sink (80 nsf).

FUNCTION	Room Code	AUTHORIZED m^2	AUTHORIZED nsf	PLANNING RANGE/COMMENTS

LOW VOLUME PHARMACY (Based on 12,000 Scripts/month) Continued

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Compound Sterile Preparation (Medium-Risk)	PHIV2	16.72	180	Depending on concept of operations; buffer room with laminar flow hood (80 nsf) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (100 nsf).
Compound Sterile Preparation (High-Risk)	PHIV3	16.72	180	Depending on concept of operations; buffer room with laminar flow hood (80 nsf) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (100 nsf).
Mobile Isolation Chamber	PHIV1	5.57	60	Depending on concept of operations; requires clean alcove; 40 nsf per single-chamber unit; 60 nsf per dual-chamber unit.
Bulk Storage (GP)	PHBS1	42.73	460	One workstation; biological refrigerator (two-door), computer, printer, and label printer; plus walk-in vault with computer (50 nsf).
Dedicated Janitor Closet	JANC1	3.72	40	One per pharmacy.

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FUNCTION	Room Code	AUTHORIZED m^2	AUTHORIZED nsf	PLANNING RANGE/COMMENTS
MEDIUM VOLUME PHARMACY (Based on 35,000 Scripts/month)				
Waiting Area	WRC01	65.03	700	700 minimum for medium volume pharmacy; seven seats per dispensing station at 16 nsf per seat.
Storage/Dispensing, Medium-Volume (GP)	PHOD2	176.51	1,900	Includes consultation room/cubicle (100 nsf), six dispensing windows (50 nsf each), 17 computers, five printers, seven label printers, 20 pill counters/dispensers (floor-mounted), three pill counter (table-top), water demineralizer (floor-mounted), four refrigerator/freezers and sink.
Manufacturing/Prepack, Medium-Volume (GP)	PHMP2	12.08	130	One workstation; flammable safety storage cabinet (floor-mounted), safety storage cabinet (built-in), automated pill counter/dispenser (table-top), mixer (table-top), computer, and sink.
Unit Dose/IV Admixture (GP)				*See separate Unit Dose Preparation and Compound Sterile Preparation areas.*

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

		m^2	nsf	

MEDIUM VOLUME PHARMACY (Based on 35,000 Scripts/month) Continued

Unit Dose Preparation	PHUD1	78.97	850	Four workstations; automatic medication distribution system (floor-mounted), unit dose solids packager, three refrigerators/freezers, six computers, two printers, two label printers, and sink.
Compound Sterile Preparation (Low-Risk)	PHIV1	31.59	340	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and anteroom area with computer, printer, label printer, gowning area, supplies, and sink (100 nsf).
Compound Sterile Preparation (Medium-Risk)	PHIV2	33.44	360	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (120 nsf).

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

		m^2	nsf	

MEDIUM VOLUME PHARMACY (Based on 35,000 Scripts/month) Continued

Compound Sterile Preparation (High-Risk)	PHIV3	33.44	360	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (120 nsf).
Mobile Isolation Chamber	PHIV2	5.57	60	Depending on concept of operations; requires clean alcove; 40 nsf per single-chamber unit; 60 nsf per dual-chamber unit.
Bulk Storage (GP)	PHBS2	111.48	1,200	Three workstations; two refrigerators/ freezers, four computers, printer, and label printer; plus walk-in vault with computer and printer (80 nsf).
Dedicated Janitor Closet	JANC1	3.72	40	One per pharmacy.

HIGH VOLUME PHARMACY (Based on greater than 35,000 Scripts/month)

Waiting Area	WRC01	74.32	800	800 minimum for high volume pharmacy; six seats per dispensing station at 16 nsf per seat.

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

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		m^2	nsf	

HIGH VOLUME PHARMACY (Based on greater than 35,000 Scripts/month) Continued

Storage/Dispensing, High-Volume (GP)	PHOD3	204.38	2,200	Includes two consultation rooms/cubicles, eight dispensing windows (50 nsf each), 12 computers, seven printers, 10 label printers, 20 pill counters/dispensers (floor-mounted), four pill counters (table-top), water demineralizer (floor-mounted), five refrigerators/freezers and sink
Manufacturing/Prepack, High-Volume (GP)	PHMP3	17.65	190	One workstation; flammable safety storage cabinet (floor-mounted), safety storage cabinet (built-in), automated pill counter/dispenser (table-top), mixer (table-top), computer, and sink (double).
Unit Dose/IV Admixture (GP)				*See separate Unit Dose Preparation and Compound Sterile Preparation areas.*
Unit Dose Preparation	PHUD1	148.64	1,600	Five workstations; automatic medication distribution system (floor-mounted), unit dose solids packager, three refrigerators/ freezers, seven computers, three printers, four label printers, and two sinks.

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

		m^2	nsf	

HIGH VOLUME PHARMACY (Based on greater than 35,000 Scripts/month) Continued

Compound Sterile Preparation (Low-Risk)	PHIV1	31.59	340	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and anteroom area with computer, printer, label printer, gowning area, supplies, and sink (100 nsf).
Compound Sterile Preparation (Medium-Risk)	PHIV2	33.44	360	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (120 nsf).
Compound Sterile Preparation (High-Risk)	PHIV3	33.44	360	Depending on concept of operations; buffer room with two laminar flow hoods and biosafety cabinet (80 nsf each) and separate anteroom with computer, printer, label printer, gowning area, supplies, and sink (120 nsf).
Mobile Isolation Chamber	PHIV1	5.57	60	Depending on concept of operations; requires clean alcove; 40 nsf per single-chamber unit; 60 nsf per dual-chamber unit.

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

		m^2	nsf	

HIGH VOLUME PHARMACY (Based on greater than 35,000 Scripts/month) Continued

Bulk Storage (GP)	PHBS3	148.64	1,600	Three workstations; three refrigerators/ freezers, four computers, printer, and label printer; plus walk-in vault with computer, printer, and refrigerator (125 nsf).
Dedicated Janitor Closet	JANC1	3.72	40	One per pharmacy.

OFFSITE SATELLITE PHARMACY

Waiting Area	WRC01	37.16	400	400 minimum for offsite satellite pharmacy unless provided as part of public area; eight seats per dispensing station at 16 nsf per seat.
Medium Volume Offsite Satellite Pharmacy (GP)	PHDS1	102.19	1,100	Includes consultation room/cubicle (100 nsf), three dispensing windows (50 nsf each), 12 computers, six printers, four label printers, 16 pill counters/dispensers (floor-mounted), two automated pill counters (table-top), water demineralizer (floor-mounted

FUNCTION	Room Code	AUTHORIZED	PLANNING RANGE/COMMENTS

		m^2	nsf	

OFFSITE SATELLITE PHARMACY Continued

High Volume Offsite Satellite Pharmacy (GP)	PHDS2	269.41	2,900	Includes consultation room/cubicle (100 nsf), five dispensing windows (50 nsf each), 21 computers, 10 printers, seven label printers, 24 pill counters/dispensers (floor-mounted), and four automated pill counters (table-top), water demineralizer (floor-mou
Staff Toilet, Unisex	TLTU1	4.65	50	Minimum one per satellite pharmacy; one lavatory and one water closet per 15 employees on peak shift.
Dedicated Janitor Closet	JANC1	3.72	40	One per satellite pharmacy.

STAFF AND ADMINISTRATIVE AREA

Office, Pharmacy Director	OFA01	11.15	120	Per authorized FTE.
	OFA02	11.15	120	
Private Office	OFA01	9.29	100	Per authorized FTE requiring private office.
	OFA02	9.29	100	
Secretary w/Visitor Waiting	SEC01	11.15	120	Per authorized secretary FTE.
Administrative Cubicle	OFA03	5.57	60	Per authorized FTE requiring cubicle.
Conference Room (GP)	CRA01	23.23	250	One per department with eight or more FTE pharmacists.

FUNCTION	Room Code	AUTHORIZED m^2	AUTHORIZED nsf	PLANNING RANGE/COMMENTS

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STAFF AND ADMINISTRATIVE AREA Continued

Staff Lounge	SL001	13.01	140	Minimum 140 nsf for 10 FTEs on peak shift. Add 5 nsf for each peak shift FTE over 10. Maximum size is 300 nsf without vending machines and 320 nsf if vending machines are included.
Staff Locker/Changing Room	LR002	9.29	100	Minimum 1 for first 10 FTE staff. Add 6 nsf for each FTE staff member >10.
Staff Toilet	TLTU1	4.65	50	Minimum of one for the first 15 FTEs on peak shift. Add one TLTU1 for every additional 15 FTEs on peak shift. Can be combined into multi-stall toilets.

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