

**Part B – Health Facility Briefing & Design**  
**255 Pharmacy Unit**



*i*HFG

**International Health Facility Guidelines**

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## 255 Pharmacy Unit

### 1 Introduction

#### *Description*

The purpose of the Pharmacy Unit is to provide all inpatient and outpatient pharmacy services including dispensing, preparation of non-sterile and sterile commodities as required, conducting clinical trials as needed, reporting on adverse drug reactions, and providing drug information and education.

The size and type of service to be provided in the Pharmacy Unit will depend upon the type of drug distribution system used, number of patients to be served, and extent of shared or purchased services. This shall be described in the Operational Policy of the Unit.

Facilities (including satellite, if applicable) and equipment shall be as necessary to accommodate the requirements of the Operational Policy. If unit dose procedure is used, provide additional space and equipment for supplies, packaging, labelling, and storage, as well as for the carts.

Relevant local authority statutory requirements are to be complied with.

### 2 Planning

#### *Operational Models*

A Pharmacy may extend its service from a single health care facility to outlying facilities. Specific design requirements for packing, storage and dispatch of goods shall be considered for different operational models.

##### Unit Dose Systems

The unit dosage system involves packaging of each dose of each medication for patients in a blister pack to provide easy and uniform medication dispensing. For a unit dosage system, the Pharmacy must include additional space and equipment for supplies, packaging, labelling and storage.

##### Private Pharmacy

If a private Pharmacy is also to be provided within the hospital's retail area, the hospital's operational policy shall determine the type of prescription drugs to be supplied by the private Pharmacy. It shall also study the impact it has on the main Pharmacy in relation to outpatient dispensing.

#### *Planning Models*

##### Dedicated Outpatient Pharmacy

In facilities where the main Pharmacy cannot be located in a position readily accessible to the outpatients areas due to site constraints, then a separate Outpatient Pharmacy may be provided. This arrangement may result in duplication of services, equipment and support facilities.

##### Satellite Pharmacy Units

Satellite Pharmacy Units refer to a series of rooms/ suites in a hospital which is remotely positioned from the main Pharmacy and yet managed by the staff of the main Pharmacy. This may include for example, a dedicated Cytotoxic Unit within a Cancer Day Care Unit or an After-hours Drug store.

##### Unit/ Department-Based Pharmacy Areas

This refers to medication areas located within an Inpatient Unit and may include automated dispensing. Unit based facilities may be located within the Clean Utility or dedicated Medication

Rooms in Inpatient Units. Facilities will include secured drug storage, refrigerated drug storage, space for medication trolleys and computer access for pharmacy personnel.

### *Functional Areas*

The functional areas of a Pharmacy Unit may be sub-divided into two types – “restricted” and “accessible” as follows:

#### Restricted Areas

- Dispensing Areas which may include separate areas for inpatients and ambulatory patients (outpatients)
- Preparation and manufacturing areas of non-sterile goods
- Active store for imprest stock storage, including assembly and dispatch areas with space allocated for trolley parking
- Bulk stores including unpacking area
- Secured stores for accountable drugs, refrigerated stores and flammable goods storage
- Dispatch area for deliveries to inpatient units
- Drug information areas
- Staff areas including Offices, Workstations, Meeting Rooms, Staff Room, Change and Toilets

#### Accessible Areas

- Reception and Waiting areas for outpatients; it is possible to share waiting areas with an adjoining unit
- Patient counselling and consult areas
- After-hours drug store for access only by authorised personnel and direct entry from outside the main Pharmacy Unit if located within; this room can also be located within a 24-hour zone of the hospital

#### Optional Areas

- Depending on the Role Delineation and Operational Policy, the Pharmacy may also include:
- Sterile Manufacturing, which may include sterile and cytotoxic manufacturing suites, along with support facilities including Anterooms, Change Rooms and Storage
- Facilities for clinical trials, which may include dispensing areas, secured storage and records area and workstations
- Extemporaneous manufacturing area which requires extra space for compounding products

#### Sterile Preparation Area

Sterile preparation area refers to either Cleanroom facilities housing clean workstations fitted with laminar cabinets or other types of pharmaceutical isolators to meet relevant standard. This includes cytotoxic suites.

#### Manufacturing Area

The following minimum elements shall be included if manufacturing is performed on-site:

- Bulk compounding area
- Provision of packaging and labelling area
- Quality control area.

#### Dispensing Stations (Automated)

An automated Dispensing Station may be provided on an Inpatient or Critical Care Unit to dispense prescriptions for patients in that Unit. The Dispensing Station remains under the control of the Pharmacy Unit.

An automated Dispensing Station should be equipped with:

- Automated Dispensing units and refrigerated dispensing units as required; installation according to manufacturer’s specifications
- Shelving for reference texts
- Lighting level adequate for drug preparation areas
- Hand-washing facilities in close proximity

- Bench for drug preparation adjacent to dispensing units

### Satellite Pharmacy

A Pharmacy Unit Satellite is a room or unit in a hospital that is located remote from the Pharmacy Unit.

A Satellite Pharmacy requires:

- Bench and sink of stainless steel or other impervious material, supplied with hot and cold water
- Dispensing bench of stainless steel or impervious material; sized according to requirement for dispensing, labelling and packaging
- Computer workstations according to number of Pharmacists in the Satellite unit
- An area for counselling of clients about dispensed or other medicines so that privacy can be assured
- Adequate lighting and ventilation for drug preparation and dispensing
- Air temperature and humidity control suitable to the storage of drugs and medicines
- Handwashing basin and fittings.

The Satellite Pharmacy must be:

- Constructed to prevent unauthorised access by persons other than staff through doors, windows, walls and ceilings
- Fitted with a security intrusion detector alarm that is control room monitored to a central agency on a 24 hour basis.

### Storage

The following minimum elements, in the form of cabinets, shelves, and/or separate rooms or closets, shall be included as required:

- Bulk storage
- Active storage
- Refrigerated storage
- Volatile fluids and alcohol storage with construction as required by the relevant regulations for substances involved
- Secure storage for narcotics and controlled drugs
- Storage for general supplies and equipment not in use.
- Storage for prescriptions and any documents required by relevant legislation

### Clinical Trials Dispensing

The Clinical Trials Dispensing area will include storage, dispensing, packaging, labelling and records holding for clinical trials drugs. The Clinical Trials facilities will be a separate area within the main Pharmacy.

Clinical Trials storage, preparation and dispensing will be located in a separate area within the Pharmacy, and will have ready access to patient Interview and Consultation rooms.

Clinical Trials drugs/medications area will require the following considerations:

- Workspace with computer for Pharmacist
- Preparation bench and sink
- Lockable storage for clinical trials drugs, separate from other Pharmacy supplies
- Lockable records storage
- Staff Handwashing basin should be located in close proximity

### Aseptic Room (Sterile Manufacturing)/ Cytotoxic Room (Cytotoxic Manufacturing)

The Aseptic Room and the Cytotoxic Room are Clean Rooms for manufacturing of medications in a sterile environment. The room will contain laminar flow cabinets and or isolators for sterile manufacturing. The room will be positive pressure and be accessed via an Anteroom.

An external outlook is desirable.

It shall be located on the perimeter of the facility with an external outlook with access via an Anteroom.

The following features shall be considered while designing sterile manufacturing facility:

- Electronic door management system to prevent the opening of both doors in the Anteroom at the same time.
- Handwashing facilities shall be provided immediately outside the Aseptic (Clean) Rooms in adjoining Anteroom; hand basins are not to be located within the Aseptic (Clean) Rooms.
- Provide an intercom system shall be provided between Aseptic (Clean) Rooms and Anteroom
- High-resolution CCTV cameras for remote monitoring
- Comply with room requirements in relevant international Clean Room standards for sterile and cytotoxic manufacturing.

### Store - Refrigeration

This can be a room/ bay which consists of multiple refrigerators for storing specific medications. Alternatively, a commercial grade cool room can also be used.

This shall be located in proximity to assembly/ preparation area and other storage area within the Unit.

Refrigerated storage areas in the Pharmacy will require the following considerations:

- all access doors (either to room or refrigerators) shall be lockable
- temperature monitoring system installed and connect to a centralised alarm/ warning system

## *Functional Relationships*

### External

The Pharmacy Unit shall be located for convenient access, staff control, and security. Direct access to loading dock and bulk storage is required if not located within the main Pharmacy Unit.

### Internal

- Access points provided for the following personnel/ purpose shall be carefully considered:
- Visitors to the Unit
- Pharmacy Staff
- Non-Pharmacy staff to collect prescriptions and medications
- Delivery and prescription collection for outpatients
- Supplies delivery

An interview room for outpatients when provided shall have dual access – separate entries from public area and staff area. Access shall be controlled from inside of the Pharmacy.

Corridors and door openings shall provide sufficient clearance for large items and equipment from bulk stores.

## 3 Design

### *General*

Design may include provisions for barcode technology for patient prescription identification and tracking as well as electronic prescribing, which will require computer and scanning equipment including additional power and data outlets.

### *Environmental Considerations*

#### Natural Light

Natural light is highly desirable within the Unit as well as windows permitting outside views. However, such provisions shall not compromise the security of the Unit. Unauthorised entry and

maintaining privacy of the operations of the Unit are the primary concerns in the design of the Unit. Windows shall not permit casual viewing from any adjacent public thoroughfare.

### Privacy

Privacy shall be considered in patient consultation areas.

### Acoustics

Patient interview and counselling rooms will require acoustic treatment.

## *Space Standards and Components*

### Ergonomics

Storage systems selected within the Unit shall be accessible to all types of staff. Refer also to Part C of these Guidelines.

## *Safety and Security*

Pharmacy Units and Pharmacies are required to be constructed so as to be as secure as practicable from unauthorised access through doors, windows, walls and ceilings, and to be fitted with a security intrusion detector alarm which is control room monitored to a central agency on a 24 hour basis.

Security measures for consideration will include:

- Electronic door controls
- Movement sensors
- Duress alarms to Dispensing counters
- Security glazing or shutters to Dispensing counters

Accountable Drugs Stores/ Safe shall not be placed in a room positioned on the perimeter of the premises or adjoining a staircase.

## *Finishes*

Wall protection shall be installed to prevent damage to walls caused by all types of trolleys. Refer also to Part C of these Guidelines.

## *Fixtures and Fittings*

Refer to Part C of these Guidelines and Standard Components for requirements related to fixtures and fittings.

## *Building Service Requirements*

Refer to Part E of these Guidelines.

### HVAC

All drug storage areas shall have temperature and humidity controls; internal room temperature shall be kept below 25°C.

## *Infection Control*

Hand-washing facilities shall be provided within each separate room where open medication is handled. Sterile Suites must have scrub facilities.

Refer also to Part D of these Guidelines.

**4 Components of the Unit**

The Pharmacy Unit will contain Standard Components to comply with details described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



## 5 Schedule of Accommodation – Pharmacy Unit

### *Main Pharmacy*

ROOM/ SPACE	Standard Component	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
WAITING	WAIT-SUB-I WAIT-10-I	2 x 5	2 x 5	2 x 10	2 x 10	Separate Male/female areas
PHARMACY COUNTER	PHA-CO-I	1 x 9	1 x 9	1 x 20	1 x 20	Includes shelving for scripts; dedicated staff entry
MEETING ROOM – SMALL, 9M2	MEET-9-I	1 x 9	1 x 9	1 x 9	1 x 9	
AFTER HOURS DRUGS STORE	AHDR-I		1 x 4	1 x 4	1 x 4	
OFFICE – SINGLE PERSON (DIRECTOR)	OFF-S9-I OFF-S12-I	1 x 9	1 x 9	1 x 12	1 x 12	
OFFICE – SINGLE PERSON, 9M2 (DRUG INFORMATION)	OFF-S9-I	1 x 9	1 x 9	2 x 9	2 x 9	
OFFICE – WORKSTATION	OFF-WS-I	1 x 5.5	2 x 5.5	4 x 5.5	6 x 5.5	Qty depends on staffing establishment
ASSEMBLY/ PREPARATION (PHARMACY)	ASPR-20-I ASPR-30-I	1 x 6	1 x 10	1 x 20	1 x 30	Allow 3m2 per pharmacist station
BAY – EMERGENCY SHOWER	BES-I			1 x 1	2 x 1	for emergency use
BAY – HANDWASHING, TYPE B	BHWS-B-I	2 x 1	3 x 1	4 x 1	4 x 1	
CLEANER'S ROOM, 5M2	CLRM-5-I	1 x 5	1 x 5	1 x 5	1 x 5	
COOL ROOM	CORM-I			2 x 10	2 x 10	
DISPENSING - CLINICAL TRIALS				1 x 12	1 x 12	Optional
GOODS RECEIPT - PHARMACY	GRE-I similar	1 x 5	1 x 5	1 x 15	1 x 15	Could be located in Supply unit or receiving dock
PREPARATION ROOM - NON STERILE (PHARMACY)	PREP-I similar	1 x 12 optional	1 x 18	2 x 12	3 x 12	Based on 3m2 per person
STORE - BULK	STBK-20-I STBK-40-I	1 x 20	1 x 40	1 x 100	1 x 150	May include pallets; includes area for holding/dispatch
STORE - BULK (IV FLUIDS)	STBK-20-I			1 x 20	1 x 20	May be part of the Bulk store
STORE -DRUGS	STDR-5-I STDR-10-I	1 x 5	1 x 5	1 x 10	1 x 10	High security storage safe for controlled substances
STORE - FILES	STFS-8-I STFS-20-I	1 x 8	1 x 8	1 x 10	1 x 20	including documents required by regulations
STORE - GENERAL	STGN-6-I STGN-10-I		1 x 6	1 x 8	1 x 10	Dispensing supplies
STORE - REFRIGERATION		1 x 6	1 x 6			Bay with drug fridges

### *Staff Areas*

ROOM/ SPACE	Standard Component	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY – BEVERAGE, OPEN PLAN	BBEV-OP-I	1 x 4	1 x 4	1 x 4	1 x 4	Can be included in meeting room
MEETING ROOM	MEET-L-15-I MEET-L-25-I	shared	1 x 15	1 x 20	1 x 25	
OFFICE – WORKSTATION (PHARMACISTS)	OFF-WS-I		1 x 5.5	2 x 5.5	3 x 5.5	According to staff establishment
PROPERTY BAY – STAFF	PROP-2-I PROP-3-I	2 x 2	2 x 2	3 x 3	4 x 3	Separate Male/female areas
STORE – PHOTOCOPY/STATIONERY, 8M2	STPS-8-I		1 x 8	1 x 8	1 x 8	
STAFF ROOM	SRM-15-I SRM-20-I	2 x 15	2 x 15	2 x 20	2 x 20	Includes beverage bay
TOILET – STAFF	WCST-I	2 x 3	2 x 3	4 x 3	4 x 3	Separate Male/female areas

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
CIRCULATION ALLOWANCE			25%	25%	25%	25%	

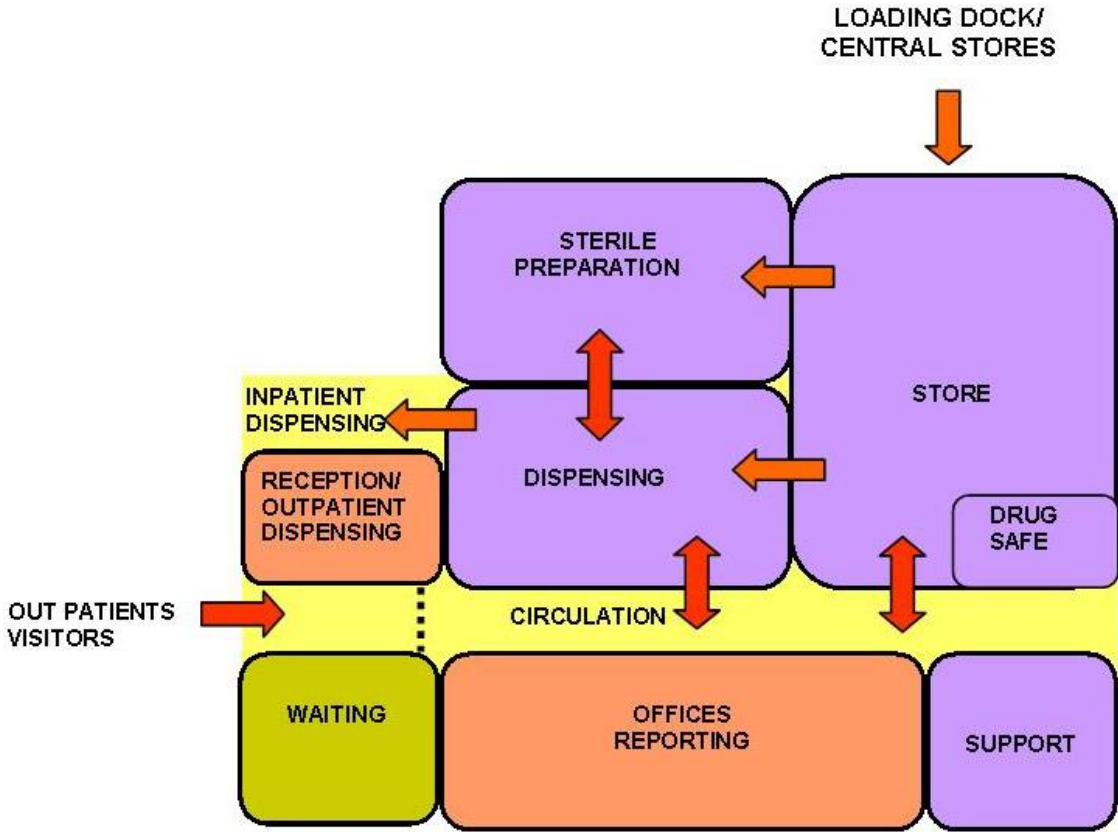
### *Sterile Manufacturing (For 2 Rooms)*

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
AIRLOCK	AIRL-6-I				2 x 6	2 x 6	
ANTEROOM	ANRM-I similar				1 x 8	1 x 12	For scrubbing and gowning
ASEPTIC CLEAN ROOM					1 x 20	1 x 20	Comply with international clean room standards
CHANGE – STAFF (MALE/FEMALE)	CHPT-10-I similar				2 x 8	2 x 8	Separate Male/female areas
CYTOTOXIC CLEAN ROOM					1 x 15	1 x 15	Comply with international clean room standards
OFFICE – WORKSTATION	OFF-WS-I				2 x 5.5	3 x 5.5	Qty determined by staff establishment
STORE – STERILE STOCK	STSS-12-I similar				1 x 7	1 x 7	
CIRCULATION ALLOWANCE					25%	25%	

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the Service Plan and the Operational Policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and number of endorsed fulltime positions in the unit.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

6 Functional Relationship Diagram – Pharmacy Unit



## 7 References and Further Reading

- Australasian Health Facility Guidelines, Part B Health Facility Briefing and Planning, Rev 4, 2012; refer to website [www.healthfacilitydesign.com.au](http://www.healthfacilitydesign.com.au)
- Refer to DHA website for local licensing requirements [www.dha.gov.ae](http://www.dha.gov.ae) and MOH website [www.moh.gov.ae](http://www.moh.gov.ae) for local approval procedures
- The Facility Guidelines Institute (US), 2010 Edition. Guidelines for Design and Construction of Health Care Facilities) refer to website [www.fgiguidelines.org](http://www.fgiguidelines.org)



The International Health Facility Guidelines recommends the use of HFBS “Health Facility Briefing System” to edit all room data sheet information for your project.

HFBS provides edit access to all iHFG standard rooms, and departments, and more than 100 custom report templates.

## HFBS Health Facility Briefing System



### Briefing Module

The Health Facility Briefing System (HFBS) has numerous modules available via annual subscription. It suits healthcare Architects, Medical Planners, Equipment Planners Project Managers and Health Authorities.

Use the HFBS Briefing Module to quickly drag in health facility departments or pre-configured room templates from the iHFG standard, edit the room features such as finishes, furniture, fittings, fixtures, medical equipment, engineering services. The system can print or download as PDF more than 100 custom reports including room data sheets, schedules, and more...

To learn more about the HFBS web-based Healthcare Briefing and Design Software and to obtain editable versions of the “Standard Components” including Room Data Sheets (RDS) and Room Layout Sheets (RLS) offered on the iHFG website, signup for HFBS using the link below.

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