

DHA Health Facility Guidelines 2019

Part B – Health Facility Briefing & Design

370 – Pharmacy Unit



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Executive Summary

This Functional Planning Unit (FPU) covers the requirements of a Pharmacy Unit. The purpose of the Pharmacy Unit is to provide all inpatient and outpatient pharmaceutical services including dispensing, preparation of non-sterile and sterile commodities as required, conducting clinical trials as needed, reporting on adverse drug reactions and the provision of 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.

The Pharmacy Unit is arranged in Functional Zones that include the Counter/ Reception, Dispensing Areas, Preparation Areas, Support Areas and Staff Areas. The Counter/ Reception may be dual purpose and serve as the point of medication distribution to Inpatient Units while also serving as a public dispensing point to Outpatients. Within the Unit Staff Areas should have controlled access too areas including Assembly and Preparation Areas, Bulk Stores, Drug Safe and Sterile Preparation Areas.

The Functional Zones and Functional Relationship Diagrams indicate the ideal external relationships with other key departments and hospital services. For the Pharmacy Unit this includes a relationship with Inpatient and Outpatient Areas. Optimum Internal relationships are demonstrated in the diagram by the juxtaposition of rooms and areas, with arrows indicating the path of travel.

Design Considerations address a range of important issues including Accessibility, Acoustics, Safety and Security, Building Services Requirements and Infection Control. This FPU describes the minimum requirements for support spaces of a typical Pharmacy Unit at Role Delineation Levels 3 to 6.

The typical Schedule of Accommodation is provided using Standard Components (typical room templates) and quantities for quantities for these numbers.

Further reading material is suggested at the end of this FPU but none are mandatory.

Users who wish to propose minor deviations from these guidelines should use the **Non-Compliance Report (Appendix 4 in Part A)** to briefly describe and record their reasoning based on models of care and unique circumstances.

The details of this FPU follow overleaf.



Table of Contents

Executive Summary	2
Table of Contents	3
370. Pharmacy Unit.....	5
1 Introduction.....	5
1.1 Description.....	5
2 Functional & Planning Considerations.....	6
2.1 Operational Models.....	6
3 Unit Planning Models.....	7
3.1 Planning Models.....	7
3.2 Functional Zones	8
4 Functional Relationships	14
4.1 External Relationships.....	14
4.2 Functional Relationships Diagram.....	15
5 Design Considerations.....	17
5.1 Environmental Considerations.....	17
5.2 Ergonomics/ OH&S.....	17
5.3 Safety and Security.....	17
5.4 Finishes.....	18
5.5 Window Treatment.....	19
5.6 Building Services Requirements.....	19
5.7 Infection Control.....	20
6 Standard Components of the Unit.....	21



- 7 Schedule of Accommodation 24**
 - 7.1 Main Pharmacy.....25
 - 7.2 Sterile Preparation (for 2 Rooms).....26
- 8 Further Reading 28**



370. Pharmacy Unit

1 Introduction

The prime function of the Pharmacy Unit is to provide inpatient and outpatient pharmaceutical services including dispensing, preparation of non-sterile and sterile commodities as required.

The size and type of services provided by the Pharmacy Unit will be dependent on the type of drug distribution system used, number of patients to be served and extent of shared or purchased drugs to be administered. The Operational Policy will have references to the above to assist in determining the requirement of a Pharmacy.

The design of the facility and the requirement of equipment should be sufficient to meet the requirements of the Operational Policy. For example, if unit dose procedure is used, additional space requirement for supplies, packaging, labelling, storage and medication trolleys should be considered.

All Pharmacies and Pharmacy Units licensed by DHA must fully adhere to the Federal Law as set out by the Ministry of Health in the UAE.

1.1 Description

The Pharmacy Unit may include all or some of the following functions:

- Dispensing for Inpatient and Outpatient (separate for each)
- Sterile Manufacturing and Non-Sterile Manufacturing
- Controlled storage, recording and distribution of narcotics and other accountable drugs
- Drug utilisation monitoring, review and reporting
- Management of drugs for clinical and drug trials
- Patient advisory services (for outpatients in a health facilities)
- Education and Training



2 Functional & Planning Considerations

2.1 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.

2.1.1 Central Pharmacies

Central Pharmacy typically refers to an IP Pharmacy located for convenience service access to the rest of the hospital or linked by a pneumatic tube system.

2.1.2 Decentralised Pharmacies

A Hospital may choose to have one or more smaller pharmacies, which work in conjunction with the facilities central pharmacy. In this model, pharmacists could be brought closer to the patient care areas. Decentralised Pharmacy includes satellite pharmacies located remotely from the central pharmacy and within other patient care areas such as the Emergency Unit, Critical Care Areas and Inpatient Areas. In larger hospital, this is a common operational model.

2.1.3 Unit Dose Systems (Medication Management System)

The Unit Dose System involves packaging a single dose of a medication for patients into a blister pack to provide easy and uniform medication dispensing. A Unit Dosage System will require the additional space and equipment for supplies, packaging, labelling and storage.

2.1.4 Retail/ Outpatient Pharmacy

Stand-alone Retail Pharmacies should ideally be located on street level or the ground floor if situated in a larger complex such as a commercial centre or mall, in this instance a Retail Pharmacy may be located on a higher floor.



For a stand-alone retail pharmacy to operate 24 hours, a special permit should be obtained from the DHA which requires annual renewal. For pharmacies operating under this special permit, they must be in operational 24 hours a day with no exception or else, have the special 24 hours operation permit cancelled. Subject to staffing provision, 24-hour operation is permitted.

3 Unit Planning Models

3.1 Planning Models

3.1.1 Integrated Pharmacy

This refers to Pharmacy as part of a larger medical facility, mostly hospitals. The main Pharmacy for Inpatient and Outpatient are collocated. Assembly, sorting, preparation and storage area will be restricted for staff access.

Multiple access for inpatients, outpatients and retail is permitted; though there should be no access to prescription drugs given to the public under any mode.

A dedicated area for Outpatient dispensing with Waiting Areas should be located away from areas which are restricted for staff only.

3.1.2 Unit/ Department-Based Pharmacy Areas

This refers to Medical Rooms 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 an Inpatient Unit.

This may include secured drug storage, refrigerated drug storage, space for medication trolleys and computer access for pharmacy personnel.

3.1.3 Satellite Pharmacy Units



Satellite Pharmacy Units refer to a series of rooms/ suites in a hospital which are remotely positioned from the main Pharmacy and yet managed by the staff of the Main Pharmacy. The need of a Satellite Pharmacy Unit could be due to distance of travel to the Main Pharmacy and other logistic issue. After-hours Drug store may be provided here.

3.1.4 Dedicated Outpatient Pharmacy

In facilities where the main Pharmacy cannot be located on the ground floor and in a position readily accessible to the Outpatient Areas due to site constraints, then a separate and dedicated Outpatient Pharmacy may be provided.

Consumer products may be sold in outpatient or retail pharmacies; however, prescription drugs must be separated behind counters.

3.2 Functional Zones

The Functional Zones, of a typical Pharmacy Unit can be subdivided in two major Zones, 'restricted' and 'accessible'. They are as follow:

3.2.1 Restricted Areas

- Dispensing area(s) to both inpatient and outpatient patients
- Preparation areas of both sterile and non-sterile goods
- Bulk stores including unpacking area. If this is outside the hospital, it may be regarded as a warehouse
- Pharmacy Store
- Secured stores for accountable drugs (controlled, semi-controlled and narcotics), including refrigerated storage and flammable goods storage. In Inpatient and Retail/ Outpatient pharmacies, drugs should be controlled and contained in a lockable storage unit. In the case of Narcotic Drugs, they must be stored in a metal drug safe which should be sized to the



capacity of the Narcotic Drug storage and mounted inside a lockable cupboard. Narcotics is always to be store within a lockable room. Where large volumes of Narcotics are being stored (eg. a Central Pharmacy), the use of a strong room construction from bricks, blocks or concrete should be considered.

- Dispatch area for deliveries to other Units including Inpatient Units if located within a hospital
- After-hours drug store with access by authorised personnel only. This should be located on the perimeter of the Unit with dual access where one entry is directly from outside the Pharmacy Unit
- Active store for imprest stock storage, including assembly and dispatch areas with space allocated for trolley parking
- Staff areas including Offices, Workstations, Meeting Rooms, Change Rooms, Toilets and Staff Room
- Drug information areas

3.2.2 Accessible Areas (in Outpatient Pharmacy only)

- Reception and Waiting Areas, as recommended by the Dubai Universal Design Code for people with determination
- Patient Counselling and Consult Areas
- Retail Pharmacy

Display Area with off the shelf drugs and consumer products, such as cosmetics, fresh or perishable food. Flowers are not allowed

- Minimum segregation should be provided at the prescription counter to separate the public from the prescription shelves or cabinets

3.2.3 Optional Areas



Depending on the RDL and Operational Policy of the Unit, the Pharmacy may also include the following areas:

- Sterile Preparation - sterile and cytotoxic manufacturing suites with support facilities including Anterooms, Change Rooms and Storage
- Extemporaneous manufacturing area which requires extra space for compounding products
- Clinical and Drug Trials - dispensing areas, secured storage, records area and workstations. This should be a separate area for facilities at RDL 6 only

3.2.4 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.

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

3.2.5 Dispensing Stations (Automated)/ Medication Management

An automated Dispensing Station may be provided in 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. Each Dispensing Station must be equipped with a built-in electronic access control to the drug compartment(s). If narcotic drugs are stored, the Dispensing Station must be located inside a lockable room.

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

Note: Medication Management Systems, to incorporate security features, are acceptable. Narcotics drugs are to be kept in a safe within a locked cupboard. A single staff member responsible for the accountable drugs should be the only person able to unlock medication storage units as well as the drug safe if it is required.

3.2.6 Satellite Pharmacy

A Pharmacy Unit Satellite is a room or unit in a hospital that is located remotely 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 the 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. This is applicable to all locations
- 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

3.2.7 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

3.2.8 Clinical Trials Dispensing

The use of drugs for Clinical Trials must first have their limited use approved by MOH. The Clinical Trials Dispensing Area will include storage, dispensing, packaging, labelling and records holding for



clinical trial drugs. The Clinical Trials facilities must be provided in a separate area within the main Pharmacy. Clinical Trial Drugs will then be sent to the patient area dedicated for clinical trials outside of the Pharmacy.

Clinical Trial 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 and drugs
- Lockable records storage
- Staff Handwashing basin located in close proximity

3.2.9 Aseptic Room (Sterile Preparation)/ Cytotoxic Room (Cytotoxic Manufacturing)

The Aseptic Room and the Cytotoxic Room are Clean Rooms for the manufacturing of medications in a sterile environment. The room will contain laminar flow cabinets and/ or isolators for sterile preparation, and must be accessed via an Anteroom. The Cytotoxic room should be negative pressure while any other clean room is to be positive pressure.

It shall be located on the perimeter of the facility and ideally with an external outlook.

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

- Electronic door management system to prevent the opening of both doors in the Anteroom at the same time.
- Handwashing facilities shall be provided immediate 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
- Work benches are to be free-standing and in Stainless Steel. Stainless Steel trolleys can be provided for minimal storage
- High performance 2-coat epoxy paint must be applied to the plasterboard ceiling and walls. Homogeneous vinyl flooring with hot-welded

3.2.10 Store – Refrigeration/ Freezer

This can be a room/ bay which consist of multiple refrigerators for storing specific medications which are required to be kept at cool temperatures. Alternatively, a commercial grade cool room can also be used.

This should be located in proximity to the Assembly/ Preparation Area and other Storage Area within the Unit. Walk-in cool rooms or fridges are interchangeably allowed.

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

4 Functional Relationships

4.1 External Relationships

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 Relationships

- 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

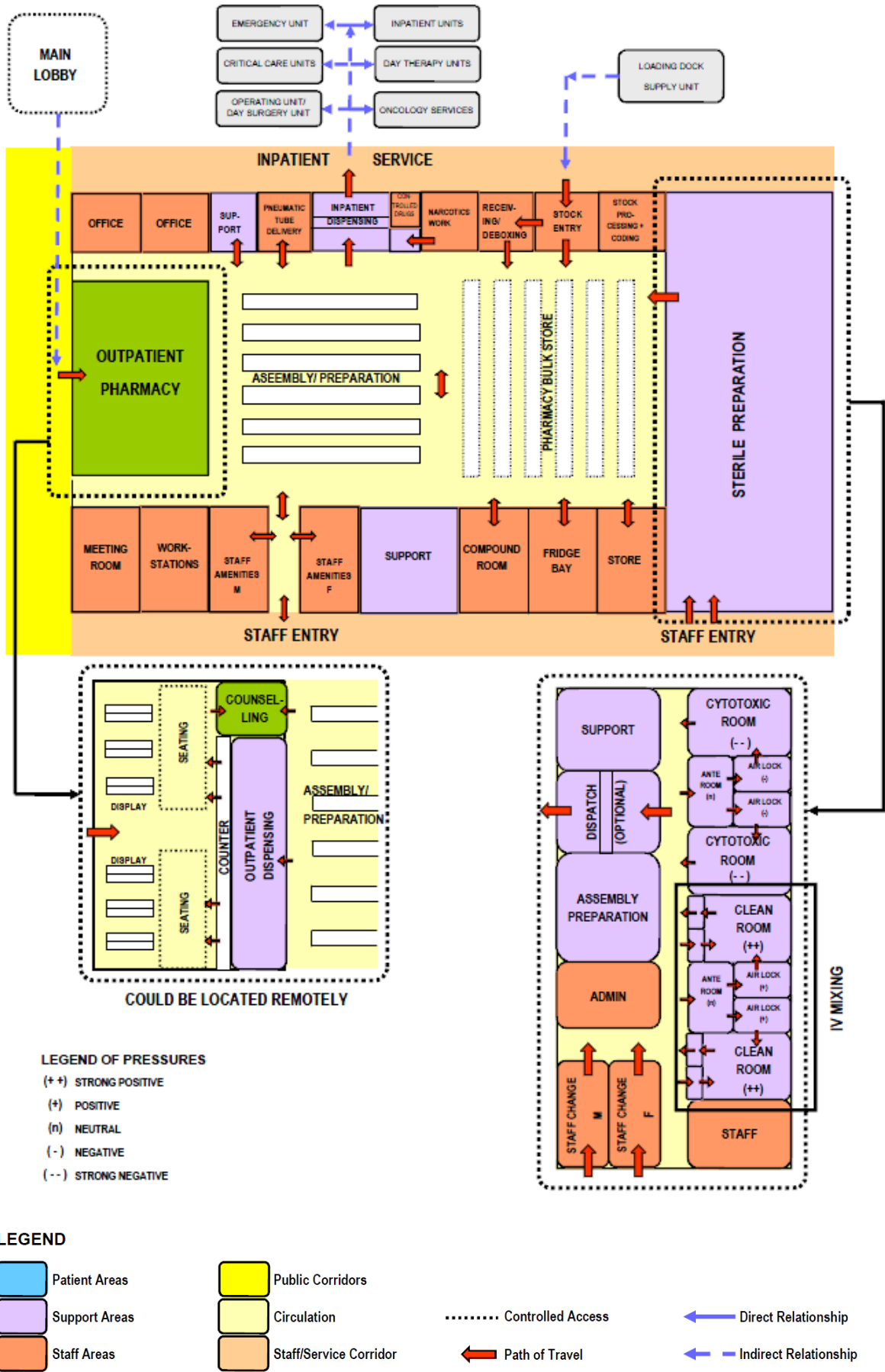
An Interview Room for outpatients when provided shall have dual access – separate entries from public area and staff area. Access shall be controlled from inside of the Pharmacy.

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

4.2 Functional Relationships Diagram

The functional relationship of a Pharmacy with various zones is demonstrated in the diagram below.

In larger Facilities, Pharmacy may be divided into Inpatient Pharmacy and Outpatient Pharmacy. In such cases, preparation and dispensing areas should be provided to each Pharmacy.





5 Design Considerations

5.1 Environmental Considerations

5.1.1 Acoustics

Acoustic privacy should be provided to Patient interview and counselling room/s.

5.1.2 Natural Light

Windows permitting natural light and an external outlook are desirable within the Unit. The provision of windows must not compromise the security of the Unit.

5.1.3 Privacy

When windows are provided, visual privacy must be considered and casual viewing from adjacent public thoroughfare must be avoided.

Unauthorised entry to the Unit must be ensured through the use of controlled access systems.

5.2 Ergonomics/ OH&S

Selection of storage systems to suit and be accessible to all types of staff.

Also Refer Part C – Access, Mobility, OH&S in these Guidelines.

5.3 Safety and Security

Pharmacy Units and Pharmacies must be designed and constructed to prevent unauthorised access through doors, windows, walls and ceilings. An Intrusion Detection Alarm System is required within the Unit to allow for 24-hour monitoring by a central security team on-site.

Security measures for consideration includes the following:

- Electronic door controls
- Movement sensors
- CCTV cameras



- Duress alarms at Dispensing Counters
- Security glazing or shutters to Dispensing Counters

Positioning of Accountable Drugs Stores should avoid direct access from the perimeter of the premise or the perimeter of a Unit where public access is immediately outside the Unit. Alarm system should be provided to cupboards, drug safes and strong rooms where accountable Drugs are stored.

CCTV cameras must be installed with an unobstructed view of the area where accountable drugs are stored.

Locking mechanism where required in the Pharmacy, can be in the form of controlled access cards, keypads, or physical keys.

5.4 Finishes

The following factors should be considered in the selection of finishes:

- Durability
- Ease of cleaning
- Fire safety
- Heat resistance
- Infection control
- Movement of equipment

In Sterile Preparation Areas work surfaces should be smooth, monolithic, chemical resistant and impervious to moisture. Standard laminated benchtops are not suitable. Benchtops should be seamless to prevent contamination from spillage. Splashback or covered upturns must be provided when the benchtop abuts a wall.



Wall protection should be installed to prevent damage to walls caused by mobile equipment such as trolleys.

Floor and walls should be anti-static, heat resistant, anti-bacterial, anti-fungal and chemical resistant. All joints in flooring must be sealed and coved at the edges (against walls or fixed joinery) where possible. Water and chemical resistant are also important characteristics of selected flooring.

Walls shall be painted with lead free paint.

Wall finish treatments must not create ledges or crevices that can harbour dust and dirt.

Refer to Part C – Access, Mobility and OH&S and Standard Components of these Guidelines for more information on wall protection, floor finishes and ceiling finishes.

5.5 Window Treatment

It is advisable to provide window treatment to external windows to control sunlight and glare to Working Areas of the Pharmacy Unit.

5.6 Building Services Requirements

This section identifies unit specific services briefing requirements only and must be read in conjunction with **Part E - Engineering Services** for the detailed parameters and standards applicable .

5.6.1 Information and Communication Technology

Unit design should address the following Information Technology/ Communications issues:

- Electronic Health Records (EHR) which may form part of the Health Information System (HIS)
- Paging and personal telephones replacing some aspects of call systems
- Intercom system between positively or negatively pressurised rooms and their adjacent



spaces

- Data entry including results and reporting
- Bar coding of specimens collected within the Unit
- Data and communication outlets, servers and communication room requirements
- Optional availability of Wi-Fi for staff

5.6.2 Heating Ventilation and Air-conditioning (HVAC)

All Drug Storage Areas must be fitted with temperature and humidity controls.

Special air-conditioning systems that provide either positive pressure or negative pressure will be required in sterile and cytotoxic medication preparation.

5.6.3 Pneumatic Tube Systems

The Pharmacy Unit may include a pneumatic tube station for connecting the key clinical units with the main support units as determined by the facility Operational Policy. If provided the station should be located in the Preparation and Assembly Area of the Pharmacy under direct staff supervision.

5.6.4 Public Health

Warm water should be supplied to hand wash basins, eye-wash stations and emergency shower.

Hot and cold water should be supplied to sinks.

Refer to Part E – Engineering Services for design requirements.

5.7 Infection Control

Infection Control measures applicable to the Laboratory Unit will involve proper handling of specimens to prevent contamination of staff. Standard precautions apply to the Laboratory Unit



areas and personal protective equipment including protective clothing, gloves, masks, and eye protection will be readily available are all processing areas.

5.7.1 Hand Basins

Handwashing facilities shall be required in preparation, assembly, manufacturing areas and other rooms as specified by the Standard Components. Taps to Hand Basins in pharmacies should be either elbow-action taps or automatic taps (sensor/foot operated).

5.7.2 Antiseptic Hand Rubs

Antiseptic Hand Rubs should be located so they are readily available for use. Although very useful and recommended, they cannot fully replace Hand Wash Bays.

Antiseptic Hand Rubs are to comply with **Part D - Infection Control** in these guidelines.

5.7.3 Emergency Eye-wash Station

Further to personal protective equipment, the pharmacy should have access to emergency eye-wash station. This should have convenient access from the preparation area.

6 Standard Components of the Unit

Standard Components are typical rooms within a health facility, each represented by a Room Data Sheet (RDS) and a Room Layout Sheet (RLS).

The Room Data Sheets are written descriptions representing the minimum briefing requirements of each room type, described under various categories:

- Room Primary Information; includes Briefed Area, Occupancy, Room Description and relationships, and special room requirements)
- Building Fabric and Finishes; identifies the fabric and finish required for the room ceiling, floor, walls, doors, and glazing requirements



- Furniture and Fittings; lists all the fittings and furniture typically located in the room; Furniture and Fittings are identified with a group number indicating who is responsible for providing the item according to a widely accepted description as follows:

Group	Description
1	Provided and installed by the builder
2	Provided by the Client and installed by the builder
3	Provided and installed by the Client

- Fixtures and Equipment; includes all the serviced equipment typically located in the room along with the services required such as power, data and hydraulics; Fixtures and Equipment are also identified with a group number as above indicating who is responsible for provision
- Building Services; indicates the requirement for communications, power, Heating, Ventilation and Air conditioning (HVAC), medical gases, nurse/ emergency call and lighting along with quantities and types where appropriate. Provision of all services items listed is mandatory

The Room Layout Sheets (RLS's) are indicative plan layouts and elevations illustrating an example of good design. The RLS indicated are deemed to satisfy these Guidelines. Alternative layouts and innovative planning shall be deemed to comply with these Guidelines provided that the following criteria are met:

- Compliance with the text of these Guidelines
- Minimum floor areas as shown in the schedule of accommodation
- Clearances and accessibility around various objects shown or implied
- Inclusion of all mandatory items identified in the RDS



The Pharmacy Unit will consist of Standard Components to comply with details described in these Guidelines. Refer also to Standard Components Room Data Sheets (RDS) and Room Layout Sheets (RLS) separately provided.



7 Schedule of Accommodation

The Schedule of Accommodation (SOA) provided below represents generic requirements for this Unit. It identifies the rooms required along with the room quantities and the recommended room areas. The sum of the room areas is shown as the Sub Total as the Net Area. The Total area is the Sub Total plus the circulation percentage. The circulation percentage represents the minimum recommended target area for corridors within the Unit in an efficient and appropriate design.

Within the SOA, room sizes are indicated for typical units and are organised into the functional zones. Not all rooms identified are mandatory therefore, optional rooms are indicated in the Remarks. These guidelines do not dictate the size of the facilities, therefore, the SOA provided represents a limited sample based on assumed unit sizes. The actual size of the facilities is determined by Service Planning or Feasibility Studies. Quantities of rooms need to be proportionally adjusted to suit the desired unit size and service needs.

The Schedule of Accommodation are developed for particular levels of services known as Role Delineation Level (RDL) and numbered from 1 to 6. Refer to the full **Role Delineation Framework (Part A - Appendix 6)** in these guidelines for a full description of RDL's.

The table below shows various Main Pharmacy Unit in a typical hospital based facility at RDL 3 to 6.

Any proposed deviations from the mandatory requirements, justified by innovative and alternative operational models may be proposed and record in the **Non-Compliance Report** (refer to **Part A - Appendix 4**) with any departure from the Guidelines for consideration by the DHA for approval.



7.1 Main Pharmacy

ROOM/ SPACE	Standard Component Room Codes	RDL 3 Qty x m ²			RDL 4 Qty x m ²			RDL 5 Qty x m ²			RDL 6 Qty x m ²			Remarks
Outpatient Dispensing Area														Not applicable to stand-alone Inpatient Pharmacy
Waiting	wait-10-d similar wait-15-d wait-20-d	2	x	5	2	x	10	2	x	15	2	x	20	Separate Male/ Female areas, This is recommended, but not mandatory
Cashier	cash-5-d	1	x	5	1	x	5	1	x	5	1	x	5	Collocated at the Outpatient Dispensing Counter
Pharmacy Counter (Outpatient Dispensing)	pha-co-d similar	1	x	9	1	x	9	1	x	20	1	x	20	Includes shelving for scripts; dedicated staff entry
Pharmacy Area														
Meeting Room - Small	meet-9-d	1	x	9	1	x	9	1	x	9	1	x	9	Optional
After Hours Drugs Store	ahdr-d similar	1	x	9	1	x	9	1	x	9	1	x	9	Optional
Office Single Person	off-s12-d	1	x	12	1	x	12	1	x	12	1	x	12	Director
Office Single Person	off-s9-d	1	x	9	1	x	9	1	x	9	1	x	9	Drug Information
Office - Workstation	off-ws-d	1	x	5.5	2	x	5.5	4	x	5.5	6	x	5.5	Qty depends on staffing establishments
Assembly/Preparation (Pharmacy)	aspr-20-d similar	1	x	6	1	x	10	1	x	20	1	x	30	Allow 3m2 per pharmacist; Qty as required
Bay - Emergency Shower & Eyewash	bese-d							1	x	1	2	x	1	For emergency use, this is mandatory if undertaking pharmaceutical compounding
Bay - Handwashing; Type B	bhws-b-d	2	x	1	3	x	1	4	x	1	4	x	1	
Cleaners Room	clrm-6-d	1	x	6	1	x	6	1	x	6	1	x	6	
Cool Room	corm-d							2	x	10	2	x	10	Or Banks of Fridges; Applicable to RDL 5 and 6; For RDL 3 and 4, by with refrigerators will be sufficient
Dispensing - Clinical Trials	NS							1	x	12	1	x	12	Optional
Goods Receipt - Pharmacy	gre-d similar	1	x	6	1	x	6	1	x	15	1	x	15	
Preparation Room – Non-Sterile	prep-d similar	1	x	12	1	x	18	2	x	12	3	x	12	Based on 3m2 per person (optional for RDL 3 only); Qty depends on staffing establishment
Store - Bulk	stbk-20-d similar	1	x	20	1	x	40	1	x	100	1	x	150	May include pallets; includes area for holding/ dispatch. May be anywhere; e.g. Bulk Store, Pharmacy Store, Main Store
Store - Bulk (IV Fluids)	stbk-20-d							1	x	20	1	x	20	May be part of the Bulk Store
Store – Controlled Drugs	stdr-5-d similar	1	x	5	1	x	5	1	x	10	1	x	10	High security storage safe for controlled substances



ROOM/ SPACE	Standard Component Room Codes	RDL 3 Qty x m ²	RDL 4 Qty x m ²	RDL 5 Qty x m ²	RDL 6 Qty x m ²	Remarks
Store - Files	stfs-10-d similar	1 x 8	1 x 8	1 x 10	1 x 10	Including documents required by Regulations
Store - General	stgn-8-d similar stgn-14-d similar		1 x 6	1 x 8	1 x 10	Dispensing supplies
Store - Refrigeration	stgn-8-d similar	1 x 6	1 x 6			Applicable to RDL 3 and 4; for RDL 5 and 6, cool rooms are required
Staff Areas						
Bay - Beverage, Open Plan	bbev-op-d	1 x 5	1 x 5	1 x 5	1 x 5	
Meeting Room	meet-l-15-d similar meet-l-30-d similar	Shared		1 x 15	1 x 20	1 x 25
Office - Workstation/s (Pharmacists)	off-ws-d		1 x 5.5	2 x 5.5	3 x 5.5	Qty depends on staffing establishments
Staff Room	srm-15-d srm-25-d similar	2 x 15	2 x 15	2 x 20	2 x 20	
Property Bay - Staff	prop-3-d	2 x 3	2 x 3	2 x 3	2 x 3	Lockers, separate M/F areas; may be combined into a change room with Staff Toilets
Toilet – Staff (Male/ Female)	wcst-d	2 x 3	2 x 3	2 x 3	2 x 3	Should be convenient
Sub Total		186.5	259.5	454	560.5	
Circulation %		25	25	25	25	
Total Areas		233.1	324.3	567.5	700.6	

7.2 Sterile Preparation (for 2 Rooms)

ROOM/ SPACE	Standard Component Room Codes	RDL 3 Qty x m ²	RDL 4 Qty x m ²	RDL 5 Qty x m ²	RDL 6 Qty x m ²	Remarks
Pharmacy Preparation Area	(Optional)					
Airlock	airl-6-d			2 x 6	2 x 6	Optional
Anteroom	anrm-d similar			1 x 8	1 x 8	For Scrubbing and gowning
Aseptic Clean Room	NS			1 x 20	1 x 20	Positive Pressure. Comply with international clean room standards; comply to Part E - Engineering Services. Can be used for IV mixing
Change - Staff (Male/ Female)	chst-12-d similar			2 x 8	2 x 8	Separate Male/ Female areas
Cytotoxic Clean Room	NS			1 x 15	1 x 15	Negative Pressure. Comply with international clean room standards; comply to Part E - Engineering Services.



Part B: Health Facility Briefing & Design

Pharmacy Unit

ROOM/ SPACE	Standard Component Room Codes	RDL 3 Qty x m ²	RDL 4 Qty x m ²	RDL 5 Qty x m ²	RDL 6 Qty x m ²	Remarks
Office - Workstation	off-ws-d			2 x 5.5	3 x 5.5	Qty to be determined by staff establishment
Store - Sterile Stock	stss-12-d similar			1 x 7	1 x 7	
Sub Total				89	94.5	
Circulation %				25	25	
Total Areas				111.3	118.1	

Please also note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the Standard Components
- Rooms indicated in the schedule reflect the generic arrangement according to the RDL and size of the proposed facility
- All the areas shown in the SOA follow the No-Gap system described elsewhere in these Guidelines
- Exact requirements for room quantities and sizes will reflect Key Planning Units (KPU) identified in the Clinical Service Plan and the Operational Policies of the Unit
- Room sizes indicated should be viewed as a minimum requirement; variations may be acceptable to reflect the needs of individual Unit
- Offices and workstation to be provided according to the number of approved full-time positions within the Unit requiring access to this space



8 Further Reading

In addition to Sections referenced in this FPU, i.e. **Part C- Access, Mobility, OH&S, Part D -**

Infection Control and **Part E - Engineering Services**, readers may find the following helpful:

- Dubai Health Authority Health Regulation Sector Dubai Community Pharmacy Licensure & Pharmaceutical Practices Guide 2013
<https://www.dha.gov.ae/Documents/Regulations/Dubai%20Community%20Pharmacy%20Licensure%20and%20Pharmaceutical%20Practices%20Guide.pdf>
- Dubai Universal Design Code 2017
<https://www.dha.gov.ae/Documents/HRD/RegulationsandStandards/Polocies/Dubai%20Universal%20Design%20Code%20Final%20Feb%202017.pdf>
- International Health Facility Guideline (iHFG) www.healthdesign.com.au/ihfg
- The Facility Guidelines Institute (US), Guidelines for Design and Construction of Hospitals and Outpatient Facilities, 2018. Refer to website: www.fgiguilines.org
- USP Sterile Compounding 797. Refer to website:
<https://www.usp.org/compounding/general-chapter-797>
- USP Non Sterile Compounding 795. Refer to website:
<https://www.usp.org/compounding/general-chapter-795>
- USP Handling of Hazardous Drugs 800. Refer to website:
<https://www.usp.org/compounding/general-chapter-hazardous-drugs-handling-healthcare>