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DUBAI HEALTH AUTHORITY

DHA Health Facility Guidelines 2019

Part B – Health Facility Briefing & Design

330 – Oncology Unit – Medical (Chemotherapy)

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Executive Summary

The Oncology Unit – Medical (Chemotherapy) relates to a facility in an outpatient setting providing oncology treatment to non- admitted and admitted patients. The Medical Oncology Unit provides cancer treatment through the use of systemic therapies including cytotoxic chemotherapy, hormonal therapies and immunotherapy. This document will utilise the term Chemotherapy and not Medical Oncology (Chemotherapy) throughout.

Operational models of care for a service will influence the functional planning components for the Unit. Cancer service delivery is generally supported by a multidisciplinary team management approach.

More specialised units including Oncology Unit – Radiology, Inpatient Unit, Medical Imaging Unit and Nuclear Medicine and PET Unit have separate FPU's which are also included in these Guidelines.

The Unit is arranged in Functional Zones that include Entry/ Reception, Treatment Areas, Support Areas and Staff Areas. The Functional Zones and Functional Relationship Diagrams provided indicate the ideal external relationships with other key department and services. This includes relationships with Inpatient Units, Outpatient Units and Diagnostic Units such as Laboratory Units.

The size of the Oncology Unit may vary dependent on the service capacity and demand. The Unit is described to be made up of Treatment Bays/ Spaces as patients may receive treatment in either hospital beds or recliners. Treatment Bays must be able to service both beds and recliners, the percentage of which both are provided to be at the discretion of facility management.

The typical unit Schedule of Accommodation is provided using Standard Components (typical room templates) and quantities for a Unit with 12, 18, 24 and 30 treatment spaces at Role Delineation Levels (RDL) 2 to 6, along with an optional imaging suite.

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.

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330. Oncology Unit – Medical (Chemotherapy)

1 Introduction

1.1 Description

The treatment of cancer is complex, often involving a combination of treatment methods to be effective. The following methods may be provided, alone or in combination, as part of an individual's management plan:

- Surgical intervention
- Chemotherapy
- Radiation Therapy
- Hormone Therapy

Chemotherapy is prescribed for the treatment of diseases, especially cancers, using specific cytotoxic agents or drugs that are destructive to malignant cells and tissues. The Medical Oncology (Chemotherapy) Unit provides for the clinical treatment and management of patients undergoing Chemotherapy treatment for cancer. The function of the Unit may include:

- Chemotherapy Administration
- Administration of blood products and/or other supportive therapies
- Blood collection
- Clinical procedures and examination
- Patient and family education and support
- Clinical trial management
- Coordination of care

Chemotherapy can be administered by various routes:

- Intravenously – through a vein or artery e.g. PICC line, Central Venous Catheter, Porta-caths
- Injection – intramuscularly or subcutaneously
- Intrathecal – into the central nervous system via the cerebrospinal fluid
- Intra-pleural – into the chest cavity
- Intraperitoneal – into the abdominal cavity
- Intra-vesical – into the bladder
- Intra-lesional/ Intra-tumoral – directly into the tumour
- Topically – either as a cream or lotion
- Orally – as a capsule

Support services that are associated with the chemotherapy service may include:

- Physiotherapy (including lymph oedema management)
- Occupational therapy
- Dietetic / Nutrition services
- Clinical Psychology
- Social work services
- Community and outreach cancer services
- Palliative Care
- Complementary therapies (e.g. relaxation, stress management and massage)
- Wig and prosthesis services

This document will utilise the term Chemotherapy and not Medical Oncology (Chemotherapy) throughout.

2 Functional and Planning Considerations

2.1 Operational Models

Operational models of care for a service will influence the functional planning components for the Unit. Cancer service delivery is generally supported by a multidisciplinary team management approach. Chemotherapy treatment, within the multidiscipline treatment plan, is prescribed by an Oncologist and administered by nursing staff. The administration of treatments with blood products and the collection of specimens are also coordinated by nursing staff. Patient and family education may be undertaken by nurses, physicians and allied health professionals.

On average, 30-40% of the patients have both Chemotherapy and Radiotherapy treatments. For cases where it is prescribed for bother treatments at the same time, the aim is to have 100% of the cases to have both treatments on the same day.

The role delineation of a hospital and the community service need will determine the type and range of Chemotherapy services to be provided. An endorsed Clinical Service Plan for cancer services in the local area, including planning for support services and systems, should be well documented to assist with the design, development and planning, ensuring future functionality of the unit.

2.1.1 Hours of Operation

The hours and days of operation will depend on the level of service being provided. Units typically operate on a 5 to 7-day week, with 8 – 12 hour working days. However, given all the required facilities and staff support, the hours of operation are flexible.

Chemotherapy infusions administered in an outpatient facility may take from 15 minutes to 12 hours. Intensive and complex chemotherapy infusions that may take 1-4 days, often involving the sequential infusion of a variety of drugs, will require a short stay in an inpatient facility.

2.1.2 Service Delivery Models

This FPU is applicable to the following Operational Models

- Hospital based unit – a unit within the hospital
- Satellite Unit – on a hospital campus but not in a hospital
- Stand-alone unit – positioned in a community setting
- Integrated Cancer Care
  - Outpatients (Ambulatory Care) Unit
  - Radiotherapy/Radiation Service
  - Diagnostic Service as part of Radiotherapy Unit

3 Unit Planning Models

Factors that should be taken into consideration when planning a Chemotherapy Unit include:

- The operational model chosen as part of the planning model
- Age and mix of the patient group
- Acuity of the proposed or current patient group
- Comorbidities of the patient group
- Rate of infectious diseases to be expected in the patient group

3.1 Functional Zones

The Chemotherapy Unit may include the following Functional Zones:

- Entry / Reception including:
  - Waiting Areas with amenities such as beverage making facilities, telephones, vending machines, play area for children and toilets
  - Interview room for patient/ family discussions and treatment planning
  - Storage for files, stationery, wheelchairs
- Chemotherapy Treatment Areas including:
  - Treatment chair or bed bays

  - Isolation rooms as required
  - Ensuites, Patient Toilets
  - Treatment Room
  - Cytotoxic room
- Support Areas including:
  - Bays for linen, resuscitation trolley, mobile equipment
  - Clean and Dirty Utilities
  - Cleaner's and Disposal rooms
  - IT/ Communications room
  - Staff Station
  - Store Rooms for equipment, general supplies
  - Property bay for patients
- Administration/ Office Areas with:
  - Meeting Rooms
  - Offices and workstations according to the service plan
- Staff Areas including:
  - Staff Room
  - Toilets, Shower and locker areas
- Medical Imaging (optional) including key imaging modalities required for patient treatment:
  - CT Scanning rooms with control and computer equipment
  - General X-ray with processing and reporting areas
  - MRI with control and equipment rooms, preparation and set-up room
  - Patient waiting, holding bays, change rooms and toilets

3.1.1 Entry/ Reception Area

The Reception Area will provide for administrative tasks, such as booking appointments and record keeping, as well as receiving and directing patients to the appropriate zone for consulting or treatment.

The Reception Area should accommodate a range of patients and visitors with varied levels of ability and provide clear access to conveniently located public and patient amenities, including toilets and parenting rooms. A child play area can be incorporated into the main waiting area.

The Unit should seek to provide an optimal healing environment for patients which is both non-sterile and designed to provide an inviting sense of ambiance. The provision of a multi-function recreation and socialising area is highly recommended and should be utilised in the units' design where possible.

3.1.2 Treatment Area

3.1.2.1 Patient Bed/ Chair Bays

Patient Treatment Areas should be planned to provide staff members with direct visualization of patients in treatment bays. The preferred design is to locate staff stations in the centre of the treatment spaces to allow a direct line of vision between patients and staff. Beverages and refreshments should be accessible to patients. In large Oncology Units, patient areas may be divided up into clusters of 6 – 10 chairs with small decentralized staff stations. Lounge areas may also be provided to provide patients with choices regarding where they spend their time during treatment.

Standard pressure Isolations rooms should be provided for use by patients who are infectious or require reduced contact due to compromised immune systems. Negative pressure isolation rooms may be used dependent on service plan requirements.

3.1.2.2 Consult Rooms

The Treatment Area should include individual consultation rooms as well as accommodating multidisciplinary teams for patient consultation, follow-up and case review. Throughout the course of their treatment patients will be referred to other specialists and allied health personnel as required including Dieticians, Physiotherapists, Occupational Therapists and Social Workers. Interview and conference rooms may be required for patient and family education which may

include computers for review of treatment programs. The Consult Rooms should be located with easy access for outpatients without treatment zones.

3.1.2.3 Treatment/ Procedure Rooms

Treatment/ Procedure Rooms are recommended for catheter insertion, lumbar puncture and intrathecal chemotherapy. The rooms should have access to a dedicated lockable refrigerator for storage of intrathecal chemotherapy for short periods prior to administration.

3.1.2.4 Support Areas

Support Areas include clean and dirty utilities, storage, disposal rooms, linen bays, personal protective equipment bays and handwashing facilities. Emergency support, including resuscitation equipment should be located close to centrally located staff stations to ensure rapid access in emergency situations and emergency shower and eye washing facilities should be located close to patient areas for use in case of spills of cytotoxic chemicals.

For a stand-alone facility, Support Areas also include Back of House areas such as Loading Docks, Waste Compactors and Recyclables, Bulk Storage and Gas Bottle Storage (if medical gases are required).

3.1.3 Administration / Offices

Offices should be provided for the Clinical Director of the Unit, Radiation Oncologists, Radiation Therapy Managers, Nursing Managers, Allied Health professionals, Cancer Care Coordinators and Specialist Nurses. In a standalone facility, additional offices / workstations may be required for Human Resources, Finance, Legal Services, Public Relations and Information Technology professionals. Quantities and configuration of offices is per staffing establishment.

3.1.4 Staff Areas

Staff Areas may be shared with adjacent Units if convenient and will consist of:

- Meeting rooms
- Staff Room
- Toilets, Shower and Lockers.

3.1.5 Medical Imaging

Computed tomography (CT), magnetic resonance imaging (MRI), ultrasound (US), positron emission tomography (PET) and general x-ray imaging may be used for the visualization of bone or soft-tissue during planning and review of treatment.

A stand-alone or satellite facility that does not have an efficient functional relationship with a medical imaging department may need to accommodate medical imaging facilities. CT and MRI are the most commonly used imaging facilities for treatment planning and review. The types of imaging facilities required will be determined by the service plan.

4 Functional Relationships

A Functional Relationship can be defined as the correlation between various areas of activity whose services work together closely to promote the delivery of services that are efficient in terms of management, cost and human resources. Oncology Units, due to its makeup of several components and the need for patients to utilise more than one service per visit efficient functional relationships in the Unit is imperative.

4.1 External Relationships

- Ease of access to the Radiotherapy Unit
- Blood collection areas
- Ease of access to the Unit where the majority of people will arrive by car on a daily basis
- Separation of walking and stretcher/ambulance patient arrivals

- Safe access to the Units storerooms for the delivery of bulk items e.g. Bulk fluids which may arrive or be stored on a palette requiring mechanical lifting, moving and storage
- Safe access for the delivery of food, clean linen, pharmacy, consumables, disposable items and the removal of bulk cytotoxic chemotherapy waste and soiled linen etc.
- Patient access to OPD pharmacy

4.2 Internal Relationships

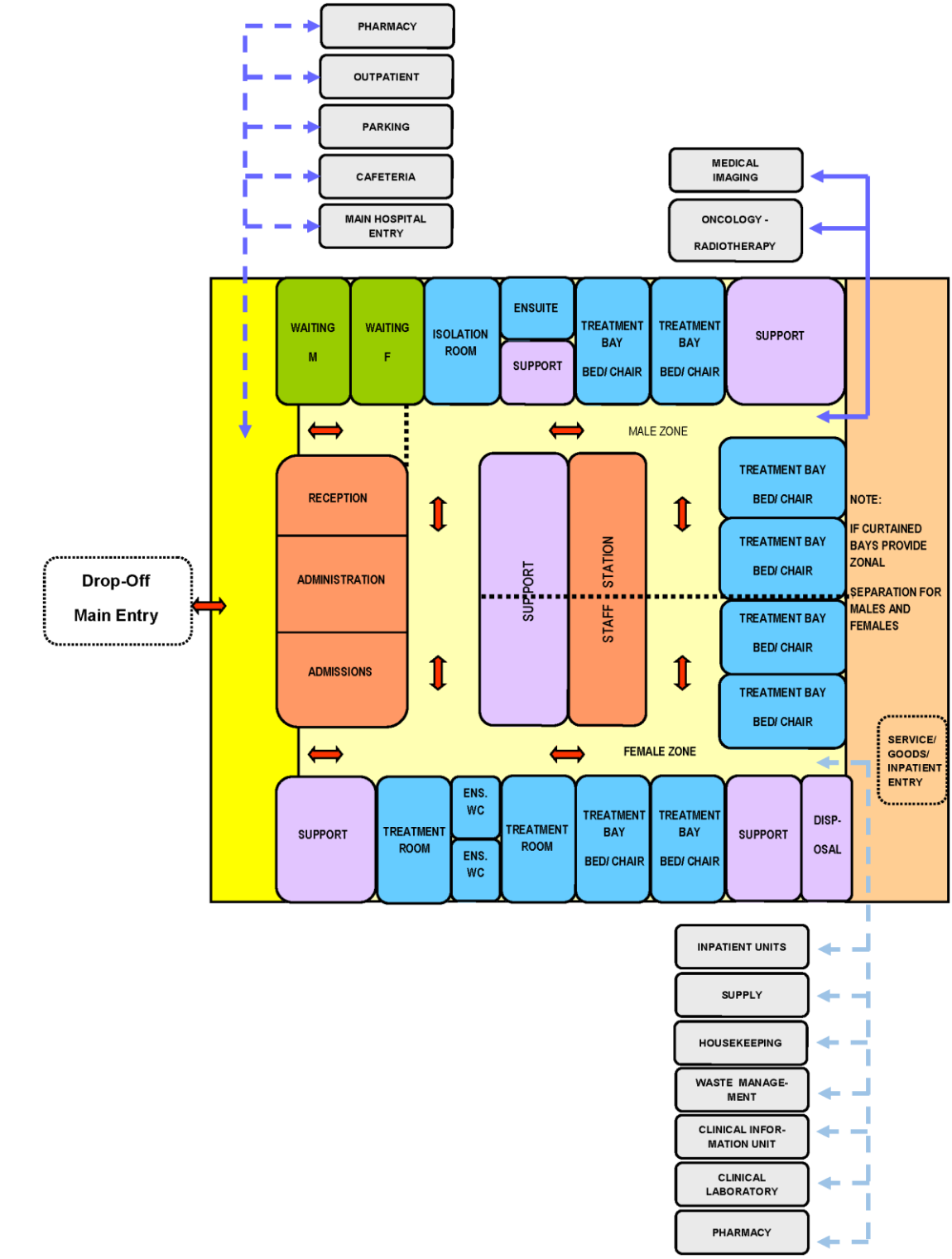
The internal planning of the Chemotherapy Unit should be planned by considering the units functional areas/zones.

Some of the critical relationships to be considered include:

- Staff station/s require an unobtrusive view of all patient treatment areas. The inclusion of decentralised staff stations may be considered in larger units that have multiple treatment spaces
- Providing a number of treatment spaces and/or individual cubicles in groups or clusters
- Inclusion of working spaces for visiting multidisciplinary team members
- Location of Reception to provide a clear view of entry and exit/egress points of the Unit
- Easy access from the Waiting Area to the patient treatment area for the convenient arrival and departure of patients and families

4.3 Functional Relationship Diagram

The Functional Relationship of a typical Oncology Unit either as a stand-alone unit or as part of a larger facility are demonstrated in the diagram below.


PHARMACY
OUTPATIENT
PARKING
CAFETERIA
MAIN HOSPITAL ENTRY
MEDICAL IMAGING
ONCOLOGY - RADIOTHERAPY
WAITING M
WAITING F
ISOLATION ROOM
ENSUITE
SUPPORT
TREATMENT BAY BED/ CHAIR
TREATMENT BAY BED/ CHAIR
SUPPORT
MALE ZONE
RECEPTION
ADMINISTRATION
ADMISSIONS
SUPPORT
STAFF STATION
TREATMENT BAY BED/ CHAIR
TREATMENT BAY BED/ CHAIR
TREATMENT BAY BED/ CHAIR
TREATMENT BAY BED/ CHAIR
NOTE:
IF CURTAINED BAYS PROVIDE ZONAL
SEPARATION FOR MALES AND FEMALES
Drop-Off
Main Entry
SERVICE/ GOODS/ INPATIENT ENTRY
FEMALE ZONE
SUPPORT
TREATMENT ROOM
ENS. WC
ENS. WC
TREATMENT ROOM
TREATMENT BAY BED/ CHAIR
TREATMENT BAY BED/ CHAIR
SUPPORT
DISP-OSAL
INPATIENT UNITS
SUPPLY
HOUSEKEEPING
WASTE MANAGE-MENT
CLINICAL INFOR-MATION UNIT
CLINICAL LABORATORY
PHARMACY
LEGEND
Patient Areas
Support Areas
Staff Areas
Circulation
Staff/Service Corridor
Public Areas
Public Corridors
Direct Relationship
Indirect Relationship
Path of Travel, Patients &
Line of Sight

The External and Internal Functional Relationships are demonstrated in the diagram above including the following:

- Separate entry for ambulant patients and visitors
- Separate entry for patient on beds from staff corridor
- Access to key clinical units associated with patient treatment, including the Radiotherapy Unit, Medical Imaging (if not provided within the unit), Pharmacy, sterile manufacturing and clinical laboratory units, via inpatient / staff access corridor
- Access required for materials, clinical information and housekeeping via staff / service corridor
- Access to main public amenities, including parking, outpatient pharmacy, and main hospital entry (if located on a health facility campus), via the public entry corridor

The optimum Internal Relationships include the following:

- Reception and Waiting at the entrance to the Unit
- Consult rooms at the entrance to the Unit
- Administration and office areas located close to Reception and at the Unit perimeter in a staff accessible area
- Patient treatment chair spaces arranged in a racetrack model with Staff Station(s) and clinical support facilities in the centre to allow clear visual access to all patient treatment bays from the Staff Stations
- Support areas located in staff areas for ease of access and to be close to the point of use

5 Design Considerations

5.1 General

Design of the Unit should consider the following:

- Ease of access for patients and their families, who may arrive either walking, using mobility equipment, by ambulance stretcher or patient transport trolley
- Convenient access to public parking for frail patients, particularly those undergoing a scheduled period of chemotherapy on a regular basis
- Service access for delivery of large amounts of intravenous fluids to the unit on a regular basis and suitably sized storage areas to hold supplies
- Appropriate floor finishes for constant staff movement to/ from and between patients during chemotherapy treatments, such as cushioned vinyl

5.2 Patient Treatment Areas

Patients should be situated so that healthcare providers have good visual access to ensure safety and quality care. This approach enhances staff monitoring of patient condition during treatment. The optimal design is to allow a direct line of vision between the patient and staff.

The type and number of chemotherapy spaces to be provided e.g. cubical, screened areas and isolation room numbers will be determined by the service plan, operational policies and cultural preferences of the population group using the services.

Provision for dedicated chemotherapy areas for children and young people is recommended. Where facilities are shared, patient pathways should be kept as separate as possible. Cancers that develop in children and young people are complex and differ from those that develop in adults. Early diagnosis is challenging because cancers are rare and more diverse.

5.3 Environmental Considerations

5.3.1 Acoustics

Acoustic privacy is required for many functions in the Unit including:

- Family/ case conference/ interview rooms
- Isolation of noisy areas such as waiting rooms from clinical areas e.g. clean and dirty utilities
- Staff discussions regarding confidential matters in meeting rooms
- Noise sources arising both within and from outside the Unit such as:
  - Sanitary Facilities
  - Equipment
  - Patients/ Clients
  - Staff Activities
  - Traffic through the unit e.g. visitors, food, linen or other trolleys
- Solutions to be considered include:
- Location of the unit away from noisy hospital areas
- Use of sound isolating construction and selection of sound absorbing materials and finishes
- Planning to separate quiet areas from noisy areas
- Review of operational management and patient/client flows; this may include separate areas for patients with special needs
- Provision of television systems with headphones to reduce ambient noise levels

5.3.2 Natural Light/ Lighting

Natural light and views should be available from the Unit for the benefit of staff and patients. This may be provided via direct or borrowed light such as views to courtyards and atrium spaces, skylights or via side corridors. Every effort should be made to provide a view to all treatment areas

either by locating treatment bays/ cubicles/ bedrooms adjacent to a window or by locating chairs and beds to have an external view from each patient space.

A minimum of 50% of all chemotherapy bays, including 100% of all enclosed rooms, are to have a direct access to a window.

The balance of the bays should have aacess to the following:

- a view to an atrium
- a view to an internal open space
- natural light borrowed from an adjoining space
- a skylight

High quality task lighting is essential to ensure complex medical and pharmacological tasks can be safely achieved.

Colour corrected lighting is also essential to ensure patient assessment can be conducted effectively.

5.3.3 Privacy

The design of the Unit needs to consider the contradictory requirement for staff visibility of patients while maintaining patient privacy. Unit design and location of staff stations should offer varying degrees of visibility and privacy.

Each Treatment Bay shall be provided with privacy screens to ensure privacy of patients undergoing treatment in both private and shared patient areas. Refer to the Standard Components for examples.

Confidentiality for patients receiving treatment is a highly important consideration to be addressed. The Unit should be designed to:

- Ensure confidentiality of personal discussions and medical records
- Provide an adequate number of rooms for discreet discussions and treatments to occur whenever required
- Enable sufficient space within each Treatment Bay to permit curtains to be easily drawn whenever required

5.4 Accessibility

There should be a weatherproof vehicle drop-off zone with easy access for less-mobile patients and wheelchair bound patients.

Design should provide ease of access for wheelchair bound patients in all patient areas including Consult Rooms and Waiting Areas in accordance with NFPA standards. Waiting Areas should include spaces for wheelchairs (with power outlets for charging electric mobility equipment) and suitable seating for patients with disabilities or mobility aids. The Unit requires provision for bariatric patients.

5.5 Doors

Door openings to Treatment Areas shall have a minimum of 1400mm clear opening to allow for easy movement of beds and equipment.

5.6 Ergonomics/ OH&S

Ergonomics must be considered in the internal design of the Unit for patient and staff health and safety. Heights and depths of benches and Staff Stations in the treatment area need to allow staff to efficiently work from standing and seated positions. Consideration must be given to storage of supplies at suitable working heights including cartons of intravenous fluids in constant use.

Refer to **Part C - Access, Mobility and OH&S** of these Guidelines for more information.

5.7 Size of the Unit

The size of the Unit is determined by the Clinical Services Plan establishing the intended services scope and complexity. Schedules of Accommodation have been provided for a hospital-based Unit with 12, 18, 24 and 30 Treatment Bays.

Treatment Bays; Bay size needs to be 9m^2 with a clear width of 3 meters along the back of the bay to ensure appropriate service placement, Infusion equipment and curtain track placement; spaces of 12m^2 will need to be considered where more than 50% of patients are receiving chemotherapy infusions in a patient beds rather than chairs; bays should be able to accommodate beds or chairs.

5.8 Safety and Security

A high standard of safety and security can be achieved by careful configuration of spaces and zones to include:

- Controlled access/ egress to and from the unit
- Optimal visual observation for staff to access points and patient/ visitor areas
- Use of CCTV to entry and communication systems to enable contact after normal work hours
- Colocation of similar functions for ease of staff management

Access to public areas shall be considered with care so that the safety and security of staff areas within the Unit are not compromised.

Refer also to **Part C - Access, Mobility, OH&S** of these Guidelines.

5.9 Finishes

Internal finishes including floor, walls, joinery, and ceilings should be suitable for the function of the unit while promoting a pleasant environment for patients, family, carers, visitors and staff.

The following factors shall be considered:

- Aesthetic appearance
- Acoustic properties
- Durability
- Ease of cleaning and compliant with infection control standards
- Suitable floor finishes with respect to slip resistance and movement of equipment

Refer also to **Part C - Access, Mobility, OH&S** and **Part D - Infection Control** of these Guidelines for additional information.

5.10 Fixtures, Fittings & Equipment

Equipment, furniture, fittings should be selected to ensure that users are not exposed to avoidable risks or injury.

A safety shower and eyewash should be provided close to patient treatment areas for cytotoxic spills.

Refer to Part C of these Guidelines and Standard Components of individual rooms for specific information related to fixtures, fittings and equipment.

5.11 Curtains / Blinds

Window treatments should be durable and easy to clean. Consideration may be given to use of blinds, shutters, tinted glass, reflective glass, exterior overhangs or louvers to control the level of lighting.

If blinds are to be used instead of curtains, the following applies:

- Vertical blinds and Holland blinds are preferred over horizontal blinds as they do not provide numerous surfaces for collecting dust
- Horizontal blinds may be used within a double-glazed window assembly with a knob control

on the bedroom side

Privacy bed screens must be washable, fireproof and cleanly maintained at all times. Disposable bed screens may also be considered.

5.12 Building Service 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.

5.12.1 Information and Communication Technology

Unit design should address the following Information Technology/ Communications issues for optimal operation of the Unit:

- Electronic health records, prescriptions and investigation requests
- Patient Administration Systems (PAS), including patient booking systems
- Computers including mobile and handheld units, email and paging systems
- Data and communication outlets, servers and communication room requirements
- Picture Archiving Communication System (PACS)
- Electronic supplies management systems
- Optional availability of Wi-Fi for staff, patients and waiting visitors
- Video-conferencing teleconferencing and telemedicine requirements

5.12.2 Staff Call/ Duress Alarm

Nurse Call and Emergency Call facilities shall be provided in all patient areas such as bed/ chair spaces, toilets, bathrooms, consult rooms and treatment rooms for patients and staff to request

urgent attention. The individual call buttons shall activate the annunciators and central module situated at or adjacent to the Staff Stations in a discreet manner.

Provision of a Duress Alarm system is required for the safety of staff members who may occasionally face threats imposed by clients/ visitors. Call buttons will be required at all Reception/ Staff Stations, Consult Rooms and Treatment Rooms where a staff may spend time with a client in isolation or alone. The combination of fixed and mobile duress units should be considered as part of the safety review during planning for the unit.

5.12.3 Heating, Ventilation and Air conditioning (HVAC)

The Unit should be air conditioned with adjustable temperature and humidity for patient comfort. Air conditioning systems should be designed with consideration to provision of appropriate air exchanges and exhaust for cytotoxic chemicals. General air conditioning outlets should not be placed directly over patients on chairs, beds or trolleys.

All HVAC units and systems are to comply with services identified in Standard Components and **Part E – Engineering Services**.

5.12.4 Medical Gases

Medical Gases (oxygen and suction) outlets should be provided to the following for use in patient emergencies:

- Bed spaces
- Recliner Chair spaces
- Treatment and Procedure Rooms

5.12.5 Pneumatic Tube System

The Unit may include a pneumatic tube station, as determined by the facility Operational Policy. If provided the station should be located in close proximity to the Staff Station or under direct staff supervision.

5.12.6 Hydraulics

Warm water shall be supplied to all areas accessed by patients within the Unit. This requirement includes all staff handwash basins and sinks located within patient accessible areas. Sinks in staff areas shall be provided with hot and cold water services.

For cold, warm & hot water technical details, refer to Part E – Engineering Services in these Guidelines.

5.13 Infection Control

Oncology patients are at increased infection risk due to immunosuppression and frequent exposure to healthcare settings. Flooring, walls, furniture and fittings should be carefully selected to ensure effective infection control measures.

Infectious and immune-suppressed patients may occupy the same treatment space at different times of the same day. The design of all aspects for the Unit should take into consideration the need to ensure a high level of Infection Control in all aspects of clinical and non-clinical practice.

5.13.1 Hand Basins

Handwashing facilities shall be required in the corridors, Treatment Bays and other areas throughout the Unit as specified by the Standard Components. Where a handwash basin is provided, there shall also be liquid soap, disposable paper towels and waste bin provided and PPE equipment due to the nature of dialysis treatment and risk of exposure to bodily fluids.

Handwashing facilities shall not impact on minimum clear corridor widths. Handbasins should be provided in single bed rooms, isolation rooms and chair bays, a minimum of 1 per 2 chair spaces,

according to Infection Control guidelines. At least one handwashing bay is to be conveniently accessible to the Staff Station. There should be one Handbasin for every room inside the room; and Handbasins are to comply with **Standard Components - Bay - Hand-washing** and **Part D - Infection Control**.

5.13.2 Antiseptic Hand Rubs

Antiseptic Hand Rubs should be located so they are readily available for use for each point of care, at the end of patient beds and in high traffic areas.

The placement of Antiseptic Hand Rubs should be consistent and reliable throughout facilities.

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

Antiseptic Hand Rubs, although very useful and welcome, cannot fully replace Hand Wash Bays.

5.13.3 Isolation Rooms

A 'Class N - Negative Pressure' Isolation Room shall be provided for each Oncology Unit as determined by the Clinical Services Plan. These isolation rooms may be used for normal acute care when not required for isolation.

For further information on Isolation Rooms refer to **Part D – Infection Control** in these Guidelines.

5.13.4 Chemotherapy Waste Disposal

Chemotherapy pharmaceuticals are highly toxic and designated as dangerous waste. All bulk chemotherapy waste is hazardous waste and must be disposed of at a dedicated waste facility.

Chemotherapy wastes include:

- Expired drugs and aborted dosages
- All equipment used in preparing and delivering chemotherapy drugs to patients
- Contaminated personal protective equipment (PPE) and other materials.

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 Health Centre consists of Standard Components to comply with details described in these Guidelines. Refer to Standard Components Room Data Sheets (RDS) and Room Layout Sheets (RLS) separately provided.

6.1 Non-Standard Rooms

Non-standard rooms are rooms are those which have not yet been standardised within these guidelines. As such there are very few Non-standard rooms. These are identified in the Schedules of Accommodation as NS.

6.1.1 Recreation Area

This is a room equipped with various recreational provisions for the leisure of patients and their companions. It may include a video game area, play area for younger children, seating area, a collection of library books.

Good sound insulation should be considered to avoid disturbing patients having treatments in the Unit, especially in smaller units.

6.1.2 Gas Bottle Store

The Gas Bottle Store is a secure room for the storage of full and empty gas bottles following delivery by an external supplier. Gas bottles may be attached to a manifold and a reticulated supply; Empty gas bottle alarms may be required. The Gas Bottle Store should be located with ready access to the Loading Dock area. Full and empty bottles to be stored separately. May be located externally at a secure location.

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 theroom 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 Framwork** (**Part A - Appendix 6**) in these gduielines for a full description of RDL's.

The table below shows the SOA for a typical Oncology – Chemotherapy Unit at RDL 2 to 6 with 12, 18, 24 and 30 spaces respectively.

For stand-alone facilities, designers may add any other FPU's required such as Main Entrance Unit, Medical Imaging Unit etc. based on the business model.

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 Oncology Unit – Chemotherapy (standalone unit with 12, 18, 24 & 30 spaces)

ROOM/ SPACE	Standard Component Room Codes	RDL 2 Qty x m²			RDL 3 Qty x m²			RDL 4 Qty x m²			RDL 5/6 Qty x m²			Remarks
Entry / Reception		**12 spaces**			**18 spaces**			**24 spaces**			**30 spaces**			
Airlock	airl-6-d airle-10-d	1	x	6	1	x	6	1	x	6	1	x	10	For standalone facilities or units with direct access from outside
Bay - Beverage, Open Plan	bbev-op-d	1	x	5	1	x	5	1	x	5	1	x	5	Optional. May be shared with a collocated unit
Bay - Mobile Equipment	bmeq-4-d	1	x	4	1	x	4	1	x	4	2	x	4	Optional. May be shared with a collocated unit
Bay - Vending Machines	bvm-3-d similar							1	x	3	1	x	5	Optional. May be shared with a collocated unit
Interview Room - Family / Large	intf-d	1	x	12	1	x	12	2	x	12	2	x	12	For up to 8 persons. For counselling, interviews & education
Play Area	plap-10-d similar	1	x	10	1	x	10	1	x	15	1	x	20	Optional. Extra sound absorption may be required if located adjacent to patient treatment areas
Reception / Clerical	recl-10-d similar recl-15-d similar	1	x	9	1	x	9	1	x	12	1	x	20	
Recreation Area	NS	1	x	15	1	x	15	1	x	30	1	x	30	Optional. Includes coffee corner, play area, library corner, relaxing lounge with massage chairs, etc.
Store - Files	stfs-10-d similar	1	x	8	1	x	8	1	x	8	1	x	10	
Store - Photocopy / Stationery	stps-8-d	1	x	8	1	x	8	1	x	8	1	x	8	
Toilet - Public	wcpu-3-d similar	2	x	4	2	x	4	2	x	4	2	x	4	Separate male / female. May be shared
Toilet - Accessible	wcac-d	1	x	6	1	x	6	1	x	6	1	x	6	May be shared with a collocated unit
Waiting	wait-10-d similar wait-20-d wait-30-d	2	x	10	2	x	15	2	x	20	2	x	30	Separate M & F, 1.2m² per chair, 1.5m² for wheelchairs
Waiting – Family	wait-20-d similar				1	x	20	1	x	20	1	x	25	
Treatment Areas														
1 Bed Room - Isolation	1br-isn-18-d or 1br-isp-18-d	2	x	18	3	x	18	4	x	18	5	x	18	Minimum of 1. Must be negative pressure as required by service plan. For Bariatric Patient Larger Isolation Room at 28m2 can be used (1br-isn-28-d or 1br-isp-28-d)

ROOM/ SPACE	Standard Component Room Codes	RDL 2 Qty x m²			RDL 3 Qty x m²			RDL 4 Qty x m²			RDL 5/6 Qty x m²			Remarks
Anteroom	anrm-d	2	x	6	3	x	6	4	x	6	5	x	6	
Ensuite - Standard	ens-st-d	2	x	5	3	x	5	4	x	5	5	x	5	1 per isolation room
Bay - Beverage, Enclosed	bbev-enc-d	1	x	5	1	x	5	1	x	5	1	x	5	Patient refreshments. Access to ice dispenser
Consult / Exam Room	cons-d similar	2	x	13	3	x	13	4	x	13	5	x	13	
Procedure Room	proc-20-d							1	x	20	1	x	20	May be used for intrathecal treatments
Shower - Patient	shd-d	1	x	4	1	x	4	2	x	4	2	x	4	
Toilet - Patient	shpt-k	2	x	4	2	x	4	2	x	4	4	x	4	Separate male / female
Toilet - Accessible	wcac-d	1	x	6	1	x	6	2	x	6	2	x	6	Separate male / female
1 Bed Room - Standard	1br-st-18-d	3	x	18	4	x	18	6	x	18	7	x	18	
Ensuite - Toilet	wcpt-d	3	x	4	4	x	4	6	x	4	7	x	4	1 per Bed Room
Treatment Bay - Chemotherapy	trmt-che-d	7	x	10	11	x	10	14	x	10	18	x	10	10m² per chair bay or increase to 12m² for bed bays
Treatment Room/Procedure	trmt-d similar	1	x	16	1	x	16	1	x	16	1	x	16	Optional. For lumbar puncture and venous catheter insertion procedures.
Support Areas														
Bay - Emergency Shower & Eyewash	bese-d	1	x	1	1	x	1	2	x	1	2	x	1	
Bay - Handwashing, Type B	bhws-b-d	3	x	1	4	x	1	5	x	1	6	x	1	1 per 4 chairs/beds
Bay - Linen	blin-d	1	x	2	1	x	2	2	x	2	2	x	2	
Bay - Mobile Equipment	bmeq-4-d	1	x	4	1	x	4	2	x	4	2	x	4	
Bay - PPE	bppe-d	3	x	1.5	4	x	1.5	5	x	1.5	6	x	1.5	Collocated with handwashing bays
Bay - Resuscitation Trolley	bres-d	1	x	1.5	1	x	1.5	1	x	1.5	1	x	1.5	Adjacent to staff station
Bay - Wheelchair Park	bwc-d similar	1	x	4	1	x	4	1	x	8	1	x	8	May be subdivided
Clean Utility	clur-12-d similar	1	x	12	1	x	12	1	x	14	1	x	14	Increase to 20m² if drug fridges required to store IV fluids. May be used for the storage and management of prepared medication
Medication Room	medr-10-d similar	1	x	8	1	x	10	1	x	12	1	x	14	May be interconnected with Clean Utility
Cleaner's Room	clrm-6-d similar	1	x	6	1	x	6	1	x	10	1	x	10	Includes dry storage for cleaning consumables
Dirty Utility	dtur-12-d similar	1	x	10	1	x	10	1	x	12	1	x	12	
Disposal Room	disp-8-d	1	x	8	1	x	8	1	x	8	1	x	8	
IT Communications	comm-12-d similar	1	x	*	1	x	*	1	x	*	1	x	*	* Sized to meet service provision

ROOM/ SPACE	Standard Component Room Codes	RDL 2 Qty x m²			RDL 3 Qty x m²			RDL 4 Qty x m²			RDL 5/6 Qty x m²			Remarks
Loading dock	lodk-d similar	1	x	*	1	x	*	1	x	*	1	x	*	*External Area, Optional if attached to main facility
Property Bay	prop-3-d similar	2	x	2	3	x	2	4	x	2	5	x	2	Patient property. 1 per 6 chairs/beds. May be provided as individual lockers adjacent to chairs/beds.
Staff Station	sstn-14-d similar	1	x	12	2	x	10	2	x	10	2	x	12	May be subdivided in larger units
Store - Bulk	stbk-20-d similar	1	x	15	1	x	20	1	x	30	1	x	30	Locate on the perimeter of the Unit and accessible by a palette lifter for delivery of bulk fluids and clinical stores.
Store - Equipment	steq-10-d steq-14-d steq-20-d	1	x	10	1	x	10	1	x	14	1	x	20	Sized to meet service provision
Store - Gas Bottle	NS	1	x	10	1	x	10	1	x	10	1	x	10	Optional. Provide if medical gases required to chair/bed bays in a stand-alone unit
Store - General	stgn-8-d similar stgn-14-d similar	1	x	8	1	x	8	1	x	10	1	x	12	Sized to meet service provision
Waste disposal	disp-8-d similar	1	x	5	1	x	7	1	x	8	1	x	10	For chemotherapy cytotoxic waste, Secured room.
Administration / Offices														**Quantity as per Service Plan**
Office - Single Person	off-s9-d	1	x	9	1	x	9	1	x	9	1	x	9	Unit / Nurse manager. Located close to patient areas
Office - Single Person	off-s9-d	1	x	9	1	x	9	2	x	9	2	x	9	Educator, Teaching Fellow, Quality Assurance manager, IT manager, etc.
Office - 2 Person Shared	off-2p-d	1	x	12	1	x	12	1	x	12	1	x	12	Clinical trials monitor, nurse coordinator, biostatistician, data manager. Provided as per service plan
Office - Workstation	off-ws-d	1	x	5.5	1	x	5.5	1	x	5.5	1	x	5.5	Nurse coordinator. Provided as per service plan
Office - Workstation	off-ws-d	1	x	5.5	2	x	5.5	2	x	5.5	4	x	5.5	Cancer care coordinators, specialist cancer nurses and palliative care nurses. Provided as per service plan
Office - Workstation	off-ws-d	2	x	5.5	2	x	5.5	4	x	5.5	4	x	5.5	For administration staff. Provided as per service plan
Office - Write up (Shared)	off-wis-d	1	x	12	1	x	12	1	x	12	2	x	12	Clinical reviews. Located close to patient areas.
Meeting Room - Medium / Large	meet-l-15-d similar				1	x	15	1	x	15	1	x	20	
Staff Areas														
Property Bay - Staff	prop-3-d similar	1	x	3	2	x	3	2	x	3	1	x	6	Discrete secure location, adjacent to staff room
Staff Room	srm-15-d srm-25-d similar	1	x	15	1	x	15	1	x	20	1	x	30	
Shower - Staff	shst-d	2	x	3	2	x	3	4	x	3	4	x	3	Separate male / female
Toilet – Staff (Male/ Female)	wcst-d	2	x	3	2	x	3	4	x	3	4	x	3	Separate male / female
Sub Total				**592**			**771**			**1034.5**			**1255**	

ROOM/ SPACE	Standard Component Room Codes	RDL 2 Qty x m^2	RDL 3 Qty x m^2	RDL 4 Qty x m^2	RDL 5/6 Qty x m^2	Remarks
Circulation %		35	35	35	35	
Area Total		**799.2**	**1040.8**	**1396.5**	**1694.2**	

Please 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 typical arrangement according to RDL and suggest number of patient chairs/ beds
- All the areas shown in the SOA follow the No-Gap system described elsewhere in these Guidelines
- Exact requirements for room quantities and sizes shall 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 are acceptable to reflect the needs of individual Unit
- Offices are to be provided according to the number of approved full-time positions within the Unit

8 Further Reading

In addition to Sections referenced in this FPU, i.e. **Part C- Access, Mobility, OH&S** and **Part D - Infection Control** and **Part E - Engineering Services**, readers may find the following helpful:

- American Cancer Society http://www.cancer.org/index
- Department of Health (UK) HSC 2008/001 'Updated national guidance on the safe administration of intrathecal chemotherapy' (2008) refer to: http://webarchive.nationalarchives.gov.uk/20130107105354/http:/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_086844.pdf
- Department of Ecology, State of Washington, US: 'Pharmaceutical Waste' http://www.ecy.wa.gov/programs/hwtr/pharmaceuticals/pages/chemotherapy.html#RCRA
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2014 Edition refer to website: www.fgiguidelines.org
- Health Building Note 02-01: Cancer treatment facilities. (2013). 1st ed. [pdf] London, UK: Department of Health. Available at: http://www.dhsspsni.gov.uk/hbn_02-01_cancer_treatment_facilities_final.pdf
- International Health Facility Guideline (iHFG) www.healthdesign.com.au/ihfg
- NICE National Institute for Health and Care Excellence, UK 'Cancer Services for Children and Young People' (2014) https://www.nice.org.uk/guidance/qs55