Part B – Health Facility Briefing & Design

140 IVF Unit (Fertilisation Centres)

iHFG

International Health Facility Guidelines

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140 IVF Unit (Fertilisation Centres)

1 Introduction

Description

The IVF Unit will provide facilities for In vitro fertilisation (IVF) procedures. IVF is one of several Assisted Reproductive Techniques (ART) used to help infertile couples conceive a child. The procedure involves removal of eggs (mature Oocyte or Ovum) from the woman's ovary. Ova are then fertilised with sperm in a laboratory procedure (in vitro). If fertilisation occurs, a fertilised ovum, after undergoing several cell divisions, is transferred to the mother for normal development in the uterus, or frozen for later implantation.

The IVF laboratory may use Intracytoplasmic Sperm Injection (ICSI) in the process of IVF.

Services provided by the IVF Unit include:

- Patient consultation, interview and financial counselling on an outpatient basis
- Pre-treatment assessment
- Blood collection
- Semen collection
- Artificial insemination
- Ovarian stimulation therapy
- Ultrasound examination
- Oocyte (egg) collection
- Embryo culture
- In vitro / ICSI fertilisation
- Cryopreservation
- Embryo transfer
- Recovery

Licensing Of Unit

IVF Units (Fertilisation Centres) in the region may require licensing according to the requirements of pertaining laws of the land. Please refer to local licensing laws for additional information on the licensing process for IVF Units.

2 Operational & Planning Considerations

Operational Models

The range of options for an IVF Unit may include:

- A stand-alone centre, full self-contained
- A dedicated fully self-contained Unit within a hospital
- A Unit collocated with a clinical specialty such as Obstetrics and Gynaecology in a hospital

The IVF Unit ideally located on the Ground floor. If located on an upper floor, there must be a stretcher carrying lift available.
Patient undergoing IVF procedures may be admitted and discharged on the same day or transferred from and to a referring unit.

Hours of Operation

The IVF Unit generally operates on a long day basis, typically 8am to 9pm, with AM and PM shifts, commonly 6 days a week with admissions from early morning. It should be noted that there are no limits or restrictions on hours of operation. Procedures are undertaken on a sessional basis with discharges/ transfers into the evening. Patient care requirements and flexible work schedules may

require hours of operation to be extended to evenings and weekends to meet the demand and operational policies.

3 Unit Planning Models

Functional Zones

The IVF Unit consists of individual spaces, areas or zones which serve various service modules that combine to form a larger facility with a similar purpose. The relationship between Areas/ Zones is considered important to ensure that the Unit operates efficiently and effectively.

- Entry/ Reception and Waiting
  - Entry/ Reception and Waiting Areas
  - Administration/ Records
  - Interview Room/s
  - Public Toilets for Male and Female
- Patient Procedural Area
  - Operating Room/s for oocyte (egg) collection and re-implantation with Scrub rooms
  - Recovery areas with bays for linen and resuscitation trolley, Clean and Dirty Utilities
  - Change areas and toilets for staff and patients
- Laboratory Area
  - Laboratories (Embryology (IVF/ ICSI), Andrology, Genetics)
  - Cryopreservation facilities
  - Gas Bottle Store - typically, liquid nitrogen and rest of gases piped
- Staff and Support Area
  - Clean-Up and Disposal room
  - Storerooms and Sterile store
  - Offices, Meeting Rooms, Staff Room
  - Sterilising area: if the IVF unit is a stand-alone building, dedicated sterilising facilities are required

Entry/ Reception and Waiting

The Entry and Reception provides the first point of contact for patients. The reception also serves as the main access control point for the unit to ensure security of the Unit. Waiting Areas should be in an enclosed private area that is not open to passing traffic. Waiting areas should be divided for gender separation, although family waiting pods may be an option.

Procedural Areas

Collection Room(s)

Collection room/s should be discreet and private, enclosed rooms for collection of sperm samples from patients.

The Collection rooms have a close functional relationship with the Andrology laboratory; rapid delivery of specimens is required to prevent cell deterioration. The Collection Rooms require an Ensuite shower / toilet.

Operating Room(s)

Operating Room/s include equipment and facilities for egg collection and embryo transfer, under local anaesthesia. Operating rooms require adjacent patient and staff change rooms, scrub sink and patient toilet facilities.

Laboratory Areas

Strict protocols for handling and labelling patient specimens in all laboratory areas are required. Laboratory Areas should be zoned in a restricted staff access only area.

Embryology (IVF/ ICSI) Laboratory

The embryology laboratory provides facilities for the handling, preparation, culture, and storage of human gametes (sperm and oocytes). Due to the sensitive nature of its functions, the embryology laboratory should be located in a secure and sterile area away from the outpatient/ clinic facilities

but in close proximity to the procedure room where the oocytes (eggs) are collected. The laboratory is responsible for identifying oocytes in ovarian fluid, culturing these eggs with the partner's sperm, and embryo examination prior to embryo implantation into the patient.

The ICSI (Intracytoplasmic Sperm Injection) laboratory involves the process of injecting a single sperm into the nucleus of the egg using a microscopic needle without affecting the viability of the egg. The zygote (fertilised egg) is then monitored until it starts to divide forming a small cluster of cells known as the blastocyst (in approximately 5 days in the lab) which is then reimplanted to form an embryo. The space will be enclosed for specialty laboratory functions.

The IVF/ ICSI Laboratory should be located with a direct relationship to the Operating Room/s for oocyte collection and re-implantation. A pass-through hatch from the Laboratory to each Operating Room is recommended.

Andrology Laboratory

The Andrology laboratory performs the evaluation, testing, preparation, and storage of sperm specimens. Diagnostic procedures include:

- Semen analysis to determine sperm count, motility, viability, and morphology
- Preparation of sperm for fertilisation and Intrauterine Insemination (IUI) and thawing of frozen specimens.

The laboratory will include benches and storage units for examination of specimens. The space is enclosed for specialty laboratory functions.

The Andrology Laboratory has a close working relationship with the IVF/ ICSI Laboratories. The Collection Room/s should be located in close proximity. Access to the Laboratory should be limited.

Genetics Laboratory

The Genetics Laboratory undertakes cytogenetics studies of the embryo cells, particularly the nucleus which contains the chromosomes that carry genes and their DNA to determine the status of the embryo after IVF and before re-implantation, also referred to as Pre-implantation Genetic Diagnosis (PGD).

This process can also identify and diagnose abnormalities and genetic diseases that may accompany the pregnancy by the use of sophisticated techniques such as Fluorescence In-Situ Hybridization (FISH) or Polymerase Chain Reaction (PCR). The functions performed in the Genetics Laboratory may be included in the IVF/ ICSI Laboratory.

The Genetics Laboratory has a close working relationship with the IVF/ ICSI Laboratory.

Cryopreservation Facilities

Facilities for cryopreservation include a separate room for storage of frozen reproductive cells (gametes, zygotes, and embryos) in liquid nitrogen storage tanks. Nitrogen tanks should be stored in an enclosed space in case of nitrogen leakage.

The Cryopreservation storage area should be located in close proximity to the Laboratory areas, in an area with controlled access. A monitoring system is required for low levels of liquid nitrogen in the storage tanks and for high levels of nitrogen in the air.

Strict protocols on the method of storage and specimen labelling are required for this process (refer to local regulations and licensing laws) and will include:

- Infection control (minimising the risk of cross contamination of frozen gametes, zygotes, and embryos)
- Labelling, packaging, and documentation of tissue frozen

Staff and Support Areas

Decontamination Room

All recyclable articles (including delivery trolleys) are sorted, rinsed, ultrasonically cleaned, or mechanically washed and dried. Required to maintain effective barriers for infection control.

Sterilising/ Packing

The Sterilising/ Packing room is an area where cleaned and dried instruments are sorted, assembled into sets, packaged, and then sterilised in an autoclave.

The Sterilising/ Packing Room will be located adjacent to the Clean-up Room where the instruments are cleaned and decontaminated.

The room requires a defined unidirectional workflow for instruments from clean to sterile and then to sterile store. Sterile stock should not be stored in this room to avoid the potential for mixing unsterilized instrument sets with sterile sets.

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.

External Relationship

The IVF Unit has close functional relationship with the following areas or Units:

- Laboratory Unit
- Pharmacy

The ideal External Relationships are demonstrated in the diagram below including:

- A distinct relationship between the main Entry, car parking and public corridors
- Entrance for services and supplies via a service entry
- Entry for patients and staff through separate entries via a public corridor.

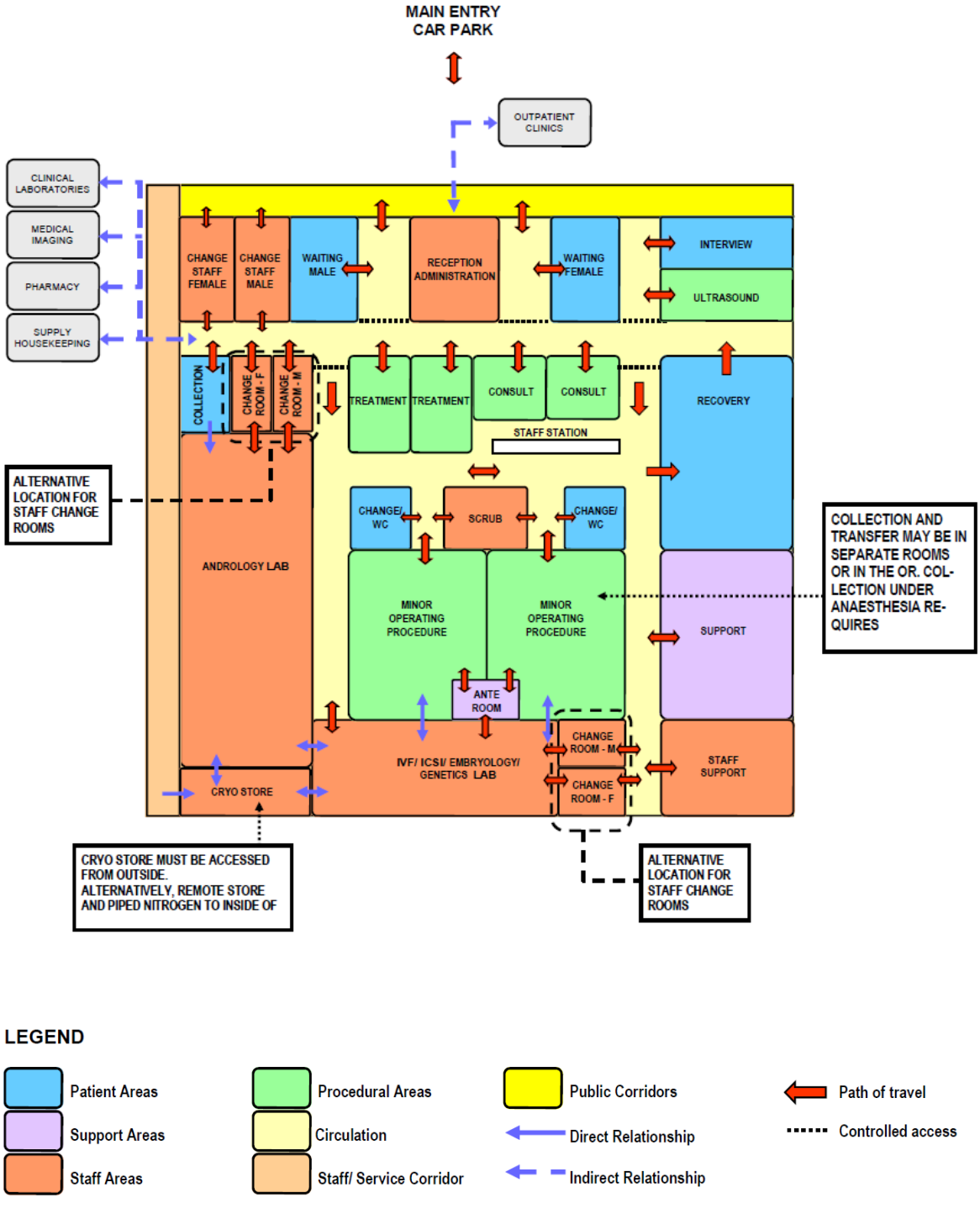
Internal Relationship

Within the IVF Unit, preferred functional relationships include:

- Reception, Administration and Waiting Areas at the entry to the Centre, where Reception may act as a control point
- Ready access to Consult, Treatment and Ultrasound Rooms from Waiting Areas and to Operating/ Procedures Rooms
- Laboratories should be located in a separate zone away from the Consult area and secured with entry through an Anteroom
- Embryology (IVF/ ICSI) Laboratory areas located with a direct adjacent relationship to the Operating/ Procedure rooms for egg collection and re-implantation
- Collection rooms have a direct functional relationship with the Andrology Laboratory; specimens require rapid transfer, of within a 2-minute period, to the laboratory to avoid deterioration. An adjacent toiled should be provided.

Functional Relationship Diagram

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



5 Design Considerations

General

The design of the unit should create a pleasant, reassuring atmosphere for patients whilst retaining the necessary functional requirements associated with clinical spaces and laboratories. Ideally, waiting areas should be divided into several small 'Family Waiting' zones to allow partners or close relatives to wait in relative privacy.

Consideration may be given to a private and discreet entry area for patients, away from general public view.

Environmental Considerations

Acoustics

The IVF Unit should be designed to minimise the ambient noise level within the unit and transmission of sound between patient areas, staff areas and public areas. Consideration should be given to the location of noisy areas or activity, preferably placing them away from quiet areas including consult rooms. Confidential patient information is exchanged between patients and staff; therefore, the Interview, Consult, Collection and Treatment Rooms should be acoustically treated to maximise privacy.

Acoustic treatment is required to the following:

- Waiting Areas should be located further away from the Consult Rooms, Treatment spaces and Staff Areas
- Interview Areas with patients require acoustic treatment in order to maintain the confidentiality of conversations between patients and clinicians
- Meeting Rooms and discussion areas for staff where confidential patient information is shared require acoustic treatment
- Consultation/ Treatment Areas where loud equipment may be used or noise producing treatments are likely to take place should be treated to minimise the transmission of noise.

Natural Light/ Lighting

The use of natural light should be maximised throughout the Unit. Windows are an important aspect of sensory orientation and psychological well-being of patients and staff. Windows should be provided to all patient and staff spaces wherever possible.

External lighting must be addressed for stand-alone units, including car parking areas, particularly if the Unit is accessed after-hours, according to local authority requirements.

Privacy

Privacy is essential for confidential conversations and interviews and will minimise stress and discomfort for patients. Patient privacy and confidentiality can be enhanced by provision of private interview rooms for personal discussions between staff and patients.

Areas should be designed to avoid direct views into Patient, Consult and Treatment spaces from the outside, through windows and through doors. Privacy curtains should be provided where necessary. Waiting Areas may include segregated smaller areas for families.

Ergonomics/ OH&S

Laboratories should be designed with consideration to ergonomics to ensure an optimal working environment which minimises the risk of distraction, fatigue and thereby making a mistake. Aspects for consideration include height of benches and chairs, height of equipment in constant use such as microscopes and bio-safety cabinets.

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

Safety and Security

The IVF Unit shall provide a safe and secure environment for patients, staff and visitors, while remaining a non-threatening and supportive atmosphere conducive to optimal healthcare outcomes. Patients and family members attending the IVF Unit may require access to lockable

storage for personal items. Zones within the Unit will require access control to prevent unauthorized access, particularly laboratory areas, cryopreservation areas and staff office areas.

The facility, furniture, fittings, and equipment must be designed and constructed in such a way that all users of the facility are not exposed to avoidable risks of injury.

The IVF Unit either stand-alone or located within a hospital precinct requires sufficient external security which may include CCTV surveillance. The perimeter of the Centre must be lockable.

Internal Areas should be planned with a high level of security including:

- Zoning areas and grouping similar functions together with electronic access to areas
- Provide access and egress control which may use the Reception as the control point
- Provide good visibility to waiting and patient areas for staff
- Use of shutters and screens to provide additional security to public access points.

Finishes

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

The following factors shall be considered:

- Aesthetic appearance
- Acoustic properties
- Durability
- Fire safety
- Ease of cleaning and compliant with infection control standards
- Suitable floor finishes with respect to slip resistance, movement of equipment and impermeable to fluids in treatment areas
- Laboratory, Storage and Procedural areas should have vinyl or similar impervious floors; patient recovery areas and staff offices may be carpeted.

For further details refer to Part C – Access, Mobility and OH&S and Part D – Infection Control in these Guidelines

Fixtures and Fittings

Critical items of equipment including incubators and liquid nitrogen storage should be temperature alarmed and monitored. Consideration should also be given to emergency and uninterruptible (UPS) power supplies to critical equipment such as incubators, refrigerators, and biosafety cabinets.

For further details refer to **Part E – Engineering Services** in these Guidelines.

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.

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
- Videoconferencing, teleconferencing, and telemedicine requirements

Staff Call/ Duress Alarm

Hospitals must provide an electronic call system next to each treatment space including Consult, Examination, Procedure, Treatment Rooms, and Patient Areas (including toilets) to allow for patients to alert staff in a discreet manner at all times.

All calls are to be registered at the Staff Station and must be audible within the service areas of the Unit including Clean Utilities and Dirty Utilities. If calls are not answered the call system should escalate the alert accordingly. The Staff Call system may also use mobile paging systems or SMS to notify staff of a call.

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

Heating, Ventilation and Air-conditioning (HVAC)

The air conditioning system in the unit should be designed to maintain a comfortable temperature range in Patient Areas including Waiting Areas, Meeting Rooms, Therapy Areas, and Consult Rooms.

All HVAC requirements are to comply with services identified in Standard Components and Part E – Engineering Services in these Guidelines.

Hydraulics

Warm water shall be supplied to all areas accessed by patients within the Centre. This requirement includes all staff handbasins and sinks located within patient accessible areas. Sinks in Staff Areas shall be provided with hot and cold-water services.

For further information and details refer to Part E – Engineering Services in these Guidelines.

Infection Control

All assisted reproductive techniques involve handling of biological material and therefore pose a potential infection control risk to staff and to other patients' reproductive cells (gametes, zygotes, embryos).

Strict infection control measures are required within the unit to protect laboratory staff from potentially contaminated body fluids (follicular fluid etc.) and to ensure aseptic environment for reproductive cells, preventing cross infection. Measures include:

- Handbasins for staff handwashing in all patient areas and laboratories
- Use of laboratory clothing in laboratories
- Use of theatre clothing in procedure rooms
- Use of laminar flow biosafety cabinets in laboratories (a Class II cabinet should be available for handling of contaminated samples)
- Sharps containers and clinical waste collection and removal

Hand Basins

Handwashing facilities are required in Corridors, Patient and Treatment Areas and the other areas specified in the Standard Components.

Handwashing facilities shall not impact on minimum clear corridor widths. At least one Handwashing Bay is to be conveniently accessible to Staff and Treatment Areas. Handbasins are to comply with Standard Components – Bay - Handwashing and Part D - Infection Control.

Hand Basins in Patient Areas should be used solely for infection control purposes.

Antiseptic Hand Rubs

Antiseptic hand rubs should be located so they are readily available for use at points of care and in high traffic areas. The placement of alcohol-based hand rubs should be consistent and reliable throughout facilities. Antiseptic hand rubs are to comply with Part D - Infection Control, in these Guidelines.

In Operating Rooms and Laboratories, alcohol-based hand rubs are not allowed, as they are embryo-toxic. Special chemicals are used instead for laboratory and operating room cleaning. There should be a minimum of two cleaners' rooms - one for the laboratory and operating room, and another one for outpatients.

Antiseptic Hand Rubs, although very useful and welcome, cannot fully replace Handwashing Bays. Both are required in all clinical FPUs.

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 IVF Unit contains Standard Components to comply with details described in these Guidelines. Refer to Standard Components Room Data Sheets (RDS) and Room Layout Sheets (RLS).

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 and are separately covered below.

Collection Room/s

The Collection rooms shall be located adjacent to the Andrology Laboratory for rapid delivery of specimens. The Collection Rooms require an ensuite shower / toilet.
The rooms should include:

- Comfortable seating
- Handbasin and fittings including soap and paper towel dispenser
- TV, DVD player
- Acoustic treatment
- A pass-through hatch for specimens

Laboratories

Laboratories are to comply with applicable statutory requirements and international standards for clean rooms. The construction of the laboratories should ensure aseptic and optimal handling of reproductive tissue during all stages of the process.

Air conditioning for the IVF/ ICSI/ Andrology Laboratories should include HEPA filters, controlled humidity (20%) and controlled temperature (22 – 24 degrees C). Please refer to Part E-Engineering in these Guidelines for further details.

IVF/ ICSI Laboratory

The IVF/ ICSI Laboratory should be located adjacent to the Operating Room/s for oocyte collection and re-implantation. A pass-through hatch from the Laboratory to each Operating Room is recommended.

Staff change and handwash areas should be located at the laboratory entry. Access to the laboratory should be limited.

Laboratory equipment requires emergency power, temperature monitoring and alarms.

Andrology Laboratory

The Andrology Laboratory should be located adjacent to the IVF/ ICSI Laboratories with close proximity to the Collection Room/s. Access to the laboratory should be limited.

Laboratory equipment requires emergency power, temperature monitoring and alarms.

Genetics Laboratory

The Genetics Laboratory should be located in proximity to the IVF/ ICSI Laboratory. Access to the laboratory should be limited.

Laboratory equipment requires emergency power, temperature monitoring and alarms.

Cryopreservation Storage

The Cryopreservation storage area should be located in close proximity to the Laboratory areas, in an area with controlled access. The Store contains liquid nitrogen cylinders or dewars holding frozen tissue and liquid nitrogen tanks for topping up dewars.

The room requires:

- Efficient ventilation and exhaust
- Monitoring high levels of nitrogen in the room air
- Monitoring for low levels of nitrogen in the storage tanks

Sterilising/ Packing

The Sterilising/ Packing Room, for sorting, packing and sterilising instruments shall be located adjacent to the Clean-up Room where the instruments are cleaned and decontaminated. Clean instruments and laboratory equipment are received from the Clean-up room, preferably through a pass-through hatch.

7 Schedule of Equipment (SOE)

This Schedule of Equipment (SOE) below lists the major equipment required for the key rooms in this FPU.

Room/ Space	Standard Room Code	Item Description	Qty	Remarks
Andrology Laboratory	**NS**	Air purification unit: under-bench	1	quantity to suit service requirements
		Analyser: sperm, automated	1	quantity to suit service requirements
		Balance: precision	1	quantity to suit service requirements
		Cabinet: biological safety, Class II, IVF	1	quantity to suit service requirements
		Centrifuge: general purpose	1	quantity to suit service requirements
		Incubator: CO2	1	quantity to suit service requirements
		Microscope: upright	1	quantity to suit service requirements
		Refrigerator: laboratory	1	quantity to suit service requirements
		Witnessing system: IVF	1	optional
Cryopreservation Store – Freezing Room	**NS**	Alarm analyser: O2 sensor	1	
		Dry vapour shipper	1	quantity and capacity to suit service requirements
		Personal monitor: O2, with alarm	1	
		RFID tagging system: with vapour phase reader	1	optional
		Storage dewar: liquid nitrogen (LN2)	1	quantity and capacity to suit service requirements
		Supply tank: liquid nitrogen (LN2)	1	quantity and capacity to suit service requirements
IVF/ ICSI Laboratory - Embryology	**NS**	Air purification unit: under-bench	1	quantity to suit service requirements
		Analyser: CO2	1	
		Antivibration table: IVF	1	quantity to suit service requirements
		Cabinet: biological safety, Class II, IVF	1	on antivibration table; quantity to suit service requirements
		Dry bath/ block heater, digital	1	quantity to suit service requirements
		Incubator: CO2	1	tri-gas; quantity to suit service requirements
		Incubator: tri-gas, multi room, benchtop	1	quantity to suit service requirements
		Incubator: tri-gas, time lapse	1	quantity to suit service requirements
		Laser system: IVF	1	on antivibration table; quantity to suit service requirements
		Micromanipulator: IVF	1	on antivibration table; quantity to suit service requirements
		Microscope: inverted, with camera	1	on antivibration table; quantity to suit service requirements
		Microscope: stereo	1	with camera, placed inside the IVF biosafety cabinet; quantity to suit service requirements
		Oven: laboratory, drying	1	quantity and capacity to suit service requirements
		PH meter	1	
		Refrigerator: laboratory	1	
		Witnessing system: IVF	1	optional
Ultrasound Room	**ultr-i**	IMG: Ultrasound scanning unit	1	OB/ Gyn
		Monitor: video, medical grade, HD, 26-inch	1	optional
		Oxygen flowmeter	1	
		Suction adapter	1	with bracket & suction bottle
		Table: examination/ treatment, electric, OB/ Gyn	1	

8 Schedule of Accommodation (SOA)

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 the SOA for a typical IVF Unit at RDL Levels 2-6.

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.

IVF Unit

ROOM/ SPACE	Standard Component Room Codes									RDL 2-6 Qty x m^2			Remarks
Entry / Reception													
Reception	recl-15-i									1	x	15	
Waiting - Male/Female	wait-10-i similar									2	x	15	
Waiting - Family	wait-30-i									1	x	30	Optional
Store- Photocopy/ Stationery	stps-8-i									1	x	8	Optional
Store - Files	stfs-10-i similar									1	x	8	
Toilet - Male/Female	wcac-i									2	x	6	
Patient/ Procedure Areas													
Meeting/ Interview Room – Family	intf-i									3	x	12	
Consult/ Exam Room	cons-i									4	x	13	
Collection Room	NS									2	x	6	Semen samples
Ensuite	ens-st-i									2	x	5	Adjacent to Collection Rooms
Blood Collection Bay	bldc-5-i									2	x	5	
Ultrasound Room	ultr-i									1	x	14	
Toilet – Patient	wcpt-i									1	x	4	For Ultrasound Room
Treatment Room	trmt-14-i									1	x	14	Single patient trolley. Injection teaching
Operating Room - General	orgn-i									2	x	42	The minimum required for Operating Room is 35m^2
Change Cubicle - Accessible	chpt-d-i									2	x	4	For Patient; Optional based on operational policy; 1 Adjacent to each Operating Room
Toilet – Patient	wcpt-i									1	x	4	Shared in the Recovery Area
Toilet – Patient	wcpt-i									2	x	4	Optional; 1 Adjacent to each Operating Room
Change – Staff (Male/Female)	chst-12-i									2	x	12	Includes toilets and change facilities
Scrub Up/ Gowning - Shared	scrbs-i									1	x	10	Shared between 2 Operating Rooms

Patient Bay – Holding/Recovery	pbtr-rs1-12-i										4	x	12	2 Bays per Operating Room
Patient Bay – VIP - Enclosed	pbtr-rs1-12-i similar										1	x	14	Optional For special cases; if provided, it will replace one of the four Patient Bay – Holding/Recovery. Handwash basin type B to be provided in the room.
Bay – Handwashing, Type B	bhws-b-i										2	x	1	
Bay – Beverage	bbev-enc-i										1	x	5	
Bay – Linen	blin-i										1	x	2	
Bay – Resuscitation Trolley	bres-i										1	x	1.5	
Clean Utility	clur-12-i										1	x	12	
Dirty Utility	dtur-12-i similar										1	x	10	
Staff Station	sstn-14-i similar										1	x	10	
Laboratory Areas														
Andrology Laboratory	NS										1	x	40	
IVF/ ICSI Laboratory - Embryology	NS										1	x	50	
Genetics Laboratory	NS										1	x	20	
Cryopreservation Store – Freezing Room	NS										1	x	15	25m^2 for 2 Operating Rooms
Store – Gas Bottle	stfl-i similar										1	x	9	If not reticulated as part of the hospital
Support Areas														
Clean Up Room	clup-p-i										1	x	7	
Cleaners Room	clrm-6-i										2	x	6	One for Operating Room and Laboratories, and another for other rooms
Disposal Room	disp-8-i										1	x	8	
Sterilising/ Packing	NS										1	x	20	Locate adjacent to Clean Up Room
Store – Sterile Stock	stss-12-i										1	x	12	

Change Staff (Male/Female)	chst-12-i similar										2	x	10	Includes toilets and change facilities
Store – General	stgn-8-i similar										1	x	10	For surgery devices, solutions & lab equipment
Staff Areas														
Meeting Room	meet-l-30-i										1	x	30	May share adjacent facilities
Office – Single Person	off-s12-i										1	x	12	Manager
Office – Single Person	off-s9-i										1	x	9	Nurse; Should be located close to Staff Station
Office – Single Person	off-s9-i										1	x	9	Physician
Office – 4 Person Shared	off-4p-i										1	x	20	Quantity as required
Office – Workstation	off-ws-i										1	x	5.5	
Security Room	secr-10-i										1	x	10	Mandatory – May share with Main Entry
Staff Room	srm-15-i similar										1	x	20	
Sub Total											**776**			
Circulation %											**35**			
Area Total											**1047.6**			

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 a generic and typical arrangement
- 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.

9 References and 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:

- Revised Guidelines for good practice in IVF laboratories; Magli, M.C. et al, Human Reproduction Vol 23, No 6, 1253-1262, 2008
- Clinical and Laboratory Standards Institute (CLSI) (www.clsi.org) “Laboratory Design; Approved Guideline,” 2nd edition. GP18-A2. Vol 27, No.7. Wayne, PA:CLSI, 2007
- Revised Guidelines for Good Practice in IVF Laboratories (Eshre) 2015 refer to website: www.eshre.eu/eim
- The Facility Guidelines Institute (US), Guidelines for Design and Construction of Hospitals, 2018. Refer to website: www.fgiguidelines.org
- CDC (Center for Disease Control) US. Guidelines for Environmental Infection Control in Health-Care Facilities, US, refer to website: http://www.cdc.gov/hicpac/pubs.html