



IUSS

# *IUSS HEALTH FACILITY GUIDES*

## Maternity Care Facilities



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*Task Team: A:06*

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### INFORMATION

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## Title: **Maternity Care Facilities**

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Description: "Maternity Care Facilities" contains health facility guidance in five parts, covering the infrastructure norms and standards for maternity facilities providing regional, tertiary, central and national referral services. It is to be read in conjunction with the full norms and standards suite and covers policy and service context (Part A), planning and design (Part B), a room list (Part C) and case studies (Part D).

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Authors: IUSS N and S task group A:6

Stakeholders: National Department of Health, Provincial Departments of Health and Public Works

### *Accessing of these guides*

This publication is received by the National Department of Health (NDoH), IUSS Steering Committee Chairman, Dr Massoud Shaker and Acting Cluster Manager: Health Facilities and Infrastructure Management, Mr Ndinanyi Mphaphuli. Feedback is welcome.

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### *Application and development process*

These IUSS **voluntary standard/ guidance documents** have been prepared as national Guidelines, Norms and Standards by the National Department of Health for the benefit of all South Africans. They are for use by those involved in the procurement, design, management and commissioning of public healthcare infrastructure. It may also be useful information and reference to private sector healthcare providers.

Use of the guidance in this documentation does not dissolve professional responsibilities of the implementing parties, and it remains incumbent on the relevant authorities and professionals to ensure that these are applied with due diligence, and where appropriate, deviations processes are exercised.

The development process adopted by the IUSS team was to consolidate information from a range of sources including local and international literature, expert opinion, practice and expert group workshop/s into a first level **discussion status** document. This was then released for public comment through the project website, as well as national and provincial channels. Feedback and further development was consolidated into a second level **development status** document which again was released for comment and rigorous technical review. Further feedback was incorporated into **proposal status** documents and formally submitted to the National Department of Health. Once signed off, the documents have been **gazetted**, at which stage documents reach **approved status**.

At all development stages documents may go through various drafts and will be assigned a version number and date. The National Department of Health will establish a **Health Infrastructure Norms Advisory Committee**, which will be responsible for the periodic review and formal update of documents and tools. Documents and tools should therefore always be retrieved from the website repository [www.iussonline.co.za](http://www.iussonline.co.za) or Department webportal (forthcoming) to ensure that the latest version is being used.

The guidelines are for public reference information and for application by Provincial Departments of Health in the planning and implementation of public sector health facilities. The approved guidelines will be applicable to the planning, design and implementation of all new public-sector building projects (including additions and alterations to existing facilities). Any deviations from the voluntary standards are to be motivated during the Infrastructure Delivery Management Systems (IDMS) gateway approval process. **The guidelines should not be seen as necessitating the alteration and upgrading of any existing healthcare facilities.**

## Intended audience

This guidance is intended primarily for:

Project and design teams

Clinicians and other staff involved in the provision of outpatient care and service facilities

Hospital facility planners

Staff of the Department of Health

Staff of the Department of Public Works

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IUSS N&S task team (Maternity Care Facilities): Edwina Fleming, Magda Coetzer, Etha van der Schyf

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## Documents of particular significance informing these guidelines

Department of Health, RSA. 2007. Guidelines for maternity care in South Africa. Third edition. RSA.

Department of Health, UK. 2011. Maternity care facilities: Planning and design manual 72:0.8. England.

Department of Health, UK. 2011. Maternity care facilities: Policy and service context manual 39:0.7. England.

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## OVERVIEW

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This document outlines the policy and service context, and attempts to illustrate the desired planning principles and design considerations for maternity units.

**Part A** outlines the national and provincial service and policy context, which are the basic determinants of the planning and design principles.

**Part B** contains planning and design guidance, design considerations, functional relationships between hospital departments with respect to neonatal units, and relationships within the units themselves. It recommends minimum maternity unit space, functional layouts, patient handling, infection prevention, architectural detail, and surface and furnishing needs for clinical and support areas. The document also addresses minimum maternity unit engineering design criteria for plumbing, electrical and heating, ventilation, and air-conditioning (HVAC) systems.

**Part C** develops these principles into a list of rooms. The example list provides a basis for sizing facilities at initial planning stages, but exact requirements should be determined locally and based on the number and case mix of patients, the hospital policy for the provision of supplies and waste disposal, and the layout of the unit.

Spaces that are unique to maternity care facilities are described.

While this document outlines design requirements and acceptance criteria which have an impact on clinical services, these requirements are prescribed within the framework of the entire IUSS set of guidance documents and cannot be viewed in isolation. This document is to be read in conjunction with the full IUSS suite. The documents in Table 1 should be complied with, together with this document.

**Table 1 : IUSS:GNS Reference Documents**

CLINICAL SERVICES	Essential	Recommended	SUPPORT SERVICES	Essential	Recommended	HEALTHCARE ENVIRONMENT/ CROSS-CUTTING ISSUES	Essential	Recommended	PROCUREMENT AND OPERATION	Essential	Recommended
Adult inpatient services	x		Administration and related services		x	Generic room requirements	x		Integrated infrastructure planning		
Clinical and specialised diagnostic laboratory guidelines			General hospital support services	x		Hospital design principles	x		Briefing manual		
Mental health			Catering services for hospitals		x	Building engineering services	x		Space guidelines		
Adult critical care	x		Laundry and linen department		x	Environment and sustainability		x	Cost guidelines		
Emergency centres	x		Hospital mortuary services		x	Materials and finishes	x		Procurement		
Maternity care facilities			Nursing education institutions			Future healthcare environments		x	Commissioning health facilities		
Adult oncology facilities			Health facility residential			Healthcare technology	x		Maintenance		
Outpatient facilities	x		Central sterile service departments		x	Inclusive environments	x		Decommissioning		
Paediatrics and neonatal facilities	x		Training and resource centres		x	Infection prevention and control	x		Capacity development		
Pharmacy		x	Waste disposal		x	Information technology and infrastructure	x				
Primary healthcare facilities	x					Regulations	x				
Diagnostic radiology		x									
Adult physical rehabilitation											
Adult post-acute services											
Facilities for surgical procedures		x									
TB services		x									

**Colours legend**

Consultants	
Administrators	
Related documents	

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## PART A - POLICY AND SERVICE CONTEXT

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Maternity units provide quality services for the management of pregnancy, birth and the postnatal period, as well as care of the newborn, in a safe environment.

### 1. Policy context

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Within South Africa, the Maternal and Child Health Programme is located in general development policies, which are focused on meeting the basic maternity needs of rural and urban communities.

The 'pillars' of safe motherhood (based on the World Health Organisation's safe motherhood initiative) include the following:

- **Choice on contraception** – to ensure that individuals and couples have the information and services to plan the timing, number and spacing of pregnancies
- **Antenatal care** – the identification of risk factors and early diagnosis of pregnancy complications and their appropriate management, and health education
- **Clean and safe delivery** – to ensure that all health workers have the knowledge, skills and equipment to perform clean and safe delivery and provide postpartum care to mother and baby
- **Essential obstetric care** – to ensure that essential care for high-risk pregnancies and complications is made available to all women who need it
- **Choice on termination of pregnancy** – to provide women who have unwanted pregnancies with a legal, safe and acceptable choice

Maternity care in South Africa forms an integral component of primary healthcare and free health services for pregnant women, where service provision includes services for the safe antenatal, birthing and postnatal care of mothers and their babies (newborn babies) in a comfortable environment that facilitates the normal physiological process of pregnancy and birth. The service includes all perinatal services: antenatal care, delivery rooms, postnatal care, well-baby care and kangaroo mother care management. These services are provided in terms of the promulgated required levels of care for healthcare services.

The primary healthcare aim is to provide appropriate care for women and babies close to home.

### 2. Service context

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The number of antenatal beds, delivery rooms and postnatal beds will depend on a number of factors:

- The size of the population served
- The demographic trends that will influence the number of deliveries in the area
- The category of the facility, e.g. clinic, community health centre (CHC), district, regional or tertiary hospital
- Future planning that may affect decision-making
- Model of care to be provided
- Number of deliveries in the catchment area
- Other facilities providing maternity services in the same catchment area

Strategic planning for the facility should be outlined in the business case developed by the health facility planning department.

The project business case and the health brief defines the correct level of service per facility, based on the Provincial Strategic Transformation Plan and the government policy document: Government Notice R. 185, 2 March 2012, National Health Act 61/2003: Regulations Related to **Categories of Provincial Hospitals**: No. 35101.

The district is the basic unit of a healthcare region, served by a district hospital and a number of health centres. Different levels of healthcare are required in districts and regions for the efficient functioning of the health service. Most medical conditions do not need the facilities of large hospitals. For cost-effective health management, clinics and hospitals should share the load of patient care, whereby clinics manage common and low-risk problems and hospitals the more difficult clinical entities.

To prevent maternal deaths, all hospitals' maternity units should offer caesarian section and blood transfusion facilities.<sup>1</sup>

a) District hospital

The hospital will provide maternity care in accordance with the service package for district services and will refer more complex cases to regional or tertiary hospitals. A district hospital may provide the full maternity care services for the normal birthing process and provides for the standard care of neonates. Skilled staff, midwives, general practitioners, obstetricians and paediatricians should be in attendance.

b) Regional hospital

A regional hospital may provide specialist services, including the full maternity care services for complicated obstetric cases that require specialist attendance. In a regional or tertiary hospital, the pregnant woman will be assessed for risk factors and allocated to a maternity unit's multidisciplinary team that will supervise her care for the duration of her pregnancy, labour and delivery, and possible postnatal care. The team comprises midwives, obstetricians, general practitioners, allied health staff and paediatricians.

Standard care, high-dependency care and intensive care of neonates are also provided. Skilled staff, midwives, obstetricians, gynaecologists and paediatricians should be in attendance.

c) Tertiary hospitals

A tertiary hospital may provide specialist services, including full maternity care services for complicated obstetrics and gynaecology cases that require specialist attendance. The maternity unit's multidisciplinary team comprises midwives, obstetricians, general practitioners, allied health staff, paediatricians and geneticists. Specialist obstetric care may be required for women with special-care needs, high-risk pregnancies, multiple births or histories of complications during pregnancy.

d) Central hospitals

Central referral services are **provided in highly specialised units**, require unique, highly skilled and scarce personnel and are situated at a small number of sites nationwide.

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<sup>1</sup> Department of Health, RSA. 2007. Guidelines for maternity care in South Africa. Third edition. RSA.

Approximately 60–70% of all women who use government facilities will require the services of a hospital at some stage during their pregnancies. About 10% of women will require the services of a specialist obstetrician at a regional or tertiary hospital (Department of Health, RSA, 2007).

TABLE 2: ESSENTIAL OBSTETRIC CARE (EOC) FACILITIES IN SOUTH AFRICA (NDOH, 2010)<sup>2</sup>

Level	Total	Basic EOC	Comprehensive EOC
<b>Clinics</b>			
Mobile	755	0	0
Satellite clinic	370	0	0
Fixed clinic	3 185		0
CHC	141	141	0
<b>Total clinics</b>	<b>4 451</b>	<b>141</b>	<b>0</b>
<b>Hospitals</b>			
District	265	220	161
Regional	60	53	53
Tertiary 1	6	6	6
Tertiary 2	10	8	8
Specialised hospital	66	2	1
<b>Total hospitals</b>	<b>407</b>	<b>289</b>	<b>229</b>
<b>Total</b>		<b>430</b>	<b>229</b>
<b>Total/500 000 public sector population</b>		<b>6.0</b>	<b>3.2</b>

Source: Penn-Kekana & Blauw, 2003<sup>3</sup>

### 3. Maternity care facilities<sup>4</sup>

According to the Department of Health, RSA (2007), the different requirements for each category of maternity healthcare facility are as follows:

#### 3.1. Categories of maternity healthcare

##### Clinic

This is a unit that normally functions only on weekdays during working hours. Antenatal care is one of a number of activities in the clinic. The others are chronic diseases, child health, family planning, etc.

##### Functions

Antenatal care for low- and intermediate-risk women, including on-site blood testing

Postnatal checks, including contraception

Referral of problems to hospital

Management of emergencies

<sup>2</sup> CLINICAL GUIDELINES: PMTCT (Prevention of Mother-to-Child Transmission)2010.National Department of Health, South Africa;South African National AIDS Council

<sup>3</sup> Penn-Kekana L, Blauw D. A rapid appraisal of maternal health services in South Africa. A Health Systems Approach. 2003.

<sup>4</sup> Dept.of Health RSA (2007).Guidelines for Maternity care in South Africa. Third edition RSA

**Staffing**

Midwives, enrolled nurses, nursing assistants, community maternity health worker and a visiting medical officer.

**Facilities**

All the necessities to run an antenatal clinic

Equipment and drugs for obstetric emergencies (oxygen, Ringer-Lactate solution, magnesium sulphate, hexoprenaline)

Sterile delivery packs for emergency deliveries

Reliable transport service for emergency transfers to hospital;

Effective communication system (radio or telephone).

Note<sup>5</sup>: In a number of provinces in South Africa, uncomplicated deliveries are catered for at the clinics. In this instance, the services provided may be for 24 hours and additional infrastructure is required, such as a delivery room and a postnatal resting area with en suite bathroom.

***Community health centre***

This is a 24-hour comprehensive obstetric unit run by midwives. Where it stands alone as a maternity service, it might be called a midwife obstetric unit (MOU). More often, the maternity section will run alongside other services such as emergency care, minor ailments, chronic diseases and promotive services.

**Functions**

Antenatal care for low- and intermediate-risk women, including on-site routine blood testing

Treatment of the common problems of pregnancy

Twenty-four-hour labour and delivery service for low-risk women

Vacuum extraction

Postnatal checks, including contraception

Referral of problems to hospital

Management of emergencies

**Staffing**

Advanced midwives, midwives, enrolled nurses, nursing assistants, community maternity health worker and a visiting or resident medical officer.

**Facilities**

All the necessities to run an antenatal clinic

All equipment to run a low-risk labour ward

Equipment and drugs for obstetric emergencies (oxygen, Ringer-Lactate solution, magnesium sulphate, hexoprenaline)

Effective communication system (radio or telephone)

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<sup>5</sup> Not contained in Department of Health, RSA. 2007.



Reliable 24-hour transport service for emergency transfers to hospital

A mothers' waiting area in rural areas with poor transport infrastructure

### ***District hospital – Level 1 services***

This may be called a district hospital, as it would normally be the base hospital for a health district. The definition applies best to rural areas, while in urban areas, district hospital functions are often integrated into larger hospitals (regional hospitals).

Hours of operation: 24 hours.

#### **Functions**

Antenatal care for high-risk women, including on-site routine blood testing

Antenatal ultrasound service

Treatment of pregnancy problems, including admission to hospital

Twenty-four-hour labour and delivery service for intermediate- and high-risk women

Vacuum extraction, caesarian section and manual removal of placenta

Regional and general anaesthesia

Blood transfusions

Essential special investigations

Postnatal care, including complications and postoperative care

Postpartum sterilisation

Referral centre for clinics and community maternity health centres in the district

Supervision of clinics and community maternity health centres in the district

Referral of complicated problems to regional or tertiary hospitals

Counselling and support

Genetic screening and counselling services

#### **Staffing**

Advanced midwives, midwives, enrolled nurses, nursing assistants, social workers, community maternity health workers, full-time medical officers and visiting specialist obstetricians.

Each hospital will have a dedicated staff establishment over the 24-hour operational time. Nursing staff will work in shifts. Doctors and other clinical staff will provide a dedicated function in the unit on a periodic basis as the patient profile dictates.<sup>6</sup>

#### **Facilities**

All the necessities to run an antenatal clinic, including an ultrasound scanner

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<sup>6</sup> Additional to Department of Health, RSA. 2007.

All equipment to run a high-risk labour ward, including a vacuum extractor, cardiotocograph (CTG) machines and intravenous fluid infusion pumps

A 24-hour laboratory service

A blood bank

Equipment and drugs for obstetric emergencies, including a fully equipped resuscitation trolley and defibrillator

A fully equipped operating theatre

Access to diagnostic radiology

Reliable transport service for emergency transfers to regional or tertiary hospitals

A mothers' waiting area (pregnant mothers' lodge) in rural areas with poor transport infrastructure

*Sleep-over facilities should be provided to medical staff that are required to stay at the unit overnight (Penn-Kekana & Blauw, 2003)*

### **Regional hospital – Level 2 services**

This may be called a regional hospital, as it is the base hospital for a health region, which includes a number of districts. Regional hospitals frequently include district hospital (level 1 services) functions and may be the base hospitals for nearby clinics and community maternity health centres.

Hours of operation: 24 hours.

#### **Functions**

All district hospital (level 1) functions

Management of severely ill pregnant women

Specialist supervision of the care of pregnant women

Prenatal diagnosis, e.g. genetic amniocentesis

Multidisciplinary maternity care – other specialities, physiotherapy etc.

Referral centre for district hospitals in the region

Supervision and support for district hospitals

#### **Staffing**

Advanced midwives, midwives, enrolled nurses, nursing assistants, full-time medical officers and full-time specialist obstetricians.

Each hospital will have a dedicated staff establishment over the 24-hour operational time. Nursing staff will work in shifts. Doctors and other clinical staff will provide a dedicated function in the unit on a periodic basis as the patient profile dictates.<sup>7</sup>

#### **Facilities**

All the facilities required in a district hospital

<sup>7</sup> Additional to Department of Health, RSA. 2007. *Guidelines for maternity care in South Africa*. Third edition. RSA.

Intensive care unit

### **Tertiary hospital – Level 3 services**

This also applies to central hospitals where obstetric services are provided.

Hours of operation: 24 hours.

#### **Functions**

All district and regional hospital functions

Specialist combined clinics, such as cardiac and diabetic pregnancy clinics

Advanced prenatal diagnosis, such as chorion villus sampling and cordocentesis

Management of extremely ill patients or difficult obstetric cases

Supervision and support for district and regional hospitals

Responsibility for policy and protocols in the regions served

#### **Staffing**

Advanced midwives, midwives, enrolled nurses, nursing assistants, full-time medical officers and full-time specialist obstetricians, including subspecialty skills, e.g. fetal medicine.

#### **Facilities**

All the facilities required in district and regional hospitals

Specialised equipment for the management of very ill patients or difficult obstetric cases

TABLE 3: OBSTETRIC SERVICES PER LEVEL OF CARE

	Facility/Service	Clinic	CHC	District	Regional	Tertiary	Comments
1	Inpatient antenatal care	-	-	Yes	Yes	Yes	Antenatal ward where 24-hour care is available
2	Dedicated obstetric theatre	-	-	Yes	Yes	Yes	A dedicated operating theatre for hospitals with <40 maternity beds
3	Delivery unit	Not all clinics	Yes	Yes	Yes	Yes	Also known as the labour ward or birthing unit
4	Well-baby care	-	Yes	Yes	Yes	Yes	A nursery in the postnatal ward area
5	Inpatient postnatal care	-	Yes	Yes	Yes	Yes	Postnatal ward where 24-hour service is available
6	Outpatient service	Yes	Yes	Yes	Yes	Yes	Antenatal and postnatal
7	Kangaroo mother care (KMC)	-	-	Yes	Yes	Yes	Located in the postnatal ward
8	High-dependency unit for mothers	-	-	Transit facility	Yes	Yes	Adjacent to the delivery unit and antenatal ward

### 3.2. Referral system

It is essential to have a referral system in place, with clear protocols for management, referral, transport and responsibility that link the various categories of service. A well-coordinated referral system, with access to transport and facilities, is essential for the provision of optimal care to all pregnant women in the district (NDoH, 2007).<sup>8</sup>

Transport maternity units should be available from clinic level up to central hospital level, so that patients can be transferred between facilities where required.

#### Emergency transport

Appropriately staffed and equipped vehicles (ambulances) are to be available 24 hours a day in all health districts, to move women with emergencies from one health facility to another, or from their homes to a health facility. Appropriate communication, whether radio or telephone, should be in place, so that ambulances can be called to transport such women as quickly as possible.

### 3.3. Operational policies

The national and provincial departments of Health prescribe operational and clinical policies in the interest of quality of care and infection control.

#### Management of special-needs patients

Women who have suffered perinatal loss (stillbirths, neonatal deaths, termination of pregnancy, abnormalities and miscarriages) or who are relinquishing a baby for adoption need special consideration in terms of privacy and isolation from the sight and sound of newborn babies. A separate counselling unit, positioned privately, is advisable.

#### Placental disposal

Placentas are regarded as human tissue and should be disposed of according to the policy on the disposal of human tissue. In the delivery unit, placentas should be stored in a locked fridge in the sluice room prior to removal from the unit to the waste disposal facilities at the hospital.

#### Patient visitors

The healthcare institution determines the visiting policy of the hospital. Patients' visitors may be limited by age, number and allocated visiting times.

## 4. Categories of maternity care

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The care pathway includes three categories of care:

1. Antenatal care
2. The delivery process (birth)
3. Postnatal care

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<sup>8</sup> Dept.of Health RSA (2007).Guidelines for Maternity care in South Africa. Third edition RSA

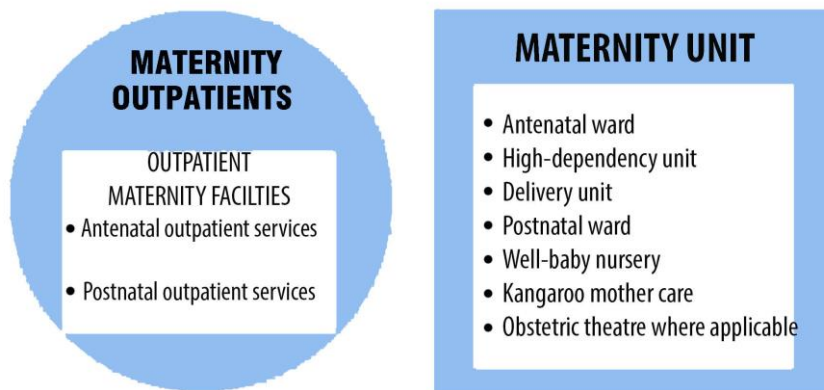
FIGURE 1: THE MATERNITY CARE PATHWAY



These care pathways are divided into two specific components for maternity care, each with subcomponents:

1. Outpatient facilities
  - a. Antenatal outpatient services
  - b. Postnatal outpatient services
2. Maternity unit facilities
  - a. Antenatal ward
  - b. High-dependency unit
  - c. Delivery unit
  - d. Postnatal ward
  - e. Well-baby nursery
  - f. Kangaroo mother care
  - g. Obstetric theatres where applicable

FIGURE 2: TWO COMPONENTS OF MATERNITY CARE



The maternity outpatient services are normally operated from within the outpatient departments and may be a separate outpatient maternity suite within the outpatient department. The exception to this is where the maternity services are offered separately in a stand-alone maternity centre. In this instance, the maternity outpatient services are adjacent to the maternity unit.

## 4.1. Maternity Outpatient Care

### Antenatal outpatient care

The **antenatal care** of the pregnant mother and the unborn child includes antenatal visits to primary healthcare clinics, community maternity health centres or district hospitals to screen all pregnant women, to provide guidance and education during pregnancy and to conduct risk assessments on all antenatal patients expected to have uncomplicated childbirths.

Every expectant woman should have access to antenatal care. All investigations and antenatal services rendered are to be recorded. Preferably, these points of care should be close to the community it serves, making it convenient for the mother to attend.

Activities include the following:

Registration and card collection

Waiting to be attended to

Preparation room where history and vitals (blood pressure, weight, height) are taken

Physical examination and assessment that occurs in a consulting room

Treatment of problems that may arise during the antenatal period

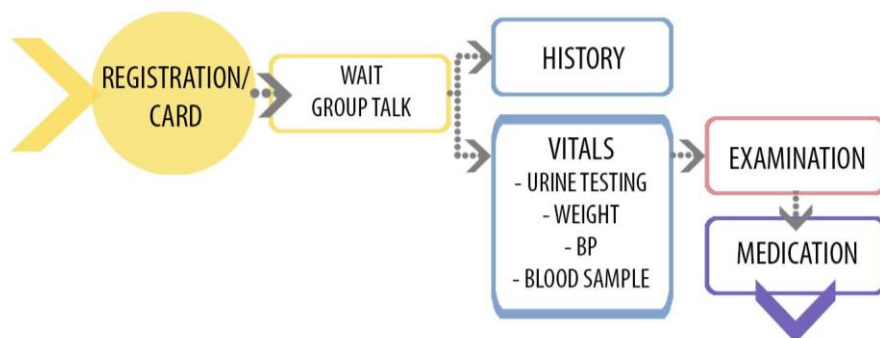
Giving medication that may improve the pregnancy outcome

Providing information to pregnant women

Tests performed by midwives or appropriately trained auxiliary staff 'on site' at the clinic, with the results available to the pregnant women before they complete the visit

Ultrasound services at all hospital facilities (a tertiary facility will have a dedicated ultrasound unit, which will be equipped for invasive procedures such as amniocentesis)

FIGURE 3: ANTENATAL PROCESS: OUTPATIENT CARE



Attendance

In total, 90% of pregnant women in South Africa attend antenatal clinics, where the following attendance is recommended:

First visit assessment between 5 and 19 weeks' gestation

Follow-up visits scheduled four-weekly until 37–38 weeks

39-/40-week visit, and then weekly visits after that

Waiting time

In the public sector, women are not given appointments for antenatal visits at primary healthcare facilities and many will arrive at the clinics before opening time to ensure that they are seen.

One study indicated that 71% of women had already arrived for antenatal care by 07:30 and no woman came after 10:30. Another study found that all antenatal patients had arrived before 13:00. The average patient who attended her first antenatal visit spent almost four and a half hours in the clinic. Of this time, four hours were spent waiting, while only 28 minutes were spent interacting with a provider. Repeat patients spent three hours at the clinic for antenatal visits, with only 14 minutes of provider contact time. The rest of the time was spent waiting (Beksinska & Kunene, 2005)<sup>9</sup>.

This has a significant effect on the design of waiting spaces and will be discussed further on in this guideline document.

Regional and tertiary hospitals see patients by appointment and usually receive referrals from primary healthcare facilities.

### *Postnatal Outpatient Care*

After the mother and child have returned home, follow-up visits are essential to ensure the full recovery of the mother after birth and the healthy development of the child. This involves a visit (or visits) to the postnatal clinic at the appropriate facility. Again, these points of care should be close to the community it serves to make it convenient for the mother to attend.

Activities include the following:

Card collection

Waiting to be attended to

Preparation room where history and vitals (blood pressure, weight, height) are taken

Physical examination and assessment, which occurs in a consulting room

Treatment of problems

Giving medication where necessary

Providing information to the mother

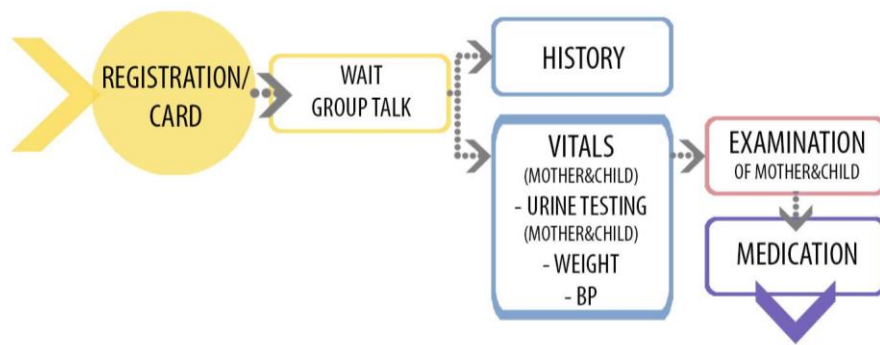
Tests performed by midwives or appropriately trained auxiliary staff 'on site' at the clinic, with the results available to the pregnant women before they complete the visit

Examination of the baby, which includes weighing the baby

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<sup>9</sup> M. Beksinska, S Maternity unitlick (2005) B Kunenematernal Care: Antenatal, Peri And Post Natal 2005

FIGURE 4: POSTNATAL PROCESS: OUTPATIENT CARE



In the public sector, women are not given appointments for postnatal visits at primary healthcare facilities. Regional and tertiary hospitals see patients by appointment and usually receive referrals from primary healthcare facilities.

## 4.2. The Maternity Unit

### *Inpatient antenatal care*

Should complications arise (or be anticipated) during the pregnancy, a woman may be referred and admitted as an inpatient for a more detailed assessment and for monitoring prior to the birthing process. The length of stay in the antenatal inpatient facility varies, depending on the condition of the patient. Patients identified as potential risks include those with medical conditions, multiple pregnancies and previous complications during pregnancy. They are referred to appropriate facilities for assessment and management, which might include admission to the inpatient facility for observation, monitoring and management.

Those mothers that are critical and require advanced care will go to the **maternity high-dependency unit** attached to the delivery unit.

### *Maternity high-dependency unit*

Should complications arise, the mother may, depending on the facility, be either transferred to the the delivery unit, the operating theatre or intensive care, or she will be moved to the **maternity high-dependency unit** adjacent to the delivery unit.

The maternity high-dependency unit has the facilities and equipment to deal with critical complications that may arise during the pregnancy. The services provided will be equal to those required for critical-care beds and will provide all requirements for the delivery of the baby.

Women in the high-dependency unit will need intensive observation, treatment and nursing care. Critically ill women requiring artificial ventilation will need to be transferred to an intensive care unit.

There needs to be good telecommunication links with other units to facilitate transfer arrangements should they be required



## Labour and delivery

### The delivery unit

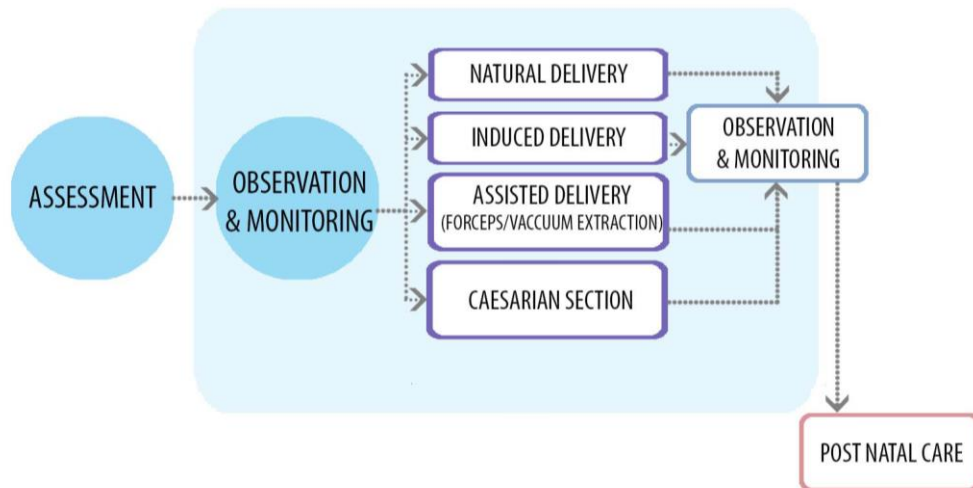
In South Africa, it is recommended that all deliveries should take place at facilities with essential obstetric care. These include community health centres and any level of hospital.

Unless previously admitted as an antenatal patient, a woman in labour will, upon entering the maternity unit, be assessed before being directed to the delivery unit, where she will occupy a delivery room through all stages of her labour until she gives birth and for at least three hours after she had delivered her baby.

Mothers who go into spontaneous labour while in the antenatal ward will go straight to the delivery room at the onset of labour.

The delivery process (birth) includes uncomplicated vaginal deliveries, assisted delivery, clinically induced delivery and delivery by caesarian section. Uncomplicated deliveries could take place at CHC and district hospital level. Planned caesarian sections could be performed at all hospitals. Complicated births and unexpected caesarian sections are referred to regional and tertiary levels of care.

FIGURE 5: PROCESS THROUGH THE DELIVERY UNIT



#### Assessment room

The mother is assessed in the assessment room to establish her condition and stage of labour.

Activities include:

Recording her history

Physical examination

Tests

Delivery of the baby in some instances (if transport to the delivery room does not occur in time)

Once assessed, the mother is directed either to the antenatal ward, the delivery unit, the maternity high-dependency unit, the operating theatre, intensive care or, in some instances, home (if her labour is established to be false and the mother is in good health).

## Delivery room

Should the mother be seen to be in labour with no anticipated complications, she is moved from the assessment room through to the delivery room, where the mother and foetus are monitored until she delivers. Should complications arise during the labour, the mother may be taken to the operating theatre for a caesarian section or will be transferred to the high-care unit.

Activities include the following:

### General care

- Continued assessment
- Providing fluids, both oral and intravenous
- Ensure mobility of the patient while in the labour process (the patient may walk around the unit or lie on the bed)
- Observations and monitoring of the patient by carers
- Procedures by the clinical staff, e.g. rupture of membranes/episiotomies
- Analgesia for the patient, e.g. epidurals(not in districts)/entonox/injections

### Labour process

- Natural labour
  - Assisted labour, e.g. forceps/vacuum extraction
  - Induced labour
  - Caesarian section (performed in the operating theatre)
- Fourth stage of labour (first hour after delivery of the placenta)  
Observations and monitoring of mother and child
  - Postnatal care in the delivery room
    - Observations and monitoring by staff
    - Baby care
    - Counselling

### **Immediate care of the newborn**

All delivery rooms should have an area set aside for attending to the baby immediately after the birth, so that the midwife or doctor can ensure the baby has a clear airway, is warm and may be physically examined to determine the Apgar score.

Should the newborn require resuscitation, this is done in a resuscitation area outside the delivery rooms but in the delivery unit.

All women are expected to stay at the delivery facility for a minimum of six hours if they have no complications. Women are commonly discharged within 12 hours after delivery. They may either go home or, as in the case of hospital patients, are transferred to the postnatal ward, where they stay up to three days before being discharged.

### ***Obstetric operating theatre***

In the event of complications during labour that necessitate an emergency caesarian section, a woman will be moved from the birthing unit to a maternity theatre. Clinic or CHC patients requiring an emergency caesarian section will be transported to the appropriate hospital. Elective caesarian cases will take place in the maternity theatre or in the main theatres of the hospital.

The operating theatre should comply with the requirements of a surgical theatre and should have space for receiving and resuscitating the baby.

**The need for a caesarian section theatre is calculated by this formula: 1 x obstetric theatre should be provided for every 8 birthing rooms.**

### **Postnatal ward**

The objective of postnatal care is to assist the woman to return to optimal health as soon as possible after delivery and to ensure the infant receives the care needed to achieve and maintain optimal health and development. It is important to ensure that the woman has all the information she needs to manage everyday situations with her newborn and family once she leaves the facility.

**Mother care:** The patient and baby are transferred to a postnatal inpatient ward once the patient is stable. She and her baby are further observed and monitored.

Patients who had undergone caesarian sections need to be accommodated in beds in the inpatient unit, as they are closely monitored after surgery.

Clinically unstable or ill mothers are managed in either the postnatal ward or high-care unit.

**Kangaroo care:** Babies who are well but underweight are nursed by the mother in a kangaroo mother care unit in the postnatal inpatient facility until the baby gains sufficient weight before discharge. Kangaroo mother care is provided at all levels of care.

**Baby care:** Space needs to be provided adjacent to the mother's bed so that the newborn can be cared for alongside its mother. Babies are roomed with their mothers unless the mother is unwell or unable to care for the infant. To this end, a **well-baby nursery** (calculated at 20% of postnatal beds) should be provided in the hospital. This is adjacent to the inpatient postnatal facility. Incubators should be provided in the well-baby nursery for babies who are sick.

Neonates who require assisted life support at district hospitals should be transferred to regional or tertiary hospitals and placed under the care of a paediatrician. This could include admission to a neonatal unit or the neonatal intensive care unit.

Overall, it is important that facilities are designed for the appropriate use by the family, the patient and the staff providing the care. The main objective is to provide for the safe care of both mother and baby in a comfortable, relaxing environment that facilitates what is a normal physiological process, enabling self-management in privacy whenever possible (Department of Health, England, 2011a)<sup>10</sup>.

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<sup>10</sup> Department of Health (2011). Maternity care facilities - Maternity care facilities: Policy and service context manual 39:0.7: England

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## PART B - PLANNING AND DESIGN

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### 1. Overview

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This section illustrates the desired planning principles and design considerations, with applied examples to support the planning process.

Workflow diagrams are provided to explain the flow of patients, clinical staff, support goods and services and maintenance staff, as well as the flow of the public through the maternity care unit.

The detailed room diagrams with accompanied norms and standards are provided to clarify the understanding of the different space requirements and room-specific specifications that makes up the maternity care unit.

Planning and design includes the following:

- Outpatient services, which include antenatal and postnatal clinics
- Delivery unit facilities
- Inpatient areas, which include antenatal and postnatal care
- High-dependency unit care for antenatal care and delivery
- Routine care of newborn babies
- Obstetric theatres

### 2. General design principles

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The planning of the maternity health facilities should support **salutogenic** (healing environment) planning principles to ensure a holistic healing environment with, where possible, clear external views, as much morning sun or light as possible and spaces that create a pleasant healing environment.

Design should provide the following:

A clinically safe and effective patient environment for mothers and babies

Ergonomically safe and risk-free work environment

Appropriate space norms and room design

Functional space design that accommodates all the relevant activities to take place in each room

Design that reduces noise in the facility

Compliance with quality assurance principles

Communication and information systems that will support patient management and administration

Layouts that reflect the service needs of the patients to be accommodated in the various areas in a maternity unit

Adequate storage space for equipment

Appropriate equipment and infrastructure to be provided to facilitate the required service

Space for skills training and development in the maternity unit

## **2.1. Access and circulation**

The entrance to the maternity unit should be visible upon entry to the site. A hospital maternity unit requires 24-hour access and should have a dedicated emergency drop-off point and entrance for when emergency cases arrive via ambulance or private vehicle. The pathway to the delivery unit should be close to the drop-off zone for the maternity unit.

Safe parking should be made available for ambulances, public and staff vehicles, and should be close to the entry point of the maternity unit.

Access control has become an important aspect in the design of a maternity unit. The workplace design should limit public access to all clinical departments. Visitors should have limited access with a single point of entry, with a security checkpoint at this entrance to the unit.

## **2.2. Security<sup>11</sup>**

Security is an issue of importance for staff, mothers and babies (Department of Health, UK, 2011b):

Babies born in hospital should be cared for in a secure environment to which access is restricted

An effective system of staff identification is essential

A robust and reliable baby security system should be enforced, such as baby tagging, closed-circuit television and alarmed mattresses

Strict criteria for the labelling and security of the newborn infant are essential

The number of entry and exit points to the unit should be reduced to a minimum. Public access and egress should be limited to one door, which should be in the vicinity of, and with good natural surveillance from the reception desk/staff communication base, although security should not solely rely on the presence of staff or observation. The use of centrally managed access control with one of the following systems should be considered essential: swipe card, proximity or biometric recognition. Where this is not possible, access/egress controls to wards should be operated at ward level.

Overt and well-publicised CCTV cameras should be installed at all entrances to the unit. Where the unit is only one department within a larger health facility building, consideration should be given to installing CCTV at all exits from the building in order to maximise the opportunity for detecting, identifying and apprehending an abductor.

An integrated security system should link the building/fire door alarm system to baby tags, and CCTV systems to an appropriate monitoring station.

Signage should be displayed alerting users of the security systems in place, for example CCTV cameras and baby tagging systems.

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<sup>11</sup> Dept. of Health UK (2011). Maternity care facilities: Planning and design manual 72:0.8:England

Security systems in place should not impede the movement of staff or the safe transfer of mother or baby in the event of an emergency.

The need to provide system security to deter potential criminal behaviour and to reassure parents should be balanced with the need to create a welcoming atmosphere in the unit.

### **2.3. Infection control**

The layout of the facility must facilitate the flow of clean and soiled goods and not only patients. The management of soiled and contaminated linen and waste removal should be planned to avoid contamination. There should be adequate ventilation to minimise airborne disease transmission. Patients and any unauthorised persons must not have access to areas where hazardous materials and waste from the facility are stored.

Hospital-acquired infections must be prevented. Particular attention should be given to protocols for the caring of patients with infectious diseases (particularly TB), immuno-compromised patients and paediatric patients, as well as for healthcare workers.

The following aspects contribute to effective infection prevention and control, and are relevant within the context of the inpatient unit:

Hand hygiene facilities

Provision for the separation of infectious patients

Handling of linen

Separation of clean and dirty work flows

Storage

Waste management

Surface finishes

All areas of the facility should be designed, constructed, furnished and equipped in keeping with infection control principles.

### **2.4. Way-finding and signage**

As hospital buildings become more complex, the more difficult it is for patients, visitors, suppliers and staff alike to navigate their way through the building to and from their intended destination. Poor way-finding systems can increase anxiety, confusion and dissatisfaction with a hospital experience. The following are ways to enhance way finding:

Printed information (pamphlets)

Architectural features and design elements that provide clues as to what the function of the building is, which can include landscaping, sculptural features, architectural interior design, floor covering, lighting, and wall, door and window graphics

Permanent signage

Digital devices (such as kiosks or information screens)

Human interaction (such as staff at help desks)

Way finding and signage should be considered from the inception of the design process. The layout of the hospital must be logical and signage must be simple and easy to follow. Universal signage for all the internal rooms should be provided as far as possible. Signage has to clearly identify staff, patient and visitor areas, and draw attention to restricted areas. The preferred lettering style on signage directions should conform to the provincial policy on signage.

The entrance to the maternity unit will require an illuminated sign that is clearly visible from the entrance to the hospital site.



### **Artwork**

The use of artwork in the maternity unit should be appropriate and should encourage a calming atmosphere.

Photograph 1: Mitchell's Plain Hospital mosaic

## ***2.5. Patient satisfaction, privacy, dignity and respect***

Patients must be attended to in spaces that offer privacy, dignity and respect, whether they are being examined and treated or merely speaking with the staff. This means that rooms need to be reasonably soundproof, well partitioned and screened from other activities in the facility. Waiting spaces must offer comfortable and durable seating.

## ***2.6. Inclusive environments***

*(Refer to: [IUSS:GNS Inclusive Environments](#).)*

There is increased public awareness of barriers that make the reasonable use of facilities difficult or impossible for the physically impaired. A healthcare facility will have a high proportion of occupants, patients and visitors who are unable to function without some form of assistance. Some staff members may also be impaired. To ensure minimum patient dependence on staff and others, consideration should be given to designing for optimum patient independence and enhanced staff productivity (Australasian Health Facilities Guidelines, 2010)

Consideration should be given to the wide range of disabilities, including the following:

Mobility impairment

Visual impairment

Hearing impairment

Cognitive impairment, e.g. patients with brain injuries or dementia

Mental illness

In addition, cultural and literacy issues should be considered, as they can impact on access and safety (Australasian Health Facilities Guidelines, 2010).

## 2.7. Ergonomics

Ergonomics is the scientific discipline concerned with designing according to the human needs and the profession, and applies theory, principles, data and methods to design in order to optimise human wellbeing and overall system performance (Wikipedi).

Poorly designed recurring elements such as workstations and the layout of critical rooms have a great impact on the occupational health and safety (OHS) of staff and the welfare of patients.

Designers should be vigilant to ensure that designing out one risk does not result in the introduction of another, e.g. in designing out a security risk should not create a manual handling risk.

Five principles should be considered when designing ergonomic spaces:

Safety

Comfort

Ease of use

Productivity/performance

Aesthetics

All workspaces should be adaptable to the users occupying that space. Therefore it should be capable of adjustment or modification to suit a specific user. For instance, conventional work surface heights for seated users are not suitable for people who use wheelchairs, and dual-height surfaces should thus be provided. Bench heights and widths in work areas should take into account the type of work to be performed in this space.

## 2.8. Ventilation

The air management in the waiting areas should be designed to reduce the spread of airborne pathogens such as tuberculosis. (*Refer to the [IUSS:GNS TB Services](#).*)

## 2.9. Medication management

The maternity unit is dependent on the pharmacy for pharmaceutical support. This includes medication, scheduled drugs, patient prescriptions and discharge medication.

Security and control of access to medication rooms should comply with legislation, requirements and hospital policy.

The location and design of the medication room should minimise the distance to the maternity unit, noise and disruption to staff undertaking medication-related activities in order to reduce error.

All medication should be stored in a temperature-controlled, locked environment. The medicine trolley, stock and patient prescriptions should be stored in a medicine room that should be close to, and directly visible from the nurse's station.

The management of intravenous fluids should be clarified for the specific facility as to whether storage is preferred within the clean utility room or in a separate room.



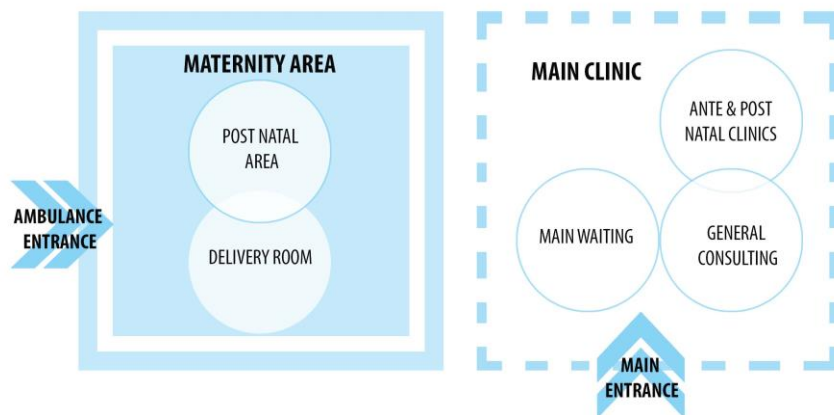
### 3. Location and departmental relationships

#### 3.1. Separation of the maternity unit

In all facilities, the maternity unit where the labour process and delivery occurs should be separate from all other services. This requires that the unit has a separate, dedicated entrance and drop-off zone. **This makes it essential that all maternity units are placed on the ground floor.**

The maternity unit should have security control at the separate entrance and drop-off zone, with 24-hour access for ambulances, taxis and cars where 24-hour services are offered. The drop-off entrance must have clear, direct access to the delivery unit for women and families. On arrival, the route to the maternity units must be clearly signposted.

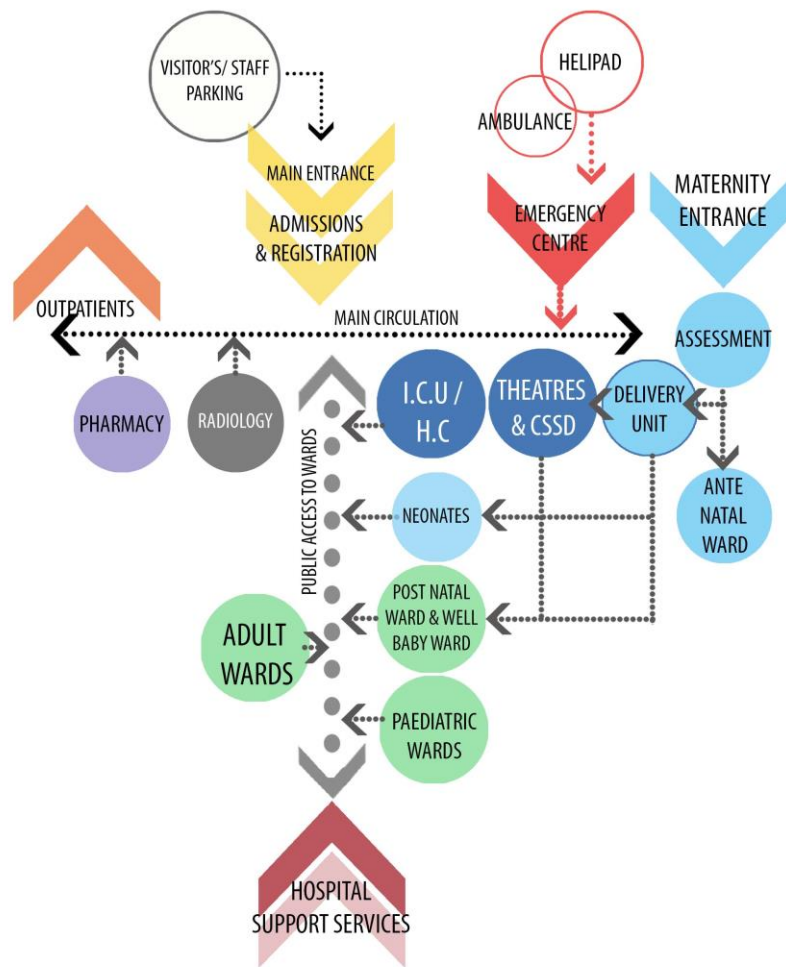
FIGURE 6: DEPARTMENTAL RELATIONSHIP: PRIMARY HEALTHCARE



#### 3.2. Departmental relationship: Maternity unit in hospitals

The maternity unit in a hospital must be adjacent to the operating theatres (unless it has a dedicated operating theatre in the maternity unit) and to the neonates' ward. Close proximity to high-care and intensive care services is preferable. Easy access to both pharmacy and radiology is required. Access from the patient areas to external spaces is preferred.

FIGURE 7: DEPARTMENTAL RELATIONSHIPS IN THE HOSPITAL



### 3.3. Antenatal and postnatal outpatient services

The antenatal and postnatal outpatient facilities are usually located in the outpatient department, unless the maternity unit is a free-standing, stand-alone facility.

While district outpatient services offer family medicine that incorporate maternity services, both regional and tertiary maternity outpatients are located separately either in the maternity unit or separately in the outpatient area.

## 4. Flow

There are a variety of client/patient journeys through the building from arrival on site to leaving the facility. These depend on the health facility and reflect individual needs.

The three main flow paths to consider are those of patients (and visitors), staff and support services: Patients or visitors will access the facility by ambulance, car, taxi or on foot. They will proceed through a secure site entrance, and then to a parking area or drop-off point, from where there should be clear signage to the required point of entry (a dedicated maternity entrance).

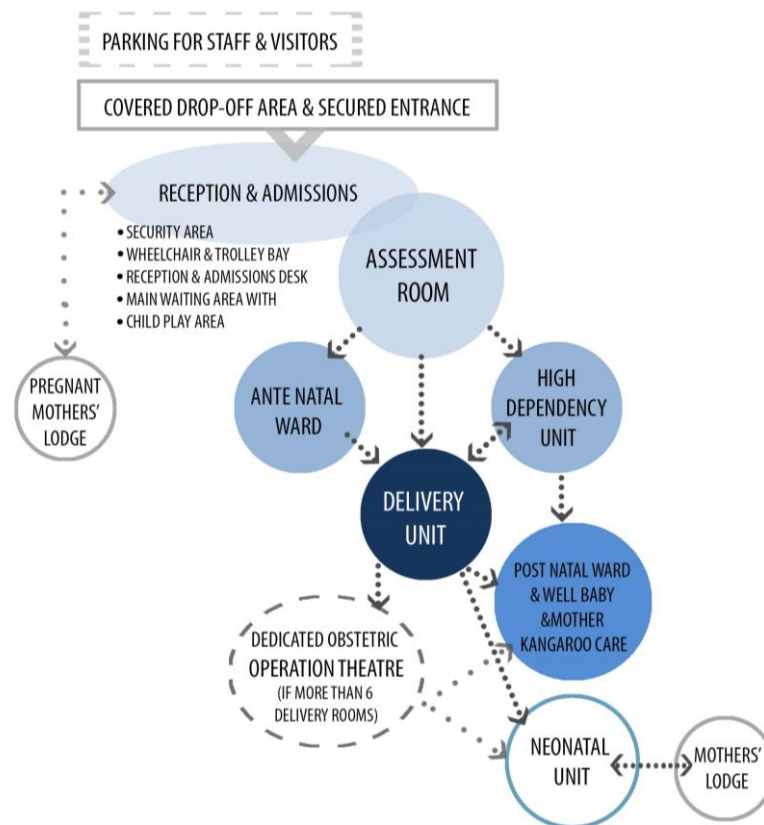
Staff will also access to the facility by car, taxi or on foot. They may proceed through a secure entrance to a staff parking area or drop-off point, from where they may enter the facility through a separate staff entrance.

A separate secured site service entrance allows only for services to enter and exit separately:

- Routes for the collection and removal of waste
- Routes for the delivery and distribution of supplies
- Routes for emergency evacuation

Circulation and communication spaces should be sized and located to facilitate the efficient flow of users and the delivery of goods and services.

FIGURE 8: DEPARTMENTAL RELATIONSHIPS AND PATIENT FLOW RELATED TO THE HOSPITAL'S MATERNITY UNIT



#### Patient flow

Upon entry into the maternity unit, patients will report to reception and collect their card or will register. From here, they will be directed to wait to be assessed.

Once the patient has been seen and assessed by the nurse, she will be directed to one of the following options (depending on her condition and level of acuity):

Pregnant mothers' lodge for mothers close to term who need to be close to the hospital

Antenatal ward for observation and monitoring

High-care unit for intensive observation and monitoring

Delivery unit, to give birth to the baby

To the operating theatre to have a caesarian section

Once the baby is delivered, both mother and child will be taken to the postnatal ward, where the baby will be roomed in with the mother or will be placed in the well-baby nursery, if required. Sick babies will be transferred to the appropriate neonatal facility, which may be provided adjacent to maternity unit (or the neonate may have to be transferred to another facility).

A mother may be taken to the intensive care unit in the hospital, should her condition become critical.

The mother and child will remain in the postnatal ward until discharged. Mothers who have been discharged from the postnatal ward but who need to remain at the hospital, as their children may be in the neonatal unit, are accommodated in a mothers' lodge facility, which provides easy access to the neonatal unit.

Staff

Workflow between departments has an impact on patient and staff movement, as well as goods and service deliveries to the maternity unit. Minimum walking distances between departments for clinical and support staff should be planned in the interest of resource management, efficiency and traffic reduction through the facility to ensure effective resource utilisation. Design should aim to minimise staff walking distances to obtain supplies and equipment.

#### 4.1. Separation of clean and dirty flow paths

Infection control principles dictate that clean services should enter at a separate point to where waste and contaminated goods are taken out of the ward. Patients, visitors and clinical staff, along with clean goods and services (including food deliveries), should enter and exit through the main maternity unit entrance. Soiled and contaminated goods should exit from the maternity unit through a separate entrance, preferably positioned at the most distant point from the main entrance. It should be noted that an exit separate to the main entrance is required in terms of fire regulations. This exit may be used for taking out the contaminated goods.

It is important that deliveries to and from the maternity unit are managed in such a way that they do not clash with visitors arriving and leaving. Goods and services should be delivered at times other than visiting hours.

FIGURE 9: ENTRANCE TO AND FROM THE MATERNITY UNIT

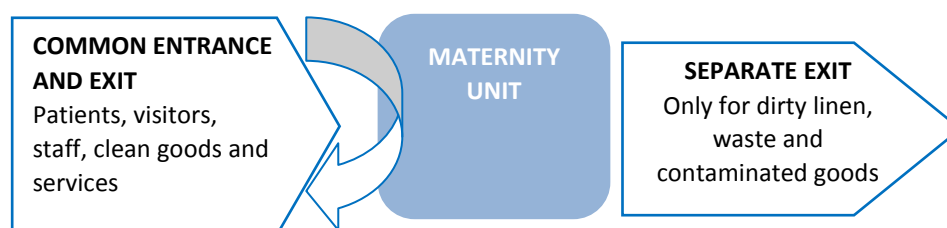
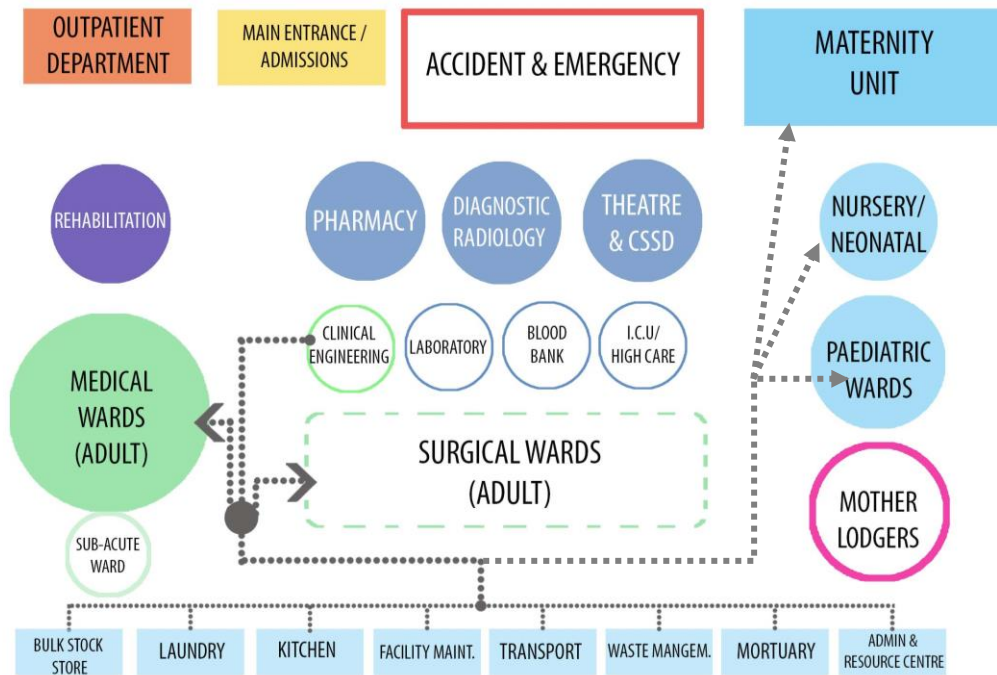
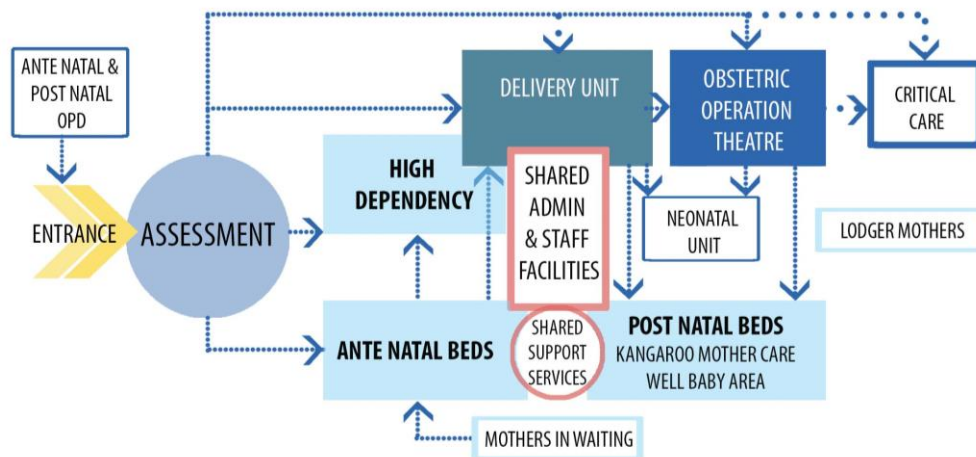


FIGURE 10: WORKFLOW DIAGRAM FOR SUPPORT SERVICES TO THE WARD



## 5. Components of a hospital maternity unit

FIGURE 11: RELATIONSHIP OF COMPONENTS INDICATING SHARED AREAS



**Note:** Shared support and staff facilities are only feasible when the maternity unit is small. If the ward exceeds the standard size of 28–32 beds, the postnatal and antenatal wards must be separate and should not share services with the delivery unit, which will have its own service support and staff areas.

TABLE 4: COMPONENTS AND SUBCOMPONENTS OF HOSPITAL MATERNITY CARE

	AREA	DESCRIPTION	COMMENTS
1	<b>MATERNITY UNIT</b>		
1.1	ENTRANCE AND RECEPTION	Covered drop-off zone and secure entrance	
		Reception and admissions: <ul style="list-style-type: none"> <li>• Security area</li> <li>• Wheelchair and trolley bay</li> <li>• Reception and admissions desk</li> <li>• Main waiting area</li> <li>• Child play area</li> <li>• Public ablutions</li> </ul>	
		Assessment room with en suite toilet and shower	
1.2	ANTENATAL WARD	Patient area: <ul style="list-style-type: none"> <li>• Bed unit with en suite toilet</li> <li>• Patients' lounge</li> </ul>	
		Staff facilities	In smaller units, these may be shared with the postnatal ward
		Support services: <ul style="list-style-type: none"> <li>• Utilities and storage</li> </ul>	
1.3	HIGH-DEPENDENCY UNIT	Patient area: <ul style="list-style-type: none"> <li>• Bed unit</li> <li>• Nurses' station</li> </ul>	
		Staff facilities	These are shared with the antenatal ward
		Support services	
1.4	DELIVERY UNIT	Patient area: <ul style="list-style-type: none"> <li>• Delivery rooms</li> <li>• Toilets adjacent to delivery rooms</li> <li>• Shared shower</li> <li>• Nurses' station</li> </ul>	
		Staff facilities	
		Support services: <ul style="list-style-type: none"> <li>• Utilities and storage</li> </ul>	
1.5	POSTNATAL WARD	Patient areas: <ul style="list-style-type: none"> <li>• Postnatal bed units</li> <li>• Kangaroo mother care bed unit</li> <li>• Well-baby nursery</li> <li>• Day lounge</li> </ul>	
		Staff facilities	In smaller units, these may be shared with the antenatal ward
		Support services: <ul style="list-style-type: none"> <li>• Utilities and storage</li> </ul>	
1.6	ADMINISTRATION	Unit manager's office	Shared by all sub-components in the maternity unit
		Doctors' offices	
1.7	STAFF FACILITIES	<ul style="list-style-type: none"> <li>• Overnight room with en suite toilet and shower</li> <li>• Training facilities</li> </ul>	Shared by all sub-components in the maternity unit

	AREA	DESCRIPTION	COMMENTS
1.8	DEDICATED OBSTETRIC OPERATING THEATRE	<ul style="list-style-type: none"> <li>• Scrub area</li> <li>• Setting up station</li> <li>• Operating theatre</li> <li>• Sluice</li> <li>• Storage</li> <li>• Holding and recovery area</li> <li>• Clinical station</li> <li>• Staff change with ablutions</li> </ul>	Operating theatre complex in the maternity unit. This is dependent on the number of delivery beds in the maternity unit: 1 per 8 delivery rooms.
<b>2</b>	<b>MATERNITY OUTPATIENTS</b>		
2.1	ENTRANCE AND RECEPTION	Reception and admissions: <ul style="list-style-type: none"> <li>• Security area</li> <li>• Wheelchairs</li> <li>• Reception and admissions desk</li> <li>• Main waiting area</li> <li>• Child play area</li> <li>• Public ablutions</li> <li>• Teaching area</li> <li>• Breastfeeding area</li> </ul>	
2.2	ANTENATAL CLINIC	Patient area: <ul style="list-style-type: none"> <li>• Consulting rooms</li> <li>• Treatment room</li> <li>• Preparation room</li> </ul>	
2.3	POSTNATAL CLINIC	Patient area: <ul style="list-style-type: none"> <li>• Consulting rooms</li> <li>• Treatment room</li> <li>• Preparation room</li> </ul>	
2.4	STAFF FACILITIES	<ul style="list-style-type: none"> <li>• Staff room</li> <li>• Staff toilet</li> <li>• Office</li> </ul>	Shared by antenatal and postnatal clinics
2.5	SERVICE SUPPORT	<ul style="list-style-type: none"> <li>• Utilities and storage</li> </ul>	
<b>3</b>	<b>LODGE FACILITIES</b>		
3.1	PREGNANT MOTHERS' LODGE	<ul style="list-style-type: none"> <li>• Four-bed units with en suite ablution</li> <li>• One-bed units with en suite ablution</li> <li>• Kitchenette</li> <li>• Laundry area</li> <li>• Lounge</li> </ul>	Separate to mothers' lodge
3.2	MOTHERS' LODGE	<ul style="list-style-type: none"> <li>• Four-bed units with en suite ablution</li> <li>• One-bed units with en suite ablution</li> <li>• Kitchenette</li> <li>• Laundry area</li> <li>• Lounge</li> </ul>	



## 6. Maternity unit entrance and reception

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### 6.1. Entrance

Single entrance

Access control with intercom to the total unit

Security

Wheelchair and trolley bay

### 6.2. Reception and admissions desk

The reception should be visible from the entrance to the facility. This is where mothers, their supporters, visitors and other personnel can be received and directed to the appropriate area in the maternity unit. Deliveries of flowers and gifts for patients in the maternity unit are received here. Administrative offices could be attached to the reception area. The main waiting area should be adjacent to the reception.

The reception area should provide a work area for managing daily service registers, road-to-health charts, patient treatment cards, notification forms, and all the required laboratory request and transfer forms.

The reception desk counter should have the following:

Two heights, one for the average patient standing and another (lower) suitable for patients in wheelchairs and smaller children

Counter space for computers and work space is essential

The counter should be designed appropriately to appeal to children and adults

Comfortable office chairs on castors for staff

### 6.3. Records store

Storage facilities need to be provided adjacent to the admissions desk to keep records and secure the records against loss or damage. Easy access for staff and confidentiality are key considerations.

### 6.4. Waiting area

Patients and visitors will be directed from the reception desk to the main waiting area. It is essential that there is a close and visible relationship between the two areas, with direct access from one to the other.

Considerations include the following:

The area's interior design should have a welcoming theme.

Adequate space should be provided for parking prams next to chairs in the waiting areas and for wheelchair patients who are waiting. Circulation space should not be compromised.

A variety of chairs should be provided to suit all ages of children and adults.

Vending machines and telephones should be positioned so as not to impede circulation.



Ablutions with baby changing areas should be adjacent to the waiting areas.

Placement of the public waiting chairs needs careful consideration.

Pinboards should be mounted on the walls to allow for information posters to be displayed.

Natural light and good ventilation in all waiting areas is essential, as both reduce the risk of cross-infection and promotes comfort.

The volume of patients is usually higher in the morning than in the afternoon. Central waiting space should be designed to accommodate the morning influx of people at outpatients and should be able to double up for those patients requiring prescriptions from the pharmacy.

A patient communication or a call system must be provided. It is suggested that an electronic communication board, which will flash the patient's service number, must be used instead of an intercom to reduce noise and to allow for flexibility of waiting space.

Way-finding within the waiting area is important, particularly in larger buildings.

Colour, pendants or large icons may be useful in helping patients to orientate themselves in the space.

#### **Layout of waiting areas**

It is more efficient to provide a shared main waiting area to serve both antenatal and postnatal suites, rather than a series of individual waiting spaces. This makes it easier to manage peaks in attendance numbers and also means that less 'contingency' needs to be built into each space.

Large waiting areas will need to be broken down with smaller groups of seats, to make the space less daunting and institutional, and to enable patients to sit close to the suite to which they will be called.

Cognisance must be taken of the TB epidemic in South Africa. It must be understood that patients will mix with others that may be undiagnosed TB sufferers, and waiting areas must be designed to reduce the danger of cross-infection. Cross-ventilation and good air flow in accordance with [IUSS :GNS Building Engineering Services](#).

Differing seating clusters can be distinguished from each other by different colours, different floor finishes, and so on. They may also be divided by screens, plants or, in larger buildings, accommodation such as a catering outlet or retail stall.

The layout of seating should enable confidentiality to be maintained at the main reception desk, by providing suitable space around the desk or by using glazed screens.

The layout should be flexible enough to accommodate patient flow at peak times, and to allow children's play areas and quiet areas to be shared by different patient groups.

Consideration should be given to providing patient/client information points, with direct access to online health information, such as NHS Choice. Appropriately located vitals observation room for recording a person's height, weight, blood pressure and other core screening data may also be provided.

Space: Floor space of 1 m<sup>2</sup>/patient (assume every second patient is accompanied by a family member)

Services: Plug for TV and DVD player  
Plug for floor cleaner

## 6.5. Play area

A play area should be situated next to the waiting area and be visible to parents seated in the waiting area. Staff should also have a clear view of the play area at all times.

Children of all ages should be accommodated in this area with age-appropriate toys, books and wall displays.

The play area must have an external view out through windows with low sills so that even small children can look out.

Where possible, access to a secure, safe outside play area with partial cover is recommended.

All play areas, indoors and outside, should be designed to engage or stimulate the senses and provide positive distraction for children.

Acoustic material finishes will assist in reducing the noise that is generated by children in these areas.

The play area should be a minimum of 12 m<sup>2</sup>.

## 6.6. Ablutions

In small buildings, it is often sensible to provide individual water closet (WC) cubicles containing a toilet and wash-hand basin. In larger buildings, multi-cubicle public WCs will be appropriate (see the Building Regulations). Separate baby-changing and feeding facilities should be provided.

## 6.7. Assessment room

The patient is admitted to the unit where she is assessed, and directed to the appropriate place of care. The assessment room will provide for the assessment and examination of patients to establish the stage of labour. This room will require storage space for sterile packs and consumables. And should have an en suite shower and toilet ([IUSS:GNS Generic room requirements](#)).

**The room must be fitted out as a delivery room** in the event of a patient delivering while being assessed.

A desk will be required for the nurse/doctor to write notes.

The assessment room should be positioned off the main waiting area, close to the delivery unit. Privacy is very important.

A minimum area of 25 m<sup>2</sup> is required for an assessment room.

## 7. Antenatal ward

The antenatal ward requirements are the same as for adult inpatient facilities. Refer to the [IUSS:GNS Adult inpatient accommodation](#) and [IUSS:GNS Generic room requirements](#).

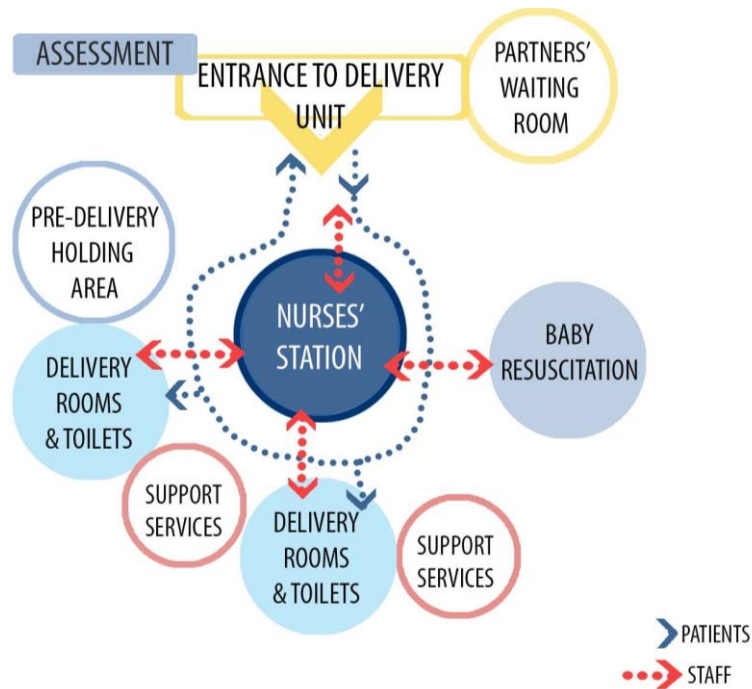
An additional requirement is that the antenatal ward should provide for the storage of a cardiotocography machine in the treatment room.

This ward must be adjacent to the delivery unit and high care for maternity

## 8. Delivery unit

The delivery unit should be designed with attention to patient supervision and effective human resource utilisation.

FIGURE 12: FLOW DIAGRAM: DELIVERY UNIT



The delivery unit must be adjacent to the theatres and the ante natal ward. There should also be a clear, direct route to the neonatal unit, high care and intensive care ward.

### 8.1. Partners' waiting area

This is a small area with seating inside the delivery unit for partners to wait, with access to an outside garden or courtyard and a toilet.

### 8.2. Admission holding room

An admission holding room is required for patients admitted to the facility who are in early labour but not ready to deliver. This should be an area with two or four patient beds, and should have an en suite facility attached. **This room is only for emergency drop-off patients.**

### 8.3. Nurses' station

The nurses' station in the delivery unit should be centrally placed to enable the staff to view all people entering the delivery unit and also for the midwives to view all entrances to the delivery rooms. It is a central hub for the midwives to operate from.

Refer to the [IUSS:GNS Generic room requirements](#) for details.

### 8.4. Delivery room

Patients will be admitted to a **delivery room** from the assessment room and will remain here throughout their labour and recovery before transfer to the postnatal unit.

The delivery room is where the labour process takes place and involves the continued assessment of the mother during early and established labour, vaginal delivery with or without intervention, and the post-natal recovery and observation prior to transfer to the post natal ward. Examination of the newborn is carried out in the delivery room at the baby receiving area.

**A delivery room should be a minimum of 22 m<sup>2</sup>.**

#### **Location and relationships**

The birthing room must be located in close relationship to the point of entry and nurses' station. Each birthing room should have easy access to a storage area for mobile equipment and sterile packs, as well as easy access to toilets and an area in which the mother may walk around during the labour process. Each birthing room should be clearly visible to the central nurses' station.

#### **Activities**

- Admission of women in labour
- Observation and assessment of pregnant women
- Uncomplicated labour and birth
- Complicated labour and birth
- Operative obstetric procedures
- Resuscitation of mother and baby
- Observation and recovery of infants
- Observation and recovery of mother
- Training of midwifery, nursing and medical staff

#### **Services**

Examination light above delivery bed – the light must be positioned effectively for the nurse/doctor delivering the baby to have good quality light

Wall-mounted examination sets

Three plug outlets at desk

Data point

Telephone point

Indicator light to show occupation

Clinical hand-wash basin with elbow taps and gooseneck outlet in each room, with tiles above, soap dispenser and paper towel dispenser

#### **Wall-mounted services at the baby receiving area in the delivery room:**

One oxygen point

One medical air point

Two vacuum points

Three 15 Amp UPS power plugs

A single pole ceiling or wall-mounted light at 60 000 lux at 4500°K.

Note: Space provision must allowed for a mobile Resuscitaire to be brought into the delivery room in the event of a twin birth.

PHOTOGRAPH 2: MOBILE RESUSCITAIRE (COURTESY: MITCHELL'S PLAIN HOSPITAL)



#### **Bed head services at the delivery bed head**

Nurses' call at all patient points of service

Four 15 Amp UPS plugs

Four 15 Amp standby power plugs

Clinical hand-wash basin with hot and cold water, operated by elbow taps

Delivery room examination light – a single pole ceiling or wall-mounted lamp at 110 000 lux at 4 400°K)

The air ambient conditions in the delivery area should be identical to the conditions in an operating theatre

Entonox for maternity unit only

One oxygen point

Two vacuum points

One LP medical air point

#### **Considerations**

The decor and finishes for a birthing room should be in a domestic style

Ensure the safety of mother and child

Privacy should be ensured

Convenient storage for mothers' possessions

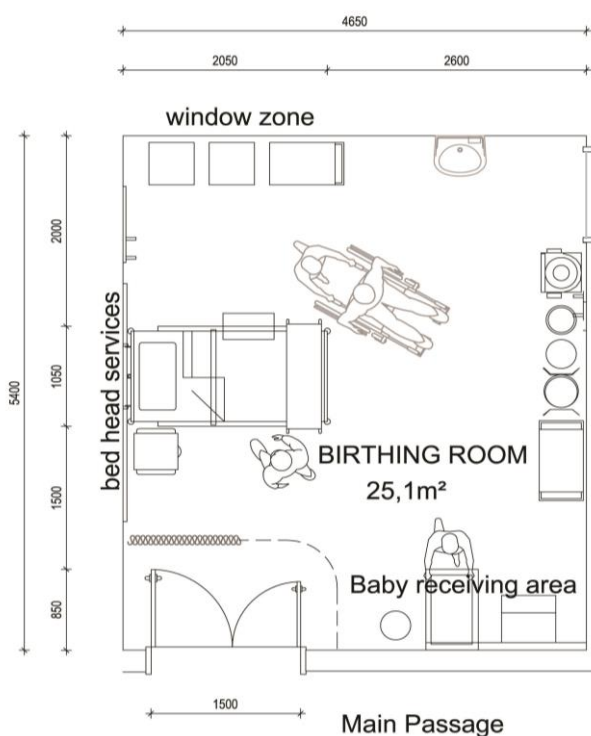
Lithotomy poles

Easy access to toilet and shower facilities

## Space provision

**Refer to the IUSS Generic Room Data for the functional space in a delivery room**

FIGURE 13: EXAMPLE OF SPACE REQUIREMENTS: DELIVERY ROOM



The midwife should have access from both sides and the foot of the bed.

Space should be provided for a partner or escort.

Allowance should be made for five staff members to attend to the patient around the bed.

The baby receiving area should be in the birthing room.

There must be space at the foot of the bed for the midwife or doctor to assist the patient delivering the baby.

There must be space for someone to walk behind the midwife attending at the foot of the bed.

Allowance should be made for all the appropriate equipment (see equipment schedule).

The minimum space is 4 200 mm width x 5 200 mm length (single space). The actual room area includes spaces for birthing, clinical hand-washing, storage and baby resuscitation.

Space should be available for the fetal monitor and a portable ultrasound machine.

PHOTOGRAPH 3: DELIVERY ROOM WITH BABY RESUSCITATION UNIT (COURTESY KHAYALITSHA HOSPITAL)



### 8.5. *Baby resuscitation room*

This is a room to resuscitate the baby away from the delivery room (but located within the delivery unit) immediately adjacent to delivery rooms.

Provide one newborn resuscitation bay for every 8 delivery rooms with a minimum of two resuscitation spaces per maternity unit

PHOTOGRAPH 4: RESUSCITATION STATION



### 8.6. *Support spaces in the delivery unit*

The following are standard spaces – refer to [IUSS:GNS Generic room requirements](#)

Clean utility (setting out of sterile packs and treatments)

Cleaners' room

Dirty utility (refuse and used linen)

Bay – resuscitation trolley

Bay – X-ray equipment and ultrasound

IT room

Store – medicine, clean linen, consumable and sterile stock, and equipment

Store – kit could be central or provided per unit (patients' clothes and belongings)



Store – clean linen

Store – consumables

Ward kitchen

Sluice room with small fridge for keeping of placentas before removal, small washing machine for rinsing of soiled linen

Store – equipment

### 8.7. Mobile equipment

PHOTOGRAPH 5: MOBILE EQUIPMENT

Emergency trolley



Incubator charging in passage



Provision to be made for an emergency trolley to be positioned centrally for ease of access from all delivery rooms

### 8.8. Administration areas: Delivery unit

The following are standard spaces – refer to the [IUSS:GNS Generic room requirements](#):

Office – unit manager

Nurses' station with clear view of all delivery rooms

Clinical administration space

### 8.9. Staff areas: Delivery unit

The following are standard spaces – refer to the [IUSS:GNS Generic room requirements](#):

Staff room with change facilities

Staff lockers can be provided in a passage off the main passage leading to the rest room

Toilet – staff (male and female separate)

Doctors' overnight accommodation

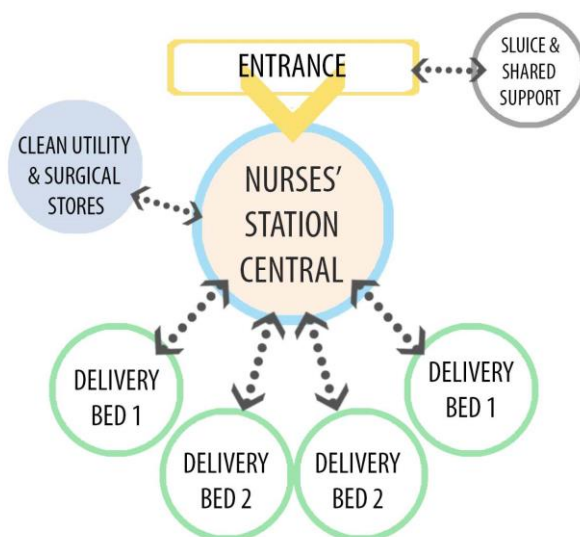
## 9. High-dependency unit

Patients who require high care are admitted to the unit. The unit should be in close proximity to the delivery unit and the neonatal unit. The unit will contain two, four or eight beds with a central clinical work station for doctors and nurses, as well as storage for medicines and surgical sundries. All service support areas are shared with the delivery rooms.

The configuration of each bed area is the same as for a delivery bed (22 m<sup>2</sup>), but with additional services: oxygen, suction and medical air in the bed head unit.



FIGURE 14: RELATIONSHIPS IN THE HIGH-DEPENDENCY UNIT



#### Activities

Observation and assessment of pregnant mothers with complications

Complicated labour and birth

Resuscitation of mother and baby

Observation and recovery of mothers

Training of midwifery, nursing and medical staff

#### Services at the delivery bed head

Nurses' call at all patient points of service

Eight 15 Amp UPS plugs

Four 15 Amp standby power plugs

Clinical hand-wash basin with hot and cold water, operated by elbow taps

Delivery room examination light – a single pole ceiling or wall-mounted lamp at 110 000 lux at 4 400 °K)

Air ambient conditions in the delivery area identical to the conditions in an operating theatre

Entonox for maternity unit only

Two oxygen points

Two vacuum points

One LP medical air point

#### Space provision

The midwife should have access from both sides and the foot of the bed.

Space should be provided for a partner or escort.

Allowance should be made for five staff members to attend to the patient around the bed.

Space should be provided at the foot of the bed for the midwife or doctor to assist the patient delivering the baby in the event that the mother is not moved to the delivery room in time.

Space should be provided for someone to walk behind the midwife attending at the foot of the bed.

Allowance should be made for all the appropriate equipment (see equipment schedule).

The minimum bed space is 4 200 mm width x 5 200 mm length (single space). The actual room area includes spaces for birthing, clinical hand-washing and storage.

## 10. Dedicated Obstetric Operating Theatre

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In the event of complications during labour that necessitate an emergency caesarian section, a woman will be moved from the delivery unit to a maternity theatre. Clinic or CHC patients requiring an emergency caesarian will be transported to the appropriate hospital. Elective caesarian cases will take place in the maternity theatre or in the main theatres of the hospital.

The operating theatre should comply with the requirements of a surgical theatre and should have space for receiving and resuscitating the baby.

The need for a caesarian section theatre is calculated with the following formula: one obstetric theatre should be provided for every eight delivery rooms. The required number of maternity beds is 20% of the entire hospital's beds.

A woman will be moved to a dedicated obstetric theatre if unanticipated problems arise or more serious interventions are required than can be offered in the birthing rooms. Arrangements must be in place for midwifery-led units (MLUs) to transfer women to a hospital with the appropriate facilities. Access routes to the theatres for emergency caesarian sections, both from within the unit and from outside, must be designed to ensure quick access and high levels of privacy for the mother.

Elective caesarian sections may also take place in these theatres or in the main theatres. Women usually go straight to theatre, and then to a single room after the procedure.

*(Refer to the [IUSS:GNS Facilities for surgical procedures](#).)*

PHOTOGRAPH 6: OBSTETRIC THEATRE

Theatre

Newborn resuscitation station in theatre



## 11. Postnatal ward

(Refer to the [IUSS:GNS Adult inpatient accommodation](#).)

Note: Day rooms are an essential component of both postnatal and antenatal wards.

### 11.1. Well-baby nursery

This is a nursery catering for newborn 'well babies' where the neonatal nursery is a component of the maternity wards. This is an integral part of the postnatal component of the ward. It needs to cater for well babies and allow for observations, procedures, phototherapy and bathing.

#### Activities

The well-baby nursery will provide facilities for the care of well babies away from their mothers' bed areas and for the following functions:

Observation

Procedures

Phototherapy

Bathing of babies using controlled temperature water

Changing, cleaning and drying of babies

Feeding of babies in comfortable chairs

Hand-washing facilities

Parent and staff education

Resuscitation, including oxygen, medical air and suction

Encouraging babies sleep in daytime, using partial blackout curtains

Storage of supplies such as nappies, towels, creams and powders

Waste and dirty linen disposal

Weighing of babies

Use of staff assistance call and emergency call

### Location

The well-baby nursery is to be located in maternity unit, adjacent to both the nurses' station and the waiting area, with a viewing window between the waiting area and well-baby nursery to display the newborns at specified times to visitors in the waiting area. The well-baby nursery must be located in such a way that it can be viewed from the nurses' station – nurses should be able to see directly into the well-baby nursery.

The well-baby nursery will be located with ready access to the maternity inpatient bedrooms in the postnatal unit.

### Space allocation

A minimum floor area of 1.5 m<sup>2</sup> should be allocated per basinet.

A minimum area of 35 m<sup>2</sup> should be allowed for the nursery.

Space must also be allocated for a resuscitation unit and a minimum of four bassinets.

### Services

Heated to an ambient temperature of around 26 °C

A baby bath with adjacent work surface

- The water temperature of baby baths should be controlled
- The ration of baths to cots is 1:10

Two sets of service points with oxygen, suction and four electrical outlets each

Resuscitation points, including oxygen, medical air and suction

Weighing facilities for babies

Staff assistance call and emergency call facilities

Hands-free wash basin with elbow action taps – one per four cots

TABLE 5: SERVICES - WELL-BABY NURSERY

Oxygen point	1 per 2 bassinets
Medical air	2 per bed
Suction	1 per 2 bassinets
Electrical point	1 per basinet
Lighting – ambient	Adjustable range: 10–600 lux
– procedural	2000 lux spot per ICU/HCU bed

**Requirements:** The Nursery will require the following

Strict access control

No traffic allowed through the nursery

Clear, glazed glass partitions for easy observation of the babies, with direct view from the nurses' station into the nursery

Heated to an ambient temperature of 26 °C

Space for a resuscitation unit

Isolation unit attached

An intercom in the waiting area for visitors to request that a specific baby be shown at the viewing window

Natural and artificial, dimmable lighting

An emergency call system

A dedicated area in or adjacent to the nursery to allow for the easy examination and changing of the baby, and storage of necessary linen and equipment

An area in the nursery that can be made available for stabilisation prior to transport by a transport team. This could be a small isolation cubicle with full services – oxygen, medical air, suction and plug points

A baby bath with adjacent work surface – one bath per ten cots

Space for feeding babies in comfortable chairs

Parent and staff education

Partial blackout curtains to create an environment conducive to sleep for babies

Storage of supplies such as nappies, towels, creams and powders

Waste and dirty linen disposal

Work surface to change babies' nappies, etc. – smooth, non-porous surface, easy to clean

Waste disposal bins

PHOTOGRAPH 7: INCUBATORS



Provision to be made in well baby nursery for incubators with wall services provided

## 11.2. Kangaroo mother care

Babies who are underweight and/or premature but who can be nursed by their mothers are managed in a Kangaroo mother care unit. Single or double rooms with en suite bathrooms, a small patient lounge and a small patient laundry should be provided.

### Unit where mother and child room together

Minimum of two beds

En suite ablutions

Day room/lounge

**Location**

Access from support area of nursery

Within close walking distance of the neonatal ward

**Bed accommodation**

Maximum of six patients per cubicle

Minimum of 7.5 m<sup>2</sup> per bed

Close to support area

Minimum of two beds

**Ablutions**

One bath/shower per six mothers

One toilet and hand-wash basin per six mothers

**Standard components – KMC**

[Refer to IUSS Generic Room Data Sheets](#)

Bath

Cleaner's room

Clean utility

Day room

Dirty utility (sluice)

Kitchen

Laundry area

Store – clean linen

Store – general

Shower – patient

Toilet – patient

Waste disposal

### **11.3. Bereavement room**

A woman who has lost a child should not be accommodated in a ward where there are new mothers and newborns. A bereavement room is required where she and her partner or family can wait prior to being transferred to a general ward until she is discharged from hospital.

This room should contain a bed, table, lounge chairs for four people, a counter with a cupboard below for a kettle, cutlery and crockery

It is important that this room have a calming ambience and that the decor is 'domestic'

The patient will receive counselling in this room and privacy is thus required

External views and daylight are essential

Access to the outside is recommended where possible

Two plug outlets are required above the countertop

En suite bathroom with shower and toilet

## 12. Management and administration

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The area manager's office should be central to the department. The unit manager's office and clinical administration space should be positioned near the entrance of the maternity unit for purposes of management, client liaison and supervision.

The list of rooms include the following:

Unit manager's office

Doctor's office

## 13. Staff areas

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### 13.1. Staff

Staff areas may be included in each maternity unit component or may be shared, and are determined in the operational narrative in the brief documentation. These include staff rooms, staff ablutions, lockers and overnight facilities for doctors. Depending on the size of the unit, these staff facilities may be shared. (Refer to IUSS Generic Room Data Sheets)

### 13.2. Teaching and training

Hospitals are associated with the teaching of health professionals, especially the regional and tertiary facilities. The operational narrative for the project should provide the specific teaching requirements.

## 14. Support services

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Each component of the maternity unit has support services, which include storage, clean and dirty utilities, sluice rooms, etc. However, some of these areas may be shared. This will be specified in the brief documentation, as it is dependent on the size of the facility and the level of service to be provided.

There are a number of considerations to be noted:

The collection of specimens for the laboratory

Mobile X-ray equipment – provision of space around patient beds and also space for the equipment to stand (a bay off the passage)

Central stores – delivery of disposables, stationery, cleaning materials, and new equipment

Pharmacy – delivery of medicine and drugs, delivery of prescriptions and return of empty recyclable containers, sending of prescriptions to the pharmacy

CSSD – delivery of sterile packs, return of opened unused packs and used recyclable equipment

Linen store – delivery of clean linen, sluicing of linen and return of dirty linen to the laundry

Central cleaning depot – delivery and storage of cleaning equipment

Refuse – removal of general waste (domestic), pathological waste for incineration, recyclable waste, sharps

General hospital policies relevant to the various departments, such as linen supply and waste management, are to be applied.

## 15. Maternity outpatients

### 15.1. Size of the antenatal and postnatal clinics

Determining the size of the antenatal and postnatal clinic suites will depend on the expected number of patients per day in relation to the hours the clinic is open for consultation, the number of clinic sessions proposed, the number of doctors and midwives available, and the number of educational classes, if any. The category of hospital will have an influence on the size of the antenatal clinic.

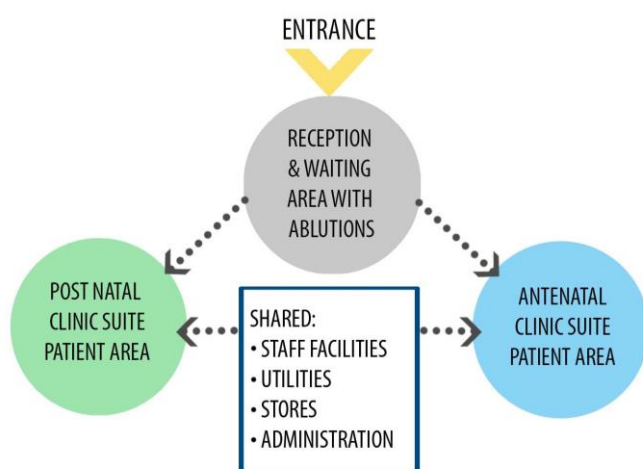
### 15.2. Location

The antenatal and postnatal outpatient clinics should preferably be in a separate suite independent of the general outpatients. It is important that the clinic has easy access to the delivery unit and the ultrasound unit.

### 15.3. Relationships

Depending on the size of the antenatal and postnatal clinics, the clinics may occupy the same clinic suite but take place on different days or at different times. This reduces the amount of space and makes it more flexible.

FIGURE 15: RELATIONSHIP BETWEEN ANTENATAL AND POSTNATAL CLINICS



Larger outpatient facilities need to split the antenatal and postnatal clinics into separate suites. However, these suites can utilise the same entrance, share reception and main waiting areas, as well



as staff facilities and support services (utilities and storage). A shared office for the unit manager manages both. Sub-waiting areas in each of the clinic suites should be provided.

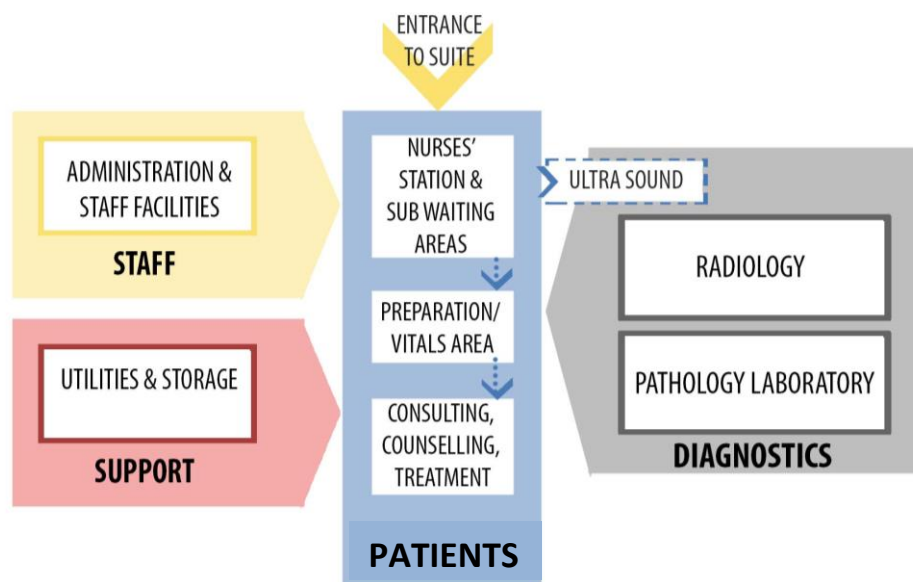
#### 15.4. Antenatal and postnatal clinic suites

Both antenatal and postnatal suites are arranged into functional areas, as indicated in the diagram below:

The size of each suite is determined by the number of patient/client contact rooms that can be effectively managed by a team of practitioners. Each suite should be large enough to maximise work efficiency, but not so large that it becomes impersonal or difficult to navigate.

The patient areas are clustered together for efficient flow. Administration and staff areas are separate from, but adjacent to the patient areas. Support service areas must be immediately adjacent to the patient area, close enough to enable an efficient staff flow within the suite. Where appropriate, support services and staff facilities can be shared between antenatal and postnatal suites.

FIGURE 16: RELATIONSHIPS WITHIN EACH CLINIC SUITE



The clinic suites involve one or more of the following activities:

Counselling

Consultation

Examination

Diagnosis

Treatment

Most activities can be delivered from the following patient/client contact spaces:

Preparation/vitals room

Consulting/examination room

Treatment room

## **15.5. Entrance area for the antenatal and postnatal clinics**

The entrance to the maternity outpatients can be shared by the antenatal and postnatal clinics and, in smaller units, clinic space can be shared between antenatal and postnatal clinics, taking place on alternate days.

### Reception and records

The reception should be visible from the entrance to the facility. This is where mothers, their supporters, visitors and other personnel can be received, files collected and records stored. Storage facilities need to be provided adjacent to the admissions desk to keep records and secure the records against loss or damage. Easy access for staff and confidentiality are key considerations.

### Waiting area

*(Refer to item 10.4.)*

The main waiting area for the maternity outpatient clinics should be welcoming and have capacity to accommodate the additional people that may accompany the mother, including children.

The atmosphere should be welcoming with neutral colours and artwork. The seating in the waiting area must be positioned such that occupants can look outside.

A children's play area adjacent to the waiting area is essential.

Ablutions off the waiting area should include facilities for males and females, with hand-wash basins as well as a baby changing area. A small, private room for breastfeeding off the waiting area should be provided.

Requirements for waiting spaces and public toilets (except independent wheelchair toilets) may be based on the number of patient/client contact spaces in the hospital, primary or community care zone. Independent wheelchair toilets should be quantified according to the size of the building. Requirements for reception spaces can be based on the size of the waiting area.

### Baby changing area

A baby changing area is required off the main waiting area, and on every floor where there are services for the public in the hospital. This must be large enough to accommodate a countertop to change the baby, a waste bin, a hand-wash basin (with elbow action taps) and an area to park a pram. The waste disposal of soiled nappies must comply with hospital policy and waste disposal regulations. Consideration must be given to the fact that parents often are accompanied by more than one child.

### Breastfeeding area

A private area is required for women who need to breastfeed their babies while waiting at the clinic. This area should be off the main waiting area and should contain comfortable chairs, a hand-wash basin and side tables. Allowance should be made for a pram.

## **15.6. Patient areas**

### ***Patient vitals/preparation room***

This area is where the patients are seen before they are attended to by the doctor in the consulting rooms. The nurses assess patients (mother and child), record the patients' weight, check vital signs (blood pressure and temperature), record essential patient data and collect specimens.

Space: Minimum floor space of 12 m<sup>2</sup>

**Services**

Electrical points only

Clinical hand-wash basin with elbow taps

**Location**

Close to the waiting area and before the consulting rooms, so that patients are prepared prior to being referred to the consulting doctor

**Equipment**

Scales – infant and adult

Stadiometer and height measure

Examination couch and chairs

Electronic infant scale

Bathroom scale

Sitting scale

Stadiometer

Tape measure

Stethoscope

Glucometer

Haemoglobinometer

Torch

Calculator

Spotlight

Fan

Portable oxygen

Portable suction

**Staff**

Professional midwife

**Considerations**

In the postnatal clinic, a worktop area for the baby scale and to dress the baby is required.

***Phlebotomy room***

The room is set up to take blood samples from patients.

**Location**

This room is adjacent to the consulting rooms.

**Services**

Clinical hand-wash basin with elbow taps

Work surface and storage space

Two electrical points at the desk

**Equipment**

Desk plus three chairs

Table

Worktop

Covered injection trolley

Refrigerator

Noticeboard and clock

Bin for waste

**Considerations**

A non-threatening environment is essential.

**Staff**

Professional nurse

***Consulting rooms***

Refer to the IUSS:GNS Generic room requirements.

The consulting rooms may provide for interviewing, consulting with, and examining the patient.  
Space: Floor space of 12–14 m<sup>2</sup>.

**Location**

The consulting rooms are situated behind the preparation/vitals room.

**Services**

Clinical hand-wash basin with elbow taps

Four power outlets

X-ray viewing panel

Examination lamp

Telephone with link to the maternity unit

Emergency call

**Equipment**

Desk plus three chairs

Examination couch

Wall-mounted diagnostic set and patella hammer

Noticeboard and clock

Bin for waste

Patella hammer

Peak flow meter

Growth charts

#### **Staff**

Professional nurse and doctor/specialist

#### **Special considerations**

For privacy, and to help minimise the risk of cross-infection, all rooms should have full-height walls and doors. The use of curtained cubicles is unacceptable.

Access should be via doors the width of a door and a half to allow space for trolleys, prams and large equipment. Door swings should not impede movement or activities in the rooms, as 360° access to the examination couch/trolley is essential to allow patients to be attended to from both sides (Department of Health, UK, 2004).

There should also be sufficient space to accommodate a minimum of one carer, the patient and equipment such as a buggy, pushchair or wheelchair.

Worktop space should have the capacity to accommodate a computer workstation for recording clinical information and viewing digital images, as well as writing notes/reports.

An adjustable-height office chair should be provided for the doctor, as well as two chairs for the patient and parent/carer.

Natural light and a view to the outside is recommended.

The consulting rooms must provide suitable space for the clinician to talk to the patient (sometimes with a family member, caregiver and/or a translator), to take notes, and to conduct a general examination (sitting and supine). There must be good lighting and appropriate space around the examination couch for the clinician to properly examine any patient for any condition. The couch needs to be accessible on the right-hand side and at the foot of the couch. Lithotomy examinations at the foot of the examination bed will require a good light.

#### **Treatment room**

Refer to the IUSS:GNS Generic room requirements.

The treatment room must provide suitable accommodation for clinical procedures such as:

Dressings

Injections

Basic resuscitation and management of emergencies (including basic emergency obstetric care, respiratory/cardiac emergencies, diabetic emergencies, allergic emergencies)

Insertion of intrauterine contraceptive devices (IUCDs)

PAP smears

#### **Location**

This room must be accessible from the reception area and needs to be close to the sluice room.

#### **Space**

Each room should have a floor space of 16–20 m<sup>2</sup> and a minimum wall length of 4.3 m.

There must be screening facilities to separate examination couches within rooms where there is more than one examination couch.

### **Services**

Clinical hand-wash basin with elbow taps

Work surface and storage space

Four electrical points per cubicle

One oxygen and suction point cubicle

Gabler rail for each cubicle

Examination light: 60 000 lux

Curtains around each cubicle

X-ray viewing box

### **Equipment**

Full resuscitation trolley

Clock with second hand

Medicine cupboard

Fridge

Hb meter, glucometer, peak flow meter

General surgical sundries

Examination couch and chair/bench

Non-invasive blood pressure (NIBP) and sat monitor

Infusion pump and stand

### **Staff**

Professional nurse and paediatrician

### **Support spaces**

Refer to the [IUSS:GNS Generic room requirements](#).

### **Support service rooms**

Records

Specimen collection toilet and testing area

Sluice room

Dirty utility

Clean linen store

Surgical store  
Equipment store  
Medical store

### Staff areas

Refer to the **IUSS:GNS Generic room requirements**.

#### Staff areas

Staff room  
Staff ablutions  
Staff locker  
Nurses' station  
Teaching area  
Administration offices

## 15.7. Ultrasound suite

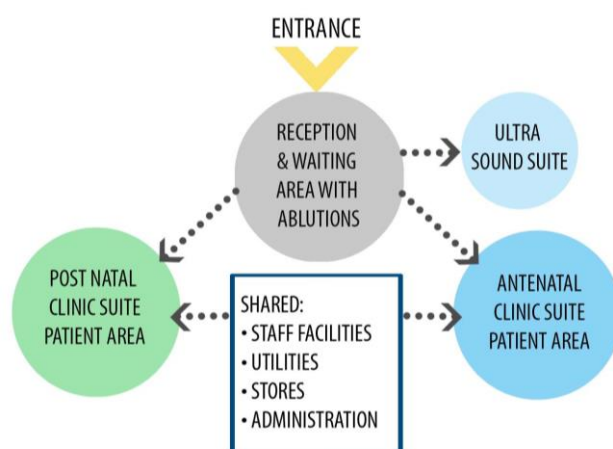
Refer to the **IUSS:GNS Generic room requirements**.

### Location and relationships

Depending on the size of the facility, the category of hospital and whether or not the maternity care services are in a separate facility completely, the ultrasound suite may be either located at maternity outpatients or it may be in the diagnostic radiology unit.

Where a dedicated ultrasound suite is provided in a maternity unit, it should be located in the antenatal clinic close to waiting and reception, with easy access to records. A toilet should be provided immediately adjacent to ultrasound rooms. There should also be easy access from the pregnancy assessment facilities.

FIGURE 17: RELATIONSHIP OF ULTRASOUND SUITE IN MATERNITY UNIT



### *Ultrasound room*

This is the same as a standard treatment room with lighting suitable (an examination light) for procedures that may be performed in the ultrasound room. Screen curtains are essential around the bed to ensure patient privacy when dressing and undressing. Space must allow for equipment around the bed. A toilet needs to be provided adjacent to the ultrasound room.

## **16. Lodges**

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### *16.1. Mothers' lodge unit*

This is a unit where the mother is accommodated while her child is being cared for as an inpatient in the hospital:

Minimum of two beds

En suite ablutions

Day room/lounge

#### **Location**

Access to the neonatal and paediatric wards

Within close walking distance of the neonatal ward

#### **Bed accommodation**

Maximum of six patients per cubicle

Minimum of 7.5 m<sup>2</sup> per bed

Close to support area

Minimum of two beds

#### **Ablutions**

One bath/shower per six mothers

One toilet and hand-wash basin per six mothers

#### **Standard components: KMC**

Bath

Cleaner's room

Clean utility

Day room

Dirty utility (sluice)

Kitchen

Laundry area

Store – clean linen

Store – general



Shower – patient

Toilet – patient

Waste disposal

Mothers' lodge

### **16.2. Pregnant mothers' lodge**

The pregnant mothers' lodge is the same as the mothers' lodge. However, this unit must be close to the antenatal ward, should complications arise and the mother is required to be admitted. The two lodges should be separate from each other.

### **16.3. Standard rooms**

Standard rooms refer to rooms/spaces for which room data sheets, room layout sheets (drawings) and textual descriptions have been developed and are available in a separate section of these guidelines under: **GNS Generic room requirements**.

## **17. Specific engineering considerations**

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Ventilation

Fire detection and alarm systems

Resilience of electrical supplies

Lighting systems

Internal drainage

Nurse call system

Security system

## PART C - LIST OF ROOMS

TABLE 5: LIST OF ROOMS

<b>ANTENATAL WARD: List of rooms</b>		
Code	Room	Standard room
	<b>Patient area</b>	
	<b>Assisted bath</b>	<b>Yes</b>
	<b>2-bed unit with en suite bathroom</b>	<b>Yes</b>
	<b>4-bed unit with en suite bathroom</b>	<b>Yes</b>
	<b>1-bed room with en suite bathroom</b>	<b>Yes</b>
	<b>Patient toilet</b>	<b>Yes</b>
	<b>Day room</b>	<b>Yes</b>
<b>(May be shared)</b>	<b>Staff area</b>	
	<b>Duty room</b>	<b>Yes</b>
	<b>Nurses' station</b>	<b>Yes</b>
	<b>Staff toilet</b>	<b>Yes</b>
	<b>Staff room</b>	<b>Yes</b>
<b>(May be shared)</b>	<b>Support areas</b>	
	<b>Bay – hand-wash</b>	<b>Yes</b>
	<b>Bay – mobile equipment</b>	<b>Yes</b>
	<b>Bay – resuscitation trolley</b>	<b>Yes</b>
	<b>Cleaner's room</b>	<b>Yes</b>
	<b>Clean utility</b>	<b>Yes</b>
	<b>Dirty utility</b>	<b>Yes</b>
	<b>IT room (if required)</b>	<b>Yes</b>
	<b>Sluice</b>	<b>Yes</b>
	<b>Store – clean linen</b>	<b>Yes</b>
	<b>Store – equipment</b>	<b>Yes</b>
	<b>Store – general</b>	<b>Yes</b>
	<b>Store – patient kit</b>	<b>Yes</b>
	<b>Store – surgical</b>	<b>Yes</b>
	<b>Toilet – disabled/public</b>	<b>Yes</b>
	<b>Treatment room</b>	<b>Yes</b>
	<b>Visitors' waiting area</b>	<b>Yes</b>
	<b>Ward kitchen</b>	<b>Yes</b>

<b>POSTNATAL WARD – List of rooms</b>		
<b>Code</b>	<b>ROOM</b>	<b>Standard Room</b>
	<b>Patient area</b>	
	<b>Assisted bath</b>	<b>Yes</b>
	<b>2-bed unit with en suite bathroom</b>	<b>Yes</b>
	<b>4-bed unit with en suite bathroom</b>	<b>Yes</b>
	<b>1-bed room with en suite bathroom</b>	<b>Yes</b>
	<b>Patient toilet</b>	<b>Yes</b>
	<b>Day room</b>	<b>Yes</b>
	<b>Well-baby nursery</b>	<b>No</b>
	<b>Staff area</b>	
	<b>Duty room</b>	<b>Yes</b>
	<b>Nurses' station</b>	<b>Yes</b>
	<b>Staff toilet</b>	<b>Yes</b>
	<b>Staff room</b>	<b>Yes</b>
	<b>Support areas</b>	
	<b>Bay – hand-wash</b>	<b>Yes</b>
	<b>Bay – mobile equipment</b>	<b>Yes</b>
	<b>Bay – resuscitation trolley</b>	<b>Yes</b>
	<b>Cleaner's room</b>	<b>Yes</b>
	<b>Clean utility</b>	<b>Yes</b>
	<b>Dirty utility</b>	<b>Yes</b>
	<b>IT room (if required)</b>	<b>Yes</b>
	<b>Sluice</b>	<b>Yes</b>
	<b>Store – clean linen</b>	<b>Yes</b>
	<b>Store – equipment</b>	<b>Yes</b>
	<b>Store – general</b>	<b>Yes</b>
	<b>Store – patient kit</b>	<b>Yes</b>
	<b>Store – surgical</b>	<b>Yes</b>
	<b>Toilet – disabled/public</b>	<b>Yes</b>
	<b>Treatment room</b>	<b>Yes</b>
	<b>Visitors' waiting area</b>	<b>Yes</b>
	<b>Ward kitchen</b>	<b>Yes</b>

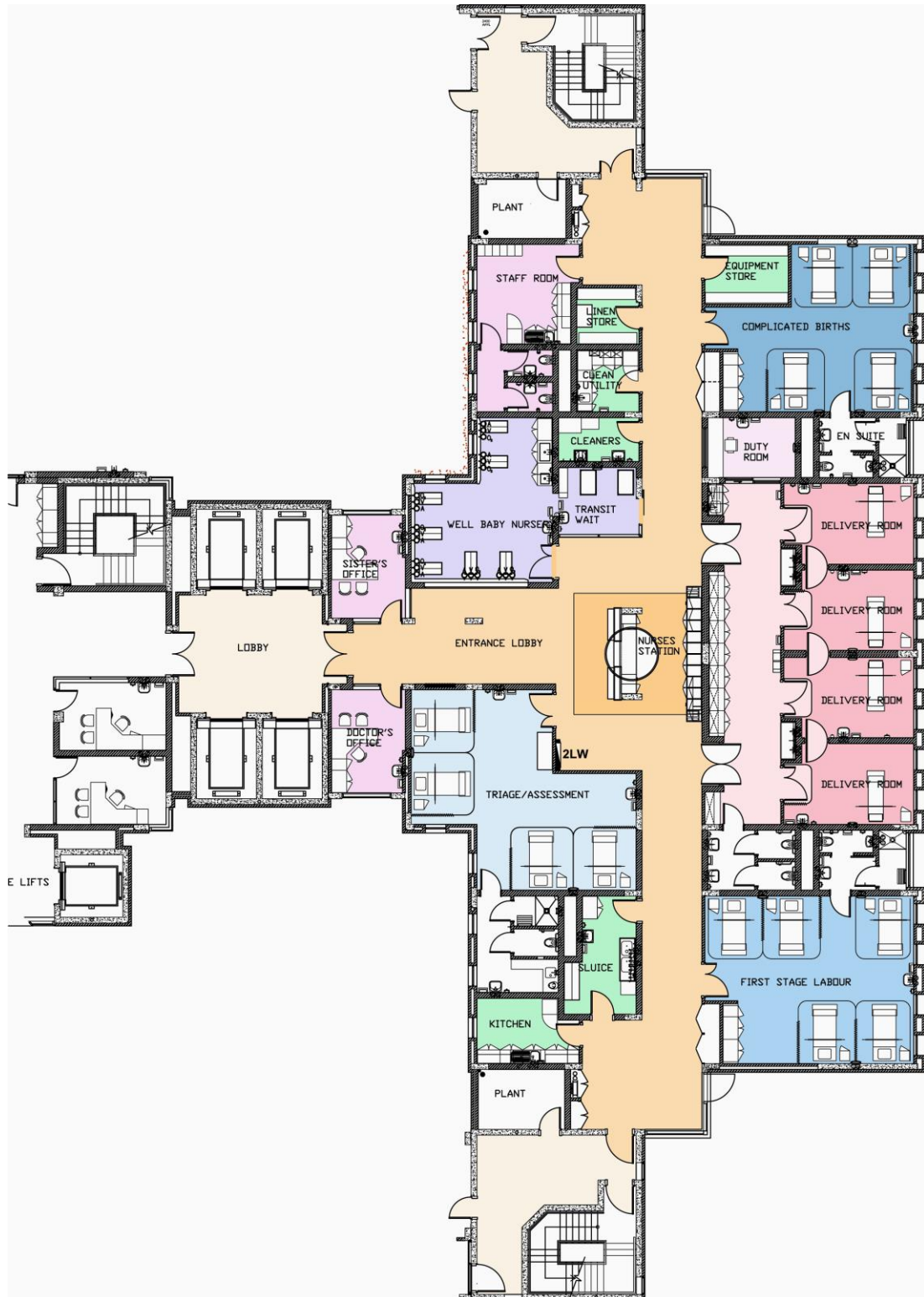
OUTPATIENT SERVICES – List of rooms		
Shared facilities		
Details	Room	Standard room
Public areas	Entrance lobby	Yes
(May be shared)	Main waiting area	Yes
	Help desk	Yes
	Waiting areas	Yes
	Play areas	Yes
	Ablutions	
	Outpatient counter and records Reception/registration area	
Staff areas	Doctor's office	Yes
(May be shared)	Duty room	Yes
	Meeting – medium	Yes
	Nurses' station	Yes
	Sister's office	Yes
	Staff toilet	Yes
	Staff room	Yes
Service support	Cleaner's room	Yes
(May be shared)	Dirty utility	Yes
	Sluice	Yes
	Store – records	Yes
	Store – clean linen	Yes
	Store – equipment	Yes
	Store – surgical	Yes
Antenatal patient area		
	Preparation/vitals rooms with sub-waiting	No
	Consulting room	Yes
	Counselling room	Yes
	Nurses' station	Yes
	Treatment room	Yes
	Toilet – patient	Yes
	Sub-waiting area	Yes
	Ultrasound room	No
	Specimen collection room	Yes
Postnatal clinic		
	Consulting room	Yes
	Counselling room	Yes
	Nurses' station	Yes
	Treatment room	Yes
	Toilet – patient	Yes
	Sub-waiting area	Yes

<b>DELIVERY UNIT – List of rooms</b>		
	<b>Patient area</b>	
	<b>Room</b>	
	Entrance	Yes
	Reception area	Yes
	Partners' waiting area	No
	Consulting/assessment	No
	Birthing room	No
	Toilets and showers	No
	Bay – charge incubators	No
	Bay – resuscitation trolley	Yes
	<b>Staff</b>	
	Doctor's office	Yes
	Unit manager's office	Yes
	Nurses' station	Yes
	Shower – staff	Yes
	Staff toilet	Yes
	Staff room	Yes
	Staff changing room	Yes
	Doctor's overnight room with en suite bathroom	Yes
	<b>Service support</b>	
	Clean utility	Yes
	Cleaner's room	Yes
	Dirty utility	Yes
	Sluice	Yes
	Store – clean linen	Yes
	Store – surgical	Yes
	Store – equipment	Yes
	Store – general	Yes
<b>HIGH-DEPENDENCY UNIT – List of rooms</b>		
<i>(Staff rooms and service support areas to be shared with delivery unit)</i>		
	Multi-bed high-care unit	Yes
	Patient toilet	Yes
	Nurses' station	Yes
	Bay – mobile equipment	Yes
	Bay – resuscitation trolley	Yes
	Bay – handwashing	Yes
	Clean utility	Yes
	Store – surgical packs	Yes

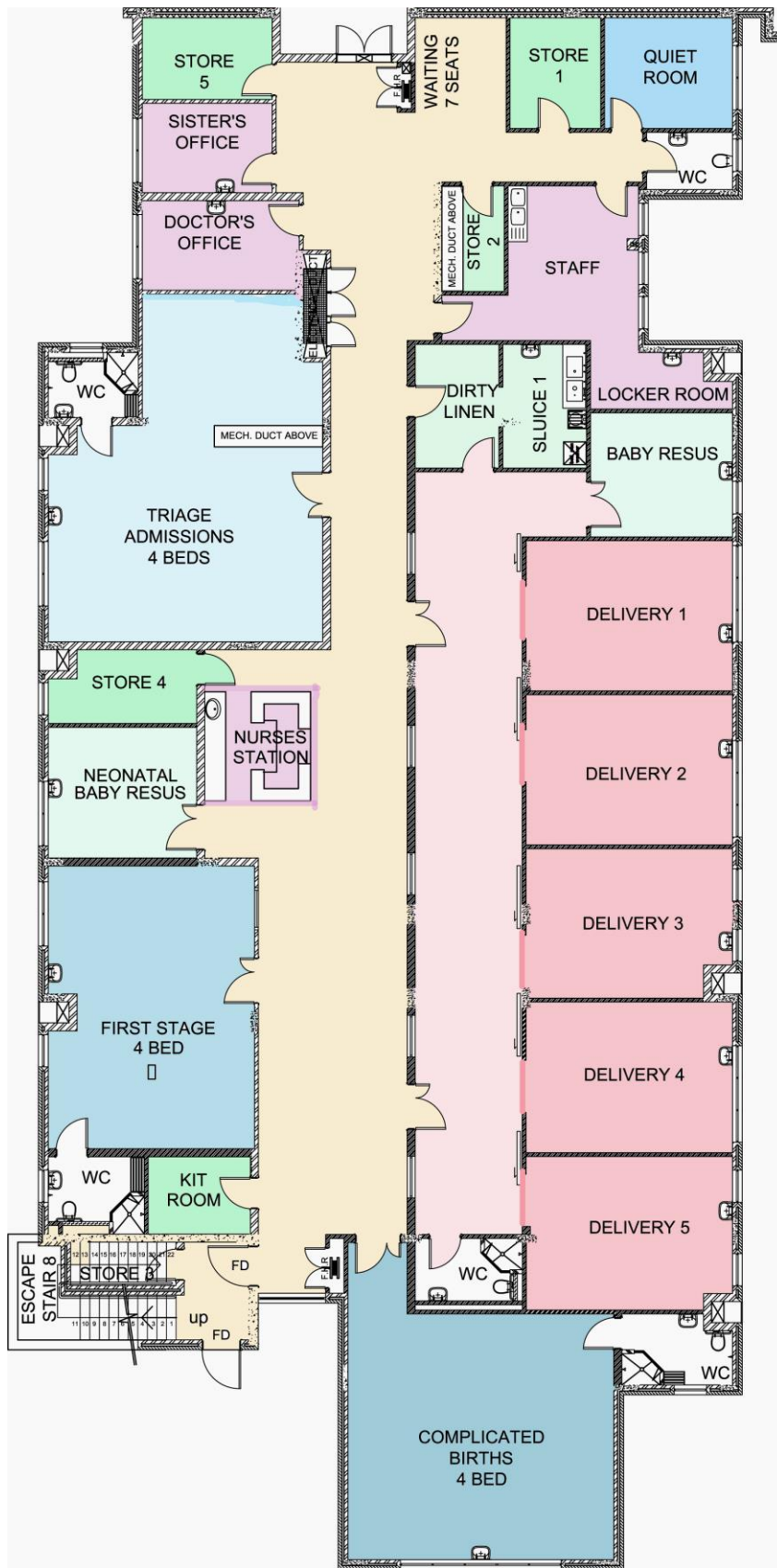
ADMINISTRATION AND STAFF TRAINING AREAS (where applicable)		
	Room	Standard Room
	Entrance/reception	Yes
	Meeting room – large	Yes
	Meeting room – small	Yes
	Office – clerk	Yes
	Office – head of department	Yes
	Office – doctors	Yes
	Toilet – disabled/public	Yes
	Staff room with kitchenette	Yes
	Store – stationery	Yes
	Student resting area	Yes
OBSTETRIC THEATRE AREA		
	Room	Standard room
	Nurses' station	
	Operation room – large	Yes
	Bay – hand-washing	Yes
	Bay – resuscitation trolley	Yes
	Scrub area	Yes
	Patient bay – holding	Yes
	Patient bay – recovery	Yes
	Set up	Yes
	Store – general	Yes
	Store – surgical	Yes

## PART D - CASE STUDIES

DRAWING 1: COURTESY MITCHELLS PLAIN HOSPITAL: DELIVERY UNIT



DRAWING 2: COURTESY KHAYALITSHA HOSPITAL: DELIVERY UNIT





# List of acronyms and abbreviations

BST	Building Science and Technology
CHC	Community health centre
CSIR	Council for Scientific and Industrial Research
CSSD	Central sterile services department
CTG	Cardiotocograph
EOC	Essential obstetric care
FSDOH	Free State Department of Health
GDOH	Gauteng department of Health
GNS	General hospital support
HCU	High-care unit
HVAC	Heating, ventilation and air-conditioning
ICU	Intensive care unit
IT	Information technology
IUCD	Intrauterine contraceptive device
IUSS	Infrastructure Unit Systems Support
KHC	Kimberley Hospital Complex
KMC	Kangaroo mother care
KZN-DOH	KwaZulu-Natal Department of Health
LP	Low pressure
MLU	Midwifery-led unit
MOU	Midwife obstetric unit
NCDOH	Northern Cape Department of Health
NDoH	National Department of Health (South Africa)
NSW	New South Wales
NWDOH	North West Department of Health
O&G	Obstetrics and gynaecology
OHS	Occupational health and safety
PMTCT	Prevention of Mother-to-child Transmission
UFS	University of the Free State
UP	University of Pretoria
WC	Water closet (flush toilet)

Any person providing health services in terms of any law, including in terms of the following:

- Allied Health Professions Act, 1982 (Act No 63 of 1982)
- Health Professions Act, 1974 (Act No 56 of 1974)
- Nursing Act, 1978 (Act No 53 of 1974)

# Team :

Pharmacy Act, 1974 (Act No 53 of 1974)  
Dental Technicians Act, 1978 (Act No 19 of 1979)

## INFRASTRUCTURE UNIT SUPPORT SYSTEMS (IUSS) PROJECT: NORMS AND STANDARDS FOCUS AREA 1: OBSTETRICS AND GYNAECOLOGY 8-9 NOVEMBER 2011

Name	Company and profession	Province
Dr Eddie Mhlanga	NDoH	Gauteng
Dr MG Schoon	Specialist Free State DoH/UFS	Free State
Dr Jan van Soest	Specialist HOU KHC	Northern Cape
Dr Thato Kgasane	Registrar O&G Free State DoH	Free State
Ms Ronel Faro	PAWC Midwife	Western Cape
Dr VD Maringa	Medical Officer O&G Dept, Robert Ferreira Hospital	Mpumalanga
Dr Shisana Baloyi	Specialist O&G UP Gauteng DoH Kalafong	Gauteng
Ms Liesl Dietrich	Medical Officer Mowbray Maternity Hospital	Western Cape
Ms Winnie Motlolometsi	Specialist Midwife Free State DoH	Free State
Ms Heloise Urry	Graceland Architects	Gauteng
Mr Matt Audinwood	Az Architects	Gauteng
Mr Geoff Abbott	CSIR, Built Environment, BST	Gauteng
Ms Peta De Jager	CSIR, Built Environment, BST	Gauteng
Ms Lorato Motsatsi	CSIR, Built Environment, BST	Gauteng
Ms Awaatief Railoun	NDoH	Gauteng
Mr Richard Hussey	NDoH	Gauteng
Mr Hennie Cloete	NDoH	Gauteng
Ms Magda Coetzer	NDoH	Gauteng
Ms Sandy Pillans	Western Cape DoH	Western Cape
Mr Martin Schulenburg	DTPW: Health Western Cape	Western Cape
Mr Lesetja Mabone	Northern Cape DoH	Northern Cape
Ms Edwina Fleming	KwaZulu-Natal -DoH	KwaZulu-Natal
Ms Ntebaleng Matlapeng	North West DoH	North West

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