



**Preventive Maternal and
Child Health
(Practical)**

PGDMCH-103

DIRECTORATE OF DISTANCE EDUCATION

SWAMI VIVEKANAND

SUBHARTI UNIVERSITY

Meerut (National Capital Region Delhi)



CONTENTS

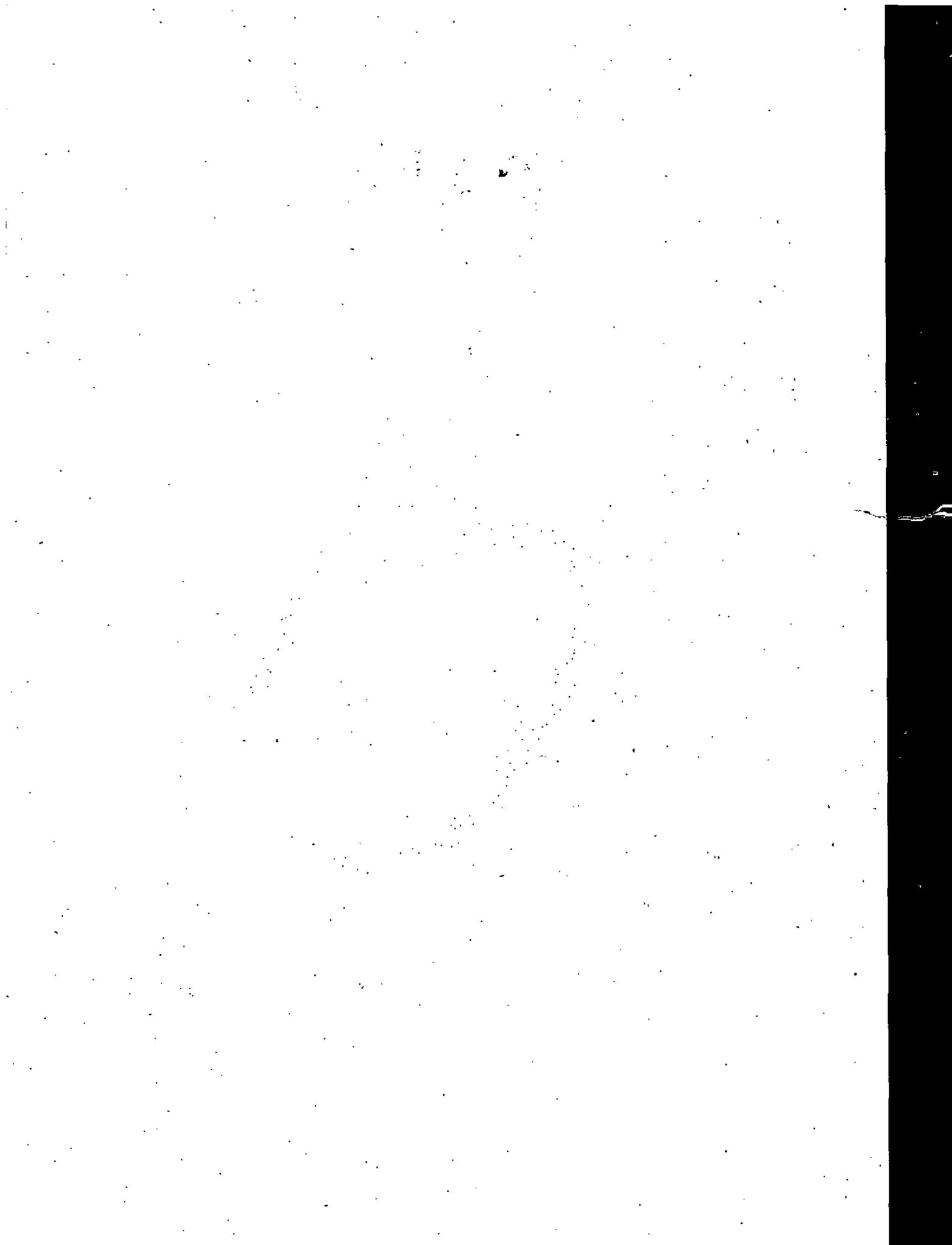
Chapter Name

Page No.

1. PREVENTIVE MATERNAL AND CHILD HEALTH

1-220

1. Assessment of Maternal and Child Health
2. Vaccination
3. Organising an Immunisation Camp
4. Ante-Natal Care
5. Assessment of Ante-Natal Mother
6. Advices on Ante-Natal Care
7. Growth and Development Monitoring
8. Maintenance and Promotion of Health of Mothers and Children
9. Monitoring MCH Related Schemes and Programmes
10. Planning Maternal and Child Health Activities
11. Organising a Health Education Program on Family Planning
12. Planned Health Education



1

Preventive Maternal and Child Health

STRUCTURE

1. Assessment of Maternal and Child Health
2. Vaccination
3. Organising an Immunisation Camp
4. Ante-Natal Care
5. Assessment of Ante-Natal Mother
6. Advices on Ante-Natal Care
7. Growth and Development Monitoring
8. Maintenance and Promotion of Health of Mothers and Children
9. Monitoring MCH Related Schemes and Programmes
10. Planning Maternal and Child Health Activities
11. Organising a Health Education Program on Family Planning
12. Planned Health Education

OBJECTIVES

- ❖ With the help of the above description, look for the problems of Mrs. Amena and make an antenatal care plan for her.
- ❖ Assessment of Ante-Natal. Mother Planned Health Education on Ante-Natal Care, Advices
- ❖ With the help of the above exercise, make an assessment of maternal health and fetal well-being and make plan for her antenatal visit and investigations.
- ❖ According to the above description and patient's problem, try to plan antenatal care and health education for her.
- ❖ To know about various type of human right as: fundamental human rights and controversial human rights

- ❖ Assessment of Ante-Natal. Mother Planned Health Education on Ante-Natal Care, Advices
- ❖ With the above description of the patient list the advices to be given to this mother and her husband.
- ❖ Write the general advice to be given to this mother about further contraception. Organize a health education program.
- ❖ What family planning. Describe the importance of family planning. Classify family planning method.
- ❖ Classify family planning method. Describe advantages and disadvantages of different family planning methods.
- ❖ Measure height, weight and head circumference of a child in front of tutor and give your comment on this a measurement following a standard chart.
- ❖ Age and weight of 5 children are 1 year, 1.5 years, 2 years, 2.3 years 2.5 years and 7 kg, 7.5 kg 8 kg, 16 kg respectively. Write down your comment about the growth of these children following a standard growth chart.
- ❖ As a nurse, what would be your contribution for the maintenance and promotion of health of a mother and child?

1. ASSESSMENT OF METERNAL AND CHILD HEALTH

TOPICS:

Assessment of meternal and child health.

or

Improving measurement of the quality of maternal, newborn and child care in health facilities.

INTRODUCTION:

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill-health and even death.

Every year, 289 000 women die due to complications in pregnancy and childbirth, and 6.6 million children below 5 years of age die of complications in the newborn period and of common childhood diseases. Many of these deaths could be prevented by providing optimal care at health facilities. Although progress has been made in increasing the coverage of several key reproductive, maternal, newborn and child health interventions over the past two decades, there has been limited progress in improving maternal and paediatric outcomes because of a major gap between coverage and the quality of care provided in health facilities. Therefore, improving the quality of facility-based health care services and

making quality an integral component of scaling up interventions to improve health outcomes of mothers, newborns and children is of utmost importance.

The well-being of mothers, infants, and children determines the health of the next generation and can help predict future public health challenges for families, communities, and the medical care system. Moreover, healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential.

AIMS

The Program for Maternal and Child Healthcare focuses on studies that seek to improve the quality and safety, equity, effectiveness, and outcomes of healthcare for women and children. The focus of the health assessment is on:

- Pregnant Women, Mothers and Infants
- Children and Adolescents
- Children and Youth with Special Health Care Needs

OBJECTIVES

The five objectives of the global consultation were :

- to review assessment tools, methods and processes for measuring the quality of care in health facilities;
- to share global and regional experience in improving the quality of care for mothers, newborns and children in health facilities;
- to review and agree on a core and a supplementary set of indicators for global monitoring and reporting on the quality of care for mothers, newborns and children in health facilities;
- to agree on a framework for reporting on the quality of care for maternal, newborn and child health; and
- to discuss opportunities and future collaboration in improving the quality of maternal, newborn and child care.

MATERIALS AND METHODS:

A Working Group was convened to review information from the published literature and expert opinion. Selection of potential indicators was guided by the following goals:

1. To identify key areas for routine aggregate monitoring;
2. To include perspectives of relevant stakeholders in maternal health care services;
3. To include measures that are comprehensive and reflect a balance between maternal and fetal interests; and

4. To develop measures that would be valid, generalizable, mutable, and feasible.

HOW TO ACCESS A MATERNAL AND CHILD HEALTH SERVICE

After you have given birth to your baby, the hospital will contact your local Maternal and Child Health Service. A MCHN will call you a few days after you get home and arrange to visit you at home. You can contact them before this time if you have any concerns.

If you have not had contact with your local MCHN, e.g. if you have moved, or your baby has been in hospital for a significant time, contact your local council for details of the nearest Maternal and Child Health Service. Call them to make an appointment and let them know what it is for (e.g. development check, health concerns).

If you have your child's yellow or blue book (Child Health Record) that you were given when your baby was born, take it to each appointment so that your MCHN can record relevant information about your child's health and development.

WHEN DO YOU NEED TO VISIT YOUR MCHN?

There are certain times of development that are known as key ages and stages, and visits to your MCHN are scheduled to correspond with these stages. These key visits are outlined in the Child Health Record (yellow or blue book) and your MCHN should fill in the book at these visits.

At these visits the MCHN will discuss:

- The health and development of your child.
- Physical and emotional effects on the family.
- Your own health and wellbeing.
- Any concerns you may have.

You can call your MCHN at other times for advice or make an appointment to visit them if necessary.

CONCLUSIONS:

While there are various tools available to MCH practitioners for capacity assessment and performance measurement, knowing how the tools relate to each other, and their defining characteristics, should lead to more effective and productive use.

2. VACCINATION

TOPICS:

Vaccination of Child

INTRODUCTION:

When germs enter the body, the immune system recognizes them as foreign substances (antigens). The immune system produces the right antibodies to fight the antigens. Vaccination is the best way to protect your child against many dangerous diseases. Vaccines contain weakened versions of a virus or versions that look like a virus (called antigens). This means the antigens cannot produce the signs or symptoms of the disease, but they do stimulate the immune system to create antibodies. These antibodies help protect you if you are exposed to the virus in the future. Vaccines not only help keep your child healthy, they help all children by stamping out serious childhood diseases.

EQUIPMENT:

Equipment may include:

- Medical waste (sharps) container that meets Australian standards (always keep sharps containers out of the reach of children)
- Vaccine, plus diluent if reconstitution is required
- 2 or 3 mL syringe (unless vaccine is in pre-filled syringe)
- Appropriate drawing-up needle (19 or 21 gauge needle if required, to draw up through rubber bung and for reconstitution of vaccine)
- Appropriate injecting needle (Recommended needle size, length and angle for administering vaccines)
- Clean cotton wool and hypoallergenic tape to apply to injection site after vaccination
- A rattle or noisy toy for distraction after the injection.

PREPARING THE VACCINE:

- Ensure that the minimum/maximum thermometer displays temperatures within the +2°C to +8°C range before removing vaccine from the refrigerator.
- Ensure that the correct vaccine is taken from the refrigerator and that it is within the expiry date.
- Ensure that the diluent container is not damaged and potentially contaminated.
- Shake vaccine (either vial/pre-filled syringe or reconstituted vaccine) to ensure a homogeneous suspension is obtained. Check for particulate matter or colour change in the vaccine. If either is apparent, refer to the vaccine product information.
- Wash hands with soap and water (if visibly soiled) or use a waterless alcohol-based hand rub.^{1,3}

- Prepare the appropriate injection equipment for the vaccine to be administered.

Injectable vaccines that do not require reconstitution

- If the vaccine is in a vial, remove the cap carefully to maintain sterility of the rubber bung. There is no need to wipe the rubber bung of single-dose vials with an alcohol swab if it is visibly clean. If there is visible contamination, the bung should be cleaned with a single-use swab, allowing time to dry before drawing up the contents.⁴
- Use a new, sterile, disposable 19 or 21 gauge needle to draw up the recommended dose through the bung (or through the top of the ampoule), if required.
- Change the needle after drawing up from a vial with a rubber bung or ampoule, before giving the injection. If using a safety needle system, once the vaccine has been drawn up, draw back on the syringe to ensure as much vaccine as possible is removed from the tip of the needle, and then eliminate any air to the tip of the syringe without re-priming the needle.

Injectable vaccines that require reconstitution

- Reconstitute the vaccine as needed immediately before administration.
- Use a new, sterile, disposable 21 gauge needle for reconstitution. Use a separate new, sterile, disposable 23 or 25 gauge needle, 25 mm in length, for administration of the vaccine in most circumstances.
- Use only the diluent supplied with the vaccine; do not use sterile water for injection instead of a supplied diluent. Ensure that the diluent and vaccine are completely mixed.⁵
- Check reconstituted vaccines for signs of deterioration, such as a change in colour or clarity, and if apparent refer to the vaccine product information.
- Administer reconstituted vaccines as soon as practicable after they have been reconstituted as they may deteriorate rapidly. Refer to individual vaccine product information for recommended times from vaccine reconstitution to administration.
- Never freeze a vaccine after it has been reconstituted.

Skin Cleaning

Provided the skin is visibly clean, there is no need to wipe it with an antiseptic (e.g. alcohol wipe). If the immunisation service provider decides to clean the skin, or if the skin is visibly not clean, alcohol and other disinfecting agents must be allowed to dry before vaccine injection.



Distraction Techniques

The routine use of distraction, relaxation and other measures have been shown to reduce distress and pain following vaccination in young children. Reducing children's distress may enhance parents' timely attendance for subsequent vaccinations.

Distraction measures that may decrease discomfort following vaccination in young children include:

- swaddling and holding the infant securely (but not excessively)
- shaking a noisy toy (for infants and very young children)
- playing music
- encouraging an older child to pretend to blow away the pain using a windmill toy or bubbles
- breastfeeding the infant during administration of the vaccine.

Discomfort may also be decreased by administering sweet-tasting fluid orally immediately before the injection (with parental consent). In infants, 15–25% sucrose drops have been used.

Topical anaesthetic agents, including vapocoolant sprays, are available but, to be effective, must be applied at the correct time before vaccine administration. Topical anaesthetics, such as EMLA, are not recommended for routine use, but could be considered in a child with excessive fear or dislike of needles; they require application 30 to 60 minutes before an injection.

Vapocoolant sprays are applied 15 seconds before vaccination. These sprays have been shown to be more effective in adults than children as children can perceive coldness as painful and spray application may also focus the child more on the procedure. Topical lignocaine/prilocaine is not recommended for children <6 months of age due to the risk of methaemoglobinaemia.

Administration of paracetamol at the time of, or immediately after, vaccination in an effort to reduce the likelihood of fever is not routinely

recommended, with the exception of specific recommendations for prophylactic administration of paracetamol with meningococcal B vaccine in infants < 2 years of age (refer to 2.3.2 Adverse events following immunisation).

VACCINE INJECTION TECHNIQUES

Intramuscular injection technique

- For intramuscular (IM) injection, use a 25 mm needle in most cases.
- Depending on the injection site, position the limb so as to relax the muscle into which the vaccine is to be injected.
- Pierce the skin at an angle of 90° to the skin, so the needle can be safely inserted to the hub.¹⁹ Provided an injection angle of > 70° is used, the needle should reach the muscle layer.
- If using a 25 gauge needle for an IM vaccination, ensure the vaccine is injected slowly over a count of 5 seconds to avoid injection pain and muscle trauma.
- If you have drawn back on the syringe plunger before injecting a vaccine (which is not considered necessary), and a flash of blood appears in the needle hub, withdraw the needle and select a new site for injection.

Studies have demonstrated that, for most vaccines, local adverse events are minimised and immunogenicity is enhanced by ensuring vaccine is into the muscle and not into the subcutaneous layer. However, some vaccines (e.g. inactivated poliomyelitis, varicella and meningococcal polysaccharide vaccines) are only registered for SC administration.

In the instance where a vaccine that is registered for administration only via the IM route is inadvertently administered via the SC route, check the vaccine product information and the 'Vaccines' section in relevant disease-specific chapters in Part 4 for additional information. Some vaccines may still be immunogenic when given via the SC route, and as such, would not need to be repeated. One vaccine that should be considered invalid and that therefore needs to be repeated is Rabipur Inactivated Rabies Virus Vaccine (PCECV) (including Australian bat lyssavirus). In general, hepatitis B vaccines should also be repeated if inadvertently given SC. However, in special circumstances, for example, in persons with bleeding disorders, some hepatitis B vaccines may be given via the SC route.

A clinical trial demonstrated that for infant vaccination long (25 mm) needles (with the skin stretched flat and the needle inserted at 90°) were associated with significantly fewer local adverse events, while achieving

comparable immunogenicity. Little difference in local adverse events or immune response was found between needles of the same length but with different gauges.

Subcutaneous Injection Technique

For subcutaneous (SC) injection, administer the injection at a 45° angle to the skin. The standard needle for administering vaccines by SC injection is a 25 or 26 gauge needle, 16 mm in length. In the instance where a vaccine that is registered for administration only via the SC route is inadvertently administered via the IM route, the immune response to vaccines is unlikely to be affected. Therefore it is usually not necessary to repeat doses.

Intradermal Injection Technique

For intradermal injection of BCG vaccine, Q fever skin test or, if indicated, hepatitis B vaccine, a 26 or 27 gauge, 10 mm needle is recommended. The intradermal injection technique requires special training, and should be performed only by a trained provider.

Two influenza vaccines from the same manufacturer, presented in a purpose-designed syringe for intradermal administration, were registered for use in Australia in 2009 but are no longer available.

TABLE: RECOMMENDED NEEDLE SIZE, LENGTH AND ANGLE FOR ADMINISTERING VACCINES 11, 17, 19, 22, 26

Age or size of child/adult	Needle type	Angle of needle insertion
Infant, child or adult for IM vaccines	23 or 25 gauge,* 25 mm in length†	90° to skin plane
Preterm babies (<37 weeks gestation) up to 2 months of age; and/or very small infants	23 or 25 gauge,* 16 mm in length	90° to skin plane
Very large or obese patient	23 or 25 gauge, 38 mm in length	90° to skin plane
Subcutaneous injection in all persons	25 or 26 gauge, 16 mm in length	45° to skin plane

* If using a narrow 25 gauge needle for an IM vaccination, ensure vaccine is injected slowly over a count of 5 seconds to avoid injection pain and muscle trauma.

† The use of short needles for administering IM vaccines may lead to inadvertent SC injection and increase the risk of significant local adverse events, particularly with aluminium-adsorbed vaccines (e.g. hepatitis B, DTPa, DTPa-combination or dT vaccines).

POSITIONING FOR VACCINATION

It is important that infants and children do not move during injection of vaccines. However, excessive restraint can increase their fear and result in increased muscle tension. The following section describes a

variety of positions that may be used for vaccinating different age groups.

Cuddle position for infants

Position the infant in a semi-recumbent cuddle position on the lap of the parent/carer (refer to Figure 1). The infant's inside arm adjacent to the parent/carer should be restrained underneath the parent/carer's arm or against the parent/carer's chest. The infant's outside arm must also be held securely. The parent/carer's hand should restrain the infant's outside leg and the knee should be flexed to encourage relaxation of the vastus lateralis for IM vaccinations. This position can also be used for young children.

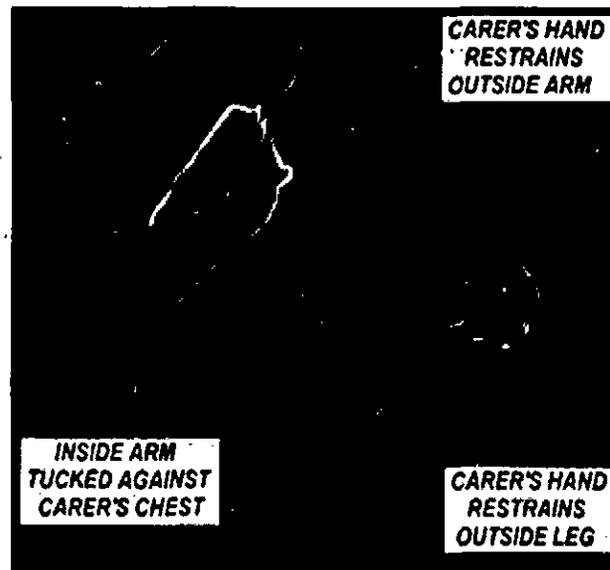


Figure 1: Positioning a child <12 months of age in the cuddle position

Positioning an infant on an examination table

An alternative is to lay an infant on his/her back on an examination table, with the infant's feet towards the immunisation service provider, and the parent/carer beside the provider to immobilise and distract the baby (refer to Figure 2).

Keep the infant's hip and knee flexed by cupping the patella in the non-injecting hand.

The thumb and index finger of the non-injecting hand may be used to stabilise the hub of the needle once the needle has been inserted.

Although the exact mechanism is unclear, recent studies have shown that placing a child in the supine position may result in more pain than if the child is held in an upright position.

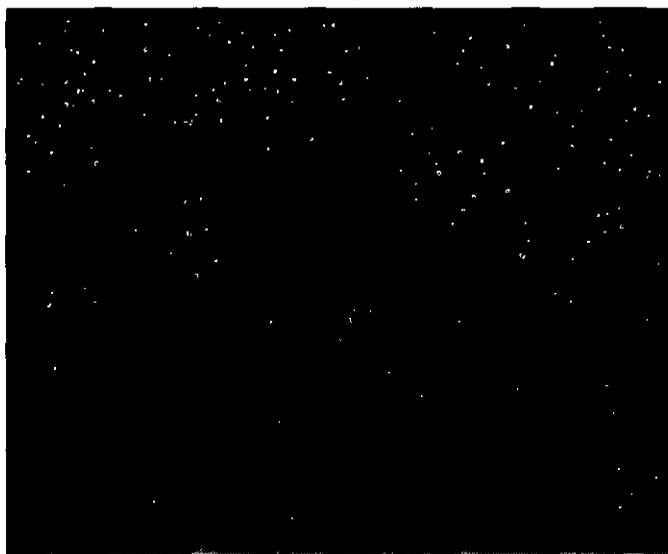


Figure 2: Positioning an infant on an examination table for vaccination (Children³ 12 months of age)

Cuddle position for an older child

Sit the child sideways on the lap of the parent/carer, with the arm to be injected held close to the child's body while the other arm is tucked under the armpit and behind the back of the parent/carer. The child's exposed arm should be secured at the elbow by the parent/carer, and the child's legs should also be secured by the parent/carer (refer to Figure 3).



Figure 3: Positioning an older child in the cuddle position

Straddle Position

An older child may be positioned facing the parent/carer with the legs straddled over the parent/carer's lap. The child's arms should be folded in front, with the parent/carer hugging the child's body to the parent/carer's chest. Alternatively the child may be positioned to 'hug' the parent/carer with the parent/carer's arms holding the child's arms in

a reciprocal hug (refer to Figure 4). This position allows access to both deltoids and both anterolateral thighs.



Figure 4: Positioning a child (Older children, adolescents and adults) in the straddle position

Solo sitting position for deltoid injections

Most vaccines can be administered into the deltoid area. Adults should sit in a straight-backed chair, feet resting flat on the floor with forearms and hands in a relaxed position on the upper thighs. Keep the arms flexed at the elbow to encourage the deltoid muscle to relax.

Encourage the shoulders to drop by asking the person to raise the shoulders up while taking a deep breath in and to drop them while breathing out fairly forcefully. Use distraction to keep muscles relaxed during the procedure, for example, have an interesting poster or similar for the person to concentrate on during the procedure and ask him/her to give you a detailed description of what can be seen.

The anterolateral thigh (vastus lateralis)

- Make sure the infant's nappy is undone to ensure the injection site is completely exposed and the anatomical markers can be easily identified by sight and palpation.
- Position the leg so that the hip and knee are flexed and the vastus lateralis is relaxed (refer to Figure 6).
- Identify the following anatomical markers: the upper marker is the midpoint between the anterior superior iliac spine and the pubic tubercle, and the lower marker is the upper part of the patella.
- Draw an imaginary line between the two markers down the front of the thigh. The correct site for IM vaccination is lateral to the midpoint of this line, in the outer (anterolateral) aspect (refer to Figures 5 and 6).

- Do not inject into the anterior aspect of the thigh where neurovascular structures can be damaged.

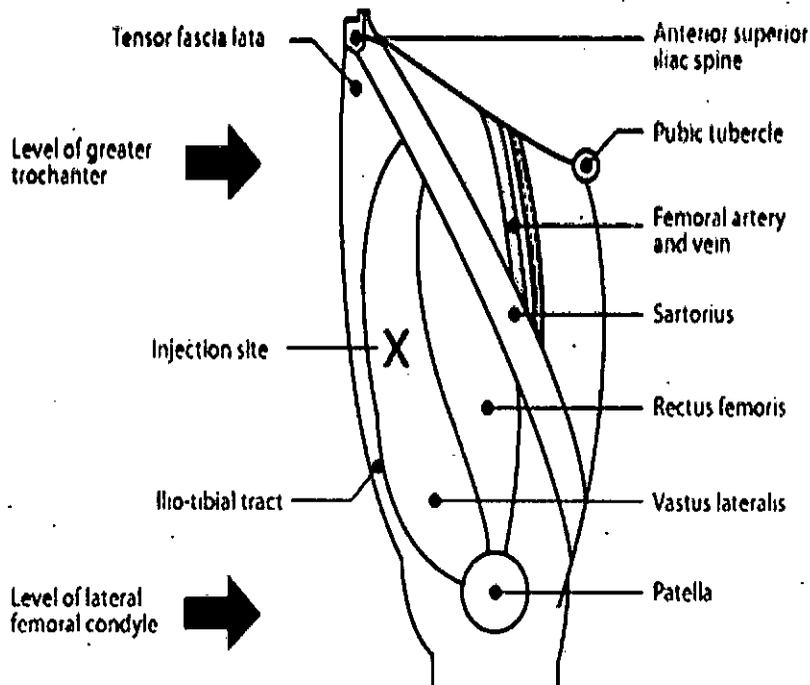


Figure 5 Anatomical markers used to identify the vastus lateralis injection site (X) on the anterolateral thigh



Figure 6: The vastus lateralis injection site (X) on the anterolateral thigh (The ventrogluteal area)

Note: This area should not be confused with the dorsogluteal area (buttock).

The ventrogluteal area provides an alternative site for administering vaccines to a child of any age (as well as older children, adolescents and

adults, adapting the guidance provided below), especially when multiple injections at the same visit are required. The ventrogluteal area is relatively free of major nerves and blood vessels, and the area provides the greatest thickness of gluteal muscle. There is a relatively consistent thinness of subcutaneous tissue over the injection site.

- Make sure the child's nappy is undone to ensure the injection site is completely exposed and the anatomical markers can be easily identified by sight and palpation. Anatomical markers are the anterior superior iliac spine (ASIS), the greater trochanter of the femur and the iliac crest (refer to Figure 7).

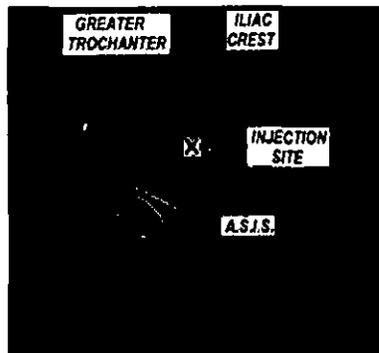
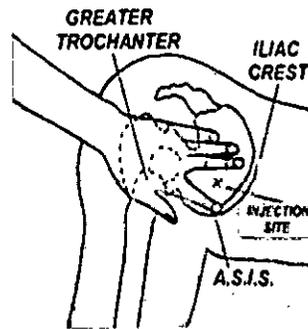


Figure 7: Anatomical markers used to identify the ventrogluteal injection site (X)
ASIS = anterior superior iliac spine

- Place the child in a prone position (face-down) on the parent/carer's lap or on the clinic table/bed, with the child's arms tucked against their chest. Allow the child's legs to dangle towards the floor (refer to Figure 7).
- Ensure the knee and hip are turned inwards to encourage muscle relaxation at the injection site.
- Use the injection site that is closest to you.
- Place the palm over the greater trochanter (the uppermost bony prominence of the thigh bone), with the thumb pointing towards the umbilicus. Point the index finger towards the anterior superior iliac spine, and spread the middle finger so it aims at the iliac

crest, thus creating a 'V' outlining the ventrogluteal triangular area. The injection site is at the centre of this area as shown in the diagram in Figure 7. *Note:* In small children and infants, the placement of the hand in relation to these anatomical markers may vary, as shown in the photograph in Figure 7.

The deltoid area

To locate the deltoid site for injection:

- Expose the arm completely, from the top of the shoulder to the elbow; roll up the sleeve or remove the shirt if needed.
- Locate the shoulder tip (acromion) and the muscle insertion at the middle of the humerus (deltoid tuberosity).
- Draw an imaginary inverted triangle below the shoulder tip, using the identified anatomical markers (refer to Figure 8).

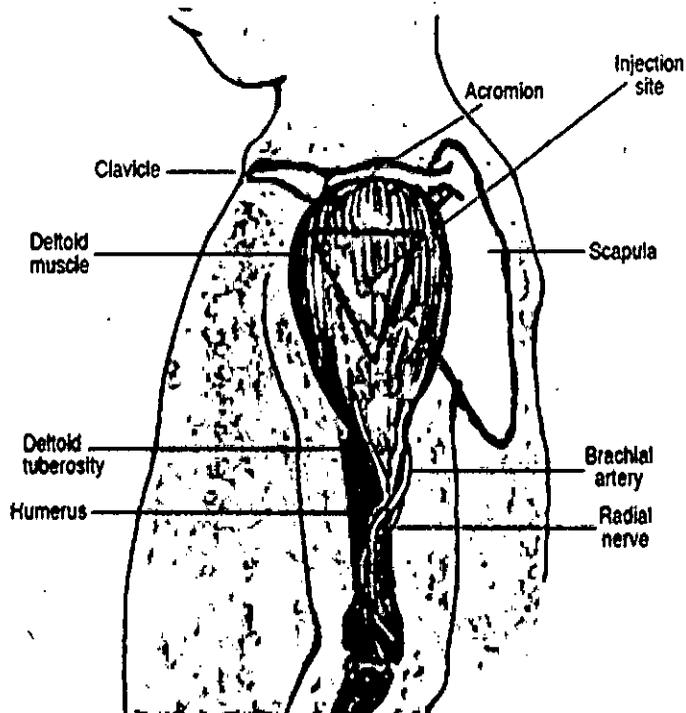


Figure 8: Anatomical markers used to identify the deltoid injection site

The deltoid site for injection is halfway between the acromion and the deltoid tuberosity, in the middle of the muscle (triangle).

Subcutaneous injection sites.

Subcutaneous injections should be administered either over the deltoid muscle or over the anterolateral thigh. There are no studies that describe any specific differences in the technique used for an 'SC injection' compared with a 'deep SC injection'. Figure 9 demonstrates the recommended technique for *any* SC injection.



Figure 9: A subcutaneous injection into the deltoid area of the upper arm using a 25 gauge, 16 mm needle, inserted at a 45° angle

A subcutaneous injection into the deltoid area of the upper arm using a 25 gauge, 16 mm needle, inserted at a 45° angle

Administering multiple vaccine injections at the same visit

When sequentially administering multiple vaccines to children, give the most painful vaccine last (e.g. pneumococcal conjugate vaccine). Evidence suggests that this may decrease the overall pain response.

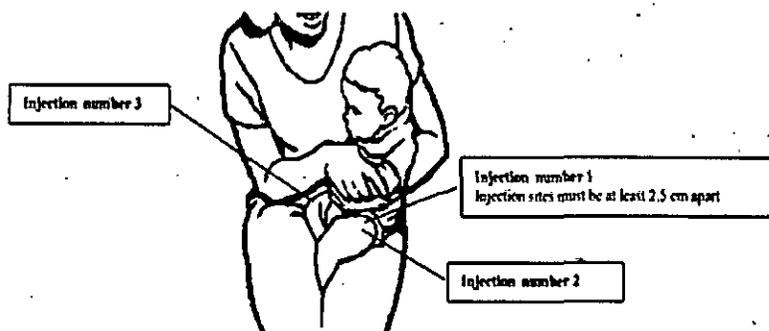


Figure 10: Recommended technique for giving multiple vaccine injections into the anterolateral thigh in an infant <12 months of age

The location of each separate injection given should be recorded, so that if a local adverse event occurs, the implicated vaccine(s) can be identified.

The suitable sites for this age group are the anterolateral thighs (preferred) and the ventrogluteal areas. For the routine schedule where only two vaccines are required, one can be given in each thigh.

When three or four injectable vaccines are to be given at the same visit, the options are :

- two injections in the same anterolateral thigh, separated by at least 2.5 cm (refer to Figure 10, injection numbers 1 and 2); further IM vaccines can be given in this way in the other thigh (injection number 3), or
- one injection into each anterolateral thigh and one injection into each ventrogluteal area (only one injection should be given into each ventrogluteal area).

INTERRUPTION TO A VACCINATION

If the process of administration of a vaccine given parenterally (IM or SC) is interrupted (e.g. by syringe-needle disconnection) and most of the dose has not been administered, the whole dose should be repeated as soon as practicable.

If most of an oral rotavirus vaccine dose has been spat out or vomited within minutes of administration, a single repeat dose can be administered during the same visit. If an infant regurgitates or vomits only a small part of a dose of oral rotavirus vaccine, it is not necessary to repeat the dose. Therefore, the regurgitated (and incomplete volume) dose is still considered as the valid dose.

3. ORGANISING AN IMMUNISATION CAMP

TOPICS

Organising an Immunisation Camp

LEARNING OBJECTIVE

Health is a productive asset that influences economic growth significantly. Immunization is a highly cost-effective way of improving child survival, yet immunization rates remain low in many developing countries. On completion of this assignment you will be able to -

- explain why immunisation is important for children and mothers
- understand the facts about the vaccines that are used for immunisation
- state the immunisation schedule
- explain the importance of maintaining cold chain and
- organize an immunisation camp.

IMPORTANCE OF IMMUNISATION

Immunisation is a mass means of protecting the greatest number of people. It is a technique by which immunising agents are introduced into the body for the production of antibody to prevent diseases.

It has been seen that every year many more children die from diseases, which could easily be prevented by immunisation. Many million

suffer from serious illnesses or become disabled for life from these same diseases. Thus it helps to :

- (a) Reduce morbidity and mortality from six preventable diseases- Diphtheria, Whooping cough, Tetanus, Measles, Polio and Tuberculosis
- (b) Reduce disability from poliomyelitis
- (c) Reduce infant and maternal mortality.

FACTS ABOUT THE VACCINES THAT ARE USED IN IMMUNISATION FACTS SHEET ENCLOSED

Details of common immunisations

Type of vaccine.	Who should have it?	How is it given?	How many doses are needed?
1. DPT (Triple) against: Diphtheria, Pertussis, Tetanus	Children from 6 weeks to 5 years	0.5 ml subcutaneously into thigh	3 doses at intervals of 4 weeks or more
2. OPV (or TOPV) (oral polio vaccine)	Children from birth to 5 years or more*	2 drops by mouth	3 or 4 doses at intervals of 4 weeks or more
3. Measles	Children for 6-9 months to 5 years or more*	Add diluent to powder and shake. 0.5 ml subcutaneously into upper arm or thigh	1 only if given at 9 months or later. Where very prevalent: 1 dose at 6 months, 2nd at 9 months

Organizing and Participating in Health Education, Family Planning and Immunization Camps

4. BCG against Tuberculosis	Children from birth upwards Upper age limit varies: follow national guidelines	Add diluent to dried vaccine. Give intradermally into upper arm (or forearm, Africa) Below 1 year 0.05 ml Over 1 year 0.1 ml using BCG syringe	Usually one only. Some programmes give 2 nd at school entry
-----------------------------	---	--	--

Side-effects	Contraindications	Storage	Comments
Pain, Swelling and redness at site of injection. Fever for 24 hours Very occasionally fits Usually none	Any child with high fever or seriously ill None	Between 2 and 8°C It is destroyed by freezing Under 8°C. Unharmed by freezing*	To check if spoiled: shake bottle. If uniformly 'cloudy' use-if white flecks appear throw away. Common cut-off points 5 years or 12 years
Fever and sometimes mild rash at 7-10 days	Any child with high fever or seriously ill	Under 8°C. Unharmed by freezing. Any unused reconstituted	*Variable cut-off points between 5 and 12 years. Follow national guidelines or local advice

0-2 weeks: red, tender nodule 2-4 weeks: small ulcer 4-6 weeks: scar appears and persists	Any child known to have active TB or AIDS, or seriously ill with high fever	vaccine should be discarded Under 8°C. Unharmed by freezing. Any unused reconstituted vaccine should be discarded	If no nodule, ulcer or scar develops repeat. If nodule appears at once, ulcer is 2 cm or more or glands develop in axilla, report to health centre
---	---	---	--

IMMUNISATION SCHEDULE

Name of the Disease	Name of the vaccine	Quantity for each dose	Interval between doses
Tuberculosis	BCG	0.05 ml	-
Diphtheria	DPT	0.5 ml 4	4 weeks
Pertusis			
Tetanus			
Poliomyelitis	OPV	2-3 drops	4 weeks
Measles	Measles	0.5 ml	-
Tetanus	TT	0.5 ml	-
			1 = after 15 yrs 2 = after 4 weeks 3 = after 6 months 4 = after 1 year 5 = after 1 year

Number of doses	Time of starting	Time of completion	Site of vaccination	Route of administration
1	After birth	1 year	Left	arm Intradarma
3	6 week of age	1 year	Thigh	Intramuscular
4	6 week of age	1 year	Mouth	By dropper
1	After 270 days	1 year	Thigh	Subcutaneous
5	After 15 years	As early	as possible Arm	Intramuscular

*Vaccination can be given to 1-2 year child if they come for.

**Fourth does of OPV should be given along with measles.

IMPORTANCE OF MAINTAINING COLD CHAIN

Cold chain is a system of storage and transport of vaccines at low temperature maintaining their potency from the manufacturer to the actual vaccination site.

Cold chain is necessary because vaccine failure may occur due to failure to store and transport under strict temperature controls.

ORGANIZE AN IMMUNISATION CAMP

(b) Assess the need for immunisation in camp area. Before starting a program we need to assess :

- i. Past immunisation coverage in the target (camp) area. Immunisation status of each child and childbearing women (15-49) is recorded on the family folder through community survey.
- ii. Present programs being carried out by other organisation to avoid duplication.

(b) Set targets

Work out the total number of children require immunisations and hence the number of vaccines we require.

(c) Encourage all those involved in the program to help set targets and contribute to planning. The team will need to be informed.

They need to know-

- Why each immunisation is needed
- How each immunisation is given
- How an immunisation camp organised.

(d) Prepare the community

The program should be carried out in full participation of the community with responsible members being involved in planning and management.

(e) Make people aware about immunisation camp through campaign, propaganda and other awareness raising activities like Folk song or Organizing and Participating in Health Education, Family Planning and Immunization Camps

drama-addressing issues such as fears, objections, beliefs, and suspicions about immunisation.

(f) Carry out the immunisation in the camp

- Place must be selected that is convenient for the mother and the child. It should be within the community where all facilities like, drinking water, toiles, sitting arrangements are made available
- A team of nurse, medical assistant and experienced health worker can carry out this program
- Maintain the register.

(g) Evaluation the program

This could be done with the community and the results will be explained to all community members.

ASSESSMENT OF NUTRITIONAL STATUS

The nutritional status of an individual is often the result of many interrelated factors. It is interrelated by the adequacy of food intake both in terms of quantity and quality and also by the physical health of the individual. Assessment of nutritional status of children is done by -

1. History
2. Clinical examination and
3. Anthropometry

1. History- During history taking following aspects are to be considered-

- (a) Sex- Female baby is more deprived than the male.
- (b) Socio-economic status- Poor socio-economic background baby is more vulnerable to malnutrition.
- (c) Family number- Number of family member influences on nutrition as more family members exist in the family usually has negative effect on child health.
- (d) Residence- Slum dwellers children suffer more than the urban children.
- (e) Breast feeding- Well breast-fed baby has less chance of infections diseases in childhood.

2. Clinical examination of a child is done from head to feet.

1. Hair	Lack of lustre Thinness and sparseness Straightness Dyspigmentation Flag sing Easy pluck ability	Kwashiorkor, less commonly marasmus
2. Face	Naso labial dysscbacea Moon face	Riboflavin Kwashiorkor
3. Eyes	Pale conjunctiva Bitot's spota Conjunctival xerosis Corneal xerosis Keratomalacia	Vitamin A Riboflavin, Pyridoxine
4. Lips	Angular palpebritis Angular stomatitis Angular scars Chellosis	Riboflavin
5. Tongue	Scarlet and raw tongue Magenta tongue	Nicotinic acid Riboflavin
6. Teeth	Motted enamel	Fluorosis
7. Gums	Spongy bleeding gums	Ascorbic acid
8. Glands	Thyroid enlargement Parotid enlargement	Iodine Starvation
9. SKin	Xerosis Perifollicular hyperkeratosis Petechiae Pellagrous dermatosis Flaky paint dermatosis Scrotal and vulval dermatosis	Vitamin A Ascorbic acid Nicotinic acid Kwashiorkor Riboflavin
10. Nails	Koilonychia	Iron
11. Subcutaneous tissue	Oedema Fat decreased Fat increased	Kwashiorkor Starvation, Marasmus Obesity
12. Muscular and skeletal systems	Muscle wasting Craniotabes Frontal and parietal bossing Epiphyseal enlargement Persistently open anterior fontanelle Knock kness or bow legs Thoracic rosary	Vitamin D Vitamin D, Ascorbic acid
13. Internal systems	Musculo skeletal haemorrhages Hepatomegaly	Kwashiorkor

a. Gastrointestinal	Psychomotor changes	Kwashiorkor
b. Nervous	Sensory loss	Thiamine, nicotinic acid
	Motor weakness	
	Loss of position sense	
	Loss of vibration	
	Loss of ankle and knee jerks	Thiamine
	Calf tenderness	
c. Cardiac	Cardiac enlargement	
	Tachycardia	

Organizing and Participating in Health Education, Family Planning and Immunization Camps

2. Anthropometry : Anthropometric measurements such as height, weight, and head circumference thickness and arm circumference are valuable indicators of nutritional status. If anthropometrics measurements are recorded over a period of time, they reflect the patterns of growth and development.

a. Height (cm) and weight (kg)-Weight is judged in relation to age and height, also height is judged in relation to age.

i. Weight for age- this is used as an index of malnutrition. But major difficulty is that in most cases the ages to the children are unknown.

ii. Height for age- this gives a picture of past nutritional history. But this is also age dependent.

iii. Weight for height- this is age independent and is used as an index of current nutritional status.

b. MUAC (Mid Upper Arm Circumference) by Sakir's tape: The arm circumference is smaller in thin children and larger in fat children. Between the ages of 1 and 5 years, the muscles of a healthy well-nourished child's arm grow larger, but the fat that the child had as a baby becomes less. So if a child is growing in a healthy way, its arm circumference does not increase very much. However, if a child is growing slowly or losing weight, its muscles do not become larger and the arm circumference is smaller than normal.

How to measure a child's arm circumference with a tape or strip :

1. The parent can hold the child on their lap.
2. Take the child's left arm and hold it straight.
3. Find the midpoint of the upper arm between the point of the shoulder and the point of the elbow.
4. Put the end of the tape or strip with the 'O' mark on the midpoint of the upper arm.
5. Put the tape or strip around the arm so that it fits closely but not so tight that it makes folds in the skin.

6. Note the reading where the 'O' cm mark meets the tape. This is the child's arm circumference.
7. If you are using an insertion tape, read the number, which shows most completely in the wide window.
8. Write down the measurement and decide if it is above or below the cut off point.

Methods of interpretation :

Normal : More than 13.5 cm

Borderline : 12.5-13.5 cm

Malnutrition : Less than 12.5

Ratios :

$$\text{Weight for age} = \frac{\text{weight of subject}}{\text{Weight of a normal child (of same age and sex)}} \times 100$$

$$\text{Weight for age} = \frac{\text{Height of Subject}}{\text{Height of a normal child (of same age and sex)}} \times 100$$

$$\text{Weight for Height} = \frac{\text{Height of Subject}}{\text{Weight of a normal child (of the same height)}} \times 100$$

How to take measurements-Height, Weight and Head Circumference.

Height: For children younger than 2 years, height should be obtained by measuring recumbent length. A measuring board with a stationary headboard and sliding vertical foot piece can be used. If one is not available, a stationary vertical surface (e.g. the wall bordering the examining table) and a yardstick or tape measure may be used. In general the infant or child should lie flat against the centre of the board, with the head against the headboard and the legs extended. The foot piece, tape measure, or yardstick is positioned to the child's heels and the height should be read to the nearest one eighth inch.

For children 2 years and older, standing height is measured with a stadiometer or a graduated ruler or tape attached to a wall with a flat surface placed horizontally on top of the head. The child should wear only socks or be barefoot, with the knees straight and feet flat on the floor. While the child looks straight ahead, the flat surface or movable headboard should be placed on the top of the head, compressing the hair, and the height read and recorded. If height-measuring devices attached to weight scales are used, he should be checked frequently for accuracy.

WEIGHT

To improve accuracy, a balance beam or electronic scale should be used to obtain weight. The scale should be checked to ensure that it reads "O" before each use and should be checked periodically. Infants and small children weight wearing only a dry diaper or light underpants. If possible, the same scale should be used for each measurement.

Organizing and Participating in Health Education, Family Planning and Immunization Camps

HEAD CIRCUMFERENCE

The maximum head circumference must be measured in all babies. It is an essential part of the routine examination.

The tape measure is passed round his forehead above the eyes and round the occiput at a rather lower level to give the maximum head circumference. The measurement is made twice. Care must be taken to ensure that the tape measure has not stretched and thereby become inaccurate. A metal tape is preferable although it is more difficult to manage than a plastic or woven one.

The head measurement is necessary because the size of the skull reflects the growth and size of the cranial contents. If the brain does not grow properly, as in mental sub-normality, the head circumference is usually small. Measurement of the head circumference is also essential for the early detection of hydrocephalus.

ACTIVITY

Measure height, weight and head circumference of a child in front of tutor and give your comment on this a measurement following a standard chart.

4. ANTE-NATAL CARE

TOPICS

Antenatal care and Visits

LEARNING OBJECTIVE

Women should be fully involved in decisions about their care and treatment in pregnancy and therefore need to be given the knowledge to make informed decisions. Where appropriate, a woman's partner and family should be involved and informed and their views and values respected. Good communication is crucial at every step in pregnancy. On completion of this assignment you will be able to - know about antenatal care.

ANTE-NATAL CARE

Ante-natal care is the clinical assessment of mother and fetus during pregnancy, for the purpose of obtaining the best possible outcome for both the mother and the child.

ANTE-NATAL TEAM

Ante-natal care is provided by a team which includes :

- General practitioner
- Nurse mid-wives
- Obstetricians
- Neonatologists
- Other medical specialists
- Health visitors
- Social workers
- Health advocates.

TYPES

There are usually three schemes of care :

- a. Community care-supervised predominantly by the mid-wife.
- b. Shared care-among the woman's general practitioner, mid-wife and obstetrician.
- c. Hospital care-only cares in cases where there is increased risk of either the mother, the fetus or both.

THINGS TO BE DONE

To achieve these objectives, the following things are to be done :

CAREFUL HISTORY TAKING OR WRITING

- Social history
- Menstrual history
- Obstetric history
- Medical history
- Family history.

EXAMINATION

- Physical examination
- Abdominal examination.

QUESTIONS YOU MIGHT BE ASKED

Throughout your antenatal care the midwife or doctor might ask about :

- the date of the first day of your last period

- your health
- any previous illnesses and operations
- any previous pregnancies and miscarriages
- ethnic origins of you and your partner, to find out whether your baby is at risk of certain inherited conditions, or other relevant factors, such as whether your family has a history of twins.
- your job or your partner's job, and what kind of accommodation you live in to see whether your circumstances might affect your pregnancy
- how you're feeling and whether you've been feeling depressed.

You might also be asked whether you smoke or use other drugs. This is not to judge you but because the more information your doctor or midwife has, the better they can support you and care for your health and your baby's health.

It's up to you whether you answer any of these questions you're asked – anything you say will be kept in confidence. The information will only be given with your permission to any health worker who needs to know as part of working with you.

ABDOMINAL POINT IN ASSIGNMENT

- Risk factors arising during pregnancy
- Fetal movement pattern changed
- Haemoglobin lower than 10 g/dl
- Weight loss, poor weight gain
- Proteinuria, glycosuria, baciluria
- B.P systolic above 155 and diastolic above 90 mm Hg
- Uterus large or small for dates
- Excess or decrease liquor
- Malpresentation
- Any vaginal bleeding.
- Premature labour
- Vaginal infection.

RISK APPROACH.

The risk approach is a managerial tool for improved MCH care. Its purpose is to provide better services for all, but with special attention to those who need them most.

The central purpose of antenatal care is to identify "high risk" cases (as early as possible) from a large group of antenatal mothers and arranged for them skilled care.

These cases comprise the following :

1. Elderly primi (30 years and over)
2. Short statured primi (140 cm and below)
3. Malpresentation, viz breach transverse lie, etc
4. Antepartum haemorrhage
5. Preeclampsia and eclampsia
6. Anaemia
7. Twins, hydramniotic
8. Previous still birth, intrauterine death manual removal of placenta
9. Prolonged pregnancy (14 days-after expected date of delivery)
10. History of previous caesarean or instrumental delivery
11. Pregnancy associated with general diseases cardiovascular disease.
 - Kidney disease
 - Diabetes
 - Tuberculosis
 - Liver disease etc.

ACTIVITY

A patient named Mrs. Amena Begum, of 20 years age; she is working in a garments factory, missed her period in the month of August 2004. Two years back, she had an incomplete abortion followed by washing. She has vomiting for 2 to 3 days.

5. ASSESSMENT OF ANTE-NATAL MOTHER

TOPICS

Assessment of Ante-Natal Mother.

LEARNING OBJECTIVE

Antenatal educational programs are delivered during the childbearing years to expecting mothers. These interventions are considered preparatory strategies for physiological and psychological changes during pregnancy. On completion of this assignment you will be able to -

- develop skill
- assess antenatal mother.

AIM

To assess the antenatal knowledge and describe the learning needs and preferred information seeking behavior of expecting and/or new Saudi mothers.

PLAN

Her general practitioner as soon as possible following the first missed period sees the Pregnant woman and an initial assessment is referred to the hospital for her first (booking) hospital visit.

METHODS

A cross-sectional study was conducted at multiple primary health care centers in Riyadh city, Saudi Arabia. A questionnaire was used to assess levels of antenatal knowledge, educational preferences, and information

THE STRUCTURE

Antenatal examinations are performed at regular intervals, and the recommended timing for visits is :

- Monthly visits for the first 28 weeks
- Two times in a month visits from 28 to 36 weeks
- Weekly visits for the remaining weeks.

THE PROGRAMME

Schedule of key antenatal visits :

Preconception clinic visit

8-14 week visit

20-24 week visit

36-38 week visit

41-42 week visit

- **Preconception Visit**

The ideal first ante-natal visit is at a preconception clinic.

The first trimester remains a critical period in determining the outcome of a pregnancy.

BOOKING VISIT (8-14 WEEKS)

The main purpose of the booking visit is to obtain :

A comprehensive history

Establish the gestational age

Identify maternal and fetal risk factors.

The mid-trimester risk assessment visit (20-24 weeks).

The results of test performed at the first trimester visit are reviewed with the mother. The results of the ultrasound scan are also reviewed. Further care is then planned in line with the risk assessment based on the ultrasound scan and other findings.

- **Ante-natal visits in the second half of pregnancy.**

Assessment of maternal health and fetal growth and well-being are pursued through these visits. Any incidental maternal symptoms are dealt with in this period. This period is also important in ensuring the education of the woman regarding the rest of pregnancy and her delivery.

INVESTIGATIONS

The typical schedule of antenatal investigations is as follows-

- **Booking (8-14 weeks)**

(i) **Blood tests**

- Hemoglobin and full blood count
- Blood grouping and Rh-typing
- Atypical antibodies
- Microbiological-

- Hepatitis B

- Syphilis status

- Rubella and

- HIV.

(ii) **Urine tests**

Dip for :

- Glucose
- Ketones
- Protein.

Assessment of Ante-Natal. Mother Planned Health Education on Ante-Natal Care, Advices

If proteinuria or suspicion of UTI, to send for microcopy, culture and sensitivities.

(iii) **Vaginal speculum examination-to perform only if indicated**

(iv) **Ultrasound**

A routine scan between 16 and 22 weeks is practiced.

A routine two-pregnancy scan-policy is also recommended.

Mid-trimester visit (20-24 weeks)

(a) **Blood tests**

Hemoglobin and atypical antibodies

Blood glucose measurement

(b) Urine tests

To dip for glucose, ketones and protein

(c) Ultrasound.

This scan is performed tranabdominally and usually takes about 20 minutes. It provides the most detailed survey of the fetus and uterine contents.

In 36-38 week visit :

(i) Blood tests

Hemoglobin and atypical antibodies

(ii) Urine tests

To dip for glucose, ketones and protein

(iii) Ultrasound.

Not performed routinely unless an indication. A management plan is then drawn up for the pregnancy, based upon the risk assessment.

ANTENATAL HISTORY FORMAT

I. Patient profile

Full name :

Age (in years) :

Hospital No. :

I. P. No. :

Marital status : Married/unmarried/divorced/separated

Education status :

Occupation :

Husband's name :

Age (in years) :

Education status :

Occupation :

Type of family :

Per capita income :

Date of booking :

Date of last antenatal visit :

Date of admission :

Obstetric score

Gravida

Para

Abortion

MTP

Living

II. Reason for hospitalization/Chief complaints

- Onset
- Duration
- Severity
- Relieving factors
- Aggravating factors

III. Menstrual history :

- Age at menarche
- Duration of cycles
- Regularity
- Flow - heavy/moderate scanty
 - clots
 - no. of days
- Any dysmenorrhoea
- Relief measures
- Last menstrual period
- Period menstrual period

IV. Obstetric history:

Present Obstetric history

- Is pregnancy confirmed : Yes / No
- When, where and how it was confirmed
- What test was done for confirmation
- Quickening
- Immunization
- Any more disorders like :

Vomiting, haemorrhoids, heart burn, backache, bleeding, varicose vein, constipation, leg cramps, fever, leucorrhoea, anorexia, insomnia, other complaints.

PAST OBSTETRIC HISTORY

SI _____
No _____
Date of delivery _____
Place of birth _____
Duration of pregnancy _____
Method of delivery _____
Course of pregnancy _____
Labor _____
Puerperium _____
Baby _____
Sex _____
Wt. _____

V. Family History:

- Congenital diseases
- Any hereditary diseases
- Multiple pregnancy.
- Diabetes
- Heart disease
- Any mental retardation
- Hypertension or PIH (in mother/ sisters)
- Twin pregnancy
- If yes,

In whom? Mother / Father?

VI. Medical-Surgical History:

- Child hood disease
- Chronic disease like asthma, diabetes, epilepsy
- Previous surgery
- Injuries especially of back and pelvis
- Hepatitis, STD, HIV
- History of anemia
- Any medication taken at present or past

Head to foot examination :	
Skin turgor	:
Moisture	:
Warmth / Temp	:
Face	:
Facial puffiness	:
Lips	: Cyanosis, dryness
Eyes	:
Peri-orbital oedema	:
Conjunctive	: Pallor
Mouth	:
Tongue	: Moisture.
Chest	:
Thorax	: Shape
	: Symmetry of expansion
	: posture
Breath sounds	: Vesicular sounds
	: Wheezing / Rhonchi
	: Crepitations
	: Pleural rub
Heart	: heart rate
	: Location of apex beat/ Cardiac murmurs
Axilla	: any lymph node enlargement
Breast	: any tenderness / painful
	: tense / dilated veins / warmth / presence of crust
Nipples	: retracted / inverted / cracked
Abdomen	:
Inspection :	Size, shape, contour, flanks, umbilicus, foetal movements, skin changes, Contractions present/not

Palpation:

- Fundal palpation:

Inference : Lie

Presentation

- Lateral Palpation:

Left side – description

Right side – description

Inference : Position

- Pelvic palpation :

- First pelvic grip : Description

Inference : Presentation

Engagement / not engaged

Attitude

- Pawlick Grip: Fixed/ Mobile

Auscultation : - FHR

- rhythm

- location

Extrimities : Ankle oedema :

Capillary refill :

Cyanosis :

ACTIVITY

A patient named Mrs. Rahima Begum, of 25 years of age, housewife, missed her period for two months. She had family history of Diabetes Mellitus. She complains of frequents micturition.

6. ADVICES ON ANTE-NATAL CARE

TOPICS

Advices on Ante-Natal Care

LEARNING OBJECTIVE

Pregnancy care tips are practical and essential pieces of health information on pregnancy, which you can use to increase your chances of having a healthy course of conception and baby.

Pregnancy is a very unique and precious journey for every lucky lady who has gone through it.

Whether yours is a planned or unplanned pregnancy, there are few things for you to consider.

On completion of this assignment you will be able to -

- know about advices on antenatal care.

GENERAL ADVICES FOR HEALTHY PREGNANCY ARE AS FOLLOWS

- i. To establish a relationship between the woman and the antenatal clinic staff
- ii. To make arrangements for the medical and social worker to see the woman if there are any difficulties such as care of the other children or housing
- iii. To discuss the social welfare benefits available
- iv. To advise a visit to the dentist, if there is any need
- v. To give dietary advice
- vi. To advise the woman to be careful about her food item
- vii. To take iron supplement
- viii. To take vitamin supplement
- ix. About inter course-no restriction to intercourses during pregnancy unless the woman bleeds from the vagina
- x. Rest and exercise-sensible exercise, such as walking and swimming many be allowed in pregnancy.
At least nine hours in bed at night should be recommended.
- xi. Travel-the woman should only travel over distances which are comfortable to her
- xii. Clothes-women should be advised to wear comfortable one
- xiii. Bathing-constipation which is common during pregnancy is best over come by increasing fluid intake, fresh fruit and by the use of foods rich in fibre.

PARENCRAFT CLASS

Parentcraft classes should be included in education programme of antenatal mother.

The classes are held at hospital prenatal clinics, health centres and local clinics. Talks should be made to meet the special needs of the participants. The following topics are usually included :

- (i) A simple explanation of the growth of the fetus in uterus and the placental function

- (ii) The physical and emotional changes in pregnancy
- (iii) Diet and the value and function of various foods
- (iv) Maternity wear
- (v) Stages of labor
- (vi) Baby care, including bathing and handling a baby
- (vii) Infant feeding, including breast-feeding and care of the breasts and nipples. Bottle-feeding and how to prepare feeds
- (viii) Immunization
- (ix) The puerperium
- (x) Birth spacing and family planning
- (xi) Transfer to home
- (xii) Follow up.

This should be extended to both parents. Fathers should be encouraged to be present during labor and at vaginal delivery.

KEY POINTS

Antenatal care traditionally involves a number of 'routine' visits for assessment to a variety of health care professionals, on a regular basis throughout the pregnancy.

The following are key points

- Antenatal care improves pregnancy outcome
- The integration of care and education is necessary
- We must continue to find ways of ensuring that those in most needs are included in the process of antenatal care.

SUCCESS OF ANTE-NATAL CARE

It is unfortunate that rates of under-utilization of antenatal care are greatest among high-risk groups, such as single unsupported mothers and particularly those with unplanned and unwanted pregnancies.

Assessment of Ante-Natal. Mother Planned Health Education on Ante-Natal Care, Advices

Special efforts should therefore be directed towards helps such groups of women.

ACTIVITY

A patient named, Mrs. Asia Khatun, of 18 years age, wife of a Rickshaw puller, has a boy of one year and seven months. She has missed her menstrual period for the last three months. She is pale looking, thin and underweight.

7. GROWTH AND DEVELOPMENT MONITORING

TOPICS

Growth and Development Monitoring of Child

LEARNING OBJECTIVE

Growth monitoring consists of routine measurements to detect abnormal growth, combined with some action when this is detected. As primary care workers worldwide invest time in this activity, we sought evidence of its benefits and harms. The review objectives are to evaluate the effects of routine growth monitoring on:

1. The child, in relation to preventing death, illness or malnutrition; and referrals for medical care, medical specialist assessment or professional social support follow-up.
2. The mother, in relation to nutritional knowledge, anxiety or reassurance about the child's health, and satisfaction with services.

GROWTH AND DEVELOPMENT

Growth monitoring is widely accepted and strongly supported by health professionals, and is a standard component of community paediatric services throughout the world. We sought to evaluate research evidence of its impact. This requires definition, consideration of the setting, and discussion of the intended effects of this activity. In this review, we define growth monitoring as the regular recording of a child's weight, coupled with some specified remedial actions if the weight is abnormal in some way. Although the causes of growth faltering and the responses to it may be region specific, the process is the same, and we consider here growth monitoring in both the deprived and richer populations of the world.

Growth implies changes in size of the body as a whole or of its separate organs resulting from multiplication of cells as well as intracellular substance. That is it indicates quantitative or physical maturation of a person where as development means function maturation (qualitative) of a person.

Or

Growth is increase in size. Its progressions are mainly structural and can be measured with some degree of reliability in terms of height, weight, bone-age etc.

Development is increase in complexity. It involves both structure and function. Its numerous simultaneous progressions are closely related but manifest many individual variations.

Or

The word 'growth' refers to increase in the physical size of the body. We measure growth in terms of kilograms and centimetres.

The word 'development' refers to increase in skill and function. Growth and development are considered together because the child grows and develops as a whole.

Growth and development imply not only physical aspects, but also intellectual, emotional and social aspects. Growth and development data constitute a comprehensive and sensitive indicator specific to child health before and after birth.

The parents should keep the growth chart, and bring it whenever the child comes for weighting, treatment, or immunization. This may be at a health centre, an outreach clinic, a village community centre, or at home.

DETERMINANTS OF GROWTH AND DEVELOPMENT

Important factors which influence growth and development are-

1. Genetic inheritance- Genetic factors influence growth and development, especially height and weight, mental and social development and personality.
2. Nutrition- Nutrition influences growth and development before as well as after birth. In fact, retardation of growth rate is an indication of malnutrition. When the diet is improved the child begins to grow in height and weight.
3. Age- Growth rate is maximum during foetal life, during the first year of life and then again at puberty. At other periods, growth is slower.

NORMAL WEIGHT/HEIGHT (OR LENGTH) INCREMENT

1. Birth weight- 2.7-3 kg.
2. First 7-10 days after birth there is 5-10% reduction of weight.
3. Gains 20-30 gm/day from 10th day after birth.
4. First 6 months-600 gm/month (5.00 kg at 6 month of age).
5. 6-12 month 500 gm/ month (9-10 in one year age).
6. Then expected weight of children in kgs.
 - a. 1-7 years- $(\text{age}+4) \times 2$.
 - b. 7 years above- $\text{age} \times 3$.

NORMAL HEIGHT

Birth- 50 cm

6 month- 68 cm

1 year- 75 cm

2 year- 85 cm

3 year- 95 cm

4 year- 100 cm

5 year- 106 cm

O.F.C. (OCCIPUTO FRONTAL CIRCUMFERENCE)

Birth- 35 cm

1 year- about 47 cm (about 1 cm/ month)

2 year- 49 cm

2-7 year- $\frac{1}{2}$ cm/ year

8-12 year- . cm/ year

10 cm for rest of life

4. Sex- About the age of 10 and 11 years female children show a sudden, increase in height and weight. This growth spurt corresponds to puberty. In male children, the growth spurt occurs a little later, that is between 12 and 13 years.
5. Physical surroundings- Sunshine, good housing, lighting and ventilation have their effects on growth and development.
6. Psychological factors- Love, tender, care and proper child-parent relationship affect the social, emotional and intellectual development of children.
7. Infections and parasitoses- certain infections of the mother during pregnancy (e.g. rubella, syphilis) affect the intrauterine growth of the foetus. Infection after birth (e.g. diarrhoea, measles) slow down growth and development especially in the malnourished child. The intestinal parasites (e.g. round worms) by consuming considerable quantities of nutrients hamper growth and development.
8. Economic factors- the standard of living of the family is an important factor; children from well-to-do families have better heights and weights. The economic factor is connected with the nutrition and living of the people.
9. Other factors- these comprise the birth order of the child, birth spacing, birth weight in single and multiple pregnancies, education of the parents etc.

GROWTH MONITORING

One of the basic activities of the under-fives clinic is growth monitoring. It is an operational strategy of regular and sequential measurements for the assessment of growth and development of the child in order to promote optimal health. The strategy recognizes growth to be the result of overall health, nutrition, environment, social, psychic and development factors rather than mere nutrition. It involves mother and health workers.

Growth monitoring is a low cost technology available for reducing infant mortality. All children to be weighed periodically at monthly intervals during the first year, every 2 months during the second year, and every 3 months thereafter up to the age of 5 to 6 years. Children who are ill, or small, or who are not growing well may need to come more frequently. When the child's

weight is plotted on the growth chart against his/her age, it gives what is known as the growth curve. This will help the growth worker to detect early onset of growth failure.

SIGNS OF GROWTH AT THE NORMAL RATE

It is assumed that a child is growing when it is seen that -

- Becomes taller
- Becomes fatter
- Becomes heavier to carry
- Grows out of their clothes.

To be certain about how a child is growing, it is measured the child regularly. In some situations children's heights or lengths is measured to find out how tall they are. In other situations the thickness of children's arms is measured to find out how fat they are.

But in most situations the best way to find out if a child is growing normally is to weight her. A child's weight is made up of the height and fatness and can show growth more clearly.

MILESTONE OF DEVELOPMENT

Milestones are definite landmarks in the growth and development of a child. These are attainments in terms of a new skill or action and involve not only physical but mental and social development. The accepted development milestones are given below-

	Motor development	Language development	Adaptive development	Social-personal development
6-8 weeks				Looks at mother and smiles
3 months	holds head erect			
4-5 months		hastening	begins to reach out for objects	recognises mother
6-8 months	sits without support	experimenting with noises	transfers objects hand to hand	enjoys hide and seek
9-10 months	crawling	increasing range of sounds		suspicious of strangers
10-11 months	stands with support	first words		
12-14 months	walks wide base		builds	
18-21	walks narrow base beginning to run	joining words	beginning to explore	
24 months	runs	short sentences		day to day

WHAT TO DO THE FIRST TIME THAT YOU WEIGH A CHILD

Introduce yourself to the mother or other family member and the child. Register the child as required.

Show the parent the chart, and explain what it is for and what it means. If it is explained carefully, the mother is more likely to be interested in weighing the child, in keeping the chart carefully and in talking about how she feeds baby.

Spend as much time as you can ask the mother about the child and her family.

- Ask about the other children, how old they are, if they are healthy or ill or have died.
- Talking with the mother helps you to know if the family has any special problems and whether the child needs special care.
- Be careful not to embarrass the mother. If you are friendly, she is more likely to bring her children for weighing regularly.

Fill in on the chart details of about the child and family.

- Make sure that you have the complete name of the child.
- Find out the date of birth as accurately as possible.
- Fill in the birth order by finding out how many children the mother has.
- Fill in details about sisters and brothers.

Record any 'Reason for special care'

Register the family in your 'follow-up register' if the child is undernourished or at risk of under nutrition.

Then if they do not return when you expect them, you can try to visit them at home.

WHAT TO DO AT EACH VISIT

The service system may vary in different health centre. Different people may register and weigh the child, and advise the family. The order here may be best if it is possible.

1. Greet the child and parent and ask how they are.

REASONS FOR SPECIAL CARE

In the child :

- How birth weight (less than 2.5 kg).
- Twin
- Born less than 24 months after previous child.
- Disabled (mental handicap, heart problem, cleft palate).
- Chronic sickness (e.g. HIV infection)

In the family :

- More than 5 children in the family.
- Other children in the family malnourished or have died.
- Only one parent, or no parents.
- Mother lives alone with children.
- Family very poor.
- Mother mentally or physically ill.
- Mother is adolescent.

2. If the child is sick or has been sick since the last visit, find out details of the illness.
3. Ask how the child is feeding.
4. Ask to see the child's growth chart. If you have seen the child before, the growth will remind you about her, and about what you thought. If you have not seen the child before, she may have a growth chart from somewhere else.
5. Record on the chart any immunizations that are given. If necessary, record the immunization in the register.
6. Weigh the child.
7. Plot the weight on the growth chart and join the dot up to previous dots.
8. Examine the growth chart. Look at today's weight and look at the growth line. Decide how the child is growing. Explain the growth line to the mother. Discuss what you find with the mother. Praise the mother for what she is doing right. Ask if she has any questions and try to answer them.

9. Record important events in the child's life on the growth chart-

- Starting weaning foods or artificial feeding
- Stopping breastfeeding
- Illnesses.

WHAT TO LOOK FOR IN THE CHILD'S GROWTH LINE

Watch that the child's is within the normal range. If it is below the 3rd centile or above the 97th centile (if 97th centile is provided on the chart) then think of it. Find out the cause of growth falling or overgrowth. A child's line may not always be the same. The child may grow well for a long time and then grow poorly. So it is necessary to look at the child's past growth and present growth.

ASSESSMENT OF NUTRITIONAL STATUS

Normal growth

In children, parameters used to measure growth are weight in kilograms, height in meters and head and chest circumferences. Assessment can be longitudinal where serial measurement of the same child is recorded over different periods of time or cross-sectional where recorded measurement is compared to that of his peers.

In India, we are using the new WHO child Growth Standards (2006) for children. However values differ substantially among adults of different ethnic groups. We have ICMR values as Indian standard.

Physical growth

1 Weight: Most widely used and simplest, reproducible anthropometric measurements for the evaluation of nutritional status.

It indicates body mass

It is sensitive to even small changes in nutritional status due to childhood morbidity like diarrhea.

Rapid loss of weight indicates a potential malnutrition

Serial weight recording is more valuable for progressive growth of a child when age of a child is not known.

Technique for measurement

To measure weight beam or lever accentuated scales with an accuracy of 50-100 g are preferred. Portable Salter scale (CMS Weighing Equipment, Ltd. England): the child is suspended from the scale which is hung from a branch or a tripod. Special "pants" are used to weigh babies. Robust, cheap, and easy to carry, these scales should be replaced after

one year because of stretching of the spring and inaccurate readings. The model with readings up to 25 kg ($\times 100$ g) is recommended.

Bathroom scales are not recommended as errors up to 1.5 kgs can occur with this.

Precautions to be taken while weighing

Zero error has to be adjusted.

Minimal clothing should be worn and be without shoes.

While recording the value do not lean against or hold anything.

Preferably record under basal conditions in early morning.

Most types of scales (especially beam scales) are sensitive to dust and mud.

Standards

On an average, a baby weighs double the birth weight by five months, trebles its birth weight by one year and quadruples its birth weight by two years.

A baby should gain at least 500g per month in the first three months of life. If the growth is less than this it points to malnutrition. In different parts of India, the average birth weight is between 2.7 to 2.9 kgs.

Weight for age is used to classify malnutrition.

2. Height: Height of an individual is influenced by genetic as well as environmental factors.

Maximum growth potential is decided by genetic factors.

Nutrition and incidences of infection determine the extent of exploitation of that genetic potential.

Inadequate dietary intake and/or infections reduce nutrients available at the cellular level. This results in growth retardation. A prolonged period of severe deprivation leads to stunting.

Technique for measurement

Children below two years are measured by using an infantometer.

Baby is made to lie on the scale and crown heel length is measured.

For children above two years and adults a vertical measuring rod anthropometer- is used and maximum height is measured.

Measuring scale should be capable of measuring to an accuracy of 0.1 cm.

Standards

Length of the baby at birth is 50 cm.

By first year it increases by 50% to 75 cm.

By third year end it increases by 12 cm.

During puberty, growth spurt, boys add 20 cm to their height and girls gain about 16 cm.

Indian girls reach 98% of their final height by 16.5 yrs. and boys reach the same stage by 17.75 yrs.

Low height for age indicates nutritional stunting or dwarfing. It reflects past or chronic stunting. Cut off point for diagnosis of stunting is 90% NCHS values.

3. Mid upper arm circumference : Mid upper arm circumference and calf circumference indicate the status of muscle development. Mid calf and mid upper arm are heavily muscled and is approximately circular.

Mid upper arm circumference is simple, easily accessible in any age and sex and practical to measure.

Well-nourished children have a nearly constant arm circumference (about 16 cm) between 1 and 5 years. Undernourished children have a thinner upper arm and a smaller AC.

Children can be classified as malnourished if their AC falls below an arbitrarily specified level. If ages are not known, AC can be related to height (arm circumference or height).

As poor musculature and wasting are cardinal features of PEM in early childhood, MUAC helps in identifying malnutrition and in determining mortality risk in children. It correlates well with weight, weight for height and clinical signs. (QUAC stick).

Technique

Usually left arm is measured. Arm is flexed at the elbow.

The circumference is measured on the left upper arm half way between the end of the shoulder (acromion and the tip of the elbow (olecranon). To locate this point, the arm is flexed at a right angle. Then the arm is allowed to hang freely and a tape-measure (preferably of fibreglass) put firmly round it. Do not pull too tight.

Tapes or strips can be made locally from thin cardboard or X-ray films which are marked in centimeters. Special plastic tapes (insertion tapes) have been manufactured.

Fibre glass tape is preferred to tailors cloth tape as it is seen to lose accuracy.

4 Body Fat: Subcutaneous fat constitutes body's main store of energy reserves. Muscle and fat constitute the soft tissues that vary most with a deficiency of protein and calories.

Many accurate and near accurate methods like densitometry and DEXA but physical anthropometry using skin-fold calipers are practicable in field circumstances to determine the nutritional status of a person.

For this a standard skin fold caliper has to be used. The skin fold measured consists of a double layer of skin and subcutaneous fat.

For adults multiple sites are selected like triceps, the abdomen and the sub scapular and subcostal sites. By using different formulae we can derive at the amount of total body fat.

In young children, the triceps skin-fold is used. The site is exactly at the mid upper arm as determined by the method used for mid arm circumference.

The technique needs prolonged supervised practice and repetition to obtain reliable and reproducible results.

Values differ in different communities thus necessitating local standards for comparisons. Hence it is used mostly by researchers and academics in the field.

5 Head and Chest circumference : Head size relates to the size of the brain which increases rapidly during infancy.

In a normally nourished child, chest grows faster than the head circumference during second and third years.

Technique

Use a fibre glass tape.

Head circumference is recorded by passing the tape around the head over the supraorbital ridges of frontal bone in front and the most protruding point of occiput on the back of the head.

Chest circumference is measured at the level of nipple in mid inspiration.

Standards

At birth head circumference is 34 cm and chest circumference is 32 cm.

By 6-9 months both become equal.

In PEM, due to poor growth of chest, the head circumference may remain to be higher than the chest even at the age of 2.5 to 3 years due to poor development of thoracic cage.

Both the measurements are not useful beyond the preschool age.

6 Behavioral development: It is a complex affair spread in four fields

Motor development

Personal and social development

Adaptive development

Language development

For proper behavioral development, it is important to have

Assured emotional and moral stability

Regular discipline

Accepting parents who provide him with models of balanced conduct.

GROWTH CHART

It is a visible display of the child's physical growth and development and it is useful for longitudinal follow-up of a child.

We have growth charts for children below five years which compares weight for age of the child and for children in 5-19 years which compares their BMI for age.

There are separate charts for boys and girls.

In a growth chart other information like identification and registration, date of birth, weight, chronological age, immunization record, introduction of supplementary foods, episodes of sickness etc, are recorded. This chart can be easily understood by the mother and the health worker thus motivating them to improve the nutrition of the child.

How to use the chart?

Growth charts for children below five years

Pink border growth charts are for girls and blue border charts are for boys.

Each growth chart has two axes. The horizontal line at the bottom of the chart is the X axis. This is for recording the age of the child and is called "month axis". It has sixty squares and can be used for a child up to five years or sixty months. Age is recorded in completed weeks /months/ years.

The vertical line at the far left of the chart is the Y axis. This is for recording the weight of the child in kilograms and grams. Each thick extended line represents 1 kg., each line extended from a small square represents 500 gms. and the very thin line represents 100 gms.

A point on a growth chart where a line extended from a measurement on the "month axis" i.e., age, intersects with a line extended from a measurement on the "weight axis" i.e. weight is called a plotted point. A circle is drawn around the dot so as to know the position of the plotted point.

On each growth chart there are 3 printed growth curves. These are Reference Lines or Z Score Lines and are used to compare and interpret the growth pattern of the child. The 1st / top curved line on the growth chart is the median or average. The other 2 curved lines are below the average and are at a distance.

Interpretation:

When the plotted point is above the second curve the child's growth is normal.

When the plotted point is between the second and third curve the child is moderately underweight.

When plotted point is below the third curve the child is severely underweight.

If the child is severely underweight clinical signs of marasmus and Kwashiorkor may be observed.

If a child has oedema of both the feet, mark clearly on the growth chart close to the plotted point that the child has oedema and refer the child for specialised care.

The direction of curves is important. Interpretation :

Upward growth curve: Good. Indicates adequate weight gain for the age of the child. The child is growing well and is healthy.

Flat growth curve: Dangerous. Indicates that the child has not gained weight and is not growing adequately. The child needs to be investigated.

Downward growth curve: Very dangerous. Indicates loss of weight. The child requires immediate referral and health care.

Flattening of curve or falling of curve signals growth failure- an early symptom of PEM. This may precede the clinical symptoms by weeks or by months. Such a child needs special care.

Uses of growth chart

Useful tool for growth monitoring.

Diagnostic tool to detect a high risk child.

Educational tool for the mothers to participate more actively in growth monitoring and to teach them the importance of adequate feeds during illnesses like diarrhea.

Tool for action on the type of intervention that is needed and helps make referrals easier.

Helps in evaluating the effectiveness of corrective measures and thus to note the impact the programs.

Helps in policy making at local and central levels.

Growth monitoring should be

Every month- during first year

Every two months – during second year

Every three months up to five to six years.

Plot the growth curve and note that growth faltering can be deleterious.

Growth chart for 5-19 years.

We have separate charts for boys and girls.

Body mass index (BMI) of the child is taken. It is calculated with the formula $BMI = \text{Weight in Kgs} / (\text{Height in metres})^2$.

We can also use the simplified nomogram to calculate the BMI.

Calculated BMI is plotted against the relevant age of the child.

There are five reference lines .

The third curve is the average or the median.

The plotted point should be between the second and fourth curves of the graph.

If it falls above the second curve it denotes over nutrition and if it falls below the fourth curve it denotes under nutrition. Both need to be appropriately handled.

ACTIVITY

Age and weight of 5 children are 1 year, 1.5 years, 2 years, 2.3 years 2.5 years and 7 kg, 7.5 kg 8 kg, 16 kg respectively. Write down your comment about the growth of these children following a standard growth chart.

8. MAINTENANCE AND PROMOTION OF HEALTH OF MOTHERS AND CHILDREN

TOPICS

Maintenance and Promotion of Health of Mothers and Children

LEARNING OBJECTIVE

Health promotion refers to activities that increase well-being and enhance wellness or health (Pender, Murdaugh, & Parsons, 2006). These activities lead to actualization of positive health potential for all individuals, even those with chronic or acute conditions. On completion of this assignment you will be able to :

- Reduction of maternal mortality and morbidity
- Promotion of reproductive health.

Women are expected to play a very important role in promoting health and development of the country.

So health of the mother is the vital factor of the nation.

The socio-economic, environmental and cultural factors and the consequent poverty, ignorance, illiteracy and malnutrition are considered to be major contributors to this dismal health status of women. Neglect of women by society and the lack of their access to quality antenatal care, essential obstetric services cause maternal mortality and morbidity.

Effective antenatal care of the mothers during pregnancy to protect, promote health of the mothers and child.

Protection and maintainers of the health of the mothers during childbearing age of 14-45 yr.) is only improving the health of mothers and children we can improve the health of total population.

COMPONENTS OF HEALTH PROMOTION / HEALTH MAINTENANCE VISITS

Nutrition

Nutrition is a vital part of each health supervision visit. It makes important contributions to general health and fosters growth and development. Include observations and screening relevant to nutritional intake at each health supervision visit. Eating proper foods for age and activity ensures that children have the energy for proper growth, physical activity, cognition, and immune function. Nutrition is closely linked to both health promotion and health maintenance.

Physical Activity

Physical activity provides many physical and psychological health benefits. However, there is growing disparity between recommendations

and reality among most of our children. Research by the Centres for Disease Control and Prevention (CDC) using the Youth Media Campaign Longitudinal Survey (YMCLS) of parents and children found that 61.5% of 9- to 13-year old children report that they do not participate in any organized physical activity during hours outside of school. While organized activities are important and consistent forms of exercise, not all children can participate or desire to do so. However, 22.6% of these children reported that they do not engage in ANY physical activity outside of school. Parents noted that barriers to physical activities included transportation problems, lack of opportunities in area, expenses, lack of parental time, and lack of neighbourhood safety (CDC, 2003). As the child grows older, insert questions about sedentary activities such as number of hours spent watching television or playing computer games. See if the child plays sports at school or in the community. Ask about activities in a typical day to measure amount of activity.

Oral Health

While oral health may seem to require the knowledge of a specialist, many implications relate to general health care. Oral health is important because teeth assist in language development, impacted or infected teeth lead to systemic illness, and teeth are related to positive self-image formation. Children are affected by tooth decay and pain that interfere with activities of daily living such as eating, sleeping, attending school, and speaking. Health promotion to dental health by teaching about oral care and access to dental visits should be done. Health maintenance activities relate to prevention of caries and illness related to dental disease.

Eye and Vision

Eye exams for children are extremely important, because 5 to 10 percent of preschoolers and 25 percent of school-aged children have vision problems. Early identification of a child's vision problem can be crucial because children often are more responsive to treatment when problems are diagnosed early.

Infants should have their first comprehensive eye exam at 6 months of age. Children then should have additional eye exams at age 3, and just before they enter the first grade — at about age 5 or 6. For school-aged children, an eye exam every two years is recommended if no vision correction is required. Children who need eyeglasses or contact lenses should be examined annually or as recommended by the optometrist.

Mental and Spiritual Health

Mental and spiritual health is important concepts to address in health promotion and health maintenance visits. Parents can be encouraged to

keep a record of mental health issues to bring to health supervision visits. This helps them understand that the healthcare professional is willing to partner with them to assist in dealing with mental health. Suggest topics such as child and parental mood, child temperament, stresses and ways that family members manage stress, or sleep patterns. Be alert for signs of depression, stress, anxiety, and child abuse/neglect. Both health promotion and health maintenance goals related to child and family mental health should be established. Health promotion goals relate to adequate resources to meet family challenges, protective factors such as involvement in extended family and the community. Teaching stress reduction techniques such as meditation, relaxation, and imagery, as well as providing resources for yoga or other techniques, is helpful. Health maintenance goals relate to prevention of mental health problems.

The spiritual dimension is a connection with a greater power than that in the self, and guides a person to strive for inspiration, respect, meaning, and purpose in life (Murray, Zentner, Pangman, & Pangman, 2005). Spiritual health is seen in the large context as those entities that provide meaning in life.

MAINTAINER PROMOTION OF THE HEALTH OF THE MOTHER

Maternal health education comes, most important on :

- Primary health care.
 - Home resource food education, clean drinking water sanitation.
 - Prevent malnutrition
 - Self care of health, awareness of risk of pregnancy and labours
 - Care of new born
 - Advantage of breast feeding
 - Immunization
 - Oral rehydration therapy
 - Contraception.
3. Promotion of family planning to control the number of children, and spacing of births.
4. Dietary supplementation including correction of anaemia.
- Regular antenatal checkup
 - Immunization against maternal tetanus
 - Early serving of high-risk pregnancy and its referral to specialist centre
 - Prevention of infection and hemorrhage
 - Treatment of medical condition
 - Prevention of complication e.g. elapsed

- High risk pregnancy can be identified
- Clean delivery practice
- Provision of local-trained female health workers
- Regular screening and monitoring throughout pregnancy
- Provision of medical, nutritional, and social services.

MOUNTAINOUS AND PROMOTION OF THE HEALTH OF THE CHILD

- Foetal health promotion by mother's health promotion.
- Birth of pre-term and growth-retarded baby is prevented.
- Foetal well-being is assessed.
- Birth asphyxia is minimized.
- Protect newborn against tetanus of 3 months.
- Control of neonatal infections.
- High risk factors can be identified e.g. malformation, pre-term, and growth retardation, malpresentation.
- Better control of communicable disease
- Advances in chemotherapy, antibiotics and in vaccines
- Better nutrition.
- Better breast-feeding practice.
- Improvements in the standard of living.
- Safe water and basic sanitation- mothers education.

PERIODIC HEALTH CHECK-UP

Periodic health check-ups and screenings with health care provider are key to maximizing the chance of living a longer and healthier life. Not only can they help prevent health problems before they start, but regular check-ups may also help discover health problems early enough to increase chances of successful treatment and recovery. Regular health checkups can help to identify the risk factors for common as well as rare diseases, both acute and chronic. Getting examined periodically can help in the detection of diseases that could be asymptomatic in the initial stages.

ENCOURAGE HEALTH PROMOTION ACTIVITIES

Families often need health education and counselling to promote healthy behaviours in their own child. Examples of focused health education and counselling may be information about environmental control to limit sedentary behaviours, dietary changes to increase fruit and vegetable intake, and switching to low-fat dairy products. Patient education and counselling are most effective when the family

understands the relationship between a behaviour change and the resulting health outcome. When identifying that a family would benefit from a change in health behaviour, consider the family members' perceptions about the health change, barriers and benefits to change, and plan interventions to enhance the possibility for change.

Steps in promoting patient education and counselling include :

Clarifying learning needs of child and family

Setting a limited agenda

Prioritizing needs with family

Selecting-teaching strategy (explaining, showing, providing resources, questioning, practicing, giving feedback)

Evaluating effectiveness (Green & Palfrey, 2002)

9. MONITORING MCH RELATED SCHEMES AND PROGRAMMES

TOPICS

Monitoring MCH Related Schemes and Programmes

REVIEWING RECORDS AND REPORTS

Records are written information kept at the health facility. These include information on clients, services, administrative matters and area coverage profile. Reports are written information communicated by the health facility to other levels of services. Reports are usually taken from records.

Good records and reports reveal what is taking place in the health facility. Good records and reports should be factual, available when needed and relevant. Records and reports can be standardized with the use of forms. Standard records and reports are easier to follow, consolidate and analyze.

VISITS

Visiting a health facility is probably the best way of monitoring activities and performance. It reinforces the importance of the health staff's work and their achievements. A visit provides the opportunity to verify records and reports and discuss problems and achievements that are not reflected in records and reports. A visit also provides an opportunity to make actual observations of staff performance and/or the facility set-up.

A good monitoring visit should be well planned, have a definite purpose, not be hurried and give the staff immediate feedback. It should make things better and not only find out how things are.

CHECK-LISTST

Check-lists are guides for looking at elements in the programme activities that are crucial to the attainment of objectives and targets.

Check-lists help ensure that monitoring is carried out objectively and productively. They ensure uniformity of information and facilitate faster recording and evaluation.

Check-lists should be simple and relevant.

MONITORING CHECK-LIST:

MCH monitoring check-list

Health station or staff : Date of visit :

Monitoring criteria	Rating Grid				Score
	1	2	3	4	
Upkeep of clinic	poor	fair	good	very good	
Prenatal coverage (%)	0-25	26-50	51-75	76-100	
Tetanus immunization coverage (%)	0-25	26-50	51-75	76-100	
Birth attendance (%)	0-25	26-50	51-75	76-100	
Full child immunization coverage (%)	0-25	26-50	51-75	76-100	
New FP acceptor (%)	0-25	26-50	51-75	76-100	
Under-five care follow-up (%)	0-25	26-50	51-75	76-100	
Status of drugs and supplies	not available	insufficient	sufficient for 1-2 mos.	sufficient for 2-3 mos.	
Completes tasks promptly	never	rarely	often	always	
Performs tasks correctly	never	rarely	often	always	
Obtains relevant client information and records it correctly	never	rarely	often	always	
Relates well to clients	never	rarely	often	always	
Infection control measures	poor	fair	good	very good	
Total					
Average					

To fill up the score write the equivalent numerical rating per criteria in the last column.

Percentages on the rating grid refer to set targets.

Performance Rating based on average score

(1) Poor (2) Fair (3) Good (4) Very good

Remarks:

Supervisor's signature : -----

STAFF MEETINGS

A meeting provides an opportunity to report and discuss problems and solutions, give instructions and updates and share experiences among the members of the health staff. However, it may not be the best time for shy people to talk about their problems and experiences.

A good staff meeting should have a clear agenda, should be well moderated and should achieve the purpose of conducting it.

SUPERVISING

Supervision is an overall range of measures to ensure that personnel carry out activities effectively and become more competent in their work.

The objective of supervision is to help, support and provide direction to the health staff to attain the best performance possible.

Supervision entails personal contact. Providing staff with procedural manuals, having them undergo training or giving written instructions will not ensure that a task will be done well.

IMPORTANT POINTS TO CONSIDER

The staff member

- Know the staff member's qualification and job function.
- Establish rapport.
- Provide a relaxing and comfortable environment.
- Encourage staff to ask questions and make suggestions.
- Respect feelings, ideas, and suggestions.
- Listen and understand.
- Involve staff in planning activities and schedules.
- Resolve conflicts.

The work environment

- Provide a comfortable workplace.
- Ensure that resources needed to accomplish work are available.
- Provide clear instructions and procedures to follow.
- Ensure a reasonable workload.

- Know the health and related profile of the area the supervisee is serving.
- Enhance cooperation, communication and open exchange of ideas in the working environment.

The supervisory system

- A plan for supervision should be developed.
- Regular supervisory visits and meetings should be organized and set.
- Supervisory guidelines and protocols should be set and observed.
- Programme objectives, strategies, operational targets, workplans, monitoring and evaluation reports should be regularly reviewed and correlated with supervision.
- Supervision should be selective and appropriate indicators for monitoring and evaluation should be used. Staff performance may have many indicators. Only indicators that are critical in attainment of programme goals and which can be managed at one time should be chosen.
- Tools for supervision should be developed and used.

PLANNING AND PREPARATION

- Planning and scheduling of supervisory visits and meetings should be done with the staff concerned.
- MCH reports and related documents, especially on areas of supervisory interest, should be reviewed.
- Queries and problems that were not addressed during a previous supervisory visit should be addressed during the next visit.

THE SUPERVISION.

- Supervisory encounters should not be done in a hurry. Enough time should be allotted to discuss concerns with staff.
- If there are problems, staff should be helped to find ways to resolve them. The focus should be on what can be done and not on finding blame.
- On-the-job training should be done if needed.

RECORDS AND/OR REPORTS

The following information should be contained in the report:

- the contact person;
- the purpose of the visit;
- findings and observations;
- actions done;

- unresolved problems requiring higher level intervention;
- recommendations; and
- date of next visit.

Keeping a monitoring and supervisory logbook is important. It will serve as a basis for staff development. To overcome a work deficiency, a health worker needs help and support that is especially responsive to his or her requirements. If the same work deficiencies are observed among most of the health staff, a general measure may be opted.

STEPS IN SUPERVISION

Set Individual Performance Targets

Performance targets will serve as a guide to the staff member on what is supposed to be done. They are more specific than the job description and emphasize programme strategies and activities that need to be strengthened.

Performance targets also serve as a guide to the supervisor. They help to identify what kind of support is to be extended to the staff member, and clarify what to look for when monitoring performance.

Performance targets should be set with the staff member concerned.

Based on the job description and discussion with the staff member, the tasks and deadlines for completing the tasks should be outlined. Ensure that the list adequately covers the main job functions and responsibilities.

Example of performance targets of a health centre midwife:

- Identify pregnant women in the community who do not use health centre services, visit two women each week at home and encourage them to seek prenatal care services.
- Every Tuesday afternoon, visit two pregnant women who did not return for their scheduled prenatal visit.
- Every Thursday afternoon, visit two couples who failed to come back to the health centre for their scheduled family planning follow-up.
- Keep accurate records of daily activities including referrals.
- Update inventory of drugs and supplies at the end of each month.
- Submit the monthly activity report to the MCH supervisor during the first week of each month.

MONITOR PERFORMANCE

Monitoring will reveal if the performance targets are being accomplished well and on time.

Always discuss with the staff member his or her performance. Poor or lack of performance indicates problems. Problems can still occur even if performance is good. Try to find out if there were difficulties encountered while performing the tasks.

If there is a problem find out the following:

- What exactly makes up the problem?
- When did it start?
- Who is involved?
- What is the cause?

Solve Problems and Ease Difficulties

Understanding the nature of a problem is crucial if it is to be solved.

Assess the conditions that may have affected performance.

- Does the staff member fully understand what is expected to be done?
- Did the staff member receive adequate guidance on how to perform the tasks?
- Is the workload too much?
- Are resources not enough?
- Is the staff member comfortable in the workplace?
- Does the staff member have the necessary knowledge, skills and attitude to perform the tasks?
- Does the staff member have personal problems that are affecting their work?

Discuss with the staff member problems and difficulties and how to overcome them. Work out solutions. Provide support as appropriate.

EXAMPLE OF HOW TO SOLVE A PROBLEM:

Monitoring revealed that the midwife at Malibago health centre was achieving the performance target of visiting two women every week at home to encourage them to seek prenatal care. Records showed, however, that only a few of the women visited actually went to the health centre for prenatal care.

The women were interviewed and it was found that the midwife was very encouraging when she visited them at home.

What discouraged them from going was that they thought iron tablets were to be given at no cost, but instead they were asked to pay for them.

A look at the health centre drug inventory showed that the health centre did not get regular iron supplies from the district hospital. The

midwife, to ensure regular iron supply, would ask her husband who worked in the town and who came home every weekend, to purchase them. She then asked women to pay so that supplies could be replenished, not knowing that they were available at the district hospital.

Further checking on why iron tablet supply was not regular and adequate in Malibago health centre revealed that it was often missed out because it was far away and the road was dangerous, especially when it rained. The district health office supply van could not always get through.

Discussion between the supervisor and the midwife clarified the problem. A meeting between the women, the supervisor and the midwife was held. The midwife, with the help of the supervisor, explained the circumstances behind the problem. One woman volunteered to pick up the iron tablets as well as the other health centre supplies every month. The other women in turn suggested contributing a little amount each month towards the cost of transportation.

The supervisor also started to check the availability of supplies and materials regularly both at the district hospital and at the health centres.

During the following months, more women came to the clinic for prenatal care.

PLANNING MATERNAL AND CHILD HEALTH ACTIVITIES

Planning and Organizing MNH Services

All facilities providing MNH services should have a mother-and-newborn-friendly environment. Dignity and safety (privacy and choice) of clients should be ensured. Staff deputed at such facilities should adhere to clinical protocols/standards of service delivery and ensure infection prevention measures.

This section provides an outline for planning infrastructure, equipment, drugs and supplies, record keeping, reporting and monitoring. It is the responsibility of the facility in-charge and service providers to ensure that the institution and its premises remain clean, safe and client-friendly. A mother and baby friendly environment to be ensured. Health staff should be polite, courteous and respectful in behaviour towards their client; equipment has to be accessible and functional and subject to checks during every shift of staff duty; drugs and consumables to be made available 24x7; assured referral linkages have to be established; and daily rounds conducted by facility managers to identify gaps and bottlenecks and address these on priority basis.

A nodal officer should be designated at every institution for assuring quality of services. All staff including support staff should be oriented and trained on relevant protocols including infection prevention. Audit of sample prescriptions/case sheets should be a weekly exercise by faculty members or treating physicians to ensure rational treatment as per clinical standards. A robust grievance redressal system should also be put in place.

Mother-and-baby-friendly environment

Critical steps

- Respecting the right of every mother and baby to stay safe in the facility and with dignity
- Designing the infrastructure for easy mobility and comfortable stay
- Training the service providers for necessary behavioral and technical skills
- Providing integrated maternal newborn and child health services in accordance with protocols with required competency

- Practice of infection prevention and bio-medical waste management as per the guidelines
- Establishing assured referral linkages
- Monitoring quality of service delivery and establishing a process for improvement of quality
- Ensuring functional grievance redressal system both for client and service providers
- Assessing client satisfaction periodically
- For smooth planning at each level of facility, the plan should take care of infrastructure, equipment, drugs and supplies, record keeping, reporting and monitoring.

Infrastructure

While planning for infrastructure, planners may face two situations:

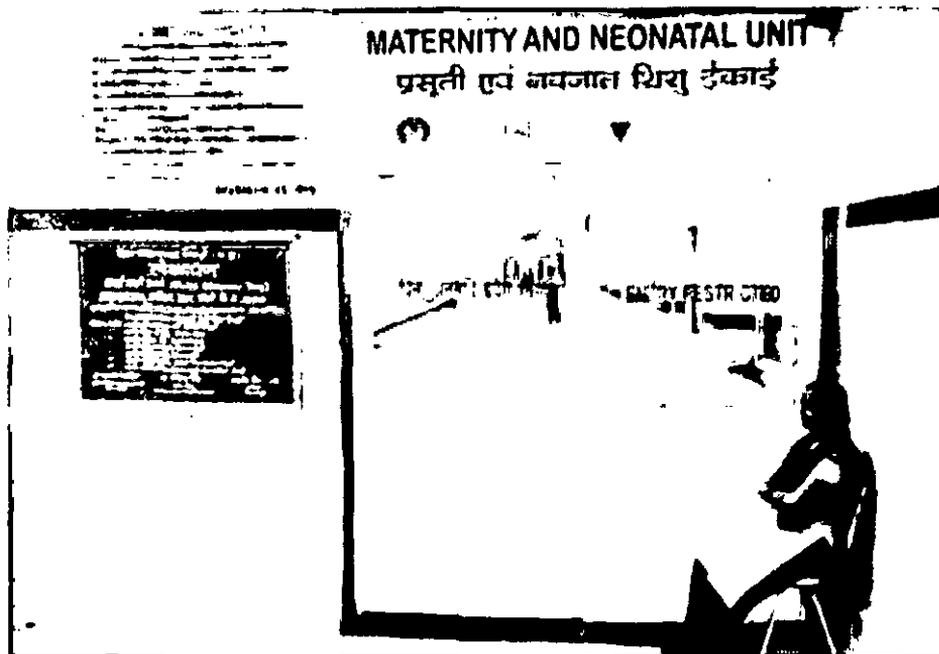
- 1) To improve existing infrastructure; or
- 2) To create additional infrastructure particularly where bed occupancy is more than 70%.

Improving existing infrastructure

Although, it may not be always possible to ensure the recommended layouts and infrastructure within an existing facility, it is still essential to make the existing facility as mother- and baby-friendly as possible. Planning therefore cannot be based on a one-size-fits-all, and will differ from facility to facility as per the local situation. Some of the critical steps to follow are to:

- Perform a need assessment and identify the gaps by observing client flow and time taken for actual service delivery from the time clients report to the registration or emergency.
- Plan to address gaps to improve service delivery and minimize the third delay.
- Relocate/redesign/rearrange available area/rooms for optimal utilization keep in mind client safety, privacy and comfort. (On how to optimize infrastructure and to understand the desirable flow of client and service delivery, refer to the plan for new MCH wing.)

- Repair and refurbish facility with appropriate tiling, flooring, roofing and ventilation.
- Ensure privacy, create anterooms before aseptic zones such as LR, OT, obstetric ICU, SNCU, etc.
- Ensure availability of 24x7 running water supply, uninterrupted power supply (along with power back-up), and clean toilets (separate for male and female).
- Attention should be given for improving the ambience of the premises, waiting area and other facilities for the clients.



Creating new infrastructure

While creating new infrastructure, the criteria given below must be used:

1. Functionality of the facility
2. Delivery point
3. Bed occupancy
4. Services being delivered



Table 4: Essential components for creating new infrastructure

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Criteria delivery point (for detail ref. to annexure 1) and bed occupancy	<ul style="list-style-type: none"> • Functioning as delivery point and increasing load of delivery 	<ul style="list-style-type: none"> • Bed Occupancy: >70%, increasing load of delivery and existing infrastructure has been optimally utilized 	<ul style="list-style-type: none"> • Same as in Level 2
Premises	<ul style="list-style-type: none"> • Neat and clean outer surroundings, with adequate signage • Boundary wall with a gate • Sign board with facility name, Glow sign make it visible from a distance. Board should have name of the institution, type of institution with NRHM a state logos • Direction boards leading to the different parts of facility • Board indicating routine functioning hours, names of ANM and other staff with their contact numbers • Emergency phone no. of ANM and vehicle drivers/call centre for referral transport • Adequate lighting and ventilation • Bio-medical waste pits are constructed, to be away from the water source (follow the IMEP guidelines) 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> • Controlled entry and exit • Approach road within the facility is paved with interlocking blocks • Garden clean, well maintained • Covered drainage • Leveled ground without water logging. • Parking space for vehicles of staff and clients • Exclusive slots for parking of ambulances/referral transport and driver's room • Covered porch where the ambulance can de-board the patient • Wheel-chair and patient stretcher are available at the entrance of the facility • Entrance has a ramp for easy barrier free movement of wheel-chair/ stretcher 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> • Clients have easy access to emergency area • Signage in vernacular local language is displayed to guide client to various departments in the facility • Canteen (may be outsourced)

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Waiting Area	<ul style="list-style-type: none"> ● Seating arrangement for clients and attendants in proportion to client load ● Display of doctors' names with days and duty rosters 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Covered space, water cooler and drinking water ● Display of Citizen Charter, display of IEC and EDL ● Display of staff on duty with timing ● Directions to various departments and room numbers displayed clearly ● Functional toilets for staff, clients and patients attendants 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> ● Public address system, LCD/ Television for IEC ● Suggestion box which is opened on a regular basis ● A board next to suggestion box should display suggestions received and action taken ● Help desk/ grievance redressal system ● Token system and electronic display for high caseload facility
Registration Counter	<ul style="list-style-type: none"> ● Availability of register ● Mother and Child Protection (MCP) card and Safe Motherhood (SM) booklet with referral slips 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Availability of space with adequate furniture ● Counter has a central register, OPD slip, admission slip ● Computerized registration for high caseload facilities ● Serves multiple purposes like registration, assistance and inquiry counter 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> ● Should be located near OPD ● Adequately furnished room ● Triage (segregation of OPD and emergency clients)

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Emergency	<ul style="list-style-type: none"> ● Assured referral after basic management ● Display of technical protocols 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Designated room with emergency drug tray, oxygen, suction facility, adult and neonatal resuscitation equipment, radiant warmer, consumables and disposables, display of resuscitation protocols, display of duty staff roster with timings 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> ● Separate emergency facilities for maternity cases at DH ● Casualty duty MO, emergency beds ● Easy access to delivery room and OT ● Provision for security guards and other support staff ● Separate room/space for injection, dressing, etc.
OPD	<ul style="list-style-type: none"> ● Seating arrangement for staff and patient, examining facility – examination table with foam mattress, bedsheet and pillow, screen /curtains for privacy with foot step ● Display of working hours and duty roster of staff. ● Display of technical protocols ● Privacy for clients ● Hand washing facility 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Drinking water facility ● Toilets 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> ● Separate OPD for maternity cases at DH co-located with waiting area ● Dedicated ANC, PNC and FP counseling rooms ● Air Conditioner ● OPD attendants/ward boy ● Help desk ● Electronic display of token number
Pharmacy	<ul style="list-style-type: none"> ● Essential medicines for antenatal, intranatal, postnatal, newborn and child health as per the level of the facility is required to be kept 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Located near OPD ● Area is adequate to accommodate 5-10% of the OPD clients 	<p>Same as in Level 2</p>

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Pharmacy		<ul style="list-style-type: none"> ● EDL is displayed available including drugs for medical abortion, contraceptives including condoms ● Cupboards, pigeon-holes to keep tablets, bottles/ envelopes for medicine distribution ● Drugs to be kept according to the date of expiry ● Stock register to be maintained 	
Clinical Laboratory	<ul style="list-style-type: none"> ● Material needed for mandated lab test at each level ● Haemoglobinometer (Sahilis kit) with reagents and lancet ● Strips for testing urine albumin and sugar ● Reagents such as sulphuric acid, acetic acid, Benedict solution ● Specimen collection bottle (in case testing strips are not available) ● Test-tubes, holder, test-tube stand, match box, spirit lamp ● RDK for malaria testing 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> ● Trained laboratory technicians ● Lab should be operational during OPD hours and emergency lab facility available after routine working hours ● Lab test reports reach a centralized OPD counter directly ● Lab is located near OPD area and should have a toilet nearby ● Lab should have marble/stone top platform and wash basin with running water supply ● Critical equipment – sequencing of the above red content ● Semi Auto analyzer ● Infection prevention protocols to be ensured 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> ● USG facility/outsourced should have a declaration displayed: sex determination of the foetus is not done at this facility ● Autoanalyser

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Labour Room	<ul style="list-style-type: none"> As per the number of delivery tables envisaged. Each delivery table and medicine trolley will require at least 10x10 ft space Windows with smoked glass, well lighted, draught-free environment, interior tiling of walls and floor Labor table (min 2) with mackintosh, Kelly's pad and buckets Stepping stool for every labor table; light for conducting deliveries; 4 trays namely delivery, baby, medicine and emergency tray NBCC Equipment for autoclave/sterilization Wall clock Colour-coded bins Tub for 0.5% chlorine solution 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> Size of LR as per the case load; stainless steel top labour table with foam mattress, sheet and pillow as per case, load changing area and buffer zone, utility room, attached hand washing area and toilet with running water supply Air conditioning NBCC with adequate number of radiant warmer as per case load Proper IMEP including waste management 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> As per case load (Min 4) labour tables Central supply of oxygen/oxygen concentrator and suction facility Air conditioning, functional telephone connection, ultrasound machine, foetal monitor, pulse oxymeter, etc.
ANC/PNC Wards	<ul style="list-style-type: none"> Two beds Privacy Foetoscope, newborn thermometer, weighing scale (Paediatric and adult), BP apparatus, disposable sterile syringe and needles, puncture proof box, consumables (cotton, gloves) Safe drinking water Wall clock 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> Adequate no of beds as per delivery load utility room, washrooms, doctors and nurses duty room, room for support staff, display of technical protocols and IEC material 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> Separate ANC/PNC and post-operative wards, nursing stations with glass partitions, small pantry, LCD/TV

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
--	---------	---------	---------

OT

Minor OT:

- Stainless steel top adequately wide table, foot rest, shadow less lamp
- Air conditioning, floor and wall tiling, slab with granite top, hand washing area with elbow operated handle
- Cupboard, colour-coded bins and tub for 0.5% chlorine solution
- Drug and dressing tray
- NBCC

Same as in Level 2, plus the following:

- Major OT: to do C-section and other related surgeries
- DH should have separate OBG and FPOT for sterilization
- OT table (Hydraulic), NBCC, Boyle's apparatus, attached scrub area, separate routine and emergency tray, anaesthesia tray, sterilized equipment for each surgery, neonatal tray,
- Drums for sterilized consumable like cotton, gauze, etc, receiving/pre-operative area, changing area and buffer zone, attached recovery room with beds, doctors and nurses duty room, utility room, attached hand washing area
- Pre-sterilised set for each delivery case (including newborn care and for resuscitation)
- Central nursing station with glass walls for observing all patients
- Attached Multi Para monitors with each bed
- A central observation area with monitors
- Round the clock doctors and nurses for close monitoring of patients

Obstetric ICU
(6-8 beds) at
district hospital

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Obstetric ICU (6-8 beds) at district hospital			<ul style="list-style-type: none"> • Separate room for the new born along with the patient attendant for feeding/nursing • Proper IMEP protocols including waste management
Toilets	<ul style="list-style-type: none"> • One toilet in or near the labour room with supply of running water • Appropriate lighting 	<p>Same as in Level 1, plus the following:</p> <ul style="list-style-type: none"> • Attached toilet with LR • Separate toilets for the clients visiting OPD and admitted patients • These should be proportionate to the client load • Cleaning staff is available round the clock • All toilets have running water, area to wash hands, door-latch and good lighting 	Same as in Level 2
Other Rooms		<ul style="list-style-type: none"> • Training/meeting room where trainings, orientation, meetings are held • Duty rooms for doctors and nurses 	<p>Same as in Level 2, plus the following:</p> <ul style="list-style-type: none"> • Counselors' room • Store room – wall mounted cupboards for sterile gowns, leggings, gynae sheets and delivery trays, wall mounted cup boards for sterile drums, medicines

Essential components for creating new infrastructure	Level 1	Level 2	Level 3
Infection Prevention	<ul style="list-style-type: none"> • Hand washing as per protocol • Use of disposable gloves, use of disinfectants, clean sheet, sterile scissor for cord cutting, sterilized cord ties, in facility – boiling of instruments and colour coded bins 	Same as in Level 1, plus the following: <ul style="list-style-type: none"> • Autoclave, colour coded bins 	<ul style="list-style-type: none"> • Same as in Level 2
Waste Management	<ul style="list-style-type: none"> • Hub-cutter, puncture proof boxes for needle disposal, deep burial of placenta • Management of liquid waste(refer to the chapter of Infection Prevention 	Same as in Level 1, plus the following: <ul style="list-style-type: none"> • Deep burial of placenta and all blood and tissue fluid stained 	Same as in Level 2, plus the following: <ul style="list-style-type: none"> • Arrangement for BMW management and disposal

Maternity Wing in L3 Facility

This section deals with organization of 'Maternity Wing' with minimum standards of care which should be observed in a facility. A Maternity Wing comprises:

Delivery unit, which includes:

- Receiving area
- Examination room
- Pre-delivery room (1st stage area)
- Delivery (Labour) room both septic and aseptic, with NBCC (2nd-3rd stage)
- Post-delivery observation room (4th stage area)

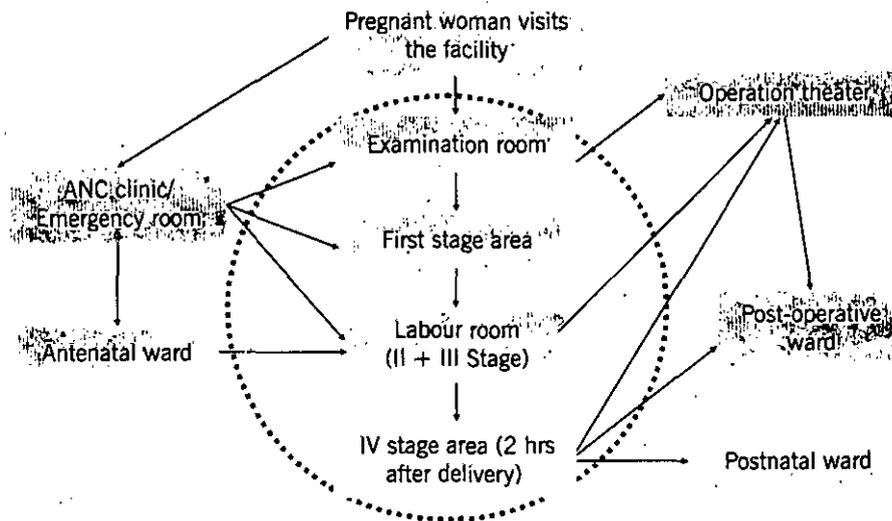
Wards: Antenatal, Postnatal and Post-operative

Receiving Area

This is the place where all pregnant women including those in emergency situation are received. The pregnant woman's BP, weight, etc. are noted. Records and registers are filled and a case sheet is prepared after the examination in the Examination Room. Relevant registers and records must be kept in the receiving area.

Any woman coming to the Receiving Area has to be quickly assessed for signs of acute emergencies, danger signs or a stage of full dilatation with imminent delivery. Initial/emergency management of such cases will be done in the Examination Room. Then the woman is sent to the appropriate area for further management.

Figure 4: Flow of a client within the Maternity Wing



Examination Room

This is a place where adequate privacy with curtains between examination tables should be maintained. It is a well-lit room with examination tables and enough space for movement of the pregnant woman/patient and also the examining doctor. The room also has the following equipment and consumables for conducting general, abdominal and vaginal examination.

Table 5: Examination Room client-flow and equipment

Client-flow	Equipment and accessories
<ul style="list-style-type: none"> ● Initial examination of all women who are in labour or in any other routine/ emergency situations, would be conducted here. ● On the basis of her initial assessment, the woman should be transferred either to the ward or home, if she is in false labour pains. A few hours of observation are advisable to confirm false labour. ● If she has good uterine contractions but cervical dilation is less than 4 cm and she is not in the active phase of labour, she will be sent to Pre-delivery Waiting room for a close observation of the progress of labor. ● She will be sent to the labour room if in active phase of labour i.e. cervical dilatation = or > 4 cms. ● In complicated cases, requiring emergency management, treatment will be initiated there itself before transferring to obstetric ICU. If C- section is required, the woman will be sent to OT. Other cases, will be transferred as per the situation e.g. to Eclampsia Room or Septic Room or the Labour Ward. 	<ol style="list-style-type: none"> 1. Wheelchair and/or stretcher 2. Examination table with foot step and curtain for privacy 3. Foetoscope/Doppler 4. Table and chair for doctor 5. BP apparatus with stethoscope 6. Thermometer 7. Wall clock 8. Adult weighing scale 9. Measuring tape 10. Emergency drug tray 11. Hub cutter 12. Puncture proof container 13. Color coded bins 14. Partograph 15. Cetrimide swabs 16. Disposable gloves 17. Records / registers 18. Refrigerator 19. Utility gloves 20. MCP card, Safe motherhood booklet 21. IUCD Client Card 22. Sterilized swabs and instruments 23. Washbasin 24. 0.5% Chlorine solution and a tub; 25. Examination tray 26. Delivery tray in case of emergency 27. Bucket and Kelly's pad 28. IV stand 29. Scissor 30. For communication – telephone facility

Pre-delivery observation room (1st stage area)

After initial examination, the pregnant woman with good uterine contractions but cervical dilation still less than 4 cm that is not in active phase of labour will be sent to Pre-delivery room area for close observation. The woman should change into a clean gown.

Table 6: Pre-delivery observation room criteria

Pre-delivery observation room criteria	Equipment and accessories
<ul style="list-style-type: none"> ● The number of beds for this area will depend upon the delivery load of the facility. ● She may be allowed to bring a birth companion (preferably a relative but certainly not ASHA nor MAMTA/ YASHODA), for her emotional support. ● Ensure administration of antenatal corticosteroid for all pre-term deliveries 	<ol style="list-style-type: none"> 1. Foetoscope/Doppler 2. BP apparatus with stethoscope 3. Thermometer 4. Wall clock 5. Color coded bins 6. Cefrimide swabs 7. Disposable gloves 8. Bed head tickets with attached Partograph 9. Utility gloves 10. Washbasin 11. IV stand 12. Sterilized instruments

Post-delivery observation room (4th stage area)

Mother and baby must be observed for 2 hours after delivery before shifting to the ward. This area can be planned along side the Pre-delivery observation area.

Delivery (Labour) room

A pregnant woman will go to the Delivery/Labour room if she is in active phase of labour, i.e. cervical dilatation = or > than 4 cm. Essential services in Labour room:

Conducting normal delivery

- Plotting partograph
- Identifying and managing complications
- AMTSL
- ENBC including newborn resuscitation

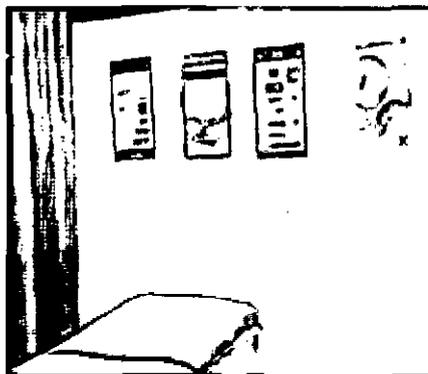
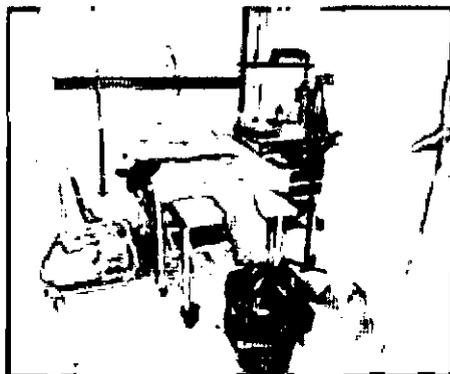


Table 7: Labour room equipment and accessories

Labour room equipment and accessories

Every Labour Room should have the following:

1. Labour table with mattress, sheet, pillow (numbers as per case load), Macintosh, Foot-rest
2. Brass V drape to collect blood and amniotic fluid
3. Wall clock with seconds hand
4. Wall mounted thermometer
5. Suction apparatus
6. Equipment for adult resuscitation
7. Equipment for neonatal resuscitation
8. Delivery trolley
9. IV drip stand
10. Screen/Partition between two tables
11. Stool for birth companion
12. Lamp – wall mounted or side
13. Autoclave drums for instruments, linen, gloves, cotton, gauge, threads sanitary pads
 - a. Autoclaved delivery set for each delivery
14. Refrigerator
15. Sphygmomanometer, adult and newborn thermometer and newborn weighing machine
16. Consumables like gloves, apron, cotton, thread, gauze, sanitary napkins, catgut, IV drip sets, needle, cord clamp, medicines (injectable, oral and parenteral, leucoplast etc.
17. Pulse oxymeter
18. Sterilizer
19. Oxygen cylinder
20. Oxygen concentrator
21. Partograph
22. Labeled plastic jars for drugs and injectables with date of expiry written on them against each drug
23. Coloured bins for bio medical waste management
24. Hub cutter
25. Puncture proof container
26. Plastic tubs for 0.5% Chlorine solution
27. Intranatal Protocols (AMTSL , PPH etc.)
28. Wheel chair/patient's trolley
29. 7 Trays: Delivery tray, Episiotomy tray, Medicine tray, Emergency drug tray, Baby tray, MVA tray, PPIUCD tray (see content below)
30. Hand-washing area and toilet for the admitted clients
31. Foeto-scope/Foetal Doppler
32. Stethoscope,
33. Display of SBA quality protocols, and shadow less lamp.
34. Mosquito Repellent

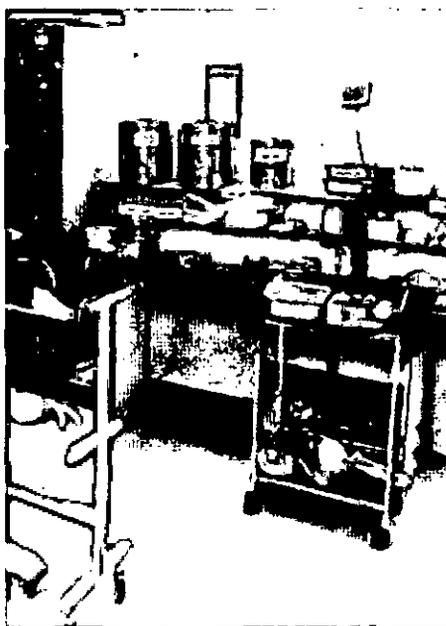
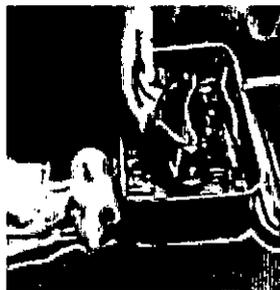


Table 8: Trays to be kept In Labour Room

1. **Delivery tray:** Scissor, Artery forceps, Sponge holding forceps, Speculum, Urinary catheter, Bowl for antiseptic lotion, Kidney tray, Gauze pieces, Cotton swabs, Sanitary pads, Gloves.
2. **Episiotomy tray:** Inj. Xylocaine 2%, 10 ml disposable syringe with needle, Episiotomy scissor, Artery forceps, Allis forceps, Sponge holding forceps, Toothed forceps, Thumb forceps, Kidney tray, Needle holder, Needle (round body and cutting), Chromic catgut no. 0, Gauze pieces, Cotton swabs, Antiseptic lotion, Gloves.
3. **Baby tray:** Two pre-warmed towels/sheets for wrapping the baby (Baby should be received in a pre-warmed towel. Do not use metallic tray.), Mucus extractor, Bag and mask, Sterilized thread/cord clamp, Needle (26gauge) and syringe(1ml.), Inj. Vitamin K, Gloves.
4. **Medicine tray*:** Inj. Oxytocin 10 IU (to be kept in fridge), Inj. Gentamicin, Inj. Vit K, Inj. Betamethason, Inj. Hydralazine, Cap Ampicillin 500 mg, Tab. Metronidazole 400 mg, Tab Paracetamol, Tab Ibuprofen, Tab B complex, Tab. Misoprostol 200 micrograms, Tab. Nifedipine, Tab. Methyldopa, IV fluids - Ringer lactate, Normal Saline, Magnifying glass.



(* - Nevirapin and other HIV drugs only for ICTC and ART Centres)

5. **Emergency drug tray:**** Inj. Oxytocin (to be kept in fridge), Inj. Magsulf 50%, Inj. Calcium gluconate-10%, Inj. Dexamethasone, Inj. Ampicillin, Inj. Gentamicin, Inj. Metronidazole, Inj. Lignocaine-2%, Inj. Adrenaline, Inj. Hydrocortisone Succinate, Inj. Diazepam, Inj. Pheneraminemaleate, Inj. Carboprost, Inj. Pentazocin chloride, Inj. Promethazine, Inj. Betamethasone, Inj. Hydralazine, IV fluids- Ringer lactate, normal saline, IV sets with 16-gauge needle at least two, IV Cannula, Vials for blood collection, Syringes and needles, Tab. Nifedipine, Tab. Methyldopa, Suction catheter, Mouth gag.

(** - only for L2, L3 facilities)

6. **MVA/ EVA tray:** Gloves, Speculum, Anterior vaginal wall retractor, Posterior vaginal wall retractor, Sponge holding forceps, MVA syringe and cannulas, MTP cannulas, Urinary catheter, Small bowl of antiseptic lotion, Sterilized gauze/pads, Cotton swabs, Disposable syringe and needle, Tab. misoprostol.
7. **PPIUCD tray***:** PPIUCD Insertion Forceps, Sym's speculum, Ring forceps or sponge holding forceps, Cu IUCD 380A/ Cu IUCD 375 in a sterile package, Cotton swabs, Betadine solution.

(*** - only for L3 facilities with PPIUCD trained provider)

Disposable masks, caps and gloves should be available in every labour room for use by service providers and for the birth companion.

Similarly, There should be enough number of disposable syringes and needles for injectable drugs

Service area

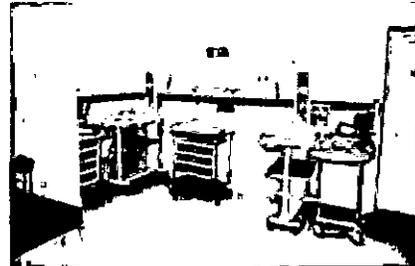
- Every LR should have a demarcated service area for the paper work (recording/ reporting, etc.) which should not be completely segregated from the patient areas, so that the staff on duty can quickly respond to any exigency or the requirements of the women in labour.
- This area should not be used as a store for drugs, consumables, equipment, etc. which can be kept in a separate store as replacement stock. List of consumables required for 100 deliveries is placed at Annexure- 11.
- Although, Oxytocin is the drug of choice for PPH prevention and treatment, it is not always feasible in low-resource settings because it requires refrigeration, sterile equipment for injection and a skilled provider. When Oxytocin is unavailable, use of oral misoprostol (600 micro grams) is recommended.
- For smooth working of the Labour room, one labour table will require 10x10 sq.ft. of space; two labour tables will need 20x20 and so on. Every labour table should have a sleek vertical trolley with space for six trays (as mentioned above in table-8).

Newborn Care Corner

This is MANDATORY for all Labour rooms and obstetric OTs of 'delivery points'.

Essential care at birth

- Resuscitation of newborn
- Provision of warmth
- Early initiation of breastfeeding
- Weighing the neonate
- Inspecting newborn for gross congenital anomalies
- Every labour room and obstetric OT should have an NBCC; with a radiant warmer and a functional bag and mask of appropriate size
- Room should be draught free



Please note that every baby will not need care under a radiant warmer. Only when the following conditions are observed in the mother or baby, then the baby should be put under a radiant warmer for ENBC and, if required, given resuscitation:

- Meconium stained liquor and preterm labour
- Baby not crying and limp/flaccid limbs/floppy baby
- Or as per doctor's advice

Table 9: Equipment and accessories needed at NBCC

Equipment and accessories needed at NBCC

- | | |
|--|---|
| 1. Baby tray | 9. Mucus extractor with suction tube and a foot-operated suction machine NG tubes |
| 2. Pediatric stethoscope (preferable to have a neonatal stethoscope) | 10. Blankets |
| 3. Baby scale | 11. Two clean and dry towels |
| 4. Radiant warmer | 12. Feeding tubes |
| 5. Self-inflating bag and mask–neonatal size (0 and 1) | 13. Empty vials for collecting blood |
| 6. Oxygen hood (neonatal) | 14. Alcohol handrub |
| 7. Laryngoscope and Endotracheal intubation tubes* | 15. HLD/sterile gloves |
| 8. Two set of pencil batteries | 16. Syringe hub cutter. |

* To be available at L-3 facilities.

Table 10: HR, INFresv, Equip and Services required for NBSU and SNCU as per Gol Guidelines

	NBSU	SNCU
Site	FRU/CHC	DH

- | | | |
|--------------|---|---|
| Space | <ul style="list-style-type: none"> ● The stabilization unit should be located within or in close proximity of the maternity ward ● Space of approximately 40-50 sq ft per bed is needed, where four radiant warmers can be kept. ● 2 designated beds in the post natal ward for rooming in facility ● There should be provision of hand washing and containment of infection control ● Floor and walls should be easy to clean | <ul style="list-style-type: none"> ● Each newborn space shall contain a minimum of 100 sq ft (9.9 sq m) of clear floor space, excluding hand washing stations and columns. This 100 sq ft per bed of space should be utilized as follows: ● Baby care area: 50 sq ft per bed ● General support and ancillary ● Areas: 50 sq ft per bed ● General support and ancillary areas: 50 sq ft per bed ● Provision of bed for the mother of out born must be ensured. |
|--------------|---|---|

* Ensure 1 support staff in all the shifts and are extra in morning shift for other duties.

	NBSU	SNCU
Site	FRU/CHC	DH
HR	<ul style="list-style-type: none"> MO/Paediatrician trained in F-IMNCI/paediatrician 1 dedicated nursing staff per shift. Total 4 dedicated staff 	<p>For a 12-bed unit (plus 4 beds for step-down area), the recommended dedicated staffing is:</p> <ul style="list-style-type: none"> Staff Nurses: 10 -12 Pediatrician/ MO trained in SNCU: 3-4 (Pediatrician/MO and staff nurses trained in FBNC Support Staff*: 4, 1
Services	<ul style="list-style-type: none"> Care at birth Provision of warmth Resuscitation Monitoring of vital signs Initial care and stabilization of sick newborns Care of low birth weight Newborns not requiring intensive care Breast feeding and feeding support Referral services 	<ul style="list-style-type: none"> Care at birth, including resuscitation of asphyxiated newborns Managing sick newborns (except those requiring mechanical ventilation and major surgical interventions) Post-natal care Follow-up of high risk newborns Referral services Immunization services

Table 11: Expected services to be provided at newborn care facilities

NBCC	NBSU	SNCU
Care at birth	Care at birth	Care at birth
<ul style="list-style-type: none"> Prevention of infection Provision of warmth Resuscitation Early initiation of breastfeeding Weighing the newborn 	<ul style="list-style-type: none"> Prevention of infection Provision of warmth Resuscitation Early initiation of breastfeeding Weighing the newborn 	<ul style="list-style-type: none"> Prevention of infection Provision of warmth Resuscitation Early initiation of breastfeeding Weighing the newborn
	Care of sick newborn	Care of sick newborn
<ul style="list-style-type: none"> Identification and prompt referral of 'at risk' and 'sick' newborn 	<ul style="list-style-type: none"> Management of low birth weight infants \geq 1800 g with no other complications 	<ul style="list-style-type: none"> Managing of low birth weight infants

NBCC	NBSU	SNCU
Care of normal newborn	Care of normal newborn	Care of normal newborn
<ul style="list-style-type: none"> Breastfeeding/-feeding support 	<ul style="list-style-type: none"> Breastfeeding/-feeding support 	<ul style="list-style-type: none"> Breastfeeding/-feeding support
Care of sick newborn	Care of sick newborn	Care of sick newborn
<ul style="list-style-type: none"> Identification and prompt referral of 'at risk' and 'sick' newborn 	<ul style="list-style-type: none"> Phototherapy for newborns with hyperbilirubinemia* Management of newborn sepsis Stabilization and referral of sick newborns and those with very low birth weight (rooming in) Referral services 	<ul style="list-style-type: none"> Managing all sick newborns (except those requiring mechanical ventilation and major surgical interventions) Follow-up of all babies discharged from the unit and high-risk newborns Immunization services Referral services
Immunization services	Immunization services	Immunization services

*Availability of laboratory facilities test estimate bilirubin levels is a prerequisite.

Table 12: Newborn care

Do's	Don'ts
<ul style="list-style-type: none"> Always wash your hands before handling the baby Rooming in of baby with the mother Keep the baby warm Take extra care to maintain baby's temperature in preterm and LBW baby Keep the cord dry and clean Breast fed the baby exclusively. Early initiation of breast feeding is essential for a good reflex action Any signs/symptoms of complications must be referred and attended to by a doctor. The care provider should observe every 2 hours in the first 6 hours and every 6 hours from 6-24 hours after delivery If the newborn is LBW then at least three additional visits should be ensured 	<ul style="list-style-type: none"> Do not keep all babies as a routine under the radiant warmer Do not delay breast feeding beyond half an hour as that may lead to rapid decrease in suckling reflex of the baby Do not use prelacteals even water Do not apply anything on the cord Do not bathe the newborn for 24hrs after birth. Do not forget to undertake routine checkup

Table 13 : List of equipment required in Obstetric ICU

List of Equipment and accessories in Obstetric ICU

- ICU cot with tilting and Trendelenburg facility
- Multi Para monitor – ECG, SPO2, NIBP (Non-Invasive BP and temperature) at the head end
- Provision of 3 central pipelines for supply of Oxygen, central suction and compressor for driving the ventilator/outlets for each bed
- Space between the two tables should be at least 4 feet
- Space between the head end of the ICU cot and the wall should be minimum 3 feet
- From the foot end of the cot, 5-6 feet distance should be there from the opposite row
- Saline stand ceiling type or ordinary saline stand from the floor/bed
- Syringe infusion pump mounted on IV stand/bed
- For each patient shelf for drugs and files (X-ray)
- At the end of ICU, emergency crash cot – all emergency drugs, defibrillator, venous catheter of various sizes, 3 way stop cock with venous extension 50, 100 cms, triple human central venous catheter of 7.5 French size, Laryngoscope, cuffed endotracheal tube 6, 6.5 and 7 with stellate and bougie, Laryngeal mask airway (size 3 and 4), Oral pharyngeal airway (size 3 and 4), Naso-pharyngeal airway
- CPAP mask ventilator with well cushioned face mask with harness –1
- Transport ventilator –1
- ICU ventilator – 1

Human resources

For quality service delivery with dignity and privacy to clients, an adequate number of competent HR is required for providing best possible care during pregnancy, delivery and postpartum period (see Table 14).

Table 14: HR requirement based on deliveries/month for a maternity wing

	Criterion	< 100 deliveries/ month	100 – 200 deliveries/ month	200 -500 deliveries/ month	500 deliveries and more/ month
Labour Ward	Human resource (calculated on basis of req. + off duty)	<ul style="list-style-type: none"> ● MO – 1-2 (avl. during routine hrs and on call during emergency) ● ANM/SN – 4 ● Sweeper – 3 ● DEO – 1 ● Guard – 4 	<ul style="list-style-type: none"> ● MO – 4 (for round-the-clock duty) ● SN – 4 ● ANM – 4 ● LT – 2 (for round-the-clock service) ● DEO – 1 ● Sweeper – 4 ● Guard – 4 	<ul style="list-style-type: none"> ● OBG – 1 (Mandatory) ● OBG/EmOC – 4 (for round the clock service) ● Anesth – 1 (Mandatory) exclusive for maternity cases ● LSAS – 4 (for round-the-clock service) ● Peads. – 1 ● MO – 4 (trained in BEmOC, FIMNCI, NSSK) ● MO and SN trained in PPIUCD ● SN – 8 ● ANM – 4 ● LT – 4 (for round-the-clock service) ● Sweeper – 4 (for round-the-clock service) ● 1 Certified ultra sonologist (on call after routine hours), Obg should be given training if ultra sonologist not available ● DEO – 1 ● Guard – 4 	<ul style="list-style-type: none"> ● OBG – 3 ● EmOC – 4 ● Anesth. – 1 exclusively for maternity cases ● LSAS – 4 ● Peads. – 1 ● MO – 4 (trained in BEmOC, FIMNCI, NSSK) ● MO and SN trained in PPIUCD ● SN – 10 ● ANM – 6 ● LT – 4 (for round-the-clock service) ● 1 Certified Sonologist (on call after routine hours) ● Sweeper – 4 (for round the clock service) ● DEO – 1 ● Guard – 4

	Criterion	< 100 deliveries/ month	100 - 200 deliveries/ month	200 -500 deliveries/ month	500 deliveries and more/ month
	Labour Ward	No. of delivery table	2	4	6
No. of delivery tray		4	8	16	20
Pre and post observation beds		2	Pre - 4 and Post - 4	Pre - 8 and Post - 6	Pre - 8 and Post - 8
Other beds		Nil	1 Septic 2 Eclampsia	1 Septic 2 Eclampsia 5 Post - op beds	2 septic 4 Eclampsia 10 Post - op beds
ANC/PNC Ward	Human resource	<ul style="list-style-type: none"> MO - No additional requirement ANM/SN - Sweeper - No additional requirement Guard - No additional requirement 	<ul style="list-style-type: none"> MO - No additional requirement SN - 6 Sweeper - No additional requirement Guard - No additional requirement 	<ul style="list-style-type: none"> Specialists (OBG/EmOC /Anaesth./LSAS /Paeds)- No additional requirement SN - 8 Sweeper -2 Guard - 4 Nursing orderly/Ward Boy - 4 	<ul style="list-style-type: none"> Specialists (OBG/EmOC/ Anesth./LSAS/ Paeds) - No additional requirement SN - 8 Sweeper - 4 Guard - 4 Nursing orderly/Ward Boy - 4
	Beds in ANC and PNC	10	20	40	50/100 bedded MCH Wing depending upon caseload and bed occupancy of the existing hospital more than 70%

Note :

- Utilization of DEO should be as per the case load and as per the discretion of hospital in-charge
- DEO to do the documentation work related to MH training, MDR, MCTS, maintenance of case records
- Number of delivery tray will depend on the daily case load
- above mentioned staff is exclusively for Maternity Wing

- Clean the floor and sinks with detergent (soapy water) and keep floor dry
- Clean table top with Phenol/bleaching solution
- Clean other surfaces like light shades, almirahs, lockers, trolley, etc with low level disinfectant Phenol
- Clean electronic monitors with 70% alcohol
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 min and then mop
- Discard placenta in yellow bins
- Discard soiled linen in laundry basket and not on floor
- Disinfect with bleaching solution followed by washing and autoclaving
- Mop the floor every 3 hrs with disinfectant solution
- Clean the labour table after every delivery
- For protocols, see GoI protocol posters for DH to Medical College and Sub-centre to PHC/Non FRU-CHC

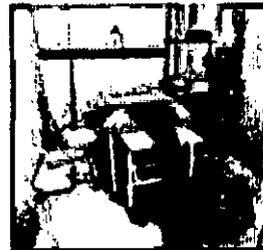


Table 15: Do's and Don'ts for Labour Room

Do's	Don'ts
<ul style="list-style-type: none"> ● Equipment must be checked for its functionality during change in shifts of nursing staff ● Privacy and dignity of the woman to be ensured ● Use sterilized instruments for every delivery ● Each labour table must have a light source ● Use plastic curtains between adjacent tables to maintain privacy ● LR should be draught free ● 20% buffer stock of LR drugs must be available all the time ● Temperature between 25-28 degree Celsius must be maintained in LR. Hilly, cold areas will need warmers during winters ● Injection Oxytocin should be kept in fridge (not freezer) ● Practice infection prevention protocols ● Initiation of breast feeding within one hour of birth ● Collect cord blood in RH-ve mother 	<ul style="list-style-type: none"> ● Do not keep almirahs and metal cabinets in the LR ● Do not burn coal in LR for lighting/heating or any other purpose ● Do not allow doctors/nurses and birth companion to enter LR without wearing gown, cap, slipper, mask ● Do not put cloth curtains between labour tables as they gather dust ● Do not allow people to enter labour room unnecessarily ● Do not put pressure on the abdomen for accelerating labour/delivery ● Do not give routine oxytocin IM or in drip for augmenting labour pains before delivery without indication ● Do not conduct frequent P/V examination ● Do not allow Dal, Mamta, ASHA, Yashoda conduct deliveries ● Do not slap the baby if not crying ● Do not keep the baby unwrapped ● Do not leave the baby unattended, if in warmer.

Ten key steps to ensure smooth working in the Labour Room

1. Ensure that the 7 trays are kept arranged and available for use.
2. Equipment needed in the LR are available, in good condition and functional – labour table, BP apparatus, stethoscope, foetoscope/ Doppler, footstep, stool for companion, maintained Partograph.
3. Environment in the LR is conducive – cleanliness, temperature maintained, curtains, windows with intact panes, privacy and attached functional toilet with running water.
If the facility has the availability of specialist or trained manpower than keep him informed well in advance specially in high risk cases.
4. NBCC with:
 - a. Radiant warmer plugged in functional and switched on at least half an hour before the time of delivery.
 - b. A pretested and functional newborn resuscitation bag and mask is kept ready on the shelf just below the radiant warmer.
5. Suction apparatus:
 - a. For Newborn: Dee Lees in the tray
 - b. For mother: Foot-operated/electrical suction machine is functional along with disposable suction catheter
6. Oxygen Cylinder: Filled, with key tied on it, new disposable tube is used every time oxygen is given; the oxygen flow is checked under water (in a bowl) before inserting the tube.
7. Hand washing area has soap and running water, long handle tap which can be closed with elbow.
8. Infection Prevention Practices observed; drums to store sterilized items such as gloves, instruments, linen, swabs and gauge pieces. Autoclave exclusive for LR available and functional; delivery instruments are wrapped in a sheet and autoclaved in enough numbers (1 set for each delivery); autoclaving is done at least twice a day (at the end of morning and evening shift); 0.5% chlorine solution prepared freshly every day and soiled items are first put into this before further treatment. Personal protective equipment is used while working in the LR.
9. Waste disposal – Colour-coded bins are available; these are emptied at least once a day or as and when they are full. Liquid waste also to be managed appropriately.
10. Records – Partograph, labour register, refer-in/refer-out registers are available and completed for each case.

Antenatal and postnatal ward

- The woman after delivery with the baby is shifted to PNC ward after 2 hours.
- Ideally at a high volume Level-3 facility, there should be separate ANC and PNC wards. However, in some situations, ANC and PNC cases can be kept in the same ward if there are more numbers of ANC or PNC cases.
- There should be adequate number of beds in PNC ward to ensure 48 hrs of stay after delivery.
- Each ward should have provision for hand washing, drinking water and toilets.
- Each bed should have a mattress, plastic sheet, a bed sheet and a mosquito net. A bedside locker, a stool and a bench should be made available for each bed.
- Adequate cooling for extreme hot conditions and room warmers for cold weather should be made available. The provisions for ambient temperature of the ward to remain constant should be ensured irrespective of the geographical conditions and weather changes.
- The room should be well ventilated but without incoming direct draught of air, to prevent hypothermia of the newborn.
- Each bed should have a bed number. Baby should be with the mother on the same bed. Mother and her baby must have identification tags.
- Space between two beds should be at least 4 ft.
- Clearance between the bed head and wall should be 1 ft (0.25 m) and between the side of a bed wall and wall should be minimum 2 ft.
- The width of a dormitory or ward should be 20 ft.
- Width of the hospital corridor should be 3 m to accommodate two passing trolleys.
- Restricted entry must be ensured in the wards with provisioning of security guards.
- Appropriate IEC material should be displayed in the wards.
- Provision of TV and DVD player to show informative and educational films on breast feeding, KMC, exclusive breast feeding and complementary feeding. Short films on JSSK, family planning, how to take care of the new born and danger signs can be shown.

- Proximity to LR, operation theatre, blood storage area and other supportive services is desirable.
- Considering that each postnatal woman stays in the facility for 2 days on an average, the beds should be at least double the daily delivery load (1:2).
- It has been observed that there is a critical requirement for the presence of mother whose newborn is admitted in the SNCU or NBSU. The presence of the mother in the facility is a must to provide correct history/breast feed the baby/ to provide expressed milk/for KMC etc. So, she should be admitted in the post natal ward. Ensure provision of daily diet to such mothers along with on-going support/treatment, if required.
- Plan in advance for additional provisions with increase case load.

Nursing Station

Being the nerve centre of the ward unit, it should be so located that the nurses on duty can keep watch over as many patients as possible and are able to access the farthest bed as quickly as possible. The nursing station should be 20x20 ft and have:

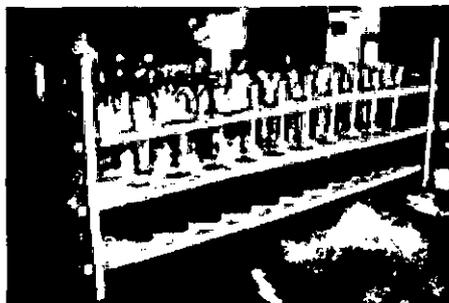
- A large work table or counter in the open space with chairs/stools
- A built-in drug cupboard to keep medicines, stationery, forms, etc.
- A refrigerator to keep medicines/injectables etc.
- Attached bath and WC
- Wash basin
- A lockable cupboard to stock additional medicines
- A notice board and cabinet for keeping files
- Telephone
- Patients' bell board

Treatment Room

A treatment room is required for each ward for physical examination, dressing and other procedures which cannot be carried out conveniently at the bed side of the patient. The room should be equipped with an examination table, a dressing trolley, adequate light (a spot light) and cabinets. Hand washing facilities should preferably be provided inside the treatment room.

Emergency Laboratory

Every delivery point particularly level II+III should have facilities for essential laboratory tests along with necessary equipments, reagents and HR needed to conduct the following tests:



- Hb
- Bleeding Time/Clotting Time
- Urine (albumin/sugar)
- Blood grouping/typing
- HIV testing
- Peripheral smear for Malaria Parasite/Rapid Diagnostic Test

Note: All other investigations to be carried out in the main laboratory

Table 16: Septic Room

S/No.	Inventory (Essential)	Quantity (Minimum)
1.	Labour tables	2 Tables
2.	Oxygen supply/cylinder	2
3.	Foetal Doppler	1
4.	Suction Machine (Electric)	1
5.	Foot Operated Suction Machine	1
6.	Stethoscope+ BP instrument	1
7.	Adult resuscitation kit	1 set
8.	Neonatal resuscitation kit	1 set
9.	Digital weighing machine	1 adult and 1 newborn
10.	Air conditioners (to be calculated as per the volume specifications for air conditioners)	1-2

S.No.	Inventory (Essential)	Quantity (Minimum)
11.	Radiant warmers	1
12.	Pulse oxymeter – with 2 adult probe and 1 neonatal probe	1
13.	Delivery trays	2
14.	Episiotomy trays	2
15.	MVA tray	1
16.	Adult Emergency Drug Tray	1
17.	Newborn Emergency Drug Tray	1
18.	Mackintosh	2
19.	Kelly's Pad	2
20.	Open Dustbin Buckets	2
21.	Color Coded Bins	1 set
22.	Needle Cutter	1
23.	Wheel Chair	1
24.	Wall Clock	1
25.	Movable Shadow less Lamp	1
26.	Dressing Drum – All sizes	As per requirement
27.	Baby Tray	1
28.	Thermometer	2
29.	Drapes and Linen	As per requirement
30.	Emergency Call Bell	1

Table 17: Eclampsia room

S.No.	Inventory (Essential)	Quantity (Minimum)
1.	Labour cots with side railing	2
2.	Oxygen supply/cylinder	2
3.	Pulse oxymeter – with 2 adult probe and 1 neonatal probe	1
4.	Foetal Doppler	1
5.	Suction Machine (Electric)	1
6.	Foot Operated Suction Machine	1
7.	Stethoscope+ BP instrument	2
8.	Adult resuscitation kit	1 set
9.	Neonatal resuscitation kit	1 set
10.	Air conditioners (to be calculated as per the volume specifications for air conditioners)	1-2
11.	Pulse oxymeter – with 2 adult probe and 1 neonatal probe	2
12.	Delivery Trays	2
13.	Episiotomy trays	2
14.	Adult Emergency Drug Tray (including magnesium sulphate)	1
15.	Newborn Emergency Drug Tray	1
16.	Mackintosh	2
17.	Kelly's Pad	2
18.	Open Dustbin Buckets	2
19.	Color Coded Bins	1 sets
20.	Movable shadow less Lamp	1
21.	Wall Clock	1
22.	Torch	1
23.	Nebulizer	1
24.	Emergency Call Bell	1
25.	Drapes and Linen	As per requirement

RMNCH: Key components of MCH Wing

Figure 5: RMNCH Wing Plan: Ground Floor and First Floor

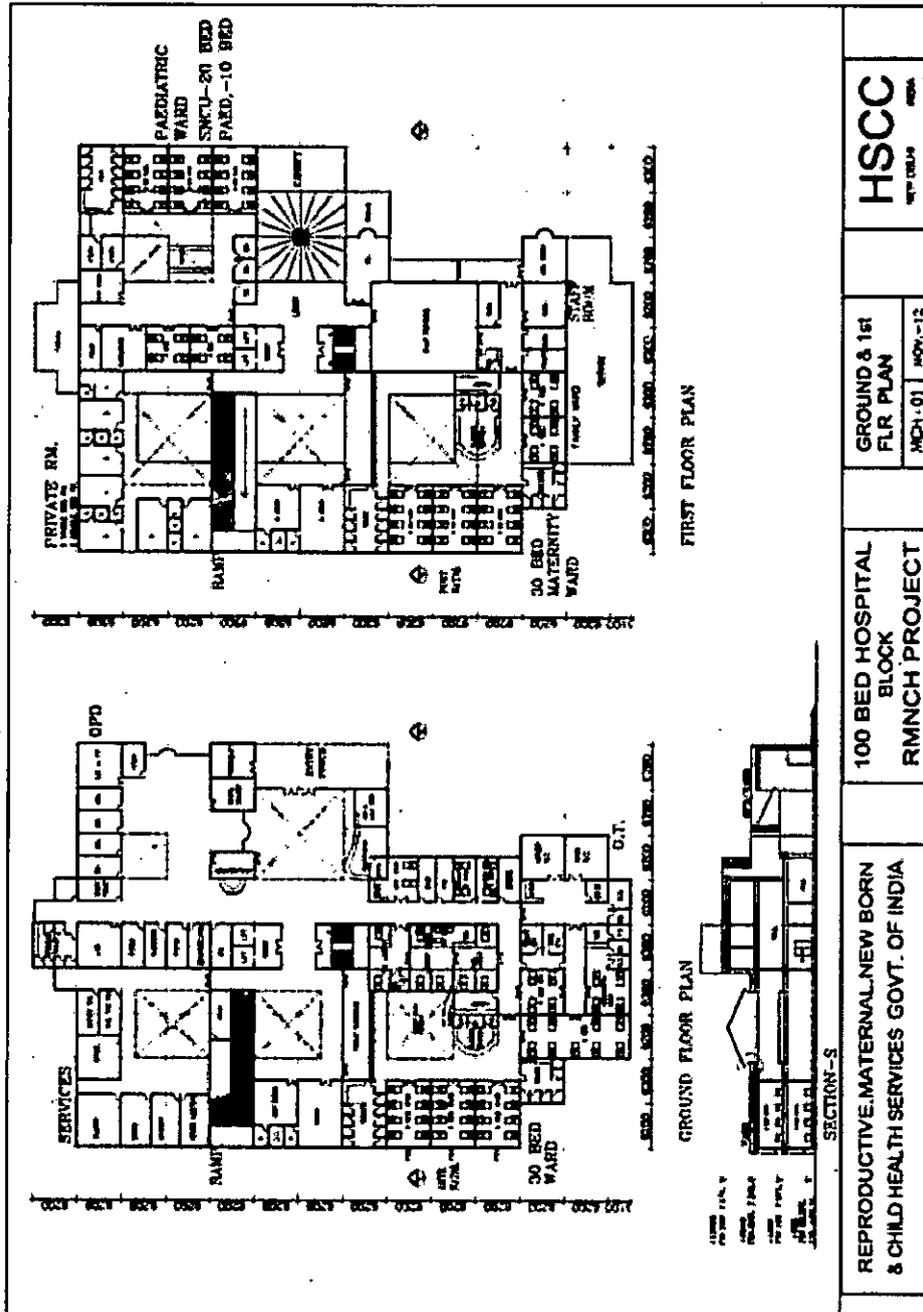
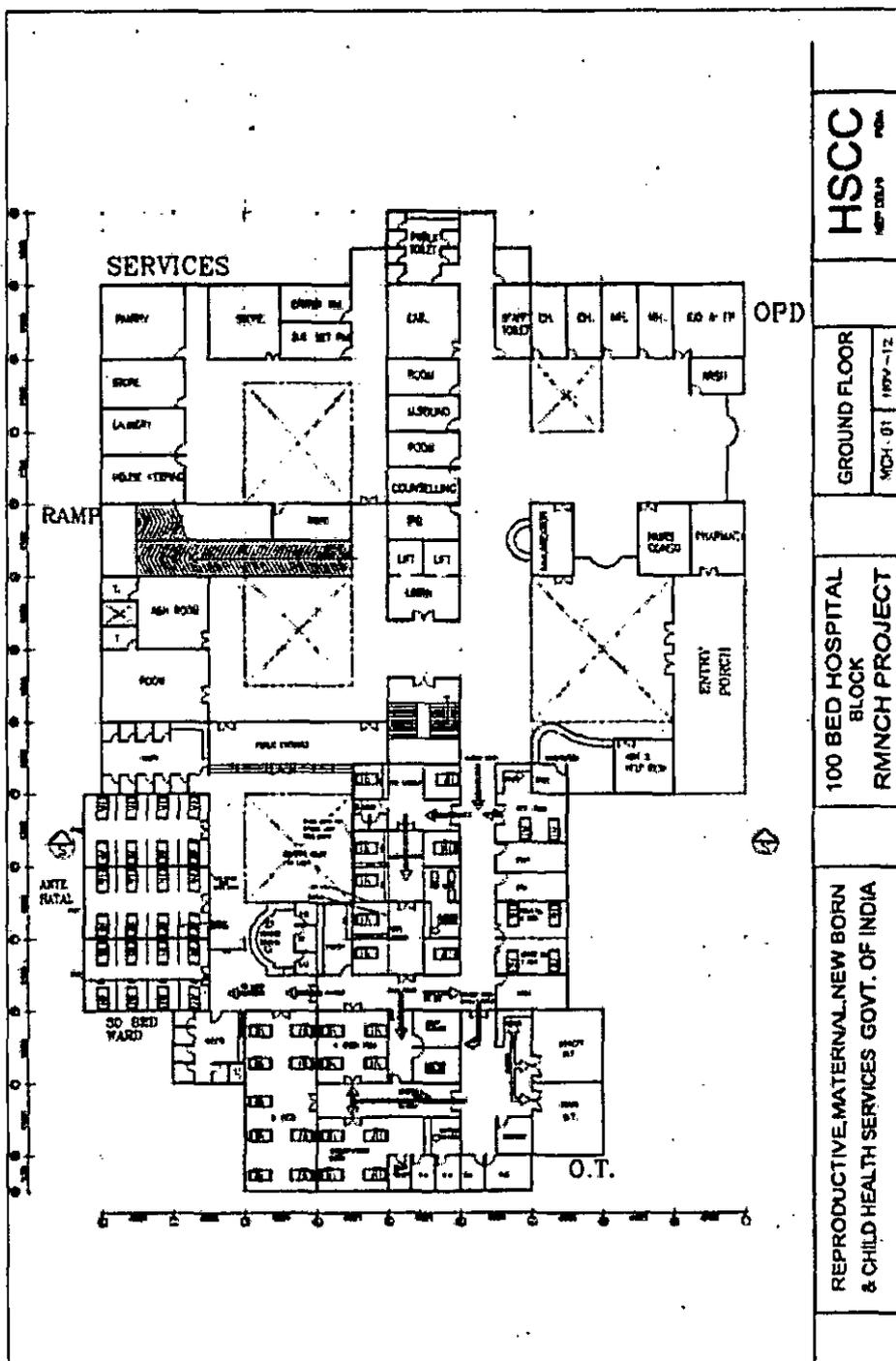
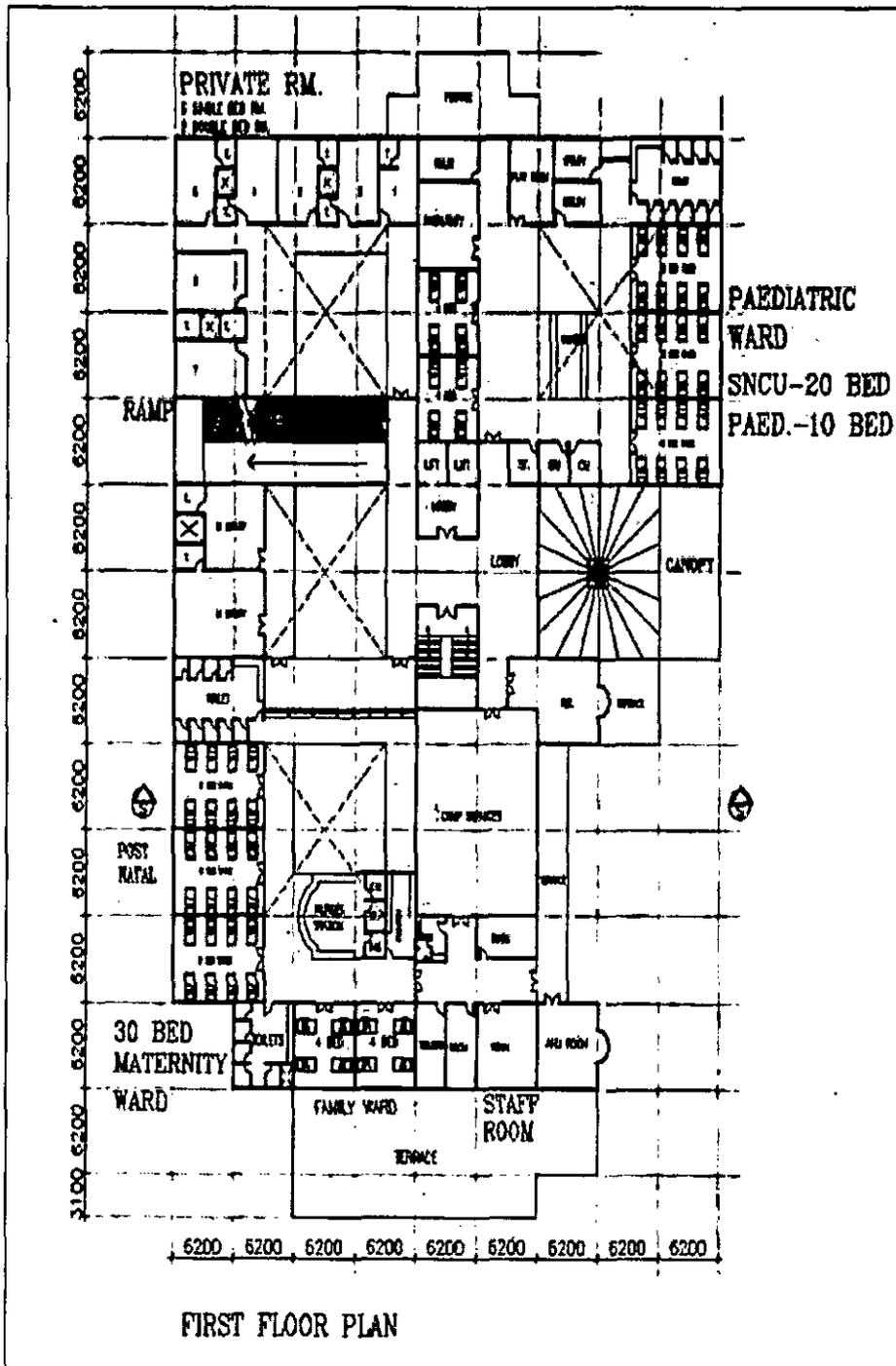


Figure 6: RMNCH – Ground Floor



REPRODUCTIVE, MATERNAL, NEW BORN & CHILD HEALTH SERVICES GOVT. OF INDIA	100 BED HOSPITAL BLOCK RMNCH PROJECT	HSCC
	GROUND FLOOR MCH-01 1104-12	

Figure 7: RMNCH – First Floor



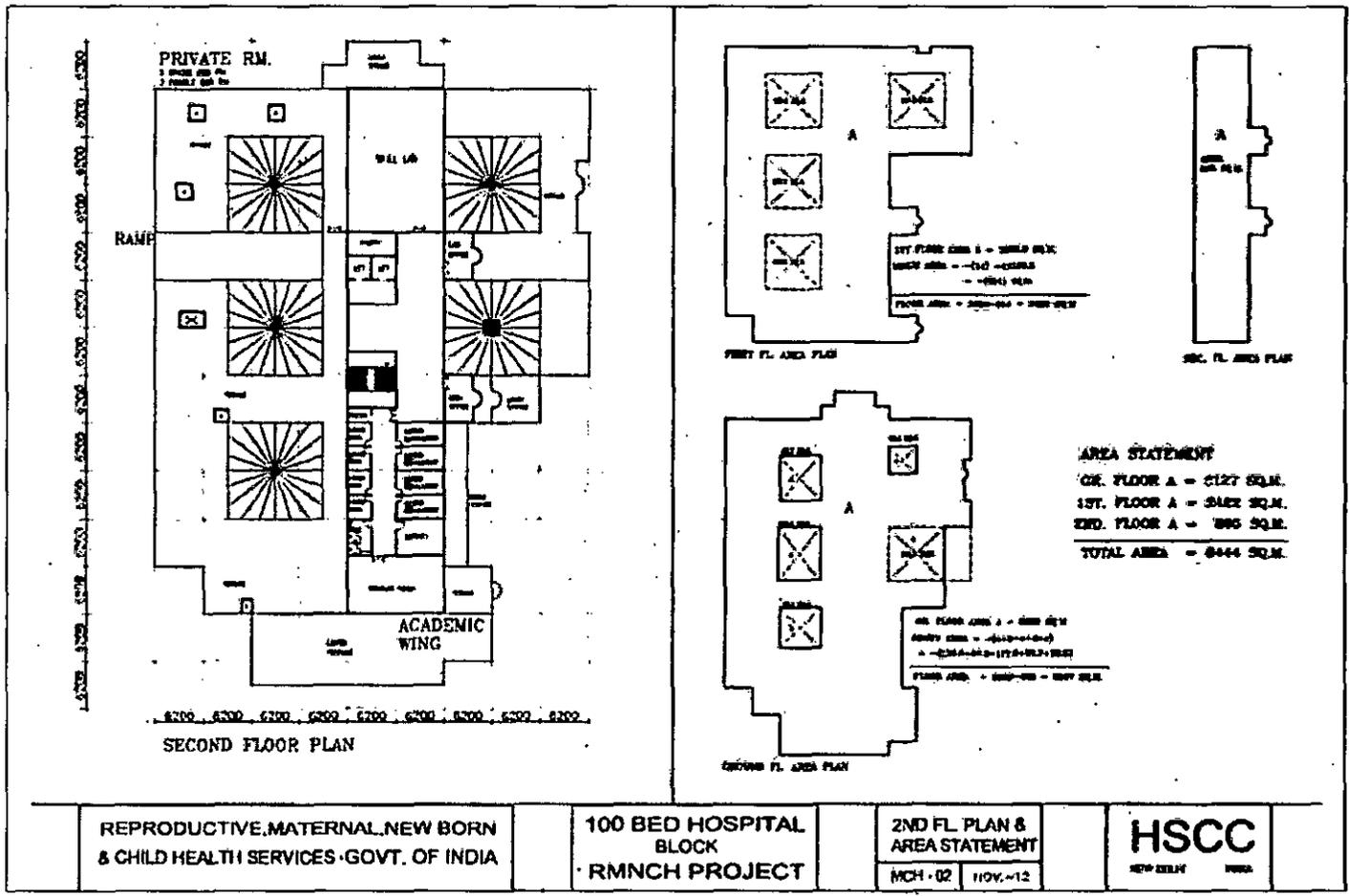


Figure 8: RMNCH - Second Floor

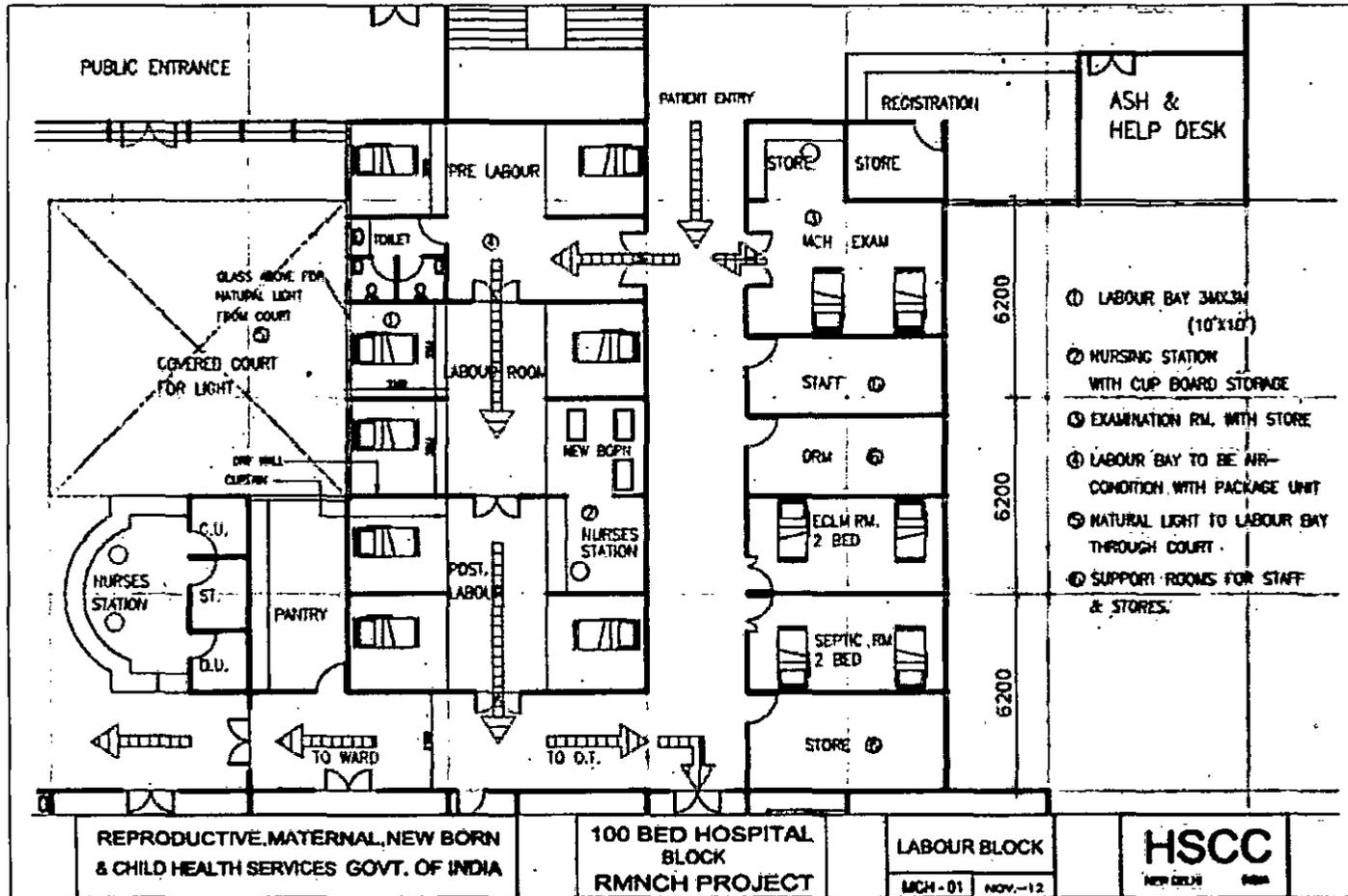


Figure 9: RMNCH: Labor Room Plan

- ① LABOUR BAY 3MX3M (10'X10')
- ② NURSING STATION WITH CUP BOARD STORAGE
- ③ EXAMINATION RM. WITH STORE
- ④ LABOUR BAY TO BE AIR-CONDITION WITH PACKAGE UNIT
- ⑤ NATURAL LIGHT TO LABOUR BAY THROUGH COURT
- ⑥ SUPPORT ROOMS FOR STAFF & STORES.

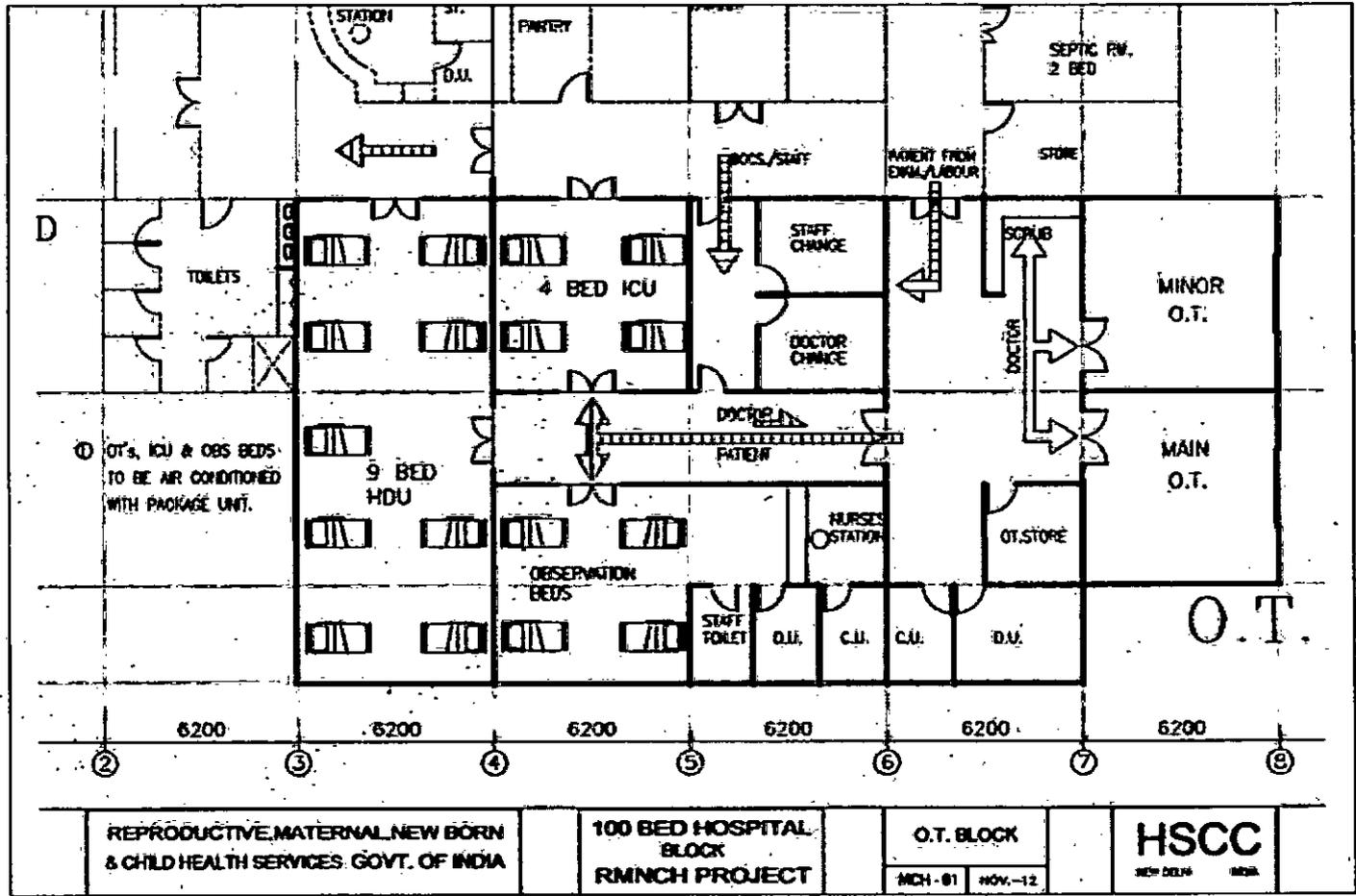


Figure 10: RMNCH - OT Plan

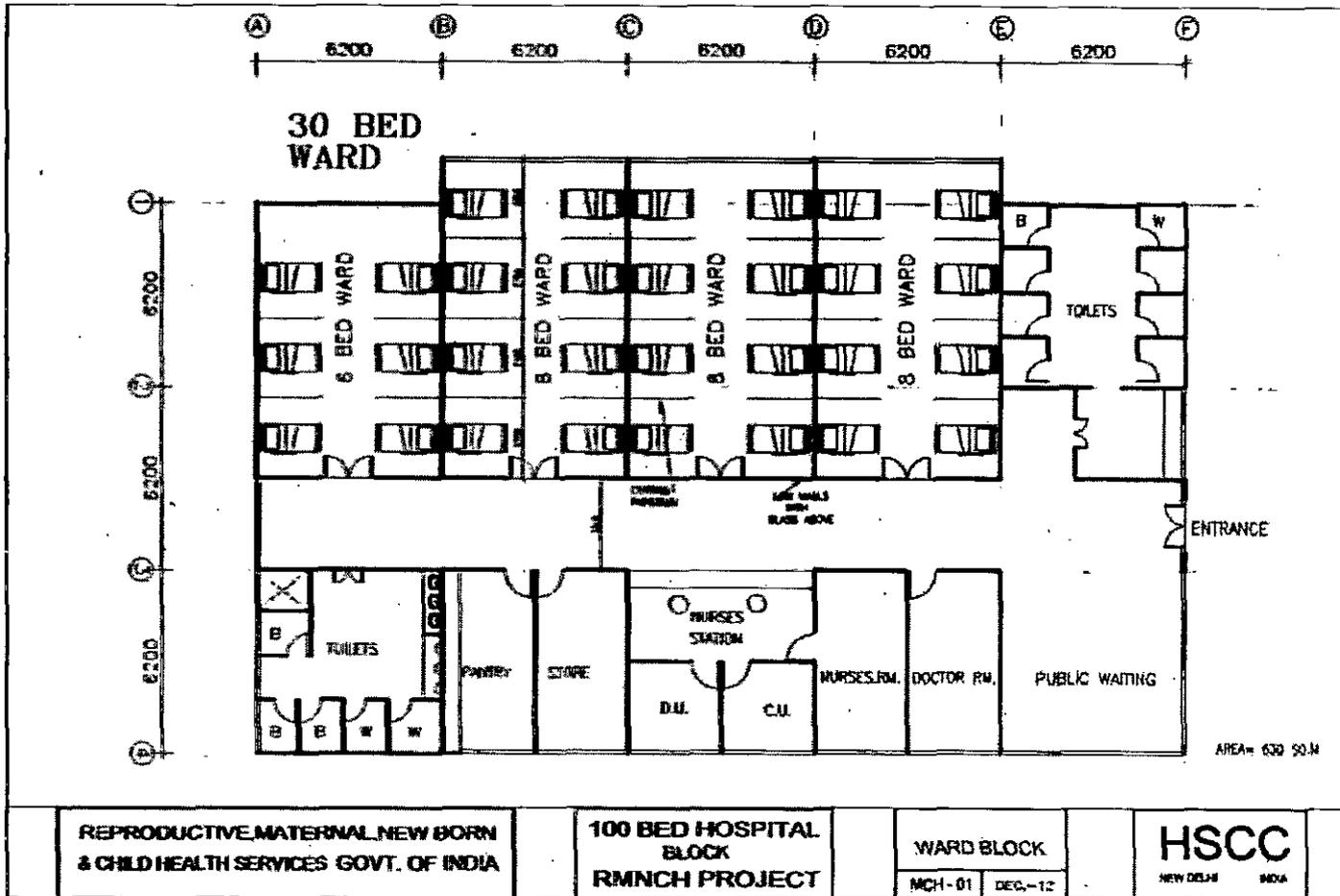
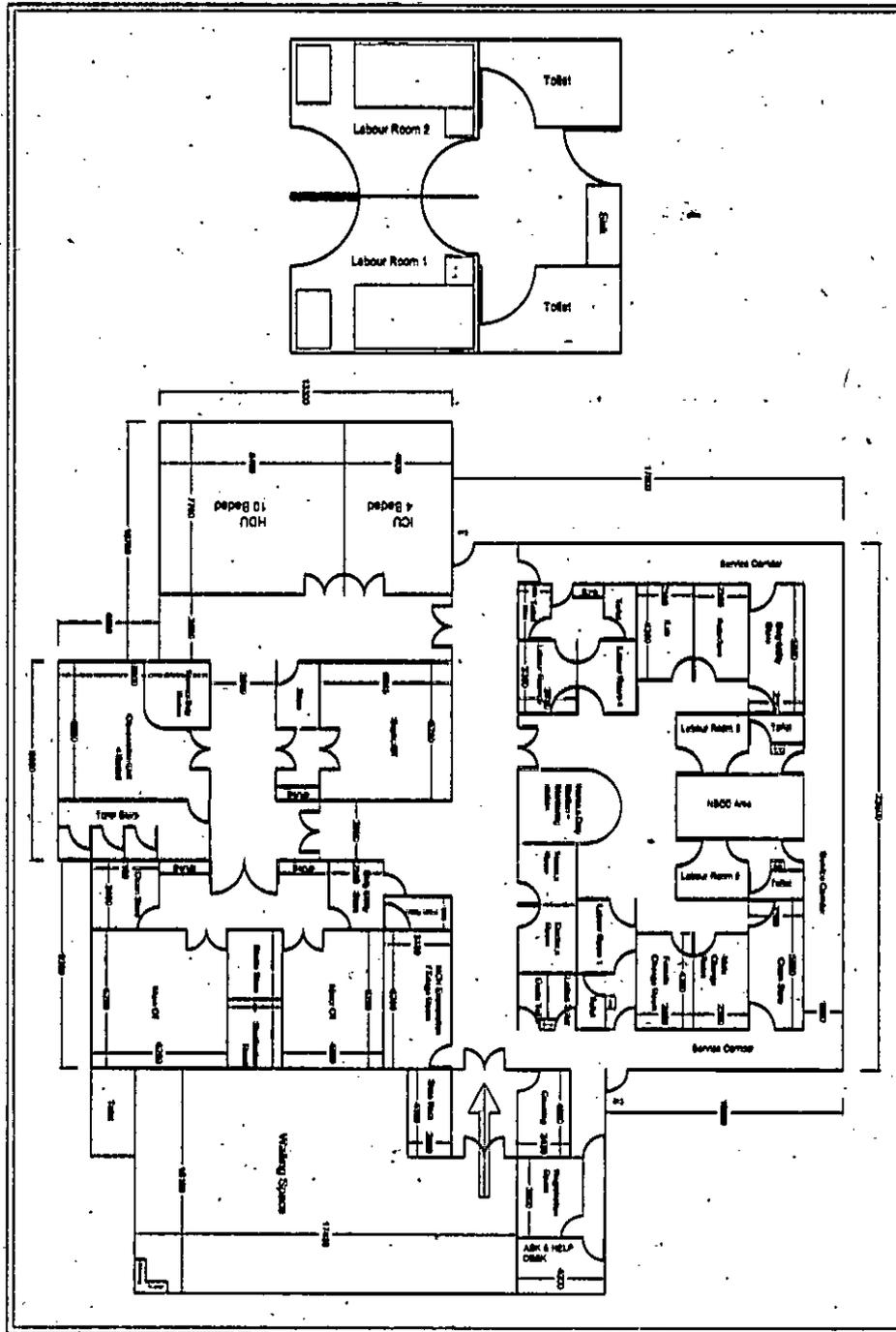


Figure 12: RMNCH - Ward Plan-II

Figure 13: Alternative design of Labour Room, Operation Theater, High Dependency unit



S. No.**Ensuring Protocols**

1. Patient and patient family member will open the shoes and change into the gown before admission. Other members can wait in the waiting space and can be addressed through microphone for any information from the monitoring station.
2. Examination room or triage room. Will decide whether mother is going to deliver in the next 8-10 hrs or not. In case there is a bad obstetrical history or any high risk factors like any associated medical diseases the patient will be admitted to the HDU that is high dependency unit. If the mother has Eclampsia or cardiac failure, she would be admitted in ICU.
3. Separate Labour room will be provided for each mother with separate toilet and the facility of having one female family member or birth companion inside the labour room.
4. Each Labour room will be cleaned before shifting the next patient.
5. Single Labour room will be allotted for a single mother i.e. from initiation of active stage of Labour (that is 4cm dilatation) to two hour after delivery. The same bed and the same cot are used.
6. Each Labour room will have a cot, sink, light, Doppler and a kit for delivery. Also a calling bell connected to the monitoring station.
7. A child after birth will be kept next to the mother and initiate early breast feeding.
8. There will be two radiant warmers and resuscitative equipments for neonatal resuscitation in the NBCC.
9. Neonates requiring resuscitation shall be resuscitated at NBCC
10. If the mother is serious either before or after delivery shift immediately to the ICU.
11. In house lab will provide critical reports.
12. Mother requiring LSCS would be immediately shifted to the OT.
13. One minor OT to be kept for septic cases.

Blood storage units³

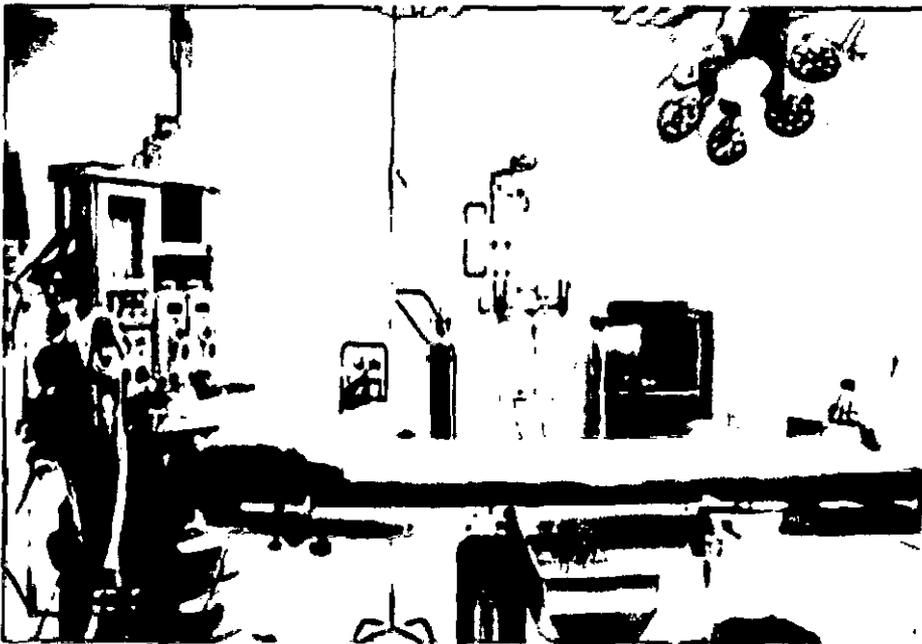
As per GoI Guidelines and Amendments to Drug and Cosmetics Rules aided with support from the National Aids Control Organization (NACO), blood storage units/ blood banks should be established at all CEmOC facilities.

Every high volume L3 'delivery point' conducting CS should have BSU in the Maternity Wing to avoid delay in getting blood.

Operation theatre

Up to 15% of deliveries or other cases of complications of pregnancy, e.g. incomplete, inevitable, missed abortion, ectopic pregnancy, etc. may need some sort of a surgical intervention; CEmOC facility must have functional OT Services. Although most facilities have an OT complex, placed below are some tips which the OT in-charge and facility manager has to keep in mind.

For ensuring sterility and keeping the OT free of microorganisms and also to ensure smooth functioning, the operation theatre area can be divided into four well defined zones (Fig 13).



³ Guidelines for setting up blood storage centres at FRU, MH division, DoHFW. GoI 2003

Figure 13: Division of OT into Different Zones

Protective	Clean
<ul style="list-style-type: none"> ● Waiting area for relatives ● Buffer zone ● Changing room ● Pre-anaesthesia room ● Store room ● Autoclave room ● Trolley bay ● Control area for electricity supply ● Receiving/pre-operative area 	<ul style="list-style-type: none"> ● Preoperative area ● Recovery room ● Sister's/Doctor's room ● Anaesthesia store
Sterile	Disposal
<ul style="list-style-type: none"> ● OT ● Attached Scrub and hand washing room/area ● Anaesthesia room ● Instrument sterilization and trolley area ● NBCC ● Exit bay 	<ul style="list-style-type: none"> ● Sluice room ● Disposal corridor ● Janitor's closet

Ensure

- Restricted entry
- Instruments sterilized by autoclaving
- Separate set of instruments for each case
- Access to OT through a 'Buffer Zone'
- Proper occlusive clothing of OT personnel

OT planning should keep the following general guiding notes in mind:

- It should be free from contamination and possible cross infection, protected from solar radiation, wind and dust.
- Ambient temperature and humidity at each location to be considered while designing the system.
- Situated close to the labour room, post-operative area, blood bank, blood storage unit and CSSD.
- Arrangements to be made for piped suction and supply of medical gases, electricity supply, heating, air-conditioning, ventilation and efficient lift service, if the theatres are located on upper floors.

- Optimal floor size of an OT should be between 200 square feet and for two tables 400 square feet.
- Complete tiling up to the ceiling must be done. Light coloured mosaic tiles could be used for the purpose for easy cleaning and washing. The flooring, walls and ceiling should be non-porous, smooth, and seamless without corners and should be easily cleanable repeatedly. The material should be chosen accordingly.
- Floor should be easily washable, impervious, stain resistant and moderately electro conductive. Conductive flooring avoids hazards of electrocution and explosion triggered by accumulated anesthetic gases near the floor.
- Doors should be single panel, sliding or double acting (can be opened from both sides) with a glass see-through panel. They must be thermetically sealed and at least 5 ft wide.
- Windows should be 3 feet 4 in above the floor. The opening may be about 16% to 20% of the floor area.
- Operation tables should be positioned on the floor plinth with pipes for anesthetic gases, oxygen, vacuum etc. emanating from the plinth.
- Fire protection measures should be in place at strategic points (eg., a dry fire extinguisher should be on the wall in the OT).
- Window and split A/c should not be used in any type of OT because they are pure re-circulating units and have convenient pockets for microbial growth which cannot be sealed.
- OT should be centrally air-conditioned with air handling unit. The Air handling unit (AHU) of each OT should be dedicated one and should not be linked to air conditioning of any other area.
- During the non-functional hours, AHU blower will be operational round the clock (may be without temperature control). VFD devices may be used to conserve energy.
- Alternatively cross ventilation with exhaust is required if air conditioning not present.
- Glare free natural light is also of particular advantage in an OT.
- All electrical switches should be 1.5 meters above the floor.
- Isolation circuits should be provided for appliances connected to patients.
- All OTs should be connected to the emergency electric generator.
- It is recommended that periodic preventive maintenance be carried out in terms of cleaning of pre filters at the interval of 15 days. Preventive maintenance of all the parts is carried out as per manufacturer recommendations.

Specific guiding notes:

I. Air Change per Hour:

- Minimum total air changes should be 25
- The fresh air component of the air change is required to be minimum 4 air changes out of total minimum 25 air changes.

II. Air Velocity: The airflow needs to be unidirectional and downwards on the OT table.

III. Positive Pressure: There is a requirement to maintain positive pressure differential between OT and adjoining areas to prevent outside air entry into OT. The minimum positive pressure recommended is 15 Pascal (0.05 inches of water).

IV. Temperature and Humidity: The temperature should be maintained at 21 +/- 3 Deg C inside the OT all the time with corresponding relative humidity between 40 to 60% though the ideal Rh is considered to be 55%. Appropriate devices to monitor and display these conditions inside the OT may be installed.

V. Air Filtration: The AHU must be an air purification unit and air filtration unit.

Strict quality control measures must be taken in OT:

- Microbiological sample should be taken randomly at 2 month intervals by Settle plate method.
- Random microbiological sampling to be done by settle plate/Air sampling method following construction/renovation work or any infectious outbreak.
- Any colony of Fungus/Staph. aureus needs to be reported. If culture is found positive for these, servicing of air handling unit and /or AC duct recommended.
- Clean the floor and sinks with detergent (soap water) and keep floor dry.
- Clean table tops and other surfaces like light shades, almirahs, lockers, trolley, etc with low level disinfectant Phenol (Carbolic acid 2%).
- Clean electric monitors with 70% alcohol.
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 minutes and then mop.
- Discard waste and gloves in proper bins and not on floor.
- Discard soiled linen in laundry basket and not on floor.
- Disinfect these items with bleaching solution followed by washing and autoclaving.
- Mop the floor unidirectional manner every 3 hours with disinfectant solution.

Table 18: Do's and Don'ts for Operation Theatres

Do's	Don'ts
<ul style="list-style-type: none"> ● Operating room must be dust-proof and moisture proof 	<ul style="list-style-type: none"> ● Do not overhead beam and loose cables/pipes on the floor
<ul style="list-style-type: none"> ● A separate FP OT must be planned 	<ul style="list-style-type: none"> ● Do not extension boards on the floor in an OT
<ul style="list-style-type: none"> ● Only essential furniture and equipment to be used for surgeries should be allowed inside the OT 	<ul style="list-style-type: none"> ● Do not unnecessary entry of personnel in OT
<ul style="list-style-type: none"> ● Cupboards for instruments and electrical switches should be operated from outside the OT 	<ul style="list-style-type: none"> ● Do not staff entering OT without wearing proper protective attire

General services required for the Maternity Wing

(A) Housekeeping, cleaning, dietary and laundry services

- a. Wear gloves (preferably thick utility gloves) when cleaning.
- b. Areas of daily cleaning and periodic cleaning should be identified and work schedule of the cleaners prepared accordingly.
- c. Standard cleaning practices and adequate and timely supply of cleaning materials should be ensured.
- d. To reduce the spread of dust and microorganism, use a damp or wet mop or cloth for walls, floors, and surfaces instead of dry-dusting or sweeping.
- e. Scrubbing is the most effective way to remove dirt and microorganism. Scrubbing should be a part of every cleaning procedure.
- f. Wash surfaces from top to bottom so that debris falls to the floor and is cleaned up last. Clean the highest fixtures first and work downwards- for example, clean ceiling lamps, then shelves, then tables, and then the floor.
- g. Change cleaning solutions whenever they appear to be dirty. A solution is less likely to kill infectious microorganism if it is heavily soiled.
- h. There should be arrangements for disposal of biomedical and other wastes, which should be in accordance with the national and state regulations.
- i. Sterilization service is needed both in OT and LR. It needs sterilizers, autoclave, autoclave drums and disinfectant solutions and powders.

- j. The beds in the wards should have clean linen at all times. All facilities should have sufficient bed-sheets (number of beds x 3) pillow covers, blankets, towels, etc. to ensure that the linen is changed at least every alternate day and also if it becomes soiled. Blankets should be washed at least once in a fortnight. Depending upon the in-patient load of the facility, the laundry services can be outsourced.
- k. Hospital laundry should be provided with necessary facilities for drying, ironing and storage of soiled and cleaned linens.
- l. Kitchen should easily be accessible from outside along with vehicular accessibility.
- m. A separate room for dietician and special diet. (Provision for those who need special diet in case of high BP/Diabetes, etc.).
- n. Kitchen is located away from OT so that the noise and cooking odour do not cause any inconvenience to the patients, but should involve the shortest possible time in delivering food to the wards.
- o. Clean utility room measuring 100–120 square feet is used for clean storage, eg. drugs, intravenous sets/solutions, CSSD articles, packing dressings, treatment trolleys/trays for minor procedures. Bulk linen and cleaning materials could also be stocked here.
- p. Janitor room is in each ward for keeping mops, brooms, cleaning material and buckets. It should have a large sink for cleaning buckets and other equipment with adequate water supply.
- q. Uninterrupted water supply and clean toilet facilities. Approximately 300 litre of water is required per bed. If necessary, this can be outsourced.
- r. Avoid water storage inside the wards/LR as spillage leads to slippery floors and provides potential sites for mosquito harboring.

(B) Electricity and power backup

- a. All the areas in the facility should be appropriately lit according to the purpose to be served.
- b. Use CFLs which are environment-friendly.
- c. There should be industry switch for portable X-ray in facilities with high patient load and one each of 15 amps and 5 amps for every two beds.
- d. In case of interrupted power supply, back-up arrangements should be made, e.g. inverter, solar panels, genset (strength as per number of beds in facility).
- e. Priority areas for electricity back-up are LR, OT (major/minor), sick newborn care unit and cold chain room.
- f. Ward, corridors, toilets should be adequately lit.

(C) Telecommunication

- a. The facility should have a telephone connection.
- b. A public telephone booth can be outsourced for the clients, family members, and visitors.
- c. PA system and microphone in duty station of maternity wing, LR and OT, and speaker in the waiting area.
- d. Dedicated phone line for LR.
- e. Computer, net connectivity and data entry operator to manage records in Maternity Wing. (Resources available in SNCU and NRC can be utilized)



(D) Good practices in the Maternity Wing

- a. Identify a Maternity Wing in-charge. This should be backed by issuing an administrative order.
- b. The Maternity Wing in-charge shall be responsible for preparing a duty roster, so as to provide 24x7 cover.
- c. Maternity Wing staff should not be transferred to other areas.
- d. Display board should have name of the doctors on duty/call with their mobile numbers.
- e. If the drugs and the other consumables are under lock and key the handing over of the key should be mandatory along with the stock position between shifts.
- f. The duty roster should be displayed either outside of the LR or staff duty room.
- g. LR checklist should be maintained by the nurses during every change of shift.

Infection

Prevention

Steps for ensuring infection prevention

For Maternity Wing, all staff including Grade III and IV staff should be given comprehensive orientation on infection prevention practices. The facility in-charge should ensure the availability of all necessary training equipment, etc. Infection prevention practices are based on the following principles:

- Every person (patient or healthcare worker) is considered infectious.
- Every person is considered at risk of infection.
- Hand washing is the most practical procedure to prevent spread of infection.
- Gloves are worn on both hands before touching broken skin, mucous membranes, blood or other body fluids, and before performing an invasive procedure.
- Protective barriers such as goggles, face masks, aprons, etc. are worn.
- Antiseptic agents are used to clean the skin or mucous membranes before certain procedures, or for cleaning wounds.
- All healthcare workers and facility staff follow safe work practices (e.g., not recapping or bending needles, properly processing instruments, and suturing with blunt needles when appropriate).
- The sites for providing care and examination of patients are cleaned regularly and waste is properly disposed.
- Colour coded bins are available as per norms and requirement.

In a facility, successful implementation of infection prevention system is dependent on:

- Knowledge and skills of service providers including Grade III and IV staff
- Availability of consumables and equipment
- Adherence to the protocols
- Segregation of waste
- Transportation and disposal of waste

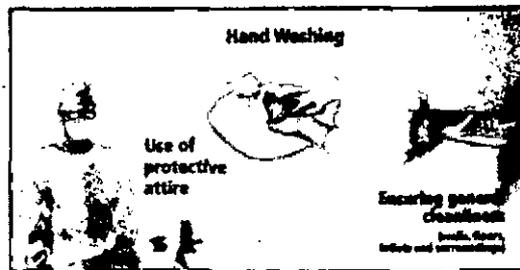
Infection prevention practices

The following should be in place at all facilities where maternal and newborn care is provided.

a. Hand washing

This is the most practical procedure to prevent spread of infection. Hands should be washed thoroughly with soap and water:

- Before and after examining a patient/client
- Before putting on gloves
- After contact with blood or other body fluids, or soiled instruments
- After removing gloves



b. Daily cleaning

- After each delivery, clean table top with Phenol/bleaching solution.
- Clean floor and sinks with detergent (soap water) and keep floor dry.
- Clean table tops and others surfaces such as light shades, almirahs, lockers, trolley, etc with low-level disinfectant Phenol (carbolic acid 2%).
- Clean electrical monitors with 70% alcohol.
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 min and then mop.

c. Safe handling of sharps

Hypodermic (hollow bore) needles cause the most injuries to healthcare workers at all levels. The following safety guidelines should be followed when handling sharp instruments such as needles and syringes:

- Sharp instruments should never be passed from one hand directly to another person's hand.
- A needle holder should be used when suturing; the needle should never be held with the fingers.

Table 19: Cleaning schedule for Client-care Areas

<p>At the beginning of each day</p>	<p>Clean horizontal surfaces – operating/procedure tables, examination couches, chair, trolley tops or Mayo stands, lamps, counter, and office furniture – with a cloth dampened with water; and clean floor with a mop dampened with water to remove dust and lint that have accumulated overnight.</p>
<p>Between Clients</p>	<ul style="list-style-type: none"> ● Clean operating/procedure tables, examination couches, chair, trolley tops or Mayo stands, lamps, and any other potentially contaminated surfaces in operating theaters and procedure rooms with a cloth dampened with a disinfectant cleaning solution. Alternatively, spray the solution onto the surfaces, using a spray bottle, and wipe with a cloth dampened with water. ● Clean spills of blood or other body fluids with a 0.5% chlorine solution immediately. ● Clean visible soiled areas of floor, walls, or ceiling with a mop or cloth dampened with a disinfectant cleaning solution. ● Put waste in a leak proof container, and empty the container when it is 3/4 full.
<p>At the end of each clinic session or day</p>	<ul style="list-style-type: none"> ● Wipe down all surfaces – including counters, tables, sinks, lights, doors, handle plates, and walls – with a cloth dampened with a disinfectant cleaning solution or spray the solution on to the surface using a spray bottle and wipe them down. Remember to wipe from top to bottom. Pay particular attention to operating/procedure tables, making sure to clean the sides, base, and legs thoroughly. Rinse sinks with clean water after cleaning. ● Clean the floors with a mop soaked in a disinfectant cleaning solution. ● Check sharps-disposal containers and remove and replace them if they are 3/4 full. ● Remove medical or hazardous chemical waste, making sure to burn or bury it as soon as possible to limit contact with potentially infectious waste. ● Wash waste containers with disinfectant cleaning solution and rinse with water.
<p>Each week</p>	<ul style="list-style-type: none"> ● Clean ceilings with a mop dampened with disinfectant cleaning solution.

- After use, needles and syringes should be decontaminated by flushing them with a 0.5% chlorine solution three times.
- All needles/sharps/I.V. Cannulae/broken ampoules/blades should be handled properly and disposed in puncture-proof container.
- Needles must be destroyed immediately using hub-cutter.
- Sharps should be disposed immediately in a puncture-resistant container. Needles should not be recapped, bent, broken, or disassembled before disposal.
- In case of needle stick injuries (used needle), please follow the Post Exposure Prophylaxis Protocol (PEP) for prevention of HIV.

d. Wearing sterile gloves

Gloves are the most important physical barrier that prevents the spread of infection. However, it is important to note that they do not replace hand washing. Gloves should be worn in the following situations:

- When there is a reasonable chance of hand contact with broken skin, mucous membranes, blood, or other body fluids.
- While performing an invasive procedure.
- While handling soiled instruments or contaminated waste items, or when touching contaminated surfaces.
- Sterile gloves should be worn without touching non-sterile surfaces.

e. Instrument processing

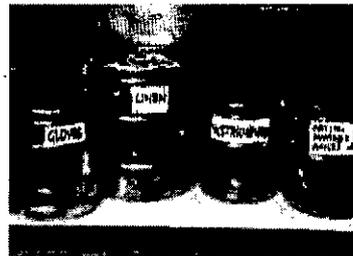
Soiled instruments, used surgical gloves, and other reusable items can transmit disease if infection prevention procedures are not properly followed. These procedures include the following:

- **Decontamination** makes inanimate objects safer to handle before cleaning and involves soaking soiled items in 0.5% chlorine solution for 10 minutes and wiping soiled surfaces such as examination tables with a 0.5% chlorine solution.
- **Cleaning** after instruments and other reusable items have been decontaminated, they need to be cleaned to remove visible dirt and debris, including blood and body fluids. Cleaning is the most effective way to reduce the number of microorganisms on soiled instruments and equipment.

- **Sterilization** destroys all microorganisms, including bacterial endospores, which are present on instruments or equipment. Instruments, surgical gloves, and other items that come in contact with the blood stream or other sterile tissue should be sterilized. Sterilization can be achieved using an autoclave, dry heat, or a chemical.
- **High-Level Disinfection (HLD)** destroys all microorganisms except some bacterial endospores on instruments or objects. It is the only acceptable alternative to sterilization and can be achieved by boiling, steaming, or soaking items in a chemical solution.

Storage

Sterilized and HLD items must be stored in a clean, dry area. Sterile packs and containers should be dated and rotated, using a "first in, first out" approach. Wrapped packages that remain dry may be used up to one week, and wrapped packages sealed in plastic up to one month. All autoclaved and wrapped instruments should have a tag which will indicate the status of sterilization after autoclaving.



Bio-medical waste disposal

There are three kinds of waste generally found in health facilities: general waste, medical waste, and hazardous chemical waste. It is important to dispose of all kinds of waste properly, since improper disposal of medical and hazardous chemical waste poses the most immediate health risk to the community.

General Instructions:

- Most waste (e.g. paper, trash, food, boxes) at health centers and hospitals is not contaminated and poses no risk of infection to people who handle it.
- Some waste, however, is contaminated and, if not disposed properly, can cause infection.
- Contaminated waste must therefore be disposed separately from non-contaminated waste.
- Hospital waste should be segregated at source in colour-coded waste bins as per guidelines.
- All plastic bags should be sealed, labeled and audited before disposal.

- Each facility must have housekeeping and waste management protocols depending upon the caseload, waste generated, available HR, and facility of waste disposal.
- Staff in the facility must be aware of infection prevention practices and protocols.

Handling and disposal of medical waste

All staff has a responsibility to dispose of waste in a manner that poses minimal hazards to client, visitors, other health care workers, and the community. Anyone who handles contaminated waste – from the time it is thrown out by a service provider to even after it reaches the site of final disposal – is at risk of infection or injury.

General waste/Non-contaminated waste

Non-hazardous waste that poses no risk of injury or infections. This is similar in nature to household trash. Example includes paper, boxes, packing materials, bottles, plastic container, and food-related trash. It should be stored in black bins/buckets, which will be taken away by municipality.

Black Bag: Kitchen waste, Paper bags, Waste paper/thermocool, disposable glasses and plates, leftover food.

Medical waste/Contaminated waste

Waste generated during examination, immunization, investigations, diagnosis and treatment such as bandages or surgical sponges; which includes blood, blood products (fresh or dried blood) or other body fluids.

Yellow bag: Human tissue, placenta, products of conception, used swabs/ gauze/ bandage, other items (surgical waste) contaminated with blood

Red Bag : Used mutilated catheters I.V bottles and tubes, disinfected plastic gloves, other plastic material

Blue bag : Tubing like I.V. drip sets and different types of Catheters and tubes should be disposed in blue bins.

Waste Disposal

Bio-Medical Waste Disposal	1 Segregation	3 Proper storage before transportation
	2 Disinfection	4 Safe disposal

 Yellow Bag Human tissue, placenta, products of conception, used swabs/ gauze, other items (surgical waste) contaminated with blood	 Red Bag Used mutilated catheters, I.V bottles and tubes, syringes, disinfected plastic gloves, other plastic material	 Black Bag Kitchen waste, paper bags, waste paper/ thermocol, disposable glasses and plates, left over food	 Proper handling & disposal of sharps All needles/sharps to be disposed in puncture proof container
---	--	--	---

All plastic bags should be properly sealed, labeled and stored pending disposal

Liquid medical waste (LMW)

- Avoid splashing
- Handle used cleaning/ disinfectant solution as LMW
- Pour LMW down a sink/drain/ flushable toilet or bury in a pit
- Rinse sink/drain/ toilet with water after pouring LMW
- Pour disinfectant solution in used sink/drain/ toilet at end of each day
- Decontaminate LMW container with 0.5% bleaching solution for 10 minutes before final washing

Hazardous chemical waste

Chemical waste that is potentially toxic or poisonous, including cleaning products, disinfectants etc. should be thrown in toilets/drains, cytotoxic drugs and radioactive compounds should be disposed of according to radioactive disposed norms.

PEP (Post exposure prophylaxis):

- To be given in case of accidental exposure to blood and body fluid of HIV+ve woman

Proper disposal of sharps needs a special mention -

- Sharps (used or unused), including hypodermic and suture needles, scalpel blades, blood tubes, pipettes, and other glass items that have been in contact with potentially infectious materials (such as glass slides and coverslips)
- All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture proof box before disposal.
- Sharps etc. like needles should be cut by a hub cutter and disposed in puncture proof containers. Once this container 3/4 filled, it should be buried or incinerated.

The four main components for waste disposal plan are:

1. Segregation at source
2. Disinfection
3. Proper storage before transportation
4. Safe disposal

Creating a waste-management plan

There are four components to a waste-management plan:

- I. Segregation:** separating waste by type at the place where it is generated/at source
 - a. Always segregate waste into infectious and non-infectious waste at the source of generation.
 - b. Segregate infectious waste into:
 - Sharps: needles, blades, broken ampoules, vials and slides. These should be disposed of in a puncture-proof container.
 - Non-sharps: soiled waste, such as syringes, dressings, gloves and masks. These are to be disposed of in the red plastic bin/bag.
 - Anatomical waste, such as placenta. This is to be disposed of in the yellow plastic bin/bag.
 - c. Non-infectious (general) waste such as waste similar to household waste including packaging material, cartons, fruit and vegetable peels, syringe and needle wrappers and medicine covers, should be disposed of in the black plastic bin/bag.
 - d. Never mix infectious and non-infectious waste at the source of generation or during the collection, storage, transportation or final disposal of waste.

II. Disinfection

- a. Always collect the waste in covered bins.
- b. Fill the bin up to the three-quarter level.
- c. Clean the bin regularly with soap and water.
- d. Never overfill bins.
- e. Never mix infectious and non-infectious waste in the same bin.
- f. Never store waste beyond 48 hours.

III. Proper storage before transportation

- a. When carrying/transporting waste from the source of generation to the site of final disposal, always carry it in closed containers.

- b. Use dedicated waste collection bins for transporting waste.
- c. Never transport waste in open containers or bags. It may spill and cause spread of infections.
- d. Never transport waste with sterile equipment.

IV. Safe disposal

- a. Always remember to *disinfect and shred the waste before its final disposal.*
- b. Remember the following while treating waste
 - Anatomical waste is to be buried deep at the health facility.
 - All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture-proof box before disposal.
 - All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture-proof box before disposal.
 - Syringes are to be cut (with hub cutters) and chemically disinfected at the source of generation before they are finally disposed off in the sharps pit located at the health facility.
- c. Never throw infectious waste into general waste without any pre-treatment and shredding.

TOPICS

Planning Maternal and Child Health Activities

INTRODUCTION

Planning is a basic programme management function. It determines the programme's framework for action. Planning is a process which helps decide in advance:

- the problems in maternal and child health and the objectives of the maternal and child health programme;
- the activities that should be done to achieve the programme objectives;
- the methods or approaches that should be followed when performing the activities;
- the time-frame within which the activities should be accomplished;
- the persons who will perform or be responsible for the activities; and

- the milestones or indicators that should be used to monitor and evaluate the maternal and child health programme.

WHY PLAN?

Planning focuses activities on the desired goals and objectives.

Good planning dictates the effectiveness and efficiency of activities because it minimizes changes or uncertainties that may occur during the implementation of the programme.

Good planning enables managers to monitor and evaluate programmes based on set indicators, and allows for necessary decisions or actions when needed.

DISTRICT HEALTH PLANNING

Planning in the district should arise from the different health centres and other units within its jurisdiction. This is important so that strategies adopted by each unit reflect their situation.

To ensure that the planning focus of different units is the same, it is important to follow a framework for planning based on the health policies and goals of the province. When all the units have come up with their plans, the district health office should put them together. This will need intensive discussion and consultation with the units concerned, especially in prioritizing problems and adopting measures to maximize results not only for the specific health unit but for the whole district.

Planning follows three main steps, analysing the situation, formulating solutions and developing workplans.

ANALYSING THE SITUATION

Analysing the situation finds out what the problems are and their causes, and what resources are available through a systematic process of examining health and health-related information.

Reviewing the general health situation

Study of the general health situation provides a more comprehensive view of maternal and child health and a better understanding of maternal and child health problems.

The review requires collecting and analysing data on population, its health status, health resources and the socioeconomic factors affecting health.

Data sources include office records on health services and resources, programme evaluation results, national health office, demographic and health surveys and reports of other institutions which collect health-

related information, such as the civil registry, records of nongovernmental health organizations, etc.

Other information may be obtained through discussions with local government and community leaders, interviewing clients or attending meetings of sectoral organizations working in the community or conducting surveys.

It is important to ensure that information for review is accurate and up to date.

Below is a summary of information that is needed for maternal and child health planning:

POPULATION

- size and dynamics
- age and sex structure
- size of target groups
- geographical distribution

HEALTH STATUS

- number, causes, and patterns of illnesses

HEALTH RESOURCES

- national health policies and programmes
- available health facilities
- available health services and coverage
- population with and without access to health facilities
- available technology
- available drugs and sources
- information system
- organizational structure and staff complement
- staff competence
- infrastructure, supplies and equipment
- income generated from services
- budget allocation from the government
- funding from donors and other sources

SOCIOECONOMIC FACTORS AFFECTING HEALTH

- political structure
- family size and authority structure
- social ethics and religious affiliations
- income level and sources

- educational level and facilities
- means of communication and transport
- water supply and excreta disposal
- health practices and food habits
- food availability and consumption patterns
- attitudes and customs related to health
- quality of health services provided to people

Reviewing this information should provide a good background to identifying maternal and child health problems.

Setting expectations/forecasting

Maternal and child health managers should know what to expect based on past and current population and the health situation.

Setting expectations allows preparation of enough resources beforehand, thus preventing problems during implementation. It also helps determine measures early, before a problem arises.

EXAMPLE OF SETTING EXPECTATIONS:

If the number of under-five clinic consultations increases by an average of 15 per year and if last year's total number of under-five clinic consultations was 975, then the expected number of consultations this year is 990.

Identifying problems

Problem identification should start with an analysis of maternal and child illnesses and deaths. Maternal and child illnesses and deaths are the main concerns of maternal and child health programmes. Their numbers, causes and trends should be ascertained.

If the problem is high maternal mortality due to postpartum haemorrhage, the causes should be identified, whether they are a result of placental retention, uterine atony, birth canal lacerations or others. Other elements may have also contributed. It is necessary to know who assisted the deliveries, if the women were referred to a higher level of care, if the women had antenatal care, etc.

Apart from the underlying and contributing factors, it is also very important to identify areas where high numbers are occurring and to find out what makes the women and children in these areas more vulnerable. This is significant in establishing priorities and developing strategies.

In most countries, there are marginalized sectors of the population where most of the diseases and deaths occur. Usually these people are the poorest, those living in difficult areas not accessible to means of

transportation or where there is war, or those belonging to cultural minorities. Only special strategies will reach these population groups.

In areas with smaller populations, the numbers of maternal and child deaths and illnesses may be deceiving. It is important that rates and ratios are used to analyze them. Maternal and child health services should be assessed. Setting up effective and efficient maternal and child health services will answer most problems in maternal and child health. Effective and efficient services though will have many requirements.

IN TERMS OF HEALTH SERVICES

- Are services technically sound?
- Are services technically appropriate?
- Are there guidelines and measures to ensure quality control?
- Are services cost-effective?
- Do communities actively participate in health care activities?
- Do services help in solving the identified problems?

IN TERMS OF RESOURCES

- Are health providers competent ?
- Are facilities and equipment appropriate, adequate and in good condition?
- Are supplies and materials adequate and used efficiently?

IN TERMS OF DELIVERY

- Are services geographically accessible to the population?
- Are services reaching the population needing them most?
- Are services acceptable?

Opportunities and limitations should be identified.

There are factors which may pose as opportunities or limitations in carrying out strategies and activities. A high level of community participation can be considered an opportunity because it facilitates mobilization and conduct of health promotion activities. However, harmful traditional practices may cause considerable limitations in promoting safe deliveries.

A good turnout during child immunization days is an opportunity to give women tetanus immunization. Where tetanus immunization is only given during antenatal visits, poor antenatal care coverage is a limitation to increasing tetanus immunization coverage.

Programme opportunities and limitations should be closely looked into, as they facilitate the formulation of sound strategies and activities.

When determining programme opportunities and limitations, the following criteria may be considered:

- factors in the organizational structure that facilitate or hinder implementation of activities;
- degree of participation of staff and the community in programme planning and evaluation processes;
- availability of qualified staff to handle assigned roles and responsibilities;
- level of expertise of staff contributing to increased efficiency;
- assessment of workload of staff, whether under-utilized or overworked;
- system of supervision, feedback mechanism, and other means of support and assistance to personnel;
- training opportunities and staff development;
- presence of a reliable information system to monitor and evaluate performance and guide decision-making;
- presence of an organized logistic system;
- capacity to provide services, training and education activities;
- capacity for expanding services through increased efficiency;
- level of client satisfaction and community participation;
- programme strengths and weaknesses;
- level of financing; and
- level of community support such as volunteers, fund-raising activities and donations of materials and supplies.

Maternal and child health problems should be listed.

To ensure that problems and underlying causes stay in focus for planning effective programme support and to have common terms of reference, they should be written down.

Sample list of problems indicating possible causes:

PROBLEM	POSSIBLE CAUSES
High incidence of maternal deaths due to postpartum haemorrhage and infections	<ul style="list-style-type: none"> • most pregnant women do not use available prenatal, delivery and postnatal health services • in instances where women use the services, midwives fail to refer pregnant and postpartum women with complications on time • most district hospitals cannot manage obstetric complications • clean and safe delivery coverage is low
Main cause of child deaths is dehydration due to diarrhoea	<ul style="list-style-type: none"> • lack of safe water source • oral rehydration solution is often not available in health facilities • need for community awareness on diarrhoea and preventive measures

Tetanus remains the main cause of neonatal deaths

- most households do not have a latrine
- health workers lack clinical competence in management of severe dehydration due to diarrhoea
- low tetanus immunization coverage among pregnant women
- unsafe birthing practices of traditional birth attendants
- use of powders or ashes as cord applications

PRIORITIZING PROBLEMS

Problems in maternal and child health are numerous and it may not be possible to address all of them at the same time. In case of severe limitations in resources, problems of lesser priority may be excluded from the programme. Prioritizing problems, though, should not automatically result in the exclusion of problems with lesser rank.

Managers prioritize problems to set targets and allocate resources for each problem.

Prioritizing problems entails ranking the identified problems according to pre-determined criteria.

The selection of criteria depends upon what the management team considers important factors for prioritization. The following criteria may be considered:

- Magnitude - in case of health status, this refers to how many deaths and cases are caused by the problem.
- Seriousness - refers to the severity of the effects of the problem.
- Scope - this refers to the proportion of the population who will benefit if the problem is considered a priority.
- Feasibility - refers to the probability of the problem being solved with existing technology which can be applied in the locality, available resources, etc.
- Social concern - this refers to the significance attached by the community to the problem.
- International commitment - this refers to the existence of a global mandate for action and support.

To facilitate decision-making about which problems deserve most attention, a scoring system may be used.

Developing a scoring system starts with setting criteria for ranking and assigning a weight for each criterion. This becomes the basis for scoring problems. The problem with the highest points is ranked as priority #1, the second highest as #2, and so on.

HOW TO PRIORITIZE A PROBLEM:

HIV infection, neonatal tetanus and measles were identified as the main problems in one province.

In order to find out which problem should be attacked more forcefully, three criteria were selected; seriousness, magnitude, and feasibility. Each criterion was then assigned a weight in order to assess its contribution to the problem. Therefore, seriousness would contribute 30 per cent, magnitude 30 per cent, and the feasibility of introducing changes to the problem, 40 per cent. Under each category, each disease would receive a rank.

Finally, the rank attached to each disease was multiplied by the weight attached to each criterion for evaluation to give a final score. In this case, measles emerged as the highest priority problem.

The scoring table below shows how the problems were prioritized.

Problem (Weight)	Seriousness (30%)	Magnitude (30%)	Feasibility (40%)	Score
HIV infection	3	1	1	$3(.3)+1(.3)+1(.4) = 1.6$
Neonatal tetanus	2	2	2	$2(.3)+2(.3)+2(.4) = 2.0$
Measles	1	3	3	$1(.3)+3(.3)+3(.4) = 2.4$

FORMULATING SOLUTIONS

Solutions should be directed at correcting identified problems and/or their causes.

Using globally accepted strategies or interventions

Formulating solutions to specific health problems is one of the most difficult skills to learn. For new health managers, this will be more difficult because of inexperience. However, there are globally accepted strategies or interventions on maternal and child health that health managers can adopt. Testing of these strategies need not be extensive and in some instances may be done away with.

INTERVENTIONS/STRATEGIES THAT HEALTH

MANAGERS CAN USE:

- adoption of the case management protocols for control of diarrhoeal disease and acuterespiratory infection;
- provision of basic maternity care;
- the risk approach in antenatal care;
- use of partograph during labour;

midwives was suggested to be done in the next planning year when more women were using the services.

The training of traditional birth attendants on identification and referral of pregnant women at risk was deferred not only because of resource constraints but also because midwives and nurses would not be able to respond well to referrals until they had been trained.

The management decided to put into the plan remedies and activities outlined under points 3, 4 and 1 and suggested that they should be accomplished in that order.

LEARNING FROM THE EXPERIENCES OF NEIGHBOURING

Communities

A problem is often not totally new. Neighbouring communities may have encountered the same problem. Sharing experiences among neighbouring communities provides an opportunity for health managers to consult and learn from each other, thus arriving at better strategies to solve problems.

Creative thinking and innovative strategies

Thorough and in-depth analysis of every problem are keys to finding innovative solutions to maternal and child health problems.

Simple and practical strategies are much more likely to succeed.

SIMPLE AND PRACTICAL STRATEGY:

In places where most women suffer from iron deficiency and laboratory facilities are scarce, haemoglobin determination may be done away with except among those with severe anaemia, all pregnant women may be given iron supplementation and a more intensive nutrition campaign may be used to encourage pregnant women to eat iron-rich foods. The funds for the haemoglobin examinations may be used to purchase iron supplies. If the iron supply is insufficient, priority should be given to women with pallor.

Some problems may be answered by new technology and management concepts.

A NEW TECHNOLOGY WHICH MAY ANSWER PROBLEMS IN DATA COLLECTION AND ANALYSIS:

Simple and standardized reporting forms and computerization will facilitate collection and interpretation of health information.

Selective Coverage

This is done to achieve greater effectiveness at the least cost. Specific strategies and activities are directed to the vulnerable population.

The characteristics of the vulnerable population should be identified. Susceptible individuals are often differentiated from the rest of the population by location, age, biological attributes, surrounding social conditions, cultural and religious practices, etc.

WHEN SELECTIVE COVERAGE MAY BE APPLIED:

A supplemental feeding programme is an accepted strategy for malnourished infants and children. When faced with scarce resources, a good option is to limit this service to a district with the highest malnutrition rate or to the population segment with the lowest socio-economic status.

Steps in Formulating Solutions

There should be an **objective** for every prioritized problem that has been identified.

For an objective to be useful it should be:

- specific - it should state exactly the result that is desired;
- measurable - results to be achieved should be observable;
- appropriate - it should relate to the problem being solved and should not be contrary to the health policy of the country;
- realistic - it can be achieved given the constraints and with available resources; and
- time bound - it should state when the desired results should be achieved.

MATERNAL AND CHILD HEALTH**Programme Objectives:**

To reduce the maternal mortality ratio to half of 1990 levels by the year 2000.

To reduce the neonatal mortality rate by 40 per cent from 1990 levels by the year 2000.

To reduce the infant mortality rate from 130 per 1000 livebirths in 1996 to 70 per 1000 live births by the year 2000.

To reduce nutritional anaemia by 50 per cent from 1996 levels by the year 2000.

To increase prenatal coverage (at least four visits per woman) from 40 per cent in 1996 to 80 per cent by the year 2000.

Operational targets based on the objectives should be identified.

An operational target identifies how an objective could be achieved and should indicate the following:

- specific measures to effect the desired change;
- priority population group; and
- target dates.

Strategies should be determined

Strategies are approaches or techniques to facilitate accomplishment of set objectives and targets. One strategy may apply to one or several objectives, or sometimes to the whole programme. Multiple strategies may be applied to one objective.

Health problems have many factors. If strategies focus on only one factor that contributes to the problem, no matter how effective the strategies are, they will not solve the entire problem. In the same manner, a single strategy may be used to help solve more than one problem.

USING MULTIPLE STRATEGIES TO SOLVE

One Problem and a Single Strategy to Solve Several Problems:

Training health workers on emergency management of obstetrical problems may not lower maternal deaths if no referral system is in place. The strategy of following up women who do not come back to the clinic for their scheduled antenatal care visits will find out not only why they failed to return but also give the health worker the chance to assess the family situation, and to show their concern for the woman and her family. Involving volunteer health workers as health promoters may not only encourage pregnant women to attend antenatal clinics but may also motivate other women to seek family planning and other services.

Consideration of programme opportunities and limitations will dictate sound strategies. Strategies should take advantage of opportunities and address limitations in the programme. Health education campaigns in schools will gain support from school officials and the faculty and will also reach teenagers who do not avail of the services in the clinic. Strategies should take advantage of the strengths and offset the weaknesses of the programme. A strong immunization programme, for example, can be used as a venue for other health services such as provision of micronutrients for children or tetanus toxoid immunization for women.

OBJECTIVES AND CORRESPONDING OPERATIONAL TARGETS:

Objective	Operational targets
<p>To reduce the maternal mortality ratio to half of 1990 levels by the year 2000.</p>	<ul style="list-style-type: none"> • To identify 50 per cent of pregnant women at risk by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000. • To enable the district hospital to perform operative delivery by 1998. • To develop a standard referral procedure by 1997.
<p>To reduce the neonatal mortality rate by 40 per cent from 1990 levels by the year 2000.</p>	<ul style="list-style-type: none"> • To give tetanus immunization to all pregnant women who come for prenatal care. • To give proper cord care to 50 per cent of newborn infants by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000. • To identify 50 per cent of pregnant women at risk by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000.
<p>To reduce nutritional anaemia by 50 per cent from 1996 levels by the year 2000.</p>	<ul style="list-style-type: none"> • To enable ten health centres, at two health centres per year, to perform haemoglobin determination by the year 2000. • To give iron supplementation to 50 per cent of pregnant women with anaemia by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by 2000. • To develop a nutritional guide for pregnant women by 1998.

Strategies Outlined by the Mother-baby Package on Family Planning Include:

- A comprehensive information and education campaign should be developed, focusing on birth spacing and birth timing as important measures for mother and child. Informing and orienting the media about contraception should be an integral part of the effort. The campaign should target the community level and should involve men.
- Training of health care providers should include not only the technical and managerial aspects of contraception but also appropriate interpersonal communication and counselling skills.
- An optimal range of contraceptives should be made available to meet the needs of the widest possible range of users, following the

principle of "free choice". Family planning information as well as post-abortion counselling should be offered at all service points.

- Availability of contraceptives should be increased by offering them at immunization sessions, all health facilities and community based outlets, and by providing counselling services.
- The protection offered by use of condoms against AIDS and other sexually transmitted diseases should be highlighted.
- Peer counselling through youth and womens' organizations to educate adolescent boys and girls on issues related to reproduction, human sexuality and the risks of early marriage and pregnancy should be encouraged.

Activities should be defined.

Activities are specific and concrete steps and actions to accomplish the set objectives and operational targets.

For the operational target to train 50 per cent of midwives on management of obstetrical complications, activities may include the following:

- organizing a training committee;
- assessing training needs and evaluating the present training programme;
- developing a training programme based on identified training needs;
- developing training materials and preparing for training;
- conducting training; and
- evaluating the training programme.

National health organizations may already have established maternal and child health programmes and policies for implementation. If this is the case, national objectives, strategies and activities should be translated into provincial, district or community health unit levels with special considerations for specific issues and concerns at the different levels.

Whenever objectives, strategies and activities are proposed for a problem, their limitations and opportunities should always be reviewed.

Developing Workplans

A workplan is a list of all planned activities, specifying the dates when the activities will be accomplished, how they should be accomplished, the required resources, and the persons or institution responsible for carrying out the activities.

A workplan is essential for effective and efficient programme implementation because :

- it gives clear direction to the health team;
- it is a means of communicating to the staff the range of activities to be carried out;
- it fosters teamwork and cooperation; and
- it serves as a basis for monitoring and evaluating performance.

Steps in developing a work plan:

- List the activities to be implemented.
- Determine in what sequence the activities should be carried out.
- Determine the time-frame for each activity.
- Assign personnel who have the skills and time to carry out the activity effectively.
- Determine the cost and other resources to carry out activities.

Developing a workplan requires patience and time. There should be extensive discussions on what the priority activities are, how the activities will be carried out, who will be responsible for the activities and how much of the available resources should be spent on each activity.

A general maternal and child health workplan may be developed to ensure that all problems and activities will be carried out. It may be stated in broader terms, provided specific workplans are developed for specific strategies or operational targets.

Long-term programme workplans of five to ten years may be needed for forecasting long-term budget allocation. Short-term workplans are important for programme operation. An annual workplan provides members of the health staff with direction for the whole year. Monthly or weekly workplans may also be developed by people in charge of specific activities.

Activities should match with budget and other resources. If the budget is not sufficient for the activities, cost-cutting or foregoing other activities which are of lower priority may be needed. If there are a lot of activities which the staff are unable to do, alternatives include hiring a temporary person to augment the workforce or channelling the rest of the activities to private health organizations who are willing and able to do the activities.

Summarizing and tabulating workplans make them easier to follow.

SAMPLE WORKPLAN:

Activities	Person responsible	Schedule	Resource requirements
Organizing a training committee	District health officer	First week of January	<ul style="list-style-type: none"> • meeting room • invitation letters
Assessment of training needs	Midwife supervisor Training Committee	January-March	<ul style="list-style-type: none"> • training committee • assessment questionnaires • per diem and transport expenses for field visits
Development of a training programme (including guides and other materials) based on identified training needs	Midwife supervisor Nurse trainer	April-May	<ul style="list-style-type: none"> • training committee • reference materials • working room • artist illustrator • supplies
Preparation for training	Nurse trainer	One month before every training course	<ul style="list-style-type: none"> • training committee • training venue • practice site • resource persons' & participants' accommodation
Conduct of training	Midwife supervisor	Two training courses (1) July-Aug (2) Sept-Oct	<ul style="list-style-type: none"> • training venue • training aids • practice site • resource persons' & participants' accommodation • transportation cost
Evaluation of training programme	Training Committee	December	<ul style="list-style-type: none"> • training committee • assessment questionnaires • per diem and transport expenses for field visits

The budget requirement details may be included in the summary of activities, but this may be confusing for the people who allocate money. Each activity may have similar budgetary requirements, which may be better presented when summarized.

BUDGET DETAILS FOR TRAINING ACTIVITY

A budget requirement chart for the example above may look like this:

Budget item	# of units (A)	Days attendance (B)	Rate (\$) (C)	Cost (\$) (A)(B)(C)
Per diem for participants, 2 training courses, 30 part./course	60 participants	16	10.00	9600
Per diem for training committee and 2 drivers for field visits	8 persons	30	10.00	2 400
Transport cost for participants, average of \$7 per participant	60 participants		7.00	420
Transport cost for training committee, gasoline at \$15/day/car	2 cars	30	15.00	900
Hiring of artist illustrator	1 person	30	20.00	600
Printing of training materials	75 copies	100 pages	0.10	750
Supplies	75		10.00	750
Miscellaneous			500.00	500
Total				15 920

11. ORGANISING A HEALTH EDUCATION PROGRAM ON FAMILY PLANNING

TOPICS

Organising a Health Education Program on Family Planning

LEARNING OBJECTIVE

- On completion of this assignment you will be able to –
- organize a health education program of family planning either in hospital or in community and
- conduct a health education session on family planning to cover the following objectives.
 - (a) Define family planning
 - (b) Describe the importance of family planning
 - (c) List the methods of family planning
 - (d) Discuss the advantages of family planning methods.

ORGANISE A HEALTH EDUCATION PROGRAM

Conduct a Health Education Session

Adult teaching learning principles are important to follow during conducting a health education session. Following steps are essential.

- Start with greetings and introduce yourself and topic
- State the session objectives
- Identify the existing knowledge of the participants
- Start from known to unknown (organise the content in such way)
- Explain and express the message clearly and sequentially
- Word and language- easy, specific and as much as possible to the spoken word and language of the locality
- Have a suitable manner and way of speaking
- Involve participant in the discussion
- Appreciate for participation
- Provide stimulating materials
- Present visual material- clear and interesting
- Emphasis given on important points.
- Address when participant gets bored with in attentive
- Clear pronunciation and audible voice with intonation

Organizing and Participating in Health Education, Family Planning and Immunization Camps

- Smiling face with direct eye contact whenever require and possible
- Not to look at the hand notes during talking
- Feedback
- Relationship- relaxed and non-authoritarian
- Summarise the content
- Alert about time keeping
- Set example from real life
- Close the session in such a way that they could understand the session is completed.

FAMILY PLANNING

Definition

An expert committee of WHO defined and described family planning as follows: "Family planning refers to practices that help individuals or couples to attain certain objectives -

- (a) To avoid unwanted births
- (b) To bring about wanted births
- (c) To regulate the intervals between pregnancies
- (d) To control the time at which births occur in relation to the ages of the parents and
- (e) To determine the number of children in the family.

IMPORTANCE OF FAMILY PLANNING

Family planning has come to play a prominent role in the national health plans of many countries for many reasons. Family planning and health have a two-way relationship. The health aspects of family planning include women's health, foetal health and infant and child health. It is important for each family and nation. Planning is a multi-purpose broad-based comprehensive program dealing with

- Proper spacing and limitation of births,
- Child spacing leads to healthier children and healthier mothers
- Reduction of world population growth
- Advice on infertility and sterility
- Education for parenthood
- Sex education
- Screening for pathological conditions related to the reproductive system
- Genetic counselling

- Marriage counselling
- Premarital consultation and examination
- Carrying out pregnancy tests, and
- Preparation of couples for the arrival of first child.

FAMILY PLANNING METHODS

Family planning methods are usually known as contraceptive methods. Contraceptive methods are preventive methods to help women avoid unwanted pregnancies. The term contraceptives include all temporary and permanent measures designed to prevent pregnancy resulting from coitus.

The contraceptive methods may be classified into two broad groups:

- i. Spacing methods or temporary methods
- ii. Terminal methods or permanent methods.

A. Barrier methods

- i. Condom
- ii. Vaginal diaphragm
- iii. Cervical cap
- iv. Vaginal sponge.

B. Chemical methods

- i. Foams
- ii. Creams, jellies and pastes
- iii. Suppositories
- iv. Soluble films
- v. Spermicidal gels.

2. Intra-uterine contraceptive devices (IUCDs)

3. Hormonal methods

(a) Oral pills

- i. Combined pill- oestrogen and progesteron

Organizing and Participating in Health Education, Family Planning and Immunization Camps

- ii. Minipill-progesteron only pill (POP)
- iii. Sequential pill-2 weeks oestrogen only and then in 3rd weeks both oestrogen and progesterone
- iv. Post-coital pill.

(b) Depot (slow releasing) preparations

- i. Injectable: Depot provera
- ii. Subcutaneous implants: Norplant

- iii. Vaginal rings.
- 4. Post- conceptional methods (termination of pregnancy)
 - i. Menstrual regulation (MR)
 - ii. Menstrual induction (MI)
 - iii. Abortion.
- 5. Behavioural/ Traditional Methods
 - i. Sexual abstinence
 - ii. Incomplete coitus
 - iii. Safe period breast feeding
 - iv. Withdrawal of penis before ejaculation.
- 6. Contraceptive immunisation-birth control vaccine
 - i. Vasectomy-male sterilization
 - ii. Tubal hgation or tubectomy-female sterilisation

Advantages and disadvantages of family planning methods

Method	How	Advantages	Disadvantages	Who for?
Natural (rhythm)	No SI from 4 days before to 4 days after ovulation	1. No supplies 2. No expense	1. High failure rate 2. Needs personal motivation 3. Difficult for those with irregular periods 4. Partner must be co-operative	1. Anyone well motivated 2. Useful for those unwilling to use other methods 3. Those with moral objections to other methods
Combined o/c pill (COC)	Take pill daily without missing	1. Very safe it regular 2. SI at any time 3. Regular periods 4. Comparatively few side-effects	1. Easy to forget 2. Reduces breast milk 3. Less safe in women who smoke	Any healthy women under 40 able to remember and not breastfeeding a baby 6 months or less
Minipill	Take pill daily without missing	As above but periods may be less regular and slightly less safe than COC	1. Easy to forget	Women breastfeeding a child 6 months of age or less

Preventive Maternal and Child Health

Injectable contraceptives	Injection every 2 or 3 months	<ol style="list-style-type: none"> 1. Simple and safe 2. SI any time 	<ol style="list-style-type: none"> 1. P may be irregular 2. Some governments disapprove 3. May be harder to conceive after finishing 	Any woman with 3 or more children
Condoms	Rubber sheath placed on erect penis	<ol style="list-style-type: none"> 1. SI at any time 2. Some protection against AIDS and STD if used with care 	<ol style="list-style-type: none"> 1. Not reliable 2. Some couples dislike using them 	<ol style="list-style-type: none"> 1. Those who won't use more reliable methods 2. Those only having SI casually or occasionally e.g. couples living apart for employment reasons 3. Those in areas where AIDS is common
Vaginal form	Foam placed in vagina which kills sperm	<ol style="list-style-type: none"> 1. No side effects 2. Easy to use 3. SI at any time 	Not very safe if used alone	Any woman not willing or able to use other more reliable methods
IUD, Coil, Copper T, Copper 7	Loop or coil inserted into vagina and left for up to 5 years	<ol style="list-style-type: none"> 1. SI at any time 2. Quite effective 	<ol style="list-style-type: none"> 1. P may be heavy and painful 2. May cause anaemia 3. Unsuitable for women who have not had children 	Any woman uncertain if she is pregnant Women with 1 to 4 children who want to delay having more
Vasectomy	Cutting of male tubes (vas)	<ol style="list-style-type: none"> 1. SI at any time 2. Effective, permanent 	<ol style="list-style-type: none"> 1. Occasional post-operative infection and psychological after-effects 	Stable couples with 3 or more children who don't want any more

Organizing and Participating in Health Education, Family Planning and Immunization Camps

Tubectomy or Cutting of tubal ligation woman's tubes	1. SI any time 2. Effective permanent	2. Many men resistant 1. As 1, under vasectomy	Any woman with 3 or more children who doesn't want any more.
---	---	--	--

SI = sexual intercourse

P = periods (menses)

STP = sexually transmitted disease (VD)

Source : Lankester T, campbell ID and rader AD (1992) setting up
communities health programmes. Macmillan, London.

Recently two new methods have been approved by Government of India for use in government facilities which will increase the choice of methods available to women in your community. In this update you will learn about the benefits and side effects of two contraceptives:

1. A contraception that can be given every 3 months through an injection: called Medroxyprogesterone Acetate (MPA).
2. A contraceptive tablet that has to be taken once a week called Chhaya.

Remember that when you counsel the couple or individual regarding contraceptives, you must understand the needs of the couple or individual.

We will first discuss the:

THE INJECTABLE CONTRACEPTIVE, MPA

This contraceptive is now available in government health facilities through a programme called Antara. It can be given by a trained provider (Doctor, Nurse, ANM) in the health facility.

What is MPA?

MPA is given every 3 months by injection. It prevents pregnancy over a long period of time and helps in achieving spacing between children.

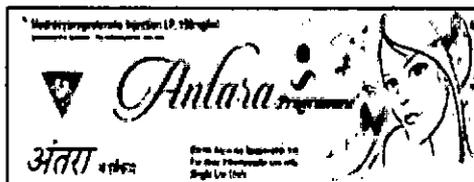


Figure 1: Injectable Contraceptive MPA

Who can use Injectable Contraceptive MPA

- Women of any age, including adolescents and women over 45 years old, irrespective of whether they have children or not.
- Unmarried women in reproductive age group.

- Women who recently had an abortion or miscarriage.
- Women who are breastfeeding (It can be started as early as 6 weeks after childbirth)
- Women who are HIV infected, irrespective of whether they are on medicines or not.

What are the benefits of MPA

Benefits of MPA:

- Requires to be taken only once in three months, rather than daily.
- Can be used by women who are not able to take hormonal oral contraceptive pills like Mala N/ Mala D etc.
- Safe for breast feeding mothers as it does not affect quality and quantity of milk.
- It does not cause problems with getting pregnant after stopping. After discontinuing the method, the woman can get pregnant.
- Does not interfere with sexual intercourse/pleasure.
- Reduces menstrual cramps (in some cases).
- It causes changes in the menstrual cycle, sometimes by stopping the monthly bleeding which is not harmful. This actually takes care of anemia by reducing menstrual blood loss.
- Does not interfere with any medicine.
- Protects from uterine and ovarian cancer.
- The privacy of client can be ensured.
- Does not require any laboratory investigation before starting the dose.

Effects of MPA: Some women could experience the following:

- Menstrual Irregularities- Irregular bleeding, prolonged heavy bleeding or amenorrhea.
- Weight gain
- Headaches
- Mood changes

Limitation:

- It does not protect from HIV and RTI/STI.
- It takes 7-10 months from the date of last injection for return of fertility.

Where can women get MPA and how it should be taken?

Women, who decide to start taking MPA, require repeat

Injections every three months. You know from previous training that it is important to use contraceptives regularly. MPA is available at the facilities where providers have been trained in using the method. The first dose can be administered by a trained doctor or a trained staff nurse/ ANM under the supervision of a doctor. Once a woman in your community starts the first dose, your role as an ASHA is to follow up with the woman, to understand if she has any side effects, to remind her when the next dose is due and motivate her to visit the health facility where trained provider is available for the repeat dose.

Schedule: One injection provides contraception for at least 3 months. It is best to take the injection exactly 3 months after the previous dose. However, it can be taken 2 weeks before or 4 weeks after the scheduled date.

Figure 2: MPA Client Card

Just like you have details of those women who are on any method of contraception, you should help every woman who receives MPA to get an MPA card. The card should have information about the details of the woman, it includes dates of current dose and the next due dose. Every client should be encouraged to carry this card to the facility where repeat doses are given. This card helps in remembering the date of next dose. The counterfoil of this card is maintained at the facility providing the first dose of Injectable MPA.

Dose and site: The injection is given in the upper arm, buttocks or thigh under the muscle or skin.

After the woman gets the injection, she should be cautioned not to massage the injection site or apply hot fomentation.

Figure 3: Facility section (Counterfoil) on MPA card kept at the Health Facility

What is to be done during follow up care?

One experience from countries where MPA is commonly used is that sometimes women, who start MPA, can discontinue the method after a few injections. They either forget the date, lose motivation to continue, or are not able to cope with the side effects. Your role is to support all women who start MPA to continue with the method and reassure them about the side effects.

Role of ASHAs:

- Maintain the list of women who opt for MPA as a contraceptive option.
- Discuss the importance of follow up visits with the clients and remind them just before the due date, to go the facility.
- Visit women who taking MPA at least once a month to discuss her experiences with the method and reassure her regarding her concerns. If she is very concerned about side effects, motivate her to consult the ANM or the doctor who has given the injection.
- One concern that women may have is related to the changes in the menstrual cycle. These include irregular or heavy bleeding. Some women may complain that their monthly period has stopped. Tell them that these changes are normal. Women

need to be told that the 'period' may completely stop because that is the way the method works and is not harmful. Reassure the woman that the menstrual cycle will start when they decide they want to get pregnant again and discontinue the contraceptive.

It may be explained in the following way to the client, "Every month a woman's body prepares for conception. An egg is released and uterus also prepares to nurture the baby. Hence inner lining of the uterus becomes thick and soft as it gets more blood supply. If she does not conceive that month, this inner lining of blood is thrown out of her body as menstrual flow. This is repeated every month, causing menstrual cycles. But with MPA, the monthly preparation for pregnancy in woman's body does not occur. There is no release of egg/ovum and thickening of inner lining of uterus. The menstrual cycle gradually comes to a stop after irregular bleeding for some time."

NEW ORAL CONTRACEPTIVE

The second contraceptive that you will learn about in this update is Centchroman (Chhaya)

What is Centchroman (Chhaya)?

Chhaya is an oral contraceptive pill which does not contain any hormone. It is available in the market in some places as 'Saheli' tablet. It has been introduced in the public health system in the name of 'Chhaya' to benefit more women at no cost. It is a safe spacing option for both breast feeding and non-breast feeding women and needs to be taken only twice a week for the first 3 months and then once a Week.

Who can use Centchroman (Chhaya)?

- Centchroman (Chhaya) can be safely used by all women once it is confirmed that they are not pregnant.
- Can be used by women of any age, whether she has children or not.
- Women who had side effects with MALA N/ MALA D can also opt for this method.
- It can be used by postpartum women who are breastfeeding as soon as she feels comfortable. Centchroman does not affect quantity, quality and composition of breast milk.

Where can women get Centchroman (Chhaya)?

It is available in all public health facilities and can be provided by doctors (MBBS and above, AYUSH), SNs, LHVs and ANMs. It would also be a part of your ASHA kit which can be distributed by you to the clients. However the first dose should be provided only by a trained provider after proper screening at a health facility.

Availability: Centchroman (Chhaya) is available in two packages: ASHA supply and free supply. Each pack contains 8 tablets. ASHA supply is for home distribution and free supply is for distribution at health facilities.



Fig3: Centchroman (Chhaya): a) ASHA Supply and b) Free Supply

Schedule: Centchroman (Chhaya) is to be taken twice a week for the first 3 months followed by once a week thereafter.

To begin the use of Chhaya, the woman is advised to take the first pill on the first day of period (which is the first day of bleeding) and the second pill three days later (on 4th day of bleeding). This pattern of days is repeated through the first 3 months.

Starting from the fourth month, the pill is to be taken once a week on the first pill day and should be continued on the weekly schedule regardless of her menstrual cycle.

Table 1: Schedule of Centchroman

If the first day of pill is taken on	First 3 months	After 3 months
Sunday	Sunday and Wednesday	Sunday
Monday	Monday and Thursday	Monday
Tuesday	Tuesday and Friday	Tuesday
Wednesday	Wednesday and Saturday	Wednesday
Thursday	Thursday and Sunday	Thursday
Friday	Friday and Monday	Friday
Saturday	Saturday and Tuesday	Saturday

What should be suggested to clients in case of 'missed pills'?

You should tell the woman, that if she forgets to take the pill, she should take the missed pill as soon as she remembers that it has been missed. If she misses taking the tablet by 1-2 days (less than 7 days), she should take the missed pill as soon as she remembers and continue the normal schedule. In addition she should use a backup method like condom, just to ensure complete protection.

If she forgets to take pills by more than 7 days, then the current pack should be discarded and she needs to start taking a new pack like a new user; that is, twice a week for first 3 months followed by once a week thereafter.

What are the benefits, side effects and limitations of Centchroman (Chhaya)?

Benefits:

- Chhaya causes less bleeding during the monthly period, and also makes the interval between two menstrual cycles longer. This is beneficial for anemic women
- Safe for breast feeding women.
- Women, who are not recommended to use hormonal method, can use this method.

Side effects:

Chhaya has very few side effects. In a few women there is delay in periods in the first three months.

Limitations:

Every client should be screened by a trained provider before starting Centchroman, just like other oral pills.

The Role of ASHA:

- Undertake regular follow up visits to those women who choose to use Chhaya .
- If the woman complains of any changes in the

duration and amount of bleeding during menstrual cycle, reassure her that these are temporary changes and will subside with regular intake of pills.

- If there is a delay in the menstrual cycle by over 15 days then you should help the woman to test for pregnancy.
- Support the woman to remember the schedule of taking Chhaya.
- Maintain line listing of eligible couples that require spacing.
- Record all relevant information like name, address and contact number.
- Maintain monthly record of contraceptives distributed to each couple.
- Submit the record of distribution of contraceptives on monthly basis to ANM.

POST ABORTION FAMILY PLANNING

What is the importance of Post Abortion Family Planning?

Many women die of abortion or abortion related complications in India every year. Repeated abortions affect the health of women. They also affect the pregnancy outcome of next pregnancy (increased chances of still birth, low birth weight, mortality). Post Abortion Family Planning is important for the women to end the cycle of repeated pregnancies. Post Abortion Family Planning enables women to use a contraceptive method after she has had an abortion to prevent unintended pregnancy again and have recommended spacing of at least 6 months between abortion and next pregnancy. If a woman does not begin to use contraception immediately after having an abortion, she can conceive as early as within 10 days of abortion.

Table 2: Timing of Initiating Contraceptive method in Post Abortion period

Sl. No.	Method	When can the method be provided
1	Post Abortion Female Sterilization	With abortion procedure or within 7 days of abortion
2	Post Abortion IUCD	Within 12 days of abortion (if no injury/ infection)
3	Combined Oral Contraceptive pills	Immediately
4	Progestin Only Pills	Immediately
5	Weekly Centchroman Pill- Chhaya	Immediately
6	Injectable Contraceptive DMPA	Immediately
7	Condoms	Immediately
8	Male Sterilization	Anytime

Note: In Medical Abortion, contraceptives should be provided after 3rd visit (completion of abortion).

Which contraceptive methods can be used in Post Abortion period and when?

All available contraceptives under the National Family Planning program can be provided in post abortion period.

What is to be done during follow up care?

You have already learnt about the follow up after the woman in your community begins to use a method. This is the same for any woman using contraception after an abortion. You should maintain the list of women who opt for post abortion family planning. Just as you would for a woman using any other method, you should undertake regular follow up visits, and reassure woman about her anxieties or concerns. If necessary you should motivate the woman to visit a trained provider so that she can feel reassured about continuing the method. This will enable her to maintain healthy birth spacing between children.

SCHEMES FOR ASHA UNDER NATIONAL FAMILY PLANNING PROGRAM

Home delivery of contraceptives by ASHA

Under this scheme, ASHA delivers the contraceptives at the doorstep of the clients as per the need. The contraceptives include Nirodh (Condoms), Mala-N and

Ezy Pill (Emergency Pills). The newly introduced Chhaya Pill (Centchroman pill) would be a part of ASHA kit. The salient features of the scheme are as follows:-

- ✓ ASHA would make a list of all the eligible couples of village and preferred method of contraceptive of each couple. This data of users should be updated regularly and shared with Sub Center and PHC.
- ✓ ASHA shall replenish her contraceptive stock every month from the Sub Center/ PHC/ block (as per the existing system established by the state). Monthly meetings could be one of the opportunities to receive contraceptive stocks every month.
- ✓ The ASHA may charge Re.1/- for pack of 3 Nirodh (condoms); Re. 1/- for one cycle of Oral-pills and Rs. 2/- for a pack of one tablet of Ezy pill (emergency pill) from the clients.

Ensuring spacing at birth scheme

Under this scheme, the ASHA would counsel the newly married couples to delay the birth of first child for two years after marriage and couple with 1 child to have spacing of 3 years between 1st and 2nd child birth. For this, ASHA would be given incentives as per following*:-

- a) Rs. 500/- to ASHA for delaying the birth of first child for two years after marriage
- b) Rs. 500/- to ASHA for ensuring spacing of 3 years between 1st and 2nd child birth
- c) Rs. 1000/- to ASHA in case the couple opts for permanent limiting method after 2 children

*This scheme is applicable in 18 states and one Union Territory of the country (Bihar, Chhattisgarh, Madhya Pradesh, Jharkhand, Rajasthan, Uttar Pradesh, Uttarakhand, Odisha, Gujarat, Haryana, Assam, Meghalaya, Manipur, Mizoram, Tripura, Arunachal Pradesh, Nagaland, Sikkim and Dadar Nagar Haveli).

Additionally, in 7 other states, only spacing components (i.e. a) and b)) are applicable. These states are: Andhra Pradesh, Telangana, Karnataka, Maharashtra, West Bengal, Punjab, and Daman and Diu.

ASHA is eligible for the above incentives if:-

- ✓ ASHA counsels the couple on benefits of spacing between children and limiting family size
- ✓ ASHA prepares and updates the list of following and gets them certified by ANM/ MO
 - Newly married couples, along with date of marriage in her register
 - Couples with 1 child/ women pregnant with 1st child, along with date of birth of first child. Production of birth certificate is mandatory.
 - Couples with 2 children/ women pregnant with 2nd child, along with date of birth of the child.
- ✓ Use Nischay Kit (Pregnancy test kit) to confirm pregnancy status of the woman
- ✓ Regularly submit the information to MO and ANM, who would certify the information for ASHA Incentives.

Pregnancy Testing Kit (Nischay Kit)

Under this scheme, ASHA would regularly collect Nischay kit from the Sub center and provide it to the women for detection of pregnancy.

Salient features of the scheme are as follows:-

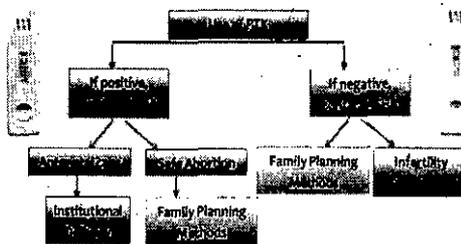
- ✓ ASHA should inform the women about availability of Nischay Kit with them.
- ✓ ASHA should counsel the women regarding advantages of early detection of pregnancy



Figure: Pregnancy Testing Kit (Nischay Kit)

- ✓ ASHA should provide the Nischay kit to client for early detection of pregnancy and tell her how to use the Kit. She should also tell the client how to read the pregnancy test results. ASHA may help and conduct the test for clients who are not able to understand how to read the results on their own.

- ✓ ASHA should refer the client, as per client's need and pregnancy test results.



✓ If test is positive:

- Woman wants to continue pregnancy- Refer the woman for ANC registration and check up
- Woman doesn't want to continue pregnancy (wants to terminate pregnancy)- Refer the woman to service provider for safe abortion services and offer PAFP choices

✓ If test is negative:

- Woman does not want to get pregnant: Counsel for family planning methods, provide contraceptive pills/ condoms or refer to health facility for IUCD/ Sterilization procedure
- Woman wants to get pregnant: refer the woman to service provider (for screening of RTI/ STI or treatment of infertility, as the case may be).

Role of ASHA in generating demand for Family Planning Services

ASHA should ensure following activities in their community:-

- ✓ Prepares line list of all eligible couple as well as pregnant women in her village
- ✓ Counsel the couple for adoption of appropriate Family Planning/ postpartum/ post abortion family planning method.
- ✓ Counsel the couple on benefits of spacing between children and limiting family size
- ✓ Inform the client about the availability of family planning services in the health facility.
- ✓ Escort the client to health facility if client chooses to adopt PPIUCD/ Post Abortion IUCD services.

ASHA's are eligible for incentives for:

- 1) Motivating the client for sterilization services (as per the Revised Compensation Scheme/ Enhanced compensation scheme/ HTD plus compensation scheme)
- 2) Motivating and Escorting client for PPIUCD services (PPIUCD incentive scheme)

1. Benefits of Family Planning



There are many benefits of Family Planning:

- It is the key to happiness of the entire family.
- When children are delayed, spaced and family size is limited, the mother and children remain healthy and family resources are well spent.
- Fewer the children, better care, education, toys, clothes etc. you can offer.
- The couple can spare more time for one another and can get close. Fewer children mean better care, thus, less expense on illness and more to provide for the entire family.

What is a planned family?

A planned family means:

- The birth of the first child delayed till the mother is over 20 years of age.
- There is atleast three years gap between two children.
- Family size is limited.

**2. Age at Marriage:
Over 18 years for girls
and over 21 years for boys**



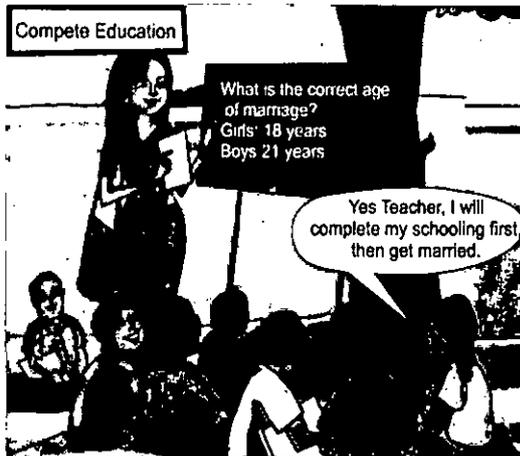
2.1. The Right Age of Marriage

Do you Know ?

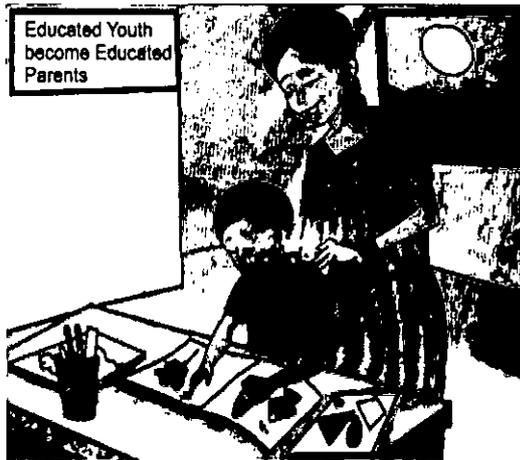
Almost one-fourth of the girls in India are married before the age of 18 years.

- If girls are married off before they are 18 and boys before they are 21 years old, it is a punishable offense
- Let them complete their schooling
- Let them become self-reliant

Complete Education



Educated Youth become Educated Parents



Delay the First Child



Marry at the Right Age and based on Joint Decision



2.2 Why Hurry? Delay the First Child

**Delaying the birth of the first child benefits the couple.
What should couples do?**

- It is a warm and lovely feeling to be parents, but don't hurry.
- Ensure that you both are healthy first, mature and even financially stable.
- Use this time to know each other and spend more time with each other.
- It will be an extended honeymoon.
- Together visit the nearest health centre and receive counselling on family planning and contraceptive methods, and jointly choose a method for contraception.
- Newly wed couples usually face pressure from family elders to have a child soon. The couple should discuss this and come up with ways and strategies to let them know that they are not in a hurry to have children and will do so after a few years.



2.3 What are the Dangers of Early Pregnancy?

Do you Know ?

Almost 50% of births are occurring in women who are 15-24 years of age.

Of the maternal deaths, almost 50% are occurring in mothers who are 15-24 years of age.

Childbirth is usually more difficult and dangerous for adolescent girls/women under 20 years of age than for those who are older than 20 years.

- Young adolescent girls do not have a fully developed pelvis and other reproductive organs, therefore, pregnancy for them can result in serious consequences/complications.
- Babies born to very young mothers are more likely to die in the first year of life.



Delay the First Child

We are spending the first few years in understanding each other.

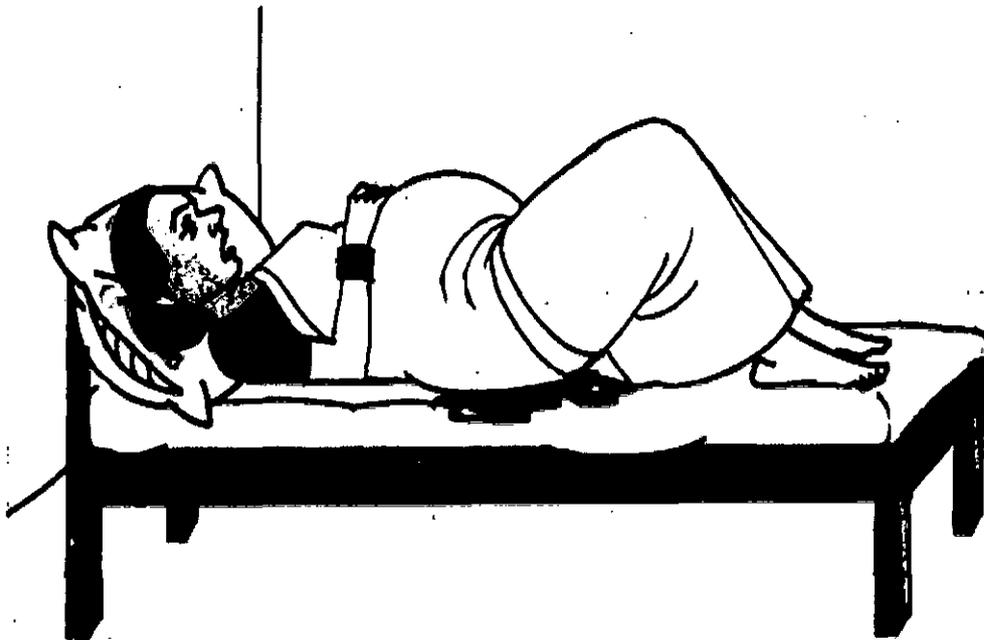
We are a happy couple because we did not hurry to have our first child immediately after marriage. We used contraceptives to delay.



2.4 Health Consequences of Pregnancy at an Early Age

1. Consequences for mother

- Physical growth is impaired and, existing malnutrition and Anaemia worsen because of early pregnancy.
- Possibility of abortion, heamorrhage, high blood pressure, fits, premature labour, prolonged labour, obstructed labour and even death, if the mother does not get proper medical care.
- A young mother can go into depression if she is unable to cope with the stress of pregnancy and dellivery.



2.4 Health Consequences of Pregnancy at an Early Age

- Mothers whose pelvis and birth canal are not fully developed often endure very prolonged labour. Relentless pressure from the baby's skull can damage the birth canal and cause incontinence of urine and even prolapse of uterus.
- Many of the young women in this age group give birth without attending an antenatal clinic or receiving the help of a skilled birth attendant. Hence, it is essential to devise programmes to reach out to reproductive advice and services, especially in the remote rural areas where most early marriages and early pregnancies are found.

2. Consequences for baby

- Increased risk of premature birth, low birth weight, health problems and death. The inability of the young mother to provide adequate and/or appropriate care to the new born, leads to higher morbidity and mortality.



2.4 Health Consequences of Pregnancy at an Early Age

3. Husband and wife interaction

- It is important that the newly married couple understand each other, know each other and then plan their family. The couple should first become economically stable and then have a child.
- They should discuss various family planning options like condoms, birth control pills, etc. and then adopt a method.
- Both husband and wife need to come to an agreement and strategize how they plan to tell other family elders about their decision not have their first child in the first year and that they are not in a hurry to have a child immediately.



2.5. Contraceptive Options for Newly Wed Couples

Contraceptive Options for Newly Weds

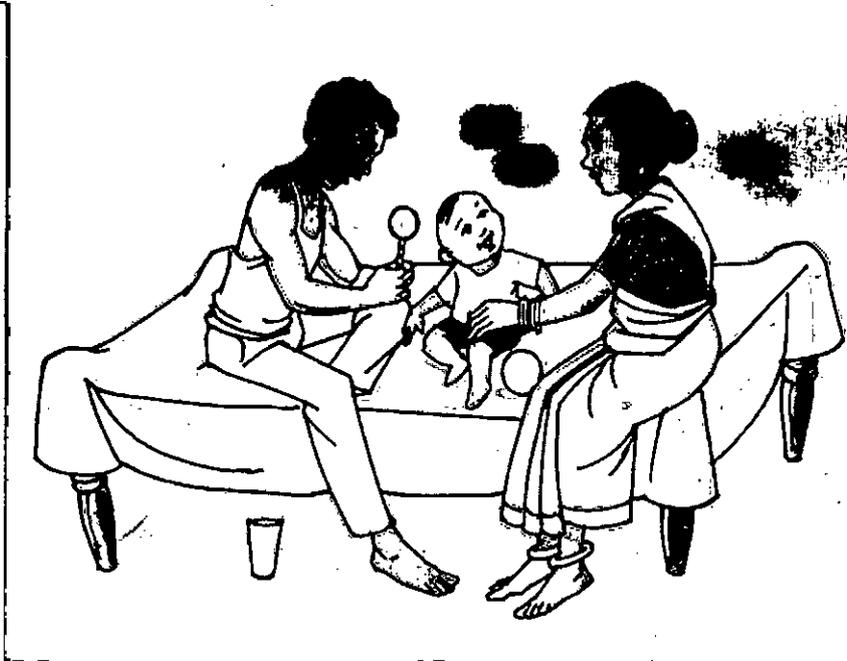
- Condoms for the husband
- Oral Contraceptive Pills (OCP's) like Mala N for the wife



Where one can avail contraceptive products and services?

- Condoms and Oral Contraceptive Pills are available at the Anganwadi Centre, with the Anganwadi worker, ASHA, ANM, Sub Health Centre Primary Health Centre (PHC), free of cost.
- In some districts, ASHAs or other community level volunteers also distribute from door-to-door a range of branded condoms and Oral Contraceptive Pills at low costs from door-to-door. Condoms and oral contraceptive pills are also available at the nearest chemist or pharmacist stores.

3. Three Years Gap between Two Children



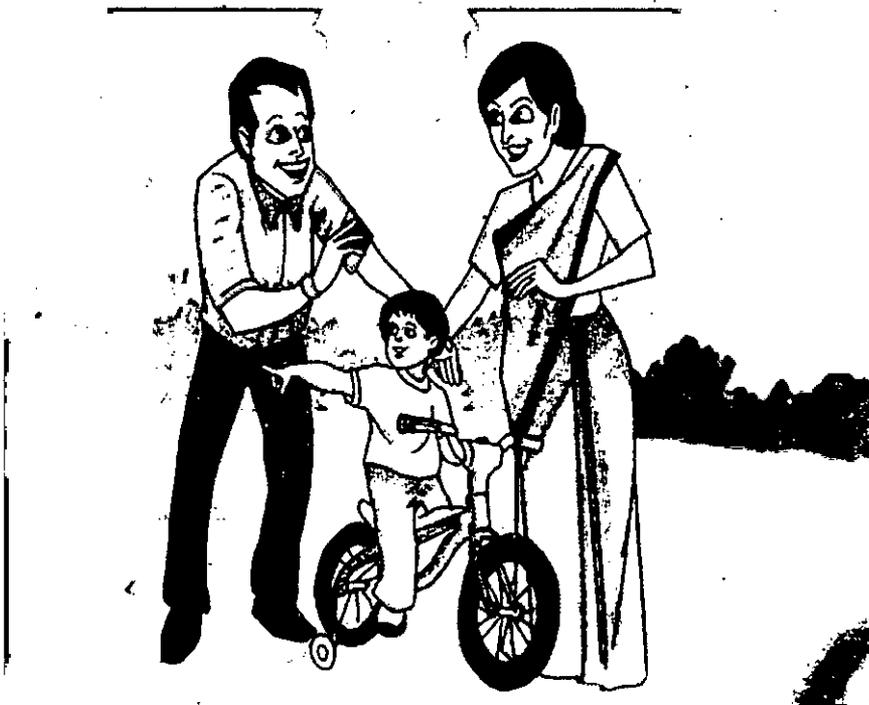
For a healthy mother and child, maintain at least three years gap between children

Do you Know ?

Almost 50% of the births in India are spaced less than three years apart.

3.1 Three Years Gap between Two Children

- A couple should wait for at least 3 years before having their next child. This gap helps in restoring mother's health and the baby can be given proper care and attention, required for proper growth.
- A couple should adopt a suitable family planning method before they leave the hospital post delivery. They can also seek information/counseling from ASHA, ANM, Anganwadi Worker or the doctor.
- Contraceptive methods to help space children:
 - IUCD (for women)
 - Oral Contraceptive Pills (for women)
 - Condoms (for men)



3.2 Contraceptive Options for Spacing between Children

Family Planning methods which can be adopted within 48 hours of delivery:

For Women:

- **IUCD within 48 hours of delivery:** Before the woman leaves the hospital she can get an IUCD inserted. It is a one-time method and is effective up to 5 - 10 years, depending on the type of IUCD. This is a long-acting spacing method. There are two varieties :
Cu IUCD 380A which is effective for 10 years and
Cu IUCD 375 for 5 years, depending on the type.

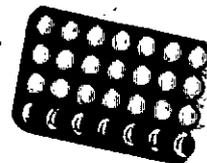


IUCD insertion can be done only by a trained health service provider. Whenever the couple decides to have a child, the IUCD can be removed easily. IUCD can also be inserted anytime after delivery, after a minor examination.

- **Lactational Amenorrhea Method or LAM:** As long as the mother (1) exclusively breastfeeds her baby on demand; (2) her baby is less than six months old and (3) her periods have not yet started post delivery, she cannot conceive. But LAM is only effective if all the above stated conditions are met.



- **Oral Contraceptive Pills:** This is a spacing method. Once the child is six months old, mothers can start taking OCPs after consulting a health service provider like an ANM or doctor.



4. Limiting Family Size



For Men:

Condoms - Condom usage is a contraceptive method for men that help space the children, protect from unplanned pregnancy as well as sexually transmitted infections and HIV.



Do you Know ?

If the current unmet need for family planning could be fulfilled over the next 5 years, we can:

- Avert 35,000 maternal deaths
- Avert 12 lakh infant deaths
- Save more than Rs. 4450 crores
- Additional savings of Rs. 2000 crores, if safe abortion services are coupled with increased family planning services

4.1 Limiting Family Size

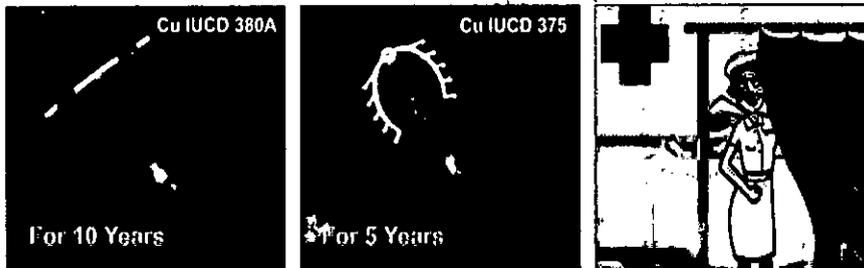


Limiting the family size - Once your family size is complete, you can opt for Long-acting Temporary Methods or Limiting Methods. These methods are available free of cost at the nearest health facility and by a trained provider. The methods are:

- **Female sterilisation (Tubectomy)** - This is a permanent method and should be adopted by those couples who do not want to have any more children. It involves tying and cutting of fallopian tubes which blocks the meeting of ovum and sperms.
- **Male sterilisation (Vasectomy)** - This is also a permanent method and should be adopted by those couples who do not want to have any more children. The No-Scalpel Method Vasectomy (NSV) involves a very simple procedure, requires less time, there are no stitches and the person can go home in an hour, hence no hospitalization is required. As part of the procedure, both the tubes which carry sperms from the testicles to the penis are cut and tied separately. This prevents the sperms from mixing with the semen which then becomes sperm-free. Vasectomy does not cause weakness in men - at work involving physical activity as well as sexual life. This procedure take at least 3 months to become fully effective.

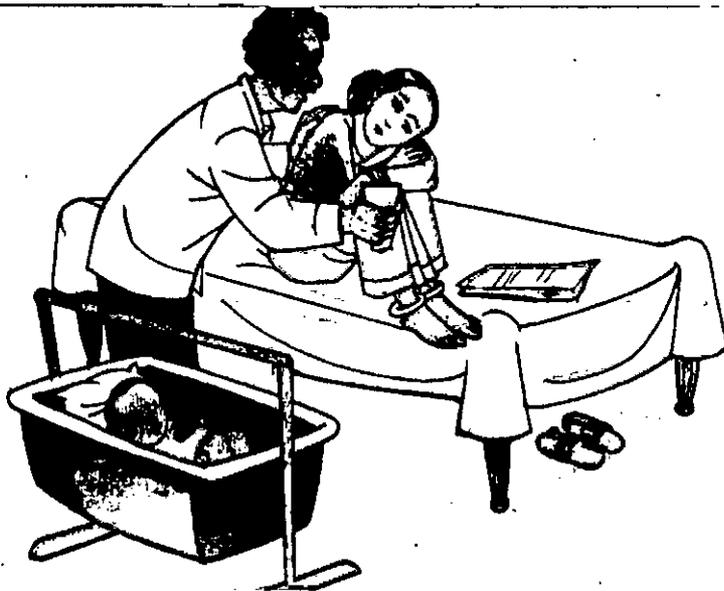
Long-acting Temporary Method: IUCD:

- To limit family size and avoid unintended pregnancies, couples should adopt an effective method that offers long-term protection against pregnancy, and also a method that is easy to use.
- IUCD can be used as a long-acting method providing protection upto ten years.
Before the woman leaves the hospital she can undergo the IUCD insertion procedure. It is a one-time method and is effective up to 5-10 years, depending on the type of IUCD.



- There are two varieties
 - Cu IUCD 380A which is effective for 10 years and
 - Cu IUCD 375 effective for five years.
- IUCD insertion can be done only by a trained health service provider. The IUCD can be removed easily.
- IUCD can also be inserted anytime after delivery, after a minor examination:
- After menstruation, when the doctor is sure that the woman is not pregnant.
- Especially after miscarriage or abortion.

5. Timely adoption of a Family Planning Method



What will happen if the couple does not adopt a family planning method on time?

- If the couple does not adopt a family planning method on time, then they can face the problem of unplanned/unwanted pregnancy, bringing in more of physical, emotional and financial stress themselves and the family.
- Sometimes, in case of unwanted pregnancy, the family or couple may want to abort the pregnancy.
- For termination of pregnancy, women often go/are taken to untrained persons, *dais*, etc.
- The methods employed by untrained persons for termination are not safe and the facilities are unhygienic. This can cause serious complications and there is a danger to the life of the woman.
- The couple should try to adopt a suitable Family Planning method so that the risk of unwanted pregnancy is minimized.
- If at all, it is required to terminate the pregnancy, then seek safe and legal abortion at a government health centre or government approved private hospital.

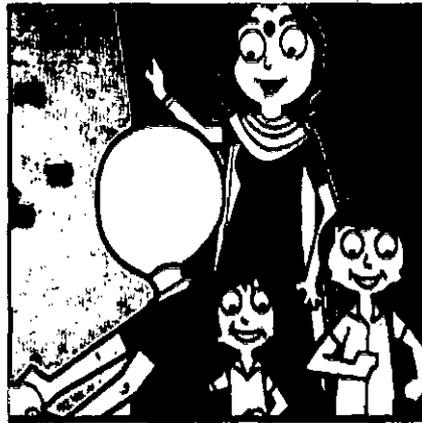
Emergency Contraceptive Pills:

- Emergency Contraceptive Pills (ECPs) are effective for preventing conception due to unplanned/ unprotected sex.
- It helps to reduce unwanted pregnancy and associated abortion, maternal mortality and morbidity.
- ECPs have to be taken by women within 72 hours of unprotected sex.
- ECPs provide protection against unwanted pregnancy, but repeated use of ECPs should be avoided as it becomes less effective.
- ECPs should be used in emergency situations only.
- ECPs should not be considered a replacement for a regular contraceptive.



6. Love and Care for your Child whether Boy or Girl

- Couples should be happy with their child whether girl or boy.
- Girls and boys are equal, and have a right to equal education, growth opportunities, health treatment, love, care and affection by parents and other family members.
- They should not practice gender discrimination or female foeticide by using prenatal diagnostic techniques, which is illegal.



7. Punishment for Violation of PCPNDT Act



- A medical practitioner may get an imprisonment for a term that may extend to three years and with a fine that may extend up to Rs.10,000/- ; and on any subsequent conviction, he/she may get an imprisonment that may extend to five years, with a fine that may extend to Rs.50,000/-.
- The name of the medical practitioner would be reported to the State Medical Council by the appropriate authority for taking necessary action, including removal of his/her name from the register of the Council for a period of five years for the first offence, and permanently for the subsequent offence.
- Any person who seeks the aid of any establishments and professionals for conducting a Pre-Natal Diagnostic Technique (PNDT) on any pregnant women for the purpose of sex selection would be punished with imprisonment for a term that may extend to three years and with a fine that may extend to Rs. 50,000/- . On subsequent conviction, he/she will be punished with imprisonment that may extend upto five years with a fine that may extend upto Rs.100,000/-

8. Where to get Services/Products?

- Counseling on Family Planning methods and related services: ASHA, ANM, Sub Health Centre, Primary Health Centre, Community Health Centre,
- District Hospitals, and accredited private health centres Family Planning services are provided by the ANM and are available at the Sub Health Centre, Primary Health Centre, Community Health Centre and District Hospitals/other health centres.
- Condoms and OCPs are available at the Anganwadi Centre, with the ANM, Sub Health Centre, Primary Health Centre, with the ASHA and Anganwadi Worker, and some are even sold for a small payment to the ASHA or other health workers.
- These products are also available with medical shops or chemists.
- IUCD Insertions, Tubectomy and NSV are provided free at public health facilities.
- Sometimes government runs special camps for Family Planning Services. Check with your ASHA or Anganwadi Worker or ANM.



9. Schemes that one can avail

- **Prerna Awards by Jansankhya Sthirta Kosh:** This strategy identifies and recognizes young married couples from backward districts who have adopted 'Responsible Parenthood Criteria', and presents them as role models for other young couples in the district. The Prerna Awards are given to couples who fulfill basic criteria including girls marrying at the age of 19, couple having their first child two years after marriage, and maintaining a gap of three years between first and second child followed by sterilization of either parent. The couples are awarded with a certificate and Kisan Vikas Patras.
- A Toll-free helpline (1800-11-6555) for reliable and authentic information on issues related to Family Planning, Reproductive and Child Health is available. One can call this toll free number from any phone.
- **Government of India scheme to compensate acceptors of sterilisation for loss of wages:** The Government has launched a scheme to compensate the acceptors of sterilisation for the loss of wages for the day on which he/she attended the medical facility for undergoing sterilisation.
- Compensation acceptors at government (public) facilities for different states is presented below:

In the high-cost states	Vasectomy (All)	Rs 1100/-
	Tubectomy (All)	Rs 600/-
Non-high-cost states/UTs	Vasectomy (All)	Rs 1100/-
	Tubectomy (BPL+SC/ST Only)	Rs 600/-
	Tubectomy (Non BPL+ NonSC/ST)	Rs 250/-

10. Family Planning Insurance Scheme

This scheme was launched by the Government in November, 2005. The benefits under the policy are as follows:

Coverage	Limits
Death following Sterilisation at the hospital (inclusive of death during process of sterilisation operation) or within seven days from the date of discharge from the hospital.	Rs. 2 Lakh
Death following Sterilisation within 8-30 days from the date of discharge from the hospital	Rs. 50,000/-
Failure of Sterilisation	Rs. 30,000/-
Cost of treatment upto 60 days arising out of complication following Sterilisation operation (inclusive of complication during process of Sterilisation operation) from the date of discharge.	Actual not exceeding Rs. 25,000/-
Indemnity Insurance per Doctor/facility but more than four cases in a year.	Upto Rs. 2 Lakh not Per claim

11. Let's Know More!

Family Planning is beneficial for all:

- It is very critical that each and every couple discuss and jointly decide when they want to have children, how many children they want, how many years gap will they maintain between two children and after how many children they want to limit family size.
- To avoid unintended pregnancies, there are many contraceptive options that are safe, easy to use, easy to adopt, effective, free and easily available at the nearest health centre or could be made available through your community health volunteer.

Family Planning is a shared responsibility of both the husband and wife:

- Couples should discuss and learn more about the benefits of Family Planning for the mother, the children and the happiness of the family as a whole.
- Couples should make an informed choice about having children and it should be planned. They should contact their ASHA or Doctor for counseling on Family Planning, contraceptive options and their use.



12. PLANNED HEALTH EDUCATION

TOPIC

Planned Health Education

LEARNING OBJECTIVE

Careful planning is essential to the success of all health education activities. A health education programme may focus both on the individual and society however, contemporary approaches to health education recognise the importance of including a concern for the role of society. This perspective recognises that factors such as income, housing, cultural practices and the like shape a person's health potential. On completion of this assignment you will be able to - know health education on antenatal care.

PURPOSE

An important part of antenatal care is the preparation for childbirth and the subsequent care of the child.

Antenatal education should continue throughout pregnancy and the puerperium. Mother should be informed of the changes, she can observe during pregnancy and of the nature of labour and delivery.

PLANNING HEALTH EDUCATION

In order to plan health education for antenatal mother, history writing should be taken into consideration. A good obstetric history is invaluable for the initial and on going assessment of the mother and fetus during antenatal care.

History to be taken according to following orders :

- Maternal disease, such as-HTN, DM
- Family, such as-DM, HTN, Tuberculosis.

Multiple pregnancy or birth of a congenitally abnormal baby.

- Last normal menstrual period.

The assessment of gestational age depends on the estimated date of delivery. Estimated date of delivery can be predicated from last normal menstrual with gestational age can be done by ultrasound measurement.

Calculation of Expected Date of Delivery (EDD)

- | | |
|--|------------------------------|
| 1. To take date of first day of last normal menstrual pregnancy. | Example
21 September 2003 |
| 2. To go back 3 months and then to add a year. | 21 June 2004 |
| 3. To add 7 days | |
| 4. This is the EDD Not to be use if;
Not to bu use if; | 28 June 2004 |

Assessment of Ante-Natal. Mother Planned Health Education on Ante-Natal Care, Advices :

- Dates uncertain
- Cycles not regular (i.e., outside range of 24-35 days)
- Been on oral contraception within 2 months.
- Past obstetric history

His involves listing all the pregnancies in chronological order together with the following details :

- Deliveries
- Miscarrinages.

All therapeutic abortions, their reason, gestation and method :

- Drug history
- Allergic history
- Social history
- Woman's habit
- Woman's marital status, her occupation and that of her partner
- Living condition of antenatal mother.

EXAMINATION

Following examination to be done for antenatal mother :

- At booking
- Height and weight
- Blood pressure
- Dentition
- Heart sounds
- Breasts/nipples
- Abdominal palpation-for any scars and masses
- Legs-for varicose vein
- Urinalysis.

Pelvic examination-in the absence of relevant history and with the routine use of *ultrasound*, there is little need to examine the pregnant woman's pelvis.

- At each antenatal visit

To check history of recent events and to ensure that the baby is moving

To take mother's blood pressure

To listen to mother's heart

To check for edema: fingers pretibial

Symphysis : fundal height presentation

Lie

Engagement

Fetal heart auscultation

To test urine for protein and glucose

- From 32 weeks onwards at all visits to check lie and presentation of the fetus
- Additionally at 36 weeks to check hemoglobin level if the mother is Rh-negative, to check for the presence of antibodies
- Between 41 and 42 weeks to examine the cervix.

OBJECTIVES

- The common objectives of these formal educational sessions include.
- The promotion of good health and habits allaying anxiety.
- Increasing the mother's feelings of control and satisfaction with the pregnancy and delivery.
- Infant feeding.
- Subsequent contraception.

ASSESSING PUPIL ACHIEVEMENT

Pupil learning should be assessed in line with the goals of the health education curriculum e.g. cognitive, affective and skill goals. While assessing the affective domain is often difficult, to do so is particularly important in health education as which pupils' values and attitudes are crucial to healthy decision-making. Assessment of students' learning can occur through :

- interviews
- questionnaires
- small group discussions
- scrutiny of pupils' assignments, tests, quizzes, course notes, practical skills etc.
- observation of pupils' questions, activities and behaviours within and beyond the classroom
- videotapes