

PREVENTIVE MEDICINE IN OBSTETRICS, PAEDIATRICS AND GERIATRICS



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CARE OF CHILDREN



- Children include 0-14 YEARS
- 40% OF TOTAL POPULATION
- SOCIALIZATION PROCESS
- VULNERABLE TO DISEASE, DEATH AND DISABILITY

CHILDHOOD PERIODS



1. INFANCY (up to 1 yr of age)
 - a) Neonatal Period (1st 28 days of life)
 - b) Post Neonatal Period (28th day to 1 yr)
2. PRE SCHOOL AGE (1- 4yrs)
3. SCHOOL AGE (5-14 yrs)

ANTENATAL PEDIATRICS



- AMNIOCENTESIS
- USG
- FETOSOCOPY
- CHORION BIOPSY
- SPACING 2 TO 3 YEARS
- PREVENTION OF CONGENITAL ABNORMALITIES AND INBORN ERRORS OF METABOLISM

INFANCY



- 2.92 % OF TOTAL POPULATION
- ABOUT 40% IMR OCCURS IN FIRST MONTH OF LIFE
- IMR = 54/1000 IN Pakistan

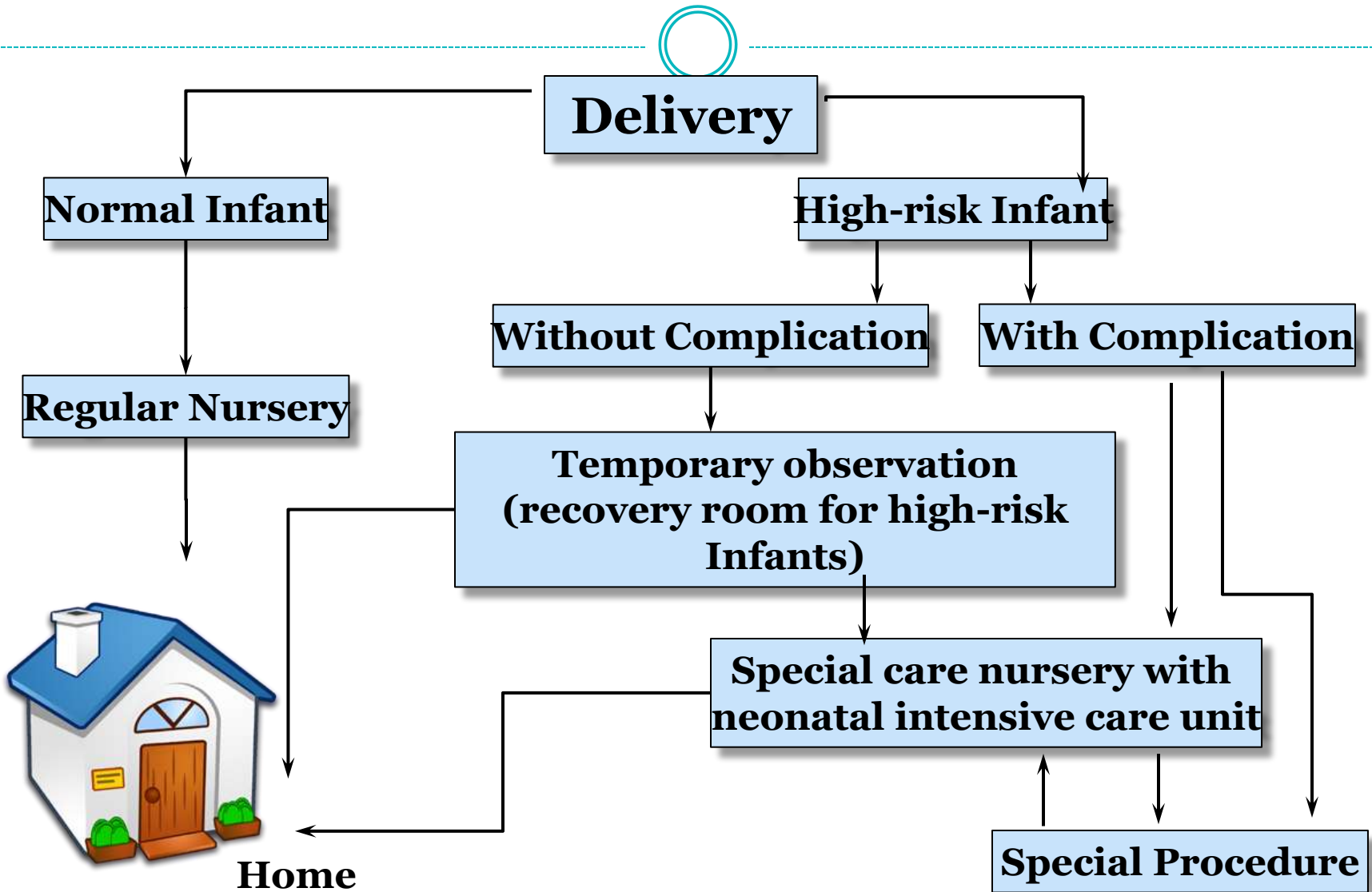
The first week of life is the most crucial period in the life of an infant. About 60 % of all infant deaths occur during the first month of life. Of these more than half may die during the first week after birth. This is because the new born has to adapt itself rapidly and successfully to an alien external environment. The risk of death is the greatest during the first 24 to 48 hrs after birth. The problem is more acute in rural areas where expert obstetric care is scarce and home environment conditions in which the baby is born are usually unhygienic.

NEONATAL CARE



1. EARLY NEONATAL CARE
 - I. IMMEDIATE CARE
 - II. NEONATAL EXAMINATIONS
 - III. THE INFECTED NEWBORN
 - IV. MEASURING THE BABY
 - V. NEONATAL SCREENING
 - VI. AT RISK INFANTS
2. LATE NEONATAL CARE

OPTIMUM NEWBORN CARE



OBJECTIVES OF EARLY NEONATAL CARE



- I. Establishment and maintenance of cardio respiratory functions
- II. Maintenance of body temperature
- III. Avoidance of infection
- IV. Establishment of satisfactory feeding regimen
- V. Early detection and treatment of congenital and acquired disorders, especially infections.

IMMEDIATE CARE



- ✓ CLEARING THE AIRWAY
- ✓ APGAR SCORE
- ✓ CARE OF THE CORD
- ✓ CARE OF THE EYES
- ✓ MAINTENANCE OF BODY TEMPERATURE
- ✓ BREAST FEEDING

CLEARING THE AIRWAY



- Establishment and maintenance of cardiopulmonary functions (e.g. breathing)
- To establish breathing, the airways should be cleared of mucus and other secretions.
- Resuscitation is necessary if natural breathing fails to establish within a minute, as in the case of babies having hypoxia during labor

APGAR SCORE



- The Apgar score is taken at 1 minute and then again at 5 minutes after birth.
- It requires observation of the heart rate, respiration, muscle tone, reflex response, and color of the infant.
- Each sign is given a score 0,1,2.
- **A score below 5** needs prompt action. Infants with low apgar score at 5 minutes of age are subject to high risk of complications and death during the neonatal period.

APGAR SCORE

Sign	0	Score 1	2
Heart Rate	Absent	Slow (below 100)	Over 100
Respiratory effort	Absent	Slow Irregular	Good crying
Muscle tone	Flaccid	Some flexion of extremities	Active movement
Reflex response	No response	Grimace	Cry
Colour	Blue, pale	Body pink Extremities blue	Completely pink
Total Score = 10	Severe depression 0-3	Mild depression 4-7	No depression 7-10

CARE OF THE CORD



In the case of normal infant, the umbilical cord should be cut and tied when it has stopped pulsating. The advantage is that the baby derives about 10 ml of extra blood, if the cord is cut after pulsation ceases.

- ❑ KEEP CORD DRY AS POSSIBLE
- ❑ ASEPTIC PREPARATION ON THE CORD STUMP AND SKIN AROUND THE BASE
- ❑ DRIES AND SEPARATES BY ASEPTIC NECROSIS IN 5-8 DAYS

CARE OF EYES



Before the eyes are open, the lid margins of newborn should be cleaned with sterile swabs,¹ for each eye and from inner to outer side.

Any discharge from the eye is pathological and required treatment.

CARE OF THE SKIN



The first bath is given with soap and warm water to remove vernix , meconium and blood clots if any. The first bath is usually done by nursing staff.

If culturally acceptable the first bathing may be delayed up to 24 to 48 hrs to avoid cooling of the body temperature.

MAINTENANCE OF BODY TEMPERATURE



The normal body temp of newborn is 36.5 to 37.5 C. Newborn has little thermal control and can lose body heat quickly. Immediately after birth most of the heat loss occurs through evaporation of amniotic fluid from the body of wet child.

After birth child is quickly dried and wrapped in warm cloth and given to mother for skin to skin contact and breast feeding.

Pre term and LBW babies lose heat more easily as they have less subcutaneous fat for insulation.

BREAST FEEDING



Breast feeding should be initiated within an hour of birth as it help to establish feeding and a close mother-child relationship known as “Bonding”.

The first milk is called “Clostrum” and contains a high concentration of protein and other nutrients. It is also rich in anti infective factors which protect body against respiratory Infections and diarrheal diseases.

The regular milk comes on 3rd to 6th day. Baby should be allowed to breastfeed whenever it wants as it helps baby to gain weight.

NEONATAL EXAMINATIONS



- **FIRST EXAMINATION- SOON AFTER BIRTH IN THE LABOUR ROOM**
- **SECOND EXAMINATION- WITHIN 24 HOURS BY PEDIATRICIAN**

A-First Examination



It is done soon after birth.

The examination is:

- To ascertain that the body has not suffered injuries during the birth process.
- To detect malformation especially those requiring urgent treatment.
- To assess maturity.



The following abnormalities found on examination should be immediately attended to:

- Cyanosis of the lips and skin
- Any difficulty in breathing
- Imperforated anus
- Persistent vomiting
- Signs of cerebral irritation such as twitching, convulsions
- Temperature instability.

B-Second Examination



It should be made preferably by a pediatrician within 24 hours after birth. It is a detailed systemic examination from head to toe.

The following protocol should be followed:

1- Body Size:

Body weight; crown-heel length, head and thoracic perimeters.

2- Body temperature:



3- Skin:

Observe for cyanosis of lips and skin, jaundice, pallor, generalized erythema

4-Cardio-respiratory activities:

Cardiac murmurs, central cyanosis, respiratory rate over 60 per minute

5- Neuro-behavioural activity:

Posture: neck retraction, hyper flexion of all limbs

Muscle tone: tendon reflexes, cry, movements



6- Head and face:

Hydrocephalous.

Eyes: cataract, conjunctivitis **Ears:** accessory auricles.

Mouth and lips: hare lip, cleft palate

7-Abdomen:

Signs of distention, abnormal masses, imperforate anus.

8- Limbs and joints:

Deformities of joints, congenital dislocation of hips, extra digits



9-Spine:

Neural tube defects

10-External Genitalia:

Male: Hypospadias, undescended testis, hydrocele

Female: fused labia, enlarged clitoris

THE INFECTED NEWBORN



- NEONATAL TETANUS
- CONGENITAL SYPHILIS
- NEWBORN WITH HBV +VE MOTHER
- NEWBORN WITH HIV +VE MOTHER

a-Neonatal Tetanus



It can be prevented by vaccination of pregnant women and sero-vaccination of new borns in case of at risk delivery.

b-Congenital syphilis



- Diagnosis is based on evidence in the mother. Since clinical signs of congenital syphilis often do not occur at once.
- In case of doubt and if there is risk of inadequate medical surveillance of baby :
- **Treatment** with 2.4 to 4.8 million U of Benzathine Penicillin may be recommended

c- New Born with an HBV mother:



- Babies may be infected at birth when the mother is a carrier.
- Transmission occurs through the blood and the genital secretions and affects the new born during the perinatal period and infancy.
- Not a contraindication of breast-feeding.



- **If the new born is infected:** the baby may become a chronic carrier, and tend to develop active chronic hepatitis, cirrhosis or primary cancer of liver during adult hood.
- **Prevention of Perinatal transmission:** by sero prophylaxis combined with vaccination –
- Intramuscular injection of 0.5 ml of hepatitis B Immunoglobulin along with hepatitis B vaccine within 24 hours of birth. The vaccine may be repeated at 6,10 and 14 weeks of age.

d-New born with an HIV positive mother:



- About 30 percent of babies born to HIV positive mothers get infected.
- Transmission usually occurs at the end of pregnancy and is not influenced by the type of delivery.
- The virus has been isolated in the breast milk.
- The risk of transmission depends on the severity of the mother's case.
- Unlike hepatitis- B there is no prevention for the new born.