

Normal Newborn Care

Module 14

Normal Newborn Care

Session Objectives:

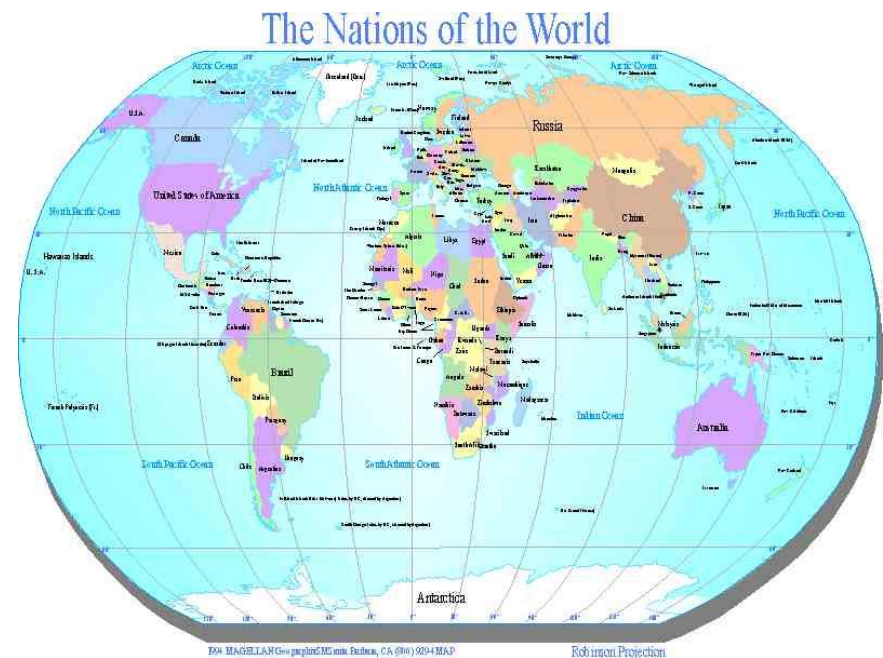
By the end of the session, participants will be able to:

- Define the major causes of newborn deaths
- List danger signs in newborns
- Define essential elements of early newborn care
- Demonstrate the importance of, and use of, chlorhexidine gel for umbilical cord care
- Demonstrate rapid initial assessment
- Demonstrate newborn examination



Newborn Deaths

- Globally, 2.9 million infants die within the first month after birth.
- **Every three minutes a newborn baby dies in Pakistan.**
- Each year in Pakistan 202,000 newborns die in the first 28 days of life.

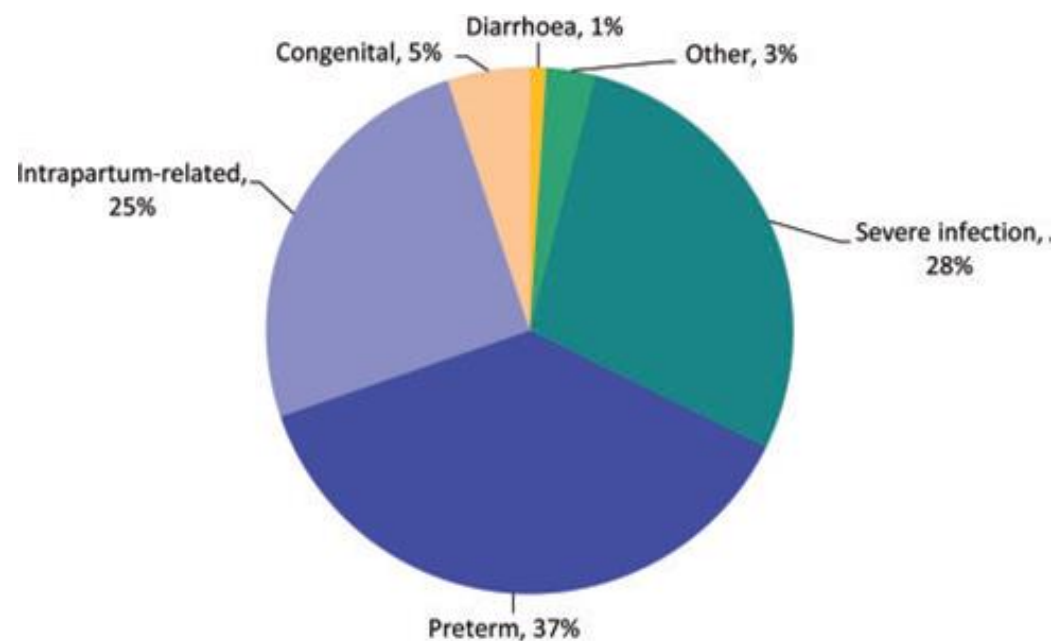


Walker CL, et al. Global burden of childhood pneumonia and diarrhea. *Lancet* 2013; 381: 1405-1416.



Causes of Neonatal Deaths in Pakistan

- **Preterm birth is the leading cause of newborn mortality.**
- **Infection is second leading cause of newborn mortality.**



Estimated causes of mortality around the year 2010 for 194, 000 neonatal deaths. Data sources: Pakistan-specific mortality estimates (Liu et al. 2012).



Why Are Neonates Dying?

The first week of life is the riskiest due to:

- The birth process
 - Two-thirds of deaths due to infections
- Lack of hygiene at childbirth and during newborn period
 - Home deliveries without skilled birth attendants
- Birth asphyxia in developing countries
 - 3% of newborns suffer mild to moderate birth asphyxia
 - Prompt resuscitation often not initiated, or procedure is

Source: Lawn JE, Coombs RW, et al. Neonatal deaths: When? where? why? *Lancet* 2005; 365(9462): 891-900.



Why Are Neonates Dying? (cont'd)

- Hypothermia and newborn deaths
 - Significant contribution to deaths in low-birth-weight infants and preterm newborns
 - Social, cultural, and health practices that delay care to the newborn
- High prevalence of sexually transmitted infections (e.g., gonorrhea) and inconsistent prophylactic practices in some countries
 - *Ophthalmia neonatorum* is common cause of blindness

Source: Lawn JE, Cousens S, Zupan J. Four million neonatal deaths: When? where? why? *Lancet* 2005; 365(9462): 891-900.



Why Are Neonates Dying? (cont'd)

- Low birth weight
 - An extremely important factor in newborn mortality
- Place of childbirth
 - At least 50% of births occur at home with an unskilled birth attendant under non-aseptic conditions. In Pakistan these birth attendants do not have the skills needed for newborn resuscitation.

Source: Lawn JE, Cousens S, Zupan J. Four million neonatal deaths: When? where? why? *Lancet* 2005; 365(9462): 891–900.



Essential Components of Normal Newborn Care

Essential Components of Normal Newborn Care

- Clean delivery
- Drying and stimulation
- Cord care
- Thermal protection
- Skin-to-skin contact
- Early and exclusive breastfeeding
- Eye care
- Immunization
- Ongoing monitoring

Preterm and low-birth-weight babies should be identified immediately after birth and referred for special care.



Essential Newborn Care: Clean Delivery



Wash your hands
Clean perineum



Wear cap,
mask, and
gloves



Use sterile
instruments
Clean delivery
surfaces



Safe waste
disposal

Prevention of Infection/Hygiene

Use infection prevention practices when handling a newborn:

- Wash hands before touching the baby
- When baby's diaper/napkin is soiled:
 - a. Remove diaper/napkin and dispose of in bucket OR wash napkin (reusable) separately from other clothes
 - b. Wash baby's bottom from genitals toward buttocks
 - c. Place cord outside the diaper/napkin
 - d. Put no lotions, powder, or other products on baby's skin
 - e. Put on a clean diaper/napkin
- Avoid sharing of baby equipment and supplies with other babies
- Do not routinely suction mouth and nose



Essential Newborn Care: Drying and Stimulation



1.

Wipe the baby dry immediately after birth using a soft, clean and dry cloth, and wrap the baby with another dry cloth to keep the baby warm

- In most cases, stimulation from drying the baby with a soft, clean, dry cloth is sufficient to initiate breathing (slapping, flicking the feet, or turning the child upside down is **unnecessary** and **potentially harmful**).

Essential Newborn Care: Cord Care

- A recently cut cord is a port of entry for invasive bacteria, which can cause neonatal sepsis.
- Babies delivered at home under non-aseptic conditions are more likely to get infected.
- Poor hygiene conditions at home during the first week increase the chances of infection.

Chlorhexidine for umbilical cord care: A new, low-cost intervention to reduce newborn mortality. MNCH Services Project Technical Brief, 2011



Introduction to Chlorhexidine and its Importance

- Chlorhexidine digluconate (CHX) is an antiseptic.
- CHX gel is used immediately after cord cutting, only on the umbilical stump and surrounding area.
- Apply CHX immediately after birth, and continue application once daily for 6 additional days (7 days total)
- Application of CHX gel helps prevent bacterial infection for a long period of time (24–48 hours).
- CHX gel has no side effects and is easy to use.
- CHX is helpful in replacing harmful traditional cord care practices.



Application of Chlorhexidine

- Wash hands with soap and water, following all 11 handwashing steps
- Immediately after cutting cord:
 - Ensure the baby is wrapped properly for warmth exposing only the naval area
 - Clean and dry cord with clean/sterile gauze
 - Use sharp protuberance of the lid to pierce tube of gel.
 - Apply gel with index finger at the stump and on abdominal area around the stump. A single application is enough.



Source: Sind Government Health Department. Chlorhexidine Training Manual. Draft.

Danger Signs in Cord Care

Reinforce the importance of early recognition and appropriate response to the following danger signs:

- If the cord bleeds, retie the cord.
- If bleeding does not stop within 15 minutes of being retied, immediately enact the complication readiness plan.
- If there is swelling, redness, or pus draining from the cord, immediately enact the complication readiness plan.
- If there is delayed separation of the cord, immediately enact the complication readiness plan.



Essential Newborn Care: Thermal Protection

- Keep delivery room warm
- Dry newborn thoroughly and wrap in a clean, dry, warm cloth
- **Bathing should be delayed until 24 hours after birth.**
- Cover baby's head with cap
- Avoid dressing baby in tight clothing because it reduces retention of heat
- Keep baby out of draft and place on warm surface
- Check warmth by feeling newborn's feet every 15 minutes for first two hours, and then every four hours for first 24 hours
 - If feet feel cold compared to normal adult skin, add a blanket or layer of clothing
 - If feet feel hot compared to normal adult skin, remove a layer of clothing
 - If feet remain cold or hot for one hour, refer



Essential Newborn Care: Skin to Skin Contact in the First Hour of Life

- **Give baby to mother as soon as possible**
 - Skin-to-skin contact for first six hours after childbirth
 - Promotes bonding
 - Enables early breastfeeding
- If baby is not skin-to-skin contact with the mother, or after six hours, dress in an extra layer or two of clothing or blankets/covering
- Mother and baby should not be separated unless medically necessary for health of baby or mother!



3.

Keep the baby in skin to skin contact with the mother

Essential Newborn Care: Early and Exclusive Breastfeeding

All babies should be exclusively breastfed from birth until six months of age. Mothers should be counseled and provided with support for exclusive breastfeeding at each postnatal visit.

- Breastfeeding should be started **within one hour** after childbirth
- Counsel the mother on exclusive breastfeeding
 - Feed on demand, every 2–3 hours (8–12 times/24 hours)
 - Educate woman about the importance of colostrum
 - No prelacteal feeds (ghuti) or other supplement
 - A baby getting enough to eat should urinate at least six times/day



4.
Initiate breast feeding within
one hour of birth

Prevent or Manage Ophthalmia Neonatorum

- Ophthalmia neonatorum
 - Conjunctivitis with discharge during the first two weeks of life
 - Usually appears two to five days after birth
 - Corneal damage if untreated
 - Systemic progression if not managed
- Etiology
 - N. gonorrhoea
 - More severe and rapid development of complications
 - 30–50% mother-newborn transmission rate
 - C. trachomatis



Eye Care to Prevent or Manage Ophthalmia Neonatorum (cont'd)

- Prophylaxis
 - Clean eyes immediately
 - 1% silver nitrate solution
 - Not effective for chlamydia
 - 2.5% povidone-iodine solution
 - 1% tetracycline ointment
 - Not effective against some *N. gonorrhoea* strains
- Common causes of prophylaxis failure
 - Giving prophylaxis after first hour
 - Flushing eyes after silver nitrate application
 - Using old prophylactic solutions



Essential Newborn Care: Immunizations

Newborn Immunization Schedule

VACCINE	DUE
BCG to protect against tuberculosis	After birth, before discharge from health care facility
OPV-0 to protect against poliomyelitis	After birth, before discharge from health care facility



Postnatal Newborn Care

Postnatal Newborn Care Visits: WHO Recommendations 2014

First visit: 24 hours after birth

For the newborn this includes an immediate assessment at birth and a full clinical examination at about one hour after birth and again before discharge.

- If birth is at home, the first postnatal contact should be as early as possible within 24 hours after birth.

Second visit: third day after birth (after 48–72 hours)

Third visit: at 7–14 days

Fourth visit: at six weeks

Preterm and low-birth-weight babies should be identified immediately after birth and should be provided special care as per WHO guidelines.



What to Assess

ASSESS	NORMAL	ABNORMAL/ACT/URGENT REFERRAL
Weight	2.5 kg–4.0 kg	Birth weight < 2 kg or > 4 kg
Respiration	30–60 breaths/minute	Respiration not within normal range
Temperature	36.6–37.5° C	Temperature not in normal range
Color	Lips, tongue, palms, soles, nail beds are pink	Pallor or cyanosis
Movement and posture	Movements are regular and symmetrical (same on both sides)	Convulsing/back arching
Level of alertness	Responds actively to stimuli	Baby is nonresponsive, floppy, or lethargic

What to Assess (cont'd)

ASSESS	NORMAL	ABNORMAL/ACT/URGENT REFERRAL
Head	The head is symmetrical in shape. Fontanelles are soft and flat.	Bulging anterior fontanelles, abnormal size and shape
Face, mouth, and eyes	Facial features and movements are regular and symmetrical. The lips, gums, and palate are intact. Eyes are not swollen or red, and there is no pus or discharge.	
Chest	The chest movements are regular and symmetrical. There is no chest in-drawing.	Severe chest in-drawing
Limbs	Position, appearance, and movement of limbs are normal and symmetrical. There is no swelling over any bone and no crying when the baby's arm, shoulder, or leg is touched.	

What to Assess (cont'd)

ASSESS	NORMAL	ABNORMAL/ACT/URGENT REFERRAL
Abdomen and umbilical cord stump	Lips, tongue, palms, soles, and nail beds are pink.	Shape is distended, with protrusions; stump is not dry; blood or pus is oozing from the cord stump; red, inflamed, swollen, or hardened skin around the umbilicus and an offensive smell
External genitalia and anus	Genitals are regular and symmetrical. In boys, the urethral orifice is at the end of the penis. The anus appears patent/intact.	
Back and limbs	The spine should be free of swelling, lesions, dimples, or hairy patches.	Any swelling/abnormality in spine

WHO Recommendations for Early Referral

Assess for these signs at each postnatal visit and refer urgently if the signs are present.

- Stopped feeding well
- History of convulsions
- Fast breathing (breathing rate ≥ 60 per minute)
- Severe chest in-drawing
- No spontaneous movement
- Fever ($\geq 37.5^{\circ}$ C)
- Low body temperature ($< 35.5^{\circ}$ C)
- Jaundice in first 24 hours of life, or yellow palms and soles at any age



Teach Mother to Give Oral Medications at Home

Explain and show how the medicine is given:

- Wash your hands.
- Demonstrate how to measure the dose on the spoon.
- Give medicine by spoon before the end of the feed.
- Complete the feed.
- Watch her as she carries out the next treatment.
- Explain to the mother that she should watch her baby after giving a dose of medicine.
- If the baby vomits or spills within 30 minutes, she should repeat the dose.



Sleep and Other Behaviors/Needs

Advise/inform mothers of the following:

- Place the baby on its back or side to sleep or rest when not in skin-to-skin contact with the mother.
- Keep the baby away from places where the baby could roll over an edge and fall to the ground, be reached/harmed by another child or animal, or become covered by a pillow, other object, or person.
- Initially, babies sleep about 20 hours per day and wake only for feeding. They do not distinguish day from night and therefore wake for night feeds.
- During the weeks following birth, babies usually start sleeping for longer periods at night and staying awake more during the day.
- Babies signal their need for attention by crying. The woman should respond by picking up the baby and talking to her/him.



Newborn Danger Signs

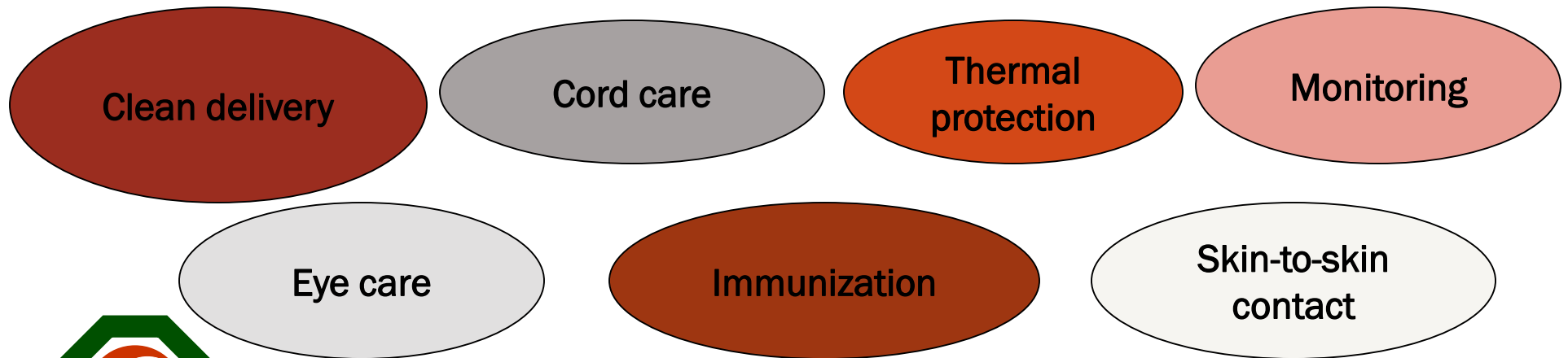
Assess for these signs at each postnatal visit and refer urgently if any of them are present.

- Baby has stopped feeding well
- History of convulsions
- Fast breathing (breathing rate \geq 60 per minute)
- Severe chest in-drawing
- No spontaneous movement
- Fever ($\geq 37.5^{\circ}$ C)
- Low body temperature ($< 35.5^{\circ}$ C)
- Jaundice in first 24 hours of life, or yellow palms and soles at any age



Summary

- Newborn deaths are preventable.
- Newborn care is simple, concise, and evidence based, and can prevent newborn deaths with no additional cost to facilities or families.



Thanks!

