1. Prevent heat loss

- Mechanisms of heat loss:
  - evaporation
  - conduction
  - convection
  - radiation

- Heat generation – brown fat
Evaporation

- When wet surfaces are exposed to the air, evaporation occurs. Heat is lost when the surface dries.
- As the amniotic fluid dries up on the infant's skin (evaporation), the infant loses heat.
- Ways to prevent heat loss by evaporation:
  - Drying the infant as quickly as possible after birth.

Conduction

- Heat loss by conduction occurs when an infant is placed on a cooler surface or touching them with a cool object or hands.
- Ways to prevent heat loss by conduction:
  - Use of radiant warmer and warm blankets.
  - Warm stethoscope and other instruments before use.
  - Pad the scale with a warm sheet before weighing the infant.
  - Placing an infant against the mother's skin helps prevent conductive heat loss.
Convection

- When heat is transferred to the air surrounding the infant, heat loss by convection takes place.
- If an air conditioner is kept on or when people move around near the infant, increase loss of heat occurs.
- Ways to prevent heat loss by convection:
  - Keeping the newborn out of drafts.
  - Maintaining warm environmental temperature.
  - Keeping a preterm neonate in an incubator.

Radiation

- The transfer of heat to cooler objects that are not in direct contact with the neonate is called the heat loss by radiation.
- When infants are placed near cold windows or walls, heat is lost by radiation.
- Ways to prevent heat loss by radiation:
  - Incubators must have double walls.
  - Cribs and incubators should be placed away from the walls and windows.
Heat loss

- Conduction
- Convection
- Evaporation
- Radiation

2. Evaluation

- Has the infant made a successful transition from fetal life to air breathing?
- Does the infant need resuscitation?
- APGAR score at 1, 5, 10 and 20 minutes
3. Clamping of the umbilical cord
   - May be delayed up to 1 minute
   - Check for the number of vessels (2A/1V)

4. Identification bracelet (name, sex, date of birth, weight)

5. Gonococcal ophthalmia neonatorum prophylaxis
   - 1% silver nitrate solution
   - 0.5% Erythromycin ointment
   - 1% Tetracycline ointment
   - Single injection of ceftriaxone 50 mg/kg IM or IV
6. Hemorrhagic disease of newborn prophylaxis
- Vitamin K: 0.5-1 mg i.m.

7. VHB prophylaxis
- VHB vaccination
- i.v. IG within 12 hours after birth if HBsAg-positive mother

Initiation of breastfeeding
- Within the first hour after birth
B. ROUTINE CARE IN THE NURSERY

1. Admission in the nursery

- Transport the newborn in an isolette with the portholes closed to prevent heat loss.
- Check the ID bracelet
- Assessment of GA – Ballard score
- Measurements:
  - Head circumference: 32-37 cm
  - Length: 48-54 cm
  - Weight: 2500-4000 g
2. Vitals

- Temperature (every 12 hrs)
  - Rectal: 36.5 - 37.5°C
  - Axillary: 36.5 - 37°C
  - Skin: 36.2-36.8°C

- Respiration: efficient, RR=40-60/min

- Heart rate: 120-160 bpm

- Arterial blood pressure (NICU): MAP > 30 mmHg

3. Skin care

- First bath: at least 2 hrs after delivery

- Partial bathing until the umbilical stump detachment

- Warm water +/- neutral pH soap

- No creams, lotions, powder, moist napkins

- Eye and ear care
4. Umbilical stump care

- Sterile dressing during the first day
- Exposure to air from the second day
- Keep dry, apply topical antiseptics or antibiotics
- Mummifies and detaches after 7-10 days.

5. Rash

- Eritema toxicum - no treatment necessary
- Candida albicans
6. Meconium passage
- within 36 hours from birth
  - first void
- within 48 hours

7. Physiological jaundice
- presentation after 48 hours
- disappears by the 10th day of life
- urine and stool with normal color
- no need for treatment if no risk factors are present
8. Weight chart

- Physiological weight loss (7-15%)
- Daily weight gain:
  - 30g in term newborns
  - 15-20g in premature newborns

9. BCG immunization

- After 72 hours of life
- Minimal weight: 2500g
- Efficiency is assessed after 5-10 months by measurement of postvaccination scar (minimum 3 mm)
10. Vitamins

- Ricketts prophylaxis:
  - Vitamin D3 p.o. starting from day 10

- Dosage: 800 UI/day (2 drops), up to 18-24 months.

11. Genital crisis

- First 2-3 days of life, both sexes

- Swelling of the genitalia and breast tissue

- Vaginal discharge in girls

- No treatment needed
12. Screening
- Congenital deafness
- Phenylketonuria
- Congenital hypothyroidism
- Congenital hip dislocation

13. Infection control
- Hand hygiene
- Non-excessive handling of the newborn
- Clothing, linens
14. Discharge criteria

- Healthy, > 72 hrs old
- Minimal weight of 2500g
- Breastfed, good tolerance
- Mother is instructed how to take care of the infant.