

# Neonatal Standards Of Care & CPAP



**KEMRI** | Wellcome Trust



**University of Nairobi**



**KENYA  
PAEDIATRIC  
ASSOCIATION**

# Objectives

- Review neonatal standards of care
- Discuss hygiene and warmth
- Discuss routine medications
- Review indications and use of CPAP

# Neonatal Standards of Care

- Clean environment
- Ability to maintain temperature at all times
- Staff and carers have good hand hygiene
- Provision of appropriate nutrition – promotion of exclusive breast feeding
- Vitamin K, TEO and Chlorhexidine
- Delayed Cord Clamping
- Inclusion of mother (carer) as partner in care

# Hygiene and Warmth – *at delivery*

## *Hygiene*

1. Hand hygiene of attendants  
(Soap and Water/ Alcohol Hand Rub)
2. Clean Surface for Delivery  
(Decontaminated, Cleaned and Disinfected with 0.5% Chlorine)
3. Sterile instrument to cut Cord
4. Clamp or Cord Tie to tie cord
5. Clean Cloth to wrap baby and mother

## *Warmth*

1. Warm delivery room
2. Immediate drying
3. Warm resuscitation
4. Warm transportation  
(skin-to-skin)
5. Skin-to-skin contact

# Hygiene and Warmth – *after delivery*

## *Hygiene*

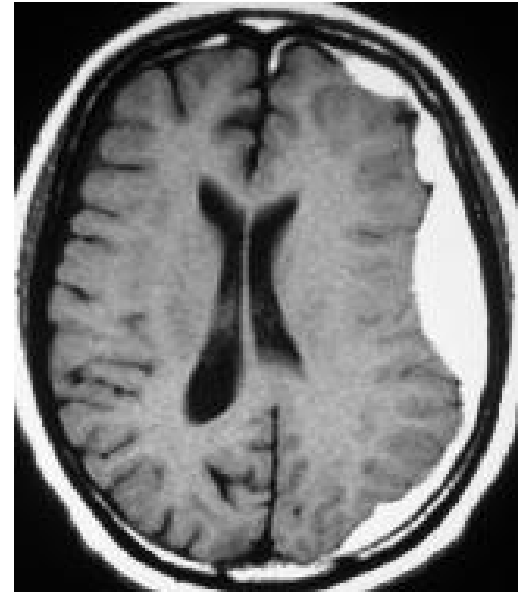
1. Hand washing before handling the baby
2. Exclusive breastfeeding
3. Keep the cord clean; Apply 4 % Chlorhexidine to the Cord daily
4. Use a clean cloth as a diaper/napkin
5. Hand wash after changing diaper/napkin

## *Warmth*

1. Breastfeeding
2. Bathing and weighing postponed by at least 24 hours
3. Appropriate clothing and bedding
4. Mother and baby roomed in together
5. Training and awareness on unnecessary exposure

# Vitamin K

- Severe Vitamin K deficiency can result in Haemorrhage & Death
- 1mg Vitamin K IM given at birth prevents bleeding in neonates of all ages (0.5mg if weight < 1.5kg)



# Eye and Cord Care

- Eye Care
  - Clean eyes immediately after birth from medial to lateral side with swab soaked in sterile water (Separate swabs for each eye)
  - Give TEO within 1 hour of birth
- Cord Care
  - If infant born stable and active, Clamp the Cord 1 minute after delivery.
  - Keep the cord clean;
  - Apply 4 % Chlorhexidine to the Cord daily

# Chlorhexidine for Cord Care

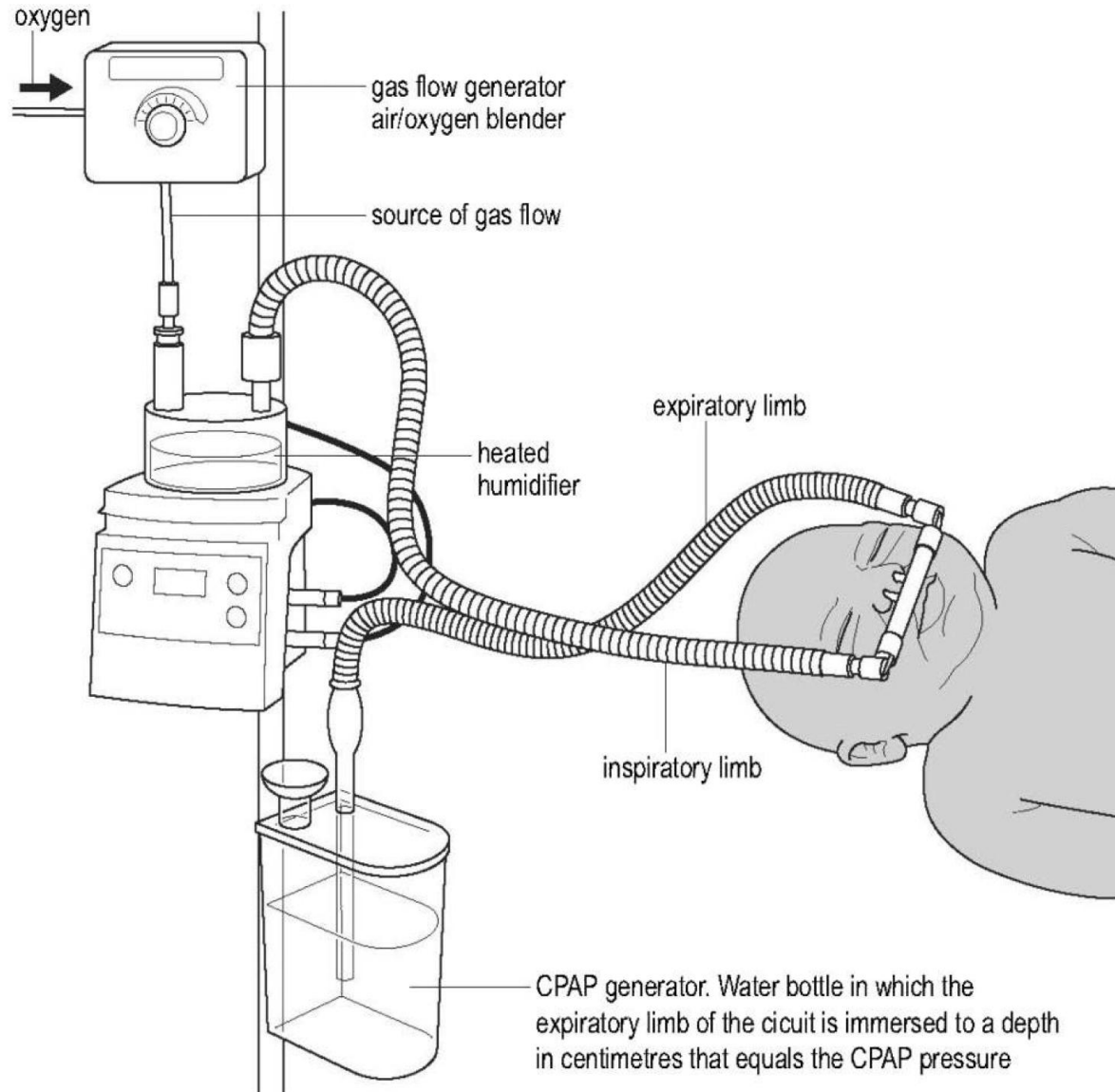
- For hospital births (gestation >28 weeks, BWT >1 kg) apply 4% active Chlorhexidine to the Umbilical Cord
  - immediately after birth
  - daily thereafter till cord separates.
- Formulations and strengths
  - There are gel, powder or solution formulations
  - A concentration of 7.1% CHX digluconate delivers 4% of the active drug



Products examples. Photo:  
PATH/Mutsumi Metzler.



# Continuous positive airway pressure (CPAP)



Three components

- **Source of continuous gas flow** – air compressor & oxygen source
- **Nasal interface** – connects infant airway to circuit
- **Expiratory limb** - distal end submerged in water to generate end expiratory pressure



# Continuous Positive Airway Pressure (CPAP)

*(For maximum benefit start as soon as symptoms are identified)*

**Newborn with severe respiratory distress with all of these**

Weight of >1000gm,  
APGAR score of  $\geq 4$  at 5 minute and  
Respiratory distress defined as a  
Silverman Anderson Score of  $\geq 4$ \*

**Defer CPAP if any of the following**

Uncontrollable seizures,  
Floppy infant or  
Apnoeic or gasping respiration

## Silverman- Anderson Score

Feature	Score 0	Score 1	Score 2
Chest Movement	Equal	Respiratory Lag	Seesaw Respiration
Intercostal Retraction	None	Minimal	Marked
Xiphoid Retraction	None	Minimal	Marked
Nasal Flaring	None	Minimal	Marked
Expiratory Grunt	None	Audible with Stethoscope	Audible

\*Score of >6 initiate CPA P as you prepare for transfer for mechanical ventilation

QUESTIONS?

# Summary

- All newborns should have access to a clean, warm environment during and after delivery
- Hand washing is essential
- All newborns should get Vit K, eyecare and cord care
- Nasal CPAP has been associated with good clinical outcomes in neonates with severe respiratory distress.
- NCPAP should be initiated early following onset respiratory distress with a Silverman Anderson score  $\geq 4$