MINISTRY OF HEALTH
GHANA

POLICY BRIEF

GHANA HEALTH SERVICE
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CHLORHEXIDINE DIGLUCONATE 7.1% GEL: THE NEWLY RECOMMENDED PRODUCT FOR NEWBORN UMBILICAL CORD CARE IN GHANA

NEED FOR APPROPRIATE UMBILICAL CORD CARE IN NEWBORNS

Neonatal mortality constitutes a high proportion of the global infant mortality. Each year 3 million newborns die globally; approximately 13% of these deaths are caused by infections.[i] Other common causes of neonatal mortality include: complications of prematurity, low birth weight and adverse intra-partum events (including birth asphyxia).

In Ghana, recent data indicates that the primary causes of newborn deaths are infections (31%), preterm birth complications (29%) and intra-partum related events (27%).[ii]

UMBILICAL CORD INFECTION

The freshly cut umbilical cord is a common entry point for invasive bacteria that cause newborn sepsis and death. Bacteria rapidly colonize the moist cord stump and have direct access to the bloodstream through umbilical vessels that remain open for the first few days after birth. The application of harmful substances has become a worry to most health providers. Thus, several studies show that this behavior is a common practice by most care givers. The bacterial colonization may also lead to cord infection (omphalitis) with potential spread to the surrounding tissues and blood stream.

THE RECOMMENDED WAY TO CARE FOR THE UMBILICAL CORD OF NEWBORNS

In January 2014, the World Health Organization (WHO) issued a new recommendation for umbilical cord care.[iii]

The recommendation states that *"**daily chlorhexidine 7.1% digluconate aqueous solution or gel (delivering 4% chlorhexidine) application to the umbilical cord stump during the first week of life is recommended for neonates who are born in settings with high neonatal mortality".***

In view of this, the Ministry of Health (MOH) and Ghana Health Service (GHS) conducted an extensive operations research in Ghana on the use of Chlorhexidine digluconate 7.1% gel for umbilical cord care in newborns to inform the country's implementation of the policy. Based on the findings of this study, the MOH and GHS recommends ***"daily application of Chlorhexidine digluconate 7.1% gel to the umbilical cord until the cord falls off and the wound is completely healed"***. Chlorhexidine digluconate 7.1% has been included in the recently published Ghana essential medicines list (2017). Chlorhexidine digluconate 7.1% **REPLACES** methylated spirit which has been used for umbilical cord care in Ghana for many years.

WHY CHLORHEXIDINE DIGLUCONATE 7.1%

- **Efficacy:** Chlorhexidine is an antiseptic with a broad spectrum activity against gram positive and gram negative bacteria.

- **Residual effect:** topical chlorhexidine has high residual activity because it binds to the proteins present in human tissues like skin. Once it is bound to the proteins, it releases slowly, leading to prolonged activity.

- **Tried and Tested:** There is over 40 years history of chlorhexidine application to the umbilical cord from developed countries, as well as widespread experience using chlorhexidine as a pre-surgical and an oral antiseptic.

- **Safety:** The safety record has been well established in adults as well as in newborns. For umbilical cord care, a concentration of 4% was selected to be sufficiently potent as an antiseptic, but at a low enough concentration to ensure safe chlorhexidine levels in the blood.[iv]

EVIDENCE ON EFFECTIVENESS OF CHLORHEXIDINE FOR UMBILICAL CORD CARE IN NEWBORNS FROM NEPAL, BANGLADESH AND PAKISTAN

Key Findings: Nepal

- Compared to dry cord care, chlorhexidine cord cleansing reduced neonatal mortality by 24% and reduced severe omphalitis by 75%;
- Neonatal mortality was reduced by 34% if chlorhexidine was first applied within 24 hours of birth.

Key Findings: Bangladesh

- Single chlorhexidine application on the first day of life reduced neonatal mortality by 20%, and moderately reduced severe omphalitis, as well as cord bacterial colonization;
- 7-day chlorhexidine application reduced severe cord infection by 65% and reduced bacterial colonization; neonatal mortality was 6% lower in this group.

Key Findings: Pakistan

- Neonatal mortality was reduced by 38% in the chlorhexidine group compared to the dry cord care group; and
- Severe cord infection was reduced by 42% for chlorhexidine cord cleansing compared to the dry cord care group.

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