22. Medicines for reproductive health and perinatal care

22.6. Medicines administered to the neonate [c]

Chlorhexidine

**ATC codes:**
- D08AC02

**Essential medicine status**
- Yes

**Indication**
- Omphalitis of newborn

**ICD11 code:**
- KA65.1

**INN**
- Chlorhexidine

**Medicine type**
- Chemical agent

**List type**
- Core

**Additional notes**
- For umbilical cord care

**Formulations**
- Local > Topical > Solution: 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) (EMLc)
- Local > Topical > Gel: 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) (EMLc)

**EML status history**
- First added in 2013 (TRS 985)

**Sex**
- All

**Age**
- Newborn (< 1 month)

**Therapeutic alternatives**
- The recommendation is for this specific medicine

**Patent information**
- Patents have expired in most jurisdictions
  - Read more about patents.

**Wikipedia**
- Chlorhexidine

**DrugBank**
- Chlorhexidine

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**Summary of evidence and Expert Committee recommendations**

The application to include chlorhexidine digluconate 7.1% solution or gel delivering 4% chlorhexidine for cord care was submitted by the Program for Appropriate Technology in Health (PATH), Chlorhexidine Working Group. In 2009, the Expert Committee reviewed an application to include this formulation of chlorhexidine. Although there was general consensus that, in unclean deliveries, topical antiseptics may help in reducing infections, there was no clear evidence regarding the superiority of any one product. In addition, no product was commercially available at that time. A 20% solution was added for dilution. In 2011 an updated application was submitted to replace the 20% listing with a ready-made 7.1% digluconate solution or gel. At that time, trials were continuing and the product was still not commercially available. The Committee then decided to list 4% chlorhexidine as one of the missing priority products in the “Priority medicines for mothers and children – 2011”. An updated application was submitted to the 19th meeting of the Expert Committee for inclusion of the 7.1% concentration providing 4% free chlorhexidine formulation. It was felt that there is a need to specify concentrations correctly: 20.0% chlorhexidine digluconate provides 11.3% free chlorhexidine, while 7.1% provides 4.0%, and 5.0% provides 2.8%. The evidence in the application consisted of three trials conducted in community settings in Bangladesh, Nepal and Pakistan where there were high rates of home deliveries and high neonatal mortality (1-3). Over 50,000 newborns were enrolled, and the trial compared single or multiple applications of chlorhexidine with standard dry cord care practices. The results showed significant reductions in neonatal mortality (24%) and omphalitis (75%). Systematically collected data on long- and short-term adverse events are scant. However, chlorhexidine was used widely in randomized trials and has been used elsewhere for neonates (4, 5). Transient contact dermatitis has been reported in preterm very-low-birth-weight infants after long-term (> 7 days) placement of chlorhexidine-impregnated dressings for central venous catheters (4). Although a significant effect was seen for neonatal mortality and omphalitis, the studies were predominantly in high-mortality home birth settings in South Asia. The findings are therefore difficult to generalize to settings where the majority of births take place in health facilities and where neonatal mortality rates are lower. Questions remain about the optimal treatment regimen with respect to...