

INCIDENCE AND CONTEXTUAL ANALYSIS OF NEONATAL HYPOTHERMIA AT GARAN GAMAWA MATERNAL AND CHILD HEALTH CLINIC IN KANO STATE NIGERIA, 2022.

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Abstract

Background and objectives: Hypothermia is a major risk factor for high neonatal mortality. In January, night-time temperatures in Kano State can drop below 20°C. We conducted a study to elucidate the incidence of neonatal hypothermia at Garan Gamawa maternal and child health (MCH) clinic in Kano City, with an aim to improve midwifery care and reduce hypothermia-related neonatal mortality.

Methods: The data of neonates born in January 2022 were collected retrospectively in February 2022. Hypothermia was defined as “axillary temperature below 35.5°C” in accordance with MSF Essential Obstetric and Newborn Care guidelines, 2019. Statistical analysis was done using a one-sided test for binomial proportions. Qualitative data was garnered by non-participatory observation (NPO) in the delivery room and postnatal care (PNC) ward to observe the warm chain and the interactions between staff and mothers. Individual semi-structured in-depth interviews were also conducted with eight MCH staff.

Results: Amongst the 206 newborns included, 55 (26.69%, Wilson confidence interval 21.13-33.13%, *p* value < 0.00001) developed hypothermia. From the NPO, contributing factors to hypothermia included: absence of skin-to-skin at birth; a delay of 40 minutes between birth and baby being put to the breast for their first feed; constant draught of outside air into delivery room; absence of heating system in delivery room and PNC ward; and the need to go outside during transfer between the delivery room and PNC ward.

In-depth interviews illustrated that midwives prioritised dressing the babies rather than encouraging Kangaroo Mother Care (KMC), and that the warm chain was prone to interruption during a complicated delivery and when there were multiple labouring mothers. Additionally, some midwives were not aware of the definition of neonatal hypothermia.

Conclusions: The proportion of hypothermic neonates was significant, and several contributing factors were identified. Recommendations include the installation of a door into the delivery room and appropriate heating systems in both the delivery room and PNC ward. Training of MCH staff is required to build knowledge and skills regarding the maintenance of the warm chain, and highlighting the importance of immediate skin-to-skin at birth and KMC, which have an important role in preventing hypothermia and must be encouraged.

Ethics

This study: Fulfils the exemption criteria set by the MSF ERB and was approved for submission by the WACA Medical Director.