



# INCIDENCE AND CONTEXTUAL ANALYSIS OF NEONATAL HYPOTHERMIA AT GARAN GAMAWA MATERNAL AND CHILD HEALTH (MCH) IN KANO STATE NIGERIA

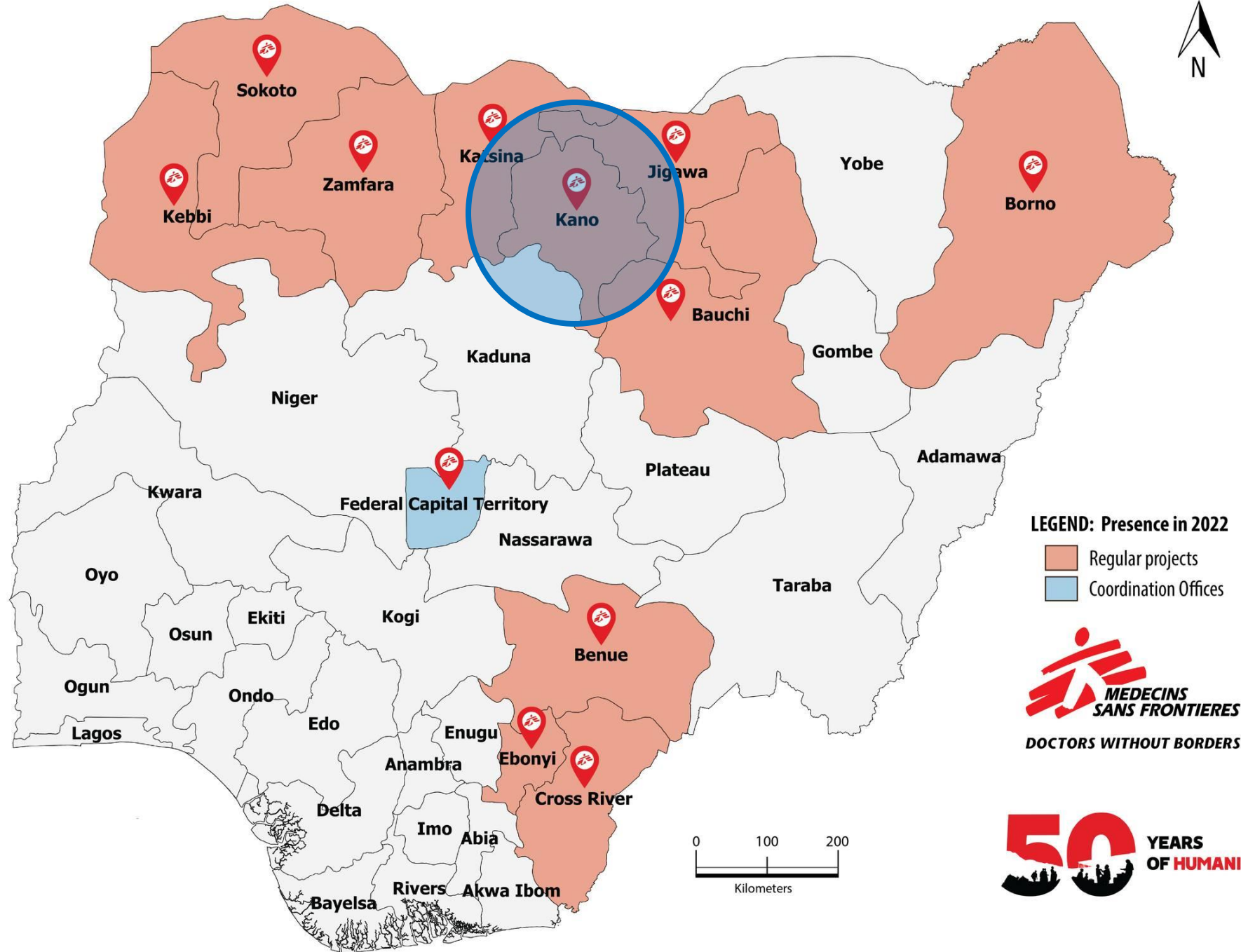
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# Introduction

- Neonatal hypothermia:  
Major risk factor of high mortality.
- Temperature:  
Drops  $<20^{\circ}\text{C}$  at night in Kano State in January.
- Study purpose:
  - To elucidate the incidence of neonatal hypothermia at Garan Gamawa MCH clinic in Kano City.
  - To improve midwifery care.
  - To reduce related neonatal mortality.



# Garan Gamawa MCH



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# Method- Mixed methods

- Study period: February 2022
- Quantitative data:
  - The data of newborns in January 2022: collected anonymously on an excel spreadsheet.
  - Statistical analysis: one-sided test for binominal proportions.



# Method- Mixed methods

- Qualitative data:
  - **Non-participatory observation:**
    - At delivery room (DR) and postnatal care (PNC) ward
    - Observing how MCH staff follow the warm chain, and the interactions between staff and mothers.
  - **Individual semi-structured in-depth interviews:**
    - With eight MCH staff



# Results: Quantitative



- 206 newborns in Jan 2022
- 55 babies with hypothermia (26.69%, 95 % Wilson score confidence interval 21.13-33.13%, *p value* < 0.00001)

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# Results: Non-participatory observation

- There was a delay of **40 minutes** from birth until baby was forwarded to the mother for breastfeeding, during which time the midwife was wiping the baby with olive oil, putting baby's clothes on, and cleaning the mother
- DR entrance was kept open to outside: **No door to close**
- Mother and baby must walk outside from DR to PNC ward: **No indoor corridor** between two rooms
- Neither room had a **heating system**





# Results: interviews

## Traditional home delivery in Kano community:

- When labour starts, they prepare thread and a razor, close window curtains and boil hot water.
- Immediately after birth, they bathe the newborn baby to remove the vernix from their skin, pour olive oil onto the baby and massage the baby's skin with the cloth. They believe that olive oil keeps the baby's skin moist.



A bottle of olive oil

- Hausa language “*Sanyi yana sa uwa da danta su kamu da ciwo* (Cold makes the mother and baby become ill)”.



# Results: interviews

- Midwives heavily rely on putting clothes on the babies rather than Kangaroo Mother Care (KMC).
- The warm chain was prone to interruption in case of a complicated delivery, and when there were multiple labouring women waiting for the midwives.
- A few midwives didn't remember MSF's definition of neonatal hypothermia correctly.
  - ❖ <35.5 degree Celsius in axillary : MSF guideline of Essential Obstetric and Newborn Care 2019





# Discussion and Conclusions

- The proportion of hypothermic neonates was significant.
- The DR is recommended to have a door.
- The DR and PNC ward should have heating systems.
- MCH staff are encouraged to build knowledge of neonatal hypothermia, and skills to maintain the warm chain.
- KMC has been shown to have an important role in preventing hypothermia and must be encouraged.



# Acknowledgement

- Special thanks to the participants who willingly participated in the study
- We would also like to acknowledge MSF WaCA team (Kano project, Coordination and Abidjan) for their unwavering support in the conduction of the study





# Ethical Statement

- Confidentiality was respected throughout the study
- No harm was intended or done during the study
- Ethical clearance was obtained from the Health Authorities of Kano State
- The study was approved and validated by the Medical Director of MSF- West and Central Africa
- It was accepted by MSF Ethical Review Board (ERB)