

Low temperature kills babies

Gaps in neonatal thermal care in low-resource settings - A web-based survey of healthcare workers -

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Context

 **2.4m** babies die within 28 days from birth every year¹

 **99%** of deaths occur in low- and middle-income countries²

 **80%** of neonates who died had hypothermia³

Thermal care guide
WHO

Warm chain including skin-to-skin care: an effective means of thermal care for clinically stable neonates



HYPOTHERMIA is preventable



COLD HAND and FOOT is a sign of COLD STRESS

a condition in which neonates are below optimum environmental temperature and using oxygen and energy for heat generation.⁴

Objective

- Understand **gaps in knowledge and practice in neonatal thermal care** in low-resource settings
- Capture first hand insights and information on neonatal thermal care

Methods

- A 2-round **web-based survey of healthcare workers** in low-resource settings
- Questionnaire based on themes of WHO's neonatal thermal care guidelines
- A self-administered questionnaire

Participants



Total **88** participants from **South and Southeast Asia and Sub-Saharan Africa**

Result 1

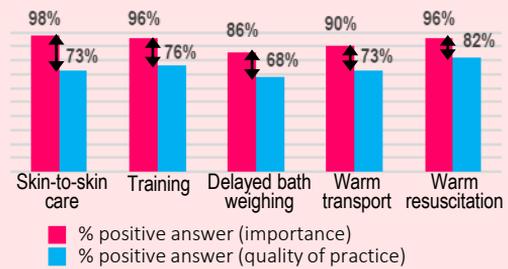


1 in 3 physicians answered "checking the hand or foot temperature by hand-touch is **USELESS**".

Result 2

GAPS!

Acknowledged **IMPORTANCE** and quality of **PRACTICE** of the WHO warm chain



NOTE: 5 elements with the biggest differences between 'importance' and 'quality of practice' are extracted.

Result 3



Participants' **opinions differed** in

- **preference**
 - **availability**
 - **perception**
- of warming equipment



Conclusion



COLD STRESS

Healthcare workers need to:

- understand cold stress
- acknowledge the **benefits of hand and foot temperatures**
- respond to cold stress **before hypothermia occurs**



WARM CHAIN: Quality of practice needs improvement



CONSISTENT GUIDANCE on WARMING EQUIPMENT is necessary for efficient and effective thermal care



References

1. UNICEF et al. Levels & Trends in Child Mortality. 2021.
2. Lawn JE, et al. Lancet. 2005; 365: 891-900.
3. Demtse AG et al. Glob Pediatr Heal. 2020;7: 1-8.
4. IUPS Thermal Commission. Jpn J Physiol. 2001; 51(2): 245-280.

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