

A Quality Improvement Initiative in NICU

Improving the life of radiant warmer temperature probe **Involving mothers**



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Background

Radiant warmer (open care system) Provides warm micro-environment to maintain stable body temperature

Especially essential in very low birth weight babies using servo or manual mode of heating Application of temperature probe on the skin of the baby helpful in number of ways

Root cause analysis (Fish bone)



- •Servo mode : Temperature probe plays a crucial role in controlling heater output as per baby's temperature
- •Manual mode : Helps in monitoring baby's temperature
- Temperature probe is delicate, likely to break if not handled carefully and a costly accessory (INR 3000)
- Dislodgment of probe was reported as a balancing outcome while promoting Kangaroo mother care

Problem Identified

The frequent breakage of radiant warmer temperature probe in NICU for babies undergoing KMC.

- Baseline life of the probe was reported to be 10 days.
- Frequent breakage of probe was adding to the cost factor involved in newborn care.

Identified causes

•Unsupervised handling of baby and the temperature probe by mothers and nurses •Lack of knowledge of nursing personnel Faulty technique used for removing the probe (pulling out the delicate temperature portion of the probe).

Sensitisation of mothers by nursing staff



Team Members for QI

Nurse Educator, 2 nurses, Resident doctor and mothers

Aim

To increase the life of the temperature probe by 50% in 8 weeks by reducing the breakage of the temperature probe in NICU.

Baseline Data Collection

Data collection related to breakage of the probe in 3 radiant warmers over 2 weeks time revealed the average life of the probe to be 9+_5 days.

PDSA Cycles



•Attitude

- a. Carelessness on the part of nursing personnel.
- b. Unsupervised handling of the probe by the mothers.
- No documentation
- a. Non-availability of register/ records.
- b. Undefined responsibility for record maintenance.
- c. Missing validation.
- d. Lack of accountability of nurses.

PDSA Cycle 1

- Sensitization of nurses through a refreshers' course
- Supervisory check of probe handling of nurses, by the sister in-charge of NICU.
- Documentation of the temperature probe breakage in temperature probe maintenance register by the



Life of temperature probe (days) before and after QI

120 -	
100 -	
80 -	



nurse educator and Sister in-charge (date of issue of probe, date of breakage and the number of days probe remained functional).

Responsibility and accountability among the nursing personnel

PDSA Cycle 2

• Mothers' teaching promoted by the assigned nurse at least 3 times during the baby's stay in NICU about the handling of probe and detaching it from the side panel of radiant warmer. Supervised handling of mother by the assigned nurse.



conclusions

This QI initiative involving mothers as team member improved the life span of probes nearly ten times. Parents involvement in adding value to context specific care in NICU need further evaluation.

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