

Improving thermoregulation on NICU admission

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Background

- Admission temperature is a strong predictor of neonatal mortality
- ↑28% neonatal mortality for every 1°C drop in admission axillary temperature
- Normothermia: T_{ax} of 36.5-37.5°C.
- In 2020, 50,29 % of our preterm infants (<32 weeks GA) had an admission temperature < 36.5 °C

Aim

To increase rate of preterm infants with normothermia on NICU admission of 10% over the the next year.

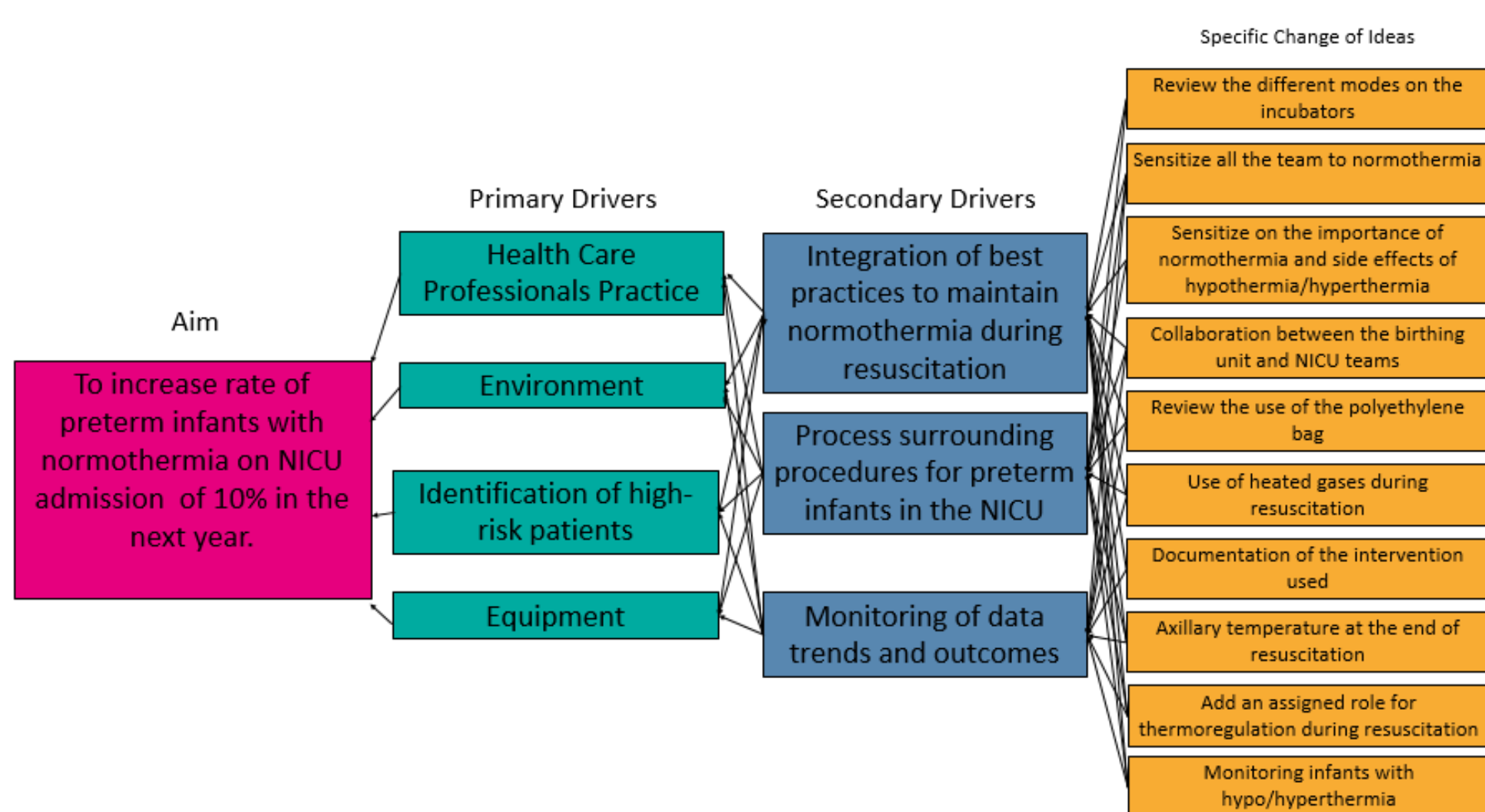
Method and Driver Diagram

QI initiative project: Driver diagram, PDSA cycles

Population: Preterm infants <32 weeks of gestation

Interventions: heated gases, axillary temperature at the end of resuscitation, assigned role for thermoregulation, change in documentation polyethylene bag.

Outcomes: T_{ax} on admission in NICU



PDSA cycle / Change plan

PDSA cycle 1: Implantation of heated gases in the stabilization room, revision of the incubator modes during resuscitation, axillary temperature at the end of resuscitation and an assigned role for thermoregulation.

PDSA cycle 2: Change in documentation for the use of heated gases and temperature

PDSA cycle 3: Revision of the use of polyethylene bag

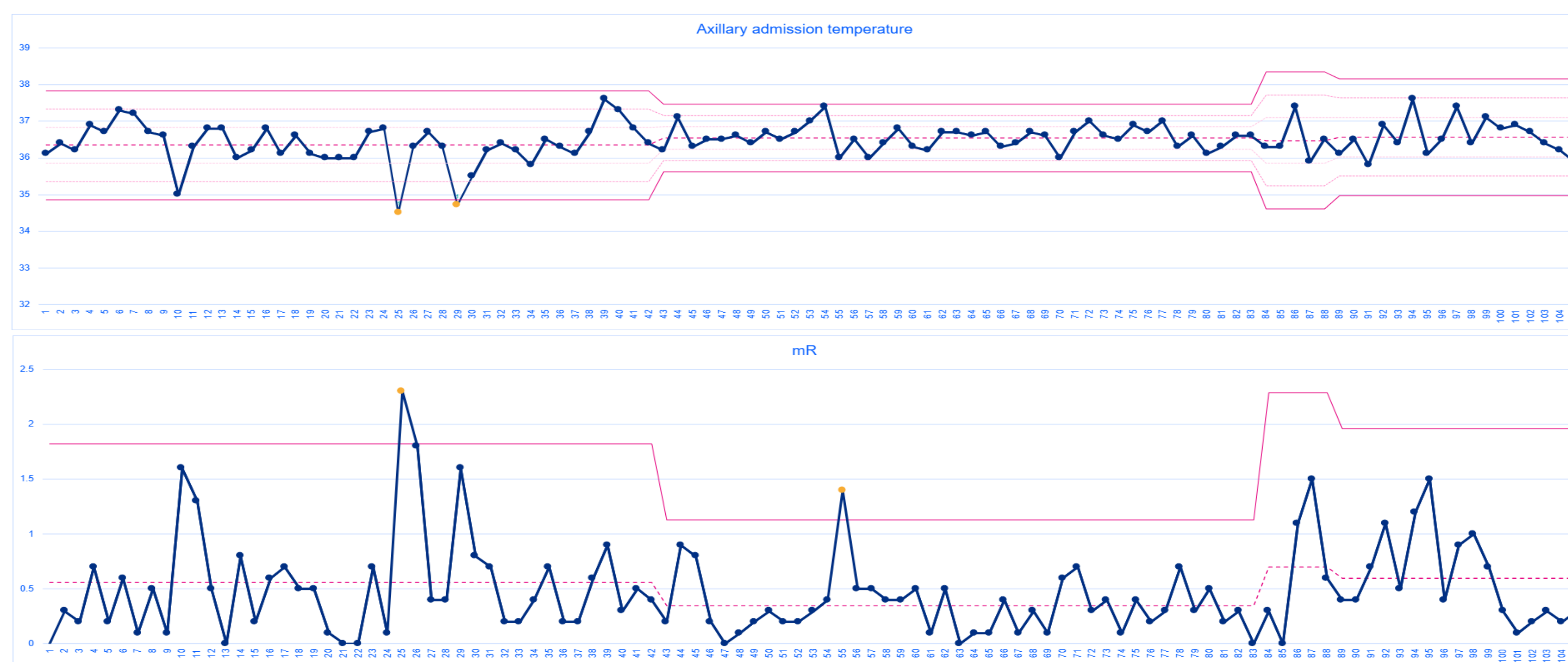
Optimize communication with various tools to diffuse information: comic book, weekly journal, journal club, quick reminders, Vimeo, Hot Five and emails.

Data / Results

The mean axillary admission temperature went from 36,3°C to 36,6°C

The axillary admission temperature variation decreased for infants between 29-32 weeks GA, but remained the same for the extremely preterm infants.

Data available for 96% of inborn patients.



Lessons Learned / References

- ✓ Thermoregulation QIs can positively impact the admission temperatures of preterm infants
- ✓ Importance of collaboration between teams (NICU and birthing unit)
- ✓ NTE can be maintained as well in the delivery room as in the neonatal unit
- ✓ Importance of reliable charting of admission temperature

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