

NICU Golden Hour PDCA Assessment 2015

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1 Background

JHH NICU is a member of the Maryland Patient Safety Center's Neonatal Collaborative and their Goal is to improve neonatal outcomes by reducing morbidity, mortality and cost of care by improving practice strategies in the first hour of life or the Golden Hour. Golden Hour protocols were implemented in the JHH Neonatal Intensive Care Unit in 2010.

2 Objectives

Since the last post-intervention evaluation of GH protocol adherence in 2011, the NICU has seen building changes, staff turnover, and new standards of care. Consideration of these changes prompted evaluation of how the NICU was doing 5 years out from the original set of educational interventions. This project served as the "check" stage of an on-going PDCA cycle.

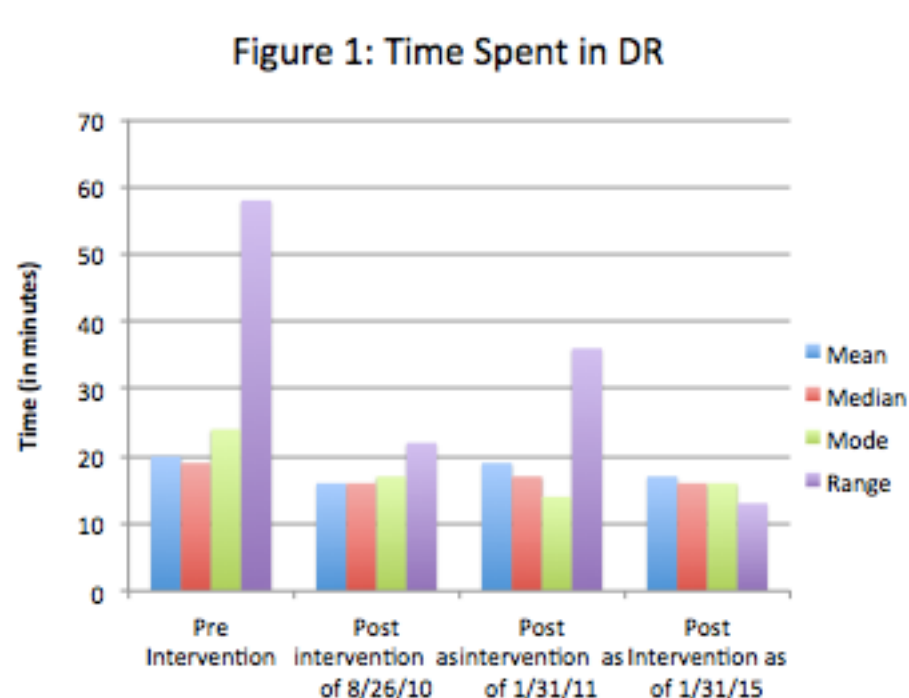
3 Methods

Using the Golden Hour admission criteria of babies < 37 weeks GA and admission to the NICU, we began collecting data on newborns in January 2015.

Upon examining baseline data, we developed a plan for evaluating the individual needs and hurdles to meeting the protocols within the Golden Hour.

4 Results

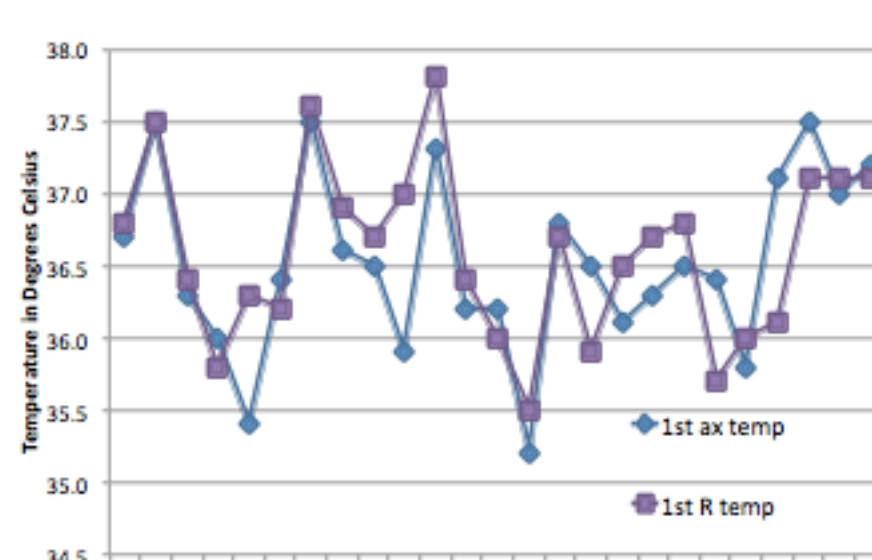
Figure 1 shows the baseline data with regards to time from the delivery to admission to the NICU. The time adjusted goal of the Golden Hour initiative for JHH is to have all NICU admissions transferred from Labor and Delivery by 20 minutes of life. Our findings were reassuring, and no further interventions were deemed necessary.



Results (continued)

Figure 2 shows the correlation between 1st axillary and rectal temperatures in the NICU.

Figure 2: 1st Axillary vs. Rectal Temperature (as of 1/31/15)

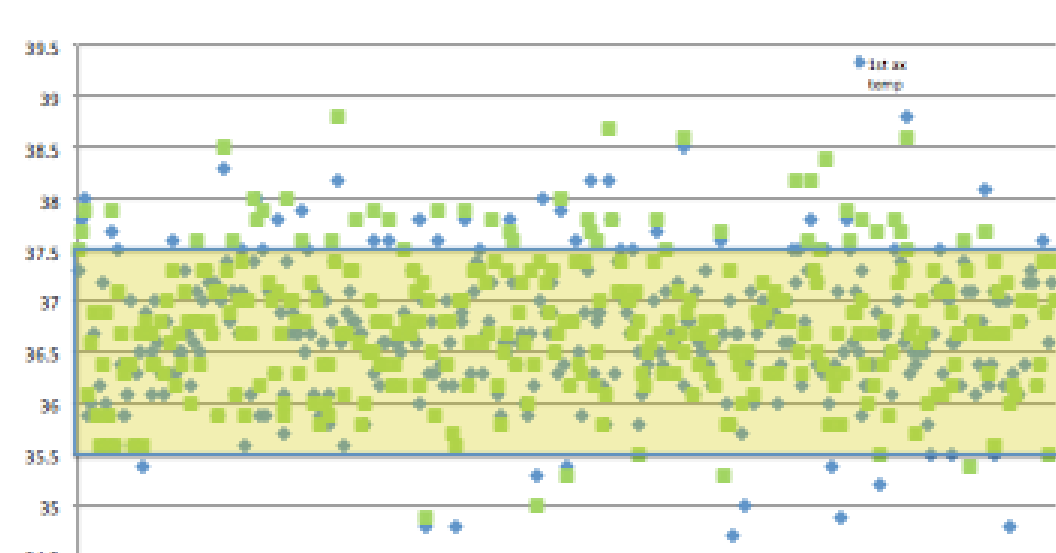


We presented this data to an interdisciplinary team, and came to the conclusion that:

- 1)Rectal and axillary temps tended to correlate within a 0.3-0.4 degree range
- 2)Upon conducting a literature review, this difference in axillary and rectal temperatures was also found a in study on rectal temperature approximation by Lantz and Ottosson in 2015.
- 3)Outliers were not easy to explain
- 4)Sample size was too low to definitively make a recommendation or policy change
- 5)0% of the charts reviewed had a second rectal temperature documented

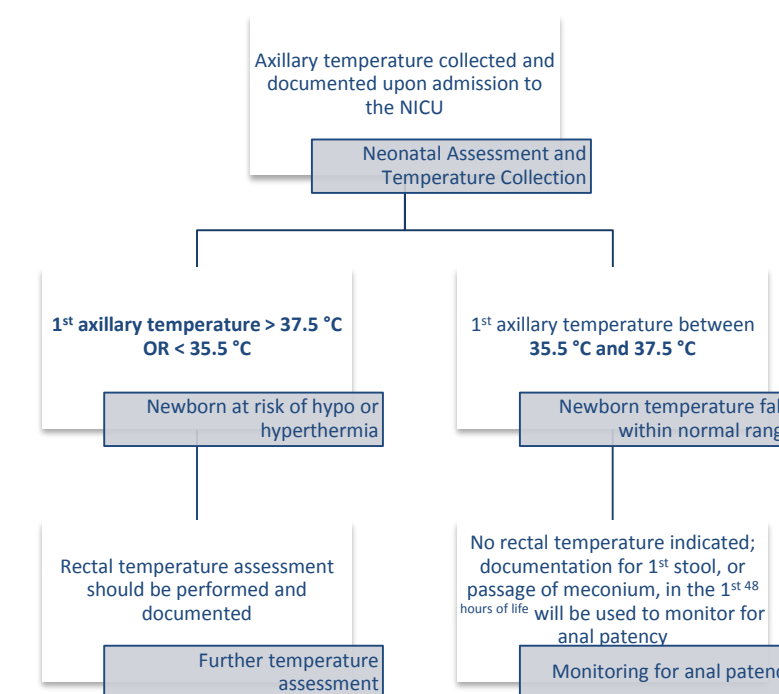
Our next step involved analyzing a comprehensive newborn data set of over 500 infant records that were collected between between 2013-2015. The results shown in figure 3 highlight the most predictable range of temperatures, with more variability between axillary and rectal temperatures occurring outside of the highlighted area, of above 37.5 degrees Celsius and below 35.3 degrees Celsius.

Figure 3: 1st Axillary vs. Rectal Temperature (2014-2015) N=347



5 Conclusions

The results of our temperature evaluation were shared with the interdisciplinary team, and a new temperature protocol was implemented in July of 2015.



6 Future Directions

Future directions of this PDCA cycle include evaluation of the remaining components that make up the Golden Hour initiative.

Most recently, we have started looking at antibiotic administration and are using staff interviews to assess barriers to meeting these standards of care. Re-education is planned, at which point, we will reassess adherence to the antibiotic administration protocols.

7 References

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