

Abstract Title: Improving thermoregulation in our very low birth weight (VLBW) patients in the Golden Hour.

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Purpose & Rationale:

Our purpose is to improve thermoregulation for our very low birth weight (<1500 grams) and premature patients in the delivery room and on admission to the neonatal intensive care unit (NICU). Current knowledge supports the need to maintain normothermia for infants, especially those born prematurely. Hypothermia is associated with increased length of stay, as well as with other morbidities and mortality in the high-risk NICU population. Vermont Oxford Network (VON) data indicated that our had average admission temperatures that were below the network's mean. In 2014 and 2015, almost 30% and 22%, respectively, of VLBW patients were admitted with temperatures less than 36.0° Celsius. Prior to implementation of our admission thermoregulation care bundle, our unit used polyurethane bags for ELBW (<1000 grams) and unlined stocking net hats for our LBW patients. What we learned from our VON data was that something changed in our unit over the last few years. The network continued to improve in their admission temperatures over the last ten years and our unit is not meeting these goals.

Research Question:

Can we improve admission temperatures of our VLBW babies with cost-effective bundled workflow?

Synthesis of Review of Literature:

Care bundles are effective at improving patient outcomes. Researchers have found that small changes in the workflow, equipment, and environment for the VLBW have a direct reduction in hypothermia. Teams have used both flowcharts to guide team activities, and tracking forms to ensure that no steps are missed in the delivery room management of high risk infants. Additionally, both chemical mattresses (CMs) and polyurethane-line hats (PHs) have both independently been found successful in improving thermoregulation in the delivery room.

Methods/Procedure:

Using the Iowa Model to guide our EBP project we designed a care bundle, created a temperature tracking form, educated all staff, and collected evidence on delivery room thermoregulation and admission temperatures. In our care bundle we supplemented the CMs for all infants <1000 grams and PHs for all infants <1500 grams.

Results:

Since implementation we have noted a dramatic improvement in our admission temperatures of our VLBW patients. Our unit went from near 30% of our VLBW patients admitted hypothermic to only 6.5% to date. Data collection is ongoing with the first phase of completion in December 2016. We will have monthly post-intervention data since January 2016.

Discussion/Application to Practice:

Our hope is that other units struggling with thermoregulation of VLBW babies will see cost effective improvements that we have made and they can make improvements in their own unit's delivery room and admission process to help their LBWs from getting hypothermic.