

Plastic drapes reduce hypothermia in premature babies

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Most babies born prematurely or with health problems are quickly whisked away to the Neonatal Intensive Care Unit (NICU) where they might require assisted heating devices to regulate their temperature. A

University of Houston College of Nursing researcher is reporting that the traditional use of cloth blankets and towels during peripherally inserted central catheter (PICC) placement may hinder heat transfer from the assisted heating mechanisms, increasing the risk for neonatal hypothermia. In *Advances in Neonatal Care*, Huong (Kelle) Phan, clinical assistant professor, reports that a plastic drape lowers the incidence of hypothermia.

"The use of the plastic drape is a [quality improvement](#) to reduce the hypothermia rate in very low birth-weight (VLBW) neonates by replacing cloth blanket/towels with a plastic drape during PICC placement," said Phan. "A plastic drape shows promise in improving nursing practice by providing improved thermoregulation for premature neonates during PICC placement."

When a premature baby's body temperature drops below 36.5°C, the baby may experience cold stress, which is a cause for concern. The recommended temperature range for postnatal stabilization is between 36.5° and 37.5°C.

Phan's research project included implementing plastic drapes over three months, during 58 PICC procedures in a Level-3 NICU. A pre-/post-test was used to evaluate the impact of the intervention on hypothermia rates compared with a baseline cloth group and a concurrent cloth cohort.

"After the 3-month implementation period, the hypothermia rate for the intervention group was lower than that for the baseline cloth group (5.2% and 11.3%, respectively). Post-PICC hypothermia rates were significantly lower for the intervention group than for the concurrent cloth cohort," said Phan.

This evidence demonstrated plastic drapes reduced the [hypothermia](#) rate in the NICU for VLBW neonates during PICC placement compared

with cloth blankets or towels.

"Phan's innovative nursing intervention of using the plastic drape during a PICC insertion helps some of our most vulnerable patients, those infants that must be treated in neonatal intensive care units," said Kathryn Tart, founding dean and Humana Endowed Dean's Chair in Nursing, UH College of Nursing.

Phan recommends further research to replicate findings with larger samples of PICC insertions, using a [plastic](#) drape in the operating room and other NICU procedures.

Provided by University of Houston

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