Patient Population/Problem/Disease

- > Our population are newborns greater than 35 weeks gestation born at Phelps
- Management of jaundice in neonates often requires measurements of Total Serum Bilirubin (TSB)which requires a blood draw from the newborn. Neonatal jaundice occurs in about 70% of term infants.
- Due to the need of multiple blood draws in these newborns, there is a desire to institute a less invasive method by implementing Point of Care Testing (POTC) that will aid in the management of these babies
- Transcutaneous Bilirubinometers (TcB)measure the yellowness of the skin by analyzing the spectrum of light reflected by the baby's skin. It is less painful, noninvasive, and parent pleasing
- Our question of whether TcB is an accurate method is answerable by comparing both TSB and TcB within a half hour of each other to measure for accuracy

Intervention

We will evaluate whether the transcutaneous device is an accurate method of assessing bilirubin levels in the neonate as compared to the "gold standard" of measuring serum bilirubin levels

Comparison

- Our goal is to acquire data for the development of evidence based guidelines that will facilitate the screening and assessment of hyperbilirubinemia
- If we determine that the TcB guideline is an accurate measurement of assessing neonatal jaundice, we will present to neonatology and then implement the new standard of care

Outcome

- The outcome we want to achieve is validating the accuracy of TcB as compared to the TSB.
- In validating the TcB, we can then implement a non-invasive way of testing our newborns for jaundice.
- This will lead to decreased costs and increased patient satisfaction
- In recent studies, the use of TcB has demonstrated a 34% decrease in the amount of blood draws (Jones, D. et.al.) This can greatly impact our nursing staff and lead to more time that they are able to spend in care of the couplet







