Finding the Best Blood Draw System

In this feature, Neonatal Intensive Care interviews clinicians and healthcare providers about the actual application of specific products and therapies. This interview is with Lynn Lingen, BSN, RN, RNC-NIC, NICU Educator at Seattle Children's Hospital, about using the Hummi Micro Draw System.

Neonatal Intensive Care: How long have you used the Hummi Micro Draw System?
Lynn Lingen: I first trialed the Hummi system in 2010 when our unit was experiencing supply and manufacturing issues with the closed blood draw system we were using at the time. After trialing the Hummi, we implemented its use for all arterial blood draws — peripheral and central. In my current unit, we have utilized it for just over 2-1/2 years.

NIC: Why did you decide to use the Hummi system vs. others that were available to you?
LL: Hummi was offered at a reasonable cost compared to other systems and was simplistic in design, as well as easy to use. We really liked that it offered a way to have passive-flow blood draws (and low blood volume moved within the system) vs. aspiration and flushing, typical of most other systems. This minimizes the hemodynamic fluctuations that occur with blood sampling from arterial lines and the variability in aspiration and flushing pressures amongst staff.

NIC: What positive benefits does the Hummi system provide for the premature population vs. other methods of drawing blood?
LL: As mentioned, the passive-flow system and low blood volume necessary to perform the draw minimizes variability in hemodynamic fluctuations, thus reducing the risk for intraventricular hemorrhage for premature patients – particularly in the first week of life when arterial blood sampling is frequently performed. Also, because the Hummi enters the line at one entry point and eliminates the need for excessive, multi-connection tubing set-ups typical of closed blood draw systems, infection risk is also minimized.

NIC: Since the Hummi system is a closed system in use, have you observed any change in your infection (CLABSI) rates since you began using the Hummi system?
LL: Unfortunately, I do not have data on this as I was not involved in tracking line infections.

NIC: What type of blood draws do you use the Hummi system for? Peripheral? Umbilical? PICC?
LL: In my current unit, we utilize the Hummi system for peripheral and umbilical arterial lines, as well as, umbilical venous catheter blood draws.

NIC: Are you aware that the Hummi system can reduce the risk for IVH development in the premature infant by moving lower volumes of blood and fluid vs. other blood draw methods?
LL: Yes, I have been very involved in advocating for practice changes to reduce the overall incidence and severity of neuro-developmental complications. So, even without considering the other benefits, Hummi was the logical choice for our premature babies.

NIC: Was reduction of IVH risk a determining factor in your adoption of the Hummi system?
LL: Yes, absolutely!

NIC: Have you observed any reduction in the incidence or severity of IVH occurrence in your patient population since you began using the Hummi system?
LL: The first unit in which I used the Hummi system was a delivery hospital with a 47 bed NICU and a high number of premature patients. At the time we brought the Hummi system in, we also implemented other IVH prevention measures. Over the course of one year, we did see a small decline in IVH incidence and severity. In my current facility, we have a lower percentage of premature infants and the majority of these patients are admitted to us after one week of life. So, I am unaware of the impact the Hummi system on IVH occurrence.

NIC: Do you find the training and support material provided by the manufacturer to be of help to you and your staff when learning to use the system?
LL: Yes, definitely. A comprehensive binder of materials and job aids were provided by the manufacturer. A clinical expert was available on sight for several days to provide training and support.

NIC: Would it be of benefit to your patient care from an infection control aspect, if the Hummi was available to you in a fully assembled manner already integrated into your umbilical artery?
LL: Although our unit doesn't have the opportunity to place many umbilical catheters due to the timing of premature patients admission (usually greater than one week of age), I do see tremendous benefit for delivery hospitals to have an integrated UAC/Hummi system. Minimizing extra pieces and connection points not only benefits the patient from an infection prevention standpoint, but having less connections also decreases the concern for inadvertent disconnections.

NIC: How would you rate your overall satisfaction clinically with the Hummi system?
LL: Extremely satisfied.

If you would like to participate in this feature, as a company or healthcare provider, please contact Steve Goldstein at s.gold4@verizon.net.