

hematopoietic cell products via an IV infusion pump with standardized infusion times. A symptom assessment survey was completed by patients for comparing gravity infusions with infusions via the IV pump. Nurses were surveyed regarding this change in practice.

**Evaluation:** Patient symptoms were rated for cryopreserved cell infusion prior to and after the initiation of a standardized infusion time of 10 minutes. Nurses were asked to rate the efficiency of utilizing an IV pump compared to gravity infusion. Patients who entered the program with a previous placed catheter that was not a 12F CVC were tracked to determine a potential cost benefit.

**Discussion:** By utilizing standardized infusion times and an IV pump both nurses and patients have a better experience with cell infusions.

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### Gorillas in Our Midst

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One of the most rewarding parts of caring for the blood and marrow transplant (BMT) patient is the long term relationships we build with them. Patients are often hospitalized for extended periods of time and with the primary nursing model, nurses have the opportunity to really get to know their patients. For all of the rewards and benefits this brings, it also has inherent risks. The risk of drift from standards of practice is notable due to our comfort level and familiarity with patients and protocols. In addition, blood and marrow transplant patients typically receive common medication regimens, including antibiotics and immunosuppressive agents. One look at the medication area for a BMT unit reveals that most patients are receiving similar, if not the same medications.

The journey towards a 'Just Culture' in our hospital has successfully encouraged the use of the Self-Reporting System when a medication error or near miss occurs, and the BMT unit has consistently been recognized as a high-reporting unit. The Oncology Safety Oversight Committee conducted a three year retrospective analysis for specific medication errors and an increase in the number of medication errors related to patient identification was noted. The BMT unit accounted for a total of 15 events reported, which was 48% of all the errors of this type reported in Oncology. A review of the literature suggested a link of this type of error to 'confirmation bias' which is when we see what is expected rather than what is there. A Failure Mode and Effect Analysis was performed and the opportunity for confirmation bias was identified. Changes to a process such as medication administration that disrupts the typical flow and thought process can reduce the tendency for the confirmation bias factor and the related potential errors. A 60 day trial was conducted where the fourth character of the patient's medical record number on the IV bag label had to be struck through by the nurse as part of the medication administration "6 Rights." This would potentially disrupt the tendency to look at the number for confirmation of the expected medical record number. Staff feedback and ongoing error rates were recorded to assess the effectiveness of the trial.

As with many practice changes, unit leadership found the need to reinforce communication of the practice change

and perform ongoing audits to ensure compliance. During the 60 day trial, no patient identification errors were reported. Staff, given the choice, voted to incorporate the practice into the unit's standard procedure for medication administration. Since initiation of the strike through process 18 months ago; only one event has been reported and the practice has become part of the unit culture. The practice has also been benchmarked by other units in the hospital.

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### A Paradigm Shift in Hematopoietic Progenitor Cell Apheresis: From Apheresis Technicians to Trained Oncology Nurses - Improving Patient Outcomes

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**Purpose and Background:** According to published guidelines from FACT, apheresis must be performed by "adequately trained" collection personnel. This recommendation gives collection facilities wide latitude to determine the appropriate skill set for optimal apheresis collections. Comparing apheresis-trained oncology nurses with apheresis technicians, our program determined which group was best suited for the early recognition and treatment of procedure-related adverse reactions based on patient outcomes.

Upon the initiation of our community-based blood and marrow transplant (BMT) program in 2007, the collection of hematopoietic progenitor cells was contracted to a local blood center. There were 35 collections performed on 12 patients using the contracted apheresis technicians on site. Seventy-five percent (75%) of patients experienced apheresis complications requiring immediate medical attention.

**Interventions:** To improve the quality outcomes within our BMT program, a comprehensive nursing education plan was developed and implemented in November 2008. A core group of oncology nurses completed a competency-based apheresis program. Protocols were developed for the nurse to manage pre-emptive medical interventions when required. Subsequent to this intervention, we used these nursing personnel exclusively for collections.

**Outcome:** As of 2011, there have been 96 collections on 40 patients since switching to apheresis-trained nursing personnel. With this change only 7.5% of the patients experienced adverse reactions, a ten-fold decrease. Although not quantified, program staff felt there was additional improvement to the quality of patient care; as there was a decrease in delays to addressing adverse reactions. The shift from technicians to apheresis trained oncology nurses was a timely nursing intervention which improved patient outcomes by an order of magnitude.

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### Therapeutic Relationship Education on a Pediatric Bone Marrow Transplant and Immunology Unit

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