may benefit from a modified conversion factor when transitioning from IV to PO tacrolimus.

**Delirium Management: A Bone Marrow Transplant Veteran Case Study**

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**Topic Significance & Study Purpose/Background/Rationale:**
Since September 11, 2001, over 2.4 million service members have been deployed to Iraq/Afghanistan war. Stressors in combat include situations where soldiers can be seriously injured or killed (75-85%), knowing someone seriously injured or killed (65-80%), and events causing intense fear, helplessness or horror (35-50%). In combat, 79% of soldiers report shooting at the enemy, 62% report explosions near them, and 48% report responsibility for someone’s death. There are three Veterans Administration (VA) bone marrow transplant (BMT) centers in the United States; however, many service members choose transplant centers outside the VA system.

**Methods, Intervention, & Analysis:** Case Description: A 39 year old male was diagnosed with Amyloidosis. After partial remission from Velcade and Revlimid, the patient was admitted for an Autologous BMT. He was pleasant and cooperative initially; however, he never slept. A few days after transplant, it was noted mid-day that he was dis-oriented with paranoid behavior. He paced his room talking loudly. The same evening he threatened staff, broke his IV tubing, and claimed a bomb was in his room. His wife was unable to calm him and he began swinging items at the nursing staff. The hospital police helped restrain the patient long enough to remove dangerous objects from the room and secure his Central IV Access. Haldol was given to calm him. The staff identified his delirium “trigger” as coming from insomnia related to a hyper-excitible state. His plan of care was to approach him cautiously to avoid startling, provide uninterrupted rest time on both shifts, and manage his care in a structured, organized fashion. The patient’s delirium resolved, and he leads a productive civilian life post transplant.

**Findings & Interpretation:** The major findings in our case study conclude that better understanding of PTSD in future veteran BMT patients is needed in order to provide holistic care. Current literature on PTSD when paired with a cancer diagnosis and treatment with a stem cell transplant is limited.

**Discussion & Implications:** While the VA offers national educational training for veteran care, only about 31% of community providers are VA trained. Post Traumatic Stress Disorder (PTSD) is under-reported; therefore, also under-diagnosed. Specific requirements are needed to make the diagnosis. BMT staff need additional training to better care for the combat veterans who are at risk for PTSD delirium episodes.

**Caring for the Caregiver: A Nurse Practitioner-led Psycho-Educational Support Program**

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**Topic Significance & Study Purpose/Background/Rationale:**
The challenges, burdens and stressors that cancer caregivers face have been well documented in the literature. Research has repeatedly found that cancer caregivers often neglect their own health, have informational and emotional needs that are unmet by the health care team, and report higher levels of anxiety and stress than the patients while undergoing treatment. Specific nursing interventions that ease the caregiver experience are not as well documented. The purpose of this program was to assess the feasibility and interest in a Nurse Practitioner-led intervention to ease caregiver distress and burden.

**Methods, Intervention, & Analysis:** On a 58 bed inpatient oncology unit, a monthly Nurse Practitioner-led psycho-educational support program was designed to ease caregiver distress and burden. Each session lasted 1 hour. The first thirty minutes provided participants an opportunity to share their experiences while being supported by the practitioner and each other. The second half of each session was devoted to the content of a self-care topic. Topics presented included: maintaining healthy lifestyle, sleep hygiene and stress management. A physician question and answer session was also offered. The physician session allowed caregivers the opportunity to “pepper” an attending physician with specific questions, and more importantly an opportunity to be “heard” by the medical team. These content topics were chosen based on the caregiver needs identified in the literature.

**Findings & Interpretation:** Informal evaluation of the program indicated that all thirty-three caregivers who attended the sessions found these sessions “very helpful”. Comments reflected a desire for more sessions, offered more frequently. These responses validate the need for a caregiver support program and indicate the caregivers’ willingness to participate in provided interventions.

**Discussion & Implications:** Oncology nurse practitioners can alleviate caregiver distress and burden by developing interventions that directly address psychological and educational needs of caregivers. The cancer caregiver population would benefit from a more in depth evaluation of such interventions.

**Simulation: Onboarding Competence with Confidence**

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**Topic Significance & Study Purpose/Background/Rationale:** Simulation training provides new nurses exposure to patient situations they will encounter in BMT nursing. Newly graduated nurses were found to perceive that simulation scenarios facilitated learning (Kaddoura, 2010). According to the Institute of Medicine’s (IOM) Future of Nursing Report, the interprofessional team must collaborate to ensure that nurses engage in learning to achieve competency (Robert Wood Johnson Foundation, 2010). High priority competencies in the BMT arena include sepsis recognition, assessment and interventions, and compassionate end of life care (FACT- JACIE International Standards, 2012). Septic shock is one of the most frequent oncologic emergencies. The BMT nurse’s early recognition of sepsis is an essential competency that can improve patient outcomes (Samphao, Eremin, & Eremin, 2010). Nurse educators are central to the task of providing competency training on these topics.

**Methods, Intervention, & Analysis:** This study is based on a convenience sample of new and experienced nurses and new graduate nurses from September 2012 through current date. As a part of the Internship, each new graduate nurse is required to complete two additional scenarios for sepsis and end of life. Of the total 195 nurse orientees, 90 were graduate
nurses and 105 were experienced registered nurses. A qualitative study of a participant evaluation was completed. A diagram of the Simulation Process can be found in Figure 1.

**Findings & Interpretation:** The participant studies demonstrated a 87% favorability in promoting the individual’s learning with the orientation curriculum and 91% favorability of confidence with the development of skills and required knowledge managing the deteriorating patient, sepsis assessment and interventions and end of life event (Figure 2).

**Discussion & Implications:** In the acute care setting, simulation innovation is a valuable tool in the process of onboarding nurses for the BMT practice setting. Future studies can include patient outcome data related to sepsis management. End of Life Simulation can prepare the new nurse to provide compassionate care interventions in a safe learning environment through debriefing. There can be an indication for simulation for ongoing competency for experienced nurses. The interprofessional team can benefit from simulation for complex management scenarios in the BMT population.

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**Red Bag Review: A Medication Reconciliation Initiative**
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**Topic Significance & Study Purpose/Background/Rationale:** The American Medical Association (2013) defines medication reconciliation as a “team-based process that should be led by and is the responsibility of the patient’s attending or personal physician in collaboration with other health care professionals.” As an interactive process, the healthcare provider (HCP) engages the caregiver by reviewing and comparing the medication list with the medication containers. The pediatric stem-cell transplant (SCT) population is particularly vulnerable to medication errors due to the large number of medications per patient, the frequency of medication changes, and the multiple providers involved in care.

**Methods, Intervention, & Analysis:** During a gap-analysis meeting between Boston Children’s Hospital/Dana-Farber Cancer Institute (BCH/DFCI), the concept of a medication bag was generated with the hypothesis that providing a designated medication bag could improve the reconciliation process. With input from the multidisciplinary team, medication bags in two sizes were chosen to accommodate medication needs (Figure 1). An audit tool was created for pre-program and post-program assessment of the effectiveness of the intervention. Pre-intervention audit results of 50 SCT patients, 25 outpatient (DFCI) visits and 25 homecare (Home Health VNA) visits are discussed below.

**Findings & Interpretation:** The audited patients (n=50) had a variety of SCT diagnoses. The caregiver had the medication list present at only half of the visits, whether outpatient or homecare. Medications were brought by the caregiver to only 10/25 outpatient visits, of which the HCP compared medication packaging to the medication list in 8/25. In 16/25 outpatient and 11/25 homecare visits at least one discrepancy was identified between the medication packaging and the medication list. The most common discrepancy was medication frequency (Figure 3).

**Discussion & Implications:** Currently, bags are being distributed to patients at discharge following SCT, and at outpatient visits. Education on medication reconciliation and pre-program audit results has been provided to nursing and physicians to improve process and practice. Post program audits will begin in October 2014 to evaluate program effectiveness. The next phase will allow us to evaluate whether the intervention of providing a designated medication bag can decrease the number of errors and improve medication reconciliation for the pediatric SCT population.

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**Moving a Bone Marrow Transplant Unit Towards a High Reliability Unit**
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**Topic Significance & Study Purpose/Background/Rationale:** Bone Marrow Transplant (BMT) units consist of high acuity patients, complex processes, and high risk medications. Failure to insure safe, reliable processes can be detrimental to the BMT patient. The healthcare industry is investigating high reliability organizations (HRO) and modeling their practices and cultures of safety and reliability to form high reliability units (HRU). Key strategies propelling the HRO model forward include strong leadership, evidenced based practice (EBP), effective communication, trans-disciplinary teamwork, root cause analysis, a culture of safety and continuous learning, improved system designs and outcomes evaluation.

**Methods, Intervention, & Analysis:** To establish and promote reliability and decrease failure, a HRU task force was created on a 24 bed pediatric BMT unit. The task force guides quality improvement and EBP projects by incorporating the five principles of high reliability while standardizing the following processes: medication administration utilizing the no interruption zone (NIZ), chemotherapy administration, stem cell infusion, patient environment, RN shift handoff, and laboratory draws. Process improvement methodology assisted with standardization and evaluation through the Plan Do Study Act (PDSA) design. Unit champions participate in outlining the process, incorporating the practice onto the unit, and frequently monitoring to insure the process is followed.

**Findings & Interpretation:** Initially, an increase in awareness was observed during the development of standardized processes, creating a new baseline. Maintaining transformation of human behavior to follow a standardized approach has been proven challenging. Consistent auditing of practices followed by real time feedback is essential to conforming team members to the standardized process and measuring improvement.

**Discussion & Implications:** Intensive care units that participate in high risk processes where the cost for error can be detrimental to patient well-being are ideal environments to incorporate the HRO model. Continued monitoring and dissemination can assist other BMT units to establish safe and reliable health care environments for a complex and vulnerable patient population.

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**The Synchronization of the Nursing Process with Electronic Clinical Nursing Documentation in Bone Marrow Transplant**
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**Topic Significance & Study Purpose/Background/Rationale:** The Adult Bone Marrow Transplant unit of this NCI designated comprehensive cancer center successfully implemented a nursing electronic clinical documentation program that synchronizes the nursing process with electronic documentation to improve the delivery of care. The program is the