

cost effective, we need to design its contents suitable for hematopoietic stem cell transplantation patients, apply the therapy for a long term, and examine its effects.

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##### **A RETROSPECTIVE ANALYSIS COMPARING INFECTION RATES DURING MOBILIZATION OF STEM CELLS PRIOR TO AUTOLOGOUS TRANSPLANT**

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Historically, the Blood and Marrow Transplant (BMT) Program at the OSU James Cancer Hospital mobilized peripheral blood stem cells (PBSC) through the use of granulocyte colony-stimulating factor (G-CSF) plus chemotherapy. At the time of chemotherapy, a venous access device (VAD) was placed. During periods of neutropenia, some patients developed VAD infections requiring a hospital admission and treatment.

In reviewing the literature, several authors (Jillella, 2003; Toor, 2001; Avery, 2002) documented an increase in infections among patients mobilized with G-CSF plus chemotherapy. G-CSF alone is considered an adequate mobilization approach with the advantages of low morbidity, low cost, and fast immune recovery (Milone et al., 2003). In 2006 the BMT Program began to mobilize PBSCs using G-CSF alone to decrease the infection rate.

A retrospective analysis was completed comparing infection rates of patients mobilized with G-CSF plus chemotherapy and patients mobilized with G-CSF alone transplanted between 2004 and 2006. Infection was defined as an elevated temperature ( $\geq 100.5$  F) with or without positive blood cultures if treated with antibiotics. For those patients mobilized with G-CSF plus chemotherapy, 28/112 (25%) developed an infection as compared to 6/66 (9%) of patients mobilized with G-CSF alone (p value of 0.009). Of the 34 patients who developed an infection, 20 patients were hospitalized and 25 patients had their VAD removed.

In this study, patients mobilized with G-CSF alone had a lower incidence of infection than patients mobilized with G-CSF plus chemotherapy. Since changing to G-CSF alone mobilization, patients do not require a hospitalization. Nursing implications include having the clinic and apheresis nurses play a major role in educating the patients and caregivers on the care of the VAD. Previously, the inpatient staff and/or home health agency nurse taught this at the time of chemotherapy. Our BMT program is continually reviewing ways to improve infections rates among patients during the mobilization process.

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##### **DEVELOPMENT OF AN OUTPATIENT FALL PREVENTION PROGRAM IN AN AMBULATORY CANCER CENTER**

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**Background:** In 2005, our institution was challenged to implement the JCAHO National Patient Safety Goal to reduce the number of patient falls in our ambulatory cancer center. There was little in the literature about falls in cancer patients and nothing in the literature about fall reduction programs for outpatient facilities at the time. We had 18 months of data about the falls that had occurred in our own clinic as well as experience implementing a fall prevention program at our inpatient facility. **Intervention:** We formed a multidisciplinary team, led by a Clinical Nurse Specialist and including a patient advisor, to examine the problem of falls in our clinic amongst our HSCT and oncology patients and to create a fall reduction program that would be appropriate to our setting. The team met for several months and accomplished the following: developed an outpatient cancer fall risk assessment tool, developed an algorithm for post-fall management, wrote two nursing policies and procedures and one multidisciplinary policy and procedure, wrote two patient education documents and developed an educational plan for the entire clinic faculty and staff to learn about their role in fall prevention. The fall prevention program was implemented

in January 2006. All SCCA outpatients are now regularly assessed by RNs for fall risk. Every patient receives written information about fall prevention in the clinic and at home. Every patient that has fallen in the clinic receives an electronic alert in his or her medical record and in the on-line scheduling program. Clinical staff implement risk reduction interventions for all patients, with special precautions for patients screened to be at risk for falling. A standard post-fall algorithm is followed for every fall in the clinic. **Outcomes:** Since implementation of the fall prevention program, we have not had any repeat fallers. We have seen a sharp decline in the number of falls occurring in the Infusion Room, which previously had the most falls in the clinic. We have seen a decrease in the number of falls due to improper footwear (from ~25% to <10%). There have been reports of near-falls that have been averted. The fall risk assessment tool appears predictive, with fallers scoring much higher than a random sample of non-fallers. **Conclusion:** The outpatient fall reduction program has led to better patient safety within our clinic.

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##### **DISCHARGE EDUCATION CLASS: HELPING TO EASE THE BURDEN OF BMT CAREGIVERS**

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Caring for Blood and Marrow Transplant (BMT) patients post discharge can be overwhelming for caregivers as well as patients. Patients and caregivers often request information about infection prevention, nutrition and how to contact their doctor. The answers to these questions are not always based on sound evidence. As evidence reveals appropriate infection control measures for the immune compromised patient, the Clinical Practice Review Committee at a large comprehensive cancer center developed guidelines for educating patients about evidenced based protective measures. In an attempt to ensure that all patients receive consistent information, two BMT nurses, the Discharge Coordinator and the Clinical Nurse Specialist (CNS) (referred as "the group") discussed the need to offer a discharge preparation class to caregivers. Caregivers were chosen because they are responsible for patient care in the home. The group thought that patients would be too ill to attend an hour long class during their hospitalization. Prior to implementing the class, the Discharge Coordinator queried caregivers and patients about their interest and willingness to attend a discharge class. Response was positive. The group developed a weekly one hour discharge education class. Components of the class included: basic care needs, infection prevention strategies, nutrition and hydration basics, fatigue management, community resources and health care navigation. Because the class would include both autologous and allogeneic caregivers, allogeneic caregivers were asked to stay for an additional 15–20 minutes to discuss GVHD and prolonged immune suppression. Advertisement for the class started with a flyer given to patients and families on admission. The class was held in the units' family waiting area. The first class had 26 participants. Even though the class was intended for caregivers, patients attended and enjoyed the class. Written evaluation of the class was very positive. The participants felt that the content was very helpful and not too overwhelming. Now in its 9<sup>th</sup> month, the class averages 10 participants per week. Feedback from follow-up phone calls validate that the discharge class has been helpful for patients and caregivers to safely transition to home.

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##### **A SPECIALTY CLINIC FOR PEDIATRIC HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS WITH CHRONIC GRAFT-VERSUS-HOST DISEASE**

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Chronic graft-versus-host disease (cGVHD) is a potentially devastating complication of pediatric, allogeneic hematopoietic stem