Transplant Nursing

clinical program. The New Patient Referral (NPR) team has been working diligently to meet the needs of community physicians who refer patients for blood and marrow transplantation (BMT).

In an effort to improve the referral process and increase RP satisfaction, the BMT-NPR team collaborated with the Office of Physician Relations in a process improvement project which resulted in the creation of a Satisfaction Survey Tool (SST). The information obtained from the SST reflected the perception of the RP on telephone courtesy, promptness and efficiency in returning initial referral call and timely referral facilitation serving as the baseline level of performance. Community physicians who have referred a BMT patient within the previous 12 months received the survey tool. Of the 13% returned, the overall results were positive with areas for improvement identified. The Referral Team developed strategies based on the survey feedback: (1) customer service training for the Referral Team performed by a consultant skilled in physician-referral program; (2) revision of the Medical Acceptance Criteria and policy that guides the NPR team regarding clinical information needed for medical review; (3) development of an algorithm on the Referral Process that includes a telephone script for answering referrals; (4) development of a Referral Notification Letter that serves as a thank you note; and (5) development of an on-line referral for physicians. The improvement strategies have resulted in a more organized and consistent NPR process. The staff has been encouraged by the verbal feedback of the RP regarding the smooth processing of referrals. A follow-up survey will be sent to the RP to evaluate if the improvements resulted in a positive difference in the process as evidenced by improved communication and ease of access.

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INFECTIOUS COMPLICATIONS OF THE GASTROINTESTINAL TRACT IN THE ALLOGENEIC BMT PATIENT
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Gastrointestinal (GI) tract complications in the bone marrow transplant patient can be a clinical challenge for both the patient and their clinician. Although the majority of these complications are a direct result of acute graft versus host disease, there are other infectious etiologies that often mimic these clinical signs and symptoms and ultimately prove to be equally detrimental. In general, the lack of specific pathogen identification, adequate cultures and definitive pathology, often prove difficult, thus leaving the clinician with uncertainty as to appropriate treatment modalities. This presentation will discuss three challenging clinical presentations of gastrointestinal complications in the BMT patient that highlight interesting infectious complications. Three infectious diagnoses will be discussed in detail including pneumatosus intestitis due to resistant cytomegalovirus colitis, strongyloidiasis and resistant herpes simplex. Each case presentation will include a brief overview of the patient demographics, the primary diagnosis, and the transplant course. The primary focus of the case discussions will be on the presentation of gastrointestinal signs and symptoms, and differential diagnosis. Treatment options for each case as well as the treatment course and resulting outcomes will be discussed. Specific pharmacologic treatments of interest will include Cidofovir, Ivermectin, and Abendazole.

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TWO SIBLINGS IN NEED OF AN HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT): CONSIDERATIONS FOR TANDEM TRANSPLANTS

In addition to the inherent stress to the patient and family, HSCT carries a significant transplant mortality risk. We describe the experience of a family whose 2 of their 3 children needed a cord blood HSCT within the next 6 months following the diagnosis of agranulocytosis. Neither of them had been previously hospitalized nor exposed to a serious disease. Simultaneous or sequential transplants were considered. Simultaneous transplants were at risk to raise the overall difficulty of the experience but would shorten the overall time period restrictions following HSCT. Also, if the first of 2 planned sequential transplants had been unsuccessful, there might have been a significant negative impact on the family. Also, everyone on the team was conscious of the potential risks associated with doing two siblings at the same time (constant comparison of the two, errors, etc.). The 2 options were discussed with the family.

The family initially decided to proceed with sequential HSCT but then instead chose simultaneous transplants. The HSCTs were performed 2 days apart. The length of stay for the 4-year-old daughter was 41 days: she fully engrafted without major complications. The 6-year-old son did not engraft and remained pancytopenic. A second HSCT was immediately performed: his total stay was 105 days.

The two children are now more than 6 months post-HSCT with Lansky scores of 100%, no evidence of GVHD and without immunosuppression. The parents still consider that they chose correctly in proceeding with simultaneous HSCT. However, they recognize that it was a very difficult experience. For example, they feel that it was extremely difficult to manage the family daily routine, the preparation of the medications, and the restrictions due to the immunosuppressed status of their children. Also, the unexpected second HSCT needed by their son added to their stress. They recognize that the support they received from their extended families and the transplant team played a significant role in their adaptation to the situation. Among the facilitating measures implemented by the team, the children were hospitalized in neighboring rooms sharing an anteroom. The parents were thus able to visit both children more easily and the children were able to visit each other.

In conclusion, if again confronted with the need to transplant 2 siblings, the most important factor to consider is the family’s internal and external resources to face this difficult and uncommon experience.

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THE DEVELOPMENT OF THE LEAD TRANSPLANT COORDINATOR FOR ONE OF THE LARGEST BLOOD AND MARROW TRANSPLANT CENTERS IN THE COUNTRY
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A challenge for one of the largest blood and marrow transplant centers in the country is the management of complex internal communications associated with a highly diverse patient population. With this diversification comes a program that is divided into many processes represented by a team of people that function as a network to achieve a common goal. The pre-transplant phase is the primary focus of the case discussions. The pre-transplant phase is a direct result of acute graft versus host disease, there are other infectious etiologies that often mimic these clinical signs and symptoms and ultimately prove to be equally detrimental. In general, the lack of specific pathogen identification, adequate cultures and definitive pathology, often prove difficult, thus leaving the clinician with uncertainty as to appropriate treatment modalities. This presentation will discuss three challenging clinical presentations of gastrointestinal complications in the BMT patient that highlight interesting infectious complications. Three infectious diagnoses will be discussed in detail including pneumatosus intestitis due to resistant cytomegalovirus colitis, strongyloidiasis and resistant herpes simplex. Each case presentation will include a brief overview of the patient demographics, the primary diagnosis, and the transplant course. The primary focus of the case discussions will be on the presentation of gastrointestinal signs and symptoms, and differential diagnosis. Treatment options for each case as well as the treatment course and resulting outcomes will be discussed. Specific pharmacologic treatments of interest will include Cidofovir, Ivermectin, and Abendazole.

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standard set of operating procedures; thus, ensuring the consistent delivery of high quality care to patients and colleagues.

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DEVELOPMENT OF A Pre-BLOOD AND MARROW TRANSPLANT PATIENT EDUCATION CLASS: A PATIENT DRIVEN APPROACH
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Today’s health care climate and advancements in Blood and Marrow Transplantation have challenged the BMT RN coordinator staff to develop an innovative multidisciplinary approach to patient care. In an effort to facilitate the patient’s passage through BMT, the need for a patient education class focusing on immediate informational needs regarding the transplant process was identified. The increased level of patient acuity, the geographical vastness of the institution, and the need for seamless transition through the process have been indicative of the importance of an ongoing and consistent patient/caregiver transplant education class. The challenge was to develop a forum to meet the patients’ information requirements while stressing the important aspects of BMT and the informational/educational needs of the multidisciplinary team. A multidisciplinary task force was developed to revamp the inpatient education survey, and outpatient patient satisfaction surveys/.comment cards, so as to, establish the goals and content to be covered in a weekly occurring pre-transplant class. As a result of the task force, patients were provided with a questionnaire intended to determine their education needs and interest in attending a class. The feedback obtained from the questionnaires supported further development of the class. The intent was to introduce the patient to their primary transplant multidisciplinary care team members and their roles while utilizing the patient education manual as a guide for the class. The length and location of class, scheduling guidelines, instructors, teaching plans, and patient survey tool were developed. The patient survey tools are obtained at each class and reviewed for possible improvements. The results thus far demonstrate a high level of satisfaction regarding the organization and information given during the multidisciplinary Pre-Transplant education class. Future goals include developing additional classes addressing specific transplant types and an admission class to enhance the BMT patient education experience.

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STAFF RETENTION, SATISFACTION AND A HEALTHY WORK ENVIRONMENT: CAN THIS BE ACCOMPLISHED WITH AN OPEN NURSING FORUM?
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Staff retention, satisfaction, and open communication are prevalent topics of discussion in Nursing, Management, and Leadership Journals. One of the nations leading Blood and Marrow Transplant (BMT) Programs joins other centers dealing with these nursing issues. To identify areas of concern in the BMT Center, one on one interviews were held with each clinic nurse. The following questions were asked: (1) Do you feel supported and cared for? (2) What one thing would improve job satisfaction? (3) We have used e-mails, “huddles”, surveys, and staff meetings to elicit input and still some nurses don’t participate, what is the best way to communicate with the staff? Responses included: “I feel supported but you’re not always here exactly when I need you”.

“When equipment fails I want to report it to one person for them to handle.” “Our staff meeting agendas are already decided and there is no time to discuss what is important to us”. Open nursing forums were created in response to the nurses’ feedback. The forums consisted of “open agenda” meetings with discussions centered on improving communication and staff satisfaction. Some solutions were simple and quickly implemented, such as identifying a point person for equipment malfunctions. The more difficult issues, “When does the opening nurse sign off to the closing nurse?”, “How do we deal with all the back line phone calls?” were assigned to groups of nurses charged with developing “opening” and “closing” clinic guidelines and pathways of communication within the clinic. Improved teamwork within the clinic, as verbalized by faculty and staff, is an initial indication of success. Surveys will be distributed to further evaluate the benefit of the open nursing forums and elicit ideas to continue to improve communication. The ultimate goal is to create a healthy work environment which promotes satisfaction and retention.

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CREATING A STAFFING MODEL FOR RN BLOOD AND MARROW TRANSPLANTATION COORDINATORS IN THE PRE-TRANSPLANT PHASE OF THE BLOOD AND MARROW TRANSPLANTATION JOURNEY
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At one of the largest Blood and Marrow Transplantation centers in the country, determining the correct number of pre-transplant RN Coordinators has always been a challenge. Staffing based on volume of patients and transplant numbers has proven to be an ineffective measure of actual workload. A staffing model was created to determine the correct numbers of personnel necessary. The goal was to improve morale, retention and create a data source that could be used to justify and request additional positions. First, data was collected on volumes of total “active” BMT patients that each coordinator is responsible for on a monthly basis. Next, a list of the coordinator activities was created and loaded into a hand held device which was used to capture the time spent on each of the coordinator activities such as consults visits, teaching, phone calls, email, and documentation. The coordinator activities were captured and recorded during a two week pilot. The hand held device randomly beeped 20 times in 8 hours prompting the coordinators to enter the activity they were performing at that moment. The findings from the pilot resulted in the calculation of the standard work hours for the week with an additional 63 minutes per person added for fatigue or personal time. The hours were then divided by the patient activity level to determine the activity hours per patient and were multiplied by the projected weekly patient load to calculate the projected activity hours. A 15% allowance for productivity variability was added and divided by 40 hours per workweek to obtain the projected number of coordinators. The staffing model demonstrated to the current 6 coordinators and lead coordinator the optimal number of patients that each of them can effectively manage. Creation of the staff model has added meaning to the work of the team and a basis to support growth.

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DEVELOPMENT OF AN ACUITY MEASUREMENT TOOL SPECIFIC TO HAEMATOLOGY AND HAEMOPOIETIC STEM CELL TRANSPLANT PATIENTS
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The lack of recognition, within New South Wales (NSW), of the degree of complexity involved in the management of Haematology/Stem Cell Transplant (SCT) patients has long been a source of frustration for nurses working in this area. This is largely attributable to the inadequacy of existing generic tools to accurately quantify specific haematology/SCT patient acuity. This lack of accurate information has led, over time, to the erosion of staffing levels, inappropriate skill mix and unsafe patient/staff ratios. Further impetus was the proposed rollout of a generic acuity assessment tool for use in all areas broadly deemed “non-high-dependency” across NSW public hospitals, including Haematology/SCT. A pilot of this tool in a Haematology/SCT unit indicated that that they were overstaffed and would be required to reduce baseline staffing levels. The BMT Network NSW appointed an experienced haematology nurse to develop a tool to demonstrate the complexity of Haematology/SCT patient care and to measure acuity levels. An exhaustive literature search revealed that no such specific tool has been published in the past decade.

A document was developed that describes in detail the activities undertaken by nurses caring for patients in haematology/SCT units. Based on this, a tool was developed in which signs and symptoms of potential adverse effects of treatments and diseases