

Steady growth in the clinical/translational research enterprise at the University of Michigan Blood and Marrow Transplant Program necessitated institution of improvements in trial design and implementation. Several novel practices have been developed to facilitate a shortened timeline to enrollment for the first patient on trial, improve protocol compliance, and increase trial accrual. To improve protocol compliance, protocols were closely aligned with current program clinical practice guidelines (CPG) whenever such alignment did not impact the objectives of the protocol. To achieve this, protocols were reviewed by members from key job families such as Pre-Transplant Nurse Coordinators, Data Management and Research Nursing prior to protocol submission for Scientific Review and the IRB resulting in reduced protocol amendments and improved protocol compliance. Other strategies to improve protocol compliance were initiated. Single page protocol "Fast Facts" provide staff with an easy reference for important protocol points and highlight variations from program CPG. Post-transplant checklists outline protocol required observations and scheduling of necessary tests/appointments with follow up care. One page study summaries identify eligibility criteria, study objectives, treatment plan and required follow up. Responsibility lists are developed to clearly delineate each team member's role as it relates to the protocol. All study related materials are available via a website developed specifically for this purpose. Prior to patient enrollment, an internal site-initiation meeting is held by the principal investigator for members of the transplant team. At this meeting the reference tools are shared among staff for review. Non-physician communication concerning protocol status and planned changes was improved by initiating scheduled meetings among job families including Pre-Transplant Nurse Coordinators, Data Management, Research Nursing, Inpatient Nursing and Physician Extenders. A monthly protocol accrual grid is provided to all transplant team members. Protocol leads in each group are identified to act as a resource to others in their job family. These improvements in practice are reflected in a program CPG chapter specific to protocol implementation which serves as a template for future protocols. In the course of restructuring this process we have experienced the validity of the old English proverb "Prior preparation prevents poor performance".

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PREPARING PRIMARY CARE GIVERS FOR OUTPATIENT HOME CARE

Leuch, M.L. Duke University Medical Center, Durham, NC

Following the inpatient transplant stay, the children in Duke Hospital's Pediatric Blood and Marrow Transplant Unit (PBMTU) continue to receive multiple intravenous medications, oral medications, blood draws for laboratory testing, and dressing changes for their central lines. To shorten the length of hospital stay and to increase caregiver satisfaction, we implemented a program to teach the patient's primary caregiver(s) the necessary skills to perform these tasks at home. The primary caregivers are required to learn and perform complex, oftentimes challenging, tasks safely and competently prior to discharge. Home care requires coaching, thorough explanations, repeated observation with attention to detail, and an appreciation for the caregiver's unique learning needs. Recognizing the need for a more comprehensive structure for discharge preparation, the PBMTU nurses, in conjunction with the home infusion nurse, have joined together to provide a structured education process. The process includes written information, demonstration, class work, and an evaluation process. Essential education topics include central line cap changes and dressing changes, central line blood draws for laboratory testing, and intravenous and oral medication administration. Teaching begins early during the inpatient stay to give caregivers ample time to master these skills. This poster will provide detailed instruction sheets for each skill, along with visual aids which are given to and reviewed with the caregivers at the beginning of the education process. Early detailed education, including written explanations, visual explanation, task assistance and coaching, is fundamental in empowering the caregivers with the knowledge and expertise to provide safe and effective care following discharge.

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INCREASING CORD BLOOD DONATION IN THE UNDERREPRESENTED POPULATIONS

Chadakhtzian, A., Yocco, M., Barnes, Y., Heidotten, A. St. Louis Childrens Hospital, St. Louis, MO

Problem: The cord blood donor pool available for stem cell transplantation is under-representative of minority ethnic populations. The city of St. Louis has a large minority population that is ethnically diverse that could enrich representation in the cord donor pool. In discussion with community leaders of minority groups it is likely that donation can be improved by enhancing education and resources towards developing programs that target these populations. The hospital that serves a vast majority of ethnic deliveries in the St. Louis City currently retrieves 7.3% of them as cord blood units in 2007.

Plan: The plan will be to develop an educational program that would target ethnic populations to increase awareness of importance of donating cord blood to increase the pool of donors for the general population. Educational targets include physician offices, clinics and hospitals in the metropolitan area. Educational tools will include material describing the importance and the ease of the donation process. Education will be continued at planned birthing classes to provide information and answer questions regarding the cord blood donation process.

Evaluation: The percentage of donations will be tracked as evaluation of this intervention on a monthly basis. One years worth of data will be analyzed to evaluate the relevance of the educational measures and if the program was successful in increasing the donation of cord blood in this patient population. Additional interventions will depend on funding and personnel available for such intervention.

Future Plans: It will be determined if this project had an impact on the numbers of donations. We would plan to initiate this process in other hospitals in the St. Louis region to increase the cord blood collection rates. If these measures are successful then the educational measures could be instituted nationwide to increase the cord blood donation process.

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INNOVATIVE WAYS TO IMPROVE SAFETY ON A PEDIATRIC BLOOD AND MARROW TRANSPLANT UNIT

McDonald, S. Duke University Medical Center, Durham, NC

The Pediatric Blood and Marrow Transplant Unit (PBMTU) at Duke University Medical Center typically administers over 19,000 medications and 500 blood products per month. Medication administration is considered a high risk and high volume procedure for the unit. Due to the large volume of medications administered there are multiple layers of safety measures in place. First, the nursing staff double checks medication drips with every rate change, every medication bag change, every intravenous tubing change, and every nurse to nurse handoff. Second, the nurses perform a read-back safety check, verifying the 6 Rights of Medication Administration and the physician order for medication, at the bedside prior to beginning all intravenous medication drips. The PBMTU patients typically have multiple intravenous medication drips, creating a high demand for a second set of helping hands available. Recognizing the intensity with incorporating additional safety checks, we implemented the Clinical Nurse Lead (CNL) position. The CNL, a nurse who does not have patients assigned for that shift, is responsible for safety checks as well as assisting the bedside nurses with typical tasks such as blood draws. A third safety measure we have implemented is the "sterile cockpit". This is essentially an interruption free zone used during critical nursing procedures such as drawing up medications, double checking chemotherapy, and double checking blood products. The physician rounds have also converted to a "sterile cockpit" with guidelines for communication during clinical rounds. This poster will elaborate on sterile cockpit criteria and the Clinical Nurse Lead job responsibilities, both of which have improved communication and effectively increased patient safety.

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DEVELOPMENT OF A PREADMISSION DVD TO EDUCATE PATIENTS AND THEIR FAMILIES ABOUT STEM CELL TRANSPLANT

Rinkus, C., Hertel, L. Barnes-Jewish Hospital, St. Louis, MO

Educating patients and their families about the complexities of stem cell transplant is challenging. The subject matter can be

abstract and has many components: pretransplant work-up, inpatient stay, and post-transplant care. Patients can become overwhelmed with all of the information. At Barnes-Jewish Hospital, Siteman Cancer Center, the patients can travel the the cancer center from as far away as 4 hours which adds to the complexity of education. Previously, a preadmission education class was developed that is offered to patients and their families twice monthly. Along with the class, a written educational program was developed. Recently, attendance to the class has started to decline resulting in decreased patient knowledge and comfort about the transplant process. We decided to query patients admitted to the hospital regarding their attendance to the preadmission class. Less than half of the patients surveyed actually attended the class. Common reasons cited for inability to attend the class included living far from BJH and having too many other commitments to fit the class into their schedule. Additionally, patients who attended the class were asked for suggestions to make the education process more useful. Suggestions included: a video/DVD format for home review with their family; a desire to talk to post-BMT patients about their experiences, and view of a hospital room on the BMT unit. A team of staff from both inpatient and outpatient areas met to discuss how to proceed. The preadmission DVD was an ideal approach, but quite expensive. The CNS from the BMT unit, wrote a proposal to the hospital Grant Foundation whose mission is to offer support for patient related projects. The grant submission was accepted for the entire estimated cost. Next, the Siteman Cancer Center marketing department was contacted for their expertise in coordinating such a project. The goal of the DVD is to offer a consistent approach to education. It is intended to be used with written and verbal educational support. The developers wanted the DVD to last for many years. Thus the written material will be utilized for specific material that is likely to change over time. After establishing the goal of the project, the team wrote a script, hired a professional narrator and began creating the DVD. The developers solicited opinions from patients as well as team members. We are proceeding along a planned timeline and should have the DVD completed by November 2008.

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COMPUTER BASED COMMUNICATION OF PATIENT ADMISSIONS "COMING OUT OF THE DARK AGES"

Kopp, K.A. Barnes-Jewish Hospital/Washington University School of Medicine, St. Louis, MO

Background and Purpose: With the ever growing Bone Marrow Transplant population within the Siteman Cancer Center, a need to improve the communication between the inpatient and outpatient teams with regard to upcoming admissions was identified. A concise, easily utilized method of sharing the appropriate patient information via computer was proposed.

Objectives: 1. Identify and alleviate the redundant ineffective sharing of information. 2. Develop a pathway that is accessible by both the inpatient and outpatient teams to include pharmacy, nursing and physician staff. 3. Initiate a computerized method to collect and convey all required diagnostic testing, study protocols and patient treatment consents.

Method: A "RIE" or Rapid Improvement Event was initiated to bring together members of all departments involved. We began by identifying what departments needed patient information, the method with which it was relayed and where that information was located. A new document was created to include all admission specific information such as patient name, diagnoses, IV access, treatment plan, pretesting completion date, estimated time of admission, as well as the current ht, wt and lab work. This document would be initiated by the outpatient nurse coordinators and available via computer. It was also established that the information currently collected and transmitted via paper packet could easily be communicated to the inpatient team via e-mail. A new shared drive was developed so that all the above information could be placed in one centralized location and available to inpatient as well as outpatient teams. While the drive was in development we utilized the e-mail scanning system to communicate patient admission information.

Result: The development of several computer based pathways and the appropriate utilization of existing databases has allowed the flow of patient related information to be communicated more efficiently.

The information previously gathered and communicated via paper packets hand delivered to the inpatient team, has now come out of the dark ages and is transmitted via "cyber space" allowing the nurse coordinator to focus their expertise where it belongs... **On the Patient.**

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SEAMLESS TRANSITION FROM AMBULATORY TO INPATIENT SERVICES: UTILIZATION OF AN ADMISSION CHECKLIST

Stevens, C.J., Adornetto-Garcia, D. MD Anderson, Houston, TX

At one of the largest stem cell transplantation departments, a single page admission checklist is utilized to facilitate a smooth and seamless transition for patients being admitted for transplant or chemotherapy mobilization from the ambulatory clinic to the inpatient unit. The checklist has proven to be effective, although questions have recently arisen regarding individual staff's responsibilities and incomplete checklists. Thus, the checklist was presented during a regularly scheduled Quality Process Improvement Meeting. The recommendation was to make revisions. The goal of the revision was to clarify staff responsibilities and enhance the format to be more user friendly. A subcommittee was convened with representatives from the multi-disciplinary team including; clinic nurses, pre-transplant related and unrelated coordinators, inpatient charge nurses, social workers, and financial specialists. The checklist was reviewed line by line to ensure that it was reflective of current practices. Additions and deletions were made to the checklist to facilitate communication among team members. The subcommittee met regularly ensuring the verbiage and flow were appropriate and adjustments were made to ensure the ease of use. An appendix was generated with brief narratives describing the requirements necessary for a staff member to complete the checklist. The appendix is intended to assist in education as well as familiarization of staff with the admission responsibilities of the other team members. The admission checklist was presented, reviewed and approved by the lead management staff and faculty representatives. Prior to implementation, ambulatory and inpatient staff were educated regarding pertinent changes and proper use of the newly improved checklist. Real time evaluations are planned to monitor the completion of checklist by staff members. Follow up education will be performed based on the findings of the evaluations. The ultimate goal is to improve the current admission process, to ensure continuity of care, and improve communication between ambulatory and inpatient services. By using the revised admission checklist as a guide to a patient's admission, staff are able to ensure the patient experiences a seamless transition from the ambulatory setting to the inpatient service.

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IDENTIFYING AND ADDRESSING THE LONG TERM NEEDS OF THE ADULT ALLOGENEIC STEM CELL TRANSPLANT (SCT) RECIPIENT THROUGH A SURVIVORSHIP CLINICAL PROGRAM

Stolar, K.R., Neumann, J., Popat, U.R., Alousi, A.M. U.T. MD Anderson Cancer Center, Houston, TX

Our center has developed an adult allogeneic SCT survivorship program with a clinic staffed by a nurse practitioner (NP). The program is structured to complement the follow up by the primary SCT physician with input from experts in pulmonary, ophthalmology, endocrine, cardiology, gynecology, etc. Evidenced based literature algorithms for management of abnormal findings have also been developed. The NP conducts a comprehensive assessment including the physical, cognitive, emotional, social and quality of life domains. This deliberate separate clinic visit shifts the focus from disease management to "Survivorship." The survivorship status is introduced to the patient and caregiver at 3 months post transplant. Patients without signs of relapse or progression of disease participate in an evaluation and 1.5 hour class. The patient education class includes a PowerPoint presentation, interactive discussion, demonstration of self assessments, return demonstration and a verbal quiz. The class is individualized incorporating the patient's transplant history, social, and lifestyle information obtained through chart review, verbal report from the patient's outpatient NP, pre-class questionnaire, laboratory tests, interview and physical exam. A plan for referral,