The Role of the Nurse Clinician to Implement Innovative Approaches to Address Capacity at the Tom Baker Cancer Centre

Carol Baumgarten, RN, MBA, DMC, CON(C), Aimee deCrom, RN, BN, CON(C), Sydeny Farkas, RN, MN, CON(C), Dorothy MacKay, RN, MN, Amy Melnick RN, BScN, MN, BA

Introduction

The Tom Baker Cancer Centre (TBCC) in Calgary, Alberta is an ambulatory care site with a systemic treatment unit (STU) that provides chemotherapy to over 23,000 patients annually. Since its introduction in 2012, the role of the nurse clinician in the STU is integral to the identification of trends and issues that impact capacity and operations.

Due to physical constraints, the need for innovative approaches to find extra capacity was quickly identified. Frequent and ongoing capacity concerns in the systemic therapy treatment unit (STU) led to the need for the nurse clinician to find ways to deal with extensive waitlists and increased patient volumes resulting from longer protocols, advancements in clinical trials, and patients living longer due to increased treatment options.

Innovative approaches to deal with capacity

- Implementation of a pod system
  - All treatment nurse rotations were changed to 10 hour shifts (0800-1815h).
  - Eliminate staggered start times for nurses in order to load the unit to capacity within 60 minutes of opening.
  - Schedule patients changed to allow for 30 minutes between patient start times for each nurse to minimize time between discharging and admitting patients.
  - Open the STU on statutory holidays.

- Standardizing chemo chair times
  - Standard chemo chair time and chemo codes were devised to ensure all treatments are booked for the appropriate time.
  - Each appointment request for chemotherapy is to include the chemo code.
  - Verification of appropriate time requested is verified by scheduling clerks.
  - Deviations from the chemo codes are investigated.

- Utilization of outside departments for administration of supportive care
  - All planned supportive care, non-chemotherapy treatments including transfusions, electrolyte infusions, and hydrations are booked in an AHS Day Medicine dept., TBCC Radiation Therapy Day Room, TBCC Bone Marrow Transplant Clinic or with the Community Paramedic In-Home treatment program prior to looking for capacity in the Systemic Therapy department.

- Review of shorter protocol options
  - Review of shorter protocol options with equal efficacy was completed. Options were presented to medical oncologists as alternatives to consider to save chair time in the treatment area. For example, by switching Cisplatin containing regimens to Carboplatin, about 74 hours of chair time a week would be saved. By switching FOLFOX to CAPOX regimens, about 30 hours of chair time a week would be saved.

- Standard Operating Procedure for managing waitlists

Analysis of clinical trials impact

This analysis showed that 2 full time equivalent RN positions are required in the STU for the administration of clinical trial protocols.

Guidelines for new protocols to determine impact

Each protocol that meets specific criteria must be brought to the TBCC Systemic Treatment Program Committee for discussion about operational feasibility and any associated capacity concerns. High risk of overtime and/or capacity limitations as well as pharmacy constraints are considered.

Conclusion

The nurse clinician in the systemic therapy treatment unit (STU) of the Tom Baker Cancer Centre plays an integral part in devising and overseeing the implementation of effective strategies for dealing with capacity concerns. Nurse clinicians must have broad knowledge and comprehensive understanding of interdepartmental processes to succeed in the implementation of quality improvements at the clinical level. Since implementation of the above strategies from 2013 to present time, 10-15% more useable capacity was found in the Systemic Therapy Unit at the Tom Baker Cancer Center.
Addressing Anxiety Early to Improve Patient-Reported Outcomes

Kara McQuaid-Duffy, Dawn MacIsaac, Jennifer Jelley

Background
Screening for distress has been embedded in clinical practice throughout the Cancer Care system in Prince Edward Island since 2012. The Edmonton Symptom Assessment System-Revised (ESAS-r) and the Canadian Problem Checklist (CPC) are used at initial consult for all patients with a cancer diagnosis. An analysis of data collected between 2012 and 2015 revealed that over 50% of PEI patients reported worries/concerns on the CPC. Furthermore, 40% of females and 31% of males reported moderate to high levels of anxiety on the ESAS-r.

Objective: To develop an orientation session aimed at preparing patients and their support people about what to expect and how to maximize available resources in an effort to reduce ESAS-r anxiety scores and worries/concerns on the CPC measured at initial consult.

Methods
A PowerPoint presentation was developed to provide an overview of the Cancer Treatment Centre to help de-mystify the first visit, and alleviate worries and anxieties through the provision of basic information. Weekly orientation sessions were introduced for all new referrals prior to initial consult. Each participant was asked to complete a standardized evaluation form at the end of each group session. ESAS-r scores collected at first consult appointment were compared between the experimental group, defined as those who attended an orientation session, with a control group from the same time frame the previous year (2015). Focus groups with nursing and clerical staff were conducted to gain additional perspective.

Results
Feedback from participants was overwhelmingly positive.

"This information was helpful and I appreciate this session being offered. We are all mostly anxious for the first appointment to get the detailed information specific to our treatment.”

"I really appreciate the staff’s welcoming attitude. The unknown is the biggest issue to face. Still have concerns, but do feel that the staff is supportive and ready to help.”

Table 1. Post-Session Participant Feedback

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alleviated concerns</td>
<td>62%</td>
</tr>
<tr>
<td>Decreased feelings of anxiety</td>
<td>70%</td>
</tr>
<tr>
<td>Decreased fear</td>
<td>72%</td>
</tr>
<tr>
<td>Provided comfort</td>
<td>85%</td>
</tr>
<tr>
<td>Boosted confidence</td>
<td>90%</td>
</tr>
</tbody>
</table>

Counter to our objective, orientation sessions did not reduce worries/concerns on the CPC (50% vs. 56%) or initial anxiety levels measured by the ESAS-r when compared to a control group.

Figure 1. Proportion of ESAS-r Anxiety Scores at First Consult

<table>
<thead>
<tr>
<th>Anxiety Level</th>
<th>Control</th>
<th>Experimental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate (4-6)</td>
<td>24.5</td>
<td>32.5</td>
</tr>
<tr>
<td>High (7-10)</td>
<td>18.1</td>
<td>20.8</td>
</tr>
</tbody>
</table>

Despite no direct improvement on screening for distress scores, the orientation sessions did show a positive impact on patient reported outcomes based on participant feedback (see Table 1). To deal with the complex nature of anxiety, we posit that various psychosocial supports offered at different stages are integral to an effective person-centred approach.

Discussion
Overall, staff felt that the orientation sessions were valuable in terms of “taking care of housekeeping” items. Although substantial behavior changes were not noticeable at the first consult appointment, staff insisted that patients seemed more knowledgeable and familiar with available resources.

"I notice a difference in them coming in. Before it was like deer-in-the-headlights look. It's kind of nice to get them in for a short time to get them used to the building so they at least know where to go. Just little general things like that make a big difference.”

"I have heard many people tell me that the orientation session is very helpful, but it doesn’t necessarily reduce their anxiety. In reality it does make a difference; it just doesn’t show in the numbers. They’re more informed, so it’s more comfortable to come.”

"Patients are so concerned with the outcome of that initial visit with the doctor; they just want to know what their plan is. That’s why you don’t see a decrease in anxiety – they still don’t know what the diagnosis is or what the future holds. The ESAS-r does not measure come-through-the-door anxiety.”

It became clear that anxiety is a multi-faceted construct and requires different interventions at different phases.
Patient-Family Feedback on Consultation For New Diagnosis of Brain Metastases: Value of Team Approach to Care

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BACKGROUND

In 2011, an interdisciplinary, integrated palliative care clinic was developed at our regional cancer centre to provide team-based consultations for patients diagnosed with brain metastases.

Between 2012-2015, self administered feedback surveys were given to 384 patients/families at the end of their consultation appointment for the purpose of quality improvement and program evaluation and development. The survey response rate was 22% (N=84).

This poster summarizes the results and emerging themes from the patient and family feedback provided.

INTERDISCIPLINARY TEAM

• Registered Nurse
• Clinical Nurse Specialist
• Radiation Oncologist
• Palliative Care Physician/NP
• Spiritual Care Specialist

INTERDISCIPLINARY ELEMENTS OF CARE

• Address treatment options and goals
• Assess patient/family values and expectations
• Assist with decision making process
• Discuss Prognosis
• Introduce Advance Care Planning/Goals of Care
• Assist
• Symptom management
• Establish connection with supportive care resources
• Provide follow up, navigation and care co-ordination

SURVEY METHOD

A self administered feedback survey was developed by team consensus, comprised of 13 questions for rating on a 5 point Likert scale from "strongly agree" to "strongly disagree"

Satisfaction assessed on 4 domains:
• Illness Understanding and Education
• Symptom Control
• Decision Making
• Ongoing Care Co-ordination

At the end of the initial consultation appointment, surveys were given to 384 patients and families for voluntary completion

RESULTS

• 84/384 (22% response rate) surveys returned
• 51/84 (61%) included written comments
  Satisfaction ("agree" or "strongly agree" was indicated in 85% or more of the surveys on 11/13 questions
  Dissatisfaction ("disagree" or "strongly disagree") was indicated in less than 10% of surveys

• Item with most dissatisfaction (9% of questionnaires) was about receiving "as much information about my prognosis as I wanted"
• Written comments expressing dissatisfaction included themes of poor communication, lack of clarity on treatment impact on prognosis, waiting time for care facility, tiring consultation process, missing prescription and discrepancy between anticipated and actual cause of death

CONCLUSION

Responding patients and families seen in our interdisciplinary brain metastases clinic rated the team based consultation and care highly. The most valued features of were indicated as the team-approach, providing information and respect.

Further exploration is needed to clarify what was perceived to be lacking in satisfying communication. An identified area for improvement is ensuring patients are provided with desired information around prognosis and impact from treatment options.
Building an understanding of information, education and communication as well as emotional support needs from a patient and family perspective.
Carol Baumgarten MBA, DMC, RN, CON(C)

Background

The Tom Baker Cancer Centre (TBCC) in Calgary, Alberta participates in the national Ambulatory Oncology Patient Satisfaction Survey (AOPSS).

In 2014, TBCC rated lower in two domains than in years previous and a study was created to ascertain the reasons why:

Those domains were information, education and communication and emotional needs support.

Methodology

• Purposeful sample sent to 40 oncology patient and family advisors
• 11 semi-structured interviews conducted
• 3 questions asking what their experience had been in relation to information, education, communication and emotional support needs
  o What was positive
  o What was not
  o What should it look like

Representation

• 7 disease sites represented
• 8 patient and 4 family perspectives offered
• Range from first diagnosis to 18 years
  o 2 years to 18 years
    • 36%-24-37 months
    • 64% > 37 months
  o Spanned cancer journey

Underlying Themes

• Patient perceived that preferences not considered (or asked)
• ‘System makes patient work around it rather than system working for patient’
• No explicit partnership crafted collaboratively

Findings

Information and Education

• Plan of action (personalized with what means something to that patient) is crucial
• Multifaceted and personal
• Needs reinforcement and comprehension check
• Clinicians and other peers have biggest influence on attendance of groups sessions
• Making it standard to see allied health services rather than the exception
• Access to medical record, less cumbersome that allows comprehension
• Transition periods very tough and understanding around what to expect not always there

Communication

• Care coordination is felt to land on patient’s shoulders
• Empathy and relationships core to provider team rapport
• Face to face is not enough, multi-modality is fine (phone, email, classes)
• Optimize IT (text/email/resource line)
• There is not enough time in clinics to have all needs met
• Nurse navigator or one person to take me through the journey felt as important

Family care

• Underserved as well as lack of resources available and awareness of same

Emotional support starts with provider team

• One more appointment to coordinate
• Call before or after appointment to check in would be welcome and possible decrease anxiety as well as deepen the ‘connectedness’
• So busy ‘trying to get [physically] better’ better that emotions take second place
• Peer support is important but different for everyone
  o It is not always tumour site specific

Aligning a system to be proactive, responsive, adherent to organizational, legal and professional practice guidelines that allow for personal patient preferences by explicitly building a partnership, creating added value for patients in between clinic appointments to assess status but to also comprehension and a feeling of ‘connectedness’.

K.Parker, Autumn Storm, 2006
### Introduction:
A gap exists in cancer care in the discourse of sexual information – patients are not asking about it and clinicians are not volunteering it. We need to make sexual health information and discourse more accessible to our patients by making our clinicians more comfortable with this topic.

### Purpose:
This study aims to address the subject of discussing sex with hematology oncology patients at The Ottawa Hospital hematology oncology program.

### Methods:
A peer literature review search was done through a scholar search at The Ottawa Hospital library and information collected and itemized. We collected qualitative data at The Ottawa Hospital by means of a true/false survey given to registered nurses and registered practical nurses in the inpatient acute leukemia and bone marrow transplant unit, outpatient chemotherapy unit, and outpatient hematology-oncology assessment clinic. We utilized and reformatted a survey from Saunamaki, N., Anderson, M and Engstrom, M (2010) Discussing sexuality with patients: nurses’ attitudes and beliefs. Journal of Advanced Nursing, 66: 1308-1316.

### Results:
- **98%**: nurses do NOT feel that patients expect nurses to talk about their sexual concerns.
- **100%**: sexuality is a part of everyday life, however it is not included in their teaching priorities to patients.
- **96%**: feel uncomfortable talking about sex.
- **50%**: giving patients permission to talk about a sexual concern is a nursing responsibility.
- **"Sexuality is not a ‘medical emergency’."
- **"Sexuality takes a backbench compared to all pertinent information we need to counsel patients on."
- **"I feel I am comfortable to respond to their questions, but I don’t usually initiate a conversation."
- **"I don’t normally address the subject."
- **"Nurses do not even have the education ourselves on how chemo affects sexuality.""

### Implications for Nurses:
Providing education to nurses surrounding sexuality is a must if we are going to elicit change in our current practice. We propose that nurses first need to normalize the discussion and become comfortable talking to their patients about their sexuality. Sexuality needs to be viewed as an everyday issue, as is any other physical and emotional change associated with cancer care. We propose first introducing the BETTER model to staff so that they have a framework with which to work until they are more comfortable facilitating sexual health history conversations independently. Within our facility at the Ottawa Hospital and the Ottawa Regional Cancer Center, there are many differences in the tangible resources (pamphlets etc.) available to patients. Regardless of where our hematology patients are receiving care, they should have equal access to these available resources so we suggest that they be placed in our waiting rooms.
Projet d’éducation et soutien à la prise de décision concernant la reconstruction mammaire : évaluation de la satisfaction et des savoirs de la clientèle

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Introduction / Contexte
Plusieurs études rapportent que les femmes atteintes de cancer du sein identifient l’information comme étant un élément prépondérant pour s’adapter. Une équipe interdisciplinaire du CHUM s’est mobilisée pour développer et implanter des outils d’information destinés aux femmes atteintes d’un cancer du sein ou génétiquement prédisposées envisageant une reconstruction mammaire (RM).

But
Le but du projet est d’évaluer une approche éducative destinée aux femmes choisissant d’avoir recours à la RM, en termes de savoirs et de satisfaction concernant l’enseignement et le soutien reçu.

Méthode
Contenu de l’intervention éducative développée
L’intervention multidimensionnelle a permis de développer et mettre en place plusieurs outils (http://clic.chummontreal.ca/iai-cancersein-cics/reconstruction), afin de standardiser les enseignements sur la RM.

L’intervention comprend 14 fiches d’information, 5 vidéos, un signet et des affiches promotionnelles, une séance d’apprêtissage dispensée à la clinique de pré-admission, l’introduction d’une infirmière-ressource et des formations pour les professionnels de la santé.

Participants


Instruments de mesure et analyse
Questionnaire (Q) de données sociodémographiques.
Q sur la mesure des savoirs : 10 items (réponses oui/non/ne sais pas), 4 rubriques (but, types, risques et complications et précautions).
Q de satisfaction : 8 questions (échelle de Likert, 0 à 10).
Analyse statistique de base (nombre, écart-type et %).

Résultats
Données sociodémographiques
Les 2 groupes sont comparables en termes d’âge (GT = 52.6 ± 11.3 ans et GE = 51.5 ± 9.8 ans, concernant le nombre d’enfants (2 et 3), le pays de naissance (Canada, > à 81%), de langue (français, > à 88%), de statut d’emploi (congé maternité 35-38% et temps plein 25-35%), de revenu familial (> à 50 000 $, 69-75%) et de niveau de scolarité (collégial et universitaire, 60-63%).

Mesure des savoirs des femmes face à la RM
(réponses/question)

Le question intéressant (1) du GE porte sur l’apparence naturelle ou non d’un sein réformé par lambeau (Q5).
Les questions montrant une amélioration (*) du GE touchent la perte de sensibilité au niveau de la peau du sein reconstruit (Q6), la durée de mise en place (7 à 14 jours) des drains au site du lambeau (Q9) et le port d’une gaine abdominale de soutien après une opération par lambeau (Q10) au ventre.

Mesure de la satisfaction

2. Séance d’information, vidéo témoignages. Documents de références.
3. Formation : me retrouver avec des femmes qui vivaient la même chose.

Ce qu’elles ont le moins aimé :
1. J’aurais aimé en savoir plus sur le retour à la maison, aide pour la médication.
2. La formation préopératoire a été assez complète, car l’aide que j’ai reçue post-op n’était pas super, par chance qu’il était bien préparée.
3. La rencontre a été appréciée mais il manquait des infos j’ai dû trouver ailleurs. Je pense toutefois que c’est la bonne voie et que c’est nécessaire pour les femmes inquiètes.

Conclusion
La mise en place de l’intervention éducative semble démontrer une amélioration des savoirs, un niveau égal ou supérieur de satisfaction, comparativement à l’enseignement usuel, et ce pour toutes les questions.

Références

Remerciements
La Fondation du cancer du sein du Québec est fière d’avoir contribué à la réalisation de ce projet.
Recognizing nursing excellence and partnering to enhance morale
Sydney Farkas RN, MN, CON(C), Amy Melnick RN, BScN, MN, BA, Darlene Whyte RN, MN
Alberta Health Services, Tom Baker Cancer Centre (TBCC) Calgary

What is the DAISY FOUNDATION?
An acronym for Diseases Attacking the Immune SYstem. The DAISY Foundation was formed in November, 1999, by the family of J. Patrick Barnes who died at age 33 of complications of Idiopathic Thrombocytopenic Purpura (ITP).

TBCC DAISY AWARD for Extraordinary Nurses

Dwindling Staff Morale
- Overwhelming workloads
- Safe staffing levels
- Shortage of health care professional
- Workplace violence/bullying
- Extended work hours
- Workplace hazards

What is the DAISY Award?
An award that ensures nurses know how deserving they are of the society’s profound respect for the education, training, brainpower and skill they put into their work and especially for the caring with which they deliver care.

Daisy Award Process
- 4 nomination boxes
- Nomination forms with criteria to demonstrate “5 C’s of Caring”
- Honoree selected in Nursing Council meeting
- Daisy Award Ceremony

AWARDS at TBCC
- 6 Ceremonies
- 210 Attendees
- 56 Nominees
- 6 Honoree Spotlights in Baker Buzz
- 1 Honoree Spotlight in CancerCare Newsletter
- 1 Spotlight in CANKA

Staff Evaluations
- Helpful tool to capture patient/family feedback
- Helps recognize excellent nursing care
- Contributes to you feeling that nursing practice is valued
- Enhanced nursing morale

Manager Evaluation
- Helpful tool to capture patient/family feedback
- Helps recognize nursing excellence
- Good strategy to ensure nursing practice is valued
- Enhanced nursing morale

Conclusion
Program provides staff with acknowledgement of the excellent care they provide on a daily basis. The program enhances morale and offers a process for patients, families and peers to recognize superhuman efforts nurses perform every day.

Acknowledgements
- DAISY Foundation
- Tom Baker Cancer Centre Executive and Leadership Team
- Tom Baker Cancer Centre Nursing Council
- Dr. Scot Dowden
- Alberta Cancer Foundation

References
ConGRASPulations, a success story. The revival of workload to ensure tomorrow’s success.
Michaelson, Steffanye, RN, BA, BScN; Long, Anita, RN, MSN/ED, CON(c); and Avila, Elaine, RN, BScN
Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

Background
As an organization nursing staff are required to complete their workload measurement tool (GRASP) every shift. This information is used by the ministry and the organization to determine nurse/patient ratios and cost analysis. For several years nursing staff on the unit were not compliant with completing the GRASP tool. GRASP data as a result did not reflect actual workload. There was a lack of understanding and appreciation on what GRASP is and why it is important to complete GRASP. Lack of motivation, engagement and collaboration was seen with the nursing staff. With the leadership of a new Patient Care Manager (PCM) there was a renewed emphasis on improving compliance with GRASP. An environmental scan was completed to understand workload.

Goal
Increase GRASP compliance to 100%.

Demographics
Medical Short-stay and General Surgery / Surgical Oncology Unit 36 bed unit.

Purpose
• To implement multiple strategies to increase compliance with completing the workload measurement tool.
• To provide education to enhance nursing understanding of GRASP.
• To increase staff engagement to improve compliance.

Method

Strategies
Informal Education
• Collaborated with GRASP Workload Consultant in educating staff about the cost-benefit ratio, thus empowering staff to gain the knowledge and appreciation of the implications of non-compliance
• Huddles with communication in a question-answer format

Engagement
• Huddles (informal)
• Staff meetings (formal)
• Positive reinforcement by GRASP consultant, PCM and leadership team
• Email data re: compliance, average staffing per shift and patients with missed workload
• Staff input on the instrument (original, and update in January)

Strategies
• Daily monitoring with early morning print out, go to assignment, check assigned nurse and follow up with every nurse (phone calls, emails, and face to face)
• Dialogue and engaging staff daily (reinforcement of the need to complete the tool daily)
• Obtaining feedback
• Acknowledging efforts
• Explaining stats in previous months (nurse overages) -> sent to ministry, the implications
• Explaining the concept and possible implications
• Assigning IRM by the APN (coached the staff with completing their first IRM)
• Positive reinforcement

Workload Compliance

Lessons Learned
• Staff engagement throughout the process was crucial to the success
• Daily monitoring and dialogue with nurses reiterated the cost-benefit ratio, thus empowering staff to gain the knowledge and appreciation of the implications of non-compliance
• As a result the nurses now have an in-depth understanding of GRASP, are able to be proactive in identifying gaps in the tool and addressing resolutions

Challenges
• Resistance to change
• “Why, we won’t get another nurse”, it’s not about potential gains but averting potential losses
• Resistance as “no one told us why”
• Workload to complete the tool (they have 7 days to complete) -> policy states daily
• Completion time is incorporated in the tool
• No time, too busy
• What’s in it for me attitude
• Lack of knowledge
• Lack of accountability
• Struggle with perceived authority

Sustainability
• Sharing with staff GRASP data pre, post implementation, and current
• Continue to email data re compliance, average staffing per shift and patients with missed workload
• The monitoring process has evolved from daily to bi-weekly basis
• Over the last five months the process has been sustained with a 95.37% compliance rate
• Developing unit Workload Champions

Reference
Background: Treatment of metastatic melanoma with ipilimumab (IPI) and nivolumab (NIVO) improves PFS when compared with monotherapy. While treatment responses can be dramatic and durable, significant adverse events (grade 3 and 4) occur in >50% of patients. Common Immune-related adverse events (IR-AEs) include dermatitis and colitis, and in rare cases the latter can be fatal. Uncommon but potentially severe IR-AEs include pneumonitis and hypophysitis. Early recognition of IR-AEs is crucial for patient safety, as in most cases toxicities are predictable and manageable. As nurses, we play an essential role in this process. Monitoring for IR-AEs begins before initiation of therapy and must include detailed patient education. Monitoring continues during and after the cessation of immunotherapy, as IR-AE may be significantly delayed in presentation.

Objective: A case-based module on monitoring IR-AE will assist other nurses in the recognition and management of IR-AEs.

Methods: 2 case studies of IR-AEs will be presented, including colitis and pneumonitis. We will demonstrate how monitoring of IR-AEs is coordinated at an academic cancer center with a population catchment of 1.5 million.

Conclusion: Immunotherapy has improved the lives of patients with melanoma as well as a growing list of cancers. While treatment responses can be dramatic, IR-AEs can be severe. Early recognition and prompt management of toxicities is crucial for patient safety.

Pre-Treatment:
- Patient education:
  - Review of IO side effects
  - Communication with Nursing team. Importance of early reporting of side effects. Not to wait until appointment.
  - Ensure support medications are available (ie. Imodium)
  - Provide pt. with supplies (C. Diff. kit)
  - instructions to present wallet card or letter stating IO treatment and to contact Cancer Center

Nursing Interventions:

**NURSING INTERVENTIONS**

Pre-Treatment:
- Patient education:
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  - Ensure support medications are available (ie. Imodium)
  - Provide pt. with supplies (C. Diff. kit)
  - instructions to present wallet card or letter stating IO treatment and to contact Cancer Center

On Treatment:
- Nursing assessments:
  - Review of systems: GI, respiratory, cutaneous

Nursing Intervention:

- **VS**
- **Review labs i.e.: electrolytes, renal function, liver enzymes**
- **Targeted examination**
- **Communication with physician**
- **Skin care (zinc oxide, baby wipes, hemorrhoid oint)**
- **Optimize supportive care (anti-diarrheal schedule, dietary modifications, hydration, electrolyte replacement)**

Active management:

- **Investigations:** exclude enteric infection; imaging for respiratory symptoms; imaging for acute abdomen
- **Treat concordant conditions (i.e. antimicrobials vs steroids)**

*If supportive medications/corticosteroids ineffective, consider hospitalization for supportive care & non-steroid immunosuppressives*
Ambulatory Oncology Office Project
Carol Baumgarten MBA DMC RN CON(C), Chris Jensen-Ross MSc BN RN A Mus CE Yongtao Li MLIS, Sydney Farkas RN MN CON(C), Amy Melnick RN BScN MN BA, Cheryl Howe RN BN CON(C), Karlene Phillips BN

Background
Questions were being raised as to the formula for ‘office time’ allocated at the TBCC. Office time is a broad term that encapsulates pre and post clinic prep time, case management and coordination of care for oncology patients.

Methodology
In February and March, 2016 semi-structured interviews were conducted with a purposive sample of four organizational leaders in ambulatory oncology care in Canada to gain an understanding of the office time allotted based on a ratio of hours of clinic time to office time.

Results

<table>
<thead>
<tr>
<th>Service model</th>
<th>N</th>
<th>Office Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease Specific</td>
<td>2</td>
<td>No assigned office time for case management.</td>
</tr>
<tr>
<td>Dyad (provider-nurse)</td>
<td>2</td>
<td>1:1 ratio for chemotherapy clinics, no set formula for the other disciplines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TBCC Clinical Areas</th>
<th>Ratio clinic time to office time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient clinics</td>
<td>0.3</td>
</tr>
<tr>
<td>Chemo Clinics</td>
<td>1.1</td>
</tr>
<tr>
<td>BMT Clinics</td>
<td>1.0</td>
</tr>
<tr>
<td>Hematology Oncology Clinics</td>
<td>0.8</td>
</tr>
<tr>
<td>RT Review Clinics</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Limitations
At the time of the project, there was a time limit on obtaining information. This could have impacted potential informants. Background data that was asked was not directly comparable to each site.

Recommendations
Based on the centres surveyed and those that fall within a physician-nurse model, TBCC is on par with office time allocation. Going forward, attention to appropriate management of resources to incorporate an adequate clinic to office ratio will be imperative.

Future directions
Similar operational issues were revealed through this project that prompted other centres’ service delivery model to be changed or is under assessment in order to be sustainable.

Next question
How to meet the growing demands of ambulatory oncology patients in a patient and family centered way while managing within budgetary constraints.
Enhancing radiation oncology education through innovation and technology

Komal Patel, RN, MN, CON(C), CHPCN(C), CVAA(C), Jiahui Wong, PhD, MD, and Charmaine Lynden, MN, RN(EC), CON(C)

Abstract

Nearly 60% of all individuals with cancer will receive radiation therapy during some point of their illness. As regulated healthcare professionals, an enhance understanding of radiation therapy, side effects, and symptom management is essential to provide high quality care. To support professional development of professionals, a Radiation Oncology course was developed using an innovative learning model. The six week course reflects CANO/ACIO’s Radiation Oncology Nursing Practice Standards and Competencies. To date, 158 health care professionals from both the hospital and community setting have completed the course.

Goal

The goal of de Souza Institute’s Radiation Oncology course is provide regulated health care professionals knowledge on key principles of radiation therapy, including how radiation therapy works, implications for use, treatment methods, side effects, symptom management, and the nurse’s role in supporting patients.

Course Content

Interactive components:
- Flash-based animated diagrams
- Learning games
- Quizzes
- Collaborative discussion forums

Animated clips
- Features taking avatars or “virtual guides” throughout the course to further engage participants and help facilitate the integration of concepts.

The course consists of:
- Sections/Topics
  - Introduction to Radiation Oncology
  - Administration of Radiation
  - Radiation Safety and Combined Modality Therapy
  - Radiation Treatment Side Effects
- 1 Assignment
- 1 Discussion
- Final Exam

Selected Participant Perceptions

Radiation in Cancer Treatment

Radiation therapy is the most important form of treatment available for cancers. As such, it is provided only under specific conditions. This includes treating cancerous tumors, cancerous growths, and certain other conditions. The process involves the use of internal and external radiation to destroy cancerous cells, slow or stop the growth of cancerous growths, and/or relieve symptoms associated with cancerous growths.

Radiation Safety Principles

Health care providers caring for patients receiving radiation therapy should implement all the necessary precautions to protect patients, healthcare workers, and the public from the possible risks of radiation exposure. This includes wearing lead or other protective clothing, maintaining a safe distance from the treatment area, and following all safety guidelines.

Three Main Principles:

1. Time
2. Distance
3. Shielding

Skin Assessment Criteria

The following criteria are completion requirements to assess participant understanding of skin assessment. Professional development in radiation oncology education and training is essential to provide high quality care for patients receiving radiation therapy. It is recommended that de Souza Institute’s Radiation Oncology course is a prerequisite for all health care professionals involved in radiation therapy.

Mat Joneet Jethin, a radiation oncology nurse and Raymond Reno, a nursing student.
Lung cancer remains the leading cause of cancer deaths in Canada. Due to the urgent nature of the disease, those with a suspicion of lung cancer benefit from rapid assessment, diagnosis and treatment. Ontario has implemented Diagnostic Assessment Programs (DAPs) to improve accessibility of care. In 2007, our regional cancer program opened a Thoracic DAP to provide a single point of access to a multidisciplinary team, coordinated testing and navigational support for patients.

Referral volumes to the Thoracic DAP quickly increased every year. Many of those referred with abnormal chest CT scans have solitary or multiple pulmonary nodule(s) not amenable to percutaneous biopsy. These patients often require risk assessment, serial chest CT scans and monitoring as part of their management. In response, a Lung Nodule Evaluation and Assessment Program (LnEAP) was implemented in 2012, primarily to decimate the DAP while ensuring appropriate monitoring and surveillance.

This presentation will focus on the implementation, successes, and lessons learned in sustaining the nurse-led LnEAP program over several years with minimal resources. Process improvements, patient tracking tools, and informational materials will be shared. LnEAP has successfully created capacity in the Thoracic DAP by following over 600 patients to ensure they are not lost to follow up. Importantly, those eventually diagnosed with lung cancer receive early intervention through rapid re-referral to the DAP.

**Diagnostic Assessment Program**

- **Though a small percentage of total referral volumes to the Thoracic DAP, there has been 720 referrals to LnEAP since its initiation in 2012.**

**Lung Nodule Program**

- CT Chest ordered
- Nodule suspicious for cancer
- Stable lung nodule
- Already diagnosed with cancer and being followed by an appropriate physician

**Patient Tracking**

- Tools for patient tracking include a multi-user (nursing and clerical) database to ensure appropriate patient monitoring and surveillance.

**Navigation to ensure:**
- Expedited consultation with Respirologist
- Improved coordination of care
- Clarification of management plan
- Early needs assessment and identification of possible barriers to care
- Patient tracking for monitoring and surveillance
- Information and plan of care provided to every patient
- Scheduled visits are attended

**Resource constraints and competing priorities in a high volume Thoracic DAP**
- Ongoing continuity with different nurses assigned to role
- Coordination with other organizations across LHIN as imaging (CT thorax) most often completed in outside institutions
- Ensuring communication with referring family physician
- Patient engagement with ongoing surveillance
- Limiting access to better support family physicians
- Volume of lung nodules assessed on imaging
- Database management
- Adequate physician resources

**Challenges**

- Collaborative efforts of multidisciplinary teams can improve care without significantly increasing costs
- Patient engagement early in the process is key
- Continued effort to provide care closer to home promotes adherence to surveillance regimen
- Importance of providing written information to patients for comprehension and adherence to program
- To maintain physician engagement, ensure that there is an efficient and effective use of physician time
- Patient tracking tool is central to the process
- Ongoing innovation is important i.e. eConsult in the future?

**Successes**

- Engages patient in monitoring program
- Significant benefit for primary care providers
- Rapid re-entry to Thoracic DAP as required
- Monitoring and surveillance by appropriate physician(s)
- Overall efficient use of resources including nursing
- Integrated with DAP intake processes
- ↑ DAP capacity

**Abstract**

Lung cancer remains the leading cause of cancer deaths in Canada. Due to the urgent nature of the disease, those with a suspicion of lung cancer benefit from rapid assessment, diagnosis and treatment. Ontario has implemented Diagnostic Assessment Programs (DAPs) to improve accessibility of care. In 2007, our regional cancer program opened a Thoracic DAP to provide a single point of access to a multidisciplinary team, coordinated testing and navigational support for patients.
Background & Purpose
After a review the oncology educators noted the variability in education offered to cancer care nursing staff. To foster excellence in nursing practice and education, various sources were utilized. CANO Practice Standards and Competencies for the Specialized Oncology Nurse and Benner’s model were used to develop a learning pathway for both the generalist and specialized oncology nurse.

Findings
Streamlining fostered enhanced collaboration, mentorship, and synergies amongst the educators. The educator supporting generalized oncology nurses in the surgical program also felt supported in enhancing the nurses’ knowledge, skills, and competencies in oncology. Through stakeholder engagement, the educators were able to lead a discussion and set the expectations required for orientation in order to foster excellence in oncology nursing practice and education. The support from senior leadership greatly impacts the orientation programs.

Recommendations
Senior leadership should be engaged in the process as the classroom learning augments clinical learning and should be equally supported. There should be a fair and equitable distribution of funds for all oncology nurses to successfully complete the required learning. There needs to be a concentrated effort to support the oncology-specific educational needs for all nurses regardless of sub-specialty.
The Design

The learning goals and objectives of the simulation were established to create a scenario algorithm that encompassed theory and skill application. Using various templates, a fictitious patient was born with a complete physical, medical and social history. A comprehensive list was formulated to outline the equipment required, number of facilitators to role play and participants to be involved. Scripts were provided to the actors to ensure the goals of the simulation were aligned to the algorithm.

To ensure a successful and positive experience, the facilitator incorporated pre and post debriefing moments. Prior to the simulation, designated time was allotted for a didactic theory presentation of cytotoxic precautions and orientation to the simulation. After the simulation was completed, the debrief was used to reflect on the experience and allowed the educator to address and clarify content in a constructive manner.

Implementation

The simulation was held during an extensive oncology orientation for twenty-five novice nurses. Participants received a presentation and quiz specific to the content of the scenario, followed by the debriefing period. The simulation was conducted in the chemotherapy treatment unit absent of patient care yet imitated a realistic scenario.

Results

Overall they found the experience helpful and that it increased their knowledge with regards to managing chemotherapy spills.

Future Directions

• Updating the scenario annually based on evidence based practice
• Incorporating the interprofessional team to offer a well rounded approach
• Acquiring actors as standardized patients
• Implement various scenarios into the oncology curriculum at the Ottawa Hospital

Introduction

Currently the nursing curriculum provides limited knowledge regarding oncology. To train novice nurses, innovative ways are required to prepare for entry to practice. The use of high fidelity simulation has been proven to be a successful and engaging modality that can assess for knowledge gaps. Presented are the outcomes of a chemotherapy spill simulation with novice nurses.

The Benefits of Simulation

Simulation is an educational modality that exposes the new nurse to a variety of clinical challenges in a safe environment. It has been found to promote critical thinking, decision making, and team building. More importantly, it bridges the gap between theory and practice according to the specific clinical area. (Kuhrik, 2008)

Use in Oncology

The use of simulation is increasing in all disciplines of nursing. There are now more scenarios being developed specific to the Oncology patient. Initially scenarios were derived from critical care, i.e. sepsis, and now tailored towards oncology emergencies, cytokine infusional reactions.

Emergency Preparedness for Chemotherapy Spills Using High-Fidelity Induced Simulations

Phillip Nguyen, RN, BScN, Laurie Ann Holmes, RN BScN, CON (C), CHPCN(C)

Challenges

• No formal training on simulation for facilitators
• Significant preparation to develop clinical scenario
• Establishing a location to implement
• Acquiring time/funding for nurses to participate outside of patient care schedule
• Lack of funding to employ actors to role play as standardized patients
Assessing the Oncology patient education needs on a Medical and Radiation Oncology unit

Eleanor Miller, RN, BScN, M.Ed, PhD; Linda Ramjohn, RN, BScN, MSN, CON(c); Ashley Andrade, RN, BScN, CON(c); Bill Ford, Chaplain, M.Div.; Danielle Takahashi, SW, MSW, RSW; Kate Hamer, Patient Representative; Aalima Lali, Public Health, BSc, MPH; Deirdre Law, PT, MS; Jason Oliver, Patient Specialist, BA, Med; Elizabeth Tran, SLP, MHSc.

Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

Background

Oncology patients are given a wealth of information when they encounter the health care system. Some of this information is useful for decision making, dealing with the side effects of treatment and coping with the disease, among other things. A recently developed patient education committee on the Inpatient Oncology unit identified the need to provide additional information for patients and their families. However, there is a lack of clear understanding of the type, relevance and delivery of information from the patient’s perspective. As a result, a survey was used to identify what these patients determine as their own educational needs. The results helped to identify the specific information, tools, strategies, methods of delivery and relevance for these cancer patients. The literature was also examined, to better understand what others are saying about Oncology patient educational needs and how best to support and meet these needs. A brief review of the literature revealed that most information and strategies are from the perspective of health care professionals, rather than from the patients, and the focus is mainly on disease and treatment (Frentsos, 2015, Porter et al, 2015). Overall this study highlights the importance of providing information for patients throughout their hospital stay, and emphasize how they think this information should be delivered.

Purpose

The purpose of this study is to understand what oncology patients are saying about their educational needs, and how health care professionals can work collaboratively towards meeting these needs.

Method

• The study was conducted on a 36 bed Medical and Radiation Oncology unit at a tertiary hospital in Toronto.
• A survey consisting of eleven questions was used. Sample size n= 12 participants, who completed the survey over a month.
• Six of the twelve patients identified that this was their first admission.

Result

1. When would you like to get information/education?

<table>
<thead>
<tr>
<th>Time Patient would like</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before going to the hospital</td>
<td>35%</td>
</tr>
<tr>
<td>During hospital stay</td>
<td>65%</td>
</tr>
</tbody>
</table>

2. What information would be helpful to you?

<table>
<thead>
<tr>
<th>Information</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on radiation therapy</td>
<td>88%</td>
</tr>
<tr>
<td>Information on treatment and side effects</td>
<td>83%</td>
</tr>
<tr>
<td>Information on mychart being updated more often</td>
<td>50%</td>
</tr>
</tbody>
</table>

3. How do you like to get education/information?

<table>
<thead>
<tr>
<th>Method</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written</td>
<td>36%</td>
</tr>
<tr>
<td>Oral</td>
<td>64%</td>
</tr>
</tbody>
</table>

4. Who would you like to deliver this information?

<table>
<thead>
<tr>
<th>Information Source</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>44%</td>
</tr>
<tr>
<td>Patient's daughter</td>
<td>41%</td>
</tr>
<tr>
<td>Patient doesn't know but thinks his daughter knows</td>
<td>15%</td>
</tr>
</tbody>
</table>

5. Would it help to have someone deliver a package with information to you?

<table>
<thead>
<tr>
<th>Package delivery</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64%</td>
</tr>
<tr>
<td>No</td>
<td>36%</td>
</tr>
</tbody>
</table>

6. Did you know about patient education/information on the unit?

<table>
<thead>
<tr>
<th>Information Known</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>30%</td>
</tr>
<tr>
<td>Yes</td>
<td>70%</td>
</tr>
</tbody>
</table>

7. What information do you feel is missing?

<table>
<thead>
<tr>
<th>Information Gaps</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug information</td>
<td>25%</td>
</tr>
<tr>
<td>Need for treatment information</td>
<td>25%</td>
</tr>
<tr>
<td>Information on mychart being updated more often</td>
<td>18%</td>
</tr>
</tbody>
</table>

8. Do you know who to call to get information you need help with when you leave the hospital?

<table>
<thead>
<tr>
<th>Information Source</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50%</td>
</tr>
<tr>
<td>No</td>
<td>50%</td>
</tr>
</tbody>
</table>

9. Would you be interested in hearing from other patients, family members or support groups?

<table>
<thead>
<tr>
<th>Interest</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>25%</td>
</tr>
<tr>
<td>Yes</td>
<td>75%</td>
</tr>
</tbody>
</table>

10. What are you most worried/concerned about?

<table>
<thead>
<tr>
<th>Concerns</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment, not sure what to expect</td>
<td>87%</td>
</tr>
</tbody>
</table>

Next Steps

• Share the results with the team and present the findings at our Medical Radiation operations meeting.
• Provide information on treatment and their side effects in the form of pamphlets.
• Increase patient education awareness on the unit and spruce up the current patient education information board.
• Provide written information on finance.

Conclusion

• Patients identify the need for education/information throughout their hospital stay.
• Their main information needs are about treatment and side effects. They identified the Physician as the key person to deliver this information.
• The need to speak to someone and receiving pamphlets are the main source for obtaining information.
• Hearing from other patients and support groups is not favored by the participants.
• Other information that they identified includes: finance, caregiver support, discharge planning, radiation schedule, and improved communication.

References

Regional Cancer Hub & Winnipeg Cancer Hub
A Key Component to Enhanced Comprehensive Cancer Care in Manitoba

Zenith Poole – Provincial Navigation Lead
Community Cancer Programs Network, CancerCare Manitoba. Winnipeg, Canada

Loriebeth Quileza – Rapid Improvement Lead
Cancer Patient Journey Initiative
Winnipeg, Canada

Background

The Cancer Patient Journey Initiative (CPJI) known as “In Sixty” is a first of its kind in Canada cancer strategy to break down barriers and to work across provincial jurisdictions to streamline and re-engineer processes in a manner that reduces the overall wait time for cancer patients from suspicion to treatment to no longer than 60 days.

A key component of In Sixty is the transformation of Community Cancer Programs into “Regional Cancer Hubs” (RCPH) providing Cancer Navigation Services.

What is Navigation Services?

Patients with a high clinical suspicion of cancer can be referred to Cancer Navigation Services (CNS).

Navigation Services works closely with a patient’s Primary Care Provider to provide assistance with coordinating tests and referrals needed to obtain a cancer diagnosis.

The cancer journey is often complex and overwhelming. Cancer Navigation Services provides information and support to patients and families in a timely manner, helping to reduce distress and anxiety.

Receiving support from the Cancer Navigation Team can make a difference in the way patients feel about their care. A study sited in the Journal of Oncology states, “patients with a Nurse Navigator rate their care higher and report fewer problems.”

Regional Cancer Program Hubs

A “Hub” is a comprehensive community of practice providing high quality, culturally safe, coordinated, evidence-based cancer care and support throughout the cancer patient journey.

- Connecting patients and families to the right services at the right time.
- Moving the patient’s care forward along the diagnostic and intervention pathways.
- Providing emotional, physical, and practical support as needed.

Implementation Outcome

Seven Regional Cancer Hubs and one Winnipeg Cancer Hub established. Implementation of Navigation Teams include:

- Nurse Navigator works closely with primary care providers, surgeons, and other members of the healthcare team to help in the coordination of diagnostic testing and oncology referral.
- Family Physician in Oncology provides clinical guidance and support to primary care providers in making a complex cancer diagnosis or with the steps required to make an oncology referral.
- Psychosocial Oncology Clinician provides assessment, care planning, counseling and links to community resources to assist patients and families.
- Community Engagement Liaison helps communities learn about cancer services and supports, cancer prevention and early detection and shares culturally responsive education.
- Surgical Lead oversees surgical activity of the Hub and provides or facilitates surgical services for patients with cancer or at risk for cancer

Lessons Learned

- A provincially standardized model of care ensures timely and consistent guidance and support for patients and care providers.
- Support in the diagnostic phase of the patient’s journey is key to reducing barriers in accessing cancer services and reducing stress and anxiety.
- Seamless transitions between primary care and provincial cancer services is achieved through relationship building, to incorporate practice changes in cancer care.
- Gaps and barriers that delay the diagnostic journey must be escalated to the appropriate care providers and decision makers.
- Community engagement builds relationships of trust with culturally diverse communities. Education and connecting communities to resources, enhances the capacity to overcome barriers to care.
- Provincial and regional partnerships to implement innovations in quality evidence-based care improve the patient experience and expand the range of cancer services available closer to home.

Evaluation

An evaluation study was undertaken to describe the impact of one RCPH and understand successes and challenges from inception to completion of one year. Evaluation outcomes have been disseminated to the other RCPHs to identify evidence-based quality improvement opportunities and to support ongoing strategic program planning.

EFFECTIVENESS 83% of referring physician participants either strongly agreed or agreed that the CNS was useful to their patients, to them and to their practice.

93% of referring physician participants were either very satisfied or satisfied with the impact the CNS made on their patients and their practice.

SATISFACTION: Overall, patients gave a positive evaluation and view Cancer Navigation as a service that provides education, emotional support, arranges resources, and helps in coordinating with various appointments during their cancer experience. Almost all patients indicated that they would recommend the service to others who might benefit. Patients perceived that Cancer Navigation Services helped in terms of advocating for them and decreasing their anxiety.
Cardio-Oncology screening and assessments in patients referred for autologous bone marrow transplantation: a prospective descriptive study.

Cox-Kennett N¹, Paterson I²,³, Sandhu I¹,², Venner C¹,², Becher H²,³, Pituskin E¹,².
¹ Cross Cancer Institute, Edmonton AB, ² University of Alberta, Edmonton AB, ³ Mazankowski Alberta Heart Institute, Edmonton AB

BACKGROUND
Cancer patients (PTS) referred for autologous bone marrow transplantation (autoBMT) are frequently pre-treated with established cardiotoxic medications including cyclophosphamide, anthracyclines and kinase inhibitors. As a result, PTS may not have adequate cardiac function to meet eligibility criteria for potentially lifesaving autoBMT. Furthermore, with mobilizing and consolidation chemotherapy, PTS receive serial exposures to cardiotoxins, with acute and long-term negative cardiac sequelae. Accordingly, these PTS represent a population with a major unmet need for appropriate screening and interventions.

METHODS
Between January 1, 2013 – December 31, 20135 PTS referred for autoBMT were systematically screened for comorbid conditions, cardiovascular risk factors and eligibility for transplant. All underwent complete physical assessment, laboratory (ECG, complete profile) and transthoracic echocardiogram with contrast. Those with EF < 50%, increased IVsd/LVpWd, ECG abnormalities +/- significant cardiac history also received proBNP and high sensitivity troponin testing. PTS with abnormal findings or decreased left ventricular (LV) function < 50% were referred to the Edmonton Cardio-Oncology REsearch (ENCORE) program.

OBJECTIVE
To determine the effects of a prospective multidisciplinary cardio-oncology assessment and intervention in an unselected patient population referred for autoBMT.

RESULTS
N = 236 pts screened, January – December 2015
42 (18%) PATIENTS REFERRED TO ENCORE
• Decreased LV function n = 20 (47%)
• Increased IVsd n = 12 (28%)
• Arrhythmia n = 6 (14%)
• Angina n = 1 (2%)
• Review of cardiac hx n=4 (9%)

INTERVENTIONS
Pharmacotherapy n=20 (48%)
Urgent stent for 1 PT
Ongoing imaging/follow up 100%

OUTCOMES
88% of eligible PTS proceeded to autoBMT
12% (n=5) patients not proceeding to transplant (1 for non-cardiac)
4.7% cardiac related death (n=2) ***

***patients proceeding to transplant with EF < 50%/2nd BMT

ENCORE = multidisciplinary, multispecialty group of scientists and clinicians. Aims: research innovation, excellence in clinical service, prospective consented datasets.

PATIENT CASE
38 year old male, relapsed lymphoma.
CHOP in 2009 (644mg doxorubicin)
Baseline ECHO LVEF 48%

Referral to ENCORE: assessment, no major CVD risk factors. Dual therapy initiated.

Stem cell collection, high-dose BEAM chemotherapy

Day 100 ECHO LVEF 55%

CONCLUSIONS & FUTURE DIRECTIONS
As a result of systematic screening, a high proportion of PTS referred for autoBMT received assessments and cardio-oncology interventions, with 88% PTS subsequently proceeding through transplantation. Patients with high risk for cardio-toxicity secondary to transplant offered alternative therapy.

ENCORE represents a novel approach in the provision of cardio-oncology expertise for autoBMT PTS acutely during the mobilizing and transplantation period. Future examination of our prospective dataset will elucidate the longer term effects of our interventions.
The Timeliness of Patient Discharge as an Ongoing Concern in Hospitals

Mary Glavasевич, RN, BA, MN, Elaine Avila, RN, BSc(N); Rosemary Irish, RN, MSN/ED, CON(C).
Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada.

Background
- Timely discharge is required in hospitals to manage patient flow and increase bed utilization.
- There is an increased emphasis on discharge before 1100.
- The interprofessional team observed that patients are not always aware of their expected discharge date and time.

Purpose
- To determine if patients are aware of their expected discharge date and time.
- To explore barriers to patients being discharged before 1100.
- To determine if patients are aware of their expected discharge date and time.

Method
- A 5-item questionnaire guided the telephone interview.
- 20 patients were interviewed 7-10 days following discharge home.
- Questions focused on knowledge of discharge date, time, and barriers to discharge.

Patient Survey Results
When were you told that you were being discharged from the hospital?
- Before admission: 26%
- Day before discharge: 42%
- Day of discharge: 52%

Were you told that the hospital discharge time is 1100?
- No: 26%
- Yes: 74%

What helped you to leave before 1100?
- Homecare came on time: 25%
- Husband came early: 42%
- Daughter came on time: 52%
- Was anxious to leave: 75%
- Everything was nice and arranged: 74%

What prevented you from leaving before 1100?
- Waiting for prescriptions: 29%
- Waiting for test results: 45%
- Late transportation: 42%
- Option given when to leave: 75%

Interprofessional Strategies
Weekly interprofessional rounds: Urology, Gyn-Oncology, ENT, and Medical/Radiation Oncology
- Nurse brings patient’s perspective
- Topics discussed
  - Patients support and concerns
  - Expected Date of Discharge (EDD)
  - Readiness for discharge
  - Need for supportive services

Nurses, discharge coordinator, team leader, and allied health team members directly involved with patient communicates discharge date and time.

Created and implemented a lanyard card that guided interprofessional rounds.

Revised Welcome to D6 pamphlet and included discharge time, discharge planning and tips to help patients prepare for discharge.

The PSP distributes the Welcome to D6 pamphlet @ 1100 and 2000.

Emphasis on the daily coordination of discharge
- Collaboration and patient rounds between Team Leader, Discharge Coordinator, and CCAC Coordinator.
- Resident reports and communicates discharge plan with Team Leader.

Timely blood work collection for patients going home
- Identify patients being discharged and requiring blood work.
- Blood work entered in EPR as pending discharge.
- Collaboration between Team Leader, PAA, Discharge Coordinator and Phlebotomist.

Staff documents time of discharge in the day book.

Outcome
Monthly Average % Discharges Before 1100, D6

- 35%

Sustainability
- Staff and physician engagement and education.
- Integrating discharge planning in orientation.
- Sharing corporate recognition.
- Ongoing feedback and evaluation.
- Knowledge transfer within the organization, locally, nationally and internationally.
- Celebrating our Team Success!!!

Conclusion
- The patient’s perspective and experience with discharge is imperative.
- Successful implementation of strategies requires engagement and commitment of the interprofessional team.
- Relentless communication and engagement of the physicians.
- Diversity of expertise fosters synergy towards the common goal.
- Early engagement of patients/families is essential.
- A multi-prong approach has significantly enhanced timeliness of discharge.

References

D6 Interprofessional Team

Mary Glavasевич (PCM)
Cynthia Robinson (SW)
Amy O’Connor (RG)
Vanessa Wheeler (PT)
Laura Zulet (OT)
Bill Ford (Chaplain)
Lisa Riedeling (Pharmacist)
D6 RNs, PAs, PSPs and ESPs

Elaine Avila (CE)
Anita Long (APN)
Maudeline Romano (TL)
Brenda Leung (Discharge Coordinator)
Rosemary Irish (DNP Student)
Mohamed Hajiha (Chief Resident Urology)

Other physicians within the team.
Randomized Controlled Trials (RCT) are a rigorous, scientific method used to compare novel therapies to approved Standard of Care (SOC) treatments; they are essential for advancement of cancer treatment. As our population ages, the number of new cancer cases diagnosed each year increases. Caring for cancer patients has become more complex and ambulatory chemotherapy units throughout Canada are reaching or have reached capacity. There may be the perception that, due to additional requirements of a trial protocol, clinical trial treatments drain already stretched resources. However, this has not yet been verified; there is currently no published method to quantify the impact of clinical trial activities on systemic units.

To develop and test a method to measure clinical trial impact on nursing workload and treatment chair resources in an Ambulatory Systemic Chemotherapy Unit.

Electronic medical records of patients participating in a Clinical Trial (CT) were accessed to determine what Standard of Care (SOC) therapy was offered as an alternative to a CT treatment. We then compared nursing and chair time resources required for CT treatments to those of the identified SOC treatments. Infusion times for the SOC treatment were obtained from institutional standards; these were compared to the actual infusion times required for the CT treatments. This method was utilized for 230 CT treatments administered over five weeks in June 2015.

230 CT patients were reviewed. Of those, 125 (54%) were oral treatments and 105 (46%) were infusion treatments. This resulted, on average, in 6 CT patients being treated in the systemic therapy unit that would otherwise have received oral therapy.

The total weekly infusion time for clinical trial treatments ranged from 64-101 hours compared to 52 to 71 hours for SOC treatments. The weekly additional treatment time required for clinical trial patients ranged from 5 to 48 hours. CT patients required, on average, 84 chair time hours per week (5.2% of weekly systemic unit capacity) compared to 60 chair time hours per week for SOC treatments. Therefore, the average number of extra infusion hours per week due to clinical trial was 23.55 hrs. Based on a nursing care model of 2 nurses per 6 chemotherapy treatment chairs, the additional chair time for CT treatments is 24 hours per week. This equates to 6 treatment chairs and 2 nurses for 4 hours per week.

The developed method is feasible and allows calculation of additional nursing FTE required for CT activity.

References

Tom Baker Cancer Centre, Calgary, AB.
Increasing Chemotherapy Safety with a Closed-System Transfer Device
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Abstract
Exposure to hazardous drugs has been proven to increase employee risk of developing cancer, reproductive issues, and local reactions. The closed-system transfer device, Phaseal© prevents the leakage of liquids, vapours, and aerosols.

Exposure Risk for All TOH Staff
Previously, following administration, surface contamination could potentially expose all staff.

Implementation Process
Initial education was provided by the supplier. Ongoing support from Nurse Educator providing one on one guidance. 24hr support from unit clinical experts. Trialled tubing maps

Unit council developed utilization decision tree

Initial Challenges
Many challenges were identified:
• Change in practice - RN required to prime IV lines
• Knowledge regarding medication specific tubings required
• Confusion of supplier teaching regarding use of multiple lines for infusions
• Principle of dedicated lines for therapy
• Challenges with engaging connectors appropriately
• Current IV tubing caused disconnects due to additional add on piece between Phaseal connector at IV Y-port

Solutions
• Ongoing education required as not all chemo regimens necessitated Phaseal utilization
• Elimination of tubing maps
• IV tubing conversion in Cancer Program minimized risk of disconnection
• Pharmacy drug labels identify type of tubing to use with drug
• Developed tubing chart to facilitate administration process and planning of treatment

Pharmacy Risk
During preparation this closed-system device minimizes aerosolization exposure

Future Recommendations
Utilization of Phaseal device for all hazardous drugs administered throughout the organization.

By incorporating the Phaseal into chemotherapy preparation and administration practices at TOH, we are providing a safer working environment and keeping staff healthier.

Ongoing Challenges
• Viscosity of some medications causing difficulties with subcutaneous administration.
• Length of device for subcutaneous administration causing dexterity issues
• Cost of I.V. tubing conversion delaying full implementation across the organization
• Worker compliance, i.e. using available tools and resources
• Inpatient limited experiences due to frequency of chemotherapy bookings
Implementation of a POD System to Increase Capacity in a Chemotherapy Treatment Area
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The Tom Baker Cancer Centre (TBCC) in Calgary, Alberta is an ambulatory care site, providing chemotherapy administration to over 23,000 patients annually; this is increasing by 4.4% per year. With patients living longer due to increased treatment options, longer protocols, and advancements in clinical trials, capacity challenges have become unmanageable. With safe, sustainable capacity being quoted as 80%, our capacity of 87% in 2011 was viewed as unsafe and unsustainable unless processes changed.

Goals
- Gain capacity in the systemic therapy unit at Tom Baker Cancer Centre while maintaining efficient patient flow and safe nurse to patient ratios.
- Decrease the frequency of extensive treatment waitlists.
- Sustain safe chair utilization of 75-80% capacity.

Method
Clinicon was brought in to identify opportunities for improving overall process performance and patient flow. The recommendation was to implement a POD system in the systemic therapy unit.

The POD system would allow for the following improvements:
- Assigned breaks to maintain safe nurse to patient ratios.
- Minimize the amount of lost time between patients.
- Safe nurse-to-chair ratio (1 nurse to 3 chairs).
- Allow for flexible capacity for unforeseen situations.
- Maximize available chair time by loading unit within 50 minutes of opening.
- A booking template to allow for maximum caseload.

Outcomes
The POD system was implemented at the Tom Baker Cancer Centre Systemic Therapy Unit in March of 2014 based on the recommendations from Clinicon. The following improvements were observed:

- Safer, more organized processes in the patient care areas.
- Decrease in the amount of overtime worked by nursing staff.
- Efficient utilization of available capacity by improving booking templates or scheduling treatments.
- More efficient, sustainable chair utilization of 75-80% since implementation.
- Increased overall capacity by front-loading patients.
- Consistency in the treatment areas for patients and nurses.

In order to gain capacity through implementation of the POD system, the following changes occurred:

- All treatment nurse rotations were changed to 10 hour shifts (0800-1815h).
- Eliminate staggered start times for nurses to load the unit to capacity within 60 minutes of opening.
- Book 30 minutes between patient start times for each nurse and minimize time between discharging and admitting patients.
- Open the systemic therapy unit on statutory holidays.
- Maximize available chair time by loading unit within 60 minutes of opening.

Conclusion
Since 2014 we have observed firsthand that the POD system has improved capacity, structure, organization, nursing workloads and chair utilization while decreasing nursing overtime and patient waitlists. Although this may seem counter-intuitive, being more efficient in assigning nurses to specific chairs and scheduling patients according to a structured template allowed us to decrease our operating hours from 0800-1900h to 0800-1815h, decrease our waitlists and gain available, bookable chair capacity. We are now operating with a full complement of nurses for the entire day, have flexible capacity to utilize when unforeseen situations arise and are maintaining a safer, sustainable capacity of 75-80% on a daily basis.

References
Feasibility and Acceptability of Integrated Cardiac Rehabilitation in Patients Referred for Autologous Bone Marrow Transplantation

Derek Rothe 1,3, Nan Cox-Kennett 1, Gabor Gyenes 2, Ian Paterson 1,3, Irwindeep Sandhu 1, Chris Venner 1, and Edith Pituskin 1,3

1Cross Cancer Institute, 2Mazankowski Alberta Heart Institute, & 3University of Alberta

Background

• High-dose chemotherapy (HDCT) and Autologous bone marrow/hematopoietic cell transplantation (BMT) is established therapy for many malignancies.
• HDCT/BMT negatively impacts healthy organ function via direct effects (i.e., cardiotoxicity) and indirect effects (functional deconditioning)
• HDCT/BMT survivors have up to a 4-fold greater risk of CVD and adverse cardiac events (i.e., MI, Stroke) and a 15-fold increase for cardiovascular (CV) risk factors than in age matched population controls
• Patients are not exempt from risk factors such as dyslipidemia, hypertension, diabetes, and obesity/weight gain are established contributors to increased CV morbidity and mortality.
• Cardiac rehabilitation /secondary Prevention (CR) programs significantly reduce CV risk and events in cardiac disease populations.
• Currently, feasibility of CR programs has not been explored in HDCT/BMT survivors.

Methods

• HDCT/BMT patients were serially screened and referred to the Northern Alberta Cardiac Rehabilitation program.
• Exercise testing was performed prior to BMT, after BMT, and at the exit of the 8 week CR Program and again 6 months after completion of program.
• The 8-week CR program includes guided exercise and CV risk reduction education sessions

Results

• 30 BMT PTS were referred to CR/SP from Jan 2015 to Jan 2016.
• 20 attended the CR program
• 66% of pts who attended the CR completed Exit exercise testing at home or at facility.
• High levels of satisfaction of CR/SP program components were reported.

Patient Characteristics

• N=30, Median age: 52yrs, range: 23-69yrs
• Gender: 73% male, 27% Female
• Distance from program: Median (25 km, range: 3-996 km)
• Drop Out: 10/30 patients
• Pertinent Comorbidities (#): HTN(5), diabetes (3), obesity (3), fatty liver (3), CAD (2), dyslipidemia (2)

Conclusions

• Integration of CR within standard HDCT/BMT care is feasible and acceptable.
• We expect short term measurable impacts including reduced symptom burden and improved quality of life post transplant. Longer term impacts will evaluate CV morbidity and mortality.
• This work will inform improve survivorship interventions across the cancer continuum.

Cardiac Rehabilitation Physical Functioning Indicators

To prospectively evaluate feasibility and acceptability of routine referral to CR/SP program in lymphoma PTS undergoing HDCT/ BMT

- Six Minute Walk Test: measure of functional exercise capacity. An increase of 20-50m is clinically significant
- Gait Speed: Predictor future ADL or mobility disability. An decrease of 0.1ms2 indicates a 10% decrease in ability to perform IADLs. An increase of 0.1ms2 is clinically significant for a decrease in all-cause mortality
- Grip Strength: Simple test to for upper body strength and hand function. An increase of 1Kg demonstrates a 3% decrease in disability in Men and 5% in women
- Timed Up and Go (TUG): TUG reflects PT functional status, balance, and mobility. Shorter time indicates better PT functioning. >10 sec indicates difficulties with ADLs

Aim

- HDCT/BMT patients were serially screened and referred to the Northern Alberta Cardiac Rehabilitation program.
- Exercise testing was performed prior to BMT, after BMT, and at the exit of the 8 week CR Program and again 6 months after completion of program.
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