Making Educational Resources More Understandable for Chemotherapy Patients Living in a Rural Community

Penny Webster BScN, RN, Chemistry Nurse, Winchester District Memorial Hospital

Background

Health Literacy is “The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” 

More complex than general literacy, health literacy requires patients to be able to read and act on health information, express their needs to their care team, and understand health instructions. Health Literacy involves five linked skills – reading, writing, speaking, listening, and math concepts such as normal, risk, and range.

Patients with limited health literacy may have • difficulty taking medications appropriately, • difficulty interpreting labels and health messages, • more hospitalizations and ER visits, • worse health status, lower quality of life, and earlier mortality. 

55% of working age adults in Canada and 88% of those over age 65 do not have adequate health literacy skills.

Motivation

The stress and fear that come with a cancer diagnosis, combined with the information overload of the “chemo teach”, mean that patients may not understand or remember important instructions and facts. Discussions with patients and colleagues revealed that some patients could not or would not read materials we distributed, or read them and still had difficulty figuring out what they should do.

A “Universal Precautions” approach calls for health information that is accessible to patients of varying literacy levels. All patients, regardless of their literacy level, prefer clear information. By reducing complexity in our health teaching, and focusing on what patients need to do, we may reduce their stress and improve their outcomes.

Method

• Reviewed Health Literacy, Plain Communication, and Patient Education using RNAO Advanced Practice Fellowship Grant.
• Analyzed current patient teaching resources.
• Focused on creating pamphlet for patients starting chemo, using principles of plain language and clear communication.
• Surveyed colleagues re: what are the most important points patients need to know?
• Surveyed patients re: satisfaction with chemo teach.
• Consulted with colleagues and sought feedback after each of many drafts.
• Field tested with homeless and at-risk writing group.
• Redrafted with design assistance of Communication Specialist and graphic designer.
• In addition, created “Your Nausea Pills” and “You’ve finished chemo” flyers.

Current resources used for new chemo patients at WDMH

<table>
<thead>
<tr>
<th>Resource</th>
<th>Reading grade level (Fry formula)</th>
<th>SAM score (Suitability Assessment of Materials)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;15</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>&gt;15</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>73%</td>
</tr>
</tbody>
</table>

New resource

Copyright © 2017 Penny Webster pwebster@wdmh.on.ca

Next steps

• Include new pamphlet in chemo teach.
• Qualitative assessment – survey patients re: document preference, frequency of use, and rationale.
• Evaluate patient outcomes with crossover study.
• Continue to analyze resources we use with patients and revise based on plain language principles.

“Just as everyone has the right to understand health information, everyone has the responsibility to clearly communicate health information.”

References

1) CDC Health Literacy (Accessed April 2016).
2) Rudd, R (2014).
4) Fry, E (1968).

Reference details available on request.

Many thanks to Martin Streit, Janet Allingham, Jackie MacMillan, Michelle Renaud, Kerry-Anne Hogan, Lynn Hall, Jackie Romanick, Laura Landry, Callie Laurin, Mohamed Gazarin, Jane Adams, Lorraine Carey, Devin Dasey, Kaylee Steele, Mary Moore.
ABSTRACT

- The hematopoietic stem cell transplant program at Hamilton Health Sciences performs 120 Autologous transplants per year. The number of transplants performed each week vary significantly, from a minimum of 0 to a maximum of 5. A quality improvement initiative was undertaken to streamline the bookings and reduce the variation from week to week. The goal was to book 2-3 autologous transplants per week, ≥80% of the time, without compromising achievement of the Cancer Care Ontario (CCO) wait time target for autologous transplantation within 21 days post last apheresis.

BACKGROUND

- Fluctuations in the booking of Autologous Transplants per week negatively affects the bed capacity on the inpatient unit and the distribution of workload for the staff (pharmacy, NPs, nurses, physicians), as well as the workload distribution for the Stem Cell Lab who are required for the infusion of the stem cell product.
- The active list of all Autologous Transplant patients resides on an electronic spreadsheet which is only accessible to the Autologous Transplant Coordinators. The lack of a centralized, accessible location to update and retrieve current data by all members of the team, creates delays in information flow which in turn creates bottlenecks and workflow inefficiencies. Furthermore, the high volume of clinical data that needs to be captured, organized, and linked for analysis, clinical decision making, and reporting purposes, has surpassed what can be managed manually. The current manual processes create significant inefficiencies and workload challenges for the team.

OBJECTIVES

- To perform 2-3 autologous transplants/week ≥80% of the time
- Improve communication amongst team members through an accessible database and utilizing it as a tool that facilitates discussion during meetings
- Continue to achieve Cancer Care Ontario’s (CCO) wait time target of not exceeding more than 21 days from the last day of stem cell collection to day to the day of the stem cell reinfusion

METHODS

- Through application of LEAN methodology, we created and implemented an autologous transplant database to monitor patient progress, diagnostics, and data results. Using the database reports menu we were able to improve team care planning and communication to avoid delays for autologous transplant patients. We tracked the number of transplants performed per week for 1 year prior to the implementation of the database.
- A pre and post comparison of weekly transplant volumes and performance in meeting the CCO wait time target, was completed to evaluate the impact of the database.

RESULTS

- Prior to the implementation of the database we were performing 2 to 3 transplants 59% of the time, 3 months post implementation we were performing 2 to 3 transplants 66.6% of the time and 6 months post implementation we were performing 2 to 3 transplants 76% of the time.

CONCLUSIONS

- Although we were unable to reach the target of performing 2-3 transplants 80% of the time, we are trending towards achieving this target, by achieving ≥76% of the time 6 months post the implementation of the data base which will increase our ability to even out the workload on the inpatient unit.
- Through implementation of the database tool, we provided information about all autologous transplants electronically to all team members, which facilitated a focused discussion and early identification of patients who may exceed CCO’s target wait times at the monthly Autologous list meetings
- 3 months post implementation 89.1% of the patients met CCO’s target of achieving a transplant within 21 days of the last apheresis and at 6 months post implementation 85.7% of the patients met the target. Therefore, implementation of the data base did not negatively impact CCO’s targeted wait times.

References:
ABSTRACT

Radiation-induced skin reaction (RISR) is a common side effect that impacts the majority of patients receiving radiation therapy (RT) treatments. RISR is often characterized by swelling, redness, pigmentation, fibrosis and ulceration, pain, warmth, burning and itching of the skin. Severe radiodermatitis can have a negative impact on quality of life and may lead to interruptions in RT treatments. There is limited evidence that provides definitive results suggesting the effectiveness of any single intervention for reducing RISR. Unfortunately, evidence providing definitive results suggesting the effectiveness of any single intervention for reducing RISR is very limited. A wide variety of topical, IV or oral agents are currently employed in the management of RISR. However, current literature does not sufficiently support or refute their application. The interventions showing the most potential are calendula, hyaluronic acid, silver leaf dressings and no sting barrier films (NSBF).

BACKGROUND

Radiodermatitis is among the most common side effects experienced by patients receiving radiation therapy for sarcoma, breast, anal, vulva, and head and neck cancers. Erythema is the first visible manifestation, occurring in more than 90% of these patients, followed by moist desquamation in more than 30% of patients. The severity of RISR depends on numerous patient-related (e.g. BMI, large breast cup size, hormonal status, etc.) and treatment-related risk factors (e.g. total dose, type of external beam, treatment volume, concurrent chemoradiation, etc.). Cavilon™ No Sting Barrier Film may be used for reduction of friction and protection of the skin from moisture during the course of radiation therapy. It does not require removal prior to radiation treatment.

METHODS

The Radiation Medicine department implemented the daily use of NSBF for patients receiving RT to the vulva a few years ago and recently implemented a clinical practice change related to skin care interventions for patients receiving RT to the breast. Breast cancer patients who fall in the following categories are now being instructed to use NSBF twice a week instead of the traditional moisturizer:

- Application of bolus to increase the dose to the chest wall,
- Fractionation of 5000 cGy in 25 or 4600 cGy in 23,
- Patients who have large pendulous breasts,
- Patients who have compromised skin in the inframammary fold pre-treatment,
- Patients who have skin folds (other than the inframammary fold) in the treatment area.

The breast interprofessional disease site group reviewed evidence and determined guidelines for the use of Cavilon™ NSBF. Education sessions were provided to front-line staff and web-based patient and health-care provider resources were made available. Spray bottle format was recommended to patients, as it allows for a no-touch application.

OUTCOMES

The lead Radiation Oncologists involved, the Registered Nurses, the Radiation Therapists, and the patients have all provided positive anecdotal evidence to support the continued use of Cavilon™ NSBF as an intervention to delay the onset and reduce the severity of RISR. Radiation Oncology Nurses and Radiation Therapists have incorporated the new guidelines into their first day teaching to patients starting RT to the vulva and breast.

“The daily use of Cavilon™ in addition to the other supportive care interventions now provided to our patients receiving vulvar radiation, such as Domeboro® soaks, daily RN assessments, adequate pain control, hydrocortisone cream, and psychosocial support has really made a difference in helping these women get through the full course of treatment. I can’t remember the last time I had to interrupt a patient’s treatment due to skin toxicity in the last three years. Historically, it wasn’t uncommon for up to thirty percent of patients not to complete therapy.”

Dr. Rajiv Samant

NEXT STEPS

We would like to study the effectiveness of using Cavilon™ NSBF in delaying the onset and reducing the severity of skin toxicity (grade 2 or higher) for patients receiving RT to the head and neck. The goal is to determine the value of applying NSBF daily prior to the start of RT compared to the traditional moisturizing lotions currently being used, such as Glaxal Base cream for this patient population.

References:


Health professionals’ responses to a video about First Nations & Metis people’s experiences with cancer

Viviane Grandpierre, Wendy Gifford, Roanne Thomas

OBJECTIVES
The National Picture Project team explored gaps in cancer survivorship care with First Nations and Métis peoples.
This poster focuses on audience responses to the video that was produced to summarize the findings.

BACKGROUND
Research shows First Nations and Métis peoples experience many challenges and inequities in cancer care.
These include a lack of community-based programs, encounters with racism, and financial obstacles.

METHODS
• Our team used arts-based methods in tandem with sharing sessions and interviews with survivors in five Canadian communities.
• The resulting video has been screened five times in four communities to over 100 people. Data from post-screening discussions as well as written responses to open ended questions (e.g., what might be done to improve survivorship care; who should see the video) were analyzed.

FINDINGS
• Audiences consisted of nurses and other health professionals, patients, caregivers, and other stakeholders.
• Health professionals and patients both indicated that there are gaps in cultural sensitivity within health practices.
• Audience members also reported the video could be a useful tool for practising health professionals, as well as for students, particularly those in nursing and medicine.
• Nurses also stated the video was relevant to current initiatives surrounding person-centred care.

CONCLUSION
While the video was intended to raise awareness of issues faced by First Nations and Metis cancer survivors, post-screening discussions and responses indicate that patients, caregivers, nurses, and health professionals were able to identify potential contributions toward oncology nursing practice. Clinical implications for oncology nurses include improving cultural sensitivity and psychosocial care, incorporating holistic approaches to healing, and fostering connections among isolated patients.

CONTACT
Principal Investigator:
Wendy Gifford, PhD
wgifford@uottawa.ca
http://roannethomas.ca

ACKNOWLEDGEMENTS
Funding for this project was provided by a Quality of Life Grant of the Canadian Cancer Society in memory of Edna Goebel (Grant # 701822)
Managing Cancer And Living Meaningfully Information Group (CALMING)
Pilot Study of a Novel Psychoeducational Intervention for Patients with Advanced Cancer
Eryn Tong, Shari Moura, Chris Lo, Louise Lee, Kelly Antes, Sarah Buchanan, Ali Henderson, Gary Rodin; Princess Margaret Cancer Centre

BACKGROUND
Pancreatic cancer is one of the most aggressive cancers and is associated with considerable physical and psychological comorbidity.

People affected by pancreatic cancer have high informational and supportive care needs and brief, supportive interventions are needed.

Psychoeducational interventions can promote health education and self-management in a supportive context. There are limited studies of psychoeducation in advanced cancer; despite its benefit in early-stage and non-cancer settings.

Purpose: To develop an acceptable intervention and evaluate the feasibility of its implementation in an ambulatory pancreatic cancer clinic at a large tertiary cancer centre.

METHODS
(i) Development: Schofield & Chamber’s framework for supportive care intervention development; Consolidated Framework for Implementation Research (CFIR) to guide development & evaluation phases

(ii) Evaluation:
Participant Flow:

- Informed consent; baseline measures (T0)
- Primary support person (n=39)
- 1 month follow-up (T1); exit interview

Feasibility Data:
- Rates of participation, adherence (completion of sessions & measures)

Qualitative Data:
- Semi-structured interviews with participants: program length, time, usefulness, understanding, delivery
- Open-ended surveys with clinical staff
- Inform acceptability, feasibility, program & methodological refinements

Self-Reported Outcomes Measures (T0; T1):
- Mishel Uncertainty in Illness Scale
- Family Satisfaction with Advanced Cancer Care Psychoeducation Knowledge Questionnaire

RESULTS
- Calming: Single, 1.5-hour group psychoeducational session
- Jointly led by a nurse, social worker, and dietitian
- Goal: to facilitate early adjustment of patients & families

- Disease management
- Personal & family impact of cancer
- Planning for the future
- Supportive care services
- Communication with loved ones & HCPs

IMPLICATIONS
A psychoeducational intervention for people affected by pancreatic cancer may reduce uncertainty & facilitate adaptation to life-threatening disease.

An implementation science approach to intervention delivery can improve uptake and sustainability in the clinical setting.

Acknowledgements: Funded by the Princess Margaret Cancer Foundation, Harold and Shirley Lederman Chair Income Fund & the Al Hertz Fund.
Colorectal Cancer Survivorship: An Evaluation of Surveillance Guidelines Compliance

G. Larocque, NP, MN, T. Asmis, MD, R. Morash, RN, MHS
The Ottawa Hospital Cancer Centre

Abstract

The Wellness Beyond Cancer Program (WBCP) at the Ottawa Hospital Cancer Centre (TOHCC) was launched in March 2012 for colorectal cancer (CRC) patients. When appropriate, patients are discharged at the end of active treatment to one of two streams:

1. Primary Care Provider (PCP) or,
2. Nurse Practitioner (NP) within TOHCC, until deemed appropriate for discharge to their PCP.

To enhance self-management strategies and knowledge, all patients are invited to attend a survivorship education class and receive a discharge visit and survivorship care plan review when transitioning to their PCP.

Background

Worldwide, CRC is the second most commonly diagnosed cancer. Colorectal cancer is one of the three (3) most common malignancies: With the advent of early detection, heightened awareness, and new therapies, many are early stage cancers and have an estimated 5-year overall survival rate of 63%.

Cancer survivorship is now part of the cancer trajectory and focuses “on the health and life of a person with cancer post treatment until the end of life,” addresses issues of follow-up care, cancer surveillance, late and long term effects due to treatment, and ongoing impacts on quality of life.

Challenges in survivorship care are linked to numerous factors including: who provides the ongoing management of cancer as a chronic disease; the knowledge and comfort level of PCPs, ongoing cancer management; the existence and use of cancer surveillance guidelines; and the roles of both patients and health care providers.

Objectives

• To determine the rate of compliance to the recommended CRC surveillance guidelines for patients discharged from the TOHCC through WBCP, and followed by their PCPs.
• To improve cancer surveillance care, while ensuring CRC survivors have access to appropriate follow-up care.
• It was anticipated that we would see PCP compliance rates at or above 70%.

Methods

• Three hundred and forty-six (346) surveys were mailed to PCPs for patients transitioned through the WBCP between March 2012 and March 2014.
• Data was entered into a secure database, and unique IDs were assigned to patient information to respect privacy.
• Responses of yes, not applicable (>5 years from treatment completion), or patient refusal, were considered as compliant.
• Calculations were based on completed data only.

Survey Distribution and Return Rate (n=346)

Results

• Survey return rate was 29% (n=102).
• Compliance rates for guideline adherence were:
  - CEA monitoring every six months (5 years): 71%
  - Colonoscopy (1 year post treatment): 92%
  - Abdominal imaging (annually for 3 years): 82%
  - Chest imaging (annually for 3 years): 72%

Discussion/Conclusions/Limitations

• Compliance rates to the surveillance guidelines for CRC patients, transitioning through the WBCP met our anticipated estimates.
• However, if incomplete data had been included in the calculations, compliance rates for adherence to guidelines were 10% lower.
• One of the limitations of the survey is the number of non-responders, which may have affected the level of compliance.
• Ongoing education for PCPs on cancer surveillance, and quality improvement audits are planned.
• Survivorship oncology nurses are well positioned to facilitate coordination of care between TOHCC and PCPs, and engaging patients in managing their care.

References

Developing Innovative Competency Based Education for Oncology Nurses providing Urgent Cancer Care
Suganya Vadivelu RN, MScN, PGDHM, CON(C); Noelle Gauvin-Toste RN(EC), MN; Charissa Cordon RN, MN, EdD, Con(C); Lorraine Martelli MN, RN(EC); Denise Bryant- Lukosius, MScN, PhD, and Amanda Hurdowar BSc.
1. Juravinski Cancer Center, Hamilton Health Sciences 2. McMaster University, School of Nursing

BACKGROUND
- The Rapid Evaluation and Symptom Support Cancer Unit (RESSCU) is a new model of urgent care at the Juravinski Cancer Centre
- Targets patients with symptom management needs
- Aims to improve patient experience and health outcomes, reduce emergency department visits and hospitalization
- A literature review revealed no standards of practice or competencies for oncology nurses within urgent care
- Education was required to address the learning needs of RESSCU nurses with diverse backgrounds in oncology, critical care and acute medicine

PROJECT OBJECTIVES
- Develop oncology urgent care standards and competencies for nursing practice
- Evaluate competency-based education to optimize oncology nurse scope of practice for cancer symptom management in urgent care

METHODS
- A self-assessment tool was developed using Canadian Association of Nurses in Oncology (CANO) Practice Standards and Competencies and the National Emergency Nurses Association (NENA) Competencies
- The research team identified other competencies needed in an oncology urgent care setting to include in the tool

Learning Needs Assessment
- For each item in the self-assessment tool, nurses rated their competency from novice to expert pre and 9 months post the education program
- Items ranked novice, advanced beginner, and competent were considered “learning opportunities”
- Items ranked as proficient and expert were considered “individual strengths”

Education Plan
- A competency-based education plan was developed from the baseline assessment to address common and individual learning needs
- Learning strategies included case studies, hands on learning, role-playing, online videos and large group discussions
- Nurses with expertise in specific competency areas mentored others to meet individual learning needs
- Priority topics for learning included: telephone triage using COSTaRS, central vascular access, oncology emergencies, cancer treatment side effects, and clinical procedures.
- Nurses were supported to achieve advanced nursing skills such as ECG monitoring, Implanted ports access and medical directives by the Clinical Educator and Advance Practice Nurse

RESULTS
- 5/5 completed the pre and post assessment
- There was a negative shift in the nurses’ “individual strengths” vs “learning opportunities” ratio

- Nurses perceived the competency initiative:
  - Promoted peer mentorship
  - Increased comfort level in providing care to oncology patients with urgent needs
  - Identified areas to optimize RN scope of practice (i.e., telephone follow up and medical directives)

KEY LEARNINGS
- Manager, Advance Practice Nurse and Clinical Educator support were key to nursing competency development
- Engaging nurses to develop the competency assessment tool promoted buy-in and engagement in learning
- Exposure to new knowledge heightened nurse awareness of additional competency-based learning needs
- Group learning and peer mentorship promoted team building

NEXT STEPS
- Validation of competencies for expanded use in other urgent care cancer settings

REFERENCES
Nurses Leading the Way with Assisting Patients on Their Path Towards Smoking Abstinence

Mélissa Michel RN, BScN & Robin Morash RN, BScN, MHS
The Ottawa Hospital

Abstract

The topic of smoking cessation has long been a difficult subject of conversation between patients and health care providers. Patient counseling on this matter has been considered suboptimal to the newly developed guidelines established by RNAO on how to incorporate smoking cessation intervention into daily nursing practice. Several barriers prevent health care providers from tackling this problem head-on: issues with lack of time, self-efficacy and uncertainty of their roles. Research suggests that nurses can have a positive influence on cessation rates and decision counseling.

The following poster presentation will present the findings of the literature review focusing specifically on how nurses can help patients who have made the decision to stop smoking. Nurses need to integrate smoking cessation in their daily practice by asking, advising and arranging follow-up to better support their patients in their smoking cessation journey.

Background

Health implications

• ~ 20% of Canadians smoke.
• More than 47,000 Canadians die prematurely from smoking related illness every year.
• Recognized as the leading cause of preventable death, disease and disability.
• Half of smokers will die of smoking related illness.

Financial Implications

• Smoker average twice as many hospital days than non-smoker.
• Smokers also are known to have increased readmission rates and number of ER visits compared to non-smokers.

Regulatory implications

• Smoking is currently prohibited within 9 meters of hospital entrance.
• By January 2018, smoking on hospital property will be prohibited.

Hospital based smoking cessation programs

• Hospital based interventions have been proven to significantly improve cessation rates.
• They provide a structure that allows for the appropriate delivery of smoking cessation intervention by health care professionals.

Objective

To further our understanding on how nurses working on hospital units can assist patients during their smoking cessation journey.

Materials & Methods

A literature review on smoking cessation with respect to decision counseling was conducted to further understand how nurses can support patients who want to stop smoking:

A variety of databases were used:

Databases

Pubmed
Medscape
Nursing & Allied Health Database
Google scholars

The following keywords were searched:

Smoking cessation
Decision counseling and smoking cessation
Nurse mediated smoking cessation interventions
Hospital based smoking cessation programs

Discussion/Conclusion

Nurse-mediated smoking cessation programs can positively impact quit rates among individuals who smoke. Several identified barriers have slowed the processes of implementing smoking cessation into daily nursing practice. Standardization of smoking cessation into nursing practice is necessary to allow nurses to assist patients about their smoking states and it provides them with access to competent counselling that will give them the best possible chance of overcoming their addiction to smoking.

Summary of Results

• The nursing profession constitutes the majority of the work force in health care industry.
• Nurses also work in diverse health care setting and are in frequent contact with patients more than any other health care professional.
• Nurses have an added advantage to frequently assess patients and deliver smoking cessation counseling.
• Nurses are heavily involved with providing patient education, have direct access to patients and have a good understanding of patient conditions.
• The clinical workplace is identified as an ideal setting where clinicians have a window opportunity to deliver smoking cessation advice.

References


Materials & Methods

Intensive Smoking Cessation Intervention (Lasting more than 10 minutes)

Every nurse will:

Aim: To arrange face to face discussion with all clients (e.g. “have you used any form of tobacco in the past six months?”) and assess readiness to quit. If these clients, assess patients level of motivation to change behavior, using motivational interviewing techniques (see Appendix 2).

Advise: Document clients use status (e.g. non-smoker, smoker, ex-smoker). Every nurse should use the principles of quitting to a non-judgmental and supportive manner.

Assist: By providing external intervention:

• Make use of Canadian Cancer Society’s Smokers’ Helpline 1-877-633-9200 or renewsantization.ca.
• Offer support and help resources, such as booklet (see Appendix 2) for a brief assessment.
• Inform client or referee in a community stop smoking clinic or service.
• Refer to other healthcare providers. Follow-up up referral.

Minimal Smoking Cessation Intervention (Lasting 1 to 3 minutes)

Every nurse will:

Aim: To arrange face to face discussion with all clients (e.g. “have you used any form of tobacco in the past six months?”) and assess readiness to quit. If these clients, assess patients level of motivation to change behavior, using motivational interviewing techniques (see Appendix 2).

Advise: Document clients use status (e.g. non-smoker, smoker, ex-smoker). Every nurse should use the principles of quitting to a non-judgmental and supportive manner.

Assist: By providing minimal intervention:

• Make use of Canadian Cancer Society’s Smokers’ Helpline 1-877-633-9200 or renewsantization.ca.
• Offer support and help resources, such as booklet (see Appendix 2) for a brief assessment.
• Inform client or referee in a community stop smoking clinic or service.
• Refer to other healthcare providers. Follow-up up referral.

Discussion/Conclusion

Nurse-mediated smoking cessation programs can positively impact quit rates among individuals who smoke. Several identified barriers have slowed the processes of implementing smoking cessation into daily nursing practice. Standardization of smoking cessation into nursing practice is necessary to allow nurses to assist patients about their smoking states and it provides them with access to competent counselling that will give them the best possible chance of overcoming their addiction to smoking.
Healthcare Use and Costs for Patients with Newly Diagnosed Advanced Colon Cancer Receiving Care in Two Cancer Centres

S.Vadivelu1,2, RN, MSc (N), CON© ; D.Bryant-Lukosius1,2, RN, PhD; and C.Philips1,3, MD
1. Juravinski Cancer Centre, Hamilton Health Sciences 2. School of Nursing, McMaster University 3. Joseph Brant Memorial Hospital

GOAL & RESEARCH QUESTIONS

Goal
To examine and compare the healthcare utilization and costs for patients with newly diagnosed advanced colon cancer receiving care in two cancer centres.

Research Questions
1. What are the types of healthcare services patients use during the diagnostic phase?
2. Are there differences in healthcare use and costs among patients receiving care in two cancer centres?
3. What patient factors are associated with healthcare costs for patients newly diagnosed with advanced colon cancer?

BACKGROUND

• Colorectal cancer (CRC) is the second most common cancer and second leading cause of cancer death in Canada.5
• Fifty-six percent of Ontarians with CRC are diagnosed with advanced stage colon cancer.2,6
• Little is known about healthcare service use and costs related to a new diagnosis of advanced colon cancer.
• In phase I of this study, we identified the unmet supportive care needs (SCNs) and the priority unmet needs of patients newly diagnosed with advanced colon cancer.
• Significant association was noted between priority unmet needs (uncertain future, fatigue, appetite and family) and patient characteristics (i.e. gender, education level, and home support).
• In phase II of this study, we identified and compared healthcare use and costs for patients receiving care at two cancer centres.

The Supportive Care Framework for Cancer Care provided the conceptual framework for this study.8

METHODS

Study Design: Descriptive cross-sectional survey.
Sample & Setting:
• All newly diagnosed patients with colon cancer at the Juravinski Cancer Centre (JCC), Hamilton, and Joseph Brant Memorial Hospital (JBH), Burlington.
• The JCC is a comprehensive regional cancer centre serving over 1.7 million people with an average income of $75,000 per year.8
• JBH is a community satellite centre of the JCC, serving 175,000 people with an average income of $88,000 per year.8

Data Collection:
• Patients completed a self-report questionnaire 2 to 4 weeks following their first consult visit.
• The questionnaire included the SCN Survey short form, Functional Assessment of Cancer Therapy-Colorectal subscale, and the Health Service Utilization Questionnaire (HSUQ).6
• The HSUQ asks patients to report on services used within the prior 6 months.

Data Analysis:
• Descriptive statistics (mean, frequency counts) were used to summarize healthcare service use and the associated costs.
• Chi-square test was used to examine differences in patient SCNs at the two cancer centres.
• Mann-Whitney tests were used to examine associations between patient characteristics and healthcare costs.

RESULTS

94/122 patients completed the questionnaire (response rate ~77.1%).
JCC patients had less education and more advanced disease compared to JBH patients (Table 1).
JCC patients reported more unmet SCNs compared to JBH patients (Table 2).
Mean hospital and non-hospital costs per patient were $57,974.43 and $55,473.04 respectively (Table 3).
Total healthcare costs were two times higher for JCC patients ($28,156.36 vs $14,323.99; p<0.002).
Higher costs for JCC patients were related to hospitalization ($22,789.00 vs $8,846.19; p<0.000).
Significant association was noted between patient characteristics (i.e. age, marital status), cancer centre, and healthcare costs (mental health services, drug costs, diagnostics tests, hospitalization, physician specialist) (Table 4).

Table 1: Demographic characteristics of patients receiving care in two cancer centres

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>JCC (n=62)</th>
<th>JBH (n=50)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male</td>
<td>63%</td>
<td>44%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>37%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Age (years):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>65</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Marital status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>80%</td>
<td>52%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Single</td>
<td>20%</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Education status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>61%</td>
<td>36%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>College or more</td>
<td>39%</td>
<td>61%</td>
<td></td>
</tr>
<tr>
<td>Patient's perception of colon cancer stage:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage III</td>
<td>39%</td>
<td>68%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Stage IV</td>
<td>22%</td>
<td>16%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Do not know</td>
<td>39%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Association between unmet SCNs of patients receiving care in two cancer centres

<table>
<thead>
<tr>
<th>Unmet Supportive Care Needs (ISCN; 34 items survey)</th>
<th>JCC (%)</th>
<th>JBH (%)</th>
<th>Chi-square (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reassurance by medical staff that their feelings are normal</td>
<td>48.4</td>
<td>15.6</td>
<td>0.002</td>
</tr>
<tr>
<td>Hospital staff attend promptly to physical needs</td>
<td>41.9</td>
<td>15.6</td>
<td>0.010</td>
</tr>
<tr>
<td>Hospital staff are sensitive to emotional needs</td>
<td>41.0</td>
<td>18.8</td>
<td>0.031</td>
</tr>
<tr>
<td>Being informed about how to get well</td>
<td>57.4</td>
<td>35.5</td>
<td>0.047</td>
</tr>
<tr>
<td>Being treated like a person not a case</td>
<td>45.2</td>
<td>21.9</td>
<td>0.027</td>
</tr>
<tr>
<td>Being treated in a physically pleasant clinic/hospital</td>
<td>46.8</td>
<td>15.6</td>
<td>0.003</td>
</tr>
<tr>
<td>Have one healthcare provider to talk about cancer care</td>
<td>56.7</td>
<td>34.4</td>
<td>0.020</td>
</tr>
</tbody>
</table>

Table 3: Estimate of annual healthcare costs per patient

<table>
<thead>
<tr>
<th>Health Service</th>
<th>Healthcare Cost per Patient (in$)</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family physician</td>
<td></td>
<td>254.50</td>
<td>232.75</td>
</tr>
<tr>
<td>Physician specialist</td>
<td></td>
<td>475.02</td>
<td>321.17</td>
</tr>
<tr>
<td>Homecare services (e.g., CCAG) and Allied HCP (e.g., OT, PT, SW)</td>
<td></td>
<td>1272.04</td>
<td>3341.59</td>
</tr>
<tr>
<td>Mental health services (e.g., psychologist, counsellor)</td>
<td></td>
<td>13.37</td>
<td>75.24</td>
</tr>
<tr>
<td>Emergency services (e.g., 911, emergency department)</td>
<td></td>
<td>579.69</td>
<td>731.81</td>
</tr>
<tr>
<td>Additional services (e.g., financial, recreational services)</td>
<td></td>
<td>149.60</td>
<td>514.66</td>
</tr>
<tr>
<td>Diagnostic tests</td>
<td></td>
<td>1113.80</td>
<td>996.96</td>
</tr>
<tr>
<td>Drugs</td>
<td></td>
<td>1473.93</td>
<td>2986.88</td>
</tr>
<tr>
<td>SUPPLIES</td>
<td></td>
<td>141.09</td>
<td>417.30</td>
</tr>
<tr>
<td>TOTAL NON HOSPITAL</td>
<td></td>
<td>5473.04</td>
<td>5335.36</td>
</tr>
<tr>
<td>TOTAL HOSPITAL</td>
<td></td>
<td>17574.43</td>
<td>20076.50</td>
</tr>
<tr>
<td>TOTAL COSTS</td>
<td></td>
<td>23447.47</td>
<td>22843.76</td>
</tr>
</tbody>
</table>

Table 4: Significant association between patient characteristics and healthcare use and costs

<table>
<thead>
<tr>
<th>Patient related Characteristics</th>
<th>Mental healthcare services</th>
<th>Hospital costs ($)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Range: &lt;65 years vs &gt;65 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental healthcare services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;65 years</td>
<td>28.57</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>&gt;65 years</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status: Married vs Single</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Married</td>
<td>1,261.80</td>
<td>759.45</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Single</td>
<td>20.239.83</td>
<td>13,121.08</td>
<td>0.038</td>
</tr>
<tr>
<td>Cancer Centre: JCC vs JBH</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>JCC</td>
<td>531.69</td>
<td>365.23</td>
<td>0.026</td>
</tr>
<tr>
<td>JBH</td>
<td>22,789.00</td>
<td>8,846.20</td>
<td>0.000</td>
</tr>
</tbody>
</table>

CONCLUSIONS

• Patients with newly diagnosed colon cancer have substantive unmet SCNs, especially related to psychological support and information.
• During the first 6 months of diagnosis for colon cancer, healthcare use and costs related mostly to hospitalization, drugs, homecare services, and diagnostic tests. Use of mental health services was low.
• Differences in referral patterns (i.e., stage of disease) and socioeconomic factors (i.e. age, marital status, education) may impact on SCNs, healthcare service use, and costs.

IMPLICATIONS FOR NURSING PRACTICE

• Nurses are often the "first point of contact" during the diagnostic phase and they are well positioned to assess and manage SCNs and facilitate patient referral to appropriate cancer clinic or community services.25
• Targeted nursing interventions may be required to address psychosocial and information needs.
• New care models are needed to better support patients during the diagnostic phase for colon cancer.
• New care models using specialized and advanced oncology nurses to identify high need patients, proactively assess and manage SCNs, and promote patient self-management may improve patient health outcomes and quality of life, and lead to better use of more effective and less costly healthcare services.
Be on ALERT

Development of a concise educational intervention to guide nurse-patient discussions about cancer-related internet information

Kristen Haase¹,², RN, BN, MA, PhD(c), Roanne, Thomas², PhD, Wendy Gifford², RN, PhD
¹University of Saskatchewan, ²University of Ottawa.

Background
• Oncology nurses face fast-paced clinics, and complex patients.
• Patients increasingly look to the internet for information.
• Patients and healthcare professionals agree that cancer-related internet information (CRII) is an important resource for patients throughout the cancer trajectory.
• Nurses and patients describe a need to have conversations about CRII, but express a tension about how and when to initiate these conversations.

Purpose
To propose a concise nurse-led intervention to create dialogue about patient use of CRII.

Sample
• People newly diagnosed with cancer (n=19)
• Healthcare professionals (n=21).

Methods
As part of a larger mixed-methods study, we used an interpretive descriptive methodology. Data sources included:
1) Interviews (n=42) and focus groups (n=3)

Key Results
ALERT is a flexible framework to initiate conversations about CRII in practice. Our model guides nurses to lead conversations with patients by encouraging them to: Ask, Listen, Engage, Reorient/Reflect and Time these interactions across the trajectory. We propose a patient-centered model to conversations throughout the cancer trajectory, rather than focusing on scheduled or structured nursing interventions.

Engage
Engage with your patient; ensure they feel comfortable sharing. Focus on ongoing transactions versus, linear transaction. Create opportunities for patients to feel like empowered partners rather than passive subjects (Sanford, 2000).

Listen
Listen to what your patient tells you. Active listening skills allow nurses to understand their patients’ information needs, and permit the patient time to share their needs or what they have already found on the internet.

Ask
Ask patients and their families about their use of CRII. Do they rely on it? Asking relates to assessment, which is the first step of the nursing process and the foundation of clinical reasoning in nursing (Alfaro-LeFevre, 2014).

Reflect
Reorient or reflect what patients share with you. Having heard what information the patient has found, reflect their concern and, if necessary, redirect them to different or better CRII.

Timing
Incorporate discussions of CRII throughout the nurse-patient relationship and cancer trajectory. The notion of ‘Time’ should be a reminder that every time patients interact with their nurses, nurses should use ALERT.

Conclusions & Implications
There is a growing need for dialogue around pervasive technologies and the nursing role in assessing and directing patients to holistic information. Oncology nurses are well situated to take the lead in their multi-disciplinary care teams to engage patients about their CRII use and to explore the tensions experienced by clinicians surrounding CRII use. Future research will evaluate the implementation of ALERT in oncology nursing practice.

Acknowledgments: This study was supported by a 2015 Research Grant from the Canadian Association of Nurses in Oncology (CANO/ACIO)
Background\ Contexte

The incidence of cervical cancer is 1.78 times higher in Status Indians and they are more likely to develop and die from cervical cancer.

L'incidence du cancer cervical est de 1.78 fois plus élevé chez les femmes avec un statut d’aborigène, de plus elles sont plus à risque de le développer et d’en mourir.

Purpose\But

The aim of this project was to compare cervical cancer in Aboriginal and non-Aboriginal women. Looking at the risk factors related to their culture, beliefs, socio-economic status and lifestyle choices. Trying to see what is similar and different between the Aboriginal and non-Aboriginal women. Finally, trying to elucidate a plan to be able to reach this patient population.

Le but de ce projet est de comparer l’incidence du cancer cervical chez les femmes des Premières Nations et la population en général, comparant avec les facteurs de risques tel que: culture, croyances, niveau socio-économique, ensuite trouver les similarités et les différences entre les deux groupes; finalement, essayer de trouver un plan d’action pour pouvoir atteindre cette population.

Method\Méthode

An extensive literature search was conducted and 26 articles were chosen for this project.

Une recherche littéraire a été produite et 26 articles ont été utilisées.

Risk factors\Facteurs de risques

Early age of sexual intercourse \ jeune âge ayant des relations sexuelles
Greater number of sexual partners\ multiples partenaires sexuels
HPV infection\ infection au VPH
Smoking\ fumer
Lower socio-economic status\ pauvre situation socio-économique
Oral contraceptive use\ utilisation de contraception orale
Nutritional deficiencies\ déficience alimentaire
Lower level of education\ niveau de scolarité peu élevé
Not having Pap smears\ négliger test PAP
Sexually transmitted disease\ Maladies transmises sexuellement
Unstable relationships\ relations instables
Ethnicity\ ethnicité
Alcohol consumption\ consommation d’alcool
Inconsistency in condom use\ incohérence dans l’utilisation du condom
Poor access to medical care\ moins d’accessibilité aux soins médicaux
Fear and being uncomfortable with gynaecological examination\ crainte de l’examen gynécologique
Lack of education on screening methods for cervical cancer\ manque d’éducation sur les méthodes préventives du cancer cervical

Discussion

The population of Canada has to acknowledge that Canadian Aboriginal women have been mistreated by the power that be and these women have to regain their confidence in the health care system. The non-Aboriginal culture has to understand all the traumas that these women suffered during colonisation and the Residential School period. Aboriginal women have to regain their power and ,health care professionals have to take the time to educate them of their cervical cancer risks, prevention and treatment.

La population du Canada doit reconnaître que les femmes Canadiennes Aborigènes ont été maltraitées par les personnes en haute autorité et que ces femmes doivent avoir confiance dans le système de santé. La population doit comprendre les traumatismes que ces femmes ont eu à subir pendant leurs séjours au Pensionnat Autochtone. Ces femmes Aborigènes doivent reconquérir confiance dans leur pouvoir. Les professionnels en santé doivent prendre le temps nécessaire pour leur donner les outils nécessaires concernant les facteurs de risques, la prévention et les traitements pour le cancer cervical.

Conclusion

The health care system has to adjust their ways of helping the Aboriginal population. Cultural sensitivity has to be top priority and education for the medical staff has to be in place to provide proper care and education. The health care teams have to be aware of the results of the Residential schools and Colonialism and how this population has to feel empowered to make their own decisions, while knowing and understanding all the facts. The cervical cancer rate among aboriginal women could change if the health care industry subscribes to the changes suggested above.

Le système de santé doit changer sa façon d’aider les femmes Aborigènes; la sensibilité culturelle doit être une priorité pour l’éducation et le système de santé doit être au courant des retombées que ces femmes ont eu durant leurs séjours au Pensionnat Autochtone ainsi que la colonisation de plus faire confiance à la population ayant la capacité de bonnes décisions tout en connaissant les facteurs de risques. Le taux de cancer cervical chez les femmes aborigènes peut changer si le système de santé s’adhere aux recommandations énumérées ci-haut.
Medical oncology is an ever-changing field, with new treatments continuously being introduced to enhance patient experience and outcomes. As registered nurses working in this exciting field, we need to be proactive in continuing our education in order to give our patient population the most beneficial and fulfilling experience that we can.

Understanding the treatment our patients are receiving, the side effects, and the proper administration will lead to more positive outcomes for both the patient and nurse. Intraperitoneal chemotherapy is a treatment that was introduced to our unit due to an amalgamation process within the Ottawa Hospital. As a result, our nurse educator has spent many hours educating our nurses on the proper administration and handling of IP chemo and the care of our IP patients. In order to empower the oncology nurses on our unit, and decrease the amount of time our educator must spend at the bedside during these admissions, we have created a poster which will empower the oncology nurse to administer this treatment safely and effectively; in turn, enabling the nurse to be more efficient and enhancing the patient experience.

**What is Intraperitoneal (IP) Chemotherapy?**

Intraperitoneal (IP) chemotherapy: Cytotoxic medications are injected directly into the peritoneal space.
- IP chemo is delivered by a trained registered nurse directly into your abdomen through a small tube called an implanted port (a half dollar-sized disk topped with a pliable diaphragm). The port is placed under the skin against a bony structure of the abdominal wall, such as a rib or pelvic bone.
- During IP chemo, the medications circulate and treat tumours situated throughout the abdomen. The medications are also absorbed into the bloodstream; therefore, IP chemo is a systemic chemotherapy.
- IP chemo is given in addition to intravenous chemo.
- Women receiving IP chemo live longer than the women receiving regular chemo: treatment with IP and IV can extend median overall survival by more than a year, compared with women treated with IV chemo alone.
- Women with stage 3 epithelial ovarian cancer whose tumours are smaller than 1 cm in size after primary surgical debulking.
- There can only be a small amount of cancer left in the abdomen for the IP chemo to be effective.
- Women must have normal kidney function and be in good overall shape due to increased toxicity associated with IP chemo.
- Adhesions or scar tissue inside the abdomen can prevent IP chemo from being well absorbed.

**Who Can Receive IP Chemotherapy?**

Women receiving IP chemo live longer than the women receiving regular chemo: treatment with IP and IV can extend median overall survival by more than a year, compared with women treated with IV chemo alone.

**Ovarian Cancer**

- Ovarian cancer is the 5th most common cancer for women and is the most serious women’s cancer.
- For ovarian cancer patients, chemotherapy medications may be given intravenously or intraperitoneally.

**Guidelines for the Safe Administration of IP Chemotherapy**

**Day 1 - Inpatient regime**
- **Assessment:** Review history, physical assessment, check height and weight, calculate BSA/BMI, review lab values, assess need to liaise with MD, complete toxicity assessment, make comparisons to prior visits, and take pre-dose vitals.
- **If outcomes met:** administer pre-chemo medications and initiate IV Paclitaxel via Picc line, with post-initiation 30 minute vital check.

**Day 2 - Inpatient regime**
- **Magnesium infusion:** 2 hours prior to completion of Paclitaxel, administer IV magnesium infusion simultaneously with Paclitaxel via Y-port (to decrease risk of hypomagnesia related to Cisplatin).
- **Accessing IP port:** Have patient void before accessing IP port to minimize patient movement during infusion. Access port with 19 gauge non-coring gripper using. Check for patency by flushing port with 10 mls sterile normal saline. There should be no resistance. Blood return will not be present if aspiration attempted.
- **Administer chemo/fluids:** Prior to chemotherapy, infuse prescribed amount of normal saline to verify port placement and patency. Administer chemo (cisplatin) via IP port. Normal saline and chemo are infused via gravity, no pump required. Administer post flush.
- **Post infusion:** Flush IP port with 20 mls of NS followed by 10mls Heparin flush solution (10 units/ml). De-access port immediately following post-flush as per hospital policy.
- **Patient teaching and Follow-up:** Encourage ambulation and change of positions post IP instillation. Review potential side effects. Review medications. Assess suitability for discharge. Review follow-up appointments, prescriptions and home care services.

**Day 8 - Outpatient regime**

Patient will receive chemotherapy at designated unit.

**Barriers/Side Effects of Intraperitoneal Chemotherapy**

- IP chemo is associated with worsened toxicity and quality of life.
- An increased total dose of chemo is required via the IP route.
- IP chemo gives the most concentrated dose of the drugs to the cancer cells in the abdominal cavity; and therefore increases effectiveness of the chemotherapy, but with more severe side effects than with regular chemo.
- Side effects: feeling of fullness and bloating, shortness of breath, decreased appetite, abdominal pain, anemia, neuropathy, tinnitus, nausea and vomiting.

As the result of the redistribution of medical services at the Ottawa Hospital, our unit at the General Campus took on the responsibility of caring for an increased amount of patients receiving IP Chemotherapy. While very familiar with the delivery of chemotherapy on this unit, a number of staff were new to the procedure of IP chemo. We have created a poster to enhance their knowledge and confidence in the administration of IP chemo and posted it on our units’ teaching wall. This will help to ensure that we are providing excellent and world-class care to our ovarian cancer patients.

**Clinical Pathway-General Campus, The Ottawa Hospital, Inpatient Intraperitoneal (IP) Chemotherapy, Intraperitoneal Chemotherapy in Advanced Ovarian Cancer Improves Survival, But is Underused, Canadian Cancer Statistics, 2015, www.ovariancanada.org; taken on 2017/07/16.**

Smartpump Technology - Last but not least on the path to change
Cynthia Heron BScN, RN CON(C)®, Karyn Perry BSN RN, MBA CON(C)®

OBJECTIVE
This poster presentation will describe the Stronach Regional Cancer Center (SRCC) implementation experience of smartpump technology measured by: patient outcomes, i.e. number of near misses resolved, bedside patient education on the logic for enhanced independent double-checks, and staff education and user experiences.

BACKGROUND
A sentinel event in 2006 was the catalyst for the introduction of multiple safeguards being implemented in cancer care internationally. Out of the ensuring Institute for Safe Medication Practice (ISMP) root cause analysis in 2007; two pump specific features were identified: (a) a complex procedure was needed to scroll through options to program the pump and (b) the pump did not provide feedback as a safeguard.

Following this, the Stronach Regional Cancer Center (SRCC) promptly adopted several of the reports’ recommendations early on; yet, the outstanding recommendation to be adopted was the implementation of smart pumps for use in ambulatory care settings.

An interprofessional collaboration between pharmacy, nursing and bio med, implemented smart pumps building on the lessons learned from peer institutions.

TOOLS
- One Registered Nurse with recent front line experience with the assistance of two (2) experts in the field of data analytics reviewed, analyzed, and interpreted the raw data
- All staff were educated on independent double check (IDC) process at the bedside and subsequent co-signing the activity within the electronic health record.

RESULTS
- Data was downloaded and collected from 6 pumps out of 86. This small sample size is a result of insufficient wireless infrastructure, but produced sufficient data to be analyzed. Each pump provided on average over 16 000 data entries for a total of over 98 000 data entries.
- Using spreadsheet software, each pumps’ raw data entries were filtered by soft and hard limit values built within the library guardrails.
- This process enabled the identification of trends within the end user pump programming
- “Soft limits exceeded” resulted in the end user accepting or reprogramming the pump 69 times
- “Hard Limits” were met by the end user 18 times
- 9 BSA and rate programming errors did not reach the patient

ANALYSIS
- The design of the pump face may have contributed to incorrect key strokes leading to infusional programming errors. In error, the zero key was pressed three (3) times as opposed to the decimal key. I.e. BSA 1095, hard limit met, pump reprogrammed for 1.95.
- The pump library logic mitigated error/activity occurrences resulting in correct reprogramming of the infusion in 18 hard limit corrections and 69 soft limit corrections or acknowledgements. Updates to BSA limits, drug dosing, hard and soft limits will decrease benign alerts.
- IDC identified two near misses in which a drug was miss-programmed outside of administration directions. The ability to identify these errors in a timely manner allows for judicious education and support for staff.

FUTURE OPPORTUNITIES
This process of data collection and interpretation will influence:
- Business case to update current infrastructure to a wireless system promoting and enhancing care delivery,
- Potential to report infusion related adverse events to Cancer Care Ontario for future evidence based decision making,
- Inform and influence chair time design and optimization of clinic flow based care needs of patients.

CONCLUSIONS
This evaluation has demonstrated that the addition of drug libraries via smart pump technology adds layers of safety thus optimizing the safe delivery of care in a busy environment.

Implications for clinical nursing practice include the ability to mitigate infusion errors during the performance of high risk activities.

Implications for clinical administrators is the investment of smart pump technology reduces human error technology in the administration of increasingly complex cancer treatment regimens.

As an unintended outcome, patients and families verbalized their enhanced satisfaction from the heightened safeguards associated with the implementation of the smartpump and IDC at the bedside.

REFERENCES
69”: Our Solution for a Better Fit
Stephanie Clermont, RN, BScN; Nehmat Khairallah, RN, MScN, CON(C); Claudine Thuillard, RN, BScN; Erin Hopewell, RN, BScN; Sheilagh Dalziel, RN, BScN; Emma Kuzmicz RN, BScN; Kathryn Vineskie Yantha, RN, BScN; Jennifer Newton, RN, MEd

Introduction
- Precision and efficiency are essential when working as a nurse in a busy outpatient systemic therapy unit.
- The complexity of chemotherapy and biotherapy treatment for cancer is a constant motivation for chemotherapy nurses to find the best practice to ensure the safest and highest quality care for their patients.
- A change of infusion pumps and tubing caused inaccuracies in infusion times, contributing to increased safety risks and decreases in nurse and patient satisfaction and overall in unit efficiency.

Project Goals
- Find a way to administer chemotherapy and biotherapy in a more efficient and accurate manner.
- Find a medium IV line to administer medication respecting the prescribed flow rate.
- Resolve inconsistent run times due to sympathetic primary flow, air running into the lines and the associated safety hazards.
- An IV line would have to be inserted directly into the Baxter IV pump, so that flow rate could be programmed accordingly with each drug.

Project Description
- Chemotherapy nurses attempted multiple strategies using existing resources, including: using extra hangers to lower the primary IV bag, increasing IV pole height, lowering IV pump height, clamping the primary line. However none of these were ergonomically friendly or a reliable solution.
- Discussions where brought to Unit Council Meetings, Staff Meetings and Management.
- The 69” Medium IV line was discovered incidentally by our colleagues at our sister chemotherapy treatment unit (CTU).
- Meetings were held between nursing, pharmacy, management and Baxter representatives. An agreement was made for 1 month trial of 69” medium infusion line in the CTU.

Method
- Evaluation of 1 month trial of 69” medium infusion line in the CTU involved discussions with the nurses trialing the line.
- The 69” line is a continuous line with no Luer activated valves, directly hooked up to the main line at the middle Luer valve, leaving the lower Luer valve free for emergency use. The 69” line is fed through the IV pump, allowing the nurse to program the rate according to each drug, ensuring less drug wastage.
- To assess accuracy, 2 drugs were chosen to compare infusion time using a 37” and 69” IV line.

Findings/Results
- Time trials compared IV secondary set (37”) with the new medium line, solution set (69”).
- 2 medications trialed: Avastin® (Bevacizumab) and Alimta® (Pemtrexed)

- Drug: Bevacizumab
- Infusion Time: 10 min
- Rate: 780ml/hr.
- Volume: 130ml
- Method of Infusion: Secondary line
- Conclusion: After 10 min there was still 30ml remaining in secondary bag, as a result of the IV pump pulling N/S from the main bag. 6 min was added to total infusion time, after pinching off the main line.

- Total Infusion Time: 16 mins

- Drug: Pemtrexed
- Infusion Time: 10 min
- Rate: 840 ml/hr.
- Volume: 140ml
- Method of Infusion: Secondary line
- Conclusion: After 10 min there was still 40ml remaining in secondary bag, as a result of the IV pump pulling N/S from the main bag. 8 min was added to the total infusion time, after pinching off the main line.

- Total Infusion Time: 18 min

Conclusion: Replacing secondary line with 69” line: both drugs ran over 10 min as ordered. See Figure 1.

Medication Infusion Times

![Figure 1](Medication Infusion Times.png)

- The 69” line helps to standardize the administration of medications with rate of infusion greater than or equal to 300ml/hr in CTU, such as: Herceptin, Pertuzumab, Rituximab, Zometa, Pamidronate, Cyclophosphamide, Liposomal Doxorubicin, Gemcitabine, Cisplatin, Carboplatin, Dacarbazine, Ifosfamide, Oxaliplatin, Irinotecan, Leuvoverin, Dexrazoxane, Mesna

Conclusions & Implications
- The use of medium 69” IV line is now a standard practice at both chemotherapy unit.
- The 69” IV line has been successfully integrated into our clinical setting for now two years.
- This IV line helps standardize the tubing mapping of medication administration in CTU.
- The implementation of the 69” IV line decreased patient and nurses frustrations, safety risks and patient chair time and accurately administer medication respecting their time of infusion.
- Work in the oncology environment is constantly evolving and fast paced. It requires adapting practice to be able to work with different therapies and technologies. Our solution for a better fit proved that nurses can not only keep pace, but also provide essential leadership in the face of new challenges.

References/Thanks
- Thank you to Baxter Canada for working with us on this initiative.
- Thank you to the Cancer Centre CTU nursing, pharmacy, and management.

Thank you to the Cancer Centre CTU nursing, pharmacy, and management.
Supporting Novice Nurses in Providing Telephone Support to Cancer Patients

Kanji F1, Grant D1, Sabourin T1, Pick S1, Lecours T1, Duke K1, Hull A1, Boonstra M1, Newton J1, Jolicours L1, Stacey D1,2
1The Ottawa Hospital Cancer Center, 2The Ottawa Hospital Research Institute, Ottawa, Ontario, Canada

BACKGROUND

• Novice nurses often voiced anxiety over being assigned to work in the Patient Support Line (PSL).
• Novice and experienced nurses voiced concerns about novice nurses being assigned to the PSL within weeks of hire.
• Novice nurses reported they did not feel they received adequate training to provide telephone support:
  • A 2 hr intro tele-practice, symptom management & COSTaRS practice guide with case scenarios.
  • 1 day of buddy shifts

OBJECTIVES

1. Determine the perception of training adequacy with respect to working in the PSL and use of practice guides.
2. Identify if use of practice guides helped to increase knowledge or confidence for novice nurses when working in the PSL.

QI METHOD

• A working group of key stakeholders was formed
• Questions from validated survey tools were selected. Survey items focused on:
  1) training and education,
  2) knowledge, skills and confidence, 3) utility of the guideline and 4) work satisfaction.

RESULTS

<table>
<thead>
<tr>
<th>Characteristics of participants</th>
<th>Novice RNs (≤2 years n=6)</th>
<th>Experienced RNs (≥2 years n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work experience as a RN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 to 10 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 to 15 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work experience in oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11 to 15 years</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Work experience providing triage in oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 or fewer months</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7 to 12 months</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1 to 2 years</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3 to 5 years</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>more than 10 years</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Work Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Part-time</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Highest level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Graduate</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Certification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CNA Oncology</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>CNA Palliative Care</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Shft in PSL

- Novice Nurses
- Experienced Nurses

CONCLUSIONS

• Novice nurses feel more confident using COSTaRS. They want to further enhance their knowledge and skills. They work more shifts in the PSL, but are assigned when experienced nurses work in PSL.
• Overall, experienced nurses do not feel more confident when using COSTaRS. They report there is inadequate time to use the tool.
• Next steps:
  • Enhance the education for Novice RN in PSL
  • Review the PSL assignment
  • Evaluate the quality of telephone support via chart audits, and audits of telephone interactions
We are a collaborative network of provincial and territorial health care system leaders in cancer care. Improving patient experience at the end of active cancer treatment requires that cancer care systems shift in response to patient need. Jurisdictions across Canada are developing, testing and implementing programs and processes to effectively transition patients at the end of active treatment. There is opportunity to learn from each other.

The Network provides members the opportunity to:

- Facilitate sharing of information on their programs related to the transition of patients to primary care, including the development methodology, resources, tools and evaluation
- Exchange current and emerging knowledge focused on improving transitions of care between oncology and primary care
- Influence the uptake of emerging knowledge and opportunities to address the needs of cancer survivors across Canada

The Network meets monthly by teleconference and meets face-to-face as determined by the consensus of the Network. The work of the Network is enabled by the Cancerview.ca Online Collaborative Community, hosted by the Canadian Partnership Against Cancer.

The Online Collaborative Community – Most Used Features

- Meeting and event announcements
- Publications
- New tools and resources
- Organized by province/territory
- Environmental scan of post-treatment activities and tools across Canada
- Network Terms of Reference, meeting agenda and minutes
- Resources in French and Indigenous languages

- 38 members, with representatives from every province and territory in Canada
- Member names, titles and contact information
- Membership is open to cancer care system leaders concerned with transitions of care
- New members welcome!

The Network has given us access to operational resources (EMR letter templates, policies and procedures, standards, educational materials) to adapt to our own cancer care system. Without the Network, we would not have had access to these important resources or been able to share our work with other provinces and territories to help accelerate the pace of health system improvements for our growing population of cancer survivors across Canada.

Pan-Canadian Transitions of Care Network – An Online Collaborative Community

Lisa McCune1, Christine Maheu 2, Shelley Currie3

3. Accreditation Canada Standards on Transitions

How to set-up your own Online Community

- Contact the Online Community Manager, Knowledge Mobilization at the Canadian Partnership Against Cancer: groupspaces@cancerview.ca
- Determine who will be the administrators for the Online Community
- Decide on the core functions for your Online Community

How the online community helps us stay in touch

Add a document to the online community

Timeline

Conclusions

- In the past 6 months, 18 resources have been shared and viewed over 400 times
- An Online Collaborative Community can effectively facilitate cross-jurisdictional communication and information sharing about development methodologies, resources and evaluation
- Members are enabled to share additional resources (e.g. draft resources, curricula) between select jurisdictions to facilitate more targeted health system improvements
- Members have facilitated cross-jurisdictional networking on related work streams (e.g. patient education program design, navigation program models)
The purpose of this poster is to highlight the importance of oral care for all inpatients, with emphasis on mucositis and xerostomia, which leads to fungal infections, ulcerations and plaque build-up on the teeth and gums. Mouth care is an integral part of nursing care but can be seen as an add-on to other duties or a menial task to undertake. Recognizing risk factors for poor oral health and understanding the principles associated with providing this care can be sporadic and ill-informed and lacking clarity. From a literature review, it is clearly shown that mouth care is welcomed by patients and does much to improve their quality of life and self-esteem. The importance of mouth care, oral assessment and oral care methods for treating oral problems will be discussed. Registered nurses must advocate for their patients and teach good oral hygiene not only to the patient and their family members, but also to health care aides, student RN's, new graduate nurses, and colleagues.

Background

It is known that a good oral care regimen can help in preventing or decreasing the severity of mucositis and can help prevent the development of infection through open mouth sores. Risk factors include frail, debilitated patients, patients receiving chemotherapy and radiotherapy, as well as socio-economic situations.

Mucositis: The painful inflammation and ulceration of the mucous membranes lining the digestive tract, usually an adverse effect of chemotherapy and radiotherapy treatment for cancer. Oral mucositis is one of the most common side effects. It can lead to several problems, including pain, nutritional problems, and increased risk of infection.

Xerostomia: Dryness in the mouth, which may be associated with a change in the composition of saliva.

Hospital Acquired Pneumonia (HAP): An inflammatory condition of the lungs that develops more than 48 hours after admission to hospital; is caused by infection that was not present or incubating at the time of admission; and commonly involves MRSA pathogens. HAP is the fourth most common nosocomial infection and has the highest mortality rate of all nosocomial infections.

Caring for the Mouth

Oral Care Assessment: Visual examination of oral cavity; including teeth, tongue, oral mucosa, gum and lips. Ensure removal of dentures. Dentures should be cleaned with a soft brush, and placed in a clean, labeled denture container. Use pen torch, tongue depressor and dental mirror if available. Oral hygiene regime should be discussed and implemented with the patient.

Suggestions:
- Mouth rinses every 2-4 hours, brushing every 12 hours with soft bristled brush, moisturizing the lips with non-petroleum based products (beeswax, lanolin, cocoa butter) and changing oral suction equipment daily.
- Oral Rinses: Normal Saline (1 tsp table salt/32 oz. water); Salt and Soda (1 tsp of salt and 1 tbsp of baking soda in 32 oz. water); Non-abrasive toothpaste OR 1 tsp baking soda in 2 cups water. **Avoid alcohol based or strong flavors**
- Magic Mouthwashes at the BC Cancer Center: Noll's Solution: 120 ml Benadryl, 30 ml Nystatin, 2.25 mg Decadron, and 0.5 g tetracycline, mixed with distilled water to total volume 203 ml.
  - Pink Lady: Maalox (1:1 up to 3:1) with viscous lidocaine
  - BCCA Magic Mouthwash: 100 ml hydrocortisone, 300 ml Benadryl and 100 ml Nystatin mixed to 1L volume.

Summary

It is essential for nurses to be aware that oral health is more than cleaning teeth; there is a need for awareness of the issues that surround mouth care and reflection on best clinical practice. If promoted and established as a nursing priority, the accomplishment of the goals of oral care will ensure comfort and a sense of wellbeing for vulnerable patients. Enhanced education to perform a thoughtful clinical assessment and delivery of care will increase evidence based standards to support excellent care of the mouth.

Discussion

- An oral care poster was created and placed on the teaching board of the medical oncology floor, and presentations were given to staff regarding performing good oral care per nursing best practice guidelines.
- A presentation was given at the nursing skills fair, targeting all nursing staff, and especially student nurses and new graduate nurses.
- An awareness was presented concerning a recent study that relates hospital acquired pneumonia(HAP) with poor oral hygiene. A working group has been created at The Ottawa Hospital to investigate the implications of this study and to raise awareness of enhanced oral care protocols to decrease the incidence of mortality related to HAP.

References

"Oral Care", CCO guidelines
"Oral Care", BCCA guidelines
Hanson, C. (2004). Mouth care – how important is it?: Journal of Community Nursing, 18(8), 4-7.
**Background/Introduction**

- **Doctoral and postdoctoral experiences** are described as emotional and isolating periods in one’s career trajectory.
- **A professional network** is important for successful completion of a doctoral degree, and has positive implications for job satisfaction and goal attainment, and overall career success.
- Recognizing these benefits, CANO/ACIO established the **Doctoral Student Network (DSN)** in 2013 to facilitate the success of Canadian oncology nurses engaged in doctoral and postdoctoral study.

**Purpose**

The purpose of this poster is to provide an overview of the evolution and current DSN structure, activities and outputs, and future plans.

**Method**

A document analysis was conducted to identify themes across DSN documents (n=29), including meeting notes, newsletters and related scholarly activities. Two cycles of coding were performed: 1) to identify emerging themes; and 2) to present results in an integrative figure.

**Results**

**CAPACITY DEVELOPMENT**

- Alternating synergy and tension between group and personal commitments and capacity development
- Specific strategies were used to promote synergy and capacity development
- The focus of these strategies has changed over time, from initially establishing foundations to preparing for the future
- These strategies for capacity building have led to personal skill development and tangible contributions to CANO/ACIO

**LEADERSHIP VOICE**

- When there was tension between group and personal academic commitments, the group’s voice was silenced
- When there was synergy between group and personal capacity development, the group’s leadership voice expanded
- The strategies for capacity development promoted the strengthening of the group’s leadership voice

**Implications**

- CANO/ACIO’s DSN provides a supportive environment for doctoral and postdoctoral students, while encouraging these emerging oncology nurse researchers to integrate CANO/ACIO into their professional lives.
- The networking and supportive format of the DSN may provide an important template for other professional groups within CANO/ACIO to achieve their scholarly and professional goals.
- Looking to the future, the DSN may use their strengthened capacity and expanding leadership voice as an important resource to further CANO/ACIO’s strategic plan.

**References**


October 29, 2017
Changing Heparin Concentration in Ports Across an Organization: Overcoming Bumps Along the Path

Kirsty Albright, RN, MSN; Angela Boudreau, RN, MN, CON(C) | Odette Cancer Centre, Sunnybrook Health Sciences Centre, Toronto, ON.

INTRODUCTION

Odette Cancer Centre is one of eight programs at Sunnybrook Health Sciences Centre. Unit level changes to practice in ambulatory Oncology impact many other areas hospital wide. An issue surfaced at our facility of increased use of Alteplase in chest ports. A practice began using an escalation process from the standard heparin concentration of 10IU/ml to 100IU/ml following Alteplase installation. Perceptually, staff identified no further need for Alteplase once the concentration changed. However, this unit-based practice created consistency challenges throughout the organization.

ISSUES IDENTIFIED

- Inconsistent practice across facility
- Blocked Ports/High Alteplase use
- Frustrated staff members
- Non-adherence to policy
- Communication Issues

FACTORS

- Environmental Scan
- Data Collection
- Available pre-mixed concentrations
- Cost
- Heparin Induced Thrombocytopenia (HIT) risk is low

ENVIRO. SCAN

- Conducted by Pharmacy
- Like Facilities
- All facilities contacted were using 100IU/ml

DATA COLLECTION

- Oncology Population (electronic documentation systems)

CHALLENGES

- Inconsistent electronic documentation systems
- CVAD complications tracked in critical care setting only (mandated by Infection Prevention & Control)

OUTCOMES

- 25% need of 100IU/ml Heparin in Oncology
- Decision made to change concentration
- HIT relates to drug, not concentration
- Pre-filled syringes keeping in cost

ROLLOUT PLAN

- Communication to stakeholders highlighting changes to heparin concentration
- Establish current stock and develop plan for use
- Policy change
- MAR changes Communicate effective change date

EVAL./PLANNING

- Types of CVADs inserted in IR
- Number of Alteplase installations

GROUP MEMBERS

- Drug Information Pharmacist
- Pharmacist Inpatient/Ambulatory
- Manager Ambulatory Oncology Pharmacy
- Supervisor Ambulatory Chemotherapy
- APN Inpatient/Ambulatory Chemotherapy
- APN Interventional Radiology (IR)
- Consult with Thromboembolic team

CONCLUSION

Our group determined the scope of the issue using evidence, current state and environmental scans. Challenges tracking CVAD issues exist in the non-Critical Care setting. Electronic documentation in Ambulatory Oncology enabled us to establish an incidence rate of increased Heparin concentration. Our path in Oncology led to a recommendation for facility wide change. Ongoing evaluation will determine our change effect.

REFERENCES

Background
To support preceptor skill development, BCCA Education Resource Nurses (ERN’s) led an innovative re-design of a preceptor program for delivery through e-learning and VideoLink technologies. The goal was to provide an interactive learning environment, with efficiencies and experiential learning that incorporates the principles of adult learning and novel teaching strategies. The model developed also incorporated Coaching Out of the Box™. The pilot cohort was utilized to evaluate individual elements and overall effectiveness of the program.

Evaluation
To assess the effectiveness of the proposed blended learning format and reformatted course content, participants were invited to complete two surveys before and after the program. A comparative analysis of the results from both surveys was completed to assess the individual components and determine the overall effectiveness of the program.

Online Component
The majority of respondents agreed or strongly agreed that the online content was easy to navigate and helpful in preparing for the workshop. The ERN facilitators also noted a high level of learner engagement in the online group activities in comparison to existing comparable online course environments. This is likely due to the mandatory nature of these activities for the purposes of this program, whereas similar activities are considered optional in other existing courses.

Workshop Component
All participants indicated the VideoLink workshops were helpful to their learning. In particular the use of a variety of multimedia tools, case studies, reflection and listening activities rated highest amongst learners. A gamification strategy was also trialed in the workshop component, however feedback indicated this was not as helpful for learning as anticipated so further review of that component is underway.

Overall Program Experience
The blended learning format used to deliver this program is similar to other education programs facilitated by BCCA ERN’s. As part of the evaluation, participants were asked to rate their previous experience with a virtual learning environment compared to the Preceptor Education Program. The overall average rating by the pilot cohort participants showed slightly higher level of satisfaction compared to previous BCCA virtual learning experiences.

Learning Outcome Evaluation
When comparing the equivalent questions from the pre and post program survey, overall participants felt less supported and less confident in having the tools they would need to support a preceptor.

Participants were also asked to rate their overall experience related to the broader learning objectives of the course.

The majority of respondents indicated that they agreed the program increased their overall knowledge of the preceptor role and responsibilities, enhanced their ability to utilize existing resources, adequately prepared them for the role and increased their confidence in their ability to function as a preceptor.

Recommendations
The evaluation results demonstrate that overall, the BCCA Preceptor Education Program is effective as a learning resource for staff preceptor education. As the appetite for preceptor education within BCCA remains strong, the recommendation is to continue to offer this program to nursing staff with minor revisions based on feedback obtained from the first cohort.

Management of this program has recently transitioned to a new portfolio within the BCCA organizational structure. The new preceptor program working group should continue to liaise with PHSA Coaching Services to build and support the COOTB component.

Expanding the facilitator pool beyond the nursing discipline would also broaden the reach and organizational impact of the program. A robust communication plan should also be developed to support the formal launch of this program and serve to reinforce with BCCA leadership the program expectations and requirements.
Obinutuzumab (Gazyva), a CD20 monoclonal antibody, is given in combination with chlorambucil for chronic lymphocytic leukemia (CLL). The main challenge associated with the administration of obinutuzumab is infusion-related reactions on cycle 1, day 1. The combination of obinutuzumab and chlorambucil is often given to elderly patients with co-morbidities, making it more concerning if the patient experiences infusion reactions. A hematologist, two nurses, and a pharmacist met to discuss the concerns and complications often seen when administering obinutuzumab as recommended by the product monograph. After discussion, it was decided that the infusion rate for cycle 1, day 1 should be modified and that the 100mg dose would be infused at a slower rate. The infusion rate protocol that is used is as follows: 15 mls/hour for 1 hour, followed by 30 mls/hour for one hour and then 60 mls/hour until complete. We present the results of this protocol, involving 67 patients which demonstrates a significant reduction in frequency and severity of first-dose infusion-related reactions when the initial infusion rate is reduced from the standard 62.5 mls/hr to 15 mls/hr.
Avoiding exposure to chemotherapy is paramount in a chemotherapy unit. Policies and procedures are in place to prevent exposure to chemotherapy via ingestion, absorption and inhalation. PPE (gowns, gloves, masks with visors) is provided by the employer as per the Occupational Health and Safety Act of Ontario. Exposure via inhalation became a concern in our unit. This issue was brought forward in Unit Council as well as by the Joint Health and Safety Representative (a staff member in the Chemotherapy unit) due to a number of nurses reporting strong odors and symptoms such as runny nose (rhinorrhea) and watery eyes (especially when the bins were opened). Further investigation showed non-compliance with the policy related to the appropriate disposal of the chemotherapy. The Ottawa Hospital policy #00107 states: "Discard all non-sharp equipment into the re-sealable plastic bag or wrap in the waterproof pad...place wrapped waste into the red cytotoxic waste container and ensure the lid is closed to prevent evaporation". Staff felt that it was more hazardous to manipulate the used tubing into the provided bag, therefore the tubing was being placed directly in the bins. The consensus after discussion in Unit Council was that size and quality of the re-sealable plastic bags provided by pharmacy was not conducive to proper disposal and thus policy adherence.

The Safety Officer was consulted and there was discussion of using smaller bins which would require daily disposal. A basic principle of Occupational Health and Safety is to contain the hazard at the source. Therefore, the decision was made to seek improvements in our current bag material and dimensions. In consultation with the pharmacy supervisor, a couple of different Ziploc bags were trialed and we settled on the new re-sealable plastic bag which was trialed for 2 weeks (15x13’ bags, 0.4mm thick). The trial was followed by a survey and consensus was to move forward with the new bag.

By changing the type of chemotherapy disposal materials (heavier, larger Ziploc bags), we were able to increase compliance to an existing procedure. This resulted in a decrease in symptoms reported by some staff in a recent survey (teary eyes & rhinorrhea). Our findings also show that staff feel safety has increased in their working environment since implementing this change.

**Background**

Avoiding exposure to chemotherapy is paramount in a chemotherapy unit. Policies and procedures are in place to prevent exposure to chemotherapy via ingestion, absorption and inhalation. PPE (gowns, gloves, masks with visors) is provided by the employer as per the Occupational Health and Safety Act of Ontario. Exposure via inhalation became a concern in our unit. This issue was brought forward in Unit Council as well as by the Joint Health and Safety Representative (a staff member in the Chemotherapy unit) due to a number of nurses reporting strong odors and symptoms such as runny nose (rhinorrhea) and watery eyes (especially when the bins were opened). Further investigation showed non-compliance with the policy related to the appropriate disposal of the chemotherapy. The Ottawa Hospital policy #00107 states: "Discard all non-sharp equipment into the re-sealable plastic bag or wrap in the waterproof pad...place wrapped waste into the red cytotoxic waste container and ensure the lid is closed to prevent evaporation". Staff felt that it was more hazardous to manipulate the used tubing into the provided bag, therefore the tubing was being placed directly in the bins. The consensus after discussion in Unit Council was that size and quality of the re-sealable plastic bags provided by pharmacy was not conducive to proper disposal and thus policy adherence.

**Method**

The Safety Officer was consulted and there was discussion of using smaller bins which would require daily disposal. A basic principle of Occupational Health and Safety is to contain the hazard at the source. Therefore, the decision was made to seek improvements in our current bag material and dimensions. In consultation with the pharmacy supervisor, a couple of different Ziploc bags were trialed and we settled on the new re-sealable plastic bag which was trialed for 2 weeks (15x13’ bags, 0.4mm thick). The trial was followed by a survey and consensus was to move forward with the new bag.

**Results**

- Improved adherence to standardized process; improved compliance
- Higher turnover of cytotoxic bins due to bulkier disposal; less ‘festering’
- As found in a recent survey, some staff reported fewer symptoms such as rhinorrhea and eye irritation causing tearing
- Survey results:
  1. Prior to implementation of the new bags, only about 20% of nurses were using the bags but now 100% of nurses surveyed are using them consistently.
  2. Nurses reported that symptoms such as irritation of eyes and/or nose have improved for 50% of nurses since implementation of the new bags.
  3. 77% of nurses surveyed feel that odours in or around cytotoxic bins have dramatically decreased while 12% still report odours after implementation
  4. Nurses surveyed feel that the bags have improved our process for disposal of chemo, decreased inhalation exposure and improved overall safety on the unit.

**Conclusion**

By changing the type of chemotherapy disposal materials (heavier, larger Ziploc bags), we were able to increase compliance to an existing procedure. This resulted in a decrease in symptoms reported by some staff in a recent survey (teary eyes & rhinorrhea). Our findings also show that staff feel safety has increased in their working environment since implementing this change.

**Objective**

Improved containment of chemotherapy to reduce inhalation exposure.
LEADING THE WAY: IMPLEMENTING THE ADVANCED MULTIDISCIPLINARY (TEAM) CLINIC FOR WOMEN WITH LOCALLY ADVANCED BREAST CANCER

Jennifer Smylie RN, MHSM; Antonella Iaderosa RN, BScN; Lynne Kroeger, RN
The Ottawa Hospital – Women’s Breast Health Centre, Ottawa ON

Abstract

Patients with locally advanced breast cancer (LABC) comprise 15-20% of all women with breast cancer. Diagnosis is often based on clinical and/or radiologic criteria including breast mass >5 cm, axillary mass/multiple axillary lymph nodes and skin changes. Rapid assessment and treatment for women with LABC is important since they are more at risk for metastatic disease and poor oncologic outcomes.

The diagnosis of LABC requires a multidisciplinary approach to consultation, appropriate diagnostic testing and treatment, often following a complex path. In order to improve care for LABC patients, the dedicated group of breast cancer specialists at our high-volume centre has implemented the TEAM clinic to identify, streamline and manage care in order to reduce wait times to treatment while improving the overall patient experience.

The focus of this presentation is on nurse-led initiatives including the following: proactive identification of referrals according to defined criteria; utilization of medical directives to ensure appropriate breast imaging and staging tests; and pathological biomarkers to facilitate decision-making. In addition, the role of the RN in offering information and psychosocial support will be highlighted. This initiative serves as a unique model for other centres providing breast care proving oncology nurses can lead the way.

RN Review

RN Role:
• Reviews and triages all referrals
• Orders testing based on Breast Imaging, Breast Ultrasound and Breast Biopsy
• Expedites necessary diagnostic workup including biopsy
• Reviews positive pathology reports for appropriate breast imaging and staging tests
• Provides psychosocial support and a plan of care outlining the ‘next steps’

Medical Directive

TEAM Identified Referrals

<table>
<thead>
<tr>
<th>Volume of Referrals Identified as TEAM By Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 21%</td>
</tr>
<tr>
<td>24 - 27%</td>
</tr>
</tbody>
</table>

TEAM - Wait Time from Referral to Consult

<table>
<thead>
<tr>
<th>Average Wait Time in days</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 12</td>
</tr>
</tbody>
</table>

Diagnosis

Volume of TEAM pts with Clinical Diagnosis

<table>
<thead>
<tr>
<th>Clinical Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other - Malignant</td>
</tr>
<tr>
<td>Other eg. Indeterminate</td>
</tr>
<tr>
<td>Inflammatory</td>
</tr>
</tbody>
</table>

Volumes and Wait Time

Successes and Next Steps

• Significantly reduced wait time for diagnosis and consult
• Earlier initiation of treatment (neoadjuvant therapy, surgery, supportive and palliative care)
• Earlier referral to other specialists (Fertility, Genetics, Medical Oncology, Radiation Oncology, Plastic Surgery)
• Timely patient contact and ongoing support
• Increased access to multidisciplinary team will improve when new Breast health centre opens in 2018
• Ongoing research project looking at the information and supportive care needs of patients offered neoadjuvant therapy for LABC